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An Analysis Of The Association Between An Established Chief Experience Officer Position And Hospital Patient Experience Scores Within Three States

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AN ANALYSIS OF THE ASSOCIATION BETWEEN AN ESTABLISHED CHIEF EXPERIENCE OFFICER POSITION AND HOSPITAL PATIENT EXPERIENCE SCORES WITHIN THREE STATES

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ABSTRACT

Few industries operate with as much capacity to personally satisfy or disappoint, as does the U.S healthcare industry. Healthcare outcomes sought by society include wellness, safety, healing, and, ultimately, experiences. While healthcare involves complex relationships between patients, families, providers, payers, and regulators, the use of management theory can be insightful in studying and explaining the motivations and strategic decisions of healthcare managers.

The healthcare industry is currently reacting to multiple stakeholders demanding improvements to the patient experience. New ways to measure patient experiences in healthcare are emerging. Some healthcare organizations are implementing new management structures, i.e., the role of Chief Experience Officer (CXO). This dissertation offers a study into potential solutions to the problem of improving patient experience through the lens of Resource Dependence Theory (RDT). This study will further review and explore the demand for increased value and improved experience, the adoption of associated goals by interest groups and facilities, factors known to influence patient experience, and the use of patient centered care models as tools for experiential improvement. This study statistically reviewed descriptors associated with hospitals that have and have not created and filled the role of CXO and, more importantly, measured the association between the CXO role and results of patients' perceptions of their

experience of care as measured by publicly reported Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) results. This study was conducted utilizing primary research regarding hospitals and health systems in three states, California, Florida, and New York.

The results of the study yielded insight into the types of hospitals and market factors that have filled the CXO role. Hospitals with a formal CXO role are larger, more likely not for profit, belong to a system, are teaching facilities, and operate in areas of these states with higher per capita income. In addition, hospitals that have a formal CXO role are also more likely to have higher HCAHPS scores as determined by the patient recommendation question as well as the hospital overall rating question included in the HCAHPS survey.

Keywords: Patient Experience, Chief Experience Officer, Resource Dependency Theory, Value Based Purchasing, Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS), Centers for Medicare and Medicaid (CMS)

DEDICATION

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LIST OF ABBREVIATIONS

ACA	Affordable Care Act
AHA	American Hospital Association
AHRQ	Agency for Healthcare Research & Quality
CEO	Chief Executive Officer
CMS	Centers for Medicare and Medicaid
CXO	Chief Experience Officer
HCAHPS	Hospital Consumer Assessment of Healthcare Providers and Systems
IOM	Institute of Medicine
IPFCC	Institute for Patient and Family Centered Care
RDT	Resource Dependency Theory
SAS	Statistical Analysis System
UCLA	University of California and Los Angeles
VBP	Value Based Purchasing
VHA	Voluntary Hospitals of America

CHAPTER 1

INTRODUCTION

The healthcare industry's challenges to continually produce value for stakeholders are numerous. For decades, leaders in government, medicine, and industry have been warning of an increased disconnect between healthcare cost and value. Many have proposed that we were nearing a *point of no return* attached to costs beyond the current 17% of the United States gross domestic product. Legislative chambers on a national, state, and local level, as well as most healthcare boardrooms, have logged countless hours of debate and study around the subject of cost, access, and quality. Even though the industry is complex with a multitude of influencing factors, one consistent theme was formed out of several position papers from the Institute of Medicine (IOM) published in the late 1990s and early 2000s. Specifically, the patient and his or her individual experience must be at the center of all healthcare delivery if society at-large is ever to achieve lasting value for the care.

For many, the brutal facts contained in the IOM report, *Crossing the Quality Chasm* (2001) were hard to fathom and the identified problems difficult to solve. The report advocated two tracks of improvement, encouraging all healthcare leaders and providers to accept the challenge of improving patient experience and simultaneously adopting practices for efficiency and rationalization. The IOM report (2001) encouraged healthcare leaders and providers to reinvent healthcare operations and care process from the lens of a patient and family and to see beyond mere economic transactions.

The healthcare industry has the capacity to bring about near miracles and yet concurrently underperform in other areas. The quest to produce greater value and improve the experience of care is an investment in the future of every current and future patient. The research outlined in this study, including a review of current literature related to a chosen organizational theory, will help inform and add to the growing literature about steps we can take to place the patient at the center of our operations and improve experiential quality. This research could potentially form the basis for encouraging the development of the Chief Experience Officer (CXO) role at hospitals or health systems and, through this individual, increase the integration of patient experience as a key factor in operational and strategic decisions by organizations. The future should hold the proliferation of knowledge about specific practices that make us better caregivers, financers, regulators, researchers, and, ultimately, patients. This will likely be a long journey and likely not completed in the span of any one career. However long the journey, it will be well worth the challenge.

CHAPTER 2

LITERATURE REVIEW

The Historical Role of Patient Experience

Prior to the advent of modern medicine and its advancements by the scientific method, medical care was generally administered in a patient-centric manner by family members. LeFanu (1999) described how care rendered in this era was often palliative and often unknowingly harmful. Prior to hospitals, the author noted that most individuals were cared for at home. This care was clearly personal and centered on the patient and the home itself. Yet few would trade today's medical advances for archaic treatments or many other previous unfounded modalities in order to receive "a more patient-centered experience" (p. 518). As medical development advanced, the cost was increasingly a provider- and technology-centered treatment experience. Howell (1995) described the tradeoffs between new treatments and cures from otherwise dreadful ailments and, with that as the focus, the way we organized care around the provider and institution's needs. Compared to death or loss of limb, the impact of falling out of focus as an individual or patient could be viewed as a small price to pay.

Industry Development and Growth

With the advent and design of the modern clinic and hospital setting, efficiency and regard for the providers of care took precedence over patient convenience. It is exactly this tradeoff that Kenney (2011) discussed regarding Virginia Mason Medical Center's proposed redesign of its cancer center. In fact, many hospitals are limited by

built environments that were developed decades ago and hospital planners from the early and middle 20th century were responding to a much different healthcare consumer. Burt (2006) highlighted the expectations of today's savvier consumers and the shift toward more consumer-driven healthcare as the catalyst forcing a shift toward the management of patient experience. In addition, where insurers were once purely abstract financial entities paying for all or most of the care providers rendered to patients, their desire to increase the patient's financial responsibility has also fueled greater patient engagement and demands, according to Burt (2006). In spite of the increased conversations about patient experience, the industry has not developed precise definition of the term. In general, the patient's perceptions of interactions with a healthcare provider serves as the best definition for explaining the term *patient experience*.

The IOM Report and Call to Action

Brevity and succinctness demand a short synopsis of the factors leading to strong calls to overhaul the role of the patient. Clearly, the gaps between optimum and actual healthcare access, quality, and cost that developed during the 1980s and 1990s played a substantial role. According to the U.S. Department of Labor (2016), during the 1980s and 1990s, the United States experienced healthcare inflation significantly greater than the rate of inflation for consumer goods. Miller and Luft (1994) indicated that one factor fueling such increases was the proliferation of services and hospital locations. Increased access to care came with a price tag.

Even as such redefining changes were working their way through the healthcare system, at least one entity kept its eye on the ball and prospered. Berry and Seltman (2008) chronicled what they called "the 100 year brand" driven by the Mayo Clinic's

relentless efforts to put patients first in all matters (p. 32). The institution, founded by the Mayo brothers, was, according to Berry and Seltman, the first integrated not for profit medical group practice in the world and even now is still the largest. In partnership with St. Mary's Hospital, the clinic seemed immune through the 1980s and 1990s to fads or the tumult felt by other institutions. The Mayo Clinic continues to be held in high regard as one of the major centers for learning integrated patient-centered healthcare tactics.

The variation in healthcare practices and outcomes outlined by comparisons to the Mayo Clinic were a major driver for the landmark 2001 Institute of Medicine (IOM) project, *Crossing the Quality Chasm: A New Health System for the 21st Century*. This IOM report greatly impacted the healthcare industry. The report chronicled the significant gaps between what we, as Americans, have settled for in healthcare and what is possible. In addition, the report described broad reforms that would make the U.S. healthcare system more accessible and efficient. One of these aims was to create more patient-centered care. The report describesd a model of care that is more collaborative, respectful of, and responsive to individual patient preferences, needs, and values. Moreover, the IOM (2001) report outlined rules for redesign that included customized care, patient control, transparency, and care collaboration. The call to action by the IOM was rooted in a number of difficult truths: chiefly that each day hundreds if not thousands of people are harmed by a system currently delivering care that is not patient-centered.

Notably, throughout the 1980s and 1990s, the concept of the *satisfied patient* was gaining momentum. Early pioneering organizations in defining and measuring the patient's perception of care included organizations such as Press-Ganey. Press-Ganey was formed in the early 1980s, according to its website, to give rise to a hospital leader's

ability to systematically measure patient satisfaction levels. Luxford, Safran, and Delbarco (2011) noted that in the early 1990s the Picker Institute developed domains to assist in measuring patient experience. Such efforts were at the time not specific to healthcare as industry after industry awakened in the 1970s and 1980s to the concept of measuring and improving customer satisfaction as a strategy for competitive advantage. A key healthcare distinction was that these efforts in the healthcare environment were voluntary and there was no direct financial incentive to drive concern about the patient's perception of his or her experience. Based on the IOM's efforts, along with the work of other industry advocates, this focus has changed dramatically in the last decade.

HCAHPS: Reimbursement and Transparency

The increased demand for reform, transparency, and a focus on patients formed the backdrop for the development of the first systemic patient satisfaction measures in the United States. According to the *HCAHPS Fact Sheet* produced by the Centers for Medicare and Medicaid Services (CMS), the *Hospital Consumer Assessment of Healthcare Providers and Systems* (HCAHPS) survey was developed in 2002 in partnership with the Agency for Healthcare Research and Quality (AHRQ). The 27-question survey received its approval from the Office of Management and Budget in 2005. After public comment, the survey was implemented in 2006, and survey results formed the basis of financial incentives to acute care hospitals. Since 2007, hospitals can, based on performance, experience reduced payments for not participating in this HCAHPS program. The passage of the Affordable Care Act (ACA) in 2010 further strengthened the impact of HCAHPS results in determining federal Medicare reimbursement levels.

The core part of the survey (Appendix) allows patient respondents to rate their experience regarding aspects of hospital care like communication, access to nursing care, and cleanliness of environment. Survey results are valid because of the great care taken to develop administration standards. Tefera, Lehrman, and Patrick-Conway (2016) observed that while approximately 30% of eligible patients actually respond to the survey, there is little relationship between response rates and non-response bias. The authors stated that due to the multiple avenues for expression of the experience by the patient and the adjustment for patient characteristics, the survey is valid regardless of response rates. Those results of HCAHPS surveys are publicly reported on the Hospital Compare website for each participating hospital. This site allows consumers to compare patient experience data efficiently and easily. For fiscal year 2013, the *HCAHPS Fact Sheet* described the effect of linking value based purchasing payments to the patient care domain of quality measures, which are HCAHPS results. Clearly, CMS meant for HCAHPS scores to matter to U.S. hospitals.

Most U.S. hospitals' margins are scant enough that the true financial impact of the *Hospital Value Based Purchasing Program* can be quite influential. Paired with the transparency of HCAHPS, no self-aware CEO or health system leader can now afford to be indifferent to the subject of the patient experience. Shaw (2010) compiled significant information from a Health Leaders Survey of over 300 hospital CEOs in the United States. Asked a series of questions about the importance of the patient experience, the results were striking. Nearly 80% of respondents agreed that managing patient experience was a business imperative. When asked about the biggest stumbling block they faced regarding improving patient experience nearly 40% cited lack of funding because of

competing priorities. Based on survey results, 65% of CEOs identified the HCAHPS development and implementation as one of the top three reasons to manage patient experience.

With respect to innovation in the area of patient experience, the Health Leaders Survey (2010) results indicated that over 70% of the time, U.S. hospitals use observation of competitors and other hospitals as the focus of their innovation and best practice identification. Regardless of the fact that as much as 20% of a hospital's Medicare margin could be at risk due to *Value Based Purchasing*, most CEO respondents to this survey rated improved margin very low as a reason to manage patient experience.

HCAHPS Performance

With several years of experience and results now available as well as the public becoming increasingly aware of the HCAHPS survey, research regarding results is beginning to be undertaken. Elliott et al. (2010) described that between 2008 and 2009, not only did hospital participation levels in the HCAHPS survey increase, but in that period the mean percentage of positive responses on eight of nine measures improved. It is interesting to note that the only measure that showed no improvement was the question about physicians' communication with the patient. Stanowski, Simpson, and White (2015) provided additional empirical evidence that implementation of a value based purchasing model by CMS coincided with a change in focus regarding patient satisfaction. The authors identified a number of factors that had an impact on patient satisfaction scores, including region, system integration, teaching status, and hospital ownership. Elliott et al. (2010) also cited evidence that hospitals were utilizing the HCAHPS process to drive improved patient experience.

Some hospital organizations are more challenged than others as it pertains to performance under this program. Researchers, Chatterjee, Joynt, Orav, and Jha (2012), reported that safety-net hospitals, those that treat the uninsured had 10% lower performance in general than non-safety-net hospitals. In addition, safety-net facilities had improved regarding patient experience somewhat more slowly than non-safety net hospitals. According to the authors, the gap between these facilities was also increasing. These results could lead to different improvement strategies for safety net facilities as more becomes known about this gap and why it occurs.

There is also growing research with respect to the "why" behind some of these gaps. Ahmed, Burt, and Roland (2014) found evidence that different population groups, such as ethnicity, may have different expectations of care. The authors presented evidence that different patient populations may place greater emphasis on some aspects of care than other groups. Additionally, Ahmed and colleagues suggested that more educated patients may be less likely to rate care at the extremes.

As the data grow regarding the value based purchasing program and HCAHPS performance, research has increased regarding the characteristics of facilities performing well under the survey. Lehrman, Elliott, Goldstein, Beckett, Klein, and Giordano (2010) examined patient experience of care and clinical quality measures. Using regression analysis, Lehrman and colleagues identified hospitals that performed in the top quartile in both dimensions of care. Top performers in both of these dimensions included smaller hospitals with less than 100 beds, larger hospitals, and rural hospitals located in New England or the West North Central region of the United States. Interestingly, the top performers in patient experience scores were smaller hospitals located in the southeast

United States. The authors also concluded that not for profit facilities were more likely to have better patient experiences than government facilities. In their review, for profit facilities were less likely to perform well on both dimensions. The researchers make a strong argument that given their findings, the redistributive aspects of the Value Based Purchasing program could have unintended consequences of harming less affluent hospitals.

Richter and Muhlstein (2017) reviewed HCAHPS results from 3,767 hospitals in the United States over a six-year period. The authors identified that positive patient experience scores were associated with increased profitability and a negative patient experience was even more highly correlated with decreased profitability. To demonstrate a financial return on investments associated with patient experience interventions, more rigorous studies will be needed in the future.

There is also developing research around the potential link between patient experience performance and clinical outcomes. Trzeciak, Gaughan, Bosire, and Mazzarelli (2016) examined data on 3,000 hospitals in the United States for 2013 and 2014 and found a statistically significant relationship between patient experience scores under HCAHPS and multiple clinical outcomes. These relationships included both patient complication rates and patient readmissions. The most significant relationship they identified was that of higher patient experience scores and lower patient readmission rates. The authors hypothesized that facilities that are diligent about patient experience are also diligent about the quality of care they provide.

The Patient-Centered Culture

Browne, Roseman, Shaller, and Edgman-Levitan (2010) described the patient experience as a measure of patient-centeredness, one of the six quality aims mentioned in the IOM Report (2001). Browne et al. further described the patient experience survey as "measures of what was and was not experienced in the course of care" (p. 141). The IOM Report (2001) 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" (p.143). The IOM further defines patient-centered care as a right for all patients and their families. Many organizations have adopted patient-centeredness as a chief aim as part of their quality efforts.

Conway et al. (2006) described the Institute for Patient and Family Centered Care (IPFCC) findings that many organizations' efforts are aimed at improving their patient-centeredness focus. The IPFCC reported that, as of 2006, 18 national healthcare advocacy organizations have developed a patient-centered development program, including the American Academy of Pediatrics, American Nurses Association, and the National Alliance for Mental Illness.

The literature regarding patient experience journeys by health systems is beginning to mature. Van Lare and Conway (2012) cited the need to shift organizations to a culture of accountability and costs, and for most organizations this appears to be a longer journey. The authors predicted adjustments to the HCAHPS program over time as more is learned about organizational performance under the program. At least three organizational journeys have been extensively studied and produced interesting findings. These include Virginia Mason in Seattle, Washington; Mayo Clinic in Rochester,

Minnesota; and Baptist Health System in Pensacola, Florida. One key finding by these organizations is that adoption and reform of the patient experience begins with the CEO and Board of Directors.

Kenney (2011) spent considerable print on the adoption process at Virginia Mason. Berry and Seltman's (2008) book on the Mayo Clinic also devoted considerable writing on the subject of leadership. Clearly, the Mayo model pioneered patient-centeredness and serves as a model for cultural integration of such efforts. Berry and Seltman described CEO after CEO who took the baton from the previous Mayo leaders and, in their own way, advanced the effort further than the last. Forbes, the former CEO at the Mayo Clinic, said it best, "if you have just communicated a value but you haven't driven it into operations, into policy and decision making, into allocation of resources, and ultimately into organizational culture, then these are just words" (Berry & Seltman, 2008). It is the unique and long-standing way that Mayo has accomplished this success that sets the Clinic apart from other healthcare systems.

There are many other system examples. According to Kenney (2011), Virginia Mason adopted a significant cultural change by empowering any caregiver to stop care at any point in which there was risk of potential patient harm. Stubblefield (2005) also described the *top down* commitment required from the CEO and the Board to successfully adopt cultural changes as part of Baptist Health System (Pensacola) journey. Stubblefield stated, "we realized that you can't fake a commitment to service excellence and patient-centeredness. Patients and employees will see right through shallow, half-hearted communication" (p. 162). Stubblefield cited top management commitment as key to cultural change around patient care. The author also identified ongoing leadership

development as a key strategy to engage other leaders on the change journey and making patient-centered care a passion begins with top leadership.

Further exploring the concept of patient-centered operations, one recent study by Aboomatar et al. (2015) reviewed the common attributes of facilities scoring high on patient experience to find correlations that could be used as predictors of better patient experience scoring. Their study concluded that high performing hospitals utilized a set of patient-centered processes that involved both leaders as well as clinicians to ensure that patient needs and expectations were addressed. Aboomatar et al. (2015) reviewed 52 facilities and identified several impactful interventions including practices to improve responsiveness to patient needs, improving the discharge experience, and making patient-clinician interactions more effective. The important interventions, according to the authors, included executive rounding, multidisciplinary rounds, post discharge calls, and behavioral standards for clinical and non-clinical staff. In addition, 40 of the 52 hospitals expressed a strong missional commitment to the patient and family experience.

Creating this culture of compassion and patient-centered care is mentioned by several authors including Kenney (2011), Merlino (2015), as well as Aboomatar et al. (2015). McClelland and Vogus (2014) reviewed compassion practices as a factor for improving patient experience. McClelland and Vogus reported on survey data from top level hospital executives from 269 U.S. hospitals concerning the subject of cultural support of compassion. The principle findings of their study was that compassion practices, a measure of the extent to which a facility supports and rewards compassionate acts, is significantly and positively associated with hospital ratings and likelihood to recommend. The researchers recommended specific and actionable organizational

structures and practices that provide and support compassion. These would include compassion recognition programs for employees who display such values.

Barriers to Patient Experience Improvement

While Kenney (2011) supported the development of cultural enhancement of compassionate behaviors, Luxford, Safran, and Delbanco (2011) described many of the barriers encountered by organizations on a journey to integrate patient experience into an organizational culture. Research findings supported the importance of an organization-wide approach for advancing patient care. The literature identifies the barriers to engaging clinical staff, especially physicians on this journey. Levinson (2011) described the importance of physician communication skills to elicit patients' true wishes and to recognize and respond to emotional concerns. The author noted that medical and nursing students rarely receive training or feedback to be effective communicators. Moreover, Levinson stated that almost no opportunities exist for practicing physicians or nurses to improve this skill. Given this situation, it is not surprising that Elliott et al. (2010) found no improvement in the physician communication domain of the HCAHPS measures from 2008 to 2009. Belasen and Belasen (2018) examined HCAHPS scores and individual physician training and found a strong correlation between communications training regarding doctor-patient communication and higher quality and higher domain scores.

Even more than obtaining engagement from clinical staff, the literature describes how support staff members are instrumental to the evolution of patient-centeredness. Berry and Seltman (2008) and Stubblefield (2005) described that the value of exceptional compassion and service were key components to "walking the walk" of patient-centeredness. Additionally, Lee (2003) described the exceptional, out of the way, "wow"

experience of service as integral to building lasting loyalty. In instance after instance, Berry and Seltman (2008) cited how every day Mayo Clinic employees go beyond what is just necessary to care for, comfort, and please patients. Berry and Seltman (2008) described that at Mayo, training is often employee-to-employee. The authors stated, "the experience is inherently social and creates a rich opportunity to transmit informally the organization's values" (p. 37). In summary, taking the entire organization on the patient-centered journey requires leaders rethinking the role of values, culture, and how to ensure the organization lives these every day.

There is growing evidence that organized interventions to improve physicians' communications skills with patients can yield improved patient experience scores. Boissy, Wendover, and Bokar (2016) described a study organized by The Cleveland Clinic's Office of Patient Experience, in which training intervention was conducted. Physicians completed a pre- and post-survey and these assessments were compared to changes in the facility's HCAHPs scores. These interventions proved to provide statistically valid improvements in patient experience for those survey questions related to physician communication.

Other study results accentuated the value of regular, organized feedback to physicians as a valuable tool for improvement. The University of Utah created what it titled a "virtuous cycle of patient and physician engagement". Miller, Daniels, Paine, and Gresh (2016) cited the following three elements of that program as crucial to improving physician communication skills: data transparency, peer-to-peer competition, and sharing of best practices for improvement.

Banka, Edington, Kyulo, and Padilla (2015) described how the University of California, Los Angeles (UCLA) utilized highly organized feedback to physicians over a two-year period to produce statistically significant improvements in patient experience scores associated with physician communication. While physicians may not have been sensitized to the impact of communication on the patient experience in their initial training, organized interventions have proven to be valuable to those facilities employing these steps.

There are few studies that detail physicians' attitudes about HCAHPS and patient experience measurement. Zgierska, Rabago, and Miller (2014) measured the effects of patient experience surveys on physicians practicing in Wisconsin. The authors discovered that 78% of physicians self-reported that patient satisfaction surveys moderately or severely impacted their job satisfaction, and 28% had considered leaving the profession because of low patient satisfaction survey results.

Likewise, the role of nursing and other clinical staff in improving patient experience scores is an area of increasing research interest. Beyond the impact of nurse staffing ratios and the availability and rapidity of clinical rounding, efforts to improve nurse-patient engagement are becoming more widespread. Dempsey, Reilly, and Ruhlman (2014) identified several important tactics for improving engagement and communication by the nursing staff including purposeful rounding hours, bedside shift reports, senior leader rounding, and nurse manager training. The authors advocated an intentional and organized effort to improve nursing communication by hospitals and health systems as the best method to facilitate improvement in the patient experience

related to nursing care. Recent studies also pointed to nursing burnout and fatigue as factors in patient experience results.

Vahey, Aikren, Sloane, Clarke, and Vargas (2004) studied the correlation between staff perceptions of burnout and patient experience scores and found a direct and clear correlation with lower patient experience scores. Vahey and colleagues advocated the purposeful review and enhancement of the work environment as a mitigating factor impacting burnout and patient experience. Considering the attention given to physician and nursing burnout and potential looming physician and nursing shortages, Vahey et al. cited organized interventions as a key to sustainable patient experience success.

Improving organizational culture and reducing associated barriers to increase focus on the patient can occur at all levels. One key organizational question is how to organize this effort and determine who is best to lead the effort of improving patient experience.

The Role of the Chief Experience Officer (CXO)

The introduction of the Value Based Purchasing Program by CMS and other similar incentive efforts by non-governmental payers has heightened the development and emphasis on patient experience in the healthcare sector. According to Manary, Staelin, Kosel, Schulman, and Glickman (2015), senior leadership at U.S. hospitals has redoubled its efforts to improve the patient experience. According to the authors, 91% of hospital boards surveyed nationally had specific goals to improve the patient experience. Manary et al. surveyed individuals who were members of the association, Voluntary Hospitals of America (VHA), and reported that they were the executive responsible for

patient experience in their organizations. Manary and colleagues observed that less than 25% of the individuals surveyed held the formal CXO title.

From an historical perspective, the Cleveland Clinic was the first organization to create a defined CXO position, 10 years before the introduction of CMS Value Based Purchasing plan. Merlino (2015) described the Clinic's efforts to recognize and change a culture that had concentrated more on quality and less on empathy for the patient. As measured by the Clinic's own data, patient experience was not a priority. Merlino described how the leader of the Cleveland Clinic in 2003, Cosgrove, had the vision to create the role of Chief Experience Officer, a new member of the C-suite, reporting directly to the CEO.

Cosgrove researched how other industries developed and supported a senior executive role responsible for overall customer service. Cosgrove was encouraged by data from Forrester Research which described in detail the executive role for customer service in 155 large companies across numerous industries. Results showed that in over 50% of these cases, this new executive role reported to the CEO of the firm and was firmly entrenched as part of the C-suite. Cosgrove noted that, as in most other healthcare facilities, managing the patient experience at the Cleveland Clinic was a *shared responsibility* between a number of areas, including Nursing, Quality, Marketing, and Operations.

As a groundbreaking leader in this improvement effort, Cosgrove wrestled with how the CXO role could contribute to the effort to integrate the patient experience as a guiding value to the Clinic's entire operations. In a 2016 personal interview (J. Merlino, personal interview, February 20, 2016), Merlino described the issues facing the first CXO

at the Clinic including a strong desire by the leadership team to alter its culture and promote the patient experience as a measure for performance. The role was initially designed to be consultative yet responsible for the day-to-day execution of strategies to improve patient experience.

The journey described by Merlino (2015) offers well-documented insight into the perils and pitfalls associated with leading change and the culture needed to make the journey successful. With respect to culture as a predictor of success, a study by Manary et al. (2015) found a positive relationship between collaborative hospital cultures and higher patient experience scores. The researchers also found that where decentralized hospital cultures existed, lower patient experience scores were more likely. Even given these data, culture, and interventions, altering or improving culture can be elusive.

Bees (2017) cited the results of a Health Leaders patient experience survey reflecting that 31% of surveyed facilities reported culture as their most significant stumbling block to improving patient experience. The role of structure and resources should be an area of further research and literature in the future, according to Bees.

The Contemporary Integration of the CXO Role

The role of CXO, as envisioned and implemented at Cleveland Clinic, received notice and attention over the following decade. As Merlino (2015) described, “One of our early goals was to shape the emerging field of patient experience by sharing what we were learning and doing” (p. 62). Over the next several years, the team at the Clinic achieved significant improvement in patient experience scores.

It is important to note that no significant research exists to detail the prevalence of the CXO position prior to the introduction of VBP. According to Polemus, Senior Partner at the recruiting firm of Witt-Kieffer:

> [c]reating the role of CXO has clearly become a more common tactic to advance a patient centric culture, especially in light of the impact of the increasing transparency of results around patient experience and the role it plays in organizational success. (R. Polemus, personal interview, March 3, 2016)

As a leader at Witt-Kieffer, Polemus is in a relevant position to summarize the environment regarding the prevalence of recruitment for the CXO role and job scope associated with the CXO position as it exists in the hospital and health system community. Polemus described a significant and recent (2015-2016) increase in recruiting for the role as well as the wide variation in a number of variables associated with the role. Variables included reporting relationships, preferred background of potential candidates, support staffing associated with the leadership position, and the scope of the role as defined by the hiring facility or system. With regard to the preferred background of potential candidates, Polemus described the strong beliefs expressed by various hospitals that a candidate for the role should be a clinically trained candidate such as a physician or nurse or administrative leader.

Even with this increased interest within the industry to develop and hire a CXO, Manary and colleagues (2015) underscored the following: “there is little empirical work to understand the approaches that hospitals are using to improve patient experience and whether these investments in organizational strategy, culture and leadership actually translate to higher HCAHPS scores” (p. 202).

Recent data are becoming available about the state of the patient experience effort at hospitals and health systems. A recent benchmarking study by the Beryl Institute, Wolf (2017) detailed several surveys associated with the patient experience improvement effort at hospitals. For example, in a survey of 944 U.S. hospitals conducted in January 2017, 76% of surveyed facility administrators stated they were either well established or established in their patient experience efforts. Interestingly, only 23% of those surveyed facilities had formally filled the role of CXO. Of the individual facilities that had designated a CXO, Wolf (2015) reported that over 30% designed the role to include other administrative or clinical duties in addition to patient experience leadership.

While this is the only empirical data to suggest that the role commonly exists along with other duties, Polemus expressed the belief that the tactic of aggregating patient experience with other duties was common. Regardless of this tactic, Wolf's survey of hospitals and health systems found that 82% of respondents stated that improving patient experience was their number one strategic priority followed by employee engagement (46 percent). With respect to the definition of patient experience, 65% of facility administrators stated they had a formal definition for patient experience as compared to just 27% reported in 2011. While this study detailed the increased importance of the role of patient experience in organizational strategy, the field could benefit from more empirical study of not only the impact of strategies to improve patient experience but the value associated with the role of the CXO in promoting the improved experience, according to Wolf (2015).

Key Health Research Findings

Since the HCAHPS program was not fully implemented until 2007, the literature regarding action steps to improve results as related to patient experience is not as fully formed as with other areas of hospital performance. However, there are several important themes in the current literature around patient experience that are worth noting. These include the following:

1. Improving patient experience scores is an important strategy for many U.S. healthcare leaders. The current body of knowledge around the survey instrument clearly indicates that by focusing attention on patient experience, HCAHPS surveys are having an impact on national hospital performance related to patient experience.
2. Because of growing evidence of the correlation between improved patient experience and improved hospital outcomes, there is a business case for improving HCAHPS scores beyond the obvious rewards and penalties associated with the *Value Based Purchasing* program adopted by CMS. Boulding et al. (2011) showed fewer re-admissions associated with patient-centered communication and collaboration measured by HCAHPS.
3. Some change efforts, especially surrounding communication and collaboration with the patient, are more impactful to HCAHPS scores than other factors. For example, Manary et al. (2013) described the significant correlation between nursing communication and HCAHPS results. The authors found this change to be more impactful than physician communication results.

4. Regardless of the financial impact of HCAHPS scores and Value Based Purchasing, many leading healthcare organizations are tackling patient experience improvement because of their mission and values. The literature regarding patient experience journeys by individual health systems is beginning to mature. There are at least three major published books on individual health system journeys. Each describes a highly successful organization whose market differentiation is based in part on becoming patient-centered. Each also describes a belief that the adoption and reform of the patient experience begins with top leadership and requires cultural transformation. Examples include Kenney's (2011) writing about Virginia Mason and Berry and Seltman's (2008) book on the Mayo Clinic.
5. An increasing number of hospitals and health systems are investing in the role of a Chief Experience Officer (CXO), an individual charged with organizing and leading the facility's strategies and tactics to improve the patient experience and build cultural support for necessary changes and interventions. There is evidence that such investments have accelerated since 2013. The successful introduction of the CXO role at the Cleveland Clinic by Cosgrove and subsequent documented success stories at the Clinic and other facilities has encouraged the development and relevance of such a role in the healthcare industry.

Management Theory Review – Resource Dependence Theory

Understanding the motivations of organizations to adopt objectives and operationalize practices that may be increasingly difficult and require cultural changes can be explained by one or more organizational theories. With respect to hospitals and health systems adopting more patient-centered practices, *Resource Dependence Theory*

(RDT) offers an effective framework for understanding motivations and associated strategic decisions by healthcare managers.

In RDT, one examines the role of stakeholders' interests where one or more stakeholders control resources necessary for the firm's survival or success. RDT offers a predictive framework for strategic decisions given defined stakeholder interests.

Specific to healthcare, RDT can help explain the motivations and actions of healthcare leaders as they seek to both minimize environmental uncertainty and reduce dependencies on outside interest groups. With respect to healthcare facilities, these dependencies are regulatory and financial and most often focused on federal and state funding as well as the influence of commercial insurers.

Pfeffer and Salancik's (1978) seminal work developed the foundation of *Resource Dependence Theory*. Pfeffer and Salancik analyzed the sources and consequences of power in inter-organizational relations, where power and dependence originate, as well as how leaders use power and manage the firm's dependencies. The theory advances the belief that the motivation of leaders is to ensure the organization's survival, enhance the organization's autonomy, and reduce dependence on other firms or entities. Hillman, Withers, and Collins (2009) articulated three core ideas of the theory: (1) the social context of a firm is highly relevant, (2) organizations have strategies to enhance their own autonomy, and (3) maintaining organizational power is an important factor for explaining internal and external actions of the organization.

Nienhauser (2008) stated that differences in the behavior of organizations, both decisions and non-decisions, can be traced back to differences in environments which are influenced by external and internal agents controlling critical resources to the firm,

including revenue and capital. Nienhauser described how RDT can also explain how various organizational structures can and do emerge from these distinct environments each firm can face regarding power and resource constraints.

The introduction of the CXO as a structural change due to external environmental factors aligns well with RDT. Nienhauser (2008) postulated that RDT is composed of a central theme: that dependence on critical resources influences the organization's actions and can help explain a firm's behavior. Nienhauser further outlined the firm's environment as (1) a source of uncertainty, and (2) a distributor of both internal and external power. A considerable amount of research has been undertaken to apply RDT principles to predict the behaviors of organizations. For example, several researchers, including Maier, Mayer, and Steinbereithner (2016), hypothesized that the impact of resource dependence causes not for profit organizations to operate more like a business and gain the characteristics of for profit organizations. Maier et al. (2016) performed a systematic literature review and discovered that not for profit organizations were in fact taking on these business-like characteristics. The causes were divided into three categories, exogenous, endogenous, and finally organizational/government interface. The latter cause explains why a not for profit with government dependencies, such as a not for profit healthcare facility, would become more business-like. The authors argued that political institutions often require not for profit organizations to implement business like structures to help ensure compliance or performance with the needs of society. In the case of not for profits, the researchers also found a considerable relationship between the ability to secure resources and eventual organizational performance.

When such performance takes on the form of compliance or accountability, RDT can be a useful construct to explain why an organization will make the effort to adopt such practices. Verbruggen, Christaens, and Milis (2011) hypothesized that the level of compliance with reporting standards would increase as an organization's dependence on government resources increased. The authors empirically confirmed that a strong relationship existed between compliance and governmental dependence.

Another example of such confirmation was reported by Zinn, Weech, and Brannon (1998), who found that if an organization perceived an external competitive threat associated with adoption of programs to improve service and quality, they would more likely adopt such programs. In light of this theory, one can clearly see the potential of RDT to explain why a hospital or health facility, seeking to reduce uncertainty and ensure the flow of needed resources, would be motivated to adopt and operationalize objectives created for it by outside groups such as the *Center for Medicare and Medicaid Services* (CMS), the *Institute of Medicine* (IOM), as well as *the Institute for Patient and Family Centered Care* (IPFCC).

Leadership roles and RDT have been studied by a number of researchers. Heimovics, Herman, and Jurkiewicz–Coughlin (1993) found that effective senior leaders were more likely to employ a political frame as part of a more complex perspective than senior leaders who were not seen as effective. Heimovics and colleagues further explained that when organizations are dependent on outside resources, these leaders form more complex managerial structures and relationships and operate more entrepreneurially to secure and revitalize mission orientation.

Applying RDT specifically to the healthcare environment is a relatively new area of empirical research, according to Yeager, Menachemi, Savage, Ginter, Sen, and Beitsch (2014). The researchers performed a systematic literature review to summarize the manner in which RDT has been applied to empirical studies of the external environments of healthcare organizations. In their review, they found wide variability regarding the number of variables used to measure the environment, the constructs measured, and the specific variables used to operationalize these environmental constructs. Of nearly 200 studies examining the relationship between environmental variables under RDT and the outcome of interest, only 6.8% resulted in findings supporting RDT predicted hypotheses. Yeager and colleagues conclude that the literature was limited and should be further investigated in other areas of healthcare operations.

Utilizing RDT as a conceptual framework to guide research about cultural competency within healthcare organizations, Weech-Maldonado, Elliott, Pradhan, Schiller, Dreachslin and Hays (2012) found that hospitals that served more diverse populations were more likely to achieve greater cultural competency. They explain that this effort is rooted in the healthcare organization's desire to secure power over their environments and secure resources. They also found greater emphasis on cultural competence in not for profit facilities compared to for profit facilities.

Likewise, Patidar, Weech-Maldonado, O'Connor, Sen, Trimm and Carnago (2017) utilized RDT to study the relationship between market forces and organizational factors to review the likelihood that hospitals would operate free standing emergency facilities. The context reflected in the study focused on the availability of resources and the ability to reduce uncertainty in the facilities environment by enacting strategies such

as free standing emergency facility. The authors utilized the concept of munificence to hypothesize that hospitals with more access to resources were more likely to operate these new facilities. Additional hypotheses involved greater likelihood to be operating in a dynamic environment and likelihood to be a larger facility. The authors found all of these hypotheses to be supported in their research.

Resource Dependence Theory: A Conceptual Framework

To this point, this study has introduced the concept of patient experience in several contexts, including the development of a key C-suite role (CXO) to ensure patient experience is afforded its rightful importance in a healthcare facility. These contexts include the failures of the current system, stakeholder expectations, and, finally, efforts to spur improvement in the system through incentives and penalties. These factors play a significant role in the development of a conceptual framework that guided and informed this research around improvement efforts. Maxwell, quoted in Ravitch and Riggin (2005), stated, "the conceptual framework of your study or research is the system of concepts, assumptions, expectations, beliefs and theories that supports and inform your research" (p. 86).

The findings of researchers and others' personal beliefs regarding patient experience are also clearly a part of the framework. For someone like Merlino, being witness to and a party of a cultural journey to remodel a healthcare system into a new patient-centered image and having the ability to explain that journey forms a powerful example to other healthcare leaders. Experiences of other healthcare organizations provide enlightenment around the selection of an organizational theory as the backdrop for the health sector research as well as the development of this research study. The

application of Resource Dependence Theory is extremely well suited to explaining the motivation the hospital to seek transforming changes in the patient experience. RDT particularly explains why a facility would adopt the interests of stakeholders even it if requires disruptive changes to its operations. A simplified example of this conceptual framework is shown in Figure 1.

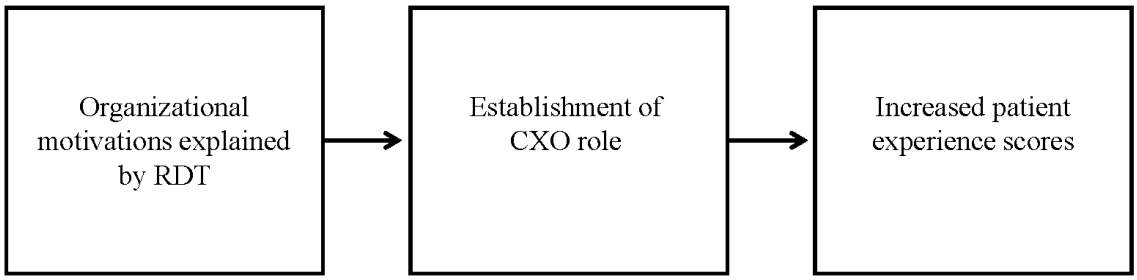

Figure 1. Simplified conceptual framework.

CHAPTER 3

RESEARCH METHODOLOGY

With the implementation of Value Based Purchasing by CMS and other payers implementing similar contract terms that measure patient experience of care, hospital and health systems seek interventions that will advance the experience of care and yield an improvement compared to previous performance. Drawing from the motivations described in RDT, hospitals are likely to continue to search for improvement tactics and continue to spend substantial resources on patient experience support. Interventions such as adding the CXO role are not yet well studied but will require significant investment.

Purpose of Study

This study has several purposes. The first of these is to identify the prevalence of the CXO as an established role in a sample of hospitals in the states of California, New York, and Florida. The second is to determine hospital characteristics and market factors associated with the hospitals in these states that have established a formal CXO role (i.e., where a C-suite executive is the responsible executive and does not assume other roles as well) and those hospitals in these states without a formal CXO role. The third purpose of the study is to determine if there is an association between establishing the formal role of CXO and reported higher HCAHPS scores.

Research Questions

The following three research questions helped guide the analysis:

(1) What is the prevalence of the formal CXO role at hospitals or health systems included in this study's sample population?

(2) Are there market factor and hospital characteristic differences in the sample associated with those facilities that have created a formal CXO role and those that have noted created a formal CXO role?

(3) Do hospitals with a formal role of CXO report higher HCAHPS scores?

Hypotheses

This study tested the following four hypotheses:

Hypothesis 1

Several studies have investigated the organizational characteristics of hospitals and health system facilities that are high performing on the various domains of the HCAHPS survey. These include Chatterjee et al. (2012) who reviewed the safety net status of hospitals and found lower patient experience scores under the HCAHPS survey for those facilities. Richter and Muhlstein (2017) studied profitability and its relationship to patient experience and found that a negative patient experience was highly correlated with lower profitability. However, to date, this researcher did not uncover any empirical studies examining organizational characteristics of hospitals and health systems and the establishment of the formal CXO role. The organizational characteristics chosen for this study included bed size, nurse staffing ratio, teaching status, system affiliation, and ownership status. These major characteristics were chosen to explore what kind of facilities have established the formal CXO role and have previously been studied relative

to HCAHPS scores. For this study, Hypothesis 1 stated: There are differences in organizational characteristics of hospitals that have a formally established CXO position as compared to those hospitals that have not established a formal CXO role.

Hypothesis 2

Lehrman et al. (2010) reviewed market factors and U.S. hospital characteristics associated with higher HCAHPS scores. The researchers found that hospitals in more urban locations with higher per capita income tended to score better on HCAHPS results. Little literature has reviewed market characteristics associated with the establishment of a CXO role. The market factors chosen for this study included total population, per capita income, education level, ethnicity, rural/urban status and level of competition as determined by the Herfindahl-Hirschman Index (HHI). These factors have also been studied by previous researchers related to HCAHPS scores. For the purpose of this study, Hypothesis 2 stated: There are differences in market factors of hospitals that currently have a formally established CXO position as compared to those hospitals that have not established a formal CXO role.

Hypothesis 3

In a recent study, Wolf (2017) found that a high percentage (76%) of sampled hospitals believed they were either established or well established in their patient experience efforts, and an even higher percentage (82%) stated that improving patient experience was their first priority. Even so, there is no empirical research that has studied the association between the establishment of the CXO role and reported HCAHPS results. This study will be one of the first studies to report such information. For the purpose of this study, the third hypothesis stated: Hospitals that have a formally

established CXO position will report higher overall hospital rating scores (a response of 9 or 10) as determined by HCAHPS Question 21 as compared to those hospitals that have not established a formal CXO role.

Hypothesis 4

In general, the literature identifies work regarding various interventions that facilities have adopted in order to increase the likelihood that the patient will answer "probably yes" or "definitely yes" to the question of whether they will recommend the hospital to a family or friend. Dempsey et al. (2014) reviewed nursing communication and engagement levels and the relationship these have to hospital recommendation. The authors identified a correlation between lower nursing engagement and lower HCAHPS performance. This study will be the first to review HCAHPS results in light of the establishment of a formal CXO role. For the purpose of this study, the fourth hypothesis stated: Hospital and health systems that have a formally established CXO position will report higher patient scores indicating "likelihood to recommend" as determined by HCAHPS Question 22 as compared to those hospitals that have not established a formal CXO role.

Data Collection

The primary source of data associated with whether a facility or health system had established the role of CXO was the web pages of hospitals and health systems associated with the state hospital associations in the three sample states of California, Florida, and New York. First, the hospitals were identified from the rosters of each state's hospital association. The remaining facilities were then cross-referenced with the AHA hospital membership database. It is important to note that Children's hospitals and VA hospitals

were removed from the sample as their surveys and/or structures were highly differentiated from adult facilities. Second, a web search was performed to see if the individual hospital was independent or part of a multi hospital system. Those system status results were also verified with the AHA database. Third, if the hospital's website did not indicate that the facility had a formally established CXO or if those duties were associated with another role, the facility inquiry stopped and the record was coded non-CXO. If the website was unclear, a phone call was made to administration to clarify. If the hospital was part of a system, the web review involved the system web site and a call to the system to determine if they had established the system level role. This process is outlined in Appendix C. The results of this data collection yielded two hospital cohorts, one that had an established and distinct CXO role (n = 172) and another cohort in which there was no established CXO role or if those duties were associated with another role (n = 702). The HCAHPS scores of facilities are publicly available at Medicare.gov and were extracted for 2016 and compiled based on the hospital cohorts. Other available descriptive information about each facility was gathered from the American Hospital Association database as of January 2017. The market factors for each facility were extracted from the Area Health Resource File (AHRF) as of 2016. These variables and their sources are shown in Table 1.

Table 1

Descriptive Variables and Sources Used

Variable	Source
Total # beds	AHA data
Teaching Status	AHA data
Ownership	AHA data
System Affiliation	AHA data
Nurse Staffing ratio	AHA data
Metro area status	AHRF
Black population	AHRF
White population	AHRF
Asian population	AHRF
Other ethnic populations	AHRF
Hispanic population	AHRF
Education level	AHRF
HHI Index	AHRF

Please note new variable list with "other" category ethnicity

Measures

Independent Variables

The independent variables for Hypothesis 1 included selected organizational characteristics including total beds, nurse staffing ratio, ownership type, teaching status, and system affiliation. The independent variables for Hypothesis 2 encompassed market characteristics including total population, per capita income, education level, ethnicity, rural/urban continuum and HHI index. For Hypothesis 3 and Hypothesis 4, the independent variable was whether or not the hospital or health system had established a CXO position. Of this sample, 172, or approximately 20% of these facilities, had filled the formal role of CXO. VA Health Systems (N = 21) were excluded.

Dependent Variables

The dependent variable in Hypotheses 1 and Hypothesis 2 was whether or not there was an established formal CXO role at the facility. The dependent variable for Hypothesis 3 was the percentage of respondents answering 9 or 10 on HCAHPS question 21. The dependent variable for Hypotheses 4 was the percentage of respondents that answered *definitely yes* or *probably yes* to the recommend question number 22 from the HCAHPS survey.

Control Variables

The control variables of primary interest in Hypothesis 3 included hospital characteristics of total beds, nurse staffing ratio, ownership, teaching status, and system affiliation. The control variables of Hypothesis 4 were market factors including total population, per capita income, education level, HHI (competition factor), ethnicity, and rural/urban continuum code.

Data Analysis

For continuous variables, an independent t-test was used. For categorical variables, Chi-square test of independence was used to analyze research questions 1 and 2. Logistic regression and multivariable regression were used to examine the effect of hospital and community factors on the top-box performance for the overall hospital rating question (question # 21) and the recommendation question (question # 22) on the survey to analyze research questions 3 and 4.

P-values less than 0.05 were considered significant (represented with a * next to the p-value). Log transformations were applied to the total bed size, per capita income, percentage of Blacks and Asians to account for extreme outliers in the dataset and the

transformed variables were used in the multivariable models to assess the factors that played a significant role with regards to overall hospital rating and *recommend* questions, 21 and 22 within the survey.

CHAPTER 4

RESULTS

Upon analysis, several individual hospital characteristics listed in Table 2 described differences between the sample hospitals that had created the formal CXO role and those that had not. The results for hospitals with a formal CXO included a larger bed size (CXO = 296 vs. without a CXO = 212; p=0.0014), a larger number were not for profit (CXO = 66.47% vs. without a CXO = 49.64%; p=<0.0001), and were more associated with a system affiliation (CXO = 87.86%, without a CXO = 65.48%; p=<0.0001). All of these differences were statistically significant at a 95% confidence level.

In reviewing the market factors or variables described in Table 2, the sample facilities employing a formal CXO operate in metro communities with 500,000 fewer people (p=0.0412), greater per capita income (p=0.0148), slightly more reported education and fewer Hispanics (-2.7%, p=0.0432). All of these differences were statistically significant at a 95% confidence level.

There was no statistical significance to market factors such as other population differences. However, when the 8 levels within the Rural-Urban Continuum Code were reduced to 2 levels i.e., classified as metro with higher population (categories: 1, 2, and 3) and non-metro with lower population levels (categories: 4, 5, 6, 7, and 8). The variable metro was highly significant 93.64% metro for CXO hospitals versus 88.59% for non-CXO hospitals (p=.00513).

Nurse staffing ratios and HHI Index measurements were not statistically different between the cohorts.

Table 2

Analysis of Hospital Factors, Market Factors, and HCAHPS Scores for CXO and Non-CXO Cohorts

Variable	CXO (Yes)	CXO (No)	*p-value*
Hospital Factors			
Total beds	296.2±321.3	212.7±219.3	0.0014*
Nurse staffing	7.97±3.6	8.22±18.0	0.7343
Teaching (%)			0.0002*
Yes	55.49	39.80	
No	44.51	60.20	
System Affiliation (%)			<0.0001*
Yes	87.66	65.48	
No	12.14	34.52	
Ownership (%)			<0.0001*
Not-for-profit	66.47	49.64	
For profit	28.32	27.82	
Non-federal governmental	5.20	2097	
Federal governmental	0.00	1.57	
Market Factors			
Total Population	1,765,770 ±		
Per Capita Income ($)	2,696,017	2,252,362 ± 3,169,095	0.0412*
Education (%)	52,436.40 ±		
White Population (%)	23,806.00	47,670.00 ± 18519.30	0.0148*
Black Population (%)	14.52 ± 5.51	16.14 ± 5.89	0.0007*
Asian (%)	68.29 ± 14.16	68.02 ± 15.55	0.8337
Hispanic (%)	10.5 ± 7.21	9.83 ± 7.96	0.3170
American Indian/Alaska Native (%)	8.02 ± 8.16	7.26 ± 7.15	0.2582
Native Hawaii/Other PI (%)	23.73 ± 14.96	26.43 ± 18.31	0.0432*
Other (American Indian/Alaska Native & Native Hawaii/Other PI)(%)	0.68 ± 0.74 0.21 ± 0.28 0.90 ± 0.83	0.83 ± 1.00 0.19 ± 0.22 1.04 ± 1.04	0.0263* 0.3607 0.0800
Metro			
Yes (Rural-Urban categories 1, 2, and 3) (%)	93.64	88.59	0.00513*
No (Rural-Urban categories 4, 5, 6, 7, and 8) (%)	6.36	11.41	
Herfindahl-Hirschman Index (HHI or HHI-score)	5793.1 ± 3361.0	5579.5 ± 3373.4	0.4556
HCAHPS Question 21: Overall Rating	68.49	66.3	0.0047*
HCAHPS Question 22: Patient Recommendation	93.83	92.82	0.0009*

Note:

** - statistically significant at 0.05 level*

Continuous variables are reported as mean (M) ± standard deviation (SD); categorical variables are reported as a percentage of the group.

For continuous variables, an independent t-test was used. For categorical variables, a Chi-square test of independence was used.

As shown in Table 2, the cohort of 173 hospitals that had employed a formal role CXO scored a higher mean score (68.49) as compared to the cohort without a CXO (66.3) for the overall rating question in which we distinguish between an answer of 9 and 10 on the survey and any answer lower than a score of 9. The t-test performed showed the difference to be highly significant (p=0.0047) though the effect difference was only 2.19 when measured for each cohort. In addition, Table 2 also reported the higher mean score on the question associated with a recommendation for the hospital by the patient to friends and family. In this case, the score for the CXO cohort was 93.84 versus 92.82 for the cohort without a CXO. The t-test performed on the differences in the means for this question was highly significant at p equals 0.0009. In reviewing the factors influencing the outcome of higher overall rating, a number of differences in hospital characteristics and market factors associated with each cohort were found to be significant.

Table 3

Bivariate Odds Related to CXO Cohort

Variable	Odds Ratio (95% CI)
Hospital Factors	
Total beds	
≤Median (179.5)	**0.42 (0.30 – 0.60)**
>Median(179.5)	reference
Nurse staffing/bed	
≤Median (4.49) nurses	**0.32 (0.20 – 0.52)**
>Median(4.49) nurses	reference
Teaching	
Yes	**1.89 (1.35 – 2.64)**
No	reference
System Affiliation	
Yes	**3.82 (2.36 – 6.18)**
No	reference
Ownership (%)	
Not-for-profit	reference
For profit	0.76 (0.52 – 1.11)
Non-federal governmental	**0.19 (0.09 – 0.38)**
Metro	
Yes (Rural-Urban categories 1, 2, and 3)	**1.93 (1.01 – 3.71)**
No (Rural-Urban categories 4, 5, 6, 7, and 8)	reference
Market Factors	
White Population	1.00 (0.99 – 1.01)
Black Population	1.20 (0.96 – 1.51)
Hispanic	0.99 (0.98 – 1.00)
Asian	1.13 (0.93 – 1.37)
Other (Native Hawaii/Other P)	0.85 (0.69 – 1.05)

Note:
Significant odds are bolded

Hospitals with total beds less than or equal to 179.5 (median value for the overall distribution) had an odds ratio of .42 of being associated with a formal CXO (95% CI: 0.30, 0.60). Hospitals with nurse staffing less than or equal to 4.49 (median value for the overall distribution) had an odds ratio of .32 of being associated with a CXO facility

(95% CI: 0.20, 0.52). Teaching hospitals had an odds ratio of 1.89 of being associated with a formal CXO role (95% CI: 1.35, 2.64). Hospitals affiliated with a healthcare system had an odds ratio of 3.8s of being associated with a facility with a formal CXO (95% CI: 2.36, 6.18). With regard to ownership, we found only one significant association: i.e., non-federal governmental hospitals had an odds ratio of .24 of being associated with a CXO facility (95%CI: 0.09, 0.38). Hospitals located in a metro region had an odds ratio of 1.01 of being associated with a CXO hospital (95% CI: 1.01, 3.71).

Table 4

Multivariable Logistic Regression Related to CXO Cohort

Variable	Odds Ratio (95% CI)
Total beds	
≤Median (179.5)	**0.50 (0.33 – 0.75)**
>Median(179.5)	reference
Nurse staffing/bed	
≤Median (4.49) nurses	**0.55 (0.33 – 0.91)**
>Median(4.49) nurses	reference
Teaching	
Yes	1.29 (0.86 – 1.94)
No	reference
System Affiliation	
Yes	**3.23 (1.95 – 5.36)**
No	reference
Ownership (%)	
Not-for-profit	reference
For profit	0.80 (0.53 – 1.21)
Non-federal governmental	**0.24 (0.12 – 0.50)**
Metro	
Yes (Rural-Urban categories 1, 2, and 3)	1.01 (0.49 – 2.08)
No (Rural-Urban categories 4, 5, 6, 7, and 8)	reference

Note:
Significant odds are bolded

Following the bivariate odds ratio analysis, we performed multivariable logistic regression on the variables that came out significant within the bivariate analysis. Hospitals with total beds less than or equal to 179.5 (median value for the overall distribution) were 50% less likely (95% CI: 0.33, 0.75) to have a CXO. Hospitals with nurse staffing less than or equal to 4.49 (median value for the overall distribution) were 45% less likely (95%CI: 0.33, 0.91) to have a CXO. Hospitals affiliated with a healthcare system were approximately three times more likely (95%CI: 1.95, 5.36) to have a CXO compared to those that are not affiliated within a hospital system. With regard to ownership status, we found only one significant association i.e., non-federal governmental hospitals are 76% less likely (95%CI: 0.12, 0.50) to have a CXO compared to not-for-profit hospitals. Interestingly, teaching hospitals and hospitals located in metro regions were found to be no longer significantly associated with a hospital establishing the CXO role.

Table 5

Multivariate Analysis of HCAHPS Question 21 – Overall Hospital Rating

Effect		Estimate	Standard Error	p-value
Intercept		79.1665	29.5258	0.0081*
PX_leader		1.6576	0.8173	0.0431*
Total beds (Log)		-1.8331	0.4613	<0.0001*
Teaching		2.0217	0.8060	0.0125*
Ownership	2 – for profit	-7.1118	0.8791	<0.0001*
	3 – non-federal governmental	-2.3788	1.0302	0.0214*
	4 – federal governmental	1.3898	8.3209	0.8674
	1 – not for profit	*reference*	-	-
System Affiliation		3.6454	0.8266	<0.0001*
Nurse Staffing		0.2310	0.04151	<0.0001*
Metro		4.9693	1.7210	0.0041*
Black Population (Log)		-1.2009	1.0723	0.2633
White Population		-0.06720	0.1222	0.5826
Asian (Log)		-1.8286	1.7444	0.2950
Hispanic		0.02761	0.06073	0.6495
Other Race		0.5882	0.5177	02564
Per Capita Income (Log)		0.2524	2.3106	0.9131
Education		-0.3170	0.1891	0.0943**

(Log) – Log transformed to account for outliers
** - statistically significant at 0.05 level*
*** - statistically significant at 0.10 level*
R-value for this model is: 0.62
R-Squared value for this model is: 0.38

In reviewing the factors influencing the outcome of higher rating, a number of the hospital and area level factors were found to be significant. It is important to note that we have considered the multivariate analysis of hospital and area characteristics. The teaching status of a facility (2.0217, p=<0.0001), system affiliation (3.6454, p=<0.0001), and nurse staffing (0.2310, p=<0.0001) were significantly associated with a high rating for the hospital system. In comparing healthcare systems, we have noticed a decrease of about 7.11 points (p=<0.0001) in the case of for-profit hospitals; and a decrease of about

2.38 points (p=0.0214) in the case of non-federal government hospitals when compared to not-for-profit hospitals. Hospitals that are part of a metro region are associated with a higher score by 4.9693 points (p = 0.0041).

Table 6

Multivariate Analysis of HCAHPS Question 22 – Patient Recommendation (Definitely Yes or Probably Yes)

Effect		Estimate	Standard Error	p-value
Intercept		99.1517	9.0154	<0.0001*
PX_leader		0.7491	0.3635	0.0399*
Total beds (Log)		-0.3254	0.2065	0.1157
Teaching		0.7645	0.3604	0.0344*
Ownership	2 – for profit	-3.4317	0.3878	<0.0001*
	3 – non-federal governmental	-0.7545	0.4607	0.1021
	4 – federal governmental	-20.8234	3.8325	<0.0001*
	1 – not for profit	*reference*	-	-
System Affiliation		1.4309	0.3693	0.0001*
Nurse Staffing		0.08496	0.01784	<0.0001*
Metro		0.2695	0.6618	0.6841
Black Population (Log)		-0.7026	0.3698	0.0580**
White Population		-0.02743	0.04072	0.5008
Asian (Log)		-0.6531	0.5919	0.2704
Hispanic		-0.01182	0.01758	0.5017
Other Race		0.1340	0.2026	0.5088
Per Capita Income (Log)		0.02912	0.6855	0.9661
Education		-0.09986	0.06398	0.1192

Note:
(Log) – Log transformed to account for outliers
** - statistically significant at 0.05 level*
*** - statistically significant at 0.10 level*
R-value for this model is: 0.48
R-Squared value for this model is: 0.24

In reviewing the factors influencing the outcome of higher likelihood to recommend, a number of the hospital and area level factors were found to be significant. The teaching status of a facility (0.7645, p=<0.0344), system affiliation (1.4309, p=0.0001), and nurse staffing (0.08496, p=<0.0001) were significantly associated with patients recommending the healthcare facility for the medical needs of their friends and family. In comparing healthcare systems, we have noticed a decrease of about 3.43 points (p=<0.0001) in the case of for-profit hospitals; and a decrease of about 20.82 points (p=<0.0001) in the case of federal government hospitals when compared to not-for-profit hospitals.

Summary of Results

Data were gathered with the intention of examining the hospital characteristics and market factors associated with two cohorts established from the 874 sampled facilities in three states (CA, FL, and NY). Those cohorts included (1) those facilities that had established the role of CXO, and (2) those facilities that have not established the role of CXO. Data were also examined to determine if there was an association between the presence of a formal CXO position and higher HCAHPS scores as measured by patient responses to HCAHPS questions 22 and 21 during the sample period of 2016, as compared to hospitals that have not established a formal CXO role. Chapter 5 will explore in more detail the results of the study, its limitations, and suggestions for future research on this subject.

CHAPTER 5

DISCUSSION

Research Questions

(1) What is the prevalence of the CXO role at hospitals or health systems?

(2) Are there hospital characteristics and/or market factor differences associated with the cohort of facilities that have created a CXO role?

(3) Are hospitals that have created the role of CXO associated with higher HCAHPS scores?

Assessment and Implications of Findings

Based upon the hospitals queried, approximately 20% of these facilities have formally established the role of CXO.

Hypothesis 1: *There are differences in organizational characteristics of hospitals that currently have a formally established CXO position as compared to those hospitals that have not established a formal CXO role.*

There is support for this hypothesis as there were differences in organizational characteristics of the hospitals in the sample that had filled the CXO role. Those differences which were statistically significant and associated with the hospitals with CXOs included greater bed size, teaching status, not for profit ownership, and system affiliation. The difference in hospital characteristics seems logical. Larger facilities naturally would have more resources to allocate to patient experience, including a formal CXO role. Likewise, not for profit facilities are likely to resource this role because of

their mission orientation. The innovation associated with a teaching facility would explain this association.

Hypothesis 2: *There are no differences in market factors of hospitals that currently have a formally established CXO position as compared to those hospitals that have not established a formal CXO role.*

Based upon this study's results there is support for this hypothesis. There were differences between the market factors associated with the hospitals that had invested in the CXO role and those that had not. A number of market factors were not statistically significantly different, namely those around population ethnicity. In addition, competition level as determined by the HHI indicated no significant impact associated with the presence or lack of a CXO role. I believe that the reason HHI is not a significant variable relates to how new the CXO role is in most facilities. This warrants additional future research. There were a number of market factors where there were significant differences. Facilities with formal roles of CXOs operated in areas that were more urban, higher per capita income, higher education, and lower Hispanic population. The market factors associated with hospitals that have formally filled the CXO role are logical. A more metro facility will likely have more resources because of a more lucrative payer mix or case mix index and greater incomes provided by urban economic development.

Hypothesis 3: *Hospitals that have a formally established CXO position report higher overall hospital rating scores (an answer of 9 or 10) as determined by HCAHPS Question 21 as compared to hospitals that have not established a formal CXO role.*

An analysis of the data indicated that there is support for this hypothesis. The cohort of 173 hospitals that had filled the CXO role scored higher top box answer (9 or

10) in comparison to the cohort without a CXO. The resulting difference was highly significant (p=.0047). The value associated with the presence of a CXO was nearing significance (p=.0514). In reviewing other factors influencing the outcome of higher top box score, a number were significant. For profit ownership was associated with a lower score and system affiliation was associated with a higher score. The teaching status of a facility was also associated with a higher score. The log of total bed number was also significant as was nurse staffing as well.

All of these relationships were statistically significant at the 95% confidence level. These associations are not unexpected given that the literature describes similar results in those previous studies analyzing organizational performance and higher HCAHPS scores.

Hypothesis 4: *Hospitals that have a formally established CXO position report higher patient scores indicating "likelihood to recommend" (signified as an answer of definitely yes as well as probably yes) as determined by HCAHPS Question 22 as compared to hospitals that have not established a formal CXO role.*

An analysis of the data indicated that there is support for this hypothesis. The cohort of 173 hospitals that had filled the formal CXO role scored higher in comparison to the cohort without a CXO. The resulting difference was highly significant with a p value of 0.0009. In reviewing the factors influencing the outcome of higher likelihood to recommend, a number were significant. These included the presence of a CXO, for profit ownership, system affiliation, and teaching status of a facility.

All of these relationships were statistically significant at the 95% confidence level. Several relationships between the variables were tested in this study. The most

significant identified were nurse staffing and ownership. When controlling for nurse staffing and ownership, teaching and system affiliation remained highly significant while the presence of a CXO was no longer significant.

When analyzing the results of this study, six forces become more apparent as to understanding managers' decision making for establishing a formal CXO role within the organization and the potential for more effective performance. These include: adoption process, operational alignment, stakeholder interests, anticipated patient and stakeholder outcomes, internal organizational context, and patient and other stakeholder characteristics. This conceptual framework is rooted in RDT but recognized that these forces reinforce the willingness for the organization to disrupt its normal operation to become more patient centered and align more forcefully with stakeholder demands. The construct provides momentum and sustainability to the change efforts.

Adoption Process

The adoption of stakeholder interests, especially those associated with increasing patient-centered practices, has been accelerated by the formation and operation of coalitions and associations promoting stakeholders' interest in these changes. Organizations like the IFPCC, American Hospital Association (AHA), IOM, and others are exerting a powerful influence on regulators, payers, and hospitals to adopt changes and have assisted in implementing penalties and incentives to promote these concepts.

Operational Alignment

The creation of reimbursement related penalties and rewards around the patient experience has caused hospitals and healthcare systems to adopt operational changes designed to increase the likelihood of patient satisfaction and patient engagement with

their care. In addition to instituting changes in operations, many facilities have integrated patients and families into their planning and organizing efforts. This includes the process of expansion and design of the facility's built environment and investing in new managerial structures (such as a CXO) to ensure patients' needs are integrated into strategy and operations. The conceptual framework that is outlined in this study is rooted in the concept of adapting to stakeholder interests and external forces (see Appendix).

Stakeholder Interests

As outlined in the literature review of RDT as well as the research regarding patient experience, there is strong support for a clearer and more rigorous definition of the interests of the patient related to safety, outcomes, and the experience of patient care within a hospital or healthcare system. RDT describes how penalties and incentives would form the basis of adoption by hospitals of more rigorous demands proposed by external forces, namely the government and patient interest groups (i.e., stakeholders).

Anticipated Patient and Stakeholder Outcomes

It is believed that the focus on patient friendly practices and design will improve patient and family satisfaction with their healthcare experience. In addition, this could also increase employee engagement in the mission, vision, and values of the organization (McClelland, 2014). Families that are more involved in their plan of care and provided greater access to the care environment may result in increased engagement as well as improved understanding of the care plan provided by caregivers. Improved community perception could also result from improved patient experience (Kenney, 2011).

Internal Organizational Context

An important aspect that comprises the conceptual framework is that of internal organizational context, specifically of the hospital or healthcare system. Not only do these factors impact the model, they also form opportunities to empirically study these contextual variables with regard to proposed and actual outcomes, or the research. These factors include directional strategies of the hospital, organizational culture, short- and long-term constraints such as finances, logistics, physical plant, location, facilitation processes, and resource allocation.

Patient and Other Stakeholder Characteristics

Even as the organizational context likely defines the behavior and strategies chosen by the hospital or healthcare facility as they face stakeholder demands to enact change and adopt new objectives, each stakeholder also behaves within the context of their internal and external environment as well. Stakeholder characteristics are also important to defining the research framework. Patients, hospital leaders, caregivers, payers, and regulators each exhibit characteristics that drive reactions, behaviors, and outcomes. These are a part of the conceptual framework defining this research opportunity.

Recommendations

Hospitals and Health Systems

It is clear that the body of knowledge is expanding regarding potential interventions, strategies, and management structures that can improve patient experience and the resulting reimbursement associated with value based contracting. Hospitals and health systems that have not invested in the CXO role should evaluate their current

progress given their existing leadership structures. I believe that as a minimum, this structure should assign specific accountability for the patient experience with a key leader that can advance this effort and implement evidenced based practices to drive these improvement efforts. I believe there is significant sentiment among some hospital leaders that patient experience is everyone's business and should be left as a decentralized mandate. This study does indicate an association between having someone in the CXO role and higher reported scores for the recommendation and overall rating questions as reported in HCAHPS results for 2016. Facilities should support the development of more leaders in patient experience training and development, encouraging the growth of credentialed professionals in these roles regardless of whether or not they are led by a CXO.

While it may be true that the return on establishing a CXO is hard to quantify today, that situation may change as the value associated with outcome measures begins to have greater influence on payment rates. As noted previously, certain other factors were associated with higher patient experience scores, such as lower readmission rates and lower lengths of stay. These reductions generally have a positive impact on a hospital or health systems bottom line. Organizations should remain curious and open-minded about these strategies and periodically evaluate the return associated with these investments as the industry places more emphasis on patient experience results.

Patient Advocacy Groups

Organizations that advocate for greater knowledge and emphasis about patient experience such as the IOM, the IPFCC, and Beryl Institute can benefit from supporting greater study of the role of the CXO as well as strategies to optimize the return on

investments designed to improve patient experience results. As the industry lacks significant knowledge about the impact of patient experience infrastructure in a hospital or health system, advocacy groups should embrace and sponsor greater empirical study of these strategies. This research development study would enable more complete cost/benefit analysis of not only the CXO position but other organizational strategies aimed at improving patient experience performance. These could include cultural efforts, improving provider/patient communication and environmental improvements. These groups should also continue to develop and strengthen credentialing and certification programs of patient experienced leaders and embrace the study of the value of these credentials in improving patient experience performance.

Payer Organizations

RDT offers a unique framework from which we can view the motivations of hospitals and health systems to be attuned to the demands of healthcare payers and their beneficiaries. These demands now include attention to the opinions patients have regarding their experience of care. Payers should embrace the future study of the role experience plays in a number of important outcomes, namely quality and cost of care. As the body of knowledge grows, greater evidence that improved experience has a relationship to improved outcomes should motivate payers to place greater importance on patient experience results as it related to reimbursement rates. Incorporating greater importance will then incentivize hospitals and health systems to pay more attention to factors influencing experience.

Limitations of the Study

The sampling of licensed hospitals in three states provided significant information regarding the prevalence of the CXO role in the industry. The study detailed market and hospital differences that can be understood based upon the theory of resource dependency and directional strategies. While the study revealed an association between the CXO role and higher HCAHPS scores, more longitudinal data will be necessary to determine if this association is becoming a relationship that is statistically meaningful and higher HCAHPS scores result from filling the role. The possibility exists that those facilities that have invested in the role of CXO are likely further on a cultural journey in recognizing the importance of the patient experience and as a result, may be biased toward higher HCAHPS results because of that advancement and more developed infrastructure. While this was a sample of 874 facilities, the states sampled were chosen to represent a varied geographic and service sample.

Recommendations for Further Research

Hospitals and healthcare systems would benefit from further research around the role of the CXO. In particular, research into the HCAHPS scores of facilities that have filled the role should focus on before and after results of questions 21 and 22 in the HCAHPS survey and organization-specific initiatives associated with establishing this role. In addition, analyzing the motivations for these early adopters would provide insight. More research into the characteristics of individuals filling this role would also yield further insight into patient experience results. Future studies should also analyze strategies CXOs have implemented to improve specific areas surrounding scores such as nursing or physician communication and whether these demonstrate an increase in patient

experience scores. The role of corporate culture as support for the development of a CXO role or other infrastructure investment would be helpful to decision-makers as would an analysis of the reporting relationships associated with the CXO position. Hospitals and health systems should welcome future analysis of the potential return on the investment associated with higher reimbursements under VBP and the cost of implementing strategies designed to improve patient experience, including creating a formal CXO role and the potential infrastructure associated with that effort.

Summary

This study will further the process of mitigating gaps in current research and providing useful information to guide healthcare leaders in understanding the relevance of a new C-suite role, the Chief Experience Officer. Based on RDT, this study offers a framework to understand the rationale for the investments and changes made by hospitals and health systems relative to improving patient experience. It provides greater insight into the types of hospitals that have utilized the CXO role as a strategy to improve patient experience and identified an association between those hospitals with a CXO position as well as several key characteristics and higher HCAHPS scores. The importance of improving patient experience is evidenced by the significant investments most facilities are making in infrastructure, management staff, programs, and cultural interventions to be more patient-centered.

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APPENDIX A

HCAHPS SURVEY

Exhibit A

HCAHPS Survey

SURVEY INSTRUCTIONS

- You should only fill out this survey if you were the patient during the hospital stay named in the cover letter. Do not fill out this survey if you were not the patient.
- Answer all the questions by checking the box to the left of your answer.
- You are sometimes told to skip over some questions in this survey. When this happens you will see an arrow with a note that tells you what question to answer next, like this:

☐ Yes
☑ No ➔ ***If No, Go to Question 1***

You may notice a number on the survey. This number is ONLY used to let us know if you returned your survey so we don't have to send you reminders.
Please note: Questions 1-22 in this survey are part of a national initiative to measure the quality of care in hospitals. OMB #0938-0981

Please answer the questions in this survey about your stay at the hospital named on the cover letter. Do not include any other hospital stays in your answers.

YOUR CARE FROM NURSES

1. During this hospital stay, how often did nurses treat you with courtesy and respect?

[1] ☐ Never
[2] ☐ Sometimes
[3] ☐ Usually
[4] ☐ Always

2. During this hospital stay, how often did nurses listen carefully to you?

[1] ☐ Never
[2] ☐ Sometimes
[3] ☐ Usually
[4] ☐ Always

3. During this hospital stay, how often did nurses explain things in a way you could understand?

[1] ☐ Never
[2] ☐ Sometimes
[3] ☐ Usually
[4] ☐ Always

4. During this hospital stay, after you pressed the call button, how often did you get help as soon as you wanted it?

[1] ☐ Never
[2] ☐ Sometimes
[3] ☐ Usually
[4] ☐ Always
[9] ☐ I never pressed the call button

YOUR CARE FROM DOCTORS

5. During this hospital stay, how often did doctors treat you with courtesy and respect?

[1] ☐ Never
[2] ☐ Sometimes
[3] ☐ Usually
[4] ☐ Always

6. During this hospital stay, how often did doctors listen carefully to you?

[1] ☐ Never
[2] ☐ Sometimes
[3] ☐ Usually
[4] ☐ Always

7. During this hospital stay, how often did doctors explain things in a way you could understand?

[1] ☐ Never
[2] ☐ Sometimes
[3] ☐ Usually
[4] ☐ Always

THE HOSPITAL ENVIRONMENT

8. During this hospital stay, how often were your room and bathroom kept clean?

[1] ☐ Never
[2] ☐ Sometimes
[3] ☐ Usually
[4] ☐ Always

9. During this hospital stay, how often was the area around your room quiet at night?

[1] ☐ Never
[2] ☐ Sometimes
[3] ☐ Usually
[4] ☐ Always

YOUR EXPERIENCES IN THIS HOSPITAL

10. During this hospital stay, did you need help from nurses or other hospital staff in getting to the bathroom or in using a bedpan?

[1] ☐ Yes
[2] ☐ No ➔ **If No, Go to Question 12**

11. How often did you get help in getting to the bathroom or in using a bedpan as soon as you wanted?

[1] ☐ Never
[2] ☐ Sometimes
[3] ☐ Usually
[4] ☐ Always

12. During this hospital stay, did you need medicine for pain?

[1] ☐ Yes
[2] ☐ No ➔ **If No, Go to Question 15**

13. During this hospital stay, how often was your pain well controlled?

[1] ☐ Never
[2] ☐ Sometimes
[3] ☐ Usually
[4] ☐ Always

14. During this hospital stay, how often did the hospital staff do everything they could to help you with your pain?

[1] ☐ Never
[2] ☐ Sometimes
[3] ☐ Usually
[4] ☐ Always

15. During this hospital stay, were you given any medicine that you had not taken before?

[1] ☐ Yes
[2] ☐ No ➔ **If No, Go to Question 18**

16. Before giving you any new medicine, how often did hospital staff tell you what the medicine was for?

[1] ☐ Never
[2] ☐ Sometimes
[3] ☐ Usually
[4] ☐ Always

17. Before giving you any new medicine, how often did hospital staff describe possible side effects in a way you could understand?

[1] ☐ Never
[2] ☐ Sometimes
[3] ☐ Usually
[4] ☐ Always

WHEN YOU LEFT THE HOSPITAL

18. After you left the hospital, did you go directly to your own home, to someone else's home, or to another health facility?

[1] ☐ Own home
[2] ☐ Someone else's home
[3] ☐ Another health facility ➔ **If Another, Go to Question 21**

19. During this hospital stay, did doctors, nurses or other hospital staff talk with you about whether you would have the help you needed when you left the hospital?

[1] ☐ Yes
[2] ☐ No

20. During this hospital stay, did you get information in writing about what symptoms or health problems to look out for after you left the hospital?

[1] ☐ Yes
[2] ☐ No

OVERALL RATING OF HOSPITAL

Please answer the following questions about your stay at the hospital named on the cover letter. Do not include any other hospital stays in your answers.

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?

[0] ☐ 0 Worst hospital possible
[1] ☐ 1
[2] ☐ 2
[3] ☐ 3
[4] ☐ 4
[5] ☐ 5
[6] ☐ 6
[7] ☐ 7
[8] ☐ 8
[9] ☐ 9
[10] ☐ 10 Best hospital possible

22. Would you recommend this hospital to your friends and family?

[1] ☐ Definitely no
[2] ☐ Probably no
[3] ☐ Probably yes
[4] ☐ Definitely yes

ABOUT YOU

There are only a few remaining items left.

23. In general, how would you rate your overall health?

[1] ☐ Excellent
[2] ☐ Very good
[3] ☐ Good
[4] ☐ Fair
[5] ☐ Poor

24. What is the highest grade or level of school that you have completed?

[1] ☐ 8th grade or less
[2] ☐ Some high school, but did not graduate
[3] ☐ High school graduate or GED
[4] ☐ Some college or 2-year degree
[5] ☐ 4-year college graduate
[6] ☐ More than 4-year college degree

25. Are you of Spanish, Hispanic or Latino origin or descent?

[1] ☐ No, not Spanish/Hispanic/Latino
[2] ☐ Yes, Puerto Rican
[3] ☐ Yes, Mexican, Mexican American, Chicano
[4] ☐ Yes, Cuban
[5] ☐ Yes, other Spanish/Hispanic/Latino

26. What is your race? Please choose one or more.

[1] ☐ White
[2] ☐ Black or African American
[3] ☐ Asian
[4] ☐ Native Hawaiian or other Pacific Islander
[5] ☐ American Indian or Alaska Native

27. What language do you mainly speak at home?

[1] ☐ English
[2] ☐ Spanish
[3] ☐ Chinese
[4] ☐ Russian
[5] ☐ Vietnamese
[6] ☐ Some other language (please print): _____

THANK YOU

Please return the completed survey in the postage-paid envelope.

[NAME OF SURVEY VENDOR OR SELF-ADMINISTERING HOSPITAL]

[RETURN ADDRESS OF SURVEY VENDOR OR SELF-ADMINISTERING HOSPITAL]

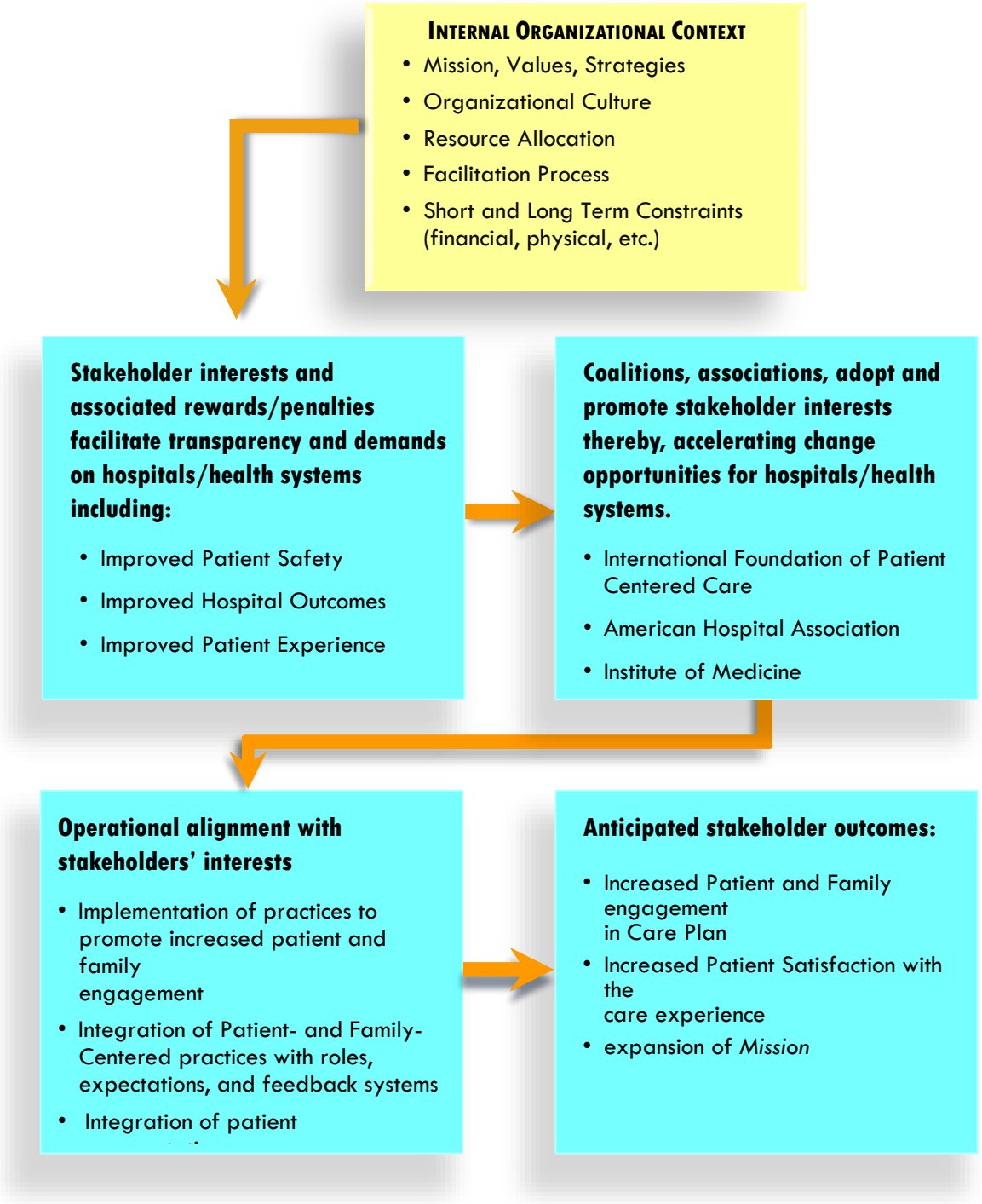
APPENDIX B

A CONCEPTUAL FRAMEWORK

Exhibit B

A Conceptual Framework:

The Relationship between establishing the Role of Chief Experience Officer and HCAHPS scores at a hospital or health system as impacted by Resource Dependence Theory

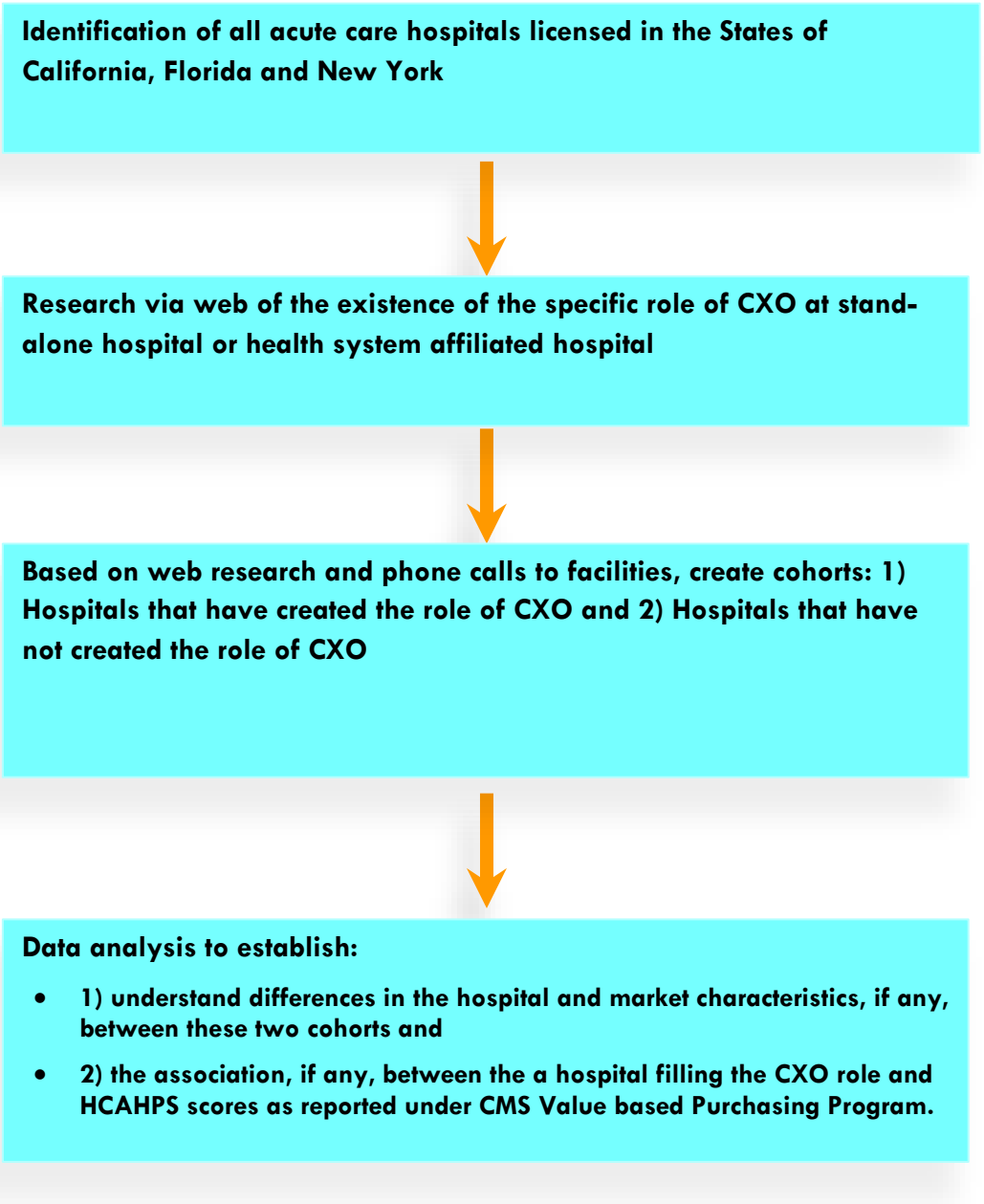


APPENDIX C

ANALYTIC STRATEGY

Exhibit C

ANALYTIC STRATEGY



APPENDIX D

LETTER OF APPROVAL FROM THE INSTITUTIONAL REVIEW BOARD

THE UNIVERSITY OF ALABAMA AT BIRMINGHAM
Institutional Review Board for Human Use

DATE: April 27, 2016

MEMORANDUM

TO: William Breen
Principal Investigator

FROM: Nancy Stansfield, CIP
Assistant Director
Institutional Review Board for Human Use (IRB)

RE: Request for Determination – Not Human Subjects Research

IRB Protocol N160420009: The Position of Chief Experience Officer in Hospitals and Health Systems and Its Relationship to HCAHPS Scores

A member of the Office of the IRB has reviewed your Application for Not Human Subjects Research Designation for above referenced proposal.

The reviewer has determined that this proposal is **not** subject to FDA regulations and is **not** Human Subjects Research. Note that any changes to the project should be resubmitted to the Office of the IRB for determination.

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