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Human Resource Strategies for Improving Organizational Performance to Reduce Medical Errors

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This is to certify that the doctoral study by

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has been found to be complete and satisfactory in all respects,
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Walden University
2017

Abstract

Human Resource Strategies for Improving Organizational Performance to Reduce

Medical Errors

by

Mary Ellen Taylor-Hyde

MBA, Robert Morris University, 2010

BBA, Robert Morris University, 2007

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

Walden University

April 2017

Abstract

Preventable medical errors are the third leading cause of death in the United States. Healthcare leaders must consistently promote the delivery of quality and safe care of patients to reduce unnecessary errors and prevent harm. The purpose of this case study was to explore human resource strategies for improving organizational performance to reduce medical errors. The study included face-to-face interviews with 5 healthcare clinical managers who work within a multifaceted health system in the Midwestern region of the United States. Complex adaptive systems theory was used to frame this study. Interview notes, publicly available documents, and audio recordings were transcribed and analyzed to identify themes regarding strategies used by managers to find effective ways for improvement. Four themes emerged: addressing seminal/never events, ongoing training programs, communication/collaboration, and promoting a culture of safety and quality. Results may directly benefit healthcare managers by facilitating successful strategies to reduce preventable medical errors through education, feedback, innovation, and leadership. Implications for social change for healthcare managers include continued training, building a culture of safety, and using collaborative and communicative efforts while making contributions to the best practices within healthcare organizations to reduce the likelihood of medical errors.

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Dedication

The completion of this Doctoral Study was possible because of my family for their love and support, my husband August C. Hyde IV, and our children Pierre, Ashley, and Alexia. I hope to have encouraged my children to pursue their dreams as I have, and know whatever they want for their lives is within reach. During this journey, I hope to have made it clear that through persistence, and belief in their abilities that they are capable, extraordinary, and strong individuals with far more to accomplish.

This Doctoral study is also dedicated to my parents who both never had an opportunity to receive an education but still raised me with the skills of humility, integrity, and transparency, which gave me the ability to be a positive example for my children and community. To my mother, Mary Liza Taylor, who provided me with incomparable love, watching over my children when she was able, and frequently looked after my well-being. My mother often provided me with strength through her circumstances, having had nine children, and encouraging my effort as the youngest, and the first to achieve this honor in pursuant of my dreams. Finally, in memory of my father, Joseph Earl Taylor, Sr. for many years, he taught me independence, patience and to take pride in everything that I set my heart in doing. My father had always expressed his pride in my accomplishments. He was and is still a part of many positive actions in my life. I have gone through my journey knowing he is smiling now, and can still imagine him here saying, "I am so proud of you".

Acknowledgments

First, I would like to acknowledge GOD for the opportunity to be of service to others and for humbling me through this process of achieving this distinction. I would like to thank my Doctoral Committee Chairman, Dr. Kenneth Gossett, who spent many hours with me to perfect my study for compliance providing inspiration, reassurance through conversations, and helping me to develop my own aha moments to improve the quality of my study. I also thank Dr. William Stokes, co-chair and Dr. Roger Mayer, URR for their support, belief in my project, and patience when I needed to re-draft. I acknowledge, Fred Walker who was there if I ever needed him for assistance, thank you for your prompt responses and always making me feel early on that I had already accomplished my goal. I would also like to acknowledge Dr. Gene Fusch, Methodologist, for initially assisting me in the progression of my study. Dr. Reginald Taylor, DBA Methodologist, for his words of encouragement that kept me focused throughout my final core classes of how we should view ourselves as future scholars who will flourish, and be among the few who have accomplished this difficult journey. Dr. Taylor, thank you for reminding me that I am worthy, and have the ability to attain success.

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Section 1: Foundation of the Study

Medical errors happen and are a result of numerous causes, but patient safety is a

necessity for all healthcare stakeholders including accrediting and credentialing agencies,

and educational institutions (Wachter, Pronovost, & Shekelle, 2013). A gap exists

between current hospital practices and the perceived importance of varying approaches to

improve patient safety (Wachter et al., 2013). Healthcare organizations in the United

States are seeking ways to reduce medical errors and adverse events that effect patient

safety (Frese & Keith, 2015). Medical errors are one of the primary causes of deaths in

the United States (James et al., 2014). The annual cost of preventable medical errors, not

including the cost of loss of human life, is $17- $29 billion dollars (James et al., 2014).

The reduction of these errors and improving patient safety has become a global concern

(James et al., 2014). Organizational performance may improve when staff and human

resource (HR) personnel use a more coherent strategic approach to reduce errors

improving patient safety (Crema & Verbano, 2015).

Background of the Problem

The responsibility of healthcare leaders is to strategically guide the direction of

the organization for competitive advantage, optimal organization of the products or

services offered, and determining the type of business model employed for pursuance of

profit (Burns, Bradley, Weiner, & Shortell, 2012). Quality care can be expensive and was

out of reach for many Americans until healthcare reform took place. In 2010, Congress

passed the Patient Protection Affordable Care Act (PPACA) to address healthcare reform

in an effort to assure Americans the right to reasonably priced quality healthcare that is

safe and effective. Quality of care occurs when timely and accurate diagnoses are made

by physicians that are dependent upon the interaction of human components, technology of care, and the science of care. A critical goal in improving the delivery of quality healthcare is doing more good than harm within the system by focusing on reducing medical errors (Agency for Healthcare Research, 2015). The delivery of quality healthcare turns on leadership strategy. Chief executive officers, including the board of directors and other leaders within the organization, establish the foundation for a quality culture based on the implementation of necessary policies and procedures that affect all staff.

Problem Statement

James (2013) found from their research that 400,000 patients die annually due in some respect to medical errors, making it the third leading cause of death in the United States. At least 50% of hospital-acquired infections (HAIs) account for a large proportion of the harm caused by inappropriate healthcare and are estimated to cost approximately 18.2 billion dollars on an annual basis (Zimlichman et al., 2013). With little evidence of improvement of quality care, thousands of additional deaths are associated with preventable medical errors (Wachter et al., 2013). The general business problem is that medical errors might result in a loss of profitability for a healthcare program and reduce both healthcare efficiency and effectiveness. The specific business problem is that some healthcare managers have limited (HR) strategies to improve organizational performance to reduce medical errors.

Purpose Statement

The purpose of this exploratory qualitative single-site case study was to identify how healthcare managers use HR strategies to improve organizational performance to reduce medical errors. The targeted population included healthcare managers who have successfully addressed the problem of preventable medical errors in a clinical setting in the Midwest of the United States. The findings of this study might contribute to positive social change by improving the quality of healthcare delivery by reducing medical errors in clinics and hospital settings across this country.

Nature of the Study

This research is qualitative and exploratory. I selected a qualitative method over other methodologies such as quantitative and mixed method in order to support a rational understanding of a social setting or activity from the viewpoint of the research participants (Bernard, 2013). Yilmaz (2013) outlined three methods for conducting research: quantitative, qualitative, and mixed methods. Yilmaz proposed a quantitative approach supports a researcher to develop objective, statistical data through predetermined instruments to address a specific hypothesis. In a qualitative approach, Yilmaz suggested the researcher's objective is to derive themes from the subjective responses of research participants. With a mixed methods approach, Venkatesh, Brown, and Bala (2013) suggested a researcher should attempt to combine both of these strategies to enrich the meaning of outcomes and improve study validity. For this doctoral study, the qualitative method was appropriate in exploring experiences of concise quality assessments for organizational improvements. Researchers can use a qualitative method

to provide relevant data and information for decision-making in order to improve policies and practices of staff (Marshall & Rossman, 2016), which was the intent of this study.

The research design was a single site case study, which was selected over other designs such as phenomenology and ethnography to answer *what, how,* and *why* questions (Yin, 2014). A case study is an in-depth analysis of people, events, and relationships bounded by a united cause (Merriam, 2014). I did not select a phenomenological design for this proposed study because it focuses on the lived experiences of the participants (Bernard, 2013). An ethnographic study as described by Wolcott (2010) was not appropriate because the focus is not on a group culture through direct observations. An exploratory case study qualitative research design was appropriate to understand the study participants' ideas regarding strateigies to reduce preventable medical errors in the delivery of quality healthcare services.

Research Question

The overarching research question for this study in the exploration of quality healthcare was the following: What HR strategies do healthcare managers use to improve organizational performance to reduce medical errors?

Interview Questions

1. How has your leadership influenced positive change in quality care within your organization?

2. What HR strategies do you believe managers need to implement to improve organizational performance?

3. How do you handle the responsibility for the quality and safety of patients?

4. How do you perceive the problem of medical errors in your organization?

5. What are your current HR strategies toward implementing organizational improvements for delivering quality care?

6. What preventable measures have you taken to assure teamwork in promoting the delivery process?

7. How have you used positive feedback to improve the performance of staff in delivering quality healthcare?

8. What have been your experiences regarding medical errors within your organization?

9. Is there anything else that you can tell me about the HR strategies necessary in a healthcare program to reduce medical errors?

Conceptual Framework

This proposed study focuses on complex adaptive systems (CAS) as a conceptual framework for healthcare organizations and programs. In 1984, the CAS theory originated in a program located at the Santa Fe Institute headed by John H. Holland, Murray Gell-Mann, and others (Norberg & Cumming, 2013). This research attempts to demystify the behavior of staff in large complex systems. In addition, this research should assist healthcare managers in thinking about the nature and value of quality improvement strategies in healthcare organizations (Wallis, 2013). Managers can use this framework to make sense of natural phenomena, including human responses to solving problems within primary care organizations and quality improvement programs. Key constructs underlying the theory are to identify key themes and HR strategies that underpin the effective authority of quality improvement programs to reduce medical errors.

Operational Definitions

Accountable care organization (ACO): A local network of healthcare providers that can serve the full continuum of care for patients within their provider network (Lewis, Colla, Carluzzo, Kler, & Fisher 2013; Koury, 2014).

Analytical framework: Organized into categories, an anlytical framework is a set of codes jointly developed by researchers who are involved in conducting an analysis of organizational data (Gale, Heath, Cameron, Rashid, & Redwood, 2013).

Complex adaptive systems: A conceptual framework for healthcare organizations and facilities that is used to make sense of natural phenomena including human responses to solving problems (Iosim, 2016),

Continuous quality improvement (CQI): An incremental approach toward improvement and takes an organization-wide systems viewpoint, which is tied to the strategic goals and aligned with a culture of quality (McFadden, Stock, & Gowen III, 2015).

Medical errors: Aplan of action that was not completed, an error in execution of an action or the use of a flawed plan that leads to adverse clinical events (James, 2014).

Patient protection and affordable care act (PPACA): Federal legislation signed into law in 2010 by President Barack Obama. The legislation contained provisions that expanded health insurance benefits to uninsured individuals. The PPACA has been used by healthcare managers to ensure Americans the right to reasonably priced healthcare and to limit healthcare costs and increase the quality of care delivered (Blumenthal & Collins, 2014).

Assumptions, Limitations, and Delimitations

Assumptions

An assumption is a matter assumed to be true that shapes the research study (Kirkwood & Price, 2013). Present in this study are four assumptions. The first assumption is the information provided for review is accurate documentation of the organization's position on medical errors. In the data collection for a case study, specific information relevant to the study is not readily anticipated but can be determined by doing a complete and thorough review of the existing literature (Yin, 2014).

The second assumption is that quality care is a priority among executive staff and top administrators in the industry. Quality healthcare is expected when consumers visit hospitals and care clinics. The characteristics of leaders in healthcare are a factor in the delivery of quality care as presented through their medical staff. ACOs should aid in the process of delivering quality healthcare, which is of value to consumers (Pathak, Wieten, & Djulbegovic, 2013). This value is vital to the economic stability of the organization while promoting CQI (McFadden et al., 2015). Interlinking leadership, education, measurement, innovation, and adding value to the process are the components of delivering quality healthcare.

The third assumption is that the problem in the organization may revolve around inadequate and outdated HR strategies on improving quality in healthcare organizations (Dancer, 2014). The improvement in quality within the care organization is significant when all staff are required to follow specific HR policies and procedures that have been found to be effective in reducing preventable medical errors. The fourth and final assumption is that the participants will provide their perception and experiences as

leaders in healthcare in a manner that is truthful and honest. Without this assumption, findings of a study would be without merit.

Limitations

Limitations are potential weaknesses in the study out of the control of the researcher (Marshall & Rossman, 2016). Enforcement of *a priori* values on others limits the potential of the study in presenting improvements in the delivery of quality care. The perception of quality care and the identification of what quality means are within the character and morals of the individual. The delivery of quality care occurs individually based on physician and staff values at the time of service. Organizational and structured value-based HR strategies can be successful in improving the quality of care; however, these HR strategies must exhibit factors of organizational excellence beneficial to healthcare leaders, their staff, stakeholders, and patients.

Delimitations

Delimitations are factors within the researcher's control that limit the scope and define boundaries in a study (Marshall & Rossman, 2016). The scope of the study is to explore the perspectives of leaders and executive management in implementing HR strategies to improve employee performance and reduce medical errors. The delimitations of this study are geographic location, sample size, and sample population. The geographical location is in the Midwest of the United States. The sample population included five healthcare managers of departments in a healthcare system. The findings from this study may have important considerations for implementation of effective methods to reduce preventable medical errors.

Significance of the Study

Contribution to Business Practice

The study may assist healthcare managers to review current HR strategies that are not working and to understand the daily aspects of performance disconnect that may contribute to the reduction of medical errors which contribute to the effectiveness of improving business practices. This study may be of value to healthcare organizations because of the direct effect medical errors have on the quality of healthcare services. As medical errors increase (+), the quality of healthcare services will go down (-). As medical errors decrease (-), the quality of healthcare services will go up (+).

Managers view quality healthcare in care facilities in the context of culture, organizational design, innovation and technology, incentives, and plans for future directives. Delivering quality care is the responsibility of those in healthcare and is expected to be achieved in a collaborative manner. Expanding the current analysis of the structure to include comprehensive perspectives on quality within the organization would greatly benefit care (Koury et al., 2014). The role of managers will vary in healthcare organizations. However, their primary functions are to coordinate supportive services, plan, and direct activities of staff within organizations (Blumenthal & Collins 2014). The focus is not always on preventative care, which failure can result in an expensive healthcare system that does not produce the best medical outcomes (Koury et al., 2014).

Currently, quality healthcare is available at inflated prices for medical services, reduced quality of care, and innovative practices in the delivery of medical services (Burns et al., 2012). This qualitative single-site case study responds to the adverse economic effect on healthcare organizations because of the lack of HR strategies for

improving employee performance to prevent and reduce medical errors. The study may assist in the improvement of business practices because HR strategies can guide the actions of employees to help reduce preventable medical errors. Findings of this study might contribute to new HR strategies for proficiency in the delivery of quality care initiatives to reduce medical errors within healthcare organizations.

A Review of the Professional and Academic Literature

Healthcare management involves the use of HR strategies that managers and staff use to provide care and services to individuals in a hospital setting. James et al., (2014) noted at a subcommittee hearing on primary aging that the third leading cause of death in the United States is attributed to medical errors in hospital settings. James, (2013) found that in the United States, 400,000 patients annually are recipients of injury or harm associated with medical errors. Pozgar (2013) noted that regulations exist to provide guidelines for human behavior, and the designs of these laws protect the rights of individuals while preventing harm to them at the same time.

The review of the literature is divided into three sections: application to the applied business problem, relevancy of the literature, and the literature review organization. In the first subsections, I present the purpose of the study, critical analysis, and synthesis of literature regarding the conceptual framework, and that supported and contrasted theories of the conceptual model. Next is the relevancy of the literature, purpose of the study, and an explanation of the significance of the social environment. Finally, the literature review organization includes information on the types of preventable medical errors: (a) errors of commission, (b) errors of omission, (c) errors of communication, (d) errors of context, and (e) diagnostic errors.

This section adheres to required APA standards and reviews the literature providing substance to this study of HR strategies for improving organizational performance to reduce medical errors. The strategy for searching the literature was to use a variety of key phrases such as *medical errors, adverse events, history of medical errors, pressure ulcers, complex adaptive systems, quality improvement in healthcare,* and *leadership in healthcare*. The peer-reviewed and scholarly documentation reviewed was done vertically and horizontally; therefore, researching documents assist in establishing the integrity of the study. The search assisted in finding the past and current HR strategies useful in discovering ways of addressing preventable medical errors. During this search, articles on the severity of medical errors were aboundant; however, a shortage exists of literature on HR strategies that can be used as a means of reducing medical errors. I collected data via the Walden University Library research databases from peer reviewed journals, articles, books, and government sources. Literature for this study came from Walden databases including but not limited to ProQuest Central, Academic Search Complete/Premier, and SAGE Publications, and Journals. The *Journal of Healthcare Management Foundation* of the American College of Healthcare Executives, Google Scholar, and Government websites (e.g., U.S. Government, U.S. Department of Health and Human Services Agency for Healthcare Research and Quality) were used as sites for gathering information and data. This study includes 140 citations. One hundred nineteen or 85% of the articles were peer reviewed and published within 5 years of my expected graduation date. Seventy-Seven citations were used in my review of the literature, 67 or 87% were peer reviewed and published within 5 years of my expected graduation date in 2017.

Application to the Applied Business Problem

Purpose of the study. The purpose of the study was to identify how healthcare business leaders use HR strategies to improve organizational performance to reduce medical errors. Medical errors and mistakes occur in healthcare organizations by overworked staff, incompetent staff, or because of a shortage of personnel (Beer, 2015). Errors occur because of the increased complexity of medical practice and technology, the increased incidence of antibiotic-resistant bacteria, overuse/misuse of medications, a fragile and aging population, and the movement of the medical industry toward higher productivity and expensive technology, which encourages rapid patient flow and overuse of risky, invasive, and revenue-generating procedures (James, 2013). In the review of the literature, I explored HR strategies for reducing preventable medical errors using teamwork because working in a collaborative environment promotes learning capabilities for systematic change. In addition, a high level of managerial engagement, the promotion of job satisfaction, and the creation of better communication to hold staff accountable are preventative measures found to be effective in reducing errors that can improve profitability (Zimlichman et al., 2013).

The goal of this exploratory qualitative single-site case study was to provide guidance for healthcare managers in enhancing staff performance as well as forming the basis for continued research. The targeted sample consisted of five healthcare managers in a healthcare system in the Midwest of the United States who participated voluntarily in face-to-face, semistructured interviews to share organizational improvement strategies. The data collection will include the review of public company documents, HR policies, procedures, and plans of quality improvement. The findings of

the study may lead to improving the quality of healthcare delivery. Increasing the quality of healthcare by reducing medical errors would constitute positive social change for healthcare organizations and their communities.

Complex adaptive systems theory. CAS theory is a conceptual framework that is appropriate for this proposed study because a hospital is a large complex system. In 1984, CAS theory originated in a program located at the Santa Fe Institute headed by John H. Holland, Murray Gell-Mann, and others (Norberg & Cumming, 2013). CAS theory can be used by a researcher to demystify the behavior of staff and other variables in large complex systems (Boulding, 2013). In addition, by using a systems thinking approach, the findings of this research should assist healthcare managers in thinking about the nature of quality improvement HR strategies in healthcare organizations (Williams, 2015). Managers can use this framework to make sense of natural phenomena including human responses to solving problems in primary care organizations and quality improvement programs (Williams, 2015). Key constructs underlying the theory helped to identify key themes and HR strategies that underpin the effective authority of quality improvement or programs to reduce medical errors.

An investigator can use CAS theory to evaluate the nature (direct versus inverse) and the direction (positive versus negative) of the relationships between variables inside a healthcare system. For example, the use of barcode technology will reduce medical errors. As the use of barcode technology goes up (+), the frequency of medical errors goes down (-), indicating an inverse relationship between these variables. A researcher who uses CAS theory is able to seek an understanding of how order emerges in a complex and dynamic setting in an effort to achieve goals rather than simply achieving

equilibrium. Using CAS theory can also be helpful to healthcare managers in researching and studying how complex organizations such as healthcare systems evolve and change over time.

In a CAS, strategic management is vital in the changing healthcare environment where the leaders in healthcare have the opportunity and ability to control industry uncertainty created by external forces (Morecroft, 2015). In most systems, leaders do not have the ability to reduce uncertainty brought on by external forces (Morecroft, 2015). Under the PPACA, healthcare professionals, managers, and employees are scrutinized (Britt et al., 2013). Healthcare managers experience the pressure of maintaining a healthcare system while continuously incorporating changes that improve access to services, increase quality, and are cost effective. Nan, Zmud, and Yetgin (2014) noted that a link exists between financial incentives as a means to overcome obstacles and the theory of using CAS in healthcare organizations. Reducing medical errors through HR strategies and training for improving employee performance may require efforts that are proactive in nature, focused on the right issues, and consistent with CAS theory.

Conceptual models are beneficial in improving quality of care in healthcare facilities; however, philosophies are not mutually exclusive of one another (Burns et al., 2012). Researchers have created models that coincide with healthcare procedures that are useful in understanding complexity of the organization. Business models normally used for retailers, manufacturers, and distributors may have relevant aspects that work for healthcare organizations in the form of a proficiency model that deals with the organization, functionality, and leadership. Gallo (2013) proposed that models be learning tools that assist in the decision-making process when conflicts arise between

staff in a program or organization. The purpose of a model simplifies realism, as a means for thought; however, the model can be lost in grandeur (Gallo, 2013). Williams (2015) recommended scaling up in healthcare services with the application of models and methodologies used in other fields that study CAS. This framework underused in public health can assist policy makers, implementers, planners, and researchers in the exploration of different and more innovative ways for reaching populations in need with equitable, efficient, and effective health service policy and procedures (Williams, 2015).

Other conceptual frameworks that are supportive of CAS include Lean-six sigma, the "FADE QI" performance improvement model (Focus, Analyze, Develop, and Execute), and the performance improvement model Plan-Do-Study-Act (PDSA) (U.S. Department of Health and Human Services, 2015). These models are based on the ideas that a healthcare system is dynamic, non-linear, and always strives for equilibrium (Wallis, 2013).

Hospitals are large entities that are complex in nature, where variables related to access issues, quality considerations, and cost factors are constantly interacting with one another in a nonlinear and dynamic fashion on diverse scales while responding to inputs, outputs, and processes. The United States health system is also a complex system of social change and business challenges, needing coordination among all of its subsystems in response to inputs and outputs for the delivery of optimal care to the patients being served (Johnson, 2013). The role of any system is to process inputs (i.e., energy, information, materials, or patient's needing services or treatments) into products or services to achieve outcomes (e.g. health improvements) within the system or from the system when patients are discharged and sent home (Johnson, 2013). Systems analysis,

established independently of systems theory, applies these same principles for health system data analysis to aid in planning, designing of policies, procedures, and programs for the reinforcement of HR strategies for improved performance, observation, and evaluation.

General systems theory (GST) is applicable in varying businesses, including healthcare services. Morecroft (2015) explored GST and systems thinking with complex health issues, noting this theory as integrative, solution-oriented, and nonlinear allowing the combination of large amounts of data. This incorporation allows the formulation of a comprehensive assessment of complex systems in its entirety. Peters (2014) agreed with this belief; however, noted the methods used in systems thinking in addressing complex problems examines the communication within and between levels within its parts that are consistently changing, are nonlinear, and able to learn and create new patterns over time. Through use of this process, the association between the various components and relationship of complex health systems can explain phenomena affecting those systems. Thus, the failure to explain isolated behavioral phenomena within an organization validates this common concept of unity where all subsystems must intermingle with each other on an advanced level leading to integration to maintain a secure state of feasibility and sustainability.

Exploring HR strategies is a work in progress, a comparison, and contrast of different points of view. The relationship of the proposed study to previous research and findings were minimal. Demographics, sociology, and culture within the complexity of healthcare are forces that can bring about changes in the system. Pardasani and Bandyopadhyay (2014) suggested some studies have identified the disparities among

various ethnic and racial groups to seek out and receive healthcare services. This anonymity is reasoning why varying ethnicities and social classes may benefit from the new healthcare law that has taken effect. To combat the threat of not understanding the cultural characteristics of the ethnic subgroups, Pardasani and Bandyopadhyay suggested leaders and managers of healthcare companies must be cognizant during their analysis for an improved competitive advantage to better serve individuals are determined through the knowledge and research of disparities of care in any given area.

Relevancy of the Literature

The purpose of this exploratory qualitative single-site case study is to identify how healthcare managers use HR strategies to improve organizational performance to reduce medical errors. In addition, an investigator can explore the significance of the social environment in healthcare within a complex adaptive system. Additionally, the study explanations will assist in the understanding of how healthcare organizations known as complex adaptive systems have independent variables that or either directly or inversely related, revealing a positive/negative relationship. When one entity increases (+), the other decreases (-); however, when medical errors increase (+), quality decreases (-) but costs increase (+).

From the review of articles, dissertations, literature, and peer reviewed journal articles, the impact of clinicians handling patients in an incorrect or careless fashion has caused a lot of discomfort and trauma to the lives of patients and their families because of medical errors. According to Pozgar (2013), *negligence* is a tort, civil, or personal wrong that is caused by carelessness. Negligence transpires when a licensed professional fails to act or acts in a manner that is not consistent with accepted professional standards and is a

person that does not follow standards of care as conveyed by the governing body of the organization. Ferneini, Castiglione, Forte, Tinsley, & Wrubel (2014) suggested the adverse effects executed through this behavior places a threat upon the physician, patient, and other care providers, and that legal malpractice actions against doctors annually are at a rate of 15,000 to 19,000. Healthcare professionals with a passion for the profession have faced challenges obtaining qualified individuals for delivering quality healthcare. Ferneini et al. (2014) noted that the principal goal of risk management is to offer patient protection; however, a '*deny and defend*' pattern is now the standard and cultivating patient safety has lessened.

The Illinois Department of Public Health (IDPH, 2015), the Illinois hospital report card, and a consumer guide to healthcare have specific safety measures that hospitals are required to report. In relation to patient safety measures, managers and nurses reported that these measures provided necessary information on potential in-hospital complications and adverse events following surgeries and procedures (IDPH, 2015). The retrieval of this information was derived from discharge data from January 1, 2013 to December 31, 2013 by the hospitals and inpatient quality indicators provided by the Agency for Healthcare Research and Quality (AHRQ) (IDPH, 2015). The review of information involved six well-known hospital facilities used by Chicagoans on both the North and South side of the city. An example of the different relationships of healthcare facilities in the varying geographical areas where medical errors occur, research was compared and contrasted with the facilities in Northern vs. Southern Chicago, Illinois (Table 1.) taken from the Illinois Hospital Report Card reviewing patient safety indicators.

Table 1

Safety Measures on Potential In-Hospital Complications and Adverse Events Following Surgeries and Procedures.

North Side of Chicago, Illinois			
Safety Measure	Presence Resurrection Health	Norwegian American Hospital	Advocate IL Masonic
Foreign body left during procedure	N/A	N/A	N/A
Blood transfusion reaction	N/A	N/A	N/A
Unexpected deaths	●	●	▲
Postoperative lung embolism or deep vein thrombosis (clotting)	●	●	⬠ (black)
Wound complications in abdominal wall surgery	⬠	⬠	▲
Accidental puncture and laceration	▲	●	●
Collapsed lung caused by medical care	●	▲	▲
Postoperative hemorrhage or hematoma	●	▲	●
Postoperative respiratory failure	●	●	●
Postoperative hip fracture	▲	▲	▲

South Side of Chicago, Illinois			
Safety measure	University of Chicago	Mercy Hospital	Holy Cross
Foreign body left during procedure	3	1	N/A
Blood transfusion reaction	N/A	N/A	N/A
Unexpected deaths	●	▲	⬠
Postoperative lung embolism or deep vein thrombosis (clotting)	⬠	●	●
Wound complications in abdominal wall surgery	▲	●	▲
Accidental puncture and laceration	▲	●	●
Collapsed lung caused by medical care	●	●	●
Postoperative hemorrhage or hematoma	⬠	●	●
Postoperative respiratory failure	●	●	●
Postoperative hip fracture	▲	▲	▲

Note: Adapted from "Illinois hospital report card and a consumer guide to healthcare," by Illinois Department of public Health, (IDPH). (2015). Retrieved from http://www.healthcarereportcard.illinois.gov/hospitals/view/101246

N/A - Some facilities are not required to report this data or do not perform the relevant services.

▲ Statistically significantly better than state average or performing at the best possible rate

● Not statistically significantly better or worse than state average

⬠ Statistically significantly, worse than state average

The review of information in the Illinois Hospital Report Card covered ten prominent areas of error: (a) foreign body left during procedure, (b) blood transfusion reaction, (c) unexpected death, (d) postoperative lung embolism or deep vein thrombosis (clotting), (e) wound complications in abdominal wall surgery, (f) accidental puncture laceration, (g) collapsed lung caused by medical care, (h) postoperative hemorrhage or hematoma, (i) postoperative respiratory failure, and (k) postoperative hip fracture.

Six major hospitals chosen for review for both North (Presence Resurrection, Norwegian American Hospital, and Advocate Illinois Masonic) and Southside of Chicago (University of Chicago, Mercy Hospital, and Holy Cross). Out of the six hospitals, Advocate Illinois Masonic, located on the Northside, rendered more positive statistically significant measures in the areas of: (a) unexpected deaths, (b) wound complications in abdominal wall surgery, (c) collapsed lung caused by medical care, and (d) postoperative hip fracture, and was better than the state average or performing at the best possible rate (IDPH, 2015).

A hospital facility on the Southside of Chicago that measured statistically significantly worse than average is the University of Chicago Hospital with safety measures that indicated foreign body left during procedure, postoperative lung embolism or deep vein thrombosis (clotting), and postoperative hemorrhage or hematoma (IDPH). The hospital facilities of statistically significantly better than state average or performing at the best possible rate are at Northside hospital facilities compared to Southside facilities. The only commonality of both north and south side hospitals researched were better than state average or performing at the best possible rate was in postoperative hip

fracture and not better or worse than state average on the safety measures of postoperative respiratory failure (IDPH, 2015).

This comprehensive critical analysis and synthesis of the literature was conducted on the premise of applying the proposed study to the business problem. The general business problem is that medical errors can result in a loss of profitability for a healthcare program. The specific business problem is that some healthcare managers have limited HR strategies to improve organizational performance to reduce medical errors.

Literature Review Organization

The responsibilities of a manager or executive in healthcare facilities vary dependent upon the organization; nonetheless, the principal duty is to direct, plan and coordinate supportive services of vital aspects that relate to consumers visiting care facilities (Liebler & McConnell, 2016). A leader is someone who can withstand complexities and challenges. The leadership position of a healthcare manager is to mold the organization by making informed decisions that affect the performance pertaining to technology, staff, and financials. With the number of errors reported annually and the push for the improvement of organizational performance in a complex adaptive system, this topic is of great importance today. Three themes emerged from the literature review involving costs associated with medical errors, types of medical errors, and technology and healthcare.

Costs associated with medical errors. According to Van Den Bos et al. (2011), the estimated annual cost of measurable medical errors that harm patients in 2008 was about $17.1 billion dollars. At least 50% of hospital acquired infections (HAIs) account for a large proportion of the harm caused by inappropriate healthcare and are estimated to

cost approximately 18.2 billion on an annual basis (Zimlichman et al., 2013). 87 percent or $16 billion dollars was directly associated with supplementary medical costs. Supplementary costs of medical errors includes: ancillary services, prescription drug services, and inpatient and outpatient care according to (Mallow, Pandya, Horblyuk & Kaplan, 2013).

In 2010, the PPACA passed by Congress addressed healthcare reform granted Americans the right to reasonably priced healthcare (Lathrop and Hodnicki, 2014). This act changed the advances for care, expenses to provide care with the provider, and patient incentives. Unfortunately, supply and demand can cause threats on delivering quality care within care facilities like nursing homes, home care, outpatient facilities, some physician offices, and hospitals. Burns, Bradley, Weiner, and Shortell (2012) suggested to deliver quality care, management must use organizational and industry models. Kvedar, Coye, and Everett (2014) and Edward's et al. (2014) research noted that the use of telemedicine, medical homes, and accountable care organizations (ACO) are models that are quickly emerging today. Patient-Centered Medical Home (PCMH) is a critical model of primary care reform and complement and ACO to reform healthcare delivery (Edwards, et al., 2014). Management in healthcare organizations face challenges when reviewing offers for their employees to create significant communication and examination of results. An alignment within an ACO is vital to reach integration and can improve care coordination roles within primary care settings (Edwards, et al., 2014).

Types of medical errors. A medical error is an adverse outcome that is preventable and can result from improper medical management, other than from the progression of illness, resulting from a lack of care (James, 2013). The cause of

preventable medical errors in hospitals is organized into five categories: (a) errors of commission, (b) errors of omission, (c) errors of communication, (d) contextual errors, and (e) diagnostic errors (James, 2013).

Errors of commission. Errors of commission occur when mistakes made harms a patient because of negligence or carelessness (James, 2013). For example, a patient visits her obstetrician for an annual appointment, and the doctor has taken her history of abnormal menstruation. The doctor takes the necessary blood and urine before the examination; but fails to wait for the results, and proceeds with the examination without the presence of a nurse to determine if the patient was pregnant resulting in the patient having a miscarriage.

Errors of omission. Errors of omission can be found in medical records and occurs when an action was necessary to heal a patient; however, the staff person did not perform the action (James 2013). A patient may need a certain medication; but not prescribed, causing preventable harm. In this instance, the staff person ignored evidence-based guidelines, which are challenging to detect because consequences of failure to adhere to procedures are most often not found until after the patient has been discharged.

Errors of communication. Communication errors occur between providers or between the patient and their provider (James, 2013). An example of this error is a patient consuming a drug to assist with a serious medical condition and the physician does not warn the patient of certain foods that may trigger a negative reaction to the drug. Another example of this type of error is a physician indicating a clean bill of health without providing caution to the patient to ease back into their regular routine following a loss of consciousness or outpatient surgery.

*C**ontextual errors**.* Contextual errors will occur when a physician does not factor the unique limitations a patient may have to understand the instructions or have the proper access to receive proper follow-up care after the patient discharged (James, 2013). These errors may occur in early dementia patients or released patients who have suffered a have injury. The patient may appear that they understand the instructions and follow-up procedures that the doctor has explained to them; but may have cognitive issues that may result in harm to the patient.

Diagnostic errors. Diagnostic errors occur because of a delay in treatment, incorrect, or ineffective treatment resulting in a harmful error (McDonald et al., 2013; James, 2013). To prevent this form of harm from occurring, the use of health information technology has been identified as one of the keys to reversing diagnostic errors (Graber, 2013). The estimation of errors has been very high according to a recent study by Gorbach et al., (2015) that noted a total of 1,887,751 medication orders, 92 error events, and 50 pharmacists that met the eligibility criteria in their recent study. The five medications most commonly associated with an error event were pneumococcal vaccine (duplicate order) (13%), piperacillin-tazobactam 3.375-g vial (allergy or wrong dose) (4%), influenza virus vaccine (duplication) (3%), warfarin sodium 5-mg tablet (wrong dose) (2%), and dexamethasone injection 4 mg (of dexamethasone phosphate) per milliliter (wrong dose) (2%). No specific medication class was identified with a higher rate of error. The overall error rate was 4.87 errors per 100,000 orders verified Gorbach et al., (2015).

According to DonHee, Sang, and Schniederjans (2011), medical errors occur because of (a) inaccurate diagnosis or treatment by lower skilled or inexperienced staff,

(b) new procedures and complex urgent care or other complications, (c) poor

communication among patients and care teams, (d) improper or eligible documentation,

(e) incorrect information and data, and (f) mistaking medication that has similar names.

Multiple care providers have access to pertinent information involving the patient in lieu

of a simple chart review. Gorbach et al., (2015) suggested negligence occurs in healthcare

facilities and is perhaps most predominant within nursing facilities causing the patients

and their families' pain and sorrow. Nonetheless, medical errors in hospital settings have

resulted in over 200,000 preventable deaths over the past five years (James et al, 2014).

Van Den Bos's et al. (2011) research in 2008 of the 10 most frequent medical errors

found the top three: postoperative infections placed a probability of error at over 91%

which included the number of medical injuries at 265,995 and medical errors at 252,695.

Post laminectomy syndrome occurred at probability of errors between 10-35% with

medical injuries of 505,881 and medical errors of 113,823. These numbers were second

and third respectively to the most frequent error of pressure ulcers with a probability of

error of more than 91%, with medical injuries at 394,699 and medical errors totaling

374,964 (Van Den Bos et al., 2011).

     In 2014, a subcommittee on primary aging heard testimony in Congress

suggested that the third leading cause of death in the U.S. is attributed to medical errors,

and 400,000 patients annually are harmed in association with medical errors (James et al.,

2014). Neglect becomes apparent when a licensed professional proceeds in gross

negligence and does not follow standards of care, as issued by the governing body of the

organization, causing patient harm.

The adverse effects through this behavior place threats upon the physician, patient, and other care providers (Ferneini, Castiglione, Forte, Tinsley, & Wrubel, 2014). Taylor (2016) suggested lawsuits derived from medical errors spike up costs of care and these errors are emerging as a significant issue of regulatory scrutiny. Malpractice legal action against doctors is at a rate of 15,000 cases and just under 20,000 each year Ferneini et al., 2014). Efficiency as well as skill set is essential for those providing healthcare services to individuals and the cost of errors has continued to rise as the years pass.

Technology and healthcare. In the midst of human error, technology has been a key influence on the external environment regarding healthcare. Technology is an opportunity for competitors to reveal how well their organization can accommodate new and existing data. An assessment comparison and acquiring the most updated technology plays an important role of who prospers and who stays behind. Strategically, within a complex adaptive system, usage of the correct innovation in the healthcare industry is of concern to healthcare managers when addressing HIPPA laws and dealing with a patient's privacy information. Healthcare technology includes but is not limited to; barcoding, ICD codes, electronic medical record system (EMR); and other useful technology such as, computerized physician order entry (CPOE), evidence-based practices, and computerized decision support (Adler-Milstein, Salzberg, Franz, Orav, & Westfall Bates, 2013); Bates, Saria, Ohno-Machado, Shah, & Escobar (2014).Staff members need to be properly trained on the use of healthcare technology in the form of HR strategies to miminize the risk of preventable medical occurs from occurring.

Barcoding. Lee, Lee, Kwon, and Yi (2015) noted that bar code systems were introduced to reduce errors; but have found through research that medication errors occur during bar coding medication administration because of noncompliant behavior. Testing is performed by clinical operators on site and medical action is taken without first receiving accurate results from a laboratory. Inaccuracy can occur involving glucose and blood gas, point-of-care testing (POCT) that can result in error, and misinformation causing poor glucose control, and possible fatalities (Narla, Jones, Hermayer & Zhu , 2016). Barcoding procedures are not failsafe because of human error. Manual data is continually used when barcode scans are ineffective or are not available to the operator. Barcoding has the potential for improvement in patient care; however, a need for collaborative efforts and failsafe techniques of "double checking" work to ensure success may effectively reduce medical errors.08

ICD codes. Medical errors are commonly associated with human errors that are preventable (Banihashemi et al., 2015). Healthcare organizations rely on the International Classification of Diseases (ICD) codes for billing purposes and the proper codes must be used at all times. ICD-9 codes were to support diagnostic procedures for use in automated administrative transactions, however; in 2013, the department of health and human services required the replacement of ICD-9 with ICD-10 (Manchikanti, Falco & Hirsch, 2013). The ICD-10 coding is more complex and integrates various changes containing over 141,000 codes making it more complex and difficult to use (Manchikanti et al., 2013). The transition from ICD-9 to ICD-10 occurred October 1, 2015 requiring considerable changes to coding operations, workflow methods, and information technology support (Boyd, 2015). In some instances, medical staff may use the wrong

codes for billing purposes that do not have any effect on the health and wellbeing of the patient. These medical errors affect the reimbursements the healthcare program will receive from the payer. Coomer and McCall (2013) associated the coding error of the problem of pressure ulcers (PU) to the negative effects on payment regarding ICD-9 and ICD-10 coding procedures. The researchers suggested that underreporting of the phases stages III and IV of pressure ulcers was a significant problem and how these underreported claims varied by hospitals. Coomer and McCall (2013) suggested the significance of looking at the hospital acquired condition reports in the cost and utilization project state inpatient database to assess the sensitivity of PU for hospital-acquired conditions related to the admissions coding (HAC) to the number of diagnostic fields. Using the 4010 claim format for reference, which is the HIPPA standard for electronic transactions, may assist to accomplish this task. The researchers examined Medicare claims with secondary diagnosis codes creating a binary indicator to detect any pressure ulcer stage diagnosis code. The results of this study were under reported pressure ulcers and an expectation of a higher number of unreported cases for HAC using the new 5010 format and change from ICD-9 to ICD-10 coding. In other instances, improper coding of physicians orders are prescription orders, which have resulted in patients not getting the needed or appropriate medications causing harm to the patients (Chassin & Loeb, 2013). Once again, collaborative efforts and failsafe techniques of "double checking" work are needed to ensure success to effectively reduce medical errors.

Electronic medical record system (EMR). EMR is a tool the healthcare industry uses to share clinical data regarding specific patients on a secure network (Weeger &

Gewald, 2015). Moja et al., (2014) suggested that electronic health records (EHRs) is

innovation that has gained momentum in healthcare and noted that medical providers

were encouraged by over $27 billion allotted in reimbursement incentives by the Health

Information Technology for Economic and Clinical Health (HITECH) Act. The HITECH

act guarantees that healthcare professionals demonstrate meaningful use of EHRs by

following a specific set of criteria that included the implementation of clinical decision

support rules (Wright, Henkin, Feblowitz, McCoy, Bates, & Sittig, 2013). King, Patel,

Jamoom, and Furukawa's (2014) research found that in 2011 electronic health record

(EHR) usage assisted over half of office based physicians in promoting quality care.

About three-quarters of the physicians noted that their EHR system was certified to meet

meaningful use of measures required, enhance overall care by 78%. The system helped

physicians access a patient chart remotely by 81%, was alerted to a potential medication

error by 65%, and lab values by 62% (King, Patel, Jamoom, & Furukawa, 2014). This

tool of utilizing EMR should adhere to industry connectivity standards for effectiveness,

meaning the EMR includes medical diagnosis, demographics, clinical notes including

medical lists, and any allergic reactions for a specific patient. This information will allow

those in patient care to communicate more efficiently with each other as well as with the

patient with the use of existing technology such as email, web messaging, and

telemedicine to reduce errors and prevent harm.

   Computerized physician order entry (CPOE). CPOE refers to a radiology

imaging ordering system that allows office staff, residents, staff physicians, nurses, and

physician assistants to place imaging orders with a password-protected login to create

orders from a predetermined structured menu (Shen, Cochran, Neish, Mosleley, &

Mukalian, 2015). Technology and advancements for more current systems may assist in the probability of reducing medical errors. Shen, Cochran, Neish, Mosleley, and Mukalian (2015) researched the level of EHR adoption and quality and cost of care evidence from vascular conditions and procedures in diagnostic imaging that modernized the practice of medicine and with these advances helped to enhance the physicians understanding of illnesses contributing to patient care.

   Evidence based practices. Evidence based practices refers to a method that incorporates medical opinion or expertise of the caregiver, patient, and client to provide quality healthcare services that are in the best interest, value, and need of the individual (Boblin, Ireland, Kirkpatrick, & Robertson (2013). LoBiondo-Wood and Haber (2014) noted in their research that evidence-based practice is a collection, assessment, and incorporation of research evidence combined with clinical knowledge including an understanding of the patient, family values, and preferences to implement clinical decisions. Collaboration of all stakeholders in an effort of providing quality care promotes successful HR management strategies when using evidence-based practices (Keast & Mandell, 2014).

   Computerized decision support. Computerized decision support software is a tool that assists in the management of illness helping clinical staff conform to standards; the use of this support system based on clinical practice guidelines could definitively improve the quality of medical care (Moja et al., 2014). Computerized decision support also improves the efficiency and quality of healthcare delivery systems by increasing the observance of recommended protocol-based care (Moja et al., 2014). Computerized decision support may influence the treatment of patients by providing preventative care

reminders and notices for the observance of recommended protocol-based care reducing postoperative complications.

Lack of improvement in quality care. In my review of the literature, I found a number of studies that were applicable to the general business problem of medical errors resulting in a loss of profitability within healthcare organizations in the United States (Gorbach et al., 2015; Davis, Sevdalis, Neale, Massey, and Vincent, (2013); Ristić, Vasiljević, Rancić, and Ristić, (2014); Schwappach, 2014). Gorbach et al., (2015) suggested a lack of quality care delivered throughout the United States is costly to society and to clients. This information provided confirmation of enhancements needed in the delivery of quality healthcare. Van Den Bos et al. (2011) noted that 10 categories created two-thirds of all Medicare expenses: (a) pressure ulcers, (b) postoperative infections, (c) post laminectomy syndrome, (d) hemorrhage complicating a procedure, (e) accidental puncture or laceration during a procedure, (f) implant or graft, (g) ventral (abdominal) hernia without mention of obstruction or gangrene, (h) hematoma complicating a procedure, and (I) unspecified adverse effect of a drug or medicinal or geological substance not classified elsewhere. Van Den Bos et al. concluded that if providers focus on these ten categories, changes would lead to improved patient care. With a careful analysis of these categories of problems, healthcare managers could produce a listing of HR policies and procedures for staff to follow that would lead to improved patient care. These changes may also reduce medical errors and reduction of the expenses medical errors bring to the healthcare industry.

Zimlichman et al. (2013) noted that quality healthcare is measurable when performance can be evaluated against benchmarks or standards that is calculated by

outside individuals or groups but the process is not without its limitations. Improving the quality of care in a complex adaptive environment where there are constraints imposed by government regulations, medical technology, finances and human resources can be difficult in the delivery of care. Pai, Kennedy, and Hahn (2016) examined 12 steps to assist in health reform; (a) evidence based medicine, (b) payment reform, (c) malpractice reform, (d) primary care, (e) pharmaceutical reform, (f) patient compliance, (g) National standards for quality, (h) end of life issues and frail patients, (i) patient compliance, (j) fraud and abuse, (k) price transparency, (l) wellness programs, and (m) administrative transactional costs. Exploring the important measures noted may reduce healthcare expenditures while improving the care and delivery of a positive outcome for populations of patients keeping them at the center of focus (Pai et al., 2016).

Causes of failure. The challenge in finding the causes of failure is to find the issue and focus on the redesign process to promote change. Causes of medical errors may have key factors such as failure because of barriers within the organization. Longenecker and Longenecker (2014) acknowledged that 10 key factors caused hospital improvement and change efforts to fail. Longenecker and Longenecker noted over 160 frontline leaders who contributed in focus groups from among four community hospitals. The participants in this study consisted of 60% females and 38% males of about 40 years in age and represented the functional areas of the hospitals. 66% were clinicians and over 30% were from business operations. The results of the 10 key factors of failure included: (a) poor implementation and unreasonable timelines, (b) a lack of engagement and ownership of the personnel, (c) poor leadership and a lack of trust in management, (d) planning errors, (e) communication difficulties, (f) no change, focus or improvement, (g) lack of

teamwork, (h) failure to provide measurements, lack of accountability, and limited

feedback; (i) lack of clear goals, roles, and performance expectations; and (j) a lack of

resources, time, and the support of upper management. The identification of these

primary obstacles suggested that problems occur when hospitals do not foster an

organizational culture that holds and endorses critical essential practices such as

organizational change and improvement with expertise and desire.

Regarding the reduction of preventable harm to patients, (Keast & Mandell,

2014) suggested further collaborative efforts are important in assuring the safety of those

faced with this matter and must develop a research program to help efforts of reduction.

Hofer (2013) noted the core cause of instability is a lack of synergy of strategy planning

or strategy-thinking models at a corporate level, which society has an expectation of

certain paybacks. Engaging managers and collaboratively working in unison promotes

sustainability. As a society, we need to build momentum around possibilities to remedy

the causes of failures in healthcare.

Changes in the healthcare system. Emerging systems called accountable care

organizations (ACO) promote efficient and effective ways to alleviate the issue of errors

by providing and delivering quality healthcare. Martin, Hartman, Whittle, and Catlin

(2014) suggested that a growth in healthcare spending has remained low for four

consecutive years only increasing by 3.7 percent; however, the share of the economy

dedicated to health diminished from 17.3 percent to 17.2 percent as the gross domestic

prodct (GDP) grew by 4. 6 percent. Nyweide, Lee, Cuerdon, Pham, Cox, Rajkumar, and

Conway (2015) conducted qualitative research to view the difference between pioneer

ACOs and traditional Medicare fee for service with spending, patient experience, and

utilization. Nyweide et. al., (2015) research revealed that while improving quality for fee-for service (FFS) Medicare beneficiaries, the Pioneer ACO model aims is to drive healthcare organizations to decrease expenditures. The research conducted in a two-year period revealed that Pioneer ACOs in comparison of general Medicare FFS beneficiaries had reduced increases in total expenditures and differential reductions in utilization of diverse health services with little change in patient experience (Nyweide et al., 2015). The disadvantages are that the ACOs may not have the ability to provide quality healthcare to those individuals with Medicare because of the shifting of costs to private payers. The affordable care act (ACA) is significant to most Americans with its emphasis on access to healthcare and safety. The PPACA provides significant and practical content on requirements about the business of healthcare that includes quality care, transparency and integrity, improvements through innovation, community assistance, insurance, financing, and affordable healthcare coverage. Grievances in malpractice limit a patient's rights to the use of healthcare by driving physicians out of business or limiting their capabilities for fear of litigation (Ferneini et al., 2014).

Quality healthcare is critical and now more significant because of the changing demographics of our population with aging adults living well beyond retirement age. The National Association for Healthcare quality (NAHQ) among other agencies are at the forefront of assuring the appropriate steps for change. The appropriate steps for change are to redesign the healthcare system where managerial leaders follow through with new training programs on HR policies and procedures, conduct open discussions, analyze errors, and promote HR strategies for change. Burstin, Leatherman, and Goldmann (2016) noted to enable continuous learning; the US healthcare system needs to invest in a

rapid feedback on system on quality measures. Briggs and Isouard (2016) suggested that health reform is a challenge for healthcare managers; the role of a healthcare manager is multi-dimensional situated in a complex changing healthcare system. In contrast, changes in the system, Lega, Prenestini and Spurgeon (2013) research suggests a lack of engagement between doctors and managers as well as other staff providing care. Lega et al. research further noted when considering the impact of management practices, characteristics, engagment of management and management styles and organizational culture that management has consequences for organizationzal performance.

HR strategies for change and improvement. Beginning the process of improvement through strategic change starts with the healthcare leaders and managers to follow through with their organizational mission, values, and vision when exploring HR strategies for change and improvement. In the process of researching the literature for applicable HR strategies to reduce medical errors, Haycock-Stuart and Kean's (2012) suggested placing emphasis on quality and the role of leaders within the healthcare organization, providing quality care, and the concern of how quality care is delivered. To reduce the likelihood of error, successful HR strategies along with preparation in healthcare is eminent. The issues involved such as resources and adaptability is an important skill of a good healthcare leader; more so, these talents are critical to the longevity of the organization to be ahead of any developing threats or changes.

Research of the literature has garnered a number of categorical areas including but not limited to education, employee satisfaction through the use of compensation, and cooperative organizational performance and technology as useful HR strategies (Pittman,

Herrera, Horton, Thompson, Ware, & Terry (2013); Wachter, Pronovost, & Shekelle (2013).

Acquiring strategic change may not only involve education of knowledge and retraining, but may involve attaining education through surveys and scales used to evaluate where the errors occurred. However, Sacristán (2013) suggested that managers need to be mindful that the current state of healthcare is a restorative process in lieu of prevention; when managers need to be focused on prevention by reducing the cost of hospitalization for all patients and its unexpected occurrence for the 5% of individuals who incur half of healthcare expenditures in the United States.

Hess (2013) noted that healthcare leaders continuing their educational needs required by continuing medical education (CME) place emphasis on a competency-based curriculum with value added components. This opportunity prepares new and existing physicians with the opportunities that link lessons learned to their annual review. Hess (2013) suggested the challenges to this program is in age variation of those who were taught the previous methods of delivering healthcare when autonomy was required, quality was an individual effort, and when cost was ignored for the betterment of the patient. Toussaint and Berry (2013) suggested organizational staff should use lean methods for solving and resolving issues while Hung-Yu & Chien-Chang (2014) suggested the development of scales that involve development, preservation, payment, and assurance management. Hung-Yu & Chien-Chang felt that healthcare managers should place emphasis on effective compensation to aid in employee satisfaction for improvement of employee procedures, obligations, and service excellence. Published in the Harvard Business Essentials (2005), the document revealed that senior management is

responsible to communicate strategic intent to incoming staff and mid to lower level managers must reiterate intent into the way their subordinates work.

Hacker and Walker (2013) suggested alignment is achieved among organizations including public health agencies through HR strategies to overcome a multitude of obstacles. Therefore, providing an effective action plan and staying on course while monitoring the success of the implementation of HR strategies may prove effective. Usage of this action plan may assist in developing and maintaining profitability even in the highest element of competition through healthcare reform and beyond. Achievement of this goal involves engagement and success of strategy alignment with the interest of employees. The involvement of employees is only one element of alignment; other factors such as incentives and how the organization is structured, the culture, and leadership of the business, which allows the company to come together focusing as one unit becomes the other element that is important for alignment (Hacker & Walker, 2013).

HR strategies for staff in individual healthcare organizations can emerge from reviewing past errors that involved the inaccuracy of diagnoses by lower skilled staff, new procedures involving urgent care as well as other complications, and a lack of communication with patients among team members (Carayon et al., 2014). Additionally, Colvin, Eisen and Gong (2016) suggested about 80 percent of serious medical errors involve miscommunication, where an issue is likely the hand off of patient information because of a shift change or where written and/or verbal information is missed. Reiter et al. (2014) suggested an Improving Performance in Practice Program (IPIP) to reduce preventable errors in a healthcare organization. The goal of the program is to improve the delivery of care for better health as well as lower cost by creating a HR strategy that

reveals the benefits of practice transformation to improve efficiency and quality of care while providing professional benefits. The implications would assist in better management of the costs within a complex adaptive system. Cross training of staff to cover varying tasks and strategically arranging meetings during down time is an assertion of strategy for change. In an ACO, a practice renovation program in healthcare may assist in tracking cost and profits that build on other practices.

Vaughn et al. (2014) found hospitals that perform above level are more tangible in passing on their vision of quality care while constructing a culture that is supportive regarding staff and leadership working together across limitations to improve quality. Zuckerman (2014) suggested that strategic management is a vital tool for changing the healthcare environment and with these tools; leaders in healthcare provide a greater degree of control and influence. Blake, Kohler, Culler, Hawley, and Rask (2013) suggested an explanation of best practices for designing quality improvement programs for management of the healthcare organization, where quality improvement is underdeveloped and highlights the experiences of management in healthcare and that continued training is vital to the improvement of quality.

A continued strategy for change is choosing qualified personnel as an essential standard of the organization. Physicians and clinicians evaluated following the standards of the national committee of quality assurance (NCQA). A patient's choice of a general practitioner or clinician is essential to their personal healthcare wellbeing. In healthcare organizations, the history and commitment that physicians or clinics must service is important to understand. The process involves a proper investigation of background including medical license, education, and former employers. The American Board of

Medical specialist on the National Practitioner Data Bank can provide a thorough review.

However, no guarantees of this process can be made to the patient of quality service from

the physician. Neglecting to obtain this important information can contribute to medical

errors. The credentialing process allows the healthcare administration to find out if

certifications are current. Unfortunately, physicians are not required to hold board

certification. However, the process of credentialing does allow the administration to

obtain the documentation if the physician is board certified. This process provides a basic

guideline of criteria for healthcare executives and managers to follow when searching for

applicable licensed practicing individuals.

Dancer (2014) suggested the implementation of quality improvement and patient

safety as attributes of control within environments and the use of new technologies.

However, improvements in infection control systems have not significantly changed.

These researchers found over 29 barriers in controlling Healthcare Associated Infections

(HAIs) such as structures and healthcare management processes. The need to control

infections is problematic and one of the leading causes of death in hospitals.

Hess (2013) suggested that disruptive innovation works by exploiting of change

in health services delivery using three elements useful in the innovation process: (a)

enabling technology, (b) a business model innovation, and (c) the development of a value

network. Ackley, Ladwig, & Makic, (2016) suggested following evidence-based

guidelines and employing a more highly educated staff will result in quality care. Makie

(2016) summarized and suggested nine basic principles that provide the greatest benefit

to organizations of healthcare: (a) commitment, (b) measurement, (c) building, (d)

culture, (e) communication, (f) recognition and reward, (g) employee satisfaction, (h) development of leaders, (i) alignment of goals, and (j) individual responsibility.

Strategic changes in healthcare organizations occur with the use of technology. De Pourcq, Gemmel, and Trybou (2016) suggested the improvement of performance measurement systems is critical, and healthcare expenses are increasing in the current delivery system with questionable financial sustainability. The use of operational dashboards as a tool to monitor the performance and effectiveness of each employee may provide an effective and efficient way to deliver quality care in care facilities. De Pourcq et al. (2016) further suggested this key performance indicator of using dashboard technology is a necessity to intercede on patient flow logistics while it assists in delivering quality patient-centered care.

CPOE is an added strategy and relevant resource to address the issues of medical errors in the US healthcare system. This tool has been instrumental in contributing to the decrease of medical errors caused by adverse drugs dispensed in primary care. Pham et al. (2012) noted CPOE systems are responsible for a 20% reduction in hospital mortality and enhanced hospital quality assurance processes because of the introduction and adherence to a CPOE system. However, the CPOE system did not always render positive results because of technical difficulties and a poor implementation process as well as a poor transitioning process as the reason for system failure (Charles, Cannon, Hall, and Coutasse, 2014). The disadvantages of a CPOE system occurred when human error intervened by placing the information into the system incorrectly or holding a person with little training responsible for accuracy (Craven, Koppel & Wiener, 2014). The use of HR strategies or implementing strategic change in healthcare may consist of revisiting

quality initiatives in facilities replicating the use of transparency, integrity, and accountability when delivering quality healthcare.

Transition

Researchers have documented the problem of medical errors in healthcare settings (James et al., 2014). In section one, the analysis of literature concerning HR strategies for improving organizational performance to prevent medical errors in healthcare has been associated in many forms with communication issues, physical care, dispensing of pharmaceuticals, and the handling of medical records. The problem of carelessness and ineffective behavior among some staff who work in healthcare organizations needs proper attention through strong internal controls and in written HR policies and procedures.

In section two of the project, the reader will find thirteen subsections. The project begins with the purpose statement refreshing the reader of the purpose of this single site qualitative case study. Next is a description the researcher in the data collection process providing peer reviewed or seminal sources along with any relationship experienced with the topic. The following are the remaining sections and include the participants of the study, research method, research design, population and sampling, ethical research, data collection instruments, data collection technique, data organization methods, data analysis, reliability, and validity, then finally the transition and summary. Section 3 includes the research findings, application to professional practice, implications for social change, recommendations for action, additional study, the conclusion, and self-reflection.

Section 2: The Project

In healthcare, exploration of HR strategies to improve organizational performance to reduce medical errors might assist in quality improvement from instituting methods that provide service excellence. Zuckerman (2014) suggested strategic management is an essential tool for changing the healthcare environment, and with this tool, leaders in healthcare field can provide a greater degree of internal control and influence over outside forces that contribute to staff uncertainty and an increase in medical errors.

Medical errors occur in a number of ways within healthcare organizations. The main premise of this study was to identify HR strategies that can assist in the prevention of these errors and prevent deaths that occur as a result. Such improvements in a healthcare organization starts at the top with the executives, managers, and administrative personnel responsible for reviewing and credentialing before employing physicians and clinicians within the organization. Following this, continual requalification of skills to stay abreast of innovation and new knowledge is necessary to address incidents that may undermine the delivery of quality healthcare. Creating better communication and holding staff accountable are preventative measures that can lead to a reduction in medical errors.

Purpose Statement

The purpose of this exploratory qualitative single-site case study was to identify how healthcare managers use HR strategies to improve organizational performance to reduce medical errors. The targeted population includes healthcare managers who have successfully addressed the problem of preventable medical errors in a clinical setting in the Midwest of the United States. The findings of this study might contribute to positive

social change by improving the quality of healthcare delivery by reducing medical errors in clinics and hospital settings across the country.

Role of the Researcher

The role of the researcher in the data collection process was to comprehend the requirements of the assignment and follow Institutional Review Board (IRB) processes for a complete doctoral study (Bell & Waters, 2014). In conducting this study, I followed the appropriate interview protocol (see Appendix C) in my role as the researcher for this study. Investigators can use case study protocols and databases to establish case study dependability to lessen the effect of the investigator's prejudice and misunderstandings (Yin, 2014). I conducted semistructured interviews and document reviews to explore how healthcare leaders use HR strategies for improving organizational performance to reduce medical errors. The use of an audio recorder and handwritten notes provided assistance in organizing participant responses from the interviews. Hovenga (2013) noted that a need exists to gather the correct data and process this data in a manner that provided information to understand how well a particular system was working or not working. Data were obtained from open-ended questions and analyzed with Atlas.ti software. Prior to the study, I had an opportunity to work within diverse healthcare organizations and noticed variations of how different departments within the organization addressed issues of quality in particular areas of service in the healthcare facility. Currently, I do not work as an assistant, supervisor, or manager in the administrative office of the facility where I conducted my interviews, and I did not have supervision or managerial contact with potential study participants.

In regards to researcher ethics, I respected the steps required to sustain sensitivity to participants' rights. This research addressed the three principles for keeping doctoral research ethical: researchers must be fair to all participants in a research study, they must practice beneficence in doing more good than harm, and they must adhere to principles of justice during the conduct of the research (Belmont Report, 1979). The Belmont Report contains other basic ethical principles to assist reviewers, scientists, interested citizens, and subjects in recognizing the ethical issues inherent in research involving human subjects. The Belmont Report further presents the objective of providing an analytical framework as a guide for resolution of ethical problems arising from research involving human subjects (Belmont Report).

A sense of flexibility is a positive attribute in a qualitative research project, where the data analysis occurs parallel with data gathering. Analyzing the data allows a researcher to pursue an outline offering a concise, descriptive assessment of the participant's insights on the subject. Yin (2014) suggested the results in almost any data collection method involved with the human interaction between a researcher and participant could result in bias. I remained cognizant of those potential biases during the analysis process. In addition, identifying, and managing personal biases should ensure the integrity of the data collection and analysis of the study. This research might contribute to a social change within healthcare organizations and expand the knowledge of existing philosophies of quality healthcare.

Participants

The five participants selected for this proposed study were located in the Midwest of the United States. The participants worked as managers at a leading healthcare facility. Administrative leaders provided consent to contact prospective participants to conduct interviews, and a sample letter of cooperation was provided (see Appendix D). Participants consisted of an HR manager, a chairperson of a department, a quality manager, a medical doctor, and a nursing manager. Participants were not familiar with me through prior employment with the organization, but they were familiar with my research of the industry from the documentation provided in the participant invitation letter for this study. This resulted in an atmosphere in which the participants were at ease sharing information. Marshall, Cardon, Poddar, and Fontenot (2013) suggested a researcher should become familiar with the participant's world to understand their experiences.

After IRB approval (Walden IRB # 06-13-16-0433624), the potential participants were asked to volunteer for a face-to-face, phone, or email interview. Managers at the healthcare facility reviewed a sample letter of cooperation (see Appendix D). Participants were also asked to review a participant consent form in person before participating. Included in the communication was an explanation of the benefits of the study and adherence to protecting ethics and privacy of the participant. Marshall and Rossman (2016) suggested achieving success in a responsive interview with relative strangers required the researcher to develop a trusting relationship that encouraged detailed truthful responses that often regarded matters of a personal nature. Participants who agreed to this voluntary study signed and returned a participant consent form and an outline of the

process for maintaining confidentiality. Holloway and Wheeler (2013) noted that mutual

trust is important in interviews and observations. This idea was supported by Ertürk and

Vurgun, (2014) who also found that the influence of empowerment, social exchange, and

trust are important issues in the retention of staff and their willingness to participate in

surveys or interviews. However, participants had the opportunity upon their discretion to

withdraw from the study for any reason at any time. None of the participants decided to

withdraw from the study.

Research Method and Design

I used the qualitative research method in this study. A quantitative design is

explanatory and tests objective theories by examining the relationship between variables

that are measured (Ingham-Broomfield, 2014). I was not seeking to determine what

factors or variables determine an outcome or provide numerical data as is the case with a

quantitative design. A mixed method combines both quantitative and qualitative

approaches was also not appropriate for this study. The qualitative method was selected

over other methodologies such as quantitative and mixed method in order to provide a

coherent understanding of a social setting or activity from the viewpoint of the

participants with emphasis on description, exploration, and discovery (Bailey, 2014).

Qualitative research allows the participants an opportunity to tell their story and provide

their personal experiences regarding the phenomenon (Ritchie, Lewis, Nicholls, &

Ormston, 2013). The design for this proposed study was an exploratory, single-site case

study to explore how healthcare leaders use HR strategies for improving organizational

performance to reduce medical errors. The rationale for choosing a single-site case study

was that an individual case can present a critical assessment of a particular situation or

problem by using a valid theory (Yin, 2014). This study consisted of semistructured, face-to-face interviews with member checking, observations, and document reviews of HR policies, procedures, and incident reports involving medical errors with healthcare managers at a hospital located in the Midwest of the United States.

Research Method

The method used in this proposed study was qualitative, and the design was an exploratory, single-site case study. Houghton Casey, Shaw, and Murphy (2013) suggested a case study can be useful for comparisons of issues in varying backgrounds. In comparison, Merriam (2014) noted that qualitative research encompassed a multitude of philosophical alignments and methodologies traced back to sociology and anthropology. Asking how and why questions in an environment of complexity, qualitative researchers can assist in the development of understanding based on rich data and thick descriptions. In a healthcare setting, through the viewpoint of healthcare professionals, researchers may gain knowledge and insight into human beings and practices that can improve the operations of businesses (Holloway & Wheeler, 2013). Yin (2014) suggested that a single case can make a considerable impact toward knowledge and theory building by challenging, extending, or confirming the theory, and may alter future research in an entire field.

Research Design

Designs such as phenomenology and ethnography are options for qualitative studies. In a case study design, the theory is pursued in a bounded system with a clear set of circustances in its postion as true; however, the case design may provide relative explanations that may be relevant as opposed to other designs (Yin, 2014). Houghton, et

al. (2013) noted that related themes gathered through the exploration of a case study design may shed light on what is happening to help answer the why questions. Holloway and Wheeler (2013) stated that observing, asking questions, and listening will lead to rich data and thick descriptions of what is occurring in a situation that often cannot be understood with just numbers.

Researchers use a phenomenological study to explore the lived experiences of individuals, and an ethnography study is employed to seek meaning derived from direct observations of a situation over time (Bernard, 2013). This exploratory case study delved into understanding the experiences of the study participants concerning preventable medical errors in healthcare. This study is an analysis of factors that effect the occurrence of preventable medical errors that can put lives at risk and cost an organization millions of dollars in damages. Merriam (2014) suggested an advantage of a case study research design is it offers a researcher the ability to expand understanding through verbal and nonverbal forms of communication, process information immediately, and clarify and summarize material. Additionally, an advantage of a case study research design is that it allows for the opportunity to check with respondents for the accuracy of interpretation and unusual or unforeseen responses (Merriam, 2014). To ensure accuracy and data saturation, I provided the participants with a copy of the transcripts of their answers and asked each participant to review it for accuracy and to add any additional information. In a small study, the probability of data saturation occurs more rapidly than in larger studies (Fusch & Ness, 2015). When no new information is suggested and nothing new is added, the assumption is that saturation had been reached (Marshall & Rossman, 2016). This

single-site case study design has advantages in exploring HR strategies for improving organizational performance to reduce medical errors in a complex adaptive system.

Population and Sampling

The population of this sample derived from a clinic in a hospital system located in the Midwest of the United States. The participants selected for this proposed study work as managers at a leading healthcare facility. I chose a purposive sample of five hospital managers as participants who were familiar with the significant occurrence of medical errors in a healthcare setting. Purposeful sampling for this study involved management professionals who have successfully addressed the problem of medical errors in their departments (Ritchie et al., 2013; Palinkas, Horwitz, Green, Wisdom, Duan, & Hoagwood, (2015). Molenberghs et al., (2014) suggested a case study with a small sample size is acceptable, but by its nature, might be possibly perceived as biased. A purposeful method of sampling should allow for contributors who understand the central phenomenon designated for the study and allow the researcher to address the research question (McQuarrie & McIntyre, 2014: Suen, Huang, & Lee, (2014).

To ensure data saturation, I provided the participants with a copy of the synthesis that represented their responses and asked for additional information. Following these steps allows a researcher the ability to reach data saturation to improve accuracy. The eligibility of the participants was contingent upon their status within the healthcare organization. Additionally, the selected population met the eligibility criteria: (a) age of 18 and over, (b) no obvious connection to the military, (c) do not belong to any protected class, (d) no physical or mental handicap, and € were knowledgeable about the strategies being used to reduce preventable medical errors. Yin (2014) suggested that

knowledgeable decisions regarding sampling are important to the improvement in the quality of a study's production. The participants were managers in a hospital healthcare system willing to participate in either a face-to-face or phone interview that would last 30 to 45 minutes each.

Ethical Research

Walden University IRB approved this research, the information within the document fulfilled the university's standard of ethics, and was in accordance with U.S. federal regulation. The approval number for this study is 06-13-16-0433624, and an expiration date of June 12, 2017. The protection and privacy of participants is an essential principle of ethical research (Angelos, 2013; Morse & Coulehan, 2015). To maintain the confidentiality of each participant, the participants received numbers as identification during analysis. Coding of the data and no names of any participants appeared on any forms only their specified assigned number. Participants had the ability to withdraw from the study at any time by simply notifying me that they no longer wish to participate in the study. The IRB standards were in place to ensure the ethical treatment and respect for each participant of this study. The informed consent provided participants an overview of the research procedures, the interview protocol, and consent form. Participants voluntarily decided to take part in this study by signing the consent form.

Participants had the option to exit the interview and not continue the study without consequence. No incentives were offered in trade for participation in the interviews for this study. The interviews were recorded, in addition, notes were taken during the interview, and a follow-up of facts repeated at the end of the session to ensure the accuracy of the data collection. To ensure the privacy of the participant, no

identifiable information about the participant was revealed during analysis, the

participants were only known by numerals. To further protect the participants' identity,

Morse and Coulehan (2015) suggested not publishing a table or list of participants'

demographics within the study.

Atlas.ti software can assist in the coding and identification of themes collected

from the participant's data (Woods, Paulus, Atkins, & Macklin (2015). The responses of

the interviews were securely stored on my personal computer in a password-protected file

and transferred to a flash drive and/or CD, and stored in a home safe. Stored information

will be available to only committee members upon request. After the 5-year period of

safekeeping, I will delete any electronic data, and shred collected data to protect the

participant's confidentiality. Data in relation to these interviews and any documentation

related to this study will remain in a locked safe for a period of 5 years. I will destroy

information in this study after the 5-year period.

Data Collection Instruments

Yin (2014) suggested, preparing data collection is complex, and needs to be done

in a manner that will not jeopardize the case study. As the researcher of this qualitative

study, I was the primary data collection instrument. The selection of participants were

chosen because of their expertise and knowledge within the healthcare industry as well as

their familiarity with the topic under study (Cleary, Horsfall, & Hayter, 2014). I

conducted these interviews at a hospital system in the Midwest of the United States.

I conducted the interviews by using semistructured, open-ended questions (see

Appendix C) to support the data collection. The intent of providing semistructured open-

ended questions was to achieve a clear understanding of how healthcare business

managers use HR strategies to implement and improve organizational performance to reduce medical errors. Dependent upon the participant's time and availability, the participants had a choice of either a telephone or face-to-face interview. Probing or icebreaker questions were asked to gain a level of ease within the interview. A researcher with a clearly defined research topic and a limited number of well selected similar participants with experience related to the topic of study can lead to noteworthy information for analysis (Cleary et al., 2014).

During the interviews, an investigator has the opportunity to observe the nonverbal behavior and communications of the participants. As the primary instrument of this study, my efforts were significant in the data collection process along with the interview questions. Yu, Abdullah, and Saat (2014) noted that the interview as the secondary data instrument is not only challenging to sort out, assemble, and reconstruct, but can pose as an exhausting encounter for the novice researcher.

Yin (2014) mentioned that data collection follows a formal procedure; however, specific information is not always readily predictable and a researcher must review information and make decisions quickly. The reliability and validity of the data collection are vital when approximating the degree to which participants answer the research questions and meet the objectives of the study. Yin (2014) suggested that dependability in qualitative research needs to move in a parallel with reliability, while the purpose of reliability is to lessen biases and errors to achieve reliability of the data collection process. I used follow-up questions as the interviews were taking place for member checking (Koelsch, 2013) to confirm the accuracy of the participant's responses to

modify or correct any prior responses. Obtaining this information from the varying participants should strengthen the validity of the study.

Data Collection Technique

I collected data using semistructured questions in face-to-face interviews. Verbal information regarding policy and procedure guidelines for improving quality was gathered during the initial interviews. In the face-to-face interviews, the following procedures occurred for each participant: (a) the conversation started with the overview of the research topic and the purpose of the study, (b) an explanation of the required consent form, outlining the rights of the participants, and emphasized the confidentiality of the information collected in the interviews, (c) an introduction of the devices used to assist in the data collection such as the recording devices and knowledge of the journal for note taking purposes, (d) to gain a level of ease within the interviews, I asked probing or icebreakers questions; (e) reviewed questions and when necessary, asked follow-up questions for the purpose of member checking to reach data saturation, (f) Interpreted what the participants shared to make sure the information was recorded and transcribed accurately from the participant's perspective, and finally (g) I expressed thanks to the participants for their time in the study.

The advantages of the data collection technique will allow a researcher to provide the participant with an option of expressing their thoughts through face-to-face or phone interviews if needed. Providing options for the interviewing process will allow the participants to choose the environment to optimize their time more efficiently. The disadvantages of this data collection method would be the technique may not allow a sense of one-on-one contact while in the participant's professional surroundings. An

investigator would not be able to gauge any physical reactions other than a variation of tones in the voice of the participants to the questions presented during the interviews.

Harvey (2015) noted member checking is the practice of reiterating participant's views, ideas for their confirmation and clarification, and with the material gathered; a researcher can elaborate on the categories within the study. Qualitative studies require member checking for data saturation (Koelsch, 2013). A copy of the transcript was provided to the participants to assure the accuracy of participant responses to enrich reliability, rigor, and validity of the study (Marshall & Rossman, 2016).

Data Organization Technique

Researchers use information from multiple sources of data such as documents, interview notes, and observations for triangulation in a case study (Houghton et al., 2013). The data analysis technique for the research was qualitative. With this approach, the research objective was to derive themes from the subjective responses of research participants and to unify the codes thematically to adress the research question (Engkasan, Ng, & Low, 2014; Fiedler, Giddens, & North, 2014).

For future retrieval, the data related to this study will remain in a locked sentry safe for approximately 5 years, and then destroyed after that 5-year period as required by Walden University. I documented the work environment, observations, interviews of participants, organizational culture, and behavior using a digital recorder and a notebook. Using Microsoft word, a synthesis of the interpreted research questions evolved. For the data entered, I followed the table of contents using file folders and securely stored the analytical and coded data on a password-protected computer.

To attain an effective data management process, Atlas.ti software served as the tool to organize and code the data collected into themes. I entered the data appropriately into the Atlas.ti software to find sets of phrases or words for categorizing emerging themes. The coding process consisted of organizing the data into themes that supported the main conclusions of the research.

Data Analysis

Data analysis involves a continuous process of recognizing and associating themes for sufficient data interpretation and explanation of the findings for a qualitative case study (Harvey, 2015: Yin, 2014). This data analysis process allows case study researchers to build explanations about the case in a narrative form (Rabinovich & Kacen, 2013). Data analysis is an iterative process that cannot be completely separated from the data collection process itself (Pierre & Jackson, 2014). I took detailed field notes during the interviews regarding my observations of the participant's comments and behaviors. During the interviews themselves, I used member checking to make sure that the participants understood the particular question and recorded and captured their responses during the interviews. At the completion of the interviews, the interview transcripts and fields notes were properly evaluated making annotations as necessary. Interview data and field notes can be sorted in a word processor before loading the information into software for classifying themes (Christie, Bemister, & Dobson, 2015).

If an alternate interpretation exists for more than one of the findings, either clarification can be provided or a recommendation for future research could be formulated. In the outlook of potential opposing responses from participants and the iterative process of using the explanatory method, an investigator can focus on the

research question under investigation (Yin, 2014). Consequently, following a sequence of

evidence and regularly checking the overarching research question will diminish

distraction. Triangulation of the research shall be achieved through data review of

company documents, performance improvements plans and through the interviews of

healthcare managers that may include doctors, executives, and nursing managers.

     Atlas.ti software served as a data analysis tool to locate and organize the data.

Data analysis in qualitative research is a constant process that confirms the captivity of

distinction in participants' response, thus essential to establish data saturation in terms of

reliability and validity (Yin, 2014). To guarantee the results of this study is reliable

(Marshall & Rossman, 2016) encouraged qualitative researchers to perform continuous

self-criticism on the data analysis process. An investigator will maintain a conscious

effort of whether or not the interpretation of the responses are accurate to challenge the

assumptions, bias, and to encourage the exposure of emerging themes (Marshall &

Rossman, 2016). This organized procedure will guide the data analysis process.

1. Rerun the audio-recorded interview several times and interpret the responses

   in a synthesis and provide a paragraph of findings after each question.

2. Provide the interpretation to each participant for confirmation, a process

   called member checking. Member checking encourages the participants to

   validate the data of their interpreted responses to provide any additional

   perspectives the participants may have during the interview process.

3. Perform these steps simultaneously to safeguard data saturation and to ensure

   no new information is emerging.

4. Make every required modification as indicated by the participants.

5. Compare each participant's interpretations ensuring that every related code without repeating or duplicating is identified.

6. Engage in peer debriefing to track, confirm, and reach an agreement with the coding process.

Reliability and Validity

Bernard (2013) identified credibility, confirmability, transferability, and dependability as common measures to achieve reliability and validity in qualitative research methods. To strengthen the research findings of a qualitative method, a researcher adopts: (a) credibility, an internal validation that ensures value and accuracy of information, (b) transferability, an external validation that findings are applicable to other contexts, (c) conformability, the objectivity, neutrality, and accuracy of the data collected and (d) dependability, ensures consistency with auditing data collection and analysis (Noble & Smith, 2015).

Reliability

Bernard (2013) noted reliability in a qualitative approach is the extent to which the results of a study correctly represented the views of the participants. Reliability closes the gap between the presented research findings and the realities of the world. Member checking probing techniques confirm the participants' responses during the interview to establish validity and reliability of the data collected (Koelsch, 2013). Member checking is a follow-up process that encourages participants to authenticate the interpreted data and to provide further perspective on the phenomenon under investigation.

Validity

Yin (2013) indicated that validity in a study is achieved through convergence of information collected from multiple sources. As the investigator, I collected data from multiple sources using semistructured, face-to-face interviews reviewing human resource policies and procedures, and my observations within the healthcare setting. Woolcock (2013) suggested that at an elementary level, the research data must be of high reliability and quality. The importance of validity in the context of a qualitative study depends on credibility, integrity, transferability, and thus, the findings can be defendable when challenged (Venkatesh et al., 2013).

Dependability. Marshall & Rossman, (2016) asserted that dependability in a qualitative study ensures that audiences should be able to rely on the research findings and can follow the specific research techniques employed in conducting the research. With the potential existence of variation in participants' viewpoints, dependability in a qualitative study safeguards that the same results from this study are achievable if repeated over time and under similar conditions (Marshall & Rossman, 2016). Therefore, I covered the variations for similarities and differences in the participant's viewpoints by taking the following steps to confirm the dependability of this study: (1) ask questions by using member checking that relate to the phenomenon, (2) describe changes that occur in the research setting and how those changes affect the research results, (3) search for dissimilarity among participants' responses, (4) appropriately identify emerging codes, (5) analyze the data collected by using triangulation methods, and (6) and after transcript reviews, recode data when necessary.

Credibility. Yilmaz (2013) noted that credibility in qualitative research ensures the descriptions of the research findings and is comprehensive and convincing to the readers. The data triangulation and data saturation process supports the credibility and the trustworthiness of qualitative research (Kaczynski, Salmona, & Smith, 2014; Klotz, Da Motta Veiga, Buckley, & Gavin, 2013). The selection of applicable subject matter experts as participants, along with the adequate design of data collection using member checking and analysis techniques will lead to certifying the achievement of data saturation for this study. Therefore, an investigator will use various data collection techniques to attain triangulation for the quality of research findings. The triangulation for this study included open-ended research questions, review of documentation and notes, and observations. The utilization of more than one procedure will further confirm that the data analysis is credible and trustworthy (Kornbluh, 2015).

Transferability. Transferability is a process when another researcher decides to follow the same methods in a qualitative study even though the researcher may not yet get the same results because of the small sample size that was used in both studies (Yin, 2014). Any audience of this research interested in transferring the results to other contexts handles judging the transferability or generalizability by assessing both similarities and differences (Marshall & Rossman, 2016). Generalization focuses on the possibility of applying the recommendations of this study to other groups or organizations (Marshall & Rossman). Merriam (2014) noted the importance of providing a good description of the methods used for ease of transferability to other contexts. The intention of an investigator is to provide a detailed description of the problem under investigation, the criteria for selecting the participants, the research techniques, data

collection, and analysis methods used in their study. In section 1, of a proposed study, an investigator will provide the assumptions, limitations, and delimitations that guide the result of the single case qualitative research in the selection of participants, sample size, and data collection and analysis techniques. Transferability is about how well the study has made it possible for a reader to decide whether similar processes will succeed in their own setting by understanding in an in-depth fashion how the research took place at the research site.

Confirmability. Ravenek and Rudman (2013) noted the process of confirmability gauges whether the understanding of data is logical and in consensus with participants' perspectives and other data gathered on the phenomena under investigation. To ensure research results are in consensus with the data collected, I documented and analyzed findings from my review of the literature that confirmed and contradicted prior data collection efforts and analysis. An investigator can engage in multiple data triangulation of open-ended questions, observations, and review of documents to ensure quality in research findings while minimizing bias related to researchers interpretations (Yin, 2014). Researchers have suggested that the responsibility of an investigator is to provide a credible explanation of the findings (Marshall & Rossman, 2016).

Data Saturation. Yin (2014) indicated that data saturation is significant to ensure validation in qualitative research. Identifying the point of data saturation is a chore for some qualitative researchers (O'Cathain et al., 2015). Qualitative researchers should stop sampling when information from purposefully selected participants becomes repetitive when no new themes that have been identified (Koelsch, 2013). Researchers achieved data saturation in a study by first analyzing data from 13 participants then subsequently,

from four additional participants, which resulted in no new themes. Regardless of additional participants, data saturation is achieved when no new emerging themes are mentioned by the participants (Morse & Coulehan, 2015). After engaging in member checking with 5 participants and the investigator is no longer hearing, seeing, or identifying new themes from the participants, the investigator will have achieved data saturation for the study (Morse & Coulehan, 2015). If the investigator has not received data saturation at this point, member checking would continue until the answers become repetitive with no new themes identified.

Transition and Summary

The purpose of this proposed qualitative single-site case study was to explore HR strategies for improving organizational performance to reduce medical errors. Section 2 included a detailed account of the role of the investigator, participants involved in the study, research method and design, population and sampling, and data collection details. Section 2 included details of semistructured interviews of participants at a hospital in the Midwest of the United States that supported staff to be interviewed and this research to be conducted. ATLAS.ti software including, Excel, and Microsoft word were used in the creation of charts and tables. The information in Section 3 includes research findings, application to professional practice, and implications for social change, recommendations for action, and further study, a conclusion, and a self-reflection of the experience while conducting this study.

Section 3: Application to Professional Practice and Implications for Change

<u>Introduction</u>

In this section, I provide research findings applicable to professional practice, the implications for social change, recommendations for action, and suggestions for further study. Also, this section includes proposed human resource strategies hospital leaders can use to bring about a reduction of medical errors in a complex adaptive system. Finally, this section concludes with a self-reflection regarding my research experience during this study.

The purpose of this exploratory qualitative single-site case study was to identify how healthcare managers use HR strategies to improve organizational performance to reduce medical errors. I used a qualitative case study design to address the research question by gathering information from semistructured interviews in a single-site hospital setting. The research process focused on five hospital leaders from a healthcare hospital setting in the Midwest of the United States. I employed data triangulation with a review of company documents, performance improvements plans, and through the interviews of healthcare managers that included an internist/family practice, cardiologist, quality manager, human resource manager, and a nursing manager.

Presentation of the Findings

The findings of this study addressed the overarching central research question: What human resource strategies do healthcare managers use to improve organizational performance to reduce medical errors? Face-to-face, semistructured interviews and information from company documents provided the data in this study. Purposive sampling ensured the sample represented key participants whose knowledge and

expertise applied to the study (Marshall and Rossman, 2014). Each participant signed an agreement to permit audiotaping of the interviews. After comprehensively reviewing transcripts of the interviews, I entered the interview material into ATLAS.ti software. ATLAS.ti enabled me to analyze the data and assisted in visualizing relationships within the data. I developed common themes from the information provided by the participants as recommended by Yin (2014). I demonstrated the connectivity to the conceptual framework and literature review in Section 1 of this study by illustrative examples provided by the participants. The conceptual framework for this study was CAS theory, which was appropriate for this study because a hospital is a large complex system, and I was attempting to explain the behavior of staff in large complex systems. Key constructs underlying the theory were to identify critical themes and HR strategies that support the use of quality improvement programs to reduce medical errors.

The assumptions noted for my study included that the participants provided accurate information of the organization's position on medical errors. Quality care is a priority among executive staff and top administrators within the industry and the challenge of reducing medication and other clinical errors may be associated with inadequate and outdated HR strategies. I found the participants with each clinic consistent in providing stories and knowledge of noted medical errors in their organizational unit. The managers also provided information on their accountability to the patients, staff, and to their roles within the organization. The data collected from the information gathered provided a basis for understanding the strategies hospital managers used to improve organizational performance to reduce medical errors. Four themes emerged from the analysis of the data (see Table 2): (a) dealing with *never events*, (b)

ongoing training programs, (c) communication/collaboration and, (d) promoting a culture

of safety and quality that need to be reported to the Department of Health.

In Table 2, I display the themes that emerged after the review of participant

interviews and the responses. This table reveals the findings collected during the analysis

of the transcripts of the interviews. The analysis for each theme has similarities, but each

are unique from one another.

Table 2

Participant Responses to Themes

THEMES	P 1	P 2	P 3	P 4	P 5	TOTALS
Dealing with never events	8	4	1	1	0	14
Ongoing training programs	4	2	7	4	4	21
Communication/Collaboration	18	10	17	4	4	53
Promoting a culture of safety and quality	10	17	29	11	15	82

Note. P = participant

Figure 1. depicts the participant responses to themes to show lowest responses of

dealing with never events to the highest responses of promoting a culture of safety and

quality. The triangulation of identified patterns of behavior from the participants such as

a concern for patients, employees, and personal responsibility; and of information such as

providing a real view of process improvement boards, verbal information on policy and

procedures, and strategies to reduce errors within a complex adaptive organization

assisted in identifying the themes.

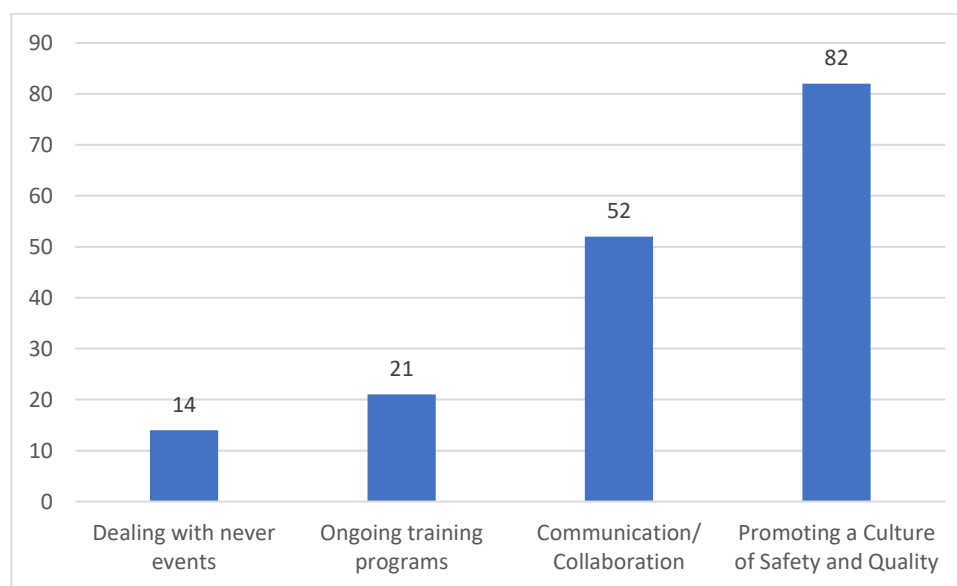Figure 1. - Total of Participant Responses to Themes

Figure 1. Participant response to themes to show lowest to highest responses by Mary Ellen Taylor Hyde, 2017

Theme 1: Dealing With Never Events

Singer and Vogus (2013) research revealed that hospital errors are apparently an obstinate problem and a continued threat to public health. The phrase 'Never Events' was introduced by Ken Kizer, MD in 2001. Kizer is a former CEO of the National Quality Forum (NQF); this phrase references dreadful medical errors that should never occur (AHRQ, 2017). Under this theme of dealing with never events were at a minimum with fourteen total responses. This organization did not reveal any significant never events or events that should have been reported to the department of health. The errors uncovered were those that were recognized and corrected before becoming a never event. In this section, the participant's responses were of accountability to the occurrence of errors, recommendations, and efforts that can prevent never events from occurring within

healthcare organizations. A certain amount of carelessness occurs in an organization, but the largest percentage is the process and not people (Participant 5). Staff working together was evident during this research when finding that this organization was proactive in developing a hemorrhage tray that had all the needed supplies for a patient to prevent adverse events. Participant 1 states, "when we have an error or event, we do root cause analysis, we do have action plans." As revealed under the theme of communication, the organization, would get staff together in a room and have them talk about what transpired, but that turned out to be ineffective because staff perceived this interaction as punitive (participant 1). New efforts have been put in place, one of which is interviewing physicians and other staff separately then come out with a flow and a cause map. The group that is there will review the cause map and determine what steps to take to prevent a repeat occurrence; then, we have action plans, we educate, train, and implement (Participant 1). Participant 2 revealed, "one of the greatest challenges we face is medication reconciliation." Participant 1 explains that distraction is a significant potential for error. For example, providing a medication to a patient meant for a patient in another room. Participant 1 shared that story; the error was not a never event, but of one where distraction could easily occur within a highly volatile situation of a potential never event. The employee left one patient's room quickly to assist another patient in an emergent need and erroneously gave that patient the medication meant for the previous patient. The distraction could occur as soon as being distracted with one patient to quickly making an error in judgment with another. Participant 1 stated, "sometimes we do not think, and are all human who make mistakes, so how can we protect ourselves and our patients from our humanism"? Participant 3 revealed other potential occurrences such as, "error of not

documenting every four-hour suicide assessment, not completing an environmental checklist for the room, or a physician forgetting to sign a restraint order." Participant 4 noted, "I have seen a lot of different things with medical errors from someone going into a room and not scanning, even though they are supposed to scan each time they go into the room." Additionally, Participant 4 stated, "I also see staff not scanning the right things such as an arm band, and administering medications erroneously." Medication errors are also prevalent through the use of technology. Participant 2 noted," when someone comes into the hospital, what is entered into our computer system of what they are taking may not be accurate; so, when we order medications, we may be ordering the wrong thing for them, that happens too often." Participant 1 stated, "there are going to be lapses and behaviors that are risky and outside of our policies, but I feel accountability is one of our values." Participant 1 goes on to state, "I also feel like we as managers have an accountability to make things as easy for the staff to take care of our patients as much as possible." In the case of a severe or sentential event, the organization has a duty to disclose and this organization does root cause analysis (Participant 3). People are nervous when attending a session of what happened, and that is something as an organization we must continuously work on (Participant 3). This organization does consider the process first and revealed that no finger pointing occurs, and they are focused on external factors, such as communication issues, IT issues, and staffing. Looking at all areas before looking at any individual is a way of reducing occurrences or potential never events.

Theme 2: Ongoing Training Program

Ongoing training programs had twenty-one total responses from all participant interviews. Training is critical to this organization to provide each patient within each

clinical setting a highly knowledgeable staff member. Research has provided validation

that team training improves safety culture, clinical outcomes, and patient satisfaction

(Cooke, 2016). Participant 5 noted, "it is important to get people well trained enough that

they can cope with the environment that we are working because the healthcare

environment becomes more challenging." Participant 5 also states, "there are pressures of

regulations from the government, having reimbursements going down, and the

organizations attempt to try to manage the finances while at the same time getting enough

of the right resources out there."

Organizations with an HR strategy of training increases an employee's

commitment to the organization (Erturk & Vurgun, 2015). This organization developed a

department called process innovation, promoting performance and improvement.

Participant 3 noted, "we have our department within our system, which incorporates a lot

of the lean processes such as Kaizen's 5s's, and value stream maps. Activity is high in

looking at the process and improving it." Additionally, as stated in this study under

communication, this organization had promoted training programs before but in some

clinical areas, this important type of communication had stopped, but picked back up

again. That training was TeamSTEPPS. Participant 3 revealed, "we have tried in the past,

but I know we are looking at teamSTEPPS again, but I think that is truly a teamwork

training model and I would love to see that implemented in our facility." Through

continuing education programs, this organization's goal is to educate and ensure that they

meet regulatory requirements. This organization is proactive in their efforts of continuing

education programs. Participant 4 noted, "we have a service excellence program for our

front-line staff." The front-line staff gets involved, and we feel they are the key to all of

this, so if we can get them involved in customer service and providing the best customer service that is going to help the quality of everything" (Participant 4). Additionally, participant 4 revealed, "we have done this program for six or seven years, and you can tell the difference in how the organization is doing things, getting people involved, and how that affects the quality of the care we provide our patients." Participant 5 believes, education and training are necessary, making sure that people who come into healthcare want to buy into the idea that patients are the most important in their lives. Therefore, a patient's safety and the concept of doing no harm is also essential. Participant 3 stated, "we try to give staff the best training that we can and have a new residency program for new RN's so instead of bringing them cold into an ICU we have training in place to help them make that transition into a critical care area. Training offered as well as required within this organization and continuously promoted through seminars, programs, and modules to assist and promote the understanding that the lives clinical staff help are meaningful and worthwhile.

Theme 3: Communication/Collaboration

Ineffective communication within a healthcare organization can lead to a significant cause of medical errors; however, teamwork coincides with effective communication in complex adaptive systems. Managers need good communication skills and compassion for their staff (Participant 4). This theme was of concern among the participants. During the interviews, this theme emerged with fifty-two responses. The communication among participants was cohesive and in agreement that the organization requires better communication overall in each unit and that they are presently proactive in making better communication a reality. During the interviews, the participants spoke of

getting together to talk about daily tasks; however, in some clinical areas this important

type of communication had stopped but picked back up again. In the organization, if an

error occurred, Participant 1 revealed, "We would all get together in the room and talk

about what happened and then what happened next." Participant 1 also revealed that the

organization was in the process of initiating what is called TeamSTEPPS across the

system. TeamSTEPPS is known as a validated multilevel teamwork intervention that

proposes specific ways to maximize performance (Gittell, Beswick, Goldmann, &

Wallack, 2015). Participant 2 stated, "I think we are working toward being better at not

placing blame on particular people when errors happen, but looking at issues as a system

and process problem." Participant 3 stated, "We have leadership meetings on the floor

with not only the patients but with the leadership and the staff." In the meetings on the

floor, the managers can find out anything that is happening or if there are any patient

safety issues. Participant 4 stressed that "Managers need excellent communication skills

and compassion for their staff," and Participant 5 revealed that "The organization is

proactive and committed, the physicians and the hospital staff work together to

accomplish goals."

Participant 1 explained the communicative effort of a nurse who noticed during an

incident that the nurses had to leave the room for supplies continually. This nurse

reported her observation to management, and a hemorrhage tray was developed so the

clinicians working on a patient would never need to leave their bedside. Communication

has become a daily process of positive initiatives that has benefited patients (Participant

1). Additionally, to maintain their positive status among other related healthcare

organizations, Participant 1 also stated, "The staff initiated positive feedback by lowering

negative percentages of wait times in the emergency room department." For example, regarding communication within the organization of wait time for patients coming through the emergency doors for service, Participant 1 revealed that they started with an 8.4 percent rating and dropped down to .09 percent. The level of communication and acknowledgment within the staff of how to triage patients in need of services contributed to their success in lowering the negative percentages. Participant 1 stated, "That the triage greens no longer take needed space from the more critical patients". The staff are experts, and when they are involved in building and developing that process, they are much more involved and invested in using that process correctly, and so that these are measures or metrics that we look at every day ." Participant 2 revealed that "Getting the doctors more aware and engaged in quality" is the key, so within Participant 2's clinic, the goal was to encourage the new hires to get on a committee right away. Participant 2 also revealed that communicating the metrics to newly hired staff is imperative, stating, "Without having metrics to say what taking great care of patients mean, how can we quantify that great care, and how can we improve?" Additionally, participant 4 noted that within an organization, the important thing was to let the employees know what they were doing right. Within this theme of communication, the triangulation of behaviors of the participant's concern for their patients, employees, and taking personal responsibility was evident. In healthcare services, the staff are taught to put the patient at the center and then to do is what is best for the people who are taking care of the patients (Participant 5).

Patient-centered care based on a collaborative effort among staff in a CAS; the focus is on the organization and working together as a unit rather than individual entities. The participants had similar conversations of communication and collaboration as a

process that works hand in hand with this organization. Collaboration among the staff was impressive, with findings showing how the units worked together with one goal in mind to promote teamwork in patient matters in the organization. Participant 3 stated, "You need to know what is going on in your facility, and we do that in a variety of ways." Managers in this organization accurately traced daily activities by debriefing, "huddling up" to talk about any issues that may have arisen, and acting proactively as a unit to determine the next steps needed to resolve a problem. Participant 1 stated that the organization had initiated a multidisciplinary drill team encompassing the physicians, nurses, technicians and everyone involved in executing drills. Participant 1 also noted that collaboration exists among frontline staff physicians and physician assistants working in the emergency room who have suggested processes for improvement. "One of the biggest accomplishments is that we worked on improving team rounding on patients" (Participant 2). Participant 3 also mentioned a daily safety huddle where the leaders of management come together. "We work together as well as look at all the ways something can fail before we put a plan into place, so you find out what is going on, mitigate, and then follow it, to see how you are doing" (Participant 3). Debriefing or huddles can also contribute to improved performance and decreased strain between individual and team performance. Participant 5 revealed that "Seeing the physicians and the hospital staff working together to accomplish those goals, and the hospital being the one to commit to some relatively expensive consulting, drives us to a quality point that we really want to get at." Participant 5 also believed, "It is getting the whole organization to buy into accepting the standards that came out of the national guidelines and getting those standards out in front to measure them."

Theme 4: Promoting a Culture of Safety and Quality

The culture within a CAS is important as a condition to improve patient safety and quality of care. Managers in a healthcare system need to develop a culture of safety and quality as a core element (Weaver et al., 2013). The interventions or resolutions to errors fails to address the cause of the central issue because of a weak organizational safety culture (Singer & Vogus, 2013). An organization requires important strategies that address the interconnected processes of the organization's safety and quality culture. Promoting a culture of safety and quality was the largest theme in this study with an overwhelming eighty-two total responses from participant interviews. The data calculated discloses this theme as a central and pivotal process that this organization relies on to continue their positive ranking amongst their competition. This theme is largely dependent upon teamwork, encompassing communication, and collaboration of each unit. The goal is achieving a financially stable organization while producing quality results that involve engaging stakeholders.

Participant 3 stated, "A nonjudgmental culture is a big thing because we want staff to feel comfortable reporting events, and know that any decision making does not take place until the entire process has been properly vetted." Participant 1 believes, "It involves a lot of situational awareness and debriefing, how did we do as a team, and what could we have done better?" Managers are accountable to make things as easy for the staff to take care of the patients (Participant 1). To promote a philosophy of safety and quality Participant 5 states, "I try to take the time to sit with each team member and doing an environmental scan involving teamwork, quality, and patient safety."

Under this theme, the participant's differences were significant for promoting a culture of safety and quality. Most of the participants were in unison of the importance that their employees are engaged within the organization through seminars, presentations or training, the staff knows that management does look at events as a process issue, not a people problem, and assuring positive recognition of the staff. The following participant responses note the similarities and differences:

Participant 1 revealed, "One of the things as far as the staff that we do struggle with is when change happens we need to look at the why and to make sure that people understand the why." This participant noted that the organization should praise the staff to inform staff members of improvements, getting that culture of debriefing, and let staff know they are doing a great job. Similarly, when events occur to look at the process that is in place first before looking at the people involved. Participant 1 noted, "We do look at the process because healthcare is so convoluted and complicated; many times, when you start looking at all of the workarounds, and the things that people have tried to do to get the job done, it is amazing that we accomplish anything." An example of this fact is the promotion of matching the patient ID with paperwork in the chart. Realizing that just checking the patient ID was not enough, the ID information must match in the system as well, a much bigger education role out about ID and matching emerged (Participant 1). Other ways to promote culture and safety per this participant is the use of brag boards, placing this type of communication around the organization to display their efforts, and engaging the doctors in quality.

Participant 2 noted, "When hiring people, have a compensation and benefits package that is good enough to get the physicians in the door and ideally to keep the staff

here, then get staff involved." Participant 2 states, "The longer someone takes part in the

organization; the more impact they will have." This manager feels personally responsible

for quality care because the orders written in the chart immediately influence that quality.

A nonjudgmental culture, Participant 2 belief is that the organization is getting better not

placing blame on people when errors happen and feel the same as Participant 1 in looking

at issues as a system and process problem. Participant 2 stated, "Overall our safety and

quality are good, and our medical error rate is lower than most; when you compare our

quality to benchmarks, I think we do better than most organizations." This participant

believes the shortage of excellent physicians and nurses is a factor. "We are looking at

hiring more doctors, generalists and specialists alike, and with more staffing quality will

improve" (Participant 2). Additional responses associated with this theme of promoting a

culture of safety and quality, "Posting kudos from patients, also believing that the display

daily activity boards called Gemba boards assist in safety and quality."

An example of a Gemba board is presented in Figure 2. This type of board is like

the Gemba boards in each of the five clinics within the participant's organization.

Participant 3 stated, "The boards that are on the units, many of the goals or issues come

from the staff members themselves about their daily work, and it is always about making

improvements not only in quality but patient safety, so all of that works together." Three

years ago, the organization started a lean initiative with performance improvement

aspects. Participant 2 stated, "we have patient care improvement boards throughout our

facility and developed a department called process innovation which is performance and

improvement ." Finally, as with participants 1 and 2, Participant 3 also believes that

employee engagement is huge, and staff must be engaged because if they are involved,

they care. The better the staff performance, the better satisfaction, and the more employee

engagement, the fewer risk events, and the better quality and safety you have (Participant
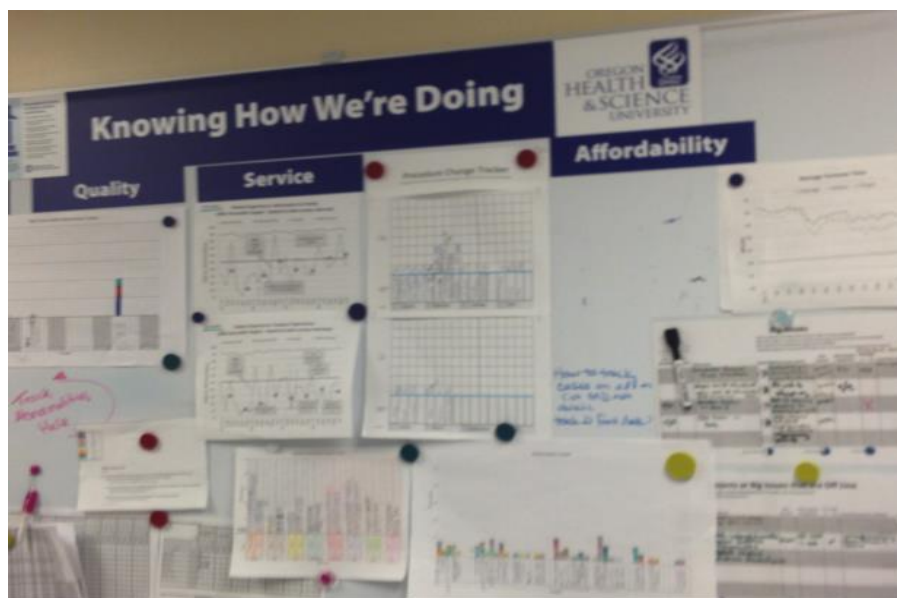
3).

Figure 2. Gemba Board

Figure 2. Retrieved from. http://instituteforexcellence.org/so-you-want-to-be-a-healthcare-value-network-member-oregon-tour/

Participant 4 stated, "we show videos on how the care of patients can be improved

and bring speakers in who share their stories." The organization had a speaker who was

burned over half of their body to tell their story about the experience and the importance

of providing quality care. Additionally, Participant 4 revealed, "it is a requirement of the

staff to attend these presentations to help them understand the importance of the quality

they bring to the patient." Participant 4 coaches, mentor's managers, does employee

relations, and helps people instead of first looking at the mistakes that they may make.

Managers need to learn how to recognize people in a positive light and not point out their

negative issues most of the time (Participant 4). A consensus among managers is again to

hire the correct person for the job and getting the right person in the position the first time

is essential. Participant 4 noted, "the organization has a success sharing program based on

the Press Ganey scores." Press Ganey is a regulatory survey that is implemented to rate

quality care. To gauge the quality of patient care, medical facilities in the United States

use Press Ganey Scores (Bernard et al., 2015). If the scores on the surveys are high and

the organization stays within budget, Participant 4 noted that the company gives the

employees a bonus once a year. Participant 4 stated, "before, the employees did not

understand how the program worked, but now they do and are reimbursed if we receive

scores that are on target." When the organization is making money, they share the funds

with their employees. Participant 4 additionally revealed, "this bonus has the potential of

being a sizeable amount which can reinforce that the company cares and that the numbers

do provide impact, such as communication with physicians, nurses, medication

information, discharge, cleanliness of the room and so forth." These are things that they

should be doing, but provides a reminder that we are thinking about our employees, so

that reinforces teamwork (Participant 4).

Participant 5 noted, "I have the opportunity to learn what is important in my

discipline and from that, working on the guidelines which lay out what the items are

regarding quality care." Promoting a culture of safety and quality also means having a

competent staff. Participant 5 noted, "through team building, it goes back to having the

right individuals in the right position who have the competency to do what they are doing

or use the HR concept of hiring for attitude and training for skill." Participant 5 also

stated, "you have to understand how well the team will work together, in the beginning,

to create the right interventions bringing the team closer together to accomplish quality goals." Additionally, Participant 5 believes, "paying attention to the standard operation procedures you have, that can be an issue, but again the largest percentage of the time I feel has to do with the process and not the people."

Applications to Professional Practice

The findings of this study yield to the most practical of thinking when evaluating the business problem of maintaining profit and providing quality service while doing so. In a complex healthcare system, there are many entities within that care organization that must work as a unit to promote effective communication, collaboration, the culture of safety and quality, training programs, and without fail, deal with never events. The specific business problem of some healthcare managers having limited human resource strategies to improve organizational performance to reduce medical errors was presented by the strategies emerged. These HR strategies provided included, 'refreshing and keeping abreast of the CMS core measure to joint commission requirements to regulatory hot topics such as restraints and suicide precautions.' Additionally, 'engaging the entire organization of buying into accepting the standards of the national guidelines, and getting those standards out in front of staff to properly management and measure them' may not be commonly used or implemented as they should within healthcare organizations. The strategies presented are costly to the organization but vital to its continued success. The organization's focus largely relies on all their strategies for promoting a productive business as complex as the business may be. Managers all revealed that errors occur, but how those events are mitigated is key. Recognizing that medical errors happen and that the problem is a process issue not a people issue is the first step in a resolve. Rewarding

employees for their efforts and engagement in the first initial stages of employment may also be an important strategic initiative of this healthcare organization. Finding the right people for the right position, providing them with a good compensation package, giving them the metrics to do their job as well as empowering them to make the right decisions for their patients is one of the basics of increasing retention within this system.

Healthcare managers who are interested in assisting the growth of their healthcare organization and acquire the best and most qualified staff can view the strategies in this study as a guide to implementing better safety and quality within their healthcare organization. These findings are relevant to improving healthcare business practices to provide a detailed discussion of the applicability on the professional practice of business. This subsection provides a rich academic argument of why and how the findings are relevant to improved business practice.

Implications for Social Change

The implication for social change consists of continued training, building a culture of safety, and collaborative and communicative efforts to reduce the likelihood of the occurrence of medical errors. Healthcare quality within organizations has an economic effect on the industry and community (Prachinkumar, 2013). Therefore, this research in addition to emerging research can improve the quality of healthcare for all Americans. This research is a significant contribution to this industry, and with a thorough study, the hope is that this research will assist positively in the thinking process of those who deliver quality healthcare. Organizations with employees who are otherwise not engaged may benefit from the strategies implemented within this study. Currently, there are a shortage of nursing staff and primary care physicians for some organizations,

and a challenge in helping managers and frontline staff understand the importance of

effective strategies to reduce medical errors. Implementing and promoting these

strategies as effective policies may assist in employee satisfaction, reduce the

organizational cost of the occurrence of errors, and create a discussion among healthcare

providers of the importance of increasing efficient and quality healthcare within a

complex adaptive system. The findings of this study also has the potential to provide

solutions to promote social change by providing solutions that may improve overall

organizational performance within a clinical setting and may increase improvements in

communities, institutions, societies, cultures and in individuals that could affect social

change or behavior.

Recommendations for Action

The findings of this study of HR strategies for improving organizational

performance to reduce medical errors are first to continuously work toward being a more

highly responsible organization by promoting continued accountability in focusing on

both safety and quality issues. Provide up to date and fail-safe technology, updating CMS

measures to Joint Commission, and creating processes to alleviate errors and the use of

lean daily techniques such as such the use of Gemba Boards, conducting route cause

analysis, and do proactive assessments. TeamSTEPPS should be used as a tool in all

clinics to assist in this process. TeamSTEPPS promoted by the Agency for Healthcare

Research and Quality, and provide strategies and tools to improve the performance of

patient safety, and improves the communication and collaboration within a health system.

This program goal is to optimize performance among teams and health professionals

providing the tools for immediate and effective responses to situations that may arise.

Additionally, the goal is to ensure employee satisfaction through praise and compensation and promote training to assure employee competency.

Working as a team in a collaborative manner is beneficial to mitigating medical errors and preventing patient harm. Another critical recommendation is hiring competent staff with the ability to work consistently with the principles set forth by the healthcare facility. Hiring the right person for the right position by offering a comparable compensation and benefits package when vetting qualified staff; this is critical to the safety, quality, and success of the organization. Third, immediately engage the new hires within the organization in committees and leadership positions. Make the new hire feel like more than an employee, but part of the team so they care about being a part of an organization that implements quality healthcare. Fourth, providing a nonjudgmental culture of safety and taking care of employees who take care of the patients. When errors happen, do not view as a people problem but a process issue considering what happened during the event first before looking at the individuals involved. Necessary eductional feedback, reprimands, suspensions, or termination will follow the examination of the situation. Finally, a recommendation of putting the patient at the center assuring that safety and quality is a priority and promoted by the healthcare organization's mission and vision statements.

The recommendations are relevant to the healthcare industry to promote healthcare quality and safety for all Americans and is directed to healthcare managers to provide quality healthcare to patients within a complex adaptive system. These managers are responsible for strategies and implementing policies to improve organizational performance. Additionally, the results of this study might be presented as useful in

conferences, training, or published in future publications as a basis for implementing programs in healthcare.

Recommendations for Further Research

The findings of a previous study and possible strategies used to reduce preventable medical errors within a CAS reveals the need for continued delivery of quality by improvement in funding, and supervisory practices including the relationships among healthcare professionals in varying locations (Ding et al., 2013). The recommendations of this study are in the form of HR strategies that the participant managers have shared for further research in reducing the occurrence of medical errors to promote safety and quality within complex adaptive healthcare systems. The potential weaknesses within the findings of the study that may elicit further research are many. These weaknesses include providing up to date and fail-safe technology, updating CMS measures to meet Joint Commission requirements, continued training to assure employee competency, and increase employee satisfaction through educational feedback, praise and compensation; implementing TeamSTEPPs, providing a nonjudgemental culture, conducting a root cause analysis, and doing proactive assessments. Additional measures also include promoting employee engagement; the higher the engagement, the fewer the risks, involvement of patient families in the process of placing patients on advisory boards, and using lean daily techniques such as the use of Gemba Boards. The recommendations for future research are in line with the limitations identified in Section 1. The perception of quality care and identification of what that means was evident within the participant responses and with each recommendation may prove successful in improving the safety and quality of care. Moreover, the strategies are evident in

exhibiting factors of organizational excellence that may prove beneficial to healthcare leaders, their staff, stakeholders, and patients. A final recommendation for further research would be to conduct this study as a mixed methods study. A mixed method study would allow the researcher to review in-depth data to compare the effects of how preventable medical errors has increased or decreased over time within the organizations of the participants interviewed.

Reflections

The focus was to earn a DBA in healthcare management, contribute to the development of creating positive change that affects business strategy within a health system and in any organizational unit of management and technology. Having completed the courses designed by Walden University under the discipline of healthcare management and having gained experience through the process, my journey is successfully at its end.

Earning this doctoral degree has been a course of hills and valleys; however, my experiences have not diminished my passion for research. My topic of interest has always revolved around healthcare, and a concern for our aging adults. The initial research was reviewing management within care facilities, how management styles affected personnel, and how the staff treated the patients under that leadership. The topic evolved into healthcare safety and quality, then encompassed both with research of human resource strategies for improvement to promote and improve safety and quality within a healthcare organization. My experiences have emphasized my focus on working more conscientiously to achieve something great and through the tenacity of achieving excellence given me cause always to strive for more.

My reflections led me to have a better understanding through this journey of how business strategies can assist in achieving quality healthcare and how successful strategy can emerge in other disciplines as a means of promoting quality within any organization. The quality of healthcare and the delivery of that care is an ongoing concern that will not likely diminish. This concern will continue as a topic of discussion in part because of our aging population and under many other factors within healthcare.

Biases occurred during the interviews with a suggestion that some managers are having limited resources of implementing strategies because they are not practicing clinical physicians; however, conducting this study and working in administration as well as in a position as an executive assistant in healthcare did not deter my focus. Perhaps future research can explore findings of healthcare organizations who have managers that are clinically inclined versus those who are not to determine how a complex adaptive system would benefit from the differentiation in management. As a business professional without a clinical background, my experience of research has led me to believe that under the topic of healthcare management, it is possible to excel without prior clinical knowledge if staff work together in a collaborative, communicative, and cooperative fashion.

During this research, I have personally met several C-Suite staff who are in positions of making, changing, and creating policies for safety and quality within the healthcare industry. I found that they held positions as clinicians previously before holding their present position as business managers, that is, CEO's, CFO's and CNO's within the healthcare industry. Additionally, I have found others who are just as comparable who have not worked in the field as a clinician. These managers experienced

the position through practice within the area of business and excelled conducting research

and moving their way through the ranks to that C-Suite status. These managers also have

knowledge, are poised, and efficiently hold their position as business healthcare

managers who are also CEO's, CFO's and CNO's within this industry.

This program has enhanced my knowledge of key concepts of real world

instances from instructors who have worked in the industry and through conducting

research of the appropriate strategies. This information has provided a greater

appreciation of being a practitioner in this field. Additionally, successfully completing

this program and conducting this qualitative study, I understand that the whole is greater

than the sum of its parts, and with that knowledge, I can efficiently contribute as a

practitioner in the field of healthcare management.

Conclusion

This study is valid research that will assist in promoting social change making a

difference within the industry and in the delivery of healthcare. Overall the themes

realized during the informational interviews were related to the strategies the

organization is using to prevent medical errors. The strategies used at this organization

verify my research and validates the literature review about HR strategies for change and

improvement. This information coincides that the strategies mentioned during the

interview are information that ties back to my conceptual framework of complex adaptive

systems with the attempt to demystify the behavior of staff in large complex systems

making sense of the natural phenomena, including human responses to solving problems

within primary care organizations. This organization also has put in place training and

quality improvement programs, which assisted in identifying themes and HR strategies

that support the effective authority of quality improvement or programs to reduce medical errors. Healthcare management practices are of importance, more so now in the wake of the Reform Bill and during the transition of change with the new President in 2017. The research methods allow the researcher to conduct their study in a thorough manner using a qualitative approach. The design chosen helps to establish a change of the issue for further review within healthcare.

A contribution to social change is like a domino effect or chain reaction of effective processes that work. This research might make a significant contribution to social change and possibly change or provide better insight to the current methods of how the healthcare industry approaches quality. Healthcare managers who are interested in delivering quality healthcare should be knowledgeable of the details of this study. The findings of this study apply to professional healthcare practices and have implications for promoting positive social change. The recommendations for action in this study are looking at events as a process issue, not a people issue. Also, using lean daily techniques, hiring more qualified doctors, generalist, and nurses; refreshing CMS core measures to joint commission, providing consistent training, educating staff and physicians, and finally engaging the entire organization because again the whole is greater than the sum of its parts. Therefore, in the continuum of promoting social change, I look forward to working in the industry of healthcare to promote the principles of healthcare safety and quality and at the forefront of ensuring the standards in providing high-quality care to everyone.

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Appendix A: Cover Letter (Invitation to Participate)

Date

Dear _____:

  My name is Mary Ellen Taylor-Hyde and I am a student member of the American College of Healthcare Executives (ACHE) and a Doctor of Business Administration (DBA) candidate at Walden University. I am conducting a doctoral study project of informational interviews to examine how the use of Human Resource HR strategies can improve organizational performance to reduce medical errors. The intention of my study is to explore the following inquiry: *What HR strategies do healthcare managers need to implement to improve organizational performance to reduce medical errors.*

  Based on your experiences within the healthcare industry in a position of leadership, I would like to interview you in order to gather information about your perceptions, beliefs, and professional experiences on appropriate measures used to reduce medical errors. Your participation in my study will be contributory in ensuring that I gather data from a variety of healthcare leaders within the industry with direct knowledge of cases and experiences. The interview may take 30-45 minutes of your time and scheduled at your convenience.

  Each participant will have an opportunity to review an informed consent. This consent form provides background information on the study and outlines a participant's privacy and rights during the interview process. I hope that you find my study of interest and would like to participate.

  Please contact me if you have any questions or need more information. You can reach me at (773)503-9028 or via email at mhydebio5@yahoo.com. I thank you in advance for your consideration and support of my study regarding a topic of nationwide importance.

Sincerely,

Mary Ellen

Mary Ellen Taylor-Hyde, MBA
Walden University - Student

Appendix B: Interview Questions

1. How has your leadership influenced positive change in quality care within

    your organization?

2. What HR strategies do you believe managers need to implement to improve

    organizational performance?

3. How do you handle the responsibility for the quality and safety of patients?

4. How do you perceive the problem of medical errors in your organization?

5. What are your current HR strategies toward implementing organizational

    improvements for delivering quality care?

6. What preventable measures have you taken to assure teamwork in promoting

    the delivery process?

7. How has the performance of staff initiated positive feedback in delivering

    quality healthcare?

8. What have been your experiences regarding medical errors within your

    organization?

9. Is there anything else that you can tell me about the HR strategies necessary in

    a healthcare program to reduce medical errors?

Appendix C: Interview Protocol

1. Create a folder for each participant, include (Appendix A, B, C and D).

2. Solicit volunteer participants for the study (see Appendix A), and set up an interview for appropriate date and time.

3. Arrive at the interview 10 minutes prior to the scheduled time.

4. Explain to each participant the interview contains nine questions and will take no more than 30 to 45 minutes in length. Provide the purpose of the study, and inform the participant that the researcher will take notes and record the interview with an audio recorder.

5. Assure confidentiality, and have participant sign the consent form (see Appendix B). Explain to participant that collected data will be coded to ensure privacy and will be kept in a locked safe. Answer any questions of concern the participant may have.

6. Emphasize that the participant may stop at any time and the researcher will assure clarification if there are questions the participant does not understand.
    a. The participant will be unidentifiable given an alphanumeric classification for identification during analysis.
    b. Coding of the data and no names of any participant will appear within the notes during analysis. Only the specified assigned alphanumeric classification other than their signature on the consent form.

7. Gain a level of ease with the participants asking probing or icebreaker questions.
    a. How has your (morning/afternoon) been thus far?
    b. Are you enjoying the weather?
    c. Do you have any questions regarding the cover letter that you received?

8. Conduct face-to-face, semistructured interviews with managers who work for a healthcare organization.

9. During the interview probe the participant, and if needed go deeper into their meanings of the topic.

10. Review questions and when necessary, ask follow-up questions for the purpose of member checking to reach data saturation.

11. Share the interpretations with the participant for validation, and allow each participant to comment on them.

12. Thank each participant for his/her participation in the study.

Appendix D: Letter of Cooperation

See additional attachment for signed letter of cooperation
Organizational Address
Date

Dear Mary Ellen Taylor-Hyde,

Based on my review of your research proposal, I give permission for you to conduct the study entitled Human Resource Strategies for Organizational Improvement to Reduce Medical Errors within our organization. As part of this study, I authorize you to work with the Human Resource (HR) and/or Quality Director to identify potential study participants that match the study criteria. You also have permission to use the conference room, office, or area convenient for the participant within your organization to conduct face-to-face interviews. Individuals' participation will be voluntary and at their own discretion.

We understand that our organization's responsibilities include a signed a letter of cooperation, supporting the use of the conference room, office, or area within your organization at the convenience of the participant. Also, HR will provide contact information of potential study participants. We reserve the right to withdraw from the study at any time if our circumstances change.

Include the following statement only if the Partner Site has its own IRB or other ethics/research approval process: The student will be responsible for complying with our site's research policies and requirements, including Describe requirements.

I confirm that I am authorized to approve research in this setting and that this plan complies with the organization's policies.

I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the student's supervising faculty/staff without permission from the Walden University IRB.

Sincerely,

Authorization Official
Contact Information

Walden University policy on electronic signatures: An electronic signature is just as valid as a written signature as long as both parties have agreed to conduct the transaction electronically. Electronic signatures are regulated by the Uniform Electronic Transactions Act. Electronic signatures are only valid when the signer is either (a) the sender of the email, or (b) copied on the email containing the signed document. Legally an "electronic signature" can be the person's typed name, their email address, or any other identifying marker. Walden University staff verify any electronic signatures that do not originate from a password-protected source (i.e., an email address officially on file with Walden).

Appendix E: ▮ Submission Process

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1 message

	Wed, May 11, 2016 at 5:08 PM

To: ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮

▮▮▮▮▮ & ▮▮▮

Thank you again for your call earlier today. As a follow-up to our conversation, I wanted to confirm that it is ▮ policy that student researchers first receive approval from their academic institution prior to submitting an application to our local ▮ IRB. Because the Walden University IRB will currently only provide conditional approval pending ▮ IRB approval, the process will be slightly adapted for the current circumstances. The process will be as follows:

1) Once I have received Walden University's conditional approval notice, the ▮ IRB student application will be submitted to the ▮ IRB Chairperson via expedited review.
2) Once the ▮ IRB application is reviewed and approved (with a decision timeline of approximately one week), an official ▮ IRB acknowledgment letter will be sent to you via email.
3) The ▮ IRB acknowledgment letter will then be submitted to Walden's IRB for full approval.
4) Once full approval is granted by Walden's IRB, documentation of the full approval will be provided to me to keep on record for the ▮ IRB.

Please let me know if I can provide any additional information or you have any questions about the process listed above.

Best Regards,
Mary

Mary ▮▮▮
System Clinical Research Coordinator/IRB Administrator
▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮

Appendix F: National Institutes of Health (NIH) web based training program certificate

Certificate of Completion

The National Institutes of Health (NIH) Office of Extramural Research certifies that **Mary Taylor-Hyde** successfully completed the NIH Web-based training course "Protecting Human Research Participants."

Date of completion: 09/15/2013

Certification Number: 1268108