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HEALTHCARE PHYSICIAN-CEOS: IMPACTS ON HOSPITAL PERFORMANCE AND
EXECUTIVE SATISFACTION

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ABSTRACT

There is a notion that a CEO with a medical background (i.e.—MD or DO) can lead a hospital to success more effectively than a CEO without a medical background (i.e.—MHA, MBA, or MPH). The existing data that seeks to answer whether a physician would serve best as a hospital CEO is limited and inconclusive. Therefore, this study was performed in order to better understand how physician-CEOs impact the success of their organizations. After an intensive review of the literature, a rigorous multiple-case study with embedded analysis was conducted. This study consisted of two healthcare organizations led by physician-CEOs. Each physician-CEO and two of their executive suite subordinates (one clinical and one operational) were interviewed. Additionally, the study examined the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS questions 21 and 22) and financial metrics (operating margin and net patient service revenue) three years prior and three years after the physician-CEO's hire. The information collected from this research led to the discovery of five characteristics specific to physician-CEOs in this study. Overall, the study has implications for various aspects of the healthcare industry and highlights a major need for future research in this field.

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Chapter 1

Introduction

Great leadership is a characteristic of successful organizations; therefore, the person acting as the chief executive officer (CEO) of a hospital plays a critical role in an organization's success (Kotter, 1990). Hospitals in the United States are faced with pressing challenges such as cost, quality, and access. Furthermore, hospitals exist within a unique external environment that is complex and dynamic, thus calling for strong leadership to navigate concerns such as government regulations, insurance, and reimbursement (Stoller, 2009 p. 876). This information begs one to ask the question, what credentials does a strong hospital CEO possess?

The notion that a CEO with a medical background (i.e.—MD or DO) can lead a hospital to success more effectively than a CEO without a medical background (i.e.—MHA, MBA, or MPH) is not unheard. Hospitals led by physician-CEOs, such as Mayo Clinic (John Noseworthy, MD), Cleveland Clinic (Delos Cosgrove, MD), and Massachusetts General Hospital (David Torchiana, MD), topped the 2016 *U.S. News and World Report* rankings. Additionally, physician-run hospitals received approximately 25 percent higher quality scores than non-physician-run hospitals (Goodall, 2012; Stoller et al., 2016).

Physician leadership is becoming an ever-important component to a successful healthcare organization (Darzi, 2009; Goodall, 2011; Poduval & Poduval, 2008; Sarto & Versonesi, 2016; Stoller, 2009; Stoller et al., 2016). Yet, the traditional medical education system, and healthcare environment do not promote the growth and development of physician leaders, much less physician-CEOs (Stoller, 2009; Stoller et al., 2016). The existing data that seeks to answer

whether a physician would serve best as a hospital CEO is limited and inconclusive. Therefore, research is needed to better understand how physician-CEOs impact the success of their organizations. This chapter will outline why the lack of physician-CEOs is a potential problem, designate the purpose of the current study, explain the significance of the research being conducted, explain the research questions, and define key terms used throughout the study.

The Problem

Historically, hospitals were led by physicians. In 1935, physicians commanded 35 percent of hospitals in the United State (MacEachern, 1935; Falcone & Satiani, 2008; Gunderman & Kanter, 2009). However, over the past three decades, the United States has progressively moved into a new era of healthcare delivery. The corporatization of medicine is a result of the culture emphasis on business and profitmaking; the development of managed care; and the conventional wisdom that physicians need to focus their attention on their expertise—patient care, while administrators maintain their focus on operations and profitability aspects of a hospital (Darzi, 2009; Goodall, 2011; Poduval & Poduval, 2008; Sarto & Versonesi, 2016).

In a 2009 study, Gunderman & Kanter found only 235 of the United States' 6,500 hospitals were led by physicians. Yet, the existing research suggests greater clinician involvement yields a plethora of potential benefits for healthcare organizations (Patel, 2007; Rosin, 2015; Sarto & Veronesi, 2016; Schultz & Swan, 2004; Stoller, et al., 2016). The argument has been made that physician-CEOs possess a better understanding of clinical challenges and patient needs, providing management with a unique perspective (Rosin, 2015; Sarto & Veronesi, 2016; Schultz & Swan, 2004; Stoller, et al., 2016). By the nature of their training, physicians are

taught to be strong decision-makers. This skill combined with the peer-to-peer credibility that exists among clinical colleagues provides physician-CEOs with the ability to implement decisions in an efficient and effective manner (Falcone & Satiani, 2008; Rosin, 2015; Sarto & Versonesi, 2016; Stoller, et al., 2016).

Additionally, clinical outcomes may be impacted by the leadership of a physician-CEO within an organization. In a 2011 study by Goodall, quality scores of organizations with a physician-CEO were approximately 25 percent higher among 300 *U.S. News & World Report* top-ranked hospitals compared to hospitals led by a non-physician-CEO. The question remains: if the limited available data shows an overall trend in higher performance outcomes in hospitals led by a CEO with a medical background, why are there a significant lack of research on this phenomenon?

Additional literature suggests a contrary position, physicians are unsuited for the role of chief executive officer. The traditional training of physicians that includes long exposure to hierarchical systems, intense individual evaluations, extrapolated leadership, and deficit-based thinking does not teach physicians the competencies needed in administrative leadership roles (Molthrop, 1990). Physicians themselves recognize the lack of practical “business” knowledge, which is needed in administrative roles, in their medical education (Molthrop, 1990). In a study conducted by Succi and Alexander (1999), physician involvement in management yielded a significant and negative impact on hospital operational efficiency. Furthermore, another study, found that having a physician-CEO negatively impacted a hospital’s financial performance (Sarto, Veronesi, Kirkpatrick, & Vallascas, 2014).

Purpose of the Study

The empirical studies conducted on physician-CEOs that exist, lack consistent evidence that suggests whether a physician-CEO or clinically-trained CEO improves efficiency and effectiveness of a healthcare organization (Sarto & Veronesi, 2016; Succi & Alexander, 1999). Specifically, there is a notable absence of research exploring the impacts a physician-CEO has on financial success of an organization (Sarto & Veronesi, 2016). The purpose of this paper is to analyze the association between clinical involvement in the chief executive officer (CEO) position and hospital performance outcomes (i.e.—financial and qualitative), as well as, top leadership (i.e.—c-suite executives) perception on organizational success.

Significance

This research is relevant and contributes to the existing literature in various ways. First, moving beyond previous studies of the impact physician-CEOs have on hospitals in terms of operational, qualitative, and overall perceived success, this study will evaluate the financial success through a six-year trend in operating margin (income derived from patient care operations) and net patient service revenue (collections from patient care activity). Additionally, this research will seek to understand the impacts a physician-CEO has on the quality scores (HCAHPS scores), as well as, the c-suite members' perception of the organization's overall success under the leadership of the physician-CEO. Due to the significant role a CEO plays in the success of a healthcare organization and the lack of consensus in the literature surrounding physician-CEOs, it is imperative that further research is conducted that examines the financial and quality success of hospitals with physician-CEOs.

Research Questions

Currently, the available research identifying the impact of physician-CEO leadership on overall hospital performance is limited and inconclusive (Sarto & Versonesi, 2016). Although there is some data that examines the association between clinical leadership and qualitative outcomes, little exists that seeks to understand the relationship between clinical leadership and financial performance; and there is scarce data that attempts to understand how c-suite leaders perceive the success of an organization led by a physician-CEO (Sarto & Versonesi, 2016).

This research is representative of a much-needed contribution to the healthcare field because hospital boards and CEO selection committees may gain from additional selection criteria and positive impacts on performance outcomes support clinician involvement in senior administrative roles. Additionally, this research will serve as a building block for future studies attempting to understand how physician-CEOs impact acute healthcare facilities. This study attempted to answer the research questions listed in **Table 1**.

Table 1. Research Questions being examined

Research Questions
1. What relationship exists between physician-CEOs and an organization's financial success?
2. What relationship exists between physician-CEOs and an organization's Hospital Consumer Assessment of Healthcare Providers and Systems Scores (HCAHPS)?
3. How do operational c-suite executives (i.e.—chief financial officer and chief operating officer) and medical c-suite executives (i.e.—chief nursing officer and chief medical officer) perceive organizational performance under a physician-CEO?
4. What impact do physician-CEOs feel their clinical background has on their organization?

The study attempted to discover the answers to each of the questions listed above through a case study design with quantitative metrics.

Definition of Key Terms

In order to establish common language and maintain consistency in the meaning of language, several key terms have been listed and defined. This section should be used as a reference for the author's meaning of these terms.

Chief Executive Officer (CEO)

“The Chief Executive Officer is responsible for (a) managing the day-to-day operations of the hospital and its entities; (b) establishing a system for ensuring that high-quality care is provided; (c) ensuring the sound fiscal operation of the hospital, while promoting services that are produced in a cost-effective manner; (d) ensuring compliance with regulatory agencies and accrediting bodies, while continually monitoring the organization's service and delivery system; (e) ensuring optimal fulfillment of the institutions charter, mission, and philosophy in response to the identified needs of the community; and (f) responding to medical staff, employees, and patients. In addition, the CEO will work closely with the Board of Directors and leadership of the organized medical staff in developing the strategic direction and major policies of the institution. The CEO reports directly to the Board of Directors.” (Kovner, 2013 p. 290).

Chief Nursing Officer (CNO)

“The Chief Nursing Officer is primarily responsible for providing leadership and guidance around quality patient care and other patient care services delivered in the hospital. As part of the senior leadership team, the CNO will: assume ultimate administrative responsibility

for nursing standards and practice, regardless of the practice area or reporting relationship of the nurse; direct hospital nursing activities within the context of hospital policies and procedures; ensure continuous and timely nursing services to patients; Ensure nursing standards, practices, policies, and procedures, in accordance with all applicable laws, regulatory, and accreditation requirements, are consistent with current research findings and national professional standards; direct nursing service performance improvement activities; actively participate in hospital leadership functions; collaborate with hospital leaders to design and provide patient care and services, including availability of sufficient, qualified nursing staff; develop, present, and manage budgets for nursing services” (Kovner, 2013 p. 49).

Chief Operating Officer (COO)

“The COO is responsible for the smooth and efficient operation of the hospital, including management of the profit and loss statement for the hospital’s business, as well as the related resources associated with the hospital operation. The COO reports directly to the CEO and is typically a member of the CEO’s senior leadership team. In this capacity, the COO carries responsibility for integrating the strategic plan of the organization with the operations. The COO provides management oversight for the development of high-quality, cost-effective, and integrated clinical programs within the hospital. The management portfolio held by this leader is notably diverse, with corresponding broad organizational implications and complexity, characterized by substantial scope of responsibility in this respect. The COO is expected to act in the absence of the CEO. The COO will exercise management responsibility over the hospital, ensuring efficient services that are designed to meet the needs of patients, physicians, public, and staff.” (Kovner, 2013 p. 51).

Chief Medical Officer (CMO)

“The Chief Medical Officer’s responsibilities include promoting concepts and practice of quality improvement; establishing and maintaining effective working relationships with medical staff; participating in reviews of qualifications, credentials, performance, and professional competence and character of medical staff applicants and members; and working within the appropriate facility or operational leadership model to establish, monitor, and improve aggregate clinical outcomes.” (Kovner, 2013 p. 47).

Multiple case study

“In the proposed model of multiple-case study, individual cases, captured through intensive exploratory interviews, are brought into "conversation" with one another. These permits shared realities to be reconstructed out of individuals' perspectival images” (Rosenwald, 1988, p. 239).

Semi-structured interview

“The defining characteristic of semi-structured interviews is that they have a flexible and fluid structure, unlike structured interviews, which contain a structured sequence of questions to be asked in the same way of all interviewees. The structure of a semi-structured interview is usually organized around an aide memo or interview guide. This contains topics, themes, or areas to be covered during the course of the interview, rather than a sequenced script of standardized questions. The aim is usually to ensure flexibility in how and in what sequence questions are asked, and in whether and how particular areas might be followed up and developed with different interviewees. This is so that the interview can be shaped by the interviewee's own understandings as well as the researcher's interests ...” (Mason, 2004).

Operating Margin

“This profitability indicator shows the income derived from patient care operations.

Profitability indicators measure the extent to which the organization is using its financial and physical assets to generate a profit.” (HFMA, 2017)

Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) Scores

“The HCAHPS Survey is the first national, standardized, publicly reported survey of patients' perspectives of hospital care. HCAHPS (pronounced “H-caps”), also known as the CAHPS® Hospital Survey*, is a 32- item survey instrument and data collection methodology for measuring patients’ perceptions of their hospital experience” (CMS, 2015).

Net Patient Service Revenue

“Difference between charges (gross patient revenue) and contractual adjustments. This is the amount received for all patient care” (Modern Healthcare, 2017).

Expert Leader

“Expert leaders are those with (1) inherent knowledge, acquired through technical expertise combined with high ability in the core-business activity; (2) industry experience, which stems from time and practice within the core-business industry; and (3) leadership capabilities, which include management skills and a leader’s innate characteristics.” (Goodall, 2012 p. 6)

Chapter 2

Review of the Literature

The purpose of this chapter is to study and synthesize the literature on the variables being researched. An indefinite number of variables exist that could determine the value and measure the success of physician-CEOs. The author acknowledges this existence and has chosen to solely focus on the variables outlined as followed. The first section will provide a historical review of the hospital - physician relationship and inspect the foundations of the transition in power from the hospital to the physician. The second section will review the role of physicians as Chief Executive Officers (CEOs) and trends within this area. The third section will review the meaning and effects of expert leadership. The fourth section examines the role executive leadership (subordinates of the CEO) satisfaction with leadership has within organizational success. The fifth and final section, will focus on literature regarding organizational success and metrics used to define high performance. An indefinite number of variables exist to determine the value and measure the success of organizations led by physician-CEOs and their respective organizations. This research is focused on the variables stated.

Healthcare Power Dynamics

According to many experts, a hospital is only as strong as the relationships it has with its physicians. Physicians are the cornerstone to the delivery of healthcare. Not only do the physicians coordinate the care, they also have a large influence over where and how a patient receives care. Because of this influence, hospitals over the years, have recognized the importance

of developing and maintaining effective relationships with physicians (Smith et al., 1990). In order to foster a cooperative relationship between the hospital and practicing physicians, hospitals have incorporated physicians in policy-making decisions, by increasing physician presence in management teams, governing boards, and executive suites (Alexander & Morrissey, 1988; Patel, 2007 p. 4).

The power dynamic within the hospital-physician relationship has evolved along with the evolution of the American healthcare system. The history of the relationship has been identified and segmented into four distinct time periods by Shortell (1991). The first period Shortell (1991) identifies is 1900—1930 when physicians owned many of the hospitals. During this time period physicians were viewed as administrative leaders because physicians oversaw hospital management in addition to treating patients. Because there were no insurance intermediaries, physicians were paid directly by their patients.

In the second period which ranged from 1930—1973, Shortell (1991) notes the incredible increase in third party payers, private, and governmental insurance. Without the fear of cost, as insurance was picking up the bill, patient volumes rose as the array of medical services increased. Because of these changes, physicians were unable to manage both the administrative and clinical aspects of the hospital, thus three distinct groups were formed during this time: the board, the administration, and the medical staff. The development of these groups represented a shift in the organizational structure of hospitals. Through their political power of the medical staff and the ability to influence hospital admissions, physicians were able to govern organizations by indirectly controlling hospital operations, such as the level of nursing staff, and directly controlling production of services (Pauly & Redisch, 1973; Shortell, 1991). With this power, physicians had no need to own hospitals during this time (Shortell, 1991). Additionally,

during this time period, both physicians and hospitals were reimbursed on a fee-for-service basis meaning they were reimbursed for the costs that were incurred in delivering care and subject to very little regulations. Therefore, the more services that were provided, the more reimbursements were received. Overall, during this time physicians' and hospitals' interests were mostly aligned. (Pauly & Redisch, 1973).

Shortell (1991) notes the drastic change in the hospital-physician relationship in the third period which spanned from 1974—1985. Physicians began to lose some control over significant decisions affecting their livelihoods and their relationship with hospitals because of the establishment of the Federal Health Planning and Development Act in 1974, which created local and state Health System Agencies (HSAs). These HSAs approved all capital expenditures for new health services and programs that exceeded specific amounts of money. To respond to this constraint, hospitals invested more in their administrative and planning teams, thus transferring power from physicians to management, who was traditionally non-clinical (Shortell, 1991).

As power shifted and competition for patients increased, physicians began to pursue fulltime careers as case review managers, service line administrators, and medical directors (Olazagasti, 1990; Shortell, 1991; Smallwood & Wilson, 1992). The enactment and implementation of the Medicare Prospective Payment System, based on Diagnostic Related Groups (DRGs) in 1983 and 1984-1986 respectively, forced hospitals to assume a degree of financial risk by agreeing to provide care for a predetermined payment (LeTourneau & Curry, 1998). Physicians lost a great deal of their traditional influence during this time period because the U.S. healthcare system did not incorporate physicians' input in big decisions and the delivery of healthcare was becoming an industry. Simultaneously, physicians felt their financial stability and clinical decision-making autonomy threatened by corporate power. Furthermore, the

development of the new reimbursement systems for physicians in hospitals divided hospital administrators and medical staff (Shortell, 1991). Overall, the power shift during this period resulted in less physician influence on the U.S. healthcare system, which could have contributed to the lack in patient-centered, high quality, and cost-effective care during this time.

The focus of the fourth and most recent period, which began in 1986 has been on restricting healthcare costs for governmental and private industry. In addition to curbing costs, an emphasis has been put on the improvement in the quality of hospital care being provided. As the concept of managed care spread, the number of Health Maintenance Organizations (HMOs) increased as the vehicle to control high costs (Bodenheimer, 1999; Shortell, 1991). Since the first publication of Shortell's 1991 article, the healthcare landscape has dramatically changed.

Various new models such as Preferred Provider Organizations (PPOs), Exclusive Provider Organizations (EPOs), and Consumer Driven Health Plans (CDHPs) have developed. Both hospitals and physicians have realized the need to work harmoniously in order to maintain a competitive advantage and secure managed care contracts (Morrissey, et al., 1996).

Unfortunately, the healthcare field continues to face challenges, such as uncertain government policies and physician shortages. Therefore, strong leaders need to be in place to navigate such a difficult industry.

However, hospitals and physicians continue to compete for patients as the service mix shifts to outpatient services and inpatient reimbursement remains stagnant (Shortell, 1991). Physicians also have employed the strategy of owning specialty hospitals to secure a significant (and stable) income and to control hospital patient care. Thus, shifting the competition between local physicians and hospitals to physician-owned facilities and hospitals (Weymier, 2004).

Igelhart (2005), found that since 1990, the number of U.S. specialty hospitals owned, at least partially, by physicians has tripled in 2005.

To overcome the threat of physician-owned facilities, hospitals have pursued strategies to incorporate physicians in management. For example, hospitals have begun including physicians in the development of strategic objectives, and allocation of resources (Molinari et al., 1995). As the trend of physicians in administration continues to increase, it is important to understand how physician leaders influence the performance of hospitals. Moving forward, the conversation of electing a physician to serve as a hospital's CEO has become more common. As the conversation develops it is important to understand the impact physician-CEOs have on healthcare organizations. As indicated in the dates of the articles used in this literature review, this conversation is not new and has been ongoing. Yet, very little research has examined physicians in the role of CEO.

Role of Physician Chief Executive Officer

Over the years, a physician's ability to provide necessary clinical information to facilitate a healthcare organization's effective decision making has been recognized and increasingly, valued. Furthermore, as hospitals and physicians join together in working partnerships, the value of having physician executives has become evident. Physician-CEOs possess a unique ability to bridge the gap between practicing physicians and administrative governing boards through their experience practicing medicine with allegiance to patients and their in-depth knowledge of the external healthcare environment that dictates care (Rosin, 2015; Sarto & Veronesi, 2016; Schultz & Swan, 2004; Stoller, et al., 2016). Understanding how clinical care is developed, evaluated,

and integrated into practice is a unique and valued perspective, which fosters trust and respect amongst physician colleagues, board members, and patients (Schneller et al., 1997).

Even with the suggested potential benefits, it has been contended that physician leadership within administrative offices is frequently lacking (Shortell et al., 1996). During the 1960's a little over a third of all acute care hospitals had physician-CEOs. That number reduced 75 percent throughout the 1970s and 1980s, to only 235 physician-CEOs (Weil, 1996; Gunderman, R., & Kanter, 2009). The decrease in physician-CEOs can be attributed to various factors including the lack of formal training in administration and finances, the existing cultural differences between clinical and non-clinical healthcare executives, the absence of executive mentorship, and the rise of graduates from Master of Health Administration (MHA), Master of Public Health (MPH), and Master of Business Administration (MBA) programs (Lazarus, 1997). However, Griffith and White (2002) suggest that the decreasing trend of physician-CEOs will change with time as more hospital board of directors are including "clinical experience" as a part of their CEO search criteria. Therefore, it is important to understand the impact that a physician-CEO has on a healthcare organization.

After an intensive review of the past and current literature, it was evident that little attention has been paid to the impact physician-CEOs have on healthcare organization performance, specifically strategic decisions, financial metrics, and quality of care. Furthermore, with the existing literature, it is difficult to confidently draw a conclusion on a physician-CEO's impact to a healthcare organization because of the lack of definitive research conducted in this area.

Weymeir (2004), which evaluated physician and non-physician-CEOs' ability to make strategic decisions that would improve the quality of care or financial performance of a

healthcare organization was found. The research was limited by a very small sample and computer-stimulation and found no differences between a physician-CEO and a non-physician-CEO in their ability to make strong decisions. A separate study led by Dunham et al. (1994), investigated the effectiveness of a physician executive's role on organizational performance as observed by subordinates was conducted in 1994. Although both subordinates and non-physician colleagues saw physician executives as making valuable contributions to the performance of their healthcare organization, comparisons across organizational types found no statistically significant differences on a scale of 0 to 100 in the perceived global value of a physician executive (Dunham et al., 1994).

In a study conducted by Succi and Alexander (1999), physician involvement in management yielded a significant and negative impact on hospital operational efficiency. This research examined the physician executives/board members ability to bridge hospital-physician interests in the areas of cost efficiencies and medical staff engagement. Similarly, a study by Sarto et al. (2014) analyzing the Italian National Health Service (NHS), found physician-CEOs have a negative impact on financial performance, calculated as operating margin and financial efficiency. Yet, findings from an empirical study by Goes and Zhan (1995) reveals that more physician involvement in the governance of U.S. private acute care hospitals leads to higher bed occupancy and operating margins.

Contrary to the negative financial impact found in the Italian NHS study, Prybil (2006) found that the top high performing hospitals, as determined by quality of care ratings and patient satisfaction scores, were characterized by high physician involvement in management roles and hospital boards. Five out of the seven hospitals deemed "high-performing" in this study had hospital boards that were comprised 25 percent or more of physicians (Prybil, 2006). In a 2011

study by Amanda Goodall, quality scores of organizations with a physician-CEO were approximately 25 percent higher among 300 *U.S. News & World Report* top-ranked hospitals compared to hospitals led by a non-physician-CEO. Moreover, among the highest-ranking hospitals in the ‘Honor Roll’, the mean index of hospital quality score (IHQ) was 17. The mean IHQ score of hospitals led by a physician-CEO was 18.38, while the mean IHQ score of hospitals led a manager CEO was 12.60 (Goodall, 2012).

Additionally, a 2004 study found no statistically significant differences between medically educated and managerially educated CEO’s ability to make strategic decisions that improve the quality of care (Schultz et al., 2004). The only statistically significant difference that was found between the two types of senior managers was seen in the amount of quality-of-care information used in decision making. In this case, physician leaders used more quality-of-care information than general managers in the process of decision making (Schultz et al., 2004). However, there was no difference in the use financial information used in decision making between medically educated and managerially educated leaders. Presented with the little and inconclusive literature, more research must be conducted to fully understand the cost benefit ratio of a physician-CEO.

Understanding Expert Leadership

Leadership and management researchers agree that leaders influence and impact organizations. Researchers now are attempting to understand what kind of leader is the best for organizational performance (Goodall, 2012). A relatively new ‘theory of expert leadership’, suggests that leaders with a deep understanding of the core business of their organization

improve organizational performance through knowledge-based strategy (Goodall, 2012). This section will define an expert leader and the theory of expert leadership, examine various studies that have researched the impacts of having an expert leader, and attempt to explain how expert leaders have such impacts on organizations.

Goodall (2012), author of *A Theory of Expert Leadership*, defines an expert leader as an individual with “(1) inherent knowledge (IK), acquired through technical expertise combined with high ability in the core-business activity; (2) industry experience (IE), which stems from time and practice within the core-business industry; and (3) leadership capabilities (LC), which include management skills and a leader’s innate characteristics” (Goodall, 2012, p. 6). In reference to this definition, a CEO of a healthcare organization with clinical training, experience practicing medicine, and leadership abilities can be considered an expert leader.

The theory’s equation [Expert Leadership = the function of (IK, IE, LC)] creates a testable hypothesis that an organization’s performance will be positively correlated with the organization’s leader’s inherent knowledge, industry experience, and leadership capabilities (Goodall, 2012; Mackey, 2008; Waldman & Yammarino, 1999). The suggestion that expert leaders positively impact an organization’s performance is supported by a variety of empirical studies and literature from various fields (Andrews & Farris, 1967; Barnowe, 1975; Goodall, 2006, Goodall, 2009a,b; Goodall, 2011; Goodall et al., 2011; Goodall, 2012).

Andrews and Farris (1967) reported one of the first studies regarding this topic, which examined the productivity of scientists. The research found that the leader’s level of technical ability, meaning inherent knowledge and industry experience, was the best predictor of a researcher’s creative performance. How strong a scientist the leader was, compared to other factors such as, the maintenance of group relations, the amount of autonomy allotted to the staff

positively impacted the creative performances of the researchers. In 1975, Barnowe was able to yielded similar results in a comparable study, which examined various forms of assistance leaders provide to subordinates. Of the 81 subunits of a large research institution, 18 percent of the variation in the contribution was explained by leadership measures (Barnowe, 1975). If these studies were replicated examining physician-CEOs, would the findings suggest that having a healthcare expert as the leader of a healthcare organization be more beneficial than a general CEO?

More recent studies by Goodall (2006, 2009 a,b), examined whether research universities should be led by top researchers, support the work of Andrew & Farris (1967) and Barnowe (1975), with recognition that the unit of observation is different (research team vs. research organization). The first study found a statistically significant ($p < 0.001$ level) relationship, in which universities led by leaders with high scholarship levels were more likely to be positioned higher in a global ranking of the top 100 universities (Goodall, 2006). Goodall's following studies (2009 a,b) utilized regression equations to demonstrate the association between better university performance and university leaders with high level of scholarship. Here is another set of studies that speak to a need for context expertise.

Transitioning away from the scientific, research atmosphere, the relationship between a leader's knowledge of the core business and organizational success has been found in additional settings including basketball (Goodall, Kahn & Oswald, 2011) and hospitals (Goodall, 2011). Goodall, Kahn, and Oswald (2011) conducted a study that examined the influential role a leader's expert knowledge played in team performance. Using longitudinal data, the research documented that a team's winning percentage and playoff success could be predicted in part by the coach's background in the sport (i.e.—those who never played NBA basketball, those who

played NBA basketball but were not ‘all-star’ players, and those who played NBA basketball and became ‘all-star’ players). Overall for a typical NBA team, the difference between having a coach who never played NBA basketball and a coach who played five years of all-star basketball in the NBA, is translated to be approximately six extra places higher in the league (Goodall et al., 2011). Similar to a sports team, a healthcare team—comprised of various physicians, social workers, nurses, medical assistants, and many others—with a leader that has had experience working in the field for a significant time may have better performance.

The correlation between expert leadership and stronger organizational performance is seen again in Goodall’s 2011 cross-section study, which examined the association between physician-leaders and hospital performance. Using U.S. hospital data, CEOs were classified as either medically trained (MDs) or professional managers. The CEOs classification was then correlated to his or her hospital’s ranking in *U.S. News and World Report’s* “Best Hospitals” 2009. The statistical analysis revealed that hospital quality scores in physician-led hospitals were approximately 25 percent higher than a hospital run by a professional manager (Goodall, 2011; Goodall, 2012). Furthermore, when examining the hospitals that succeeded in making the *U.S. News and World Report’s* selective ‘Honor Roll’, it was found that 16 out of the 21 hospitals were led by physician-CEOs (Goodall, 2012; Stoller et al., 2016).

An expert leader is able to positively influence an organization’s performance in various ways (Goodall, 2012; Mumford et al., 2002). The first being an implementation of a knowledge-based strategy. By aligning strategic choices with a leader’s own experiences and prioritizes held throughout a career as a practicing expert. Secondly, holding the expert leader as the standard-bearer of the organization is argued to automatically raise the quality threshold in an organization. The idea being, that when an organization hires an expert, the bar will naturally be

raised. Thirdly, the notion is that an expert leader establishes credibility through their proven ability to master the core-business of the organization. The literature on credibility legitimizing a leader's authority is overwhelming (Bass, 1985; Bennis & Nanus, 1985; Kouzes & Posner, 2003). Next, expert leaders reduce bureaucratization and managerialism by developing the best work conditions for core workers. Because expert leaders come from practice, expert leaders can better understand the culture, values, and motivations of core workers. Furthermore, expert leaders generally facilitate long-term goals and are intrinsically motivated by the core business, which leads to the argument that expert leaders are more likely to adopt long-term strategic goals with regard to profit generation (Goodall, 2012). Finally, leaders who share the same technical expertise and perspectives as core-workers are able to better articulate the needs and goals of the organization, which seems to better performance outcomes (Mumford et al., 2002; Goodall, 2012).

The literature provides evidence that organizational leaders should be more than managers with leadership abilities. Rather, leaders of organizations should be individuals that embody a deep inherent knowledge of the core-business activity of their organizations and years of industry experience, in addition to leadership capabilities (Goodall & Bäker, 2015 p. 50; Goodall, 2006; Goodall, 2009 a,b; Goodall et al., 2011; Goodall, 2012). By implementing knowledge-based strategies, serving as standard-bearers, establishing credibility, developing better working conditions for core-workers, being intrinsically motivated, and articulating organizational goals in a way that core-employees understand, expert leaders are able to positively influence organizational performance (Goodall 2012; Mumford et al., 2002).

Impact of Executive Leadership Team's Satisfaction with Leadership on Organizational Success

Whether an expert leader or a generalist leader, it is true that very seldom any leader leads in isolation. Most organizations, especially healthcare organizations have multiple layers of leadership. These management structures, require efficient, effective and integrated executive teams, that draw on the professional disciplines of both medicine and administration (Ross, 1988). This section will provide a better understanding of the role executive leadership teams' satisfaction with leadership has within organizational success.

It is important to acknowledge that for a CEO or any senior leader to positively impact organizational performance, executive teams, managers, and employees at lower levels must have consensus and support the senior leader's plans (Guth & Macmillan, 1986; Lee & Miller, 1999). For example, in order to implement a new strategic initiative, a CEO cannot simply demand that the initiative take place and all will follow. Rather, leaders at all of the various subordinate levels must agree, support, and enforce the new initiative; that is, the CEOs executive team must communicate the importance of the initiative, align it with employees' interests, allocate resources, and overcome resistance to it. Therefore, the executive team's opinions of the senior leader have, in some capacity, the power to impact organizational success (O'Reilly et al., 2010; Cannella & Monroe, 1997; Rotemberg & Saloner, 1993). This impact has been researched throughout healthcare, leadership, and management literature (Stagner, 1969; Dunham et al., 1994; Hrebiniak & Snow, 1982; O'Reilly et al., 2010).

In a study set within a large health care system, O'Reilly et al., (2010) tested two hypotheses regarding the implementation of a new strategic initiative to significantly increase patient satisfaction. The first being that the more a department perceives that its leader supported the new strategic initiative, the higher the likelihood that the new strategy would be implemented

in that department, and the second being that the more department members perceive that leaders aggregated across hierarchical levels support a new strategy, the higher the likelihood that the new strategy will be implemented. The research found that although there were no separate independent effects of leadership effectiveness ratings of each leadership tier examined, there were significant positive effects of leadership in the aggregate. However, because the data are not fully longitudinal, causality cannot be determined (O'Reilly et al., 2010). Essentially, the study results support the importance of subordinate buy-in for strategy implementation. As seen in healthcare, buy-in of key stakeholders such as executive leaders, board members, and physicians is vital for success in strategy implementation.

Hrebiniak and Snow (1982) contributed to the literature with their research, which highlighted the importance of top management agreement and its impact on organizational performance. Results of the study observed the significant finding that agreement among top executive on an organization's strengths and weaknesses relates to the organization's performance. The implication being that top management agreement on the organizational strengths and weaknesses reflects processes of interaction and problem-solving to correct weaknesses and take advantage of strengths. Applied within the healthcare setting, if an executive team agrees with and supports the CEO's perspectives on items such as strengths and weaknesses in organizational performance, a domino effect occurs and streamlined messaging trickles down throughout the organization to create a shared vision and/or goal.

In Stagner's 1969 study, which involved 217 vice presidents and top executives from Fortune 500 companies measured managerial cohesiveness through agreement on responses to questionnaire items by executives. The findings were a significant positive correlation between executive satisfaction on decision making process and profitability (Stagner, 1969). In the

decision-making process, the inclusion of all executives and the “concern by the chief that all be satisfied” were closely connected with “high executive morale, satisfaction with the decision-making process, and profitability” (Stagner, 1969, p. 12).

One study, arguably the most relevant to the proposed research, investigated the effect of the physician executive role on organization performance, measured by effectiveness as perceived by subordinates (Dunham et al., 1994). The results of the study indicate that both the subordinates and their non-physician colleagues view physicians as making valuable contributions to the effectiveness and performance of their organization (Dunham et al., 1994). Interestingly enough, there were significant differences in how the physician executives and lay executives rated the value of the role of the physician executives. In this study, the other executives “always rated the value of the role of physician executives higher than the physician executives themselves” (Dunham et al., 1994, p. 61).

Overall, the literature supports the notion that executive team concession and executive team perception of senior leadership’s success has an impact on organizational success. When executive teams reach consensus on issues such as organizational strength and weaknesses or strategic imperatives, there is a correlation to increased organizational success (Hrebiniak & Snow, 1982; Stagner 1969; O’Reilly, 2010). Additionally, there is a significant correlation between satisfaction and support of executive leadership and positive organizational outcomes (O’Reilly, 2010 and Dunham et al., 1994).

High Performance Metrics and Their Influence Over Organizational Success

Defining any aspect of the success of an organization can be challenging. This study aimed to measure the success of a hospital in two quantitative categories—financial outcomes and quality outcomes. A profitability ratio (operating margin) and net patient service revenue are used in this study to define high performance in financial outcomes. Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) scores were used to define high performance in quality outcomes. In particular, questions 21 and 22, which are the global items on the survey that capture patients' overall rating of the hospital [21] and whether they would recommend it to family and friends were analyzed [22] (CMS, 2017). All metrics were reviewed for three years prior to the physician-CEO's arrival to the organization and three years after the physician-CEO. Furthermore, due to time restrictions, it was decided that when gathering the quality and financial outcomes, only the healthcare organizations' flagship hospitals would be analyzed. This section will review why each of the metrics is a reasonable measure of high performance in the categories of finance and quality.

Profitability indicators are used to isolate the four levels of profit or margin (profit and margin are used interchangeably): gross profit, operating margin, pre-tax profit, and net margin. A hospital's operating margin is the organization's income that is derived from patient care operations (Gapenski & Pink, 2015). This particular profitability indicator measures "the extent to which the organization is using its financial and physical assets to generate a profit" (HFMA, 2017). The operating margin is so vital to organizations, within the healthcare industry and beyond, that the often-cited phrase: "no margin—no mission" has been coined. In fact, hospitals with negative or low operating margins, have difficulty recruiting physicians and attracting new patients (Schneider & Asplin, 2008). Because the revenues and expenses that are derived from

patient care are considered 'operating', this is a strong starting metric for analyzing an organization's financial health. Notedly, items such as capital investment, interests and taxes are not included in the operating income, which makes the measurement imperfect. However, a healthy bottom line depends on a robust operating profit for organizational growth.

According to Standard and Poor's (a renowned financial services company), a rating of 'AA' means that a hospital's capacity to meet its financial commitment on the obligation is very strong. Similarly, a rating of 'A' means that a hospital's capacity is strong but is somewhat more susceptible to adverse effects of changes in circumstances and economic conditions. Both ratings are considered high performance (S&P, 2016). Although this study did not inspect the bond ratings of the organizations examined, it did analyze two ratios that impact an organization's bond ratings. Therefore, Standard and Poor's 'AA' and 'A' bond ratings were used as benchmarks for each financial metric reviewed. In 2016, a U.S. not-for-profit acute health care stand-alone hospital with a Standard and Poor's bond rating of 'AA' had a median operating margin of 4.8 percent. For a 'A' rating, the median was 3 percent (Bretz & Gacka, 2017).

In addition to strong profitability ratios, it is important for healthcare organizations to maintain strong net patient service revenue (NPSR). Increases or decreases in the NPSR could be attributed to increases or decreases in hospital services provided to patients due to access to insurance, service mix, and/or patient volume. NPSR is essentially the amount of patient revenue that remains after reducing charges to contractual rates and estimating the charges for services rendered for charity care, bad debts and insurer denials (Heffernan, 2013). According to Standard and Poor's the median NPSR for a 'AA' rated U.S. non-profit acute health care stand-alone hospital in 2016 was \$920,966,000 and \$410,619,000 in an 'A' rated non-profit acute health care

stand-alone hospital (Bretz & Gacka, 2017). This metric is a critical value because it is used to calculate multiple other key performance indicators such as accounts receivable.

A final metric to be evaluated is the HCAHPS survey that was developed by the Centers for Medicare & Medicaid Services (CMS) partnered with the Agency for Healthcare Research and Quality (AHRQ), which is another agency in the federal Department of Health and Human Services. The survey is comprised of 18 substantive questions that incorporate the various vital aspects of the “hospital experience” (CMS, 2017). Additionally, four questions direct patients to appropriate questions, while three questions serve the purpose of adjusting for the mix of patients across hospitals and two questions are for the sole purpose of supporting congressionally-mandated reports (CMS, 2017). CMS and AHRQ took various measures to assure the credibility, utility, and practicality of the survey. Through rigorous, scientific process, which included “a public call for measures; literature review; cognitive interviews; consumer testing and focus groups; stakeholder input; a large-scale pilot test and a number of small-scale field tests”, the resulting survey serves to yield comparable data on patients’ perceptions of healthcare (CMS, 2017). Therefore, the survey instrument provides meaningful data that can be used to objectively compare participating hospitals. Because of the survey’s ability to compare results among participating hospitals, this metric was selected for evaluation. More specifically, question 21 (overall rating) and question 22 (recommendation) were examined because each question looks at the patient’s broader hospital experience.

Only “top-box” scores were measured for this study. “Top-box” defined by the Centers for Medicare and Medicaid Services’ (CMS) Hospital Compare as the most positive response to HCAHPs. For example, question 21’s “top-box” response equals to “9 or 10” and question 22’s “top-box” response is “definitely yes” (CMS, 2017). To determine the favorability of scores, the

researcher used the HCAHPs 2017 top-box percentiles set forth by CMS (CMS B, 2017). The near-best ranking hospitals were in the 95th percentile and the worst ranking hospitals were in the 5th percentile. The percentages needed to reach each of the percentiles for Question 21 and Question 22 are shown in **Table 2**. For this study placement in the 95th and the 90th percentiles were considered favorable. Placement in the 75th and 50th percentile was considered average, and anything below the 50th percentile was considered below average and unfavorable.

Table 2. HCAHPS Top-box Percentiles

Percentile	Question 21 “Overall Rating”	Question 22 “Recommendation”
95th	87 %	88 %
90th	83 %	84 %
75th	78 %	78 %
50th	73 %	72 %
25th	67 %	66 %
10th	61 %	59 %
5th	57 %	55 %

Note: Adopted from CMS’s 2017 HCAHP Percentiles (CMS B, 2017)

As previously mentioned, it is difficult to truly define and measure the success of an organization. However, for this particular study, the metrics of operating margin and net patient service ratio will be used to evaluate the health systems’ financial performance. Additionally, to determine the quality performance of the organizations, HCAHPS survey questions 21 and 22

will be utilized. These metrics were selected based on the importance each one has to the overall health of the organization.

Conclusion

This chapter served as a summary of the literature surrounding the variables being studied. Each variable selected for examination provides insight on the overarching topics—physician leadership, healthcare, and organizational success. Because of the transition of power dynamics within the industry, the focus of healthcare administration maintains its focus on operations and profitability, rather than emphasizing the importance of patient care (Darzi, 2009; Goodall, 2011; Poduval & Poduval, 2008; Sarto & Versonesi, 2016). Physician-CEOs have a unique ability to connect the two worlds of medical administration and clinical practice through expert leadership, which incorporates inherent knowledge, industry knowledge, and leadership capabilities (Goodall, 2012). By advocating for patients while maintaining, or maybe even improving, organizational operations, physician-CEOs may be what our struggling healthcare system needs. (Rosin, 2015; Sarto & Veronesi, 2016; Schultz & Swan, 2004; Stoller, et al., 2016).

The remainder of this paper will consist of the methodology (Chapter 3), results (Chapter 4), and discussion (Chapter 5). The methodology will describe the broad philosophical underpinning of the author's chosen research approaches, the detailed protocol of how data was collected, and the explanation of why each method was selected for this particular study. Chapter four will describe the results of the data that was collected and analyzed, and chapter five will provide a thorough discussion of the study results, including implications.

Chapter 3

Methodology

As a result of the significant gaps in the literature, much more quantitative and qualitative research is needed to better understand the affects a physician-CEO has on a healthcare organization (Dunham et al., 1994; Goes & Zhan, 1995; Prybil, 2006; Schultz et al., 2004; Succi and Alexander, 1999; Weymeir 2004). This study was designed as a dual approach with both qualitative and quantitative components to investigate four areas of interest with regard to physician-CEOs. The first approach was to explore the impact a physician-CEO has on financial performance of a healthcare organization. The second was the quality performance of a healthcare organization under the direction of a physician-CEO. The third focus was subordinate satisfaction with and perception of organizational success. Finally, the fourth area of interest was the CEO's perception of how his/her clinical background impacts the organization.

To understand the impacts a physician-CEO has on a healthcare organization, a qualitative approach was utilized since the exploratory research was primarily focused on gaining insight on the underlying reasons and opinions of executives currently in the field. Therefore, information gathered through semi-structured interviews provided much greater detail compared to a what a Likert-scale survey would have provided. The structure of this research was designed to be a multi-case study with embedded analysis, as defined by Yin (2009, p. 59). According to Yin (2009) and reiterated by Jones (Jones, 2014), "a case study research design is defined by five components: study questions, propositions, unit of analysis, the logic linking the data to the propositions, and criteria for interpreting the findings" (Jones, 2014, p. 46).

Furthermore, the quality of the chosen research design was tested based on the concepts of construct validity, internal validity, external validity, and reliability (Yin, 2009, p. 41). This chapter introduces the study's systematic methods for investigating the research questions by addressing each element of the research design and credibility factors. The sampling methodology and study assumptions and limitations also are presented. The chapter concludes with a summary of the methodological design of the study.

Study Questions

The study aimed to identify what impact a physician-CEO might have on a healthcare organization in the realms of quality and financial performance, in addition to c-suite executives' perception of organizational success and physician-CEO's perception of their background's influence on their organization. Additionally, the study sought to understand how a physician-CEO's clinical background is perceived to impact the organization in the same realms by his/her direct subordinates and the physician-CEO him/herself. This research specifically asked the following questions:

1. What relationship exists between physician-CEOs and an organization's financial success?
2. What relationship exists between physician-CEOs and an organization's Hospital Consumer Assessment of Healthcare Providers and Systems Scores (HCAHPS)?
3. How do operational c-suite executives (i.e.—chief financial officer and chief operating officer) and medical c-suite executives (i.e.—chief nursing officer and chief medical officer) perceive organizational performance under a physician-CEO?

4. What impact do physician-CEOs feel their clinical background has on their organization?

This multi-case study examined whether or not a physician-CEO made an impact on financial and quality performance. Additionally, this study explored “how” direct subordinates of the CEO (i.e.—CNO, CMO, and COO) and the CEO him/herself perceive the impact a physician-CEO’s medical background has on an organization. The multi-case study, with embedded analysis, allowed the researcher to ask questions and follow-up questions through semi-structured interviews.

This approach provided opportunities for the researcher to dive deeper into the answers provided by the participants and identify characteristics and impacts exclusive to physician-CEOs. According to Yin (2009), questions like the ones (listed above) are well suited for this case study (Yin, 2009, p. 27). The data gathered via the interviews was triangulated with the data found in the literature, as well as the quantitative data collected. The financial data, which was derived from each of the healthcare system’s flagship hospital, was provided by the healthcare systems participating in the study and pulled from the Pennsylvania Health Care Cost Containment Council’s website. The quality performance data, was based on the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHP) scores for questions 21 (Using any number from 0 to 10, where 0 is the worst hospital possible and 10 is the best hospital possible: What number would you use to rate this hospital during your stay?) and 22 (Would you recommend this hospital to your friends and family?). This data was retrieved from Professional Research Consultants Inc.’s (PRC) HCAHPS Scorecard Tool. PRC is a certified vendor for the government-mandated HCAHPS surveys and is the largest privately held market research firm specific to the healthcare industry (PRC, 2017).

Unit of Analysis

Determining a case study's unit of analysis is "critical for understanding how the case study might relate to a broader body of knowledge" (Yin, 2009 p. 31). Rather, it is an important component in determining the generalizability of the case study to the larger topic or group, in this case physician-CEOs. For this study, the case was defined as an embedded multiple-case study. The multiple case study was comprised of a total of two healthcare systems, each with one physician-CEO, one operational executive (COO), and one medical executive (CNO or CMO). To maintain consistency while collecting and analyzing data, the researcher followed Yin's (2009) suggestion for utilizing replication. The case study procedure (**Appendix A**) was replicated for each unity of analysis to achieve the best results. After each interview, the researcher adjusted the interview protocol, via an intuitive process, to enhance the effectiveness, resulting in minimum changes that sought to identify targeted data.

After all interviews were completed and transcribed by the researcher, an embedded analysis of the data was performed, as recommended by Creswell and Clark (2007). "When multiple cases are chosen, a typical format is to first provide a detailed description of each case and themes within the case, called a within case analysis, followed by a thematic analysis across the cases, called a cross-case analysis, as well as assertions or an interpretation the meaning of the case" (Creswell & Clark, 2007, p. 75). This process helped to determine the distinct themes from each interview.

Sampling Methodology

The process of selecting the healthcare organizations for this research began with a generic Google search for “current physician-CEOs”. There were no geographical restrictions for the study and therefore all healthcare systems that met the inclusion criteria were considered. To be eligible to participate in the study, the healthcare system needed to be a not-for-profit organization, and the organization had to have three key individuals willing to participate in the study. Those individuals being:

- A physician-CEO who has served in the role for a minimum of three years and has practiced medicine a minimum of five years
- A medical c-suite executive—a direct subordinate of the physician-CEO (i.e.—CNO or CMO)—who has worked for the current physician-CEO for a minimum of 18 months
- An operational c-suite executive—a direct subordinate of the physician-CEO (i.e.—COO or CFO)—who has worked for the current physician-CEO for a minimum of 18 months

For this study, academic affiliation and size did not matter. Although several organizations were researched and some contacted by e-mail, the first participating subject was suggested by a professional mentor in the field and was provided contact information for the physician-CEO. In the second instance, a contact introduced the researcher to a willing physician-CEO of a healthcare organization that met the inclusion criteria. In each case, an e-mail conversation between the researcher and an executive assistant ensued to confirm eligibility from all unit members. An introduction to the study and a consent form (**Appendix B**) were provided to each of the participants via e-mail. Once the consent form was completed and returned to the researcher, a phone interview took place.

Propositions

As Avan and White (2001) stated, “Propositions form the basis for scientific research. The validity of a research study is, to a large extent, evaluated on the criteria of its propositions” (Avan & White, 2001, p. 1). Furthermore, “only if you are forced to state some propositions will you move in the right directions” (Yin, 2009, p. 28). The propositions for this study were as follows:

1. Identify the impact(s), if any, a physician-CEO has on a healthcare organization
2. Interviews of a clinical executive team member (CMO or CNO) and an operational executive team member (COO or CFO) should be obtained
3. Two quantitative performance metrics be examined

The primary intent of this study was to identify the impact(s), if any, a physician-CEO has on a healthcare organization. Although identifying and understanding the impact(s) of any kind of CEO (i.e.—RN, MBA, MHA, etc.) would have been intriguing, this study only sought to focus on if clinical experience has impacts the leadership of a physician-CEO. The researcher acknowledged that interviewing physician-CEOs alone would not enough to obtain wholistic data. Therefore, the second proposition that interviews of a clinical executive team member (CMO or CNO) and an operational executive team member (COO or CFO) should be obtained was established. By adding interviews with the subordinate executives, the researcher was able to triangulate the data.

The final proposition was that two quantitative performance metrics be examined. Albert Einstein once said, “Not everything that counts can be counted, and not everything that can be counted counts”. It is difficult to define the success of an organization that resides in the complex

industry of healthcare. Although there are infinite metrics to measure various components of success, there is no one measure that can determine an organization's overall success. For this study the researcher worked to identify financial metrics that might show change based on the professional background of the CEO in consultation with a financial expert. With that understanding, the metrics that are used to evaluate the quality performance and financial performance of the healthcare organizations were the percentage of top-box HCAHP scores—the most positive scores—for Question 21 and Question 22 and the trends in operating margin and net patient service revenue, respectively.

Logic Linking the Data to the Propositions and Criteria for Interpreting the Findings

An interview guide was developed to help the researcher ensure relevance and consistency throughout the conversations. **Table 3** shows the connections between the research questions and interview questions. This guide provided “structure” for each interview. However, follow-up and probing questions were asked in addition to the established interview questions to obtain detailed information that would better answer the research questions. The full interview guide can be found in **Appendix C**.

Table 3. The Link between Research Questions and Interview Questions

Research Questions	Interview Questions
1. What relationship exists between physician-CEOs and an organization's financial success?	Q3, Q7
2. What relationship exists between physician-CEOs and an organization's Hospital Consumer Assessment of Healthcare Providers and Systems Scores (HCAHPS)?	Q2, Q8, Q9
3. How do operational c-suite executives (i.e.—chief financial officer and chief operating officer) and medical c-suite executives (i.e.—chief nursing officer and chief medical officer) perceive organizational performance under a physician-CEO?	Q5, Q6, Q10
4. What impact do physician-CEOs feel their clinical background has on their organization?	Q1, Q4, Q4

Judging the Quality of the Research Design

According to Krefting (1991) "...researchers recognize and document the worth of a project by assessing the reliability and validity of the work" (Krefting, 1991, p. 214). To enhance trustworthiness in this research, the researcher examined truth value (credibility), applicability (transferability), consistency (dependability), and neutrality (confirmability) in this study (Guba, 1981). In order to establish confidence in the "truth" or credibility of the findings the researcher conducted a member check with each informant. The transcript was sent to each participant for review. The feedback of each informant was included and requested changes were made. There were minimal changes to the transcripts; however, several informants requested some of the wording be altered within the transcripts. The concept of credibility was tested by having the findings and interpretations were examined by sources from the interviewees, a source from which the data were drawn. The second concept that was tested was transferability, rather the

degree to which the results of the research could be generalized to other contexts or settings. By providing thick descriptions of the informant's words this concept was assessed.

Consistency was practiced throughout the study design. The interview guide (Appendix C) provided the researcher with structure and guidance throughout the interviewing process. This guide therefore demonstrated the concept of dependability. Because the study did include humans, the researcher accounted for variability, not because of "error" (e.g., fatigue) but because of the evolving insights and sensitivities of the study participants. Objectivity or neutrality, was pursued to the best of the researcher's ability. The research shared her background with each participant prior to starting each interview. The bias of the researcher's background as an Master of Health Administration candidate was reflected upon during each step of the research process, to avoid impact on coding and further interpretations. Although the researcher was not one-step removed from direct subject contact, the concept of confirmability was established through an explicit methodology open to public scrutiny and replicable.

Yin (2009) suggests that a high-quality case study addresses four tests: construct validity, internal validity, external validity, and reliability. Construct validity has been met when the correct operational measures for the concepts being studied have been identified (Yin, 2009, p. 40). In order to address construct validity, it is recommended that multiple sources of evidence, review of the draft case study by key informants during data collection and composition (Yin, 2009). This study utilized data triangulation between different units, interviews, HCAHP scores, and financial data. Thus, multiple sources of evidence were used. "With data triangulation, the potential problems of construct validity also can be addressed because the multiple sources of evidence essentially provide multiple measures of the same phenomenon" (Yin, 2009, p. 116).

Additionally, the study utilized member checks to allow the participants (key informants) to review the interview transcripts.

To reach internal validity, this study used the tactic of pattern-matching logic, one of the most desirable techniques according to Yin (2009), in the data coding process. By comparing the empirically based pattern with the predicted ones, the researcher was able to strengthen the study's internal validity. By utilizing respondent validation (member checks), the participants were able to read through the data and provide feedback to the researcher. This method checked for inconsistencies in the data and challenged the researcher's assumptions.

The research implemented a cross-case synthesis to enhance the study's external validity. A separate word table for each research question was used to display the data for each unit of analysis. The overall pattern after each word table led to the conclusions of the study. Additionally, the researcher collaborated with an external expert on the topic during data analysis. This form of triangulation was implemented as a validation strategy to lessen concerns over subjectivity of the findings.

Finally, the reliability for a qualitative study such as this one, lies with consistency (Leung, 2015). Therefore, the researcher created, documented, and followed an interview and analysis protocol. This is important in ensuring the study's reliability because future researchers are able to replicate and confirm the study's process. Additionally, the researcher incorporated refutational analysis by exploring and explaining contradictions between each case studied.

Assumptions and Limitations

This case study has several assumptions and limitations. It was assumed that the information provided to the research via the interview process was accurate and free of bias to the best of the interviewees' ability. Furthermore, given the job descriptions of the individuals being interviewed, it is assumed that each one is qualified with the necessary knowledge to identify whether or not a physician-CEO's medical background impacts a healthcare organization and if so how.

The case study was bound by a very restrictive timeframe. The time constraint caused the researcher to limit the time dedicated to data collection and analysis. As a result, the sample size of the study was limited to two healthcare organizations. The small sample decreases the statistical power of the research and increases the margin for error. Essentially, the researcher accepts the high probability of inconclusive results due to the sample size. The small sample was a result of the researcher working with data that was restrictive and difficult to obtain at times because organizations choose to measure different metrics. The study also used self-report which involved asking the participants about their feelings, opinions, beliefs, and attitudes. This approach has validity issues because it relies on placing full trust in the participants' responses. To mitigate this, the researcher triangulated the responses from the CEOs with the responses from the CNO/CMO, and the COOs. Additionally, quantitative data (financial metrics and qualitative metrics) were examined. Finally, it is assumed that the research had biases due to the researcher's involvement and interest in the subject. However, reflection on this bias was completed during each step of the research process to avoid significant impact on the study. Furthermore, the willingness of the subject to participate and answer questions in the "correct manner" also provided an unconscious bias to the study results.

Conclusion

The purpose of this chapter was to introduce the study's systematic methods for investigating the four distinct research questions. A multi-case study with embedded analysis was selected because it allowed the utilization of semi-structured interviews and two quantitative measures (HCAHP scores and financial data), which provided the researcher with a wholistic perspective and an opportunity to triangulate the data in the analysis. The unit of analysis for this study was defined as one healthcare system, which included one physician-CEO, one operational executive (COO), and one medical executive (CNO or CMO). The study examined two units. Three study propositions were addressed within this chapter to provide direction and guidance for the research. An interview guide was created to ensure the relevance and consistency of the semi-structured interviews. The quality of the research design was based on Guba's (1981) model of trustworthiness which examines the truth value (credibility), applicability (transferability), consistency (dependability), and neutrality (confirmability) of the study. Additionally, the study followed Yin's (2009) suggestion in addressing four tests to determine a high-quality case study: construct validity, internal validity, external validity, and reliability. Finally, the chapter concludes with the researcher willingly confronting the assumptions and limitations of this study. In the remaining chapters the researcher will speak to the study's findings, provide a discussion on the implications of the findings, and end with a conclusion of the study.

Chapter 4

Results

Within the healthcare industry, there is a push for more “physician engagement” and stronger “physician leadership”, yet there has been little conversation about the role of physician-CEOs (Goodall, 2012; Stoller et al., 2016). The conversation is muted, despite the fact that the most consistently top-ranked hospitals, such as the Mayo Clinic, Cleveland Clinic, and Massachusetts General Hospital are run by physician-CEOs. (Darzi, 2009; Goodall, 2011; Patel, 2007; Poduval & Poduval, 2008; Sarto & Versonesi, 2016 Stoller, 2009; Stoller et al., 2016). The existing data that seeks to answer whether a physician would serve best as a hospital CEO is limited and inconclusive. Therefore, this research was needed to fill the gap, and better understand how physician-CEOs impact the success of their organizations.

This study sought to answer four specific research questions:

1. What relationship exists between physician-CEOs and an organization’s financial success?
2. What relationship exists between physician-CEOs and an organization’s Hospital Consumer Assessment of Healthcare Providers and Systems Scores (HCAHPS)?
3. How do operational c-suite executives (i.e.—chief financial officer and chief operating officer) and medical c-suite executives (i.e.—chief nursing officer and chief medical officer) perceive organizational performance under a physician-CEO?
4. What impact do physician-CEOs feel their clinical background has on their organization?

In order to answer these research questions, the author designed a rigorous multi-case study with embedded analysis, as defined by Yin (2009, p. 59). The study examined two healthcare physician-CEO led organizations and consisted of semi-structured interviews with each physician-CEO and two subordinate executive team members, one operational (i.e.—COO

or CFO) and one medical (i.e.—CNO or CMO). Additionally, the operating margin and net patient service revenue was used to gauge financial success. While, HCAHP scores for Question 21 (overall rating) and Question 22 (recommendation) were used as quality performance metrics. Both the finance and quality metrics were examined over a six-year timeframe—three years prior to and three years after the physician-CEO's hire.

The study found interesting but ultimately inconclusive results for research questions one, two, and four. However, for research question three, the study was able to generate several themes regarding the perceived qualities of physician-CEOs that impact organizational performance. These qualities include the capability to speak both a clinical and managerial language, robust decision-making abilities, a patient-centered focus, strong communication and relationship-building skills, and a continuous improvement outlook. Ultimately, more research is needed to fully understand the impact of physician-CEOs on healthcare organizations. However, this study was vital in calling attention to the large gap in the existing literature surrounding physician-CEOs. Overall, this research can be used by various stakeholders within the healthcare industry, including but not limited to healthcare executives, healthcare executive recruiting organizations, physicians, and hospital boards.

The purpose of this chapter is to provide a well-rounded and thorough discussion of the research that was performed and the results that were generated from the research. In the first section of this chapter there will be a review of the study's strengths and weaknesses. To expand on the weaknesses of the study, the second section of this chapter will address the limitations of the study. Next, section will report on the various implications this particular study has on the healthcare industry. Recommendations for future research will then be explored in section five. Finally, section six will conclude the paper with a review and summary of the study.

Healthcare Organization A Within Case Analysis

The first healthcare organization that was examined for this study will be referenced throughout the rest of the paper as Organization A; however, the performance and financial performance metrics only measure Organization A's flagship hospital, which is referred to as Hospital A. Organization A is an established healthcare organization in the northeastern region of the United States. With over 500 healthcare providers, Organization A serves an estimated one million patients each year at its many offices and hospitals. Hospital A is a full-service tertiary care hospital with approximately 250-beds.

The CEO of Healthcare Organization A has been a member of the organization for a long period of time and assumed the role of CEO in 2012. Today, this physician-CEO is still a practicing physician. The CNO, who recently joined the organization in 2016. This executive is responsible for all nursing services across the system. In their extensive career in healthcare administration, this executive has worked closely with both physician-CEOs and non-physician-CEOs. The final interview participant from Healthcare Organization A was the COO for Organization A who is responsible for the operational performance of the organization. Similar to the CNO, the COO has also worked closely with both physician-CEOs and non-physician-CEOs, in the past.

During the interview with Healthcare Organization A's physician-CEO, the CEO was asked to self-describe him/herself. In addition, he/she was asked if they believed their medical background impacted their organization, specifically in the realms of finance and quality. The physician-CEO shared that they felt that having a medical degree and experience practicing in the field did impact the organization in various ways:

...my opinion is pretty strongly held that **healthcare CEOs need a clinical background these days**, and I'd underline the 'these days' part. I would say 10 or 20 years ago—and certainly beyond that—a business background was certainly plenty.

I think clinical quality and outcomes and managing the costs of healthcare is really a difficult set of decisions and **having a clinical background gives you an edge up** on making those decisions well.

I might have a little more insight on what patients want and need because I sat with them in examine rooms and hospital beds. So, **I may have a little more insight, but I don't think that I change, fundamentally, the outcome of patient experience scoring**. I think that a good clinical process person—whether they are a clinician or not—can do that.

I think that in the cost of care, **a clinical background gives you much more clarity in to where you spend money unnecessarily**, where there is waste.

Furthermore, he/she believed that they possessed strong communication skills, decision-making abilities, and a high aptitude for talent development:

I believe that the advantage I have...is **listening skills**.

...physicians are used to making decisions in a very structured fashion. **We gather what we think is the critical data and based on that information we make a decision**. And that is fairly timely for most physicians, especially if you are a proceduralist or surgeon.

...the taking the people around me, that work with me, and **helping them to grow and extend their careers**.

The next interview was with Organization A's Chief Nursing Officer. When asked to describe the physician-CEO, this senior executive described their CEO as very knowledgeable in the organization, market, and field. Additionally, the CNO touched on the CEO's ability to speak a clinician's language:

He has a lot of knowledge about [Organization A] ...He also **has extensive knowledge of the changing healthcare dynamics** in [the regions the organization serves].

Our **perspective can help better represent the impact on our clinical teams** with change as well as the impact on patients.

The CNO described having a good working relationship with the physician-CEO and believed that the medical background of the CEO impacted that relationship:

...I **have felt great support from him** as a leader navigating a successful plan for nursing...

We both **share clinical perspective as senior leaders**.

Finally, the CNO shared his/her opinion that the organization was performing well financially despite difficult times:

Despite challenges in reimbursement, our **financial health is strong**.

The final interview for Healthcare Organization A was with the system's COO. This executive was asked questions similar to those that were asked of the CNO. When asked to describe the CEO, the COO described the CEO as analytical and process oriented with the ability to communicate effectively and make decisions efficiently:

[he/she] is able to **help us with the messaging** around it [challenging conversations] to ensure relevance and reason.

[his/her] **relationship building skills are extra ordinary**.

[He/she] comes at a problem as if a physician would come at a problem. What I mean by that is **[he/she] assesses, diagnoses, and then creates a treatment plan. Then comes back and reassesses and sees if the treatment plan worked**.

The COO felt that he/she had a strong relationship with the CEO and acknowledged that the CEO's clinical background strongly impacted that relationship:

Yes, it is a good relationship. We complement each other.

[the CEO's medical background] **Absolutely does** [impact his/her relationship with the CEO]. So, there are times that throughout my career that I can recall situations that I wasn't quite sure how a physician would

react, so I would go to him [the CEO] and run something by him. **And ask him as a physician** or as a clinician how would he present this.

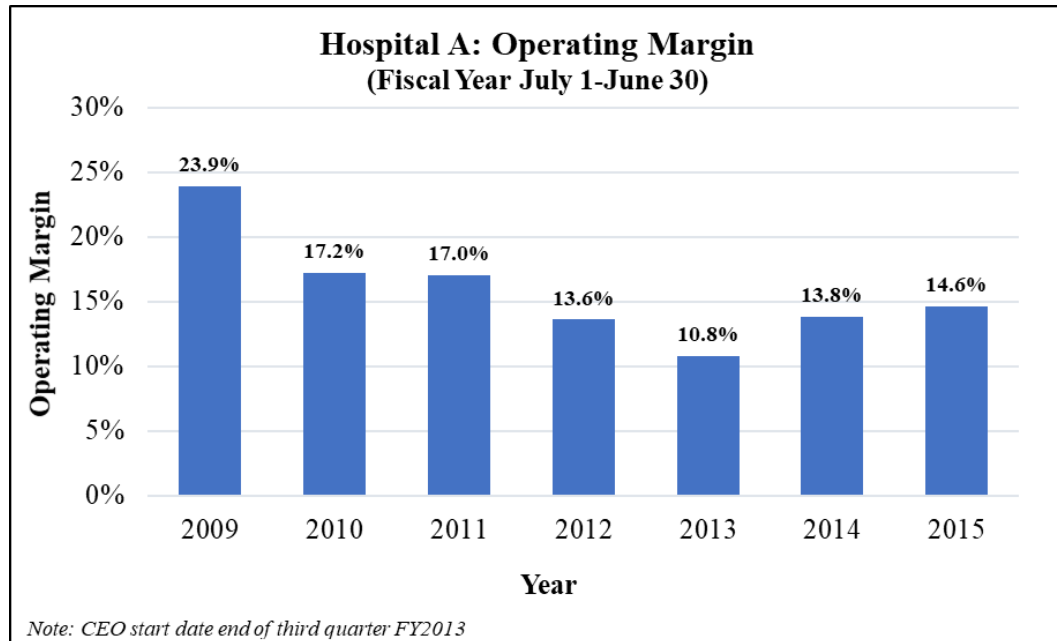
When asked about the organization's financial and quality performance, the COO felt there was room for improvement in both areas. That being said, the organization overall is performing above average:

I think from a quality perspective we have also done well—and above average—but there is still opportunity to grow.

We are doing above average [financially], I would say—with opportunity to improve.

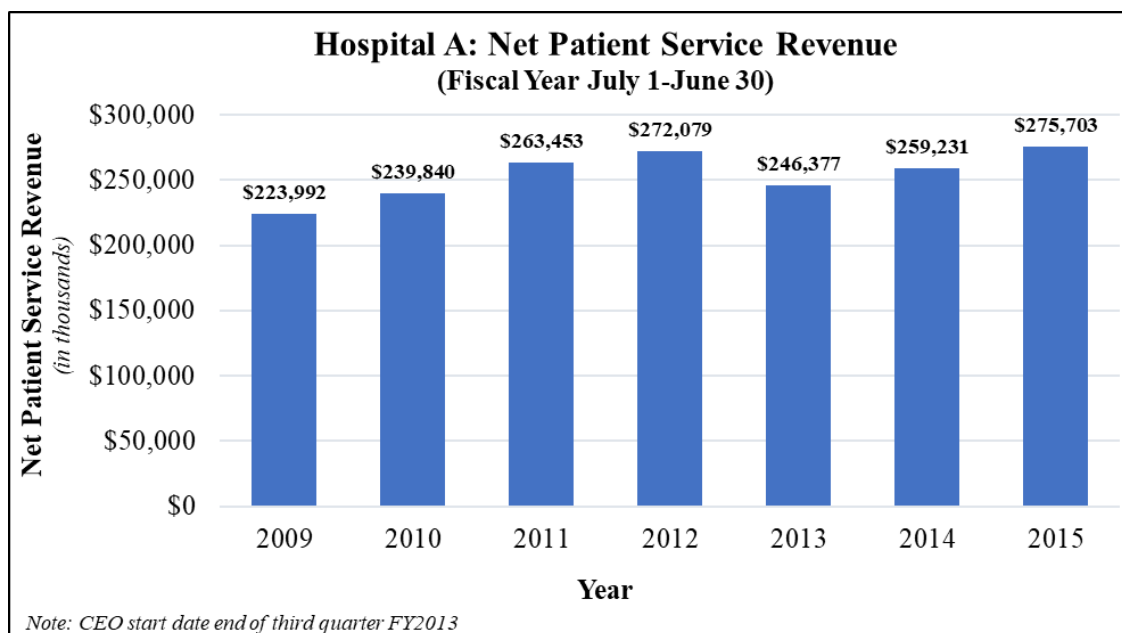
After completing the interviews with the CEO, CNO, and COO, quantitative data was collected. Upon an examination of the flagship hospital of Healthcare Organization A (Hospital A), the operating margin found that the profitability of this organization was favorable. Favorable being at or above the Standard and Poor's median operating margin for 'A' rated stand-alone hospitals (3 percent) and/or 'AA' rated stand-alone hospitals (4.8 percent) [Bretz & Gacka, 2017]. Upon hire, the physician-CEO inherited a decreasing operating margin (**Figure 1**). However, within the following three years of being the sole physician-CEO of the organization, the operating margin increased. Even the organization's least profitable year, which was in 2013, the operating margin was still 6% above Standard and Poor's 'AA' bond rated hospital median (Bretz & Gacka, 2017).

Figure 1. Hospital A: Operating Margin



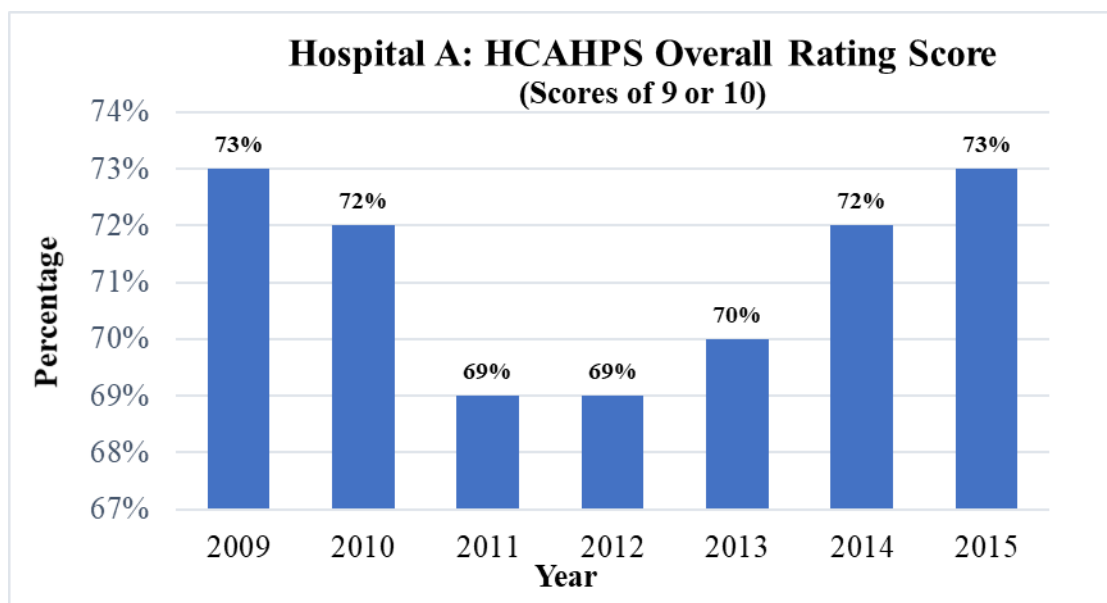
The net patient service revenue (NPSR), which is the net amount of revenue that a hospital generates from treating patients, was more consistent than the operating margin for Hospital A over a six-year timeframe (**Figure 2**). Before the physician-CEO's hire, the NPSR was steadily increasing; however, after the first year of hire the NPSR dropped considerably by almost \$26,000. By 2015, the metric increased to \$275,703,000 which was about \$4,000 more than the year of hire NPSR. Overall, even at Hospital A's highest NPSR in 2015, the NPSR was still almost \$135 million short of Standard and Poor's 'A' bond rated hospital median (Bretz & Gacka, 2017). This was not favorable for Hospital A because it indicates a decrease in the organization's patient volumes.

Figure 2. Hospital A: Net Patient Service Revenue



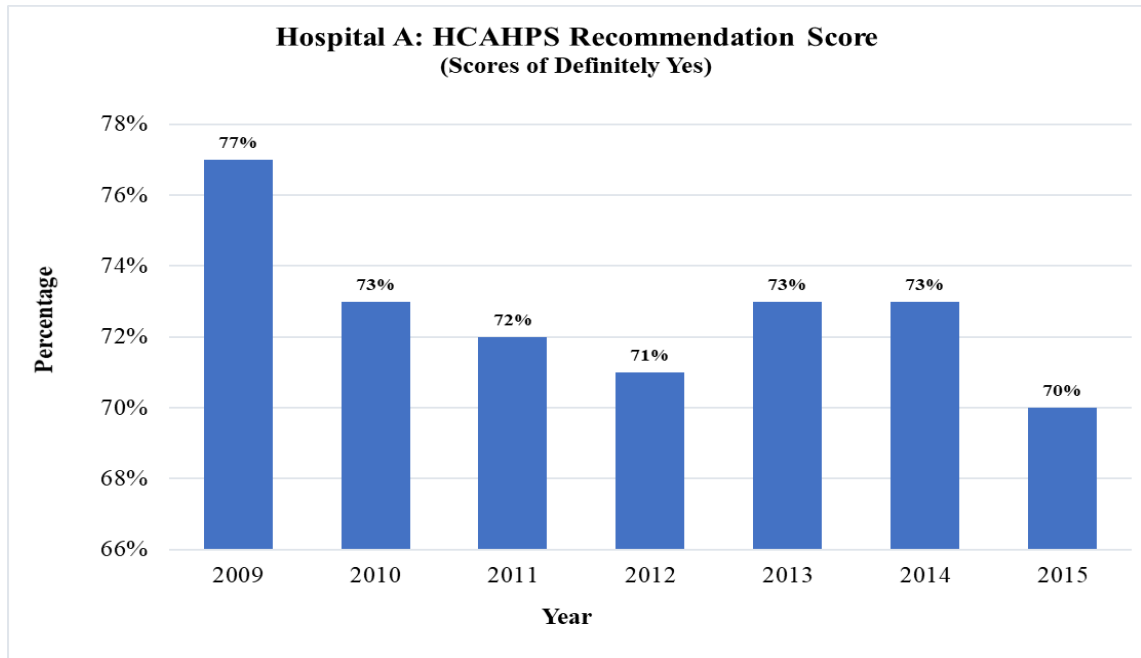
After the financial measures were analyzed, the next step was to analyze quality performance outcomes. Hospital A's Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) scores for questions 21 and 22 also were examined as a part of the quantitative metrics for the study and were overall moderate. Question 21 in the survey asks patients how they would rate the hospital overall on a scale of 0 (worst hospital possible) to 10 (best hospital possible). Hospital A's scores for Question 21 decreased between 2009 and 2011 and moved from the 50th percentile down to the 25th percentile (**Figure 3**). However, since the physician-CEO's hire in 2012 the percentage of top-box scores—scores of either nine or ten—increased by 4% for this particular question, which placed Hospital A back in the 50th percentile by 2015.

Figure 3. Hospital A: HCAHPS Overall Rating Score



Question 22 on the HCAHP survey was the second quality measure examined. This question asks patients if they would recommend this hospital to family and friends. The four-point scale ranges from definitely no, probably no, probably yes, and definitely yes. The top-box score is “definitely yes” and was measured for this study. After the first year of hire, the percentage of patients that selected “definitely yes” increased by 2 % (**Figure 4**). The next year there was no change, but after the third year of the physician-CEO’s hire (2015) there was a 3 % decrease in top-box scores. However, Hospital A consistently hovered around the 50th percentile, making their scores fairly ordinary.

Figure 4. Hospital A: HCAHPS Recommendation Score



Healthcare Organization B Within Case Analysis

The second healthcare organization that was examined for this study will be referenced throughout the rest of the paper as Organization B; however, the performance and financial performance metrics only measure Organization B's flagship hospital, which is referred to as Hospital B. Similar to Organization A, Organization B is an established healthcare organization in the northeastern region of the United States. With multiple campuses and nearly 1,600 primary and specialty care physicians, this organization serves over two and a half million patients, double the number of patients of Organization A. Hospital B offers full services and is a tertiary/quaternary care facility, which provides specialized consultative care, with almost 500 beds.

Similar to the CEO of Healthcare Organization A, the CEO of Healthcare Organization B is a practicing physician. Unlike the CEO of Organization A, the CEO of Organization B is newer to the organization, only taking on the role in 2015. The COO of Organization B is responsible for the welfare and performance of the system's clinical enterprise operationally. This executive has their Master in Business Administration and has been a member of the organization for several decades. The final interview participant from Healthcare Organization B was the CMO, a licensed physician who has shifted their practice to oversee all clinical operations in the organization. The CMO serves as the liaison between physicians and healthcare executives, in addition to enforcing the clinical guidelines that make healthcare delivery run smoothly for the system. Both the CMO and the COO at Organization B have had experience working with both physician-CEOs and non-physician-CEOs.

Healthcare Organization B's physician-CEO was asked similar questions to that of Healthcare Organization A's CEO. The interview protocol was based on an intuitive process, and thereby some interview questions evolved throughout the study. Therefore, the physician CEO was asked to self-describe him/herself and if they believed their medical background impacted their organization, specifically in the realms of finance and quality. The physician-CEO of organization B strongly believed that his/her background as a physician did not impact the organization:

I don't think so. I think you can be a healing person and not have a clinical license. **A clinical license does not equate to being kind and compassionate.**

Furthermore, he/she believed that they possessed strong communication and engagement skills, as well as a dedicated focus on patient-centeredness and caring:

I think I am a—you know what, **I think my clinical training actually trained me to be an even better listener.** But I think listening is key.

I am still working on **access** and I am still working on a way that **we can talk to people in a way that they understand...**

...**we are about caring** and you can't care from a corporate office.

The next interview was with Hospital B's COO, which was structured similarly to the interviews with Hospital A's COO and CNO. When Hospital B's COO described the physician-CEO, his/her remarks focused mainly on the CEO's messaging skills, desire to improve, and passion for patient-centered system:

I think his/her **ability to tell the story of the organization**—and I know that sounds kind of simple—but I think that in order to get...partners in the delivery of care or partners in the infrastructure of care—to really work with you, you have to have a vision for the organization. And **I think he/she can tell that story and vision really well.**

I think he/she **strategically outlined what is important for the organization** and he/she's got all of us focused on it and **we are making progress.**

...has a very high EQ [emotional intelligence], **very much patient-centric. It is at the very center of everything he/she does.** And he/she expects it to be the center of everything—all of us at the organization—do.

When asked about the relationship the COO has with the physician-CEO he/she very confidently stated that they had a strong working relationship. The CEO's ability to intrinsically motivate people and facilitate progress resonated with the COO. Furthermore, the COO believed that that strong relationship he/she shared with the CEO was in part due to the person the CEO is and not impacted by the CEO's clinical background:

It [the CEO's leadership style] is very open, it's very interactive, it's very comfortable. It is a style that **makes you want to do your very best for that leader.** I think that **my relationship is very good.**

I think that it is who he/she is. Does his/her clinical background...I think it adds a dimension...I think if [the CEO] was a finance person or a

marketing person, or whatever...**I think things that make him/her tick and make him/her who he/she is are bigger than that.**

The next interview question focused on the financial health and quality performance of the organization. The COO commented that the overall organizational performance for finance and quality was strong, but there was always a need for improvement:

There **are areas that we do very well at and there are areas where we continue to have challenges** with.

I think it is a journey for us all. I think that we are **always raising the bar.**

The final executive that was interviewed was the Chief Medical Officer of Hospital B. When asked to describe the CEO, the CMO portrayed the CEO of the organization as patient-centered and innovative:

I think those [patient interests first] **are north stars for him/her.**

He/she has a **strong foundational grounding** in what it takes to **delight your patient** and what it takes to **deliver high quality care.**

I think **he/she is oriented very differently**, where he/she believes the future of healthcare...is how do you keep people out of the hospital? How do you keep them healthy? And how do you align your finance model so that you get rewarded for keeping them [patients] out of the hospital?

When illustrating the relationship, the CMO has with the CEO, the CMO stated there was a strong relationship and conveyed a great deal of respect for the CEO. Additionally, Hospital B's CMO mentioned the alignment that was shared between them because of the shared clinical understanding as physicians:

I think since being here, **it [the relationship] has been fantastic.**

I have learned a ton from him/her. I think he/she is tremendously gracious with his/her time...**I've appreciated just being able to spend that time** and kind of hear his/her insights and see him/her in action.

There is **definitely a philosophical alignment.**

There is that **intuitive understanding when we are talking** about a certain scenario or certain set of circumstances or a certain service line. I don't have to explain that to him/her because he/she know it.

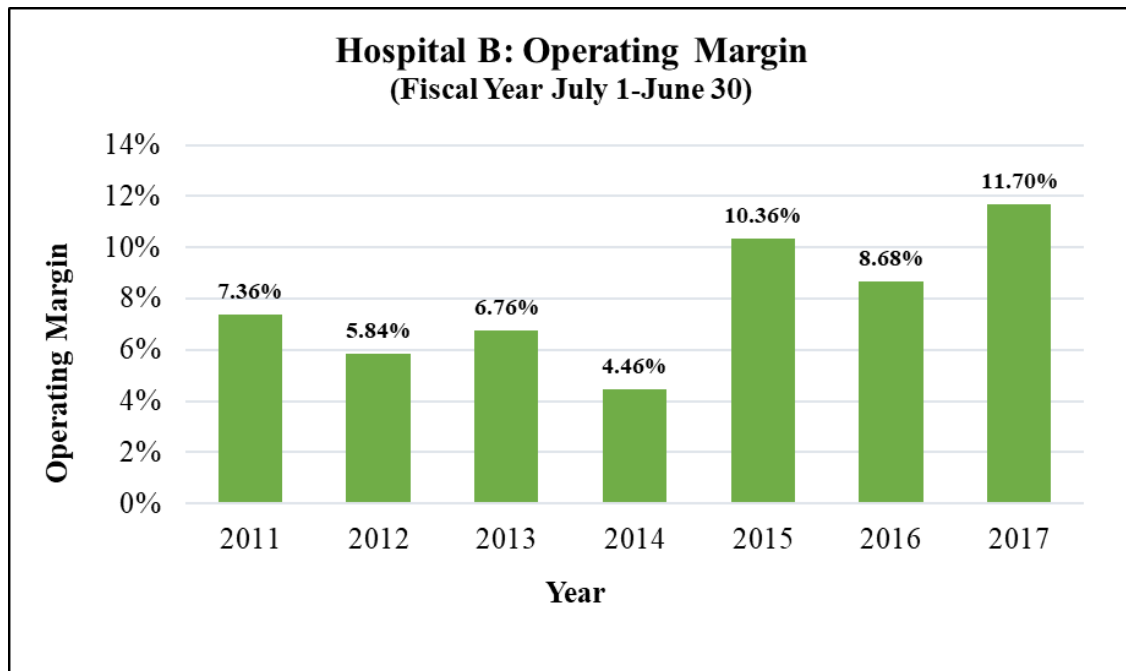
The final discussion in this interview was regarding the organization and its finance and quality performance. The CMO believed that the organization was in a time of transition and although it is doing fairly well during this transitional time, there was much hope for how much the performance will improve in the future:

I think by all external measures, we **look like we are pretty good—both financially and from a quality standpoint.**

At the same time, I would say that we are in transition because what we are doing is shifting our operating model all together. And sometimes when you are shifting an operating model, it tough to do on the fly and **it's almost impossible to do while maintaining the same level of performance.**

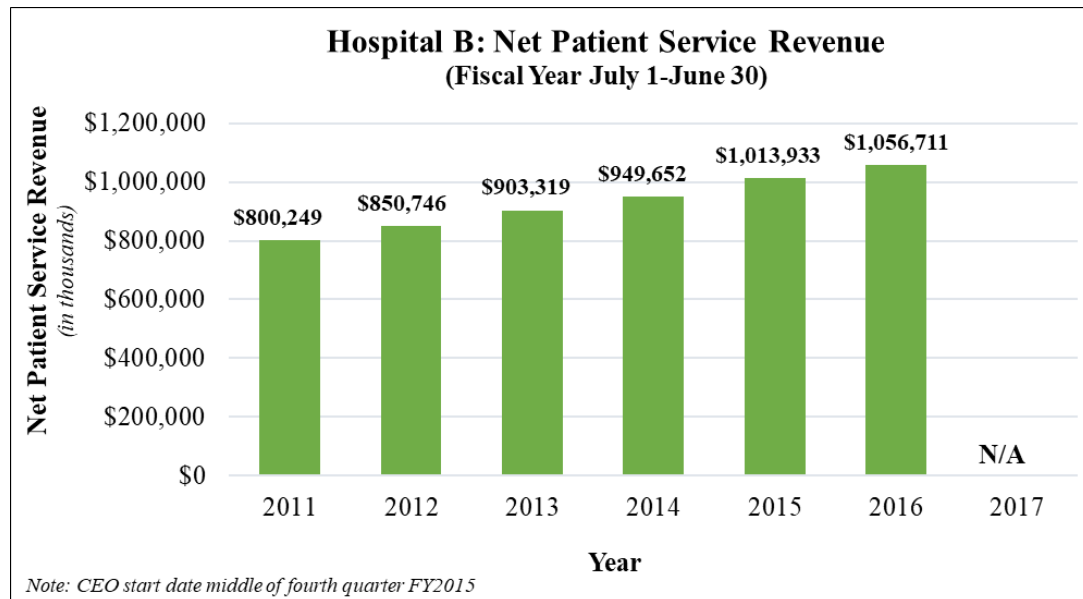
I think we are **starting to see them [leading indicators] head in exactly the right direction**, but we aren't there yet. We still have a long was to go before we sweep.

After all of the interviews were completed for Hospital B, the next focus was on gathering and analyzing the quantitative metrics. The overall financial metrics for the flagship hospital of Healthcare Organization B (Hospital B) were favorable for both operating margin and net patient service revenue (NPSR). From 2011 through 2014, which was before the hire of the physician-CEO, Hospital B had an operating margin that ranged between 4.46 % and 7.36% (**Figure 5**). After the physician-CEO's hire there was a large increase of almost 6%. After the first-year post hire, there was a slight decrease of about two percent, and then an increase of 3% to 11.7% in 2017. With the exception of 2014, the operating margin for Hospital B remained well over the Standard and Poor's 'AA' bond rated hospital median, making the profitability of this hospital very favorable.

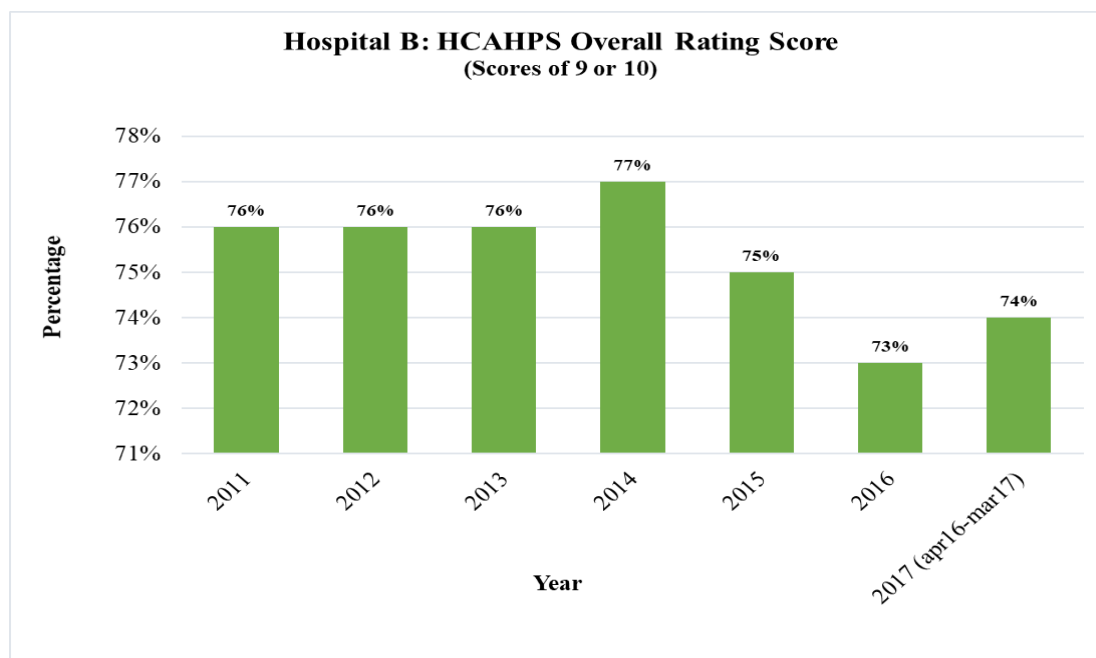
Figure 5. Hospital B: Operating Margin

The NPSR has been gradually increasing since 2011 (**Figure 6**). Prior to the physician-CEO's hire the NPSR remained under \$1 trillion. The year of hire, as well as the first year after hire, the NPSR increased to over \$1 trillion. Unfortunately, the NPSR for 2017 was unavailable to the researcher. Standard and Poor's 'AA' bond rated hospital median \$920,966,000 (Bretz & Gacka, 2017). Since 2014, Hospital B was able to exceed that amount.

Figure 6. Hospital B: Net Patient Service Revenue

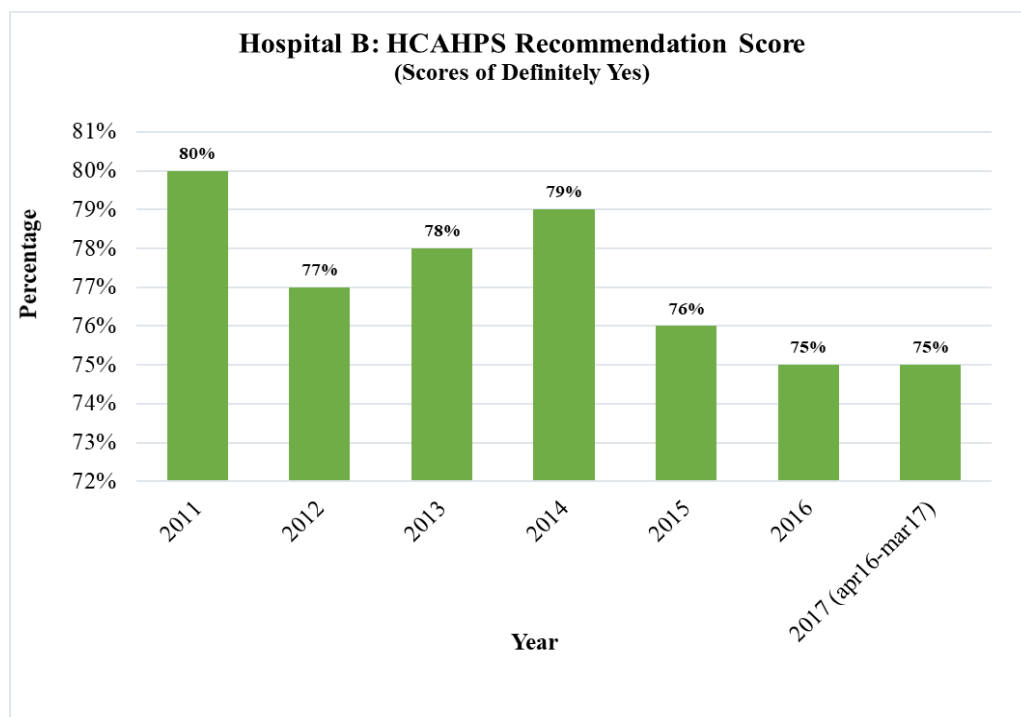


In addition to the financial metrics, Hospital B's HCAHP scores were relatively usual. For Question 21, the overall rating of the hospital, Hospital B received scores of nine or ten at a consistent 76 % in 2011, 2012, and 2013, which almost placed the hospital in the 75th percentile (**Figure 7**). After the hire of the physician-CEO and the years following there was a slight decrease to 75% in 2015, 73% in 2016, and 74% in 2017. Therefore, Hospital B has remained in the 50th percentile within this timeframe.

Figure 7. Hospital B: HCAHPS Overall Rating Score

Hospital B also received similar scores for Question 22 on the HCAHP survey, “Would you recommend this hospital to family or friends” (**Figure 8**). Similar to Question 21 results, after the hire of the physician-CEO there was a decrease in scores. After 2014, the percentage of top-box scores decreased by 3 percent. In 2016 it dropped again to 75 % and remained the same in 2017. Again, Hospital B managed to range within the 50th percentile during this timeframe.

Figure 8. Hospital B: HCAHPS Recommendation Score



Sub-Chapter 3: Cross-Case Analysis

This section shares the results of the coding process that produced the identified themes. Each interview was analyzed for phrases and key words that supported the research questions for the study. For validation purposes, triangulation was used strategically to see “whether new ideas are consistent with what is already well know about the Case” (Stake, 2013, p. 77). Next, the two cases were compared to search for common responses and shared beliefs. As the interviews were transcribed they were examined by both the researcher and a subject-matter expert to identify consistencies and inconsistencies among participant responses. This process was iterative and occurred for each of the six interviews conducted.

Below each identified theme is listed and categorized by research question. Under research questions one and two, themes were developed if three of the four subordinates c-suite executives interviewed share content that fit into that theme. The theme was then vetted with the respective quantitative data that was collected and analyzed in the previous section. For research question three, themes were created in the same way they were formed for research questions one and two. However, quantitative data was not used for support. In order to develop a theme for research question four, both physician-CEOs needed to have shared content that fit into that theme.

Research Question 1: *What relationship exists between physician-CEOs and an organization's financial success?*

Research question one yielded inconclusive results. The existing literature that attempts to understand the relationship between physician-CEOs and a healthcare organization's financial success is conflicting. Sarto et al. (2014) found that physician-CEOs have a negative impact on an organization's financial performance, as defined as operating margin and financial efficiency. Contrarily, Goes and Zhan's (1995) empirical study found that the more physicians were involved in hospital governance the higher the bed occupancy rates and operating margins were. The results of this section of the study were inconclusive because there was a lack of consensus among executives interviewed and the quantitative data did not have explicit trends. When examining research question one, there was a significant number of conflicting viewpoints and financial data:

...the **finance tends to be a lagging indicator.**

I think that **my clinical background probably does not [have an impact on financial performance]** ...I don't think it does. **I think that's neutral.** I don't think it's a negative nor a positive. And if I think of my physician CEO colleagues I think we are **a mixed bag in terms of how well we**

understand finances. And how connected we are to the financial performance. So, I would say it's a neutral.

We are **doing above average, I would say with opportunity to improve.** Financially, we have actually made a positive margin in the last 15 years, all, every year expect for one. So, **I would say that's successful.**

The financial metrics data for both flagship Hospital A and Hospital B were favorable—see **Appendix D** for more details. The operating margin for both hospitals exceeded Standard and Poor's median 'A' rated acute-care stand-alone hospital (3 percent) and in most cases median 'AA' rated hospital (4.8 percent) as well (Bretz & Gacka, 2017). This was the case in both flagship hospitals for the years prior to the physician-CEO's hire and three years post hire.

The data for the Net Patient Service Revenue (NPSR) produced slightly varied results. Hospital A did not reach the NPSR of the median Standard and Poor's 'A' rated hospital (\$410,619,000) in the six years that were examined. In fact, after the hire of the physician-CEO the NPSR decreased each year. On the contrary, Hospital B's NPSR increased every year that was observed. Furthermore, each year Hospital B exceeded Standard and Poor's median NPSR for an 'A' rated hospital (\$410,619,000) from 2011 through 2016 (Bretz & Gacka, 2017). Since 2014 and after the hire of the physician-CEO, Hospital B surpassed the median NPSR for an 'AA' rated hospital, which was \$920,966,000 (Bretz & Gacka, 2017).

Although the flagship hospitals for both Healthcare Organization A and B performed, what upon first glance seems to be favorably in financial outcomes, it is important to note that each flagship hospital only represents a portion of the healthcare organizations' overall financial performance. Furthermore, the organizations were not common-sized for this particular study, meaning the finances of each organization were not estimated to reasonable proportions.

Therefore, the organizations are not able to be fairly compared.

Research Question 2: *What relationship exists between physician-CEOs and an organization's Hospital Consumer Assessment of Healthcare Providers and Systems Scores (HCAHPS)?*

Similar to research question one, the results of research question two were inconclusive because of a lack of executive consensus and definitive quantitative trends. The existing literature suggests a positive correlation between hospital quality performance and physician-CEOs. Prybil's (2006) study discovered that the top high-performing hospitals, as determined by quality of care ratings and patient satisfaction scores, were characterized by intense physician involvement in management roles, as well as hospital boards. Organizations with physician-CEOs were found to have about 25 % higher quality scores among 300 U.S. News & World Report top-ranked hospitals compared to hospitals led by a non-physician-CEO (Goodall, 2011). However, in a 2004 study by Schultz et al., results did not find a statistically significant difference between physician-CEOs' and non-physician-CEOs' ability to make strategic decisions that improve the quality of care (Schultz et al., 2004).

This study yielded differing results. Throughout the interview process, participants indicated that HCAHP scores were not to be the best measure of quality performance, that the organization was performing well in terms of quality, and that clinical experience of the CEO did not impact quality scores:

I think **HCAHPs doesn't even capture what we are going for.**

I think from a **quality perspective we have also done well**, and above average, but **there is still opportunity to grow.**

It's certainly a journey, but even if we become the best... **[it] won't be good enough because we'd be comparing ourselves to a real mediocre industry.**

I think **HCAHPs are a little more neutral in regards to a clinical background.** HCAHPs in my estimation are more the outcome of your process of care and that can be done very well without a clinical

background. I may have a little more insight on what patients want and need because I sat with them in examine rooms and hospital beds. So, **I may have a little more insight, but I don't think that I change—fundamentally—the outcome of patient experience scoring.** I think that a good clinical process person, whether they are clinical or not can do that.

After examining the HCAHP scores (overall rating-Q21 & recommend-Q22), the quality scores for both flagship Hospital A and Hospital B were mediocre, remaining mostly between the 50th and 75th percentile of top-box scores for both questions—refer to **Appendix E** for more details. When looking specifically at the overall rating of the hospitals (Question 21), Hospital A's scores dropped significantly from the 50th percentile to the 25th percentile in the three years prior to the physician-CEO's hire. However, in the three years after the hire of the physician-CEO the hospital's scores increased back to the 50th percentile. Although, that is a notable improvement, the hospital was still performing at an average level according to CMS's 2017 HCAHP Percentiles (CMS B, 2017). On the contrary to Hospital A, Hospital B's overall rating scores started off stronger prior to the hire of the physician-CEO. Although the hospital consistently remained within the 50th percentile, after the hire of the physician-CEO the scores decreased.

For Question 22, which asked patients if they would recommend the hospital to friends and family, both hospitals remained within the 50th and 75th percentile as defined by CMS's 2017 HCAHP Percentiles (CMS B, 2017). Hospital A had decreasing scores for this HCAHP question prior to the physician-CEO's hire. After the physician-CEO's hire there was a slight up-tick in percentage of top-box scores; however, there was another decrease in scores in 2015. Similar to the results of Question 21, Hospital B experienced a decrease in top-box scores post physician-CEO hire for Question 22.

The interview responses did not provide conclusive insights into the qualitative performance of a hospital with a physician-CEO. Additionally, the HCAHP scores, revealed a small positive correlation between physician-CEOs and HCAHP scores for Hospital A and a small negative correlation between physician-CEOs and HCAHP scores for Hospital B. However, both hospitals overall had middle-of-the-road scores, according to CMS's 2017 HCAHP Percentiles (CMS B, 2017). As mentioned with the financial metrics, it is important to note that each flagship hospital only represents a portion of the healthcare organizations' overall quality performance.

Research Question 3: *How do operational c-suite executives (i.e.—chief financial officer and chief operating officer) and medical c-suite executives (i.e.—chief nursing officer and chief medical officer) perceive organizational performance under a physician-CEO?*

Research question three yielded five themes:

- Clinical and Managerial Languages
- Robust Decision-making Abilities
- Patient-centered Focus
- Strong Communication and Relationship-building Skills
- Continuous Improvement Outlook

Clinical and Managerial Languages: Physicians speak in a language of clinical priorities, new technologies, and scientific methodology. While healthcare executives generally speak a different tongue of budgets, human resources, policy, and system wide strategy. The challenge lies in the fact that physicians are using their clinical language to communicate with healthcare executives who only speak a managerial language and vis versa. What was found in this study, is that physician-CEOs have the unique ability to speak both languages. By speaking both healthcare languages physician-CEOs have the ability to bridge the clinical world of healthcare and the business world of healthcare. Therefore, common values and concerns are

shared efficiently and effectively; barriers are broken down; and progress is made. The positive impacts a physician-CEO's ability to integrate their bed-side experience, clinical rapport, and medical training into the administrative side of healthcare has is supported by the literature previously explored in this study (Rosin, 2015; Sarto & Veronesi, 2016; Schultz & Swan, 2004; Schneller et al., 1997; Stoller, et al., 2016). Within this particular study, the importance of the physician-CEO being able to speak and understand a clinical language arose on multiple occasions:

So, the ability to talk in their [physicians] language, is helpful. And **a clinically trained individual does have—I think—that advantage**. And does at times, catapult—especially in a new situation—**it does catapult the credibility of that leader** when you are talking to another clinician about change management or changing a direction. Having that clinical background does help in that conversation.

I think [the CEO] **being a clinician, helps drive the agenda** and the sincerity of our past and our goal to constantly improve our quality metrics.

I think **there's a credibility that automatically comes with having been across the bedside—so to speak—from a patient**. I think there is tremendous **credibility, and that allows you to move things, move initiatives and garner support** for different things we are trying to do.

Robust Decision-Making Abilities: When treating patients, physicians are trained to analyze the hundreds of factors that play into each patient's case, each of which can make the difference in a successful treatment, determine importance of each factor, diagnosis the problem, and then treat the patient accordingly. In addition to being accurate this decision-making process needs to be effective and efficient. Effective and efficient decision making is the best process through which alternatives are selected and then managed through implementation to achieve business objectives (Harvey, 2007).

Any decision made within the healthcare field, even in a corporate office, will impact patient lives. Therefore, a healthcare CEO requires effective decision-making skills just as much as a physician. However, when a healthcare CEO has the deep understanding of the core business as a physician, the organization is driven by knowledge-based strategy which should improve organizational performance. This concept is essentially Goodall's theory of expert leadership (Goodall, 2012). In this study, the decision-making abilities of the physician-CEOs was commented on multiple times:

The CEO with a clinical background will consider the view of the clinicians and for those decisions.

I think clinical quality and outcomes and managing the costs of healthcare is really a difficult set of decisions and **having a clinical background, just gives you an edge up on making those decisions well.** I think there are plenty of non-physician administrators that do a great job and are able to perform at a very high level and are equal to any clinically trained person, but I think that it's just an **easier path with a clinical background.**

...looking at—making decisions—with a, **making sure that we look at the clinical aspect of care.** And not solely rest on the financial aspect or the business aspect of providing care.

[He/she] **comes at a problem as if a physician would come at a problem.** What I mean by that is [he/she] **assesses, diagnoses, and then creates a treatment plan.** Then comes back and reassesses and sees if the treatment plan worked.

On the pro-side of that, **physicians are used to making decisions in a very structured fashion.** We **gather, what we think is the critical data, and based on that information we a decision.** And it's fairly timely for most physicians... You've learned over decades to find the critical information quickly, make a decision, and move forward. So that's definitely a plus. **You can apply that methodology to management all the time.** Gather the data, decide what's critical and make a decision.

Patient-centered Focus: The Institute of Medicine (IOM) defines patient-centered care as: “Providing care that is respectful of, and responsive to, individual patient preferences, needs and values, and ensuring that patient values guide all clinical decisions” (IOM, 2001).

Ensuring that people are involved in and central to their care is now recognized as a key component of developing high quality healthcare (Dowsett et al., 2000; Ashby & Dowding, 2001; Kwan & Sandercock, 2003). With a patient-centered focus there are opportunities for improvements in the quality of services available, access to care, patient engagement, and ultimately reduced pressure on health services. This study found both physician-CEOs to have a deep inherent knowledge of the core-business activity and years of experience at the bed-side of patients that they implement by serving as standard-bearers:

I would say that [the CEO] is the perfect blend of a very strong management/business person—very bright, understands healthcare very, very well, but also has a very high EQ, **very much patient-centric. It is at the very center of everything he/she does. And he/she expects it to be at the center of everything—all of us at [the organization] do.**

[His/her] **underlying commitment to the patient**—the consumer and the provider.

I think that he/she is a change agent, but **his/her change all revolves around what he/she thinks is the most important thing—and that is the patient and the patient’s experience.**

...and his/her **passion about doing what is right for the patient.**

Because, **we are about caring** and you can’t care from a corporate office. We’ve need taken an appendix out here, we’ve never held anyone’s hand while they died. That’s what our organization is [caring]...

I think I am still **just trying to take care of patients.** Today, I will round on patients and try to explain things in a way they understand. And I am trying to make sure that they can get in right away.

[His/her] **commitment to the patients and the communities we serve.**

Strong Communication and Relationship-building Skills: Communication and relationship-building skills is a vital aspect in any great leader. In a healthcare setting especially, strong communication between providers increases patient satisfaction. As a CEO of a healthcare organization, communication is critical for building alignment throughout the organization and executing strategy (Burnison, 2017). Schultz et al. (2004) found no statistically significant differences between medically educated and managerially educated CEO's ability to make strategic decisions. However, in this study found that, whether through words or actions, the physician-CEOs of the participating organizations consistently convey the vision, purpose, and values of the organization. Moreover, through effective communication the physician-CEOs are able to build strong relationships with their subordinates. Repeatedly, the theme of communication and relationships appeared in each interview. Most c-suite executive leaders in the study commented on the physician-CEO's ability to bring people together for a common goal, while both physician-CEOs emphasized how crucial their listening skills, which were honed by being a practicing physician, were to their leadership philosophies:

So, integrity, the ability to set a direction, the ability to make decisions, **the ability to bring a team together**, the genuineness that he/she interacts with staff/patients/college agues/the community. I think those are the things that make a strong leader and a CEO. And he/she has them.

[His/her] **relationship building skills** are extra ordinary.

He/she is a **good relationship person**...he/she can **develop a relationship** and really **bring two or multiple sets of people together to move in a direction to change** the environment.

That one I would say the key to all of this is really the **ability to listen and to sit with people and to empathize**. And I think I am a—you know what, I think my clinical training actually trained me to be even a better listener. But I think **listening is key**.

The **ability to convey**—basically being a **good communicator**.

He/she is also **a very personable person** and I find that it is easy to talk with him/her to get guidance.

I believe that the advantage I have... is **listening skills**. As a physician you learn, you interview a patient and listen pretty carefully for clues that are sometimes pretty obvious and sometimes are not, that will be important clues in making a decision. And in my experience, and **good physician listeners make good physician administrators**, because they can listen to the problem statements and find out of that what's the important issue.

I think his/her **ability to tell the story of the organization**—and I know that sounds kind of simple—but I think that in order to get...partners in the delivery of care or partners in the infrastructure of care—to really work with you, you have to have a vision for the organization. And **I think he/she can tell that story and vision really well**.

I think he/she really tries **to empower the team** to go do and achieve **once the vision is clear**. I think that is another really strong leadership trait.

He/she **works at nurturing that relationship and the synergies** that need to be there rather than the rub. And so, I would say that and this may be his [clinical] background—that pulling that team together in a way that it hasn't been pulled together before...

Continuous Improvement Outlook: The literature review (Chapter 2) described in-depth, the healthcare system of the United States has been a part of an ongoing evolution. The industry of healthcare itself is extremely demanding. Consumers expect consistent high-quality care, performed accurately as well as compassionately. Today, consumers are also beginning to demand more transparent and reasonable prices for the care they receive. Therefore, healthcare organizations must become more efficient in order to continue offering high-quality services at reasonable rates.

When a healthcare organization and its leader have a primary focus on the patient experience, the secondary focus is naturally continuous improvement. Furthermore, with a continuous improvement mindset, healthcare organizations are able to optimize new practices and technologies, effectively serve growing populations, and financially prosper (LEG, 2015). A

leader with a continuous improvement mindset is one that constantly searches for growth and development. In addition, the leader believes in an ongoing cycle of positive change which is actively implemented to produce results (TeamWorks, 2002). The physician-CEOs in this study were found to have a continuous improvement mindset:

I think [the CEO] being a clinician, **helps drive the agenda** and the sincerity of our past and **our goal to constantly improve** our quality metrics.

It's certainly a journey, but even if we become the best... **[it] won't be good enough because we'd be comparing ourselves to a real mediocre industry.**

And continue the organization towards **the end goal of constantly improving** and improving our quality scores.

So, where are we going to go? We will certainly get to the 99th percentile. And when we get to the 99th percentile, **I will say the journey has just begun** because we have to capture those other 14 or 15 people, so it is 100 out of 100.

...we **are always raising the bar.**

we know **it positions us better for long-term sustainable success and that takes a committed leader, who really believes that that is the right direction.** And I think [the CEO] definitely, as I alluded to earlier, believes that's the right direction. And it all starts there.

Research Question 4: *What impact do physician-CEOs feel their clinical background has on their organization?*

Research question four also produced inconclusive results. Gauging the opinion of physician-CEOs on how they view the impacts, if any, their clinical background has on their organization was unique to this study. In the literature that was reviewed, there were no studies that's evaluated the thoughts of physician-CEOs themselves. The two physician-CEOs that were interviewed in this study have very differing opinions on the subject. Both physician-CEOs were humble about their success as a CEO and indicated how their clinical backgrounds impacted

their communication skills as a leader. However, the CEO of Healthcare Organization A strongly believed that his/her background as a physician impacted the organization in terms of decision making, cost management, and clinical quality. Whereas, the CEO of Healthcare Organization A did not even hold the belief that he/she “led” the organization at all, and therefore his/her clinical background made no impact on the organization. Although, he/she did convey that he/she is trying to imbed his/her values throughout the entire organization:

Healthcare Organization A—Physician CEO:

...My opinion is pretty strongly held that healthcare CEOs need a clinical background these days. I’d underline the “these days” part. I would say 10 or 20 years ago it certainly back beyond that, a business background was certainly plenty. But I think clinical quality and outcomes and managing the costs of healthcare is really a difficult set of decisions and **having a clinical background, just gives you an edge up on making those decisions well.**

I think there are plenty of non-physician administrators that do a great job and are able to perform at a very high level and are equal to any clinically trained person, but I think that **it’s just an easier path with a clinical background.**

I think that in the cost of care, a clinical background gives you much more clarity in to where you spend money unnecessarily, where there is waste.

I think **HCAHPs are a little more neutral in regards to a clinical background.** HCAHPs in my estimation are more the outcome of your process of care and that can be done very well without a clinical background. I may have a little more insight on what patients want and need because I sat with them in examine rooms and hospital beds...**I don’t think that I change—fundamentally—the outcome of patient experience scoring.** I think that a good clinical process person, whether they are clinical or not can do that.

I believe that the **advantage I have, trying not to be arrogant about it, is listening skills.** As a physician you learn, you interview a patient and listen pretty carefully for clues that are sometimes pretty obvious and sometimes are not, that will be important clues in making a decision. And in my experience, and **good physician listeners make good physician administrators,** because they can listen to the problem statements and find out of that what’s the important issue.

Healthcare Organization B—Physician CEO:

I don't think I lead the organization. I think the leader of the organization is really our patients and families. If you say who works for us and leads the organization—it's those frontline people—our transporters, our nurses, our residents, our docs, our social workers, our pharmacists...I serve it [the organization], and my team serves it to get the obstacles out of the way, so all that stuff can happen. So, I don't even see myself as leading the organization...**Except when I occasionally do see patients. Then I think I am leading the organization.**

Yeah, that one I am good with. That one I would say **the key to all of this is really the ability to listen and to sit with people and to empathize.** And I think I am a—you know what, I think **my clinical training actually trained me to be even a better listener.** But I think listening is key.

I think caring is an innate human quality. And I think learning biochemistry and organic chemistry and doing general surgery does put you into that setting quite a bit, but **it is not enough and it's not a requirement.**

I don't know if I had followed a different path, maybe my stories wouldn't be quite as compelling, but I think I am the same person. So, **I don't know if it's the MD degree that makes this happen.**

I think you can be a healing person and never been in a clinical...not have a clinical license. **A clinical license does not equate to being kind and compassionate.** So, there are some assholes who are doctors and nurses. And there are some really, really kind people who are incredibly healing and therapeutic and they may work for us in our legal department. So, **I am not caught up on titles.**

My team knows that we answer patients and we talk to patients and we sit with patients all the time, and that that's our number one priority. **My team knows that the values that I have in my heart must be in the team or you won't be on the team...integrity, passion, and humility** are values that I work on every day in myself. Everyone on the team better have those values or they are not a part of the team. And then I hope that that spreads to the organization. And I'd add another one—kindness. I think we could use a little more kindness in the world. And I want our organization to “act” in a kind way, in whatever aspect or capacity.

Conclusion

The primary focus of this chapter was to outline the results of the study and define the overarching themes that were derived from the results. The first section analyzed each case individually. Each of the healthcare organization's demographics were provided along with information about each interview participant from that organization. A within case analysis provided significant quotes from interview participants and reviewed finance and quality performance outcomes. Finally, cross-case analysis explained the themes that emerged from the study.

Healthcare Organization A located in the northeastern United States serves approximately one million patients annually and has a flagship tertiary care hospital of about 250-beds. The researcher interviewed the physician-CEO, the CNO, and the COO individually. Hospital A's operating margin was overall very strong, being several percentage points over the Standard and Poor's median 'AA' rated stand-alone hospital. However, the Net Patient Service Revenue (NPSR) of Hospital A was below Standard and Poor's median 'A' rated stand-alone hospital, which was not considered favorable.

In terms of quality, Hospital A had top-box HCAHP scores for Question 21 (overall rating) and Question 22 (recommendation) within the 75th and 50th percentiles, which is considered ordinary according to CMS's 2017 HCAHP Percentiles. After the hire of the physician CEO, the top-box scores increased significantly for overall rating. The top-box scores for Question 22 were decreasing prior to the physician-CEO's hire and remained consistently in the 50th percentile after the hire of the physician-CEO.

Healthcare Organization B is also located in the northeastern region of the United States, but is much larger than Healthcare organization, serving over two and a half million patients

each year. Furthermore, the flagship hospital (Hospital B) of the organization has almost 500 beds. The physician-CEO, COO, and CMO were interviewed separately for this study. The operating margin for Hospital B throughout the six years examined exceeded median 'A' rated stand-alone hospital, according to Standard and Poor's. After the physician-CEO's hire, the operating margin increased continuously, with the exception of 2016. The NPSR for Hospital B was also extremely favorable. Specifically, after the physician-CEO's hire, the NPSR exceeded Standard and Poor's median 'AA' rated stand-alone hospital for 2015 and 2016.

Similar to Hospital A, the quality performance outcomes were less favorable than the financial outcomes for Hospital B. In 2011, 2012, and 2013 the top-box HCAHP scores for Question 21 (overall rating) were in the 75th percentile according to CMS's 2017 HCAHP Percentiles. After the hire of the physician-CEO the scores dropped to the 50th percentile. Question 22 (recommendation) yielded similar results to Question 21. Although the scores remained in the 50th percentile all six of the years examined, the scores decreased post-hire of the physician-CEO.

The cross-case analysis organized the discovered themes by research question. The results of the study generated inconclusive results for research questions one, two, and four. There was either not enough evidence to produce a significant theme and/or there was conflicting information provided among the interview participants' responses and/or the quantitative data. However, in research question three it was found that c-suite executives (both medical and operational) perceived the physician-CEO to have certain qualities that impacted the organization's performance. Those qualities include the capability to speak both a clinical and managerial language, robust decision-making abilities, a focus centered on the patient, strong communication and relationship-building skills, and a continuous improvement outlook.

The remainder of the paper will provide a thick discussion of the study. The researcher will observe the strengths and weaknesses of the study. Additionally, there will be a vigorous examination of the limitations of the study and a section devoted to understanding the implications this study has on the healthcare industry. Recommendations for future researchers will also be provided. Finally, the paper will conclude with a summary of the study.

Chapter 5

Discussion

Within the healthcare industry, there is a push for more “physician engagement” and stronger “physician leadership”, yet there has been little conversation about the role and benefits of physician-CEOs (Goodall, 2012; Stoller et al., 2016). The conversation is muted, despite the fact that the most consistently top-ranked hospitals, such as the Mayo Clinic, Cleveland Clinic, and Massachusetts General Hospital are run by physician-CEOs. (Darzi, 2009; Goodall, 2011; Patel, 2007; Poduval & Poduval, 2008; Sarto & Versonesi, 2016 Stoller, 2009; Stoller et al., 2016). The existing data that seeks to answer whether a physician would serve best as a hospital CEO is limited and inconclusive. Therefore, this research was needed to fill the gap, and better understand how physician-CEOs impact the success of their organizations.

This study sought to answer four specific research questions:

1. What relationship exists between physician-CEOs and an organization’s financial success?
2. What relationship exists between physician-CEOs and an organization’s Hospital Consumer Assessment of Healthcare Providers and Systems Scores (HCAHPS)?
3. How do operational c-suite executives (i.e.—chief financial officer and chief operating officer) and medical c-suite executives (i.e.—chief nursing officer and chief medical officer) perceive organizational performance under a physician-CEO?
4. What impact do physician-CEOs feel their clinical background has on their organization?

In order to answer these research questions, the author designed a rigorous multi-case study with embedded analysis, as defined by Yin (2009, p. 59). The study examined two healthcare physician-CEO led organizations and consisted of semi-structured interviews with each physician-CEO and two subordinate executive team members, one operational (i.e.—COO or CFO) and one medical (i.e.—CNO or CMO). Additionally, the operating margin and net

patient service revenue was used to gauge financial success. While, HCAHP scores for Question 21 (overall rating) and Question 22 (recommendation) were used as quality performance metrics. Both the finance and quality metrics were examined over a six-year timeframe—three years prior to and three years after the physician-CEO's hire.

The study found interesting but ultimately inconclusive results for research questions one, two, and four. However, for research question three, the study was able to generate several themes regarding the perceived qualities of physician-CEOs that impact organizational performance. These qualities include the capability to speak both a clinical and managerial language, robust decision-making abilities, a patient-centered focus, strong communication and relationship-building skills, and a continuous improvement outlook. Ultimately, more research is needed to fully understand the impact of physician-CEOs on healthcare organizations. However, this study was vital in calling attention to the large gap in the existing literature surrounding physician-CEOs. Overall, this research can be used by various stakeholders within the healthcare industry, including but not limited to healthcare executives, healthcare executive recruiting organizations, physicians, and hospital boards.

The purpose of this chapter is to provide a well-rounded and thorough discussion of the research that was performed and the results that were generated from the research. In the first section of this chapter there will be a review of the study's strengths and weaknesses. To expand on the weaknesses of the study, the second section of this chapter will address the limitations of the study. Next, section will report on the various implications this particular study has on the healthcare industry. Recommendations for future research will then be explored in section five. Finally, section six will conclude the paper with a review and summary of the study.

Strengths and Weaknesses

The author acknowledges that, like with any research, this study had various strengths and weaknesses. This sub-chapter will first review the strengths of the study individually. It will then follow-up with an explanation of the weak points of the study.

The strengths of this study include, but are not limited, to various aspects of the research methodology, study design, data triangulation, and identification of themes. The researcher adopted a rigorous multi-case study with embedded analysis, as defined by Yin (2009, p. 59) early on in the research process. Furthermore, the researcher kept to a robust qualitative guideline, similar to the template established by Guba (1981). The guidelines assisted in establishing and enhancing the trustworthiness in the research by examining truth value (credibility), applicability (transferability), consistency (dependability), and neutrality (confirmability) in this study (Guba, 1981). Although only two healthcare organizations participated in the study, the researcher gathered richer data and that allowed for a more complex analysis process than a single case study approach as it allows for the beginnings of saturation. Saturation being “the gold standard by which purposive sample sizes are determined in health science research” (Gubrium et al., 2013 p. 60).

Another noted strength of this study was its expansion on CEO self-report. In addition to interviewing the CEO, input was obtained by two other members of their executive leadership team, which allowed the researcher was able to capture a truer sense of the data, rather than rely solely on the information the physician-CEO self-reported. This, as Yin (2009) suggests, increased the impact of triangulation of the data. Finally, identification of themes pertaining to the perceived qualities of physician-CEOs that impact organizational performance laid the groundwork for future research. The inconclusive results for three of the four research questions

is not discouraging. The results produced in this study reaffirmed results found in similar studies and reinitiated the conversation about the various potential impacts a physician-CEO may have on healthcare organizations and the overarching healthcare industry.

The researcher fully recognizes each of the study's weaknesses such as the performance metrics, sample, and timeframe. Although the researcher had valid reasons to select the finance (operating margin and net patient service revenue) and quality metrics (HCAHP top-box scores for Q21 and Q22) used in this study, overall all the metrics did not gauge success in either of their respective realms. This is in part because the researcher only measured the metrics for the flagship hospital of the organizations and partially because the publicly available data was limited and therefore the researcher was restricted in the selection of metrics to review.

As briefly mentioned, the sample size of the study only consisted of two healthcare organizations, which was not ideal. This small sample size made it more challenging to identify meaningful themes and did not allow for full saturation. Another weakness worth mentioning was the type of sample taken. Physician-CEOs are only one variation of a clinical CEO. The study did not consider other types of CEOs with clinical backgrounds or longer tenures. Specifically, CEOs with a background in nursing and different physician specialties. Lastly, the study did not take into consideration the size or the academic affiliation, or lack thereof, of each healthcare organization.

In addition to the metrics and the sample, the overall timeframe of the study was condensed due to external circumstances. If there was an extended timeframe, the researcher could have spent more time addressing the other weaknesses of the study.

Study Limitations

“Mistakes are the portals of discovery” (Joyce, n.d).

Although the research conducted was rigorous and trustworthy, the author recognizes several limitations of the study and will address each one in this section. Specifically, the weaknesses of metrics, sample, and condensed timeframe previously discussed will be explored further to improve future research.

Objectively measuring organizational performance, let alone the contribution of any one individual's role to that performance is difficult, at best. The researcher chose to measure hospital success by two financial outcomes and two quality outcomes. It is important to note, that that most of the data collected relied on publicly reported data. As of 2001, 20 states collected either required hospitals to submit State financial reports or audited financial statements, which were then made public (Kane & Magnus, 2001). This research utilized this type of publicly available, retrospective financial data. Additionally, to capture the quality performance of the organizations, the study used HCAHP survey data that over 4,000 hospitals, including the ones in this study, participate in (CMS, 2017).

Operating margin and the net patient service revenue (NPSR) were selected to determine financial outcomes. The operating margin of a hospital indicates the extent to which the organization is generating a profit by using its financial and physical assets (HFMA, 2017). The NPSR of a healthcare organization indicates the fluctuation of hospital services provided to patients (Heffernan, 2013). The researcher was unable to obtain the NPSR for 2017 due to time constraints and lack of access to data after exhaustive attempts. Because fluctuation in NPSR can be related to changes in patient access to insurance and variations in service mix or patient volumes, it was difficult to connect the hospitals financial well-being to this metric without

knowing more proprietary information about the organizations. In future research, it would be beneficial to examine a different financial metric that incorporates NPSR, such as the liquidity ratio of Days in Accounts Receivable. This ratio uses NPSR to calculate the average time that it takes an organization to collect its receivables (HFMA, 2017).

In order to measure quality, two Hospital Consumer Assessment of Healthcare Providers and Systems survey (HCAHPS) questions were evaluated. Question 21 on the survey asked consumers to rate their overall experience at the hospital on a scale of (worst) 0 to 10 (best). Question 22 asked consumers to how likely they would be to recommend a friend or family member to that hospital on a scale of “definitely no” to “definitely yes”. The top-box scores of these questions were examined for this study because each question gauges the patients’ broader hospital experience. HCAHPS is a reliable and comparable dataset.

However, for this study the researcher only had access to publicly available data which only consisted of “top-box scores”, meaning the most positive responses to HCAHPS. Therefore, the study was not able to fully capture the full-range of patient responses. Additionally, without knowing the individual context of hospital priorities, new initiatives, and/or changes in processes it is difficult to understand how HCAHPS scores are valued within organizations. For instance, in an interview with one of the physician-CEO’s commented that “I think HCAHPs doesn’t even capture what we are going for”. If the leader of the organization is not emphasizing the improvement of a particular metric, the likelihood of that metric improving is low. However, additional participants in the research may reveal richer data.

Both physician-CEOs participating in the study were CEOs of a healthcare system, not just a singular hospital. However, due to time restrictions, the financial and quality metrics were only measured for the flagship hospital of each healthcare system. Although the metrics of the

flagship hospital of each system is extremely valuable data, it is only a small representation of the overall success of each system. Additionally, the two flagship hospitals that were measured varied greatly in terms of capacity, practicing physicians, patient volume, and overall size. Therefore, the Hospital A and Hospital B were not able to be compared fairly. It was possible to fairly compare the hospitals through a common-sizing process. However, due to time restraints and lack of private financial information, the research was unable to complete the common-sizing process.

The sample size of this study was hindering to the overall results of the study. Although the quality of the sample was rich, the quantity of the sample hindered the ability to better understand the emerged themes. Because the researcher only examined two healthcare organizations, further research is needed to capture a true saturation level. The small sample also contributed to the results of the study not being generalizable to the broader healthcare industry. Specifically, because the healthcare organizations were different sizes and inconsiderate of academic affiliation, provider type, and provider specialty.

Lastly, the study was limited by its unforgiving timeframe. Due to the researcher's initial struggle determine a research topic and find a committed thesis advisor, the study only started in the summer of 2017. This late start only allowed for a nine-month timeline because of the researcher's impending graduation May 2018. Because of the multiple variables examined in this study, the timeframe for preparation and execution were truncated. Additional delays were caused by an elongated process required for the study to be approved by the International Review Board, difficulties coordinating schedules with six high-level healthcare executives and imposed deadlines. The truncated timeline forced the researcher to limit the sample size of the study and shorten the time allotted for in-depth analysis. Despite the various limitations of the

study, the research conducted has implications to various aspects to the healthcare industry and highlights a need for future research in this field.

Implications to the Healthcare Industry

The information resulted from this research led to the discovery of five characteristics specific to physician-CEOs in this study. These defined characteristics, derived from interviews with talented physician-CEOs and their knowledgeable executive team members, have implications on various stakeholders within and aspects of the healthcare industry including current healthcare executives, executive recruitment, healthcare boards, educational systems, and students. This section aims to identify and explain each of the outlined implications.

Current Healthcare Executives: Current healthcare executives can benefit from the information provided by this study. If a healthcare executive, whether physician-trained or not, is striving to become a chief executive officer he/she will be expected to develop and carry out the vision and strategy of the organization. Furthermore, the CEO is expected to create a system in which all employees, from entry-level to senior executives, are engaged and motivated (AESC, 2018; Kovner, 2013 p. 290). This study found that c-suite executives were both engaged and motivated by their physician-CEO in part because of the CEO's strong communication and relationship-building skills. Those executives, physician or not, seeking to advance their careers can use this study to better understand how the themes of "continuous improvement outlook", as well as, "communication and relationship-building skills" can impact their careers.

Another possible benefit would be for current healthcare CEOs to use the identified themes in this research for assessment during succession planning. Additionally, the identified

themes of this research could be used for assessing and coaching high potentials within the organization. High potentials being the exceptional employees that organizations have identified as top talent on the path to senior executive positions in the organization (Jones, 2014, p. 140).

Healthcare CEO Recruiters: CEO recruiters and executive search firms seeking to fill healthcare CEO positions can utilize the results of this study to improve recruitment efforts. Most executive headhunters or senior search consultants focus their search efforts on candidates with extensive operational experience. In addition to credibility and a proven track record in healthcare operations, CEO recruitment efforts typically seek out individuals with an analytical mind and strong decision-making skills (AESC, 2018). This study found that c-suite executives were strongly satisfied with their physician-CEO's leadership in part because of the physician-CEO's robust decision-making abilities. Executive search firms can use the information in this study to expand search criteria for healthcare CEOs to include physician experience.

Healthcare Organization Boards: One of the most important and difficult decisions a healthcare organization's board will make is the selection of a new leader. Although an outside recruitment firm may be called in for assistance, it is up to the board to oversee that the CEO recruitment process is rigorous, careful, and defensible. More importantly, it is the board's responsibility to ensure the CEO is capable of handling the "optimal fulfillment of the institutions charter, mission, and philosophy in response to the identified needs of the community" (Kovner, 2013 p. 290). The themes identified in this study can be used by a healthcare organization's board while searching for a new CEO to provide insight on what questions to pose during the interview process and how a physician-candidate can impact an organization. For example, a physician-CEO's ability to think and speak both in a clinical and operational way can provide the board with a unique perspective that can break down

communication barriers between administrators and clinicians to promote progress. Moreover, the list of themes obtained from this research offers insight into characteristics and skills that hospital board selection committees can use to assist them in difficult decision-making process of selecting a new CEO.

Higher Educational Systems, Medical Students, and Business Students: This research also benefits higher educational systems. As the power dynamics of healthcare continue to shift between hospitals and physicians. Medical schools and universities with M.B.A., M.H.A., and M.P.H. programs need to prepare students with the necessary tools and training to thrive in such a dynamic industry. As previously mentioned, healthcare executive search firms seek out CEOs with extensive experience in operational leadership and keen understanding of business. Furthermore, healthcare CEOs are expected effectively respond to the needs of the medical staff, employees, and patients, which requires a strong understanding of the clinical side of healthcare (AESC, 2018; Kovner, 2013 p. 290).

Currently, most medical schools do not provide students the necessary leadership and business skills to pursue a career as a healthcare CEO. Similarly, most universities with M.B.A., M.H.A., and M.P.H. programs are not providing students with the necessary opportunities to engage and understand in the clinical side of healthcare (Goyal et al., 2015). Because of this, dual degree programs are increasing across the nation. Since 1993, the number of M.D./M.B.A programs in the United States has increase from six to sixty-five in 2012 (Goyal et al., 2015). As research, such as this study, continues to explore the impacts physician-CEOs have on organizations, both medical and business students need to consider how their education and training will impact their careers long-term. And higher educational systems will need to consider how their programs are preparing students to excel in the healthcare industry. Perhaps

M.H.A., M.P.H., and M.B.A programs can engage clinical representatives to teach courses that would help future lay-administrators better understand the clinical side of healthcare.

Recommendation for Future Research

This research is a launching platform that can be utilized by future researchers to drive the discussion of physician-CEOs to the forefront of conversation in the healthcare industry. There are numerous opportunities to expand on this work, including potential expansion, diversification, and additional triangulation.

Additional cases would allow the researcher to confirm reoccurring themes and reach full saturation (Creswell & Clark, 2007, p. 75; Gubrium et al., 2013 p. 60). By looking for sites similar to those that were used in this study, future researchers could deepen the impact of the results of this research. One option would be to expand the current demographics of the cases by researching organizations in different geographical locations. The leadership needed to successfully run a rural hospital varies from the leadership needed to run a hospital in a major metropolitan city. Another research opportunity lies in the differences CEOs with dual degrees (MD or OD and MHA or MBA). Expanding the study to examine type of facility would also be another future research option. This could be done by taking academic affiliation or non-profit status into consideration. Expanding the study could also be accomplished through studying various size organizations such as, singular hospitals vs. large systems.

Ethnicity and gender of the CEO were not taken into consideration for this study. Future researchers should consider how diversity impacts how a CEO leads a healthcare organization.

By adding diversity to the group of CEOs evaluated, the study's generalizability would increase to include various ethnicities and genders.

Diversifying the type of provider-CEO is another option for future research. There is an increasing number of nurse-CEOs across the country. There are plenty potential study prospects in understanding the differences between nurse and physician CEOs. Additionally, there is an opportunity to expand this study by other clinical degrees such as occupational therapists, speech language pathologists, physical therapists, certified nurse anesthetist, etc. Even within physician specialty, there is an opportunity for further research. For instance, there is a difference between how a pediatrician and a neuro-surgeon are trained. By exploring these differences, this study can be more generalizable to the medical degree.

The literature surrounding physician-CEOs lacks substance in areas such as quality performance, physician engagement, employee satisfaction, patient access, and patient experience. However, the largest gap in the literature concerns financial performance. More research in this specific area would be beneficial to understand the true impacts, if any, a physician-CEO has on cost management and healthcare spending. Additional research on how a physician-CEO's clinical training impacts any of the previously listed topics would be beneficial in triangulating the existing data. Ultimately, future research is needed to fully understand this topic.

Study Summary

There was an evident gap in the literature, that led to a need for this particular study. Four research questions were identified (1) What relationship exists between physician-CEOs and an

organization's financial success? (2) What relationship exists between physician-CEOs and an organization's Hospital Consumer Assessment of Healthcare Providers and Systems Scores (HCAHPS)? (3) How do operational c-suite executives (i.e.—chief financial officer and chief operating officer) and medical c-suite executives (i.e.—chief nursing officer and chief medical officer) perceive organizational performance under a physician-CEO? And (4) What impact do physician-CEOs feel their clinical background has on their organization? This research questions were addressed systematically through a rigorous qualitative study design. In order to better understand the variables being researched, a review of the literature was conducted that focused on the history of power dynamics in healthcare; the role of physicians as chief executive officers (CEOs); the meaning and effects of expert leadership; the role executive team satisfaction with leadership has within perceived organizational success; and metrics used to define high performance and organizational success.

In order to answer these research questions, the author designed a rigorous multi-case study with embedded analysis, as defined by Yin (2009, p. 59). The study examined two healthcare organizations led by physician-CEOs. A total of six semi-structured interviews were conducted, three for each organization. Interview participants for each organization included the physician-CEO, as well as, two of the CEO's subordinate executive team members—one operational (i.e.—COO) and one medical (i.e.—CNO or CMO). For data triangulation purposes, the research also examined two financial performance metrics (operating margin and net patient service revenue) and two quality performance metrics (HCAHPS scores for Questions 21-overall rating and 22-recommendation). These metrics were measured over a six-year time period to include three years prior to and three years after the physician-CEO's hire.

Themes were derived from the data collected if three of the four subordinate executives provided context that supported specific topics. Research questions one, two, and four yielded intriguing yet inconclusive results. However, research question three produced five unique themes regarding the perceived qualities of physician-CEOs that impact organizational performance. These qualities include the capability to speak both a clinical and managerial language, robust decision-making abilities, a focus centered on the patient, strong communication and relationship-building skills, and a continuous improvement outlook.

The study is characterized by its strong research methodology, credible study design, data triangulation, and identification of themes. However, the study was limited by the metrics ability to accurately measures organizational success, small and ungeneralizable sample size, and bound timeframe. Despite the various limitations of the study, the research conducted has implications to various aspects to the healthcare industry including, but not limited to, current healthcare executives, executive recruitment firms, boards of healthcare organizations, educational systems, and students. Yet, there is so much more to learn on the topic of physician-CEOs. This study reveals and highlights a great need for additional research in this field.

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Appendix A

Case Study Protocol

The following protocol was adapted from Yin, 2009, p. 80.

Protocol Title: *Performance Impact of Clinically Trained Hospital CEOs on Organization performance: A mixed methods study*

Protocol Version: 1

Protocol Date: 8/28/17

Co-Principal Investigator: Andra Labanc

Co-Principal Investigator: Maureen Jones, Ph.D., RN

I. Study Aims

The researchers will explore the financial impact of clinically trained hospital CEOs on organizational performance. Additionally, through semi-structured interviews, the researchers will explore the CEO's executive team perceptions of organizational performance influence from the CEO clinical background.

II. Study Design

a. Multi-case study design with embedded analysis

b. Study Population:

i. Physician CEOs

ii. Two members of the executive leadership team (one clinical and one operational)

iii. Two Healthcare Organizations

1. Not-for-profit

c. Sample Definition (n=6):

i. Two Healthcare Organizations (total)

ii. One CEO (per hospital)

iii. One Operational C-Suite Executive (per hospital)

iv. One Medical C-Suite Executive (per hospital)

III. Guide for the Case Study Report

a. Overview

b. With-in case analysis for each case

i. Description of interview subjects

ii. Description of hospital demographics

c. Cross-case analysis

i. Discuss common themes in perceptions

ii. Discuss common trends in performance

IV. Study Procedures

a. Subject selection procedures:

i. Healthcare Organization Inclusion Criteria:

1. Not-for-profit hospital

ii. Chief Executive Officer (CEO) Inclusion Criteria:

1. 5 years clinical experience

2. 3 years in CEO role with the organization

iii. Operational C-Suite Leader Inclusion Criteria:

1. Chief Financial Officer (CFO) with a minimum of 18 months experience in position working with current physician CEO at the organization

2. Chief Operating Officer (COO) with minimum of 18 months experience in position working with current physician CEO at the organization

- i. Medical C-Suite Leader Inclusion Criteria:
 - 1. Chief Medical Officer with minimum of 18 months experience in position working with current physician CEO at the organization
 - 2. Chief Nursing Officer (CNO) with minimum of 18 months experience in position working with current physician CEO at the organization
- b. Recruitment procedures:
 - i. The recruitment will occur via snowball sampling.
 - ii. Consent will be obtained via a letter explaining study objectives and aims.
 - iii. The primary investigator will be the person obtaining consent.
- c. Field procedures:
 - i. Email /call potential participant (or participant's assistant) from each hospital:
 - 1. Hospital A
 - 2. Hospital B
 - ii. Self-introduction / presentation of credentials, explain the purpose and goals of the study, discuss research questions, and advise as to why the participant has been invited to join the study
 - iii. Explain human subjects' requirement and attain necessary consents
 - iv. Begin interview
 - v. Answer any questions that may arise from participant during interview
 - vi. Thank participant for his/her participation in the research
 - vii. Ask for permission for future follow-up if necessary
 - viii. Obtain contact email for future follow-up
- d. Interview Questions:
 - i. Questions for CEO
 - 1. Tell me about yourself (i.e.—education, medical background, career path, current role, characteristics, etc.)
 - 2. Do you believe having a medical background impacts your organization's HCAHPS scores—why/why not?
 - 3. Do you believe having a medical background impacts your organization's HCAHPS scores—why/why not?
 - 4. Are there any other areas in which you feel your medical background has an impact on your organization—if so how?
 - ii. Questions for CNO/CMO/COO/CFO
 - 1. Tell me about your CEO. What characteristics/skills does your CEO have that impact the organization?
 - 2. Tell me about your relationship with your CEO. How do you think their clinical background impact this relationship?
 - 3. How do you think the organization is performing financially? How do you think their clinical background impact the performance?
 - 4. How do you think the organization is performing quality wise? How do you think their clinical background impact the performance?
 - 5. Do you believe having a clinical CEO impacts your organization's HCAHPS scores—why/why not?
 - 6. In your opinion, do you believe having a clinical CEO is a benefit for your organization? –why/why not?

I. Schedule

- a. Receive IRB Approval—September
- b. Conduct Literature Review—September
- c. Finalize Interview Questions—September
- d. Contact Interviewees and Conduct Interviews—October
- e. Transcribe Interviews—November
- f. Interpret and Analyze Findings—December
- g. Identify Themes—January
- h. Manuscript Preparation—January/February/March
- i. Thesis Submission—April

II. Analysis Plan

- a. Qualitative thematic identification
- b. Quantitative identification through Excel

III. Literature Cited

Yin, R. K. (2003). *Case study research: Design and methods*. Thousand Oaks, Calif: Sage Publications.

Appendix B

Research Study Information Sheet for Participants

Introduction to the Study:

Across health systems in the U.S., there is a prevalent assumption that suggests hospitals with greater clinician involvement in leadership roles benefit in various ways across the continuum, yet fewer than four percent of U.S. hospitals have a physician as a Chief Executive Officer (CEO) [Gunderman & Kanter, 2009, Sarto & Veronesi, 2016]. Surprisingly, there is a lack of research involving this topic. I am curious as to whether a CEO with clinical experience impacts a hospital's financial success and C-suite leaders' perception of organizational success. For my undergraduate honors thesis, I am proposing an in-depth multi-case study with embedded analysis to examine my research questions.

Sample:

Hospitals (n=2)

- Not-for-profit hospital

Chief Executive Officer (n=1 per hospital; n=2 total)

- 5 years clinical experience prior to CEO position
- 3 years in CEO role with the organization

Operational Executive Subordinate (n=1 per hospital; n=2 total)

- Chief Financial Officer (CFO) OR Chief Operating Officer (COO) with 18 months of experience in position working with current CEO

Clinical Executive Subordinate (n=1 per hospital; n=2 total)

- Chief Medical Officer OR Chief Nursing Officer (CNO) with 18 months of experience in position working with current CEO

Metrics:

- Interview Responses
- HCAHPS Overall Experience (Q21) and Recommendation (Q22)
- Operating Margin (3 years prior to current physician CEO's start & 3 years after)
- Cushion Ratio (3 years prior to current physician CEO's start & 3 years after)

Benefits:

- Results of the study could provide hospital boards and search firms with additional criteria to consider when hiring a healthcare CEO
- The study will provide the CEO will insight into their perceived performance
- I will share study results - All identifying information will be kept confidential

Time Requirement:

- 1 hour interview (in-person, telephone, or skype)
- I will be respectful of your time

Sample Interview Questions:

Participant	Research Questions	Interview Questions	Metrics
Questions for the CEO	1. What relationship exists between physician CEOs and an organization's financial success? 2. What relationship exists between physician CEOs and an organization's Hospital Consumer Assessment of Healthcare Providers and Systems Scores (HCAHPS)? 4. What impact do physician CEOs feel their clinical background has on their organization?	1. Tell me about yourself (i.e.—education, medical background, career path, current role, characteristics, etc.) 2. Do you believe having a medical background impacts your organization's HCAHPS scores—why/why not? 3. Do you believe having a medical background impacts your organization's HCAHPS scores—why/why not? 4. Are there any other areas in which you feel your medical background has an impact on your organization—if so how?	Operating Margin three years prior to current CEO & three years after current CEO Cushion Ratio three years prior to current CEO & three years after current CEO HCAHPS Questions 21 and 22 Interview Responses
Questions for CMO/CNO and CFO/COO	1. What relationship exists between physician CEOs and an organization's financial success? 2. What relationship exists between physician CEOs and an organization's Hospital Consumer Assessment of Healthcare Providers and Systems Scores (HCAHPS)? 3. How do operational c-suite executives (i.e.—chief financial officer and chief operating officer) and medical c-suite executives (i.e.—chief nursing officer and chief medical officer) perceive organizational performance under a physician CEO?	1. Tell me about your CEO. What characteristics/skills does your CEO have that impact the organization? 2. Tell me about your relationship with your CEO. How do you think their clinical background impact this relationship? 3. How do you think the organization is performing financially? How do you think their clinical background impact the performance? 4. How do you think the organization is performing quality wise? How do you think their clinical background impact the performance? 5. Do you believe having a clinical CEO impacts your organization's HCAHPS scores—why/why not? 6. In your opinion, do you believe having a clinical CEO is a benefit for your organization? —why/why not?	Operating Margin three years prior to current CEO & three years after current CEO Cushion Ratio three years prior to current CEO & three years after current CEO HCAHPS Questions 21 and 22 Interview Responses

Literature Cited:

- Gunderman, R., & Kanter, S. (2009). *Perspective: Educating physicians to lead hospitals*. *Academic Medicine*, 84(10), 1348-1351. doi:10.1097/ACM.0b013e3181b6eb42
- Sarto, F., & Veronesi, G. (2016). *Clinical leadership and hospital performance: Assessing the evidence base*. *Bmc Health Services Research*, 16, 169. doi:10.1186/s12913-016-1395-5

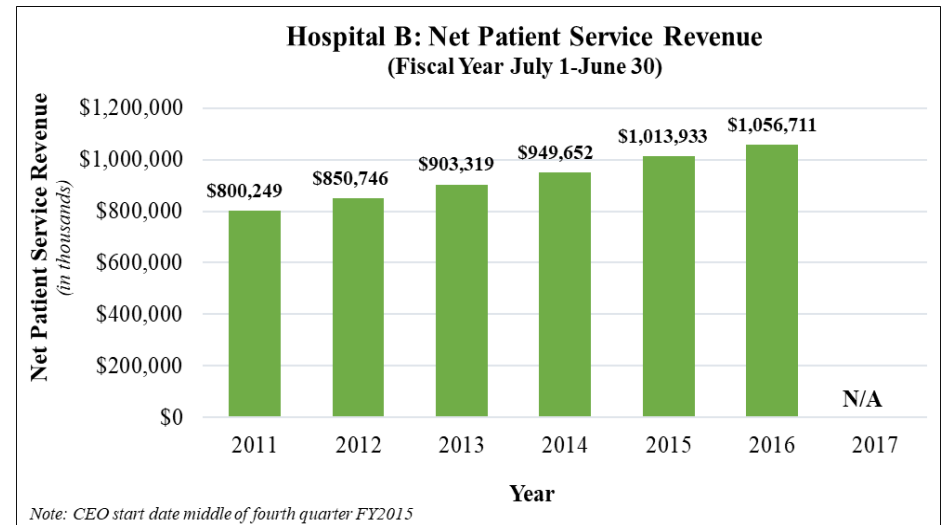
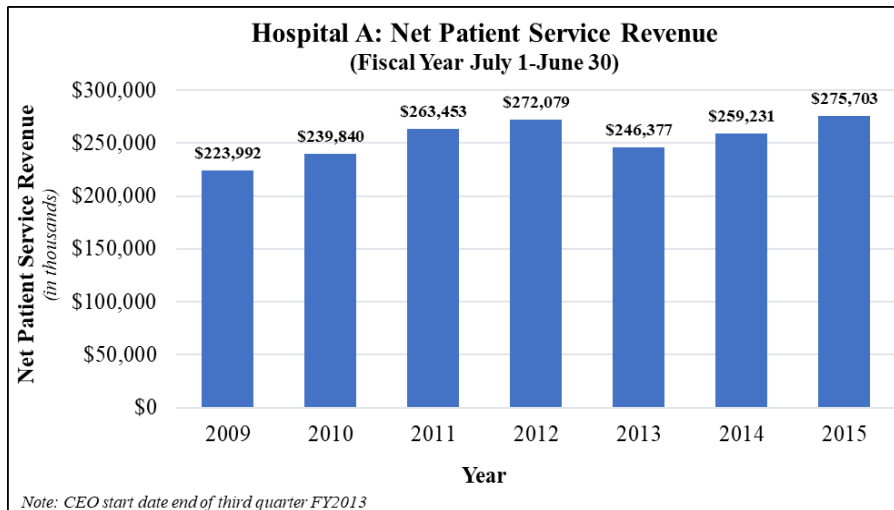
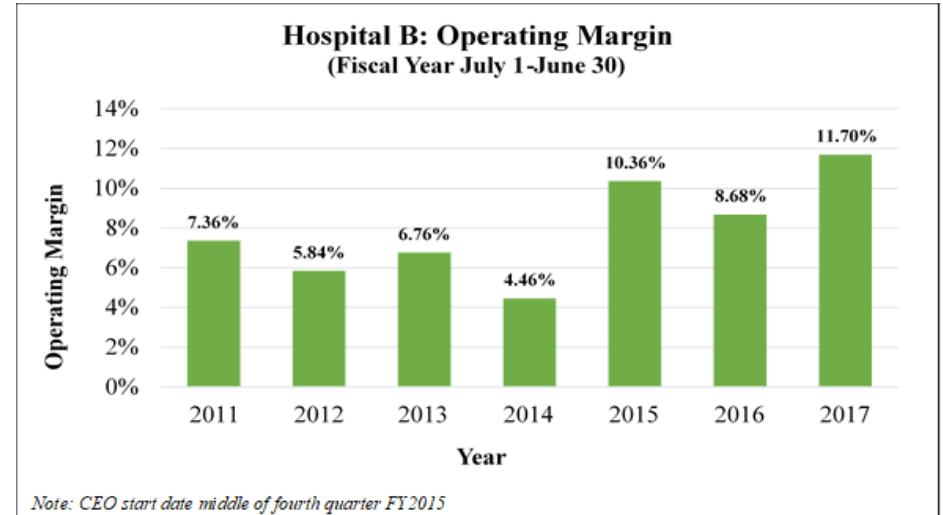
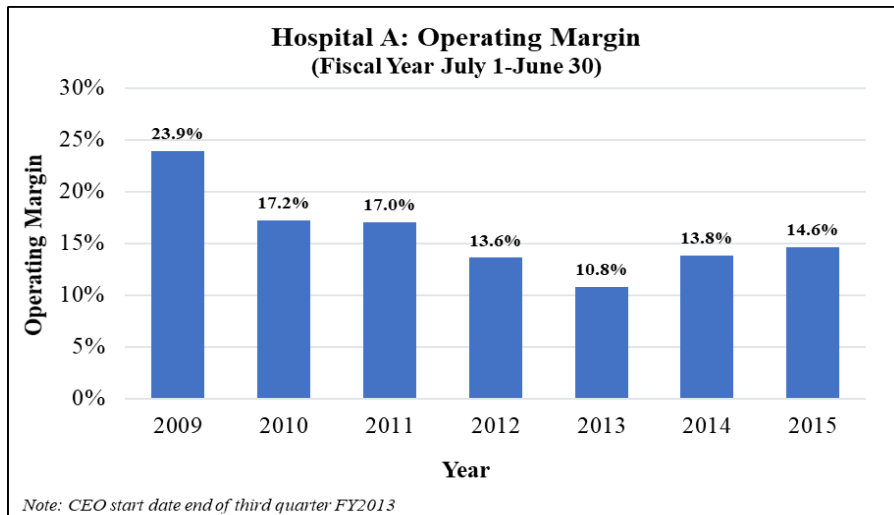
Appendix C

Interview Guide

Participant	Research Questions	Interview Questions	Metrics
Questions for the CEO	1. What relationship exists between physician CEOs and an organization's financial success? 2. What relationship exists between physician CEOs and an organization's Hospital Consumer Assessment of Healthcare Providers and Systems Scores (HCAHPS)? 4. What impact do physician CEOs feel their clinical background has on their organization?	Q1. Tell me about yourself (i.e.—education, medical background, career path, current role, characteristics, etc.) Q2. Do you believe having a medical background impacts your organization's HCAHPS scores—why/why not? Q3. Do you believe having a medical background impacts your organization's financial performance—why/why not? Q4. Are there any other areas in which you feel your medical background has an impact on your organization—if so how?	Operating Margin three years prior to current CEO & three years after current CEO Cushion Ratio three years prior to current CEO & three years after current CEO HCAHPS Questions 21 and 22 Interview Responses
Questions for CMO/CNO and CFO/COO	1. What relationship exists between physician CEOs and an organization's financial success? 2. What relationship exists between physician CEOs and an organization's Hospital Consumer Assessment of Healthcare Providers and Systems Scores (HCAHPS)? 3. How do operational c-suite executives (i.e.—chief financial officer and chief operating officer) and medical c-suite executives (i.e.—chief nursing officer and chief medical officer) perceive organizational performance under a physician CEO?	Q5. Tell me about your CEO. What characteristics/skills does your CEO have that impact the organization? Q6. Tell me about your relationship with your CEO. How do you think their clinical background impact this relationship? Q7. How do you think the organization is performing financially? How do you think their clinical background impact the performance? Q8. How do you think the organization is performing quality wise? How do you think their clinical background impact the performance? Q9. Do you believe having a clinical CEO impacts your organization's HCAHPS scores—why/why not? Q10. In your opinion, do you believe having a clinical CEO is a benefit for your organization? —why/why not?	Operating Margin three years prior to current CEO & three years after current CEO Cushion Ratio three years prior to current CEO & three years after current CEO HCAHPS Questions 21 and 22 Interview Responses

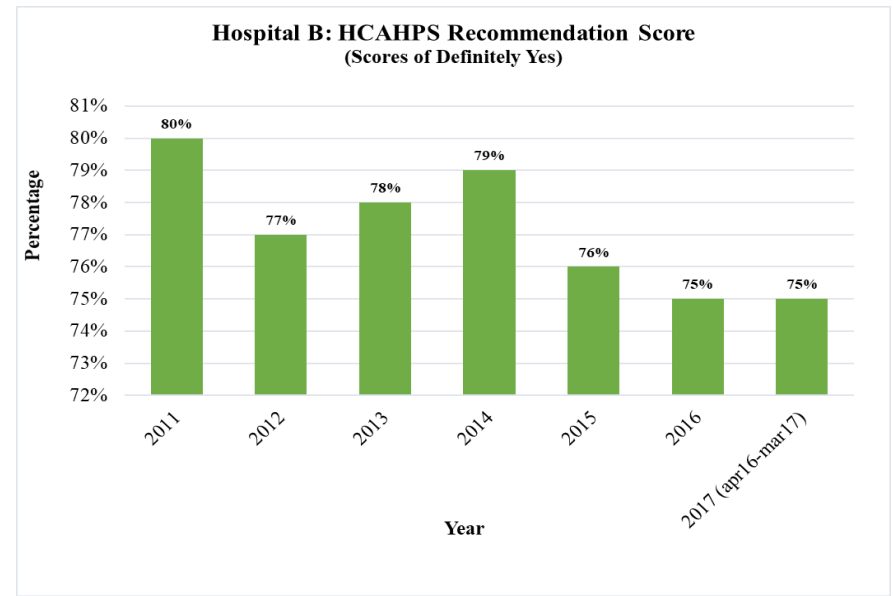
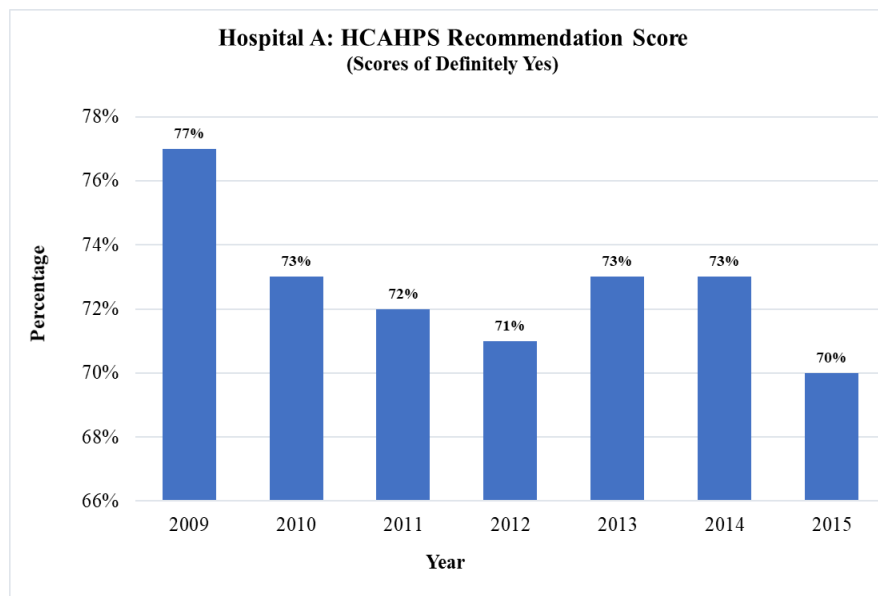
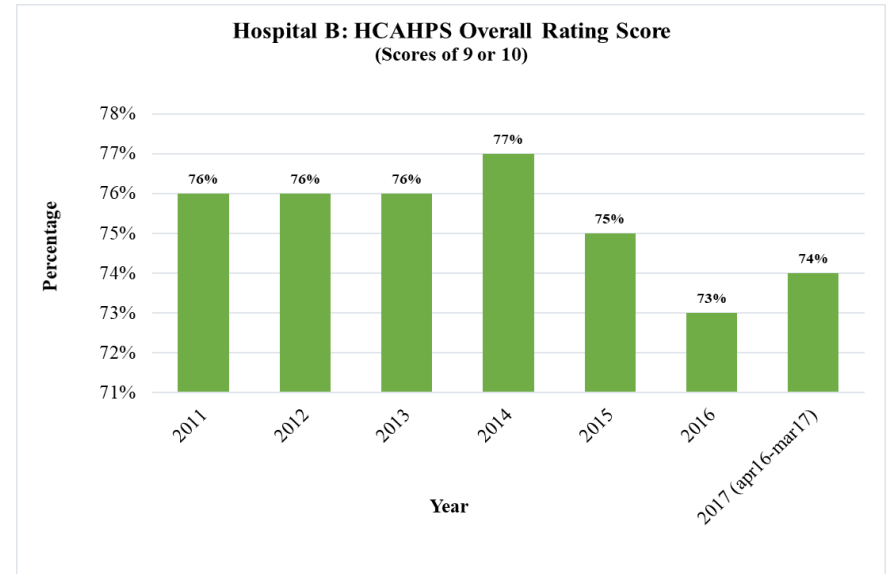
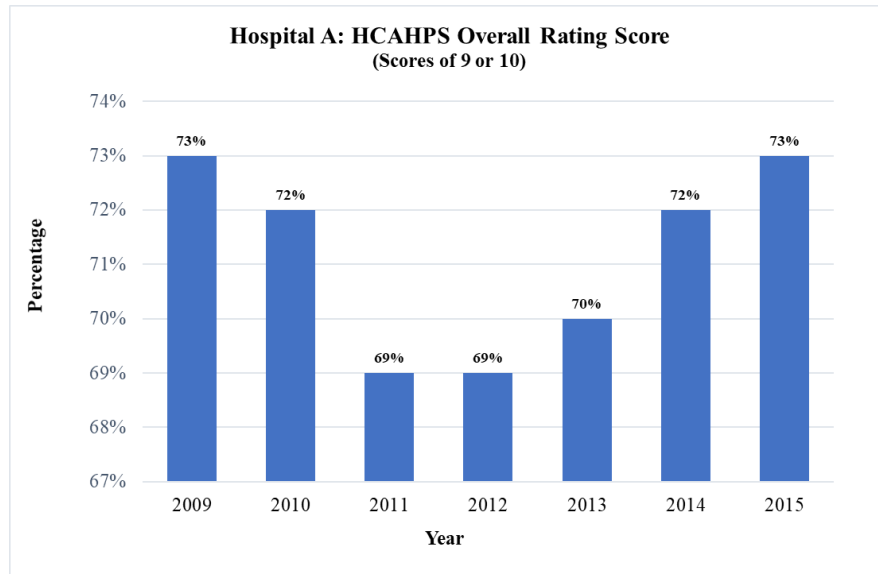
Appendix D

Financial Graphs



Appendix E

HCAHP Survey Graphs



Andra Joelle Labanc

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(412) 526-0749 • andra.labanc@gmail.com
<https://linkedin.com/in/andralabanc>

EDUCATION

The Pennsylvania State University, Schreyer's Honors College	University Park, PA
<i>Integrated Master of Health Administration / Bachelor of Science in Health Policy Administration</i>	May 2018
Minor: Human Development and Family Studies	Dean's List: 8/8 Semesters

HEALTHCARE EXPERIENCE

Communication Sciences Against Antibiotic Resistance	University Park, PA
<i>Graduate Research Assistant</i>	September 2017-Present

- Recruit and enroll eligible students to participate in the study via secure messages and in person solicitation
- Administer post-visit survey to participating clinicians
- Train and supervise 13 undergraduate research assistants on clinic protocol
- Utilize REDCap and Point and Click software to record participant data
- Distribute follow-up surveys and participation compensation to all study participants

St. Clair Hospital	Mt. Lebanon, PA
<i>Administrative Resident</i>	May 2017-August 2017

- Operated alongside the senior leadership team of St. Clair Health Corporation, which includes a 328-bed hospital, 2 outpatient facilities, and more than 600 practicing physicians
- Extracted and analyzed inpatient electronic health record data to maximize laboratory utilization by identifying redundant and/or obsolete lab tests, which resulted in a recognition of over \$79,000 in potential cost avoidance
- Identified 14 metrics in which St. Clair Medical Services was overspending and overutilizing based on Highmark True Performance claims data and presented findings to physician leaders and the senior management team
- Attended multiple training courses on the Toyota Production System
- Participated in educational rotations throughout 15 hospital departments and shadowed each department's respective administrators and clinical leaders

University of Pittsburgh Heart and Vascular Institute (HVI)	Pittsburgh, PA
<i>Summer Extern</i>	May 2016-July 2016

- Worked for the leadership team of UPMC's HVI service line, which spans 20 plus hospitals, 35 outpatient clinics, and includes 150 plus cardiologists, vascular surgeons, and cardiac surgeons
- Constructed literature reviews on different care paradigms for congestive heart failure patients to meet the demands of new payment methodologies
- Formed a master lease Excel spreadsheet of all HVI lease space for efficient tracking and updating purposes
- Completed a financial analysis of holter and event monitors to aid in the selection of a new vendor for the service line
- Updated the HVI site directory to ensure accuracy in Cerner and confirm all compliance criteria was met for meaningful use purposes

Children of Destiny Medical Mission Trip	Managua/Los Cedros/Jinotega, Nicaragua
<i>Mission Team Member</i>	March 2016

- Triage patients upon arrival to the clinic (approximately 300 patients per clinic day)
- Conducted urine analysis and pregnancy tests
- Shadowed medical clinicians through the diagnostic process
- Assisted the pharmacy in distributing prescribed medications

Penn State Milton S. Hershey Medical Center	Hershey, PA
<i>Student Observer</i>	March 2015

- Gained broad exposure to a variety of departments within the administrative function at the medical center
- Discussed the medical center's current organization structure and future goals with the Executive Director
- Observed the daily administrative tasks of the Operations Director of the Anesthesia Department

PROFESSIONAL ASSOCIATIONS

Healthcare Financial Management Association

Student Member

September 2017-Present

Medical Group Management Association

Student Member

September 2016-Present

American College of Healthcare Executives

Student Associate

August 2015-Present

EXTRACURRICULAR ACTIVITIES

United States Naval Academy (USNA) Leadership Conference

Annapolis, MD

Penn State Schreyer Honors College Student Representative

January 2018

- Selected to represent the Penn State Schreyer Honors College at the 2018 USNA Leadership Conference, comprised of more than 300 participants from over 45 military and civilian colleges
- Attended panel discussions with world-renowned leaders, such as the honorable Madeleine Albright and Simon Sinek
- Participated in small group discussions to exchange leadership ideas, experiences, and methodologies

Penn State Career Services

University Park, PA

Peer Career Assistant

January 2017-October 2017

- Revised Penn State students resume and cover letter during one-on-one drop-in appointments
- Conducted 3 to 5 mock interviews each week and provided constructive feedback for undergraduate, graduate, and postdoctoral students preparing for various career and educational opportunities
- Prepared and led presentations on career services informational topics to various classes and student organizations

America Reads

State College, PA

Literacy Mentor

August 2016-October 2017

- Supported the literacy development of children in Centre county
- Attended various training sessions to maintain clearances to work with children
- Served as general tutor to students between the ages of 5 and 12 at Easterly Parkway Elementary School
- Engaged children of all ages in learning exhibits at Discovery Space Children's Museum

Future Healthcare Executives Club

University Park, PA

General Member (2015 & 2017), Student President (2016)

August 2015-October 2017

- Discussed current healthcare news, policies, and events with club members
- Networked with professionals through the Central Pennsylvania chapter of American College of Healthcare Executives
- Attended the American College of Healthcare Executives Annual Congress in Chicago, Illinois

Penn State IFC/Panhellenic Dance Marathon (THON)

Altoona, PA

Altoona Benefiting THON Student Involvement Executive Chair

March 2014-April 2015

- Served as the primary student coordinator for the largest commonwealth campus chapter of the Penn State IFC/Panhellenic Dance Marathon, which included 500 plus active members
- Assembled and directed 35 multidisciplinary captains to accomplish fundraising goals
- Drafted and implemented a new constitution for the chapter, which set forth expectations and regulations for club members in compliance with Penn State University policies
- Composed weekly agendas to present during weekly captain meetings
- Exceeded fundraising goal by 20% and raised \$111,099.44 for the Four Diamonds Foundation

HONORS & AWARDS

- CITI Social & Behavioral Human Subjects Research Certification (2017)
- Hospital Incident & Command System Certification (2016)
- Frederick & Jeanne Riebel Lord Academic Excellence Scholarship (2016)
- Student Activities Leadership Award (2015)
- W&K Donato Honors Scholarship (2016)
- Wilson C. Baily Memorial Scholarship (2015)
- President's Freshman Award (2014)
- Upsilon Phi Delta Honor Society (2018)