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Implementation of an Electronic Health Record-Keeping System

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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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2020

Abstract

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BS, Franklin University, 1988

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Doctoral Study Submitted in Partial Fulfillment

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Abstract

In 2015, only 15% of behavior health hospitals in the United States had been converted from paper charting systems to electronic health records (EHRs) systems. Healthcare managers are concerned about the lack of EHRs because they need to meet mandated federal requirements to implement EHR systems. Using the technology acceptance model, the purpose of this qualitative single case study was to identify strategies behavioral healthcare managers use to adopt their EHR system. The participants consisted of 5 behavioral healthcare managers working in a chemical dependency treatment facility located in the U.S. Midwest. Data were collected from semistructured interviews, a review of notes, and a review of company policies. Data were analyzed using the modified van Kaam method. Three themes emerged: effortlessness of use, adoption efficiency, and transformational leadership behavior. A key recommendation is that behavioral healthcare managers evaluate their management style and consider transformational leadership techniques to motivate followers through the change management workflow process. Healthcare managers, using EHR systems, can benefit from increased workplace efficiency, improved quality of patient care, and reduction of expenses for a healthcare facility.

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Dedication

Enter, into his gates with thanksgiving, and into his courts with praise! Be thankful unto him and bless his name. For the Lord is good, his mercy is everlasting; and his truth endureth to all generations (Ps100: 4-5).

First, I give all praises to my Lord and Savior Jesus the Christ, for providing me with a way to complete my doctoral degree. Second, I dedicate this study to my mother, Betty Joe Kilgore who passed away on May 9, 2019. Bets, thank you for all your love and support during my entire life. You were my best friend and I miss you dearly. Third, I dedicate this study to my daughter, Taylor Patrice Kilgore-Barr. Taylor, I thank you for the wonderful support you gave me as I completed this study as you grew up. Fourth, I dedicate this study to my sister, Dr. Patricia Richardson. Thank you for being a positive example of what a doctoral student should be. Pat, I could not have completed this process without your love, assistance, and support. Lastly, I thank my entire family for their enduring love.

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Section 1: Foundation of the Study

There are significant inefficiencies in the U.S. healthcare system that includes rising costs, access barriers, lack of patient integration and coordination, and medical errors (Kuziemsky et al., 2014). However, healthcare administrators and leaders view electronic health record (EHR) systems as an opportunity to improve patient care. Basic EHR features include (a) patient history and demographics (b) patient problem list (c) physician clinical notes (d) comprehensive lists of patients' medications and allergies (e) computerized orders for prescriptions, and (f) the ability to view laboratory and imaging results electronically. Though 75% of hospital providers have transitioned to the basic EHR, smaller providers are still lagging in adoption (Adler-Milstein et al., 2015). The focus of this research was to illuminate the perceptions and experiences behavioral healthcare managers encounter during the assessing, planning, implementing, and evaluating phases of adoption of an EHR system. Business leaders can affect the business environment when they acquire the knowledge to implement a renowned software solution to provide timely, patient-centered information in a secure web environment, thereby improving patient outcomes (Davis, 1989).

Background of the Problem

In 2006, President Bush announced a goal to increase the use of technology in healthcare and to support the implementation of a nationwide EHR system (Clarke et al., 2014). Reports from the U.S. Government Accountability Office have revealed that only 48% of eligible hospitals in the United States have implemented an EHR system. The adoption of EHR in the United States falls behind many European countries (Kushniruk, Bates, Bainbridge, Househ, & Borycki, 2013).

There are several reasons for the lack of EHR implementation. For instance, many healthcare providers have a negative view of electronic record systems. Medical practitioners are also slow to implement EHR systems because of financial constraints, changes in workflow, temporary loss of productivity, and privacy and security concerns (Najaftorkaman, Ghapanchi, Talaei□Khoei, & Ray, 2015). Additionally, the two most significant barriers to EHR implementation have been fear of change and lack of funding (Jarvis et al., 2013). In addition, failure of equipment or network facilities, software errors, and difficulties in operating the system contribute to temporary losses in productivity (Huerta, Harle, Ford, Diana, & Menachemi, 2016). Other barriers include the inability of matching a system to meet the specific needs of healthcare providers and the apprehension that the system will become obsolete (Adler-Milstein et al., 2015).

Problem Statement

In 2015, 80% of general medicine hospitals adopted a basic EHR system, but only 15% of behavioral health hospitals adopted a basic EHR system (Henry, Pylypchuk, Searcy, & Patel, 2016). This may be because federal subsidies for health information exchanges were implemented slowly, even though a mandate of $30 billion in incentives was approved, and behavioral health hospitals are not eligible for the Centers for Medicare and Medicaid Services EHR Incentive Program (Adler-Milstein et al., 2015). The general business problem is that organizational leaders are hesitant in implementing EHR systems nationwide. The specific business problem is that some behavioral healthcare managers are unable to identify which strategies to use to successfully adopt EHR systems.

Purpose Statement

The purpose of this qualitative, exploratory, single case study was to identify strategies that managers in a Midwestern United States chemical dependency treatment facility used to successfully adopt an EHR system. Implementation of an EHR system may result in savings of $14,055 per provider, or the financial equivalent of eliminating one full-time position from the administrative staff (Fleming et al., 2014). A purposeful sample of five behavioral healthcare managers working in a chemical dependency treatment facility located in the Midwestern United States participated in the study. The implications for social change resulting from this study include the potential to implement useful business practices and strategies for healthcare providers who need to successfully adopt an EHR system to meet federal requirements to improve the quality of patient care in a cost effective manner, which will also improve the quality of life for the consumers who use these services.

Nature of the Study

There are three research methods: qualitative, quantitative, and mixed method (Turner, Kane, & Jackson, 2015). In quantitative research, information gathered from experimental and nonexperimental procedures, such as surveys, allows researchers to study trends in a sample population and generalize the data to a large sector (Marshall & Rossman, 2016). Researchers can use a quantitative research model to calculate relationships between variables and the testing of hypotheses in which variables or characteristics differ among study participants (Swensen et al., 2014; Yin, 2018). Qualitative researcher investigators embed themselves in the data collection and analysis process, focusing on a single concept or phenomenon (Moustakas, 1994; Roth, Lannum, Dennison, & Towbin, 2016; Swensen et al., 2014; Yin, 2018). The mixed method approach encompasses both surveys and interviewing techniques (Anderson, 2015; Yin, 2018).

For the current study, the qualitative method allowed participants to share lived experiences and perceptions, which could influence the adoption of an EHR system in the U.S. Midwest. Researchers commonly select semistructured interview questions when collecting data (Hammarberg, Kirkman, & De Lacey, 2016). An advantage of the qualitative method allows researchers to pose *why* or *how* questions, thereby gathering rich data and thick descriptions from open-ended questions (Merriam, 2014).

In terms of design, when the researcher centers on understanding a connection to complex phenomenon, an explanatory design is appropriate (Yin, 2018). Moreover, as in the case of my research, when there is not a clear understanding of outcomes, investigators adopt an exploratory investigation to understand the phenomenon. A case study is a common form of qualitative research to explores a specific topic or evidence-based practices (Boblin, Ireland, Kirkpatrick, & Robertson, 2013; Gergen, Josselson, & Freeman, 2015; Moustakas, 1994). The case study approach allowed the data collection process to evolve in conjunction with the exchange of information between me and the participants. The case study design encompassed the use of multiple data sources to demonstrate reliability of the findings (Yin, 2018).

The narrative inquiry was not appropriate as a design for the research because the focus was not to understand conditions relating to participants living in a natural setting or their stories from a historical perspective (Clandinin, 2016). Ethnography was also not appropriate because the focus my study was not illuminating observations relating to cultural group experiences witnessed over an extended period of time (Rashid, Caine, & Goez, 2015; Yin, 2018). Further, phenomenology was not appropriate because the objective of the study was not to understand the essence of human experience in the form of lived experiences about a phenomenon (Moustakas, 1994; Quant, Sanchez-Algarra, & Anguera, 2013).

The qualitative research method and case study design is pragmatic and interpretive in nature. The strategies of inquiry allowed me to capture the perceptions and conditions concerning the participants view regarding adoption of an EHR system. A quantitative or mixed method approach would not have facilitated a comprehensive analysis within the time frame for my study.

Research Question

The overarching research question for this study was "What strategies do behavioral healthcare managers use to successfully adopt EHR systems to improve performance?"

Interview Questions

1. How does the EHR system function in your work environment?
2. How would you describe the EHR system's ease of use?
3. How has client care changed since adoption of the EHR system?
4. What were the leadership behaviors exhibited by behavioral healthcare managers that improved performance when facilitating the transition from paper to electronic records?
5. What would you consider optimal workflow to improve performance when transitioning from a paper charting system to an EHR system in a chemical dependency treatment facility?
6. What were the leadership behaviors exhibited by behavioral healthcare managers that hindered performance when transitioning from paper to electronic records?
7. What were the barriers or challenges to improve performance when transitioning from a paper charting system to improve performance an EHR system in a chemical dependency treatment facility?

8. What other issues do you wish to discuss regarding your experiences with the EHR implementation process?

Conceptual Framework

The conceptual framework was the technology acceptance model (TAM) by Davis (1986). The TAM is a method used to determine the adoption or acceptance of technology and a framework that provides a foundation of how external factors influence the attitudes and intentions of individuals who implement technology (Bere, 2014). Therefore, the TAM model allows researchers to forecast behavioral patterns of individuals utilizing information systems (Davis, 1986).

Before learning new technology, individuals have the tendency to form attitudes and intentions toward the process (Bennington & Minutolo, 2013). The objective of TAM is to calculate the acceptance of information systems and to assist researchers to identify perceived usefulness (PU) and perceived ease of use (PEOU). PU and PEOU are factors that influence users' decisions about how and why people use technology (Davis, 1989). In this study, I investigated how and why users either accepted or rejected the EHR system technology. The purpose of this study was to identify the strategies that behavioral healthcare managers used to support the implementation of an EHR system.

Operational Definitions

Electronic Health Record System (EHR): An EHR is a patient health record in a digital form to include patients' demographic profile, diagnosis, medications, and treatment plan (Keshavjee et al., 2013; Ozok, Wu, Garrido, Pronovost, & Gurses, 2014).

Meaningful Use (MU): Meaningful Use is the Center for Medicare and Medicaid Services's incentive program aimed to measure physician and hospital quality (Center for Medicare and Medicaid Services, 2012; Gottlieb, Tirozzi, Manchanda, Burns, & Sandel, 2015).

Perceived Usefulness (PU): Perceived usefulness is when a person believes that using a special system will enhance their performance (Davis, 1989).

Perceived Ease-of-Use (PEOU): PEOU is when a person believes that using a special system will be free of effort (Davis, 1989).

Technology Acceptance Model (TAM): The TAM is used in information technology research to reveal causal links between users' beliefs, attitudes, and intentions (Davis, 1986).

Assumptions, Limitations, and Delimitations

I made certain assumptions, limitations, and delimitations to facilitate my understanding of the research problem and eliminate potential bias of conducting a study in a familiar setting. Assumptions are true or plausible without proof (Merriam, 2014). Limitations are the potential weaknesses of a study that researchers lack control of the outcome (Kirkwood & Price, 2013). Constraints on the research design and method that affect the results of the study fall under potential limitations in research (Hyett, Kenny, & Dickson-Swift, 2014). Delimitations are the definitions of the boundaries of the central research question in the study, which are under the control of the researcher (Merriam, 2014; Yin, 2018). Determining the appropriate sample size to achieve data saturation and identify the bounds of the study to maintain integrity facilitated my knowledge (Patton, 2015).

Assumptions

The primary assumption at the onset of this study was that behavioral healthcare managers had been able to successfully implement strategies to transition from a paper charting

system to a new EHR system. Another assumption was that participants in this study agreed that any proprietary information would remain confidential and the study contributors would be honest when recounting their personal experiences. They entered the study voluntarily and answered the interview questions without any fear of retribution. Finally, I assumed that interview questions did not introduce bias or social pressure into the research process.

Limitations

The research revealed the participants' experiences while transitioning from a paper-charting platform to an EHRs system. A limitation of the study is that data is not generalizable to all behavioral healthcare managers using EHR systems. The findings came from the five participants, which could be a limitation due to the small sample size. The diversity of clinical roles also posed a limitation, as each discipline requires members to hold distinctive educational and training backgrounds displaying a variety of skills.

Delimitations

The delimitations included the problem, location, sample population, and sample size for the study.The participants for this study are behavioral healthcare managers from a chemical dependency treatment facility in the U.S. Midwest. The study consisted of five behavioral healthcare managers' sharing perceptions of transitioning from a manual documentation system to an EHR. I applied triangulation methods of data collection derived from semistructured interviews, fieldwork observations, workplace documents, and company policies to ensure the trustworthiness of the data.

Significance of the Study

The U.S. adoption of EHR systems remains small among the healthcare community (Jones, Rudin, Perry, & Shekelle, 2014). The limited acceptance of EHR systems by healthcare

practitioners has caused the United States healthcare system to fall behind other developed nations (Elliott, Martin, & Neville, 2014). Inefficiencies, such as rising costs, access barriers, lack of patient integration and coordination, and medical errors have affected the United States healthcare system (Block et al., 2014). The study findings may be valuable to healthcare leaders and managers by revealing factors that behavioral healthcare managers perceive to be influential to the process of implementing an EHR system. An exploration is essential to illustrate how a surge in adoption rates by physicians and hospital administrators might affect patient care in the U.S. healthcare industry (Block et al., 2014).

Contribution to Business Practice

Exploring successful EHR implementation strategies may help healthcare business leaders in the United States become more competitive in the 21st century global market. Competitive strategies help business leaders increase profitability by reducing costs. For instance, optimizing ease of use and PU of strategies is a means for business leaders to increase profitability while reducing the inefficiency of time-consuming charting and data transmission from one facility to another or from one provider to another. Forming sustainable and transferable IT information and resources, which are difficult to create and imitate, can also help produce competitive advantages (Davis, 1989). The principal contribution to business practice is the ability to identify strategies that can be used to successfully transition from a paper charting system to an EHR platform, which provides timely, patient-centered information in a secure web environment and thus improves patient outcomes. An empirical case study concerning the implementation of EHR systems can increase the knowledge of the behavioral healthcare community to identify what managers view as the significant factors in upgrading to an EHR platform.

Implications for Social Change

The implications for social change include the potential to improve the quality of services and competitiveness of behavioral healthcare programs operating in the United States that comply with the federal directive of a national EHR initiative. Any operating system that has improved the quality of services and minimized inefficiencies can also improve business sustainability while impacting quality of life for a business's customers has implications for social change (Davis, 1989). Processes such as ease of use and PU eliminate waste by creating closed-loop feedback systems involving the inputting of data, processing of data, and retrieval of data to improve decision-making (Davis, 1989). Closed-loop feedback systems produce more efficient methods for providers to access, store, and utilize information to address patient care issues in a secure and stable environment.

A Review of the Professional and Academic Literature

The intent of the literature review was to support the conceptual framework of the TAM and to present an objective investigation of the research problem. Descriptive information concerning the emerging technology requires further empirical study. Behavioral healthcare managers need to understand what factors hinder or facilitate adoption of an optimal healthcare record system. The review of the literature revealed effective and efficient delivery of healthcare needs, while illuminating the selected organization's adoption of knowledge and a change in technology. Views illustrated the history, adoption of technology, advantages, disadvantages, and barriers to utilization of EHRs. The literature review reveals the concepts managers employ when adopting technology within the healthcare industry by examining leadership and organizational acceptance concerning EHR. The review contains six main subsections relevant in

exploring the factors healthcare managers believe influenced the adoption of an EHR system. A summary highlighting the gaps in the research will end the review of the literature.

The parameters of the search primarily included the years 2013-2018, although one article was from 1960. The sources were peer-reviewed articles from scholarly journals, scholarly books containing references to studies, and academic and business books. I conducted title searches on the following words: *innovation, technology adoption, healthcare records, leadership, leadership characteristics, decision-making,* and *EHR.* Walden University's Library was the primary source location of information drawn from ProQuest, EBSCOhost, ProQuest Dissertations and Theses, Gale Power Search, and Emerald databases. The total number of references used in this study is 178. Of the total references, 159 (89%) have publishing dates between 2013 and 2018. In the review of the professional literature, the total references equal 113. In this section, 96 references (85%) have publishing dates between 2013 and 2018. Of the 178 total references, 161 (90%) are either (a) a peer-reviewed journal (b) an academic resource book, or (c) a government article.

Conceptual Framework: Technology Acceptance Model

Models of technology acceptance relate to various conceptual perspectives to illustrate the significant perceived characteristics of technology that influence an individual to adopt the technology (Abdekhoda, Ahmadi, Gohari, & Noruzi, 2015; Fishbein & Ajzen, 2011). For example, the theory of reasoned action illuminates the intention of an individual to use technology (Abdekhoda, Ahmadi, Gohari, & Noruzi, 2015; Fishbein & Ajzen, 2011). In theory of reasoned action, the use of technology depends on the beliefs of the individual about the behavior and the perceived consequences (Fishbein & Ajzen, 2011). The theory of reasoned

action offers a rationale of why individuals intend to use technology and their actual usage of the technology.

Davis's (1986) TAM is a recognized model linked to technology acceptance and derived from theory of reasoned action, which facilitates a researcher's ability to predict the users' acceptance based on two factors: PU and PEOU. The TAM is an established model that assists individuals to explain and predict behavior using technology and could illuminate explanations of why an individual user accepts or rejects the usage of technology (Bere, 2014). The framework of TAM provides a foundation to study how external factors influence the attitude and intention of the individual to use technology (Davis, 1986). An individual's use of technology centers directly or indirectly by their attitude, PU of the system, and the system's PEOU. The external factors of TAM can influence the intention of the individual's actual use of the technology through the PU and PEOU. Davis (1989) asserted that PEOU directly affects PU, as making a system easier to use should make the system more useful.

The TAM appears to account for approximately 50% of user acceptance in different fields of study (Campbell et al., 2017; King, Patel, Jamoom, & Furukawa, 2014). Thus, the TAM is a widely used and reliable tool (King et al., 2014). In the automotive industry, researchers have used the TAM to measure employees' acceptance of technology systems. For example, Calisir, Gumussoy, Bayraktaroglu, and Karaali (2014) explored the factors that affected blue-collar workers' intention to use a web-based learning system in the pre-implementation phase of a process in the automotive industry. The authors discovered that PU is the strongest predictor of behavioral intention to use a technology system. In the field of education, the TAM has illuminated students' acceptance and usage of technology (Jan & Contreras, 2011; Teo & Noyes, 2014). Teo and Noyes (2014) indicated that TAM was a significant factor in revealing pre-

service attitudes to computer use, and Jan and Contreras (2011) found a relationship between engineering students' beliefs and user acceptance of an administrative information system (Jan & Contreras, 2011).

In the healthcare industry, the TAM has measured healthcare workers' acceptance of healthcare information systems (Aggelidis & Chatzoglou, 2012; Campbell et al., 2017; Gunawan & Huarng, 2015; King et al., 2014). For example, Aggelidis and Chatzoglou (2012) and Gunawan and Huarng (2015) noted that PU and PEOU influenced the user's intention to use information systems. Additionally, Campbell et al. (2017) examined the social influence of physicians implementing EHR systems, suggesting that role beliefs and moral norms could both encourage or discourage use. Additionally, research has shown that PU, computer experience, patient care values, and organizational support positively influences attitudes (Ozok, Wu, Garrido, Pronovost, & Gurses, 2014). Research has also shown that perceived behavioral control is a significant predictor of physicians' intentions to use an EHR (Gagnon et al., 2014). Both PU and PEOU influence the attitude of the individual toward using the technology system. Behavioral intentions are a function of both perceived usefulness and PEOU. Behavioral intention, then, reveals whether the individual will use the technology system. Thus, the TAM shows the strong influences on user intention toward technological products (Ducey & Coovert, 2016).

Perceived usefulness. PU is useful or beneficial to the user's performance (Bere, 2014). Various researchers have studied the effect of PU on the acceptance of technology. The consensus is that PU increases the acceptance of the technologies (Campbell et al., 2017; Renny, Guritno, & Siringoringo, 2016). However, Ma and Chan (2014) reported that PU was not significant for prediction of intention to use. PU, therefore, is more important than ease of use

(Campbell et al., 2017; Davis, 1989; Gunawan & Huarng, 2015; Mouakket & Al-hawari, 2012; Renny et al., 2016).

Perceived ease of use. One of the most studied characteristics of technology is the individual's PEOU. Davis (1989) asserted the extent of which the user expects the use of the technology system to be effortless. The general agreement is that technology acceptance increases when the PEOU increases (Davis, 1989; Wahab, Shamsuddin, Abdullah, & Hamid, 2016). PEOU has become the sole determinant to the prediction of intention to use (Ma & Chan, 2014). Further, there may be intrinsically motivational variables that predict PEOU such as individuals using online sellers when they do not have access to concern security information (Cheng, Tsai, Chenge, & Chan, 2012).

Perceived usefulness and perceived ease of use. A comparison of the effects of PU and PEOU on attitudes of technological adoption has revealed that PU is more significant for attitudes following adoption (Cheng et al., 2012; Wong, 2013). The user's decision to use the technology system initially is subject to the individual's PEOU (Calisir, Gumussoy, Bayraktaroglu, & Karaali, 2014; Campbell et al., 2017; Davis, 1989; Wahab et al., 2016; Wong, 2013). For example, Joo, Lim, and Kim (2016) investigated the structural relationships of PU and PEOU of online learning tools and student satisfaction in an online university in South Korea and found that PU and PEOU were significant predictors of learner satisfaction. Wong (2013) also examined the effect of PU and PEOU on behavioral intention to use mobile check-in for airlines services and revealed the individual's attitude had a perfect mediation role between behavioral intention and PU, indicating that PEOU was insignificant to both behavioral intention and attitude in technology acceptance.

Alternative Conceptual Framework

The institutional choice framework is an alternative conceptual framework that can be used to explore strategies that lead to a successful transition from an older paper and pencil health record system to a compliant EHR system. The institutional choice framework conceptual framework was developed by Elinor Ostrom and builds on the assumption that acknowledging institutional cultures and rules constrains the decision-making capabilities and social behaviors of individuals or groups, which the framework calls agents (Ostrom, 2014; Tchuigoua, 2014). Institutional choice framework researchers can examine the interactions among institutional structures, agent decision-making processes, and material resources determine if incentives and disincentives of PU or PEOU change the agent's behaviors (Yousafzai, Saeed, & Muffatto, 2015). Using the institutional choice framework to conduct the study to explore strategies that lead to a successful transition from an older EHR system to a compliant EHR system is a valid choice. However, this study is about the adoption of technology; therefore, the TAM was a better choice for exploring the research question.

Leadership and Organizational Performance

An association exists between leadership styles and employee performance. Leadership styles can indicate the type of employees who excel in an organization. Highly motivated employees working in competitive companies have leaders who value and recognize an individual's contribution to the business. Effective leaders exhibit positive characteristics, such as providing exceptional judgment, motivating staff, and fostering engagement to achieve workforce efficiency in the adoption and use of technology in the workplace (Chalofsky & Cavallaro, 2013; Twenge, & Donnelly, 2016*).*

Researchers have examined the association between leadership and performance and confirmed that leadership is a driving force in the performance of an organization (Cianci, Hannah, Roberts, & Tsakumis, 2014; Garcia-Morales et al. 2012). An affirmative level of accomplishment regarding staffing, training, performance assessment, and system of compensation led to positive leadership behaviors. García-Morales et al. (2012) claimed that leaders translate a vision to one's subordinates and influence employees' commitment, motivation, and trust, which enhance organizational performance.

Effective leadership is a management strategy used to improve business performance (Hoch & Kozlowski, 2014), where leaders provide working norms that uphold collective actions and add value to team performance (Leuty & Hansen, 2014). Strategies that employ leadership behavior that improve human resource and development achieve optimum results (Twenge & Donnelly, 2016).

Leadership Styles and Technology Acceptance

There are diverse types of leadership styles such as autocratic, bureaucratic, democratic, laissez-faire, transformational, and transactional. The styles of leadership have evolved because of the demands of global organizational development. Understanding the frameworks can assist leaders to increase organizational efficiency (Mitchell, 2013).

Autocratic leadership. This style emerged from the classical approach to organizational management when decision-making and commanding performance became highly centralized (Merat & Bo, 2013). Autocratic leadership is the personality of an authoritarian individual that has a strong and negative impact on employees (Schuh, Zhang, & Tian, 2013). In this leadership style, inputs from followers or staff are not accepted. The leadership style also holds a structured set of rewards and punishments to enforce the leader's ideas and judgements and rarely accept

advice from others (Gonzalez et al., 2014). Many researchers have argued that an autocratic leadership style resembles a dictatorship (Hickie et al., 2014). Autocratic leadership is often effective for situations in which there are recently hired and untrained employees who have a limited understanding for decision-making (Gonzalez et al., 2014). But autocratic leadership is not effective in an organization in which employees are emotionally distressed and suffer from low morale (Hickie et al., 2014).

Autocratic leadership can be problematic in the workforce. Autocratic leaders make decisions quickly and without the need to consult others (Till, Jones, & McKimm, 2015), as some projects require strong leadership to accomplished tasks quickly and efficiently. When the leader is the most knowledgeable person in the group, the autocratic style can bring facilitate effective decisions (Carnes, Bartels, Kaatz, & Kolehmainen, 2015). However, an autocratic leader allows group members to focus on performing rather than worrying about complex decisions, overlooking the knowledge and expertise of other group participants and making decisions without consulting the others. The lack of involvement by other group participants can cause resentment, hurt feelings, and lower morale. Although an expert leader can make decisions without wasting time consulting others, this style works best when balanced with other leadership styles (Carnes et al., 2015).

Bureaucratic leadership. Bureaucratic leadership is the by-the-book management style when the actions of leaders follow procedures (Renko, El Tarabishy, Carsrud, & Brännback, 2015). This leadership style signifies official duties under a hierarchy of authority, applying a system of rules for management and decision-makers (Renko et al., 2015). The bureaucratic leader style is effective for routine tasks, security training, understanding standards and procedures, and performing detailed tasks. The style can be an efficient management approach

when business outcomes do not require much creativity or innovation from employees. Standardization and best practices are often highlighted in companies with large organizational structures, ensuring that work is consistent, efficient, and effective (Renko et al., 2015). However, bureaucratic leadership is sometimes not effective, as employees usually receive less job satisfaction in rigid bureaucratic organizations (Renko et al., 2015). Thus, a bureaucratic leader's style can discourage visionary and creative workers.

Laissez-faire leadership. Laissez-faire leadership is a hands-off style of management requiring the followers to have control regarding goal setting, decision-making, and problem solving (Alkahtani, 2015). Employees are independent of their superiors concerning the decisions and authority, and the leader is usually uninvolved with employees. Laissez-faire leadership is effective when employees are skilled, experienced and educated, and have the inner drive to do work successfully (Alkahtani, 2015). The employees of the laissez-faire leader can self-monitor, problem solve, and produce successful products (van Prooijen & de Vries, 2016). The laissez-faire leader trusts staff to accomplish tasks with minimal guidance.

Conversely, laissez-faire leadership is not ideal in situations when group members lack the knowledge or experience needed to complete tasks and make decisions products (van Prooijen & de Vries, 2016). Laissez-faire style is not effective if employees cannot perform the job independently without the guidance of superiors (Alkahtani, 2015). The style is not suited to environments in which the members require feedback, direction, oversight, flexibility, or praise.

Democratic leadership. Democratic leadership style is known as the participative leadership approach, as leaders encourage employees to take a participative role in the decision-making process (Chiba, Johnson, & Leeds, 2015). Researchers have noted the democratic leadership style is one of the most effective forms of leadership when leaders value the

collaboration and affirmation of the employees (Fashola, Akanni, & Ajila, 2016). The leader empowers employees to manage organizations. The democratic leader assists the employees to set goals, implement the process, and evaluate their performance while supporting them in their promotions and advancements (Chiba et al., 2015).

Democratic leadership is mostly successful for highly skilled or experienced employees and is effective in an organization or situation requiring extensive input or ideas from employees (Merat & Bo, 2013). The democratic style of leadership is also most effective when resolving problems either individually or within the group (Fong, Mulok, & Sumilan, 2015). The style affords the leader with talent and strengths, which benefits the organization. During operational change, democratic style is useful (Fashola et al., 2016).

Despite its advantages, the democratic style of leadership has a disadvantage. Managers must make immediate decisions when it is not feasible to gain everyone's ideas, input, or acceptance. Employees still appreciate the chance to learn the reason that prompted the change in practice, but leaders should not apologize for making the decisions that ultimately could affect employees. The democratic leader must be comfortable forging a path of action with conviction for the betterment of the business (Fashola et al., 2016).

Transformational leadership. Transformational leadership involves motivating followers via the alignment of one's self-interests to organizational goals (Alkahtani, 2015). Transformational leadership is a combination of idealized attributes and behaviors, inspirational motivation, intellectual stimulation, and individualized consideration (Alkahtani, 2015). The style originates from the personal values and beliefs of the leaders that drive the followers to achieve more than what is expected (Wahab, Rahmat, Yusof, & Mohamed, 2016). The interplay between the leader and followers' results in increased levels of motivation and morality on both

sides. An organization can reach its maximum human and organizational capabilities through transformational leadership. Shurbagi and bin Zahari (2012) examined whether transformational leadership could influence job satisfaction among 50 employees of Libya's national oil corporation. The authors used organizational culture as a moderating variable that could influence leaders and consequently influence satisfaction towards one's work. The results of the study indicated that transformational leadership behaviors and the satisfaction of employees relate to organizational culture. The study reflected that high positive culture embodied in an organization caused high predictability that job satisfaction and development of transformational behaviors would emerge (Shurbagi & bin Zahari, 2012).

Lapierre, Naidoo, and Bonaccio (2012) examined the transformational leadership style within the domain of the mentoring process of leaders to followers. The authors investigated leader-follower dyads to determine whether career support and psychosocial support of leaders to followers improve the performance of the followers. The results of the study revealed that followers who received higher levels of mentoring from leaders have higher levels of task performance. Lapierre et al. (2012) reported that psychosocial support of leaders had no effect on the performance of followers.

Riaz and Khalili (2014) ensured employees perceived career importance and transformational leadership styles of leaders in the banking industry of Pakistan. Employees' perception of the importance of their career is a necessary indicator of job performance and consequently the performance of the organization (Riaz & Khalili, 2014). Riaz and Khalili used the MLQ to determine the leadership behaviors in four domains (i.e., idealized influence, intellectual stimulation, inspirational motivation, and individualized considerations). Riazand and Khalili reported there was a total response rate of 80% from the 350 surveys distributed to

bank leaders. The findings of the study reflected that transformational behaviors of leaders do not correlate to work and career.

Transactional leadership. Transactional leadership involves motivating followers by appealing to one's self-interest leading employees to a result-driven and reward-oriented structure (Alkahtani, 2015). Leaders operating under the transactional leadership paradigm focus on task completion and reward and punishment systems to achieve organizational goals (Wahab et al., 2016). The driving force behind the transactional leadership approach seems to occur because employees focus on a performance reward system designed for employees to meet organizational goals. Transactional leadership follows the bureaucratic approach in the sense that everyone should conform to the rules or suffer punishment (Wahab et al., 2016).

Rowold (2014) posited that transactional leaders as those who focus on the motivation of followers through rewards or discipline. The author associated the style with the transactional exchanges between a leader and a follower, in which implicit bargaining motivates the followers to perform. Ralston et al. (2015) claimed that leaders who exhibit the characteristics of a transactional leader see to it that employees meet organizational targets. Ralston et al. believed that employees who exceed the expectations of their organizations are deserving of recognition and reward for one's efforts. Transactional leadership demonstrates improvement in organizational effectiveness and performance.

Chen and Chen (2013) examined the effects of transactional leadership styles to the performance and job satisfaction of employees in different countries. The authors developed an instrument to measure job satisfaction using the contingent rewards and management-by-exception dimensions of the MLQ instrument aimed to measure transactional leadership behaviors of leaders. Gregoire and Arendt (2014) revealed that transactional leadership style

failed to yield any significant relationships with performance and job satisfaction of employees. The study failed to illustrate an acceptable level of significance among survey participants in other companies outside the United Arab Emirates. The authors claimed the United Arab Emirates reported high turnover rates, definite employment contract, and lesser opportunity for employee's empowerment. Gregoire and Arendt observed stability and job satisfaction among local employees. The authors noted differences in the culture and nationality of leaders, and that followers influenced the outcome of the transactional leadership style.

Chen and Chen (2013) claimed that reliance on a transactional leadership style could be destructive. The authors collated literature on the effect of transactional leadership styles to build a theoretical taxonomy of followers in a destructive leadership. The authors maximized the theory of follower compliance to examine the psychological processes involving the leader-follower dyad. The authors implied that while the reward system is sustainable, the empowerment of followers is a crucial solution to addressing negative behaviors of leaders.

Conversely, Alkahtani (2015) suggested transformational and transactional leadership styles are the most beneficial for organizations. In the context of organizational effectiveness, the two leadership styles outperformed autocratic, bureaucratic, democratic, and laissez-faire leadership approaches and managers must be carefully evaluate the benefits and risks.

The TAM demonstrates there are factors that influence an individual's PU and PEOU relating to the use of technology and the individual's behavior and a person's management style can influence both the technology acceptance and behavior of the leader. A limited number of studies explored the role of an individual's traits and the effect of such traits on the individual's intention to use technology in his or her business. One study explored the personality type of sales representatives that would use automation systems in the pharmaceutical industry in

Taiwan (Cao, Lu, Gupta, & Yang, 2014). A similar study illustrated that mobile payment services revealed personal traits are salient factors in adoption and use of technology (Cao et al., 2014).

Van Puyvelde, Caers, Du Bois, and Jegers (2016) examined two leadership styles (transformational and transactional) of PEOU and PU of innovative technologies by conducting an empirical study in a service setting. The authors explained that transactional leadership might have a relationship with PEOU and PU of such tools. Transactional leaders might recognize the usefulness of technology to increase productivity and decrease expenses (Van Puyvelde, Caers, Du Bois, & Jegers, 2016). Transformational leaders might be open to tools that encourage subordinates to be more creative and investigative (Van Puyvelde et al., 2016).

Abu-Nahleh (2013) explored leadership theories and connected leadership with leaders' technology acceptance. The main research question posed by Abu-Nahleh involved the degree to which there exists an influence of leadership on technology acceptance in a pharmaceutical company. The author proposed a model of how to determine the relationship of leadership and technology acceptance. Abu-Nahleh; however, failed to explain clearly the relationship between the two concepts.

Healthcare System in the United States

In the 19th century, the United States healthcare system, viewed as disorganized and of poor quality, led to the use of computers in the healthcare sector early in the 20th century (Chun, & Bafford, 2014). In early 1970, a small group of hospitals started adopting healthcare information systems (Gostin & Hodge, 2017). During the 1980s, healthcare information systems made some developments in planning and administration of healthcare data and by 2011, the system reached 150 Exabyte's (Raghupathi & Raghupathi, 2014).

A medical audit is a tool employed to measure quality healthcare. The process illustrates a platform when national health administrators converge to document the evolution of quality medical services and patient's outcomes. Medical professionals determined a central process, which was necessary to assess individual and organizational performance rather than protect the medical community from public scrutiny in cases of malpractice lawsuits. Standards in accounting improve work processes, advance the quality of healthcare, and develop an inclusive process that fosters engagement of hospital leaders (Jackson, Paterson, Pong, & Scarparo, 2014). The United States healthcare system remains inefficient because of rising costs, access barriers, lack of patient coordination, and medical errors (Swensen et al., 2014). Gossett, Padgett, Pierce, and Scott (2019) used complex adaptive systems theory to identify current independent variables that were related to access issues, safety and quality, cost considerations, and stakeholder satisfaction that were both directly (+) and inversely (-) related to one another to show why the U.S. healthcare system has the problems of inefficiency, ineffectiveness, excessively costly, and poor satisfaction in the delivery of healthcare services. Recommendations were also made in this study to use Evidence Based Practices to address these problems in improving safety and quality, bending the cost curve, and increasing stakeholder satisfaction.

The traditional healthcare management system has utilized paper-based medical records in detailing and storing a patient's personal information, medical history, chief complaint, outcome, and follow-up (Duce & Coovert, 2016). Healthcare professionals used handwritten documentation to kept track of patients' data for many years. Howard et al. (2013) reported that healthcare workers documented and used paper-based records because of low implementation costs and widespread acceptance. The data collected was useful to increase the quality of care and increase knowledge of physicians and staff. The disadvantages of utilizing a paper-based

medical records system are (a) doctors may not engage patients over concerns of a potential increase in workload (b) patients may not understand health record information, and (c) and frequent illegibility (Hsiao et al., 2013). Paper-based systems for information storage and retrieval could have high failure rates that might lead to duplication of service, delays in treatment, and increased risk of medical errors because leaders do not yet understand how to best design, implement, and use electronic health information technology (Rippen, Pan, Russell, Byrne, & Swift (2013).

Nguyen, Bellucci, and Nguyen (2014) demonstrated that technology is vital to revealing medical practices and hospital administration competences. Similar to other service-related industries, the healthcare system depends on information technology to provide efficient delivery of services even with limited staff and resources (Jones et al., 2014). More improved innovations and systems, therefore, provide optimum service outcomes (Ducey & Coovert, 2016). The innovative technologies that offer service efficiency in the healthcare facility include Electronic Health Record systems (EHR), computerized physician order entry systems, and the hospital information system. Such innovations provide an information system that has allowed healthcare providers to provide medical diagnosis in a paperless forum (Ducey & Coovert, 2016).

Nguyen et al. (2014) reported that hospital information systems and EHR are prerequisites for the efficient delivery of high-quality healthcare in hospitals. EHR's are convenient, portable and efficient, reduces clerical records, and supports computerized decisions. The purpose of EHRs is to document and communicate patient information and conditions between the interdisciplinary team within and outside an organization (Mandl, 2014) and improve the quality of care (Nguyen, Bellucci, & Nguyen, 2014). Singh and Sittig (2016) stated the EHR is an enabling technology that allows physician practices to pursue meaningful use

tools, which significantly improves patient and provider convenience compared with paper-based records. EHR systems have improved quality, efficiency, and patient-centeredness of care among healthcare facilities (Koh, Brach, Harris, & Parchman, 2013). Presidents Bush and Obama supported the goal to increase the use of technology and the implementation of EHR systems (Clarke et al., 2014).

Meaningful Use

The Center for Medicare and Medicaid services instituted an incentive program aimed to measure physician and hospital quality (Center for Medicare and Medicaid Services, 2012; Gottlieb et al., 2015). The Health Information Technology for Economic and Clinical Health (HITECH) Act of 2009, initiated by the United States federal government, slowed the adoption of EHR systems. Under Medicare and Medicaid, the HITECH Act provides incentive payments to eligible providers who use EHR systems (Blumenthal et al., 2014; Gottlieb et al., 2015). As of April 2013, only 291,000 out of 520,000 eligible physicians in the United States received Medicare and Medicaid EHR incentive programs for stage one meaningful use of EHR (Center for Medicare & Medicaid Services, 2014; Roth et al., 2016).

The Medicare and Medicaid MU programs contain an incentive process, which include eligible providers or both programs. Providers cannot be in both programs. Eligible providers for Medicare incentives include physicians of medicine or osteopathy, dental surgery or medicine, podiatric medicine, optometry, and chiropractic medicine (Center for Medicare & Medicaid Services, 2012). Eligible providers for Medicaid incentives include physicians, nurse practitioners, certified nurse midwives, dentists, and physician assistants in physician practices. The Center for Medicare and Medicaid Services is responsible for the Medicare MU program for eligible providers with the maximum incentive amount of $44,000 over five consecutive years.

Providers must disclose MU every year to receive incentive payments. Financial penalties for failure to achieve the MU standards by 2015 may apply (Center for Medicare and Medicaid Services, 2012; King et al., 2014). Medicaid agencies govern the MU incentive programs. The maximum incentive amount is $63,750 with payments over 6 years, which do not have to be consecutive. Providers can receive an incentive payment for adopting, implementing, or upgrading EHR technology (King et al., 2014). King et al. (2014) asserted that providers must demonstrate MU use in the remaining years to receive incentive payments.

The MU program includes three stages. The first stage focuses on the EHR incentive programs by establishing requirements for electronic capture of clinical data (Partridge et al., 2017). Stage one meaningful use began in 2011 and ended in 2013. The requirements for stage one are that eligible providers must achieve 15 core objectives and five of 10 menu objectives. The second stage includes criteria that focus on ensuring MU of EHR systems and exchange of electronic information in the most organized format (Shrestha, Dave, Losina, & Katz, 2016). The third stage focuses on improving quality, safety, and efficiency leading to improved health outcomes (Shrestha, Dave, Losina, & Katz, 2016). The synergy between information technology and medical services are advancing the possibilities in coordinated care and healthcare system performance. The use of EHR in the United States; however, the computerization of information in many other sectors of the economy were delayed (Adler-Milstein et al., 2015). Billing mechanisms were first to change to an electronic platform in healthcare. The universal electronic system could improve care by allowing medical facilities to compare and cross-sect information, leading to improved care and a more communicative dialog that might benefit patients (Middleton et al., 2013). Some common medical errors are adverse drug events, improper transfusions, surgical injuries, mistaken patient identities, order entry and transcription, and

death (Middleton et al., 2013). Medical errors cause a loss of trust in the healthcare system by patients and diminished satisfaction by patients and health professionals.

Electronic Health Record (EHR) is an electronic record of patient health information and demographics generated by one or more encounters in any care delivery setting. Pawar, Patil, and Chaudhari (2014) stated that EHR information includes patient demographics, progress notes, problems, medication, vital signs, past medical history, immunizations, laboratory data, radiology reports, and billing systems. The authors reported the EHR automates and streamlines the clinician's workflow and can generate a complete record of a clinical patient encounter (Pawar, Patil, & Chaudhari, 2014). The EHR is a digital version of the patient's medical history.

Medical professionals understand how IT affects the documentation and security of medical data about to patient information and the potential privacy infringement (Chen & Xu, 2013). An understanding of medical IT processes can improve the quality of medical data and consequently the quality of medical care (Chen & Xu, 2013). This study applies to all healthcare businesses, such as hospitals, small and large medical practices, nursing homes, assisted care facilities, behavioral medicine facilities, nursing schools, medical schools, and technical schools.

Patient safety. Patient safety and healthcare quality, medical errors and adverse effects are still numerous in clinical practice (Yaprak & Intepeler, 2015). As reported by Yaprak and Intepeler (2015), it is difficult to find a consistent guesstimate of errors but to understand the major causes for medical errors and to discover effective intervention to decrease them are fundamental to enhancing patient safety and quality of services. Safety culture is becoming a significant concern for healthcare organizations striving to enhance patient safety, and some safety assessments have pointed out that organizations need a culture change to facilitate an environment of quality care (Yaprak & Intepeler, 2015).

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Advantages. The implementation of EHR has transformed the healthcare industry from paper-based to electronic-based clinical transactions (Jones et al., 2014). Providers were encouraged to implement EHR systems and use them to capture and share data to control quality and cost (Payne et al., 2015). Payne et al. (2015) reported there is a focus on designing and implementing a way to make systems increase in quality, efficiency, and safety (Payne et al., 2015). The EHR provides vast and complete health information of patients necessary in the delivery of quality healthcare (Huerta, et al., 2016). The benefits of EHR led lawmakers to enact the HITECH Act of 2009. The law mandates healthcare providers to adopt EHR systems (Huerta et al., 2016). The HITECH Act requires providers to utilize EHR systems in improving the delivery of patients' care (Blumenthal et al., 2014). The ACT authorized nearly $30 billion to increase adoption of systems (Blumenthal et al., 2014). The use of EHR in computerized physician order entry systems could improve health outcomes and save additional billions over years (Porterfield, Engelbert, & Coustasse, 2014). After surveying some psychiatric clinicians who implemented an EHR system, Alkadi (2016) reported on the following factors: data security, data quality enrichment, personal comfort with security, efficiency, and personal importance of confidentiality. Singh and Sittig (2016) reported after surveying a group of healthcare providers, they experienced numerous benefits when adopting EHR system. The

healthcare providers noted the EHR improved access to quality information. The workers noted improved efficiency, productivity, and workflow. The workers also realized improved patient care, coordination of care of patients with other providers, and improved ability to detect medication errors.

Disadvantages. Medical practitioners have been slow to implement EHR systems because of financial constraints, changes in workflow, temporary loss of productivity, and privacy and security concerns (Najaftorkaman et al., 2015). Jarvis et al. (2013) reported the two most significant barriers to EHR implementation were fear of change and lack of funding. Adler-Milstein et al. (2015) reported that other barriers include the inability of matching a system to meet the specific needs of healthcare providers and the apprehension of the system turning obsolete.

Many American people die because of preventable medical errors (Hogan et al., 2014). Some common medical errors are adverse drug events and improper transfusions, surgical injuries and wrong-site surgery, restraint-related injuries or death, falls, burns, pressure ulcers, and mistaken patient identities. Medical errors cost causes loss of trust in the healthcare system by patients and diminished satisfaction by patients and health professionals. Healthcare professionals experience loss of morale and frustration at not providing the best care possible. Patients who experience an extended hospital stay or disability because of errors pay with physical and psychological discomfort. Health professionals pay with a loss of morale and frustration at not being able to provide the best care possible. Society pays regarding lost worker productivity, reduced school attendance by children and lower levels of population health status (Middleton et al., 2013). Medical workers must understand how IT affects the documentation and security of medical data. A benefit of understanding can improve the quality of medical data

and consequently the quality of medical care (Chen & Xu, 2013). Healthcare professionals experience a loss of morale and frustration when unable to provide the best care possible. Society pays because of lost worker productivity, reduced school attendance by children and lower levels of population health status (de Veer, Francke, Struijs, & Willems, 2013).

Barriers to the Implementation of Electronic Health Records

Many medical organizations experience barriers during an implementation of EHR systems. One barrier to successful implementation of an EHR system is a selection of software. Organizational leaders must be cautious when selecting an EHR system to meet the needs of the healthcare workers. Numerous vendors are available on the market. Achimugu, Selamat, Ibrahim, and Mahrin (2014) revealed all stakeholders should have input into the software selection process.

Cost can be a major barrier to successfully implementing an EHR system. Nationally, the implementation of EHR systems could cost between $100 billion and $150 billion and $50 billion per year in operational cost. The start-up cost of implementation of an EHR system includes the cost of capital outlay (Fleming et al., 2014). Maintenance cost of EHR includes the administrative commitment, control maintenance, support, monitoring modifying and upgrading (Huerta et al., 2016). Some leaders in the healthcare sector consider the start-up and maintenance costs as barriers to the financial operation of the organization (Blumenthal et al., 2014).

An effective EHR system can code encounters properly while the practitioner is documenting the encounter. The right EHR system will enable the organization to provide in-house billing, without having to outsource the process. According to Vawdrey et al. (2014), organizations can save at least the cost of software completing their billing functions in house.

Another barrier to successful implementation of an EHR system is training. Proper training is essential for successful implementation of any EHR system. Roth, Lannum, Dennison, and Towbin (2016) asserted the success of EHR system lies behind the support of the clinicians and patients. However, one study revealed that physicians believe it is significant to mention they did not receive proper training during the implementation of their EHR system (Roth et al., 2016). The same researchers believed they did not have enough knowledge to ask appropriate questions. Consequently, the physicians believed their implementation process was dysfunctional and inadequate (Roth et al., 2016).

Legislative History on Electronic Health Record Adoption

Abdekhoda, Ahmadi, Gohari, and Noruzi (2015) found the medicinal field and particularly doctors were slow to utilize data innovation. Paper diagram frameworks stayed predominant in clinics and medicinal practices in the USA even though EHR frameworks have been accessible since the 1990s with such potential advantages (Bere, 2014). Noblin et al. (2013) suggested that 17% of all healing centers and 10% of all doctors were utilizing health information technology before the adoption of the American Recuperation and Reinvestment Demonstration of 2009. In 2008, short of what one of every five US doctor's facilities had EHR frameworks (Weiss & Nunes Amaral, 2013).

An absence of profitability and monetary gains on the medicinal services industry was cultivated by this inability to receive innovation utilizing EHR frameworks (Furukawa, et al., 2014). Advancing EHR frameworks turned into a key need for administrative pioneers and human services creators with the objective of accomplishing enhanced quality and medicinal services cost regulation (Abdekhoda et al., 2015).

President Bush had marked an official request in 2004, which made the Office of the National Coordinator for health information technology (Furukawa et al., 2014). The American Recovery and Reinvestment Act planned $2 billion yearly for the workplace to spend on loans to human services suppliers and expanded the workplace's monetary obligations (King et al., 2014). The Act settled an objective for the workplace; for every individual in the United States to have an EHR framework set up by 2014 (King et al., 2014).

The HITECH Act, which is a piece of the American Recovery and Reinvestment Act of 2009, and the Affordable Care Act (ACA) of 2010, were endorsed by Congress to enforce the laws (Weiss & Nunes Amaral, 2013). Weiss and Nunes Amaral (2013) reported hindrances to EHR usage, which included specialized unpredictability, nonexistent financial motivating forces, and interoperability issues in the United States insurance industry.

In 2009, government policymakers endeavored to build the utilization and reception of health information technology (Adler-Milstein et al., 2015). The American Recovery Act of 2009 propelled wide government activities for biomedical research, HIT, and security of patient data (Adler-Milstein et al., 2015). One hundred and fifty-billion dollars was earmarked to the medical services industry and Congress planned $86.6 billion for Medicaid assistance. Of these assets, $19.2 billion was planned for HIT, $650 million for preventative human services and wellbeing support, and $500 million to prepare healthcare experts (Adler-Milstein et al., 2015). The $20 billion planned for health information technology came as immediate stipends for adoption of meaningful use (Adler-Milstein et. al., 2015).

Congress arranged the HITECH Act would settle the issues with the decentralized, open market EHR framework, which began in the United States (Weiss & Nunes Amaral, 2013). The HITECH Act additionally provided approximately $27 billion in motivating forces for execution

of Medicare and Medicaid to suppliers who met meaningful use models (Weiss & Nunes, & Amaral, 2013).

The American Recovery and Reinvestment Act of 2009 required doctors in outpatient settings to execute and utilize completely working EHR frameworks to meet government prerequisites for meaningful use (Bentley et al., 2016). The American Recovery and Reinvestment Act changed HIPAA by enabling patients to assess electronic data of one's medical history (Steinbrook, 2009). Patient data records had generally been available in hard copy format (Steinbrook, 2009). The American Recovery and Reinvestment Act of 2009 additionally mandated the encryption of patient data was electronically transmitted (Steinbrook, 2009). Furthermore, the ACT limits the sale of patient data and precludes utilizing the information for raising support or marketing efforts, and strengthens enforcement and government oversight (Steinbrook, 2009).

Meaningful use is a standard doctors and healing centers must meet (Adler-Milstein & Jha, 2017). Meaningful Use illuminated health information technology demonstrating what strategies doctors and healing centers could utilize to enhance the quality, wellbeing, and effectiveness of patient care (Adler-Milstein & Jha, 2017). The Government set out 14-centric goals that doctor's facilities must meet to receive incentives. Notwithstanding the 14-centered targets, hospital leaders must also select five of the ten extra metrics (Adler-Milstein & Jha, 2017).

Meaningful Use is a three-arrange framework created to make modern EHR use (Weiss & Nunes Amaral, 2013). Stage one of MU is gathering information; stage two is expanding coordination of care, and stage three is enhancing patient results (Weiss & Nunes Amaral, 2013). Singh and Sittig (2016) countered the objectives of the three periods of MU as; (a) tending to

safety concerns exclusive to EHR innovation, (b) alleviating safety issues emerging from utilizing EHR inaccurately, and (c) adopting a framework for observing and enhancing patient safety electronically.

Without MU, the developers of the ACA gambled boosting volume over results (Weiss & Nunes Amaral, 2013). More than half of suppliers and 80% of acute care facilities gained impetus installments and ended up becoming MU clients (Weiss & Nunes Amaral, 2013). Government strategy administrators utilized scientific research revealing the utilization of electronic means enhance the nature of human services (Adler-Milstein & Jha, 2017). According to Adel, El-Sappagh, Barakat, & Elmogy (2018) interoperability in healthcare is getting EHR systems to work together. Adler-Milstein and Jha (2017) purported that consolidating interoperability with enhanced nature of care brought about lessened medicinal services costs. Notwithstanding, the healthcare industry was impervious to sharing patient data and interoperability advanced gradually (Weiss & Nunes Amaral, 2013).

Adler-Milstein and Jha (2017 used data collected by the American Hospital Association to answer questions about hospitals and the MU criteria. The American Hospital Association (AMA) surveyed 4,493 acute care nonfederal hospitals (Adler-Milstein & Jha, 2017). Meaningful use regulations require the collection of demographic information, such as age, sex, race or ethnicity, and preferred language. Most hospitals with health information technology systems did not collect such demographics, before the passage of the HITECH Act. Only 11.9% of hospitals had health information technology in 2009 (Adler-Milstein & Jha, 2017)

The American Recovery and Reinvestment Act of 2009 fiscally advanced the execution of EHR frameworks by reducing payments to specialists and clinics on a diminishing scale that chose not to implement EHR systems. In 2011, doctors received $15 thousand dollars' worth of

payments but attained a reduction to about $2 thousand by 2015 if EHR systems were not in place (DesRoches, 2015).

Noblin et al. (2013) noted one practice with four doctors recorded a savings of $5500 in the initial 8-months of utilization, and $6800 every month for the next year. The four doctors also revealed a savings of $7000 in office supplies in the same timeframe (Noblin et al., 2013). With the cost of the system at $88 thousand, the investment in the technology was paid in 1-year. The technology was more convenient to use than the paper method and allowed for timely payments, which increased cash flow (Noblin et al., 2013).

The American Recovery and Reinvestment Act of 2009 incorporated an area on Federal Planning Chamber for comparative exploration research, made up of 15 elected authorities, half of which must be healthcare experts (Steinbrook, 2009). The Federal Board for comparative research suggests and facilitates investigations; however, the committee cannot enact clinical rules (Steinbrook, 2009). The reason was the administration should advance the exploration that human services suppliers use to make clinical rules, but the legislature does not have the desire to advise doctors on how to treat patients (Steinbrook, 2009). The ACA expelled numerous hindrances to healthcare advancement in the United States by ensuring access to medicinal services for Americans (Bentley et al., 2016). The ACA proved to be a motivating force to doctors to change medicinal services conveyance; thereby, changing the concentration of patient care (Steinbrook, 2009).

The ACA provided money to urge doctors to utilize EHR (Jha & Pronovost, 2016). Under the ACA, medicinal services suppliers could electronically investigate patient's insurance information to determine if laboratory tests are included in one's coverage, and understand any out-of-pocket costs, which could be a burden to the patient (Steinbrook, 2009). Steinbrook

(2009) anticipated the progression of health information technology would spare the legislature $20 billion throughout the following 10-years and determined that doctor's facilities and physicians would save considerably more. Electronic designs are more efficient and effective with every advancing year (Jha & Pronovost, 2016).

The primary purpose behind the laws that aid in the EHR implementation effort is that EHR could enhance each aspect of patient care (Noblin et al., 2013). Weiss and Nunes Amaral (2013) discovered EHR frameworks had propelled capacities, for example, early lung tumor diagnostics. Noblin et al. (2013) bore witness to how EHR diminishes therapeutic blunders and trusted the technology alone notwithstanding the money related expenditures required for system integration. Human services offices intending to offer ideal care to patients should adopt EHR technology to appropriately manage and protect patient data (Noblin et al., 2013).

Cutler and Morton (2013) noticed the enactment had not sufficiently tended to the multi-payer framework with its natural wasteful aspects. Insurance agencies spread the expenses of various charging and credentialing methods to clients, expelling any motivating force to enact new standards. Moreover, the muddled billing strategies could yield savings from denied insurance claims, which were submitted inaccurately (Cutler & Morton, 2013).

Transition

The United States healthcare system struggled in implementing effective healthcare program (Adler-Milstein et al., 2015). Restructuring the healthcare system in the United States would require the integration of technology in the daily business operation. Adoption of technology will improve quality, efficiency, and patient-centeredness of care (Dullabh, Sondheimer, Katsh, & Evans, 2014)). However, even though the benefits of improving healthcare care practice and efficiencies of services, acceptance, and utilization of EHR has been

relatively low (Friedman, Parrish, & Ross, 2013). Adler-Milstein et al., reported that 75% of hospital providers had transitioned to the basic EHR, with smaller providers still lagging in adoption (Adler-Milstein et al., 2015). Healthcare leaders need to determine factors that positively and negatively influence the adoption of an EHR system. This section detailed the purpose, nature, and research questions. This information can guide me in analyzing emerging themes that may appear in the analysis of the interview data.

Section 2: The Project

Purpose Statement

The purpose of this qualitative, exploratory, single case study was to identify strategies that managers in a Midwestern U.S. chemical dependency treatment facility used to successfully adopt an EHR system. A purposeful sample of five behavioral healthcare managers participated in the study. Implementation of an EHR system may result in savings of $14,055 per provider (Fleming et al., 2014). The implications for social change from this study include the potential to implement useful business practices and strategies for healthcare providers who need to successfully adopt an EHR system to meet federal requirements, which can improve the quality of patient care in a cost effective manner as well as the quality of life for the consumers who use these services.

Role of the Researcher

My role as the main instrument used in the case study was to design, collect, and interpret the data (Denzin & Lincoln, 2011). This study involved interviewing five behavioral healthcare managers for identifying factors that mirrored their experiences. The quality of the data depended on the participants' attitudes and perceptions of the factors that influence the adoption of the EHR system. Researchers use semistructured interviews to yield a more in-depth understanding of the views of the participants for the same underlying problem (Denzin & Lincoln, 2011; Rubin & Rubin, 2012). Semistructured interviews help understand perceptions derived from richly textured descriptions and reflections about experiences (King & Nesbit, 2015). I used semistructured interviews to collect data and only include the opinions and perspectives brought forth from the study participants. I did not have any direct reporting relationships with the participants in the study, but my familiarity working in the planned setting

may have allowed for a more open sharing of perceptions about the effects adopting an EHR system.

My role was also to treat participants in an ethical manner and adhere to the Belmont Report guidelines of fairness, beneficence, and justice (Miracle, 2016). Additionally, it is important for researchers to understand that conducting research through a personal perspective lens can influence bias and cultural experiences (Ness, 2015). As a new researcher, I understood my role was to eliminate personal bias, which began by withholding any preconceived ideas from working in the field and establishing a feeling of trust by protecting the participants' confidentiality. Further, through exploratory data analysis, theories such as the actor-network model attributes a causal relationship through the process of bracketing so a researcher can expose bias not readily eliminated (Rieder, Abdulla, Poell, Woltering, & Zack, 2015). I used bracketing to acknowledge the viewpoint of others and be less subjective as a systematic approach to reduce bias and gain a deep appreciation for the participants' perceptions (Koch, Niesz, & McCarthy, 2014). In addition to addressing bias, confidentiality agreements helped protect participants' rights.

Finally, as the researcher, I used an interview protocol (see Appendix A) to control each interview, mitigate bias, and establish principled standards (Doody & Doody, 2015; Patton, 2015; Yin, 2018). The case study protocol framed the steps I implemented in the data collection, analysis, and reporting process. A protocol provides confirmation of reliability by standardizing the conduct of the study and facilitates the dependability of exploration by proactively illuminating possible issues, which investigators can review to understand selected decisions (Yin, 2018).

Participants

In this study, I investigated providers specializing in treatment for people with addictive illness in the U.S. Midwest. Gaining access to participants working in this chemical dependency treatment facility was welcoming. At the facility's regularly scheduled monthly management meeting, I presented a review of my proposed research and asked for study volunteers including behavioral healthcare managers working at the selected facility. The review of the study provided enough information for managers to decide if they wanted to participate.

Sample size varies based on the study design and available resources (Patton, 2015). Selecting sample sizes depends on the investigator's ability to judge sufficient data saturation and quality (Glaser & Strauss, 1967). Small sample sizes are adequate when researchers are insiders (Bengtsson, 2016). Thus, I selected the first five study contributors who volunteered and were (a) successful in managing the transition from the use of a paper system to an electronic healthcare platform (b) held a professional position within the organization, and (c) computer literate. Five employees, who volunteered to participate, were sufficient to achieve data saturation (Francis et al., 2010). Strategies for developing a working relationship with the study population included maintaining concise communication, providing a clear statement of the problem, and conducting the interviews in a safe and comfortable environment (Doody & Doody, 2015; Marshall & Rossman, 2016).

The participants selected received a letter of introduction reaffirming the details and extent of the exploration. Participation in the study was voluntary, and I did not offered incentives to participate in the research. Research ethics require researchers to obtain consent from participants prior to an interview (Flick & Röhnsch, 2014). To protect the participants' confidentially, they completed an informed consent form before scheduling an interview. The

informed consent form included a statement that reveals how participants' rights and confidentiality would be assured (Marshall & Rossman, 2016). At the time of the interviews, participants reviewed and signed the formal informed consent form. The consent form reinforced the purpose of the study and provided the pathway for participants to withdraw from the study at any time within the research process. Participants were advised to attach a withdraw notification form and send to my personal e-mail account.

Research Method and Design

Researchers have the option of adopting a qualitative, quantitative, or mixed method approach for data collection (Yin, 2018). I chose a qualitative, exploratory single-case study design. The use of semistructured interviews, a review of workplace documents such as meeting notes, and interview field notes allowed me to understand how the perceptions of behavioral healthcare managers working in a U.S. Midwest chemical dependency treatment facility influenced the adoption of an EHR system.

Research Method

The qualitative method of inquiry allows for more flexibility in all aspects of the investigation process and is useful when researchers intend to understand the way in which people interact within the environment (Cronin, 2014). Qualitative research is ideal for investigating phenomenon specific to exploratory or formative purposes (Denzin & Lincoln, 2011; Yin, 2018). In contrast, quantitative researchers collect data that measures relationships between and among variables to test assumptions (Elliott et al., 2014; Rubin & Rubin, 2012). Variables or characteristics that change among the study population are synonymous with experiments or non-experimental procedures in the data collection process using a survey

instrument in which findings are generalizable to a large population. A mixed method approach is a combination of both qualitative and quantitative methods.

The qualitative method was the most appropriate to illustrate the adoption of an EHR system. In this study, the thoughts and experiences of participants were collected through semistructured, open-ended interviews in the participants' natural setting, which aligned with a qualitative approach. Neither the quantitative nor mixed method was a suitable option because the methods would not facilitate a comprehensive analysis within to meet the goals of my research within the time frame allotted for my study (Denzin & Lincoln, 2011; Sidani et al., 2014; Yin, 2018).

Research Design

Researchers make decisions to describe, explain, or explore a contributor's perception of a phenomenon (Yin, 2018). Qualitative researchers use semistructured, open-ended questions, which allows participants to respond verbally (Merriam, 2014). Additionally, the case study method is valuable in the discovery phase of research (Moll, 2012). For example, Yang, Kankanhalli, Ng, and Lim (2015) used an exploratory case study to learn how to reduce costs and improve the quality of health care not withstanding insufficient information technology that could result in poor outcomes. Additionally, Cronin (2014) used a case study research design when she interviewed participants to understand how students learn in a healthcare setting. Case studies help illuminate an intra-subject perspective on the phenomenon derived from *how* and *why* questions (Yin, 2018). Tuhs, I selected an exploratory, single-case study as the research design with the aim to increase the understanding of EHR adoption among healthcare managers working in a chemical dependency clinic in the U.S. Midwest.

The narrative inquiry was not appropriate as a design for this research because the focus was not on understanding conditions relating to participants living in a natural setting or their stories. Ethnography was also not appropriate because the focus was not on observations relating to cultural group experiences witnessed over an extended period (Rashid et al., 2015). Finally, phenomenology was not appropriate because the objective of the study was not to understand the essence of human experience about a phenomenon (Anderson, 2015).

Population and Sampling

The population from which the sample participants were derived included behavioral healthcare managers working a U.S. Midwest treatment facility that moved from a paper process to an EHR system. The organization provides comprehensive outpatient detoxication services for adults. Volunteers were computer literate behavioral healthcare managers. Working in the selected facility provided me the opportunity to gain access to perspective contributors.

Purposeful sampling is a means to select information-rich cases (Patton, 2015). Purposeful sampling allowed me to select a group of participants who best understood a phenomenon. Purposeful sampling methods also involve best practices for justifying sample size in information systems organizations (Marshall, Cardon, Poddar, & Fontenot, 2013). Further, the quality of the information received from the sample is more crucial than the number of participates used to collect the data (Rubin & Rubin, 2012). A case study supports the idea that a small number of participants is strong enough to answer the research question (Parker & O'Reilly, 2013).

At a monthly management meeting, I presented a review of my proposed research and asked for anyone interested in participating to contact me. The review provided enough information for them to decide to participate. I selected the first five study contributors who

volunteered to participate in the research with the following conditions: (a) successful in managing the transition from the use of a paper system to an electronic healthcare platform (b) held a professional position within the organization, and (c) computer literate.

Data Saturation

In a qualitative study, data saturation is essential (Francis et al., 2010). During the onset of data saturation, the researcher begins to gain an understanding of which direction to pursue throughout analysis (Marshall et al., 2013). Data saturation occurs when no new themes emerge from collecting data (Glaser & Strauss, 1967). Selecting sample sizes depends on the investigator's ability to judge sufficient data saturation and quality. A sample size of five participants met the data saturation required in understanding the research questions in this study. I adopted an ending benchmark in which two interviews were sufficient to achieve data saturation without innovative ideas arising or cause new strategies to emerge.

Ethical Research

Protecting the rights of the participants is important for ethics and trustworthiness in research (Marshall & Rossman, 2016). I took the following measures to safeguard the participant's confidentiality. A letter of introduction was the first step to provide all potential participants the necessary information needed to make an informed decision concerning joining the research. Information included the purpose of the research, specific involvement in the interview process detailing time constraints and meeting locations, steps taken to protect confidentiality, and the withdraw process (Judkins-Cohn, Kielwasser-Withrow, Owen, & Ward, 2014). Prior to the collection of data, the Walden University Institutional Review Board approved the conduct of this research (approval number 10-23-18-0068381).

Consent

Study contributors must have a full appreciation of the steps taken in the research process and understand their rights through the informed consent process (Aluwihare-Samaranayake, 2012). Participants must be knowledgeable in research vocabulary such as beneficence (goodness), no maleficence (to do no intentional harm), and integrity (honesty) to ensure the researcher adheres to the principles of that aids both the participant and the investigator ethically. Thus, it is important for participants to sign an informed consent form prior to any interview or questioning to collect data (Bhattacharya, 2014). The informed consent serves as an assurance of a researcher's commitment to ethical practices (Skinner et al., 2015). The informed consent included a statement that aimed to protect the participants' rights by excluding their names and work location from the study, not discussing the participants' comments with anyone, and safeguarding the interview transcripts. To reinforce confidentiality, participants reviewed and completed an informed consent form and returned the signed document to me before scheduling interviews. Participants were advised verbally and in writing that involvement in the research is voluntary and contributors can withdraw from the study at any time, without penalty, by submitting a withdraw notice to me. Participants did not receive any monetary incentives for participating in the research. Further, discrimination of any participant, based on age, sex, or ethnic background was not be an issue in my research, as all participants had an equal opportunity to volunteer for the research.

I recorded all interviews on an encrypted recording device and stored all study materials in a locked cabinet at my residence. I will store the study materials for 5 years. In the recording, participants had a unique identifier (e.g., Participant 1) to identify the contributor. All study participants received the same interview questions and had the option of declining to answer any

question should one become unable to provide a response for any reason (see Bellavance & Alexander, 2012). Participants had the opportunity to refuse to answer any question and to take a break at any time during the interview. All the participants appeared comfortable during their interview session. If they would have appeared or complained of being uncomfortable, I was prepared to end the interview.

Although the measures illuminated the high standards of confidentiality, there is always some risk involved. Discomforts from sitting for extended periods during the interviews or common ailments such as stress or fatigue could pose a problem. If participants experienced any symptoms of discomfort, the interview would have ended to safeguard the contributor's health and well-being. Additionally, unauthorized loss of data from computer failures and potential loss of an electronic media device are crucial factors when considering consent. Utilization of a desktop computer mitigated the risk, and using an encrypted storage platform was used to store data. Stored materials will reside in a locked cabinet at my residence for 5 years.

Data Collection Instruments

Walden University Institutional Review Board approval is a requirement prior to data collection. The path by which data collection occurred in this research provided organization and structure to the participants' contributions. An interview protocol (see Appendix A) formed the context of collected data identifying the instrument, nature of interview approach, and the process aimed to adopt rival explanations.

Instrument

Researchers must recognize themselves as focal instruments in the research process (Haahr, Norlyk, & Hall, 2014), as researchers are the primary instruments for data collection in qualitative studies (Marbach, 2013). As a qualitative case study researcher, I functioned as the

primary data collection instrument using semi- structured interviews in my research (Denzin & Lincoln, 2011; Patton, 2015; Stake, 1996). Other instruments included (a) an interview protocol (see Appendix A); (b) an informed consent form, and (c) an audio recorder. Secondary data sources included observational field notes, and a review of workplace documents, such as meeting notes. ATLAS.ti is a qualitative data analysis software that acted as the instrument that assisted me in illuminating themes and patterns of behavior expressed by the study contributors (Woods, Paulus, Atkins, & Macklin, 2015).

Interview Method

Rubin and Rubin (2012) purported that investigators adopt the use of semi- structured interviews, which include the culmination of prepared and unstructured interview questions to enhance the interviewing experience and gain an in-depth account of the participant's views. Cridland, Jones, Caputi, and Magee (2015) also suggested that semistructured interviews are an effective method of collecting data. Semistructured interviews will allow flexibility in responsiveness to the emergent themes for both the participants and the interviewer (King & Nesbit, 2015). The platform is an effective method of the collecting data to allow participants to articulate one's full expressions (Cridland, Jones, Caputi, & Magee, 2015). Semistructured interviewing, digital recorded semistructured questions and probing provided the participants a chance to respond using their own words (Merriam, 2014). King and Nesbit (2015) asserted that interviewing is a set of techniques for generating data from individuals or groups utilizing structured, semistructures, or unstructured questioning formats.

Triangulation Technique

Triangulation techniques was used to gather information by conducting semistructured interviews, recording fieldwork observations, and reviewing workplace documents, such as

departmental meeting notes (Denzin & Lincoln, 2011). Yin (2018) revealed triangulation in case study research assists investigators to establish reliable and credible information. Boblin, Ireland, Kirkpatrick, and Robertson (2013) understood the phenomena gathered from multiple data sources supports the research findings. The use of semistructured interview questions to gather rich data from the participants will further the investigation into the contributor's perceptions and experiences in transitioning from a manual system to an operable EHR system. Questions in the proposed study remained open-ended so that exploring new or interrelated information could surface during the interview process. Structured interview questions were precise; thereby, restricting the participant's views (Patton, 2015).

Case Study Protocol and Procedure Guide Process

I collected data from five behavioral health leaders using semistructured interviews, which allowed participants to verbalize one's experiences without the constraint of the researcher's perspective. A list of interview questions used to gather data assisted others gain insight into my participants' unique experiences, standardize the interview questions, and kept the dialog focused to ensure credibility and validity of the information (see Appendix A). The use of an interview protocol (see Appendix A) provided order, kept the discussions flowing, and maintained consistency between interviews (Doody & Doody, 2015; Lofland & Lofland, 1984). The expected length for each interview was approximately 30-40 minutes.

Case Study Database

A case study database provides organization to collected data. Items included in the database were copies of workplace documents, transcripts of recorded interviews, and field notes. The notes illuminated the participant's body language and voice inflection documented during the interview. I also included a table of codes from the data analysis and a list that cross-

references my participant's name and coded number. The databases are located in a folder on my computer that is password protected.

Member Checking

Member checking enhances the reliability and validity of the data collection process (Marshall & Rossman, 2016). The quality of the data depends upon the participants' views to illustrate what factors influenced the adoption of the EHR system. The quality of the data could also be dependent upon my interviewing skills (Parker, 2014). Researchers adopting the qualitative method could use the member checking technique to ensure the data is trustworthy and credible. Snyder (2012) used the member checking technique while exploring four career-changing women moving from science, technology, engineering, and mathematics (STEM) fields to high school education. The member checking process requires the participants to review interview summaries and provide feedback before the data analysis process begins (Lincoln & Gupta, 1985). The process will ensure the data is credible, and the themes represent the true nature of the participant's perceptions. I asked the first two study participants to review the narrative summary of the findings and offer an opinion as to the accuracy of the data interpretation. The contributors offered corrections when he or she noticed errors. The member checking process authenticated my research and assisted me to establish credibility of the research findings.

Data Collection Technique

Strategies depicting what behavioral health care managers use to support the implementation of an EHR system derived from the data collection techniques used in the proposed research. Other forms of data included participant observations recorded in field notes and workplace documents. An interview protocol (see Appendix A) provided evidence of how I

collected data and controlled each interview meeting to mitigate bias and establish principled standards.

To begin, potential participants received a letter of introduction in which I described the purpose of the study, and the consent form process. The letter illustrated the interview scheduling process, which will occur through the Internet, via telephone, or during face-to-face interactions. Further information revealed there would not be any monitory contribution for participation in the study.

Audio Recording

Margolis, Martin, and Mott (2016) discussed how audiotaping conversations captures a real exchange of information. Fade and Swift (2011) suggested a process whereby researchers record the participant's assigned number on the audiotape at the beginning of each interview to identify the participant and protect the contributor's identity. The use of an Olympus digital encrypted voice recorder provided a secured measure to protect the interview data.

The advantage of using semistructured methods of data collection allows participants the opportunity to respond using one's voice (Merriam, 2014). King and Nesbit (2015) demonstrated the use of how semistructured interviews turns to understanding perceptions derived from richly textured descriptions and reflections about one's experiences. Rubin and Rubin (2012) purported that researchers use semistructured interviews to yield a more in-depth understanding of the views of the participants for the same underlying problems. Schäffler et al. (2014) asserted that a disadvantage of tape-recording face-to-face sessions may provide the interviewer a false sense of security believing data will not be lost; thereby, taking notes is not necessary. Transcribing interviews is also a time-consuming process. Justinia (2014) suggested that a 1-hour tape takes 5-

6-hours to transcribe. Some investigators rely on transcription services, which is not only costly, but also has the potential for not capturing the participant's full response (Justinia, 2014).

Member Checking

In a qualitative, case study, data saturation is essential (Francis et al., 2010). Data saturation occurs when no new themes emerge from responding participants. A minimum of five contributors from behavioral healthcare managers working in a chemical dependency treatment facility in the U.S. Midwest was sufficient to meet data saturation.

Researchers adopting the qualitative method of inquiry could use the member checking technique to ensure the data is trustworthy and credible (Marshall & Rossman, 2016). Harper and Cole (2012) reported that member checking is a quality control process by which a researcher seeks to improve data accuracy, credibility, and validity. I developed a member checking protocol as described by Lincoln and Gupta (1985) to understand what strategies behavioral health care managers could use to support the implementation of an EHR system.

The member checking process entails requiring the participants to review the research summary and provide feedback (Lincoln & Gupta, 1985). The process will ensure the data is credible and the themes represent the true nature of the participant's perceptions. I asked the first two study participants to review the narrative summary of the findings and offer an opinion as to the accuracy of the data interpretation. The participants did not any offer errors needing corrected. The member checking process authenticated my research and assisted me with establishing credibility of the research findings. The quality of the data in the study depended upon the participants' views of what factors influenced the adoption of the EHR system (Parker, 2014).

Data Organization Technique

Data organization is central to illuminating a clear picture of the problem under investigation. The transcription process includes migrating the participants' recorded interviews and field notes into Microsoft's word processing application, and subsequently into ATLAS.ti qualitative analysis software (Woods et al., 2015). Yin (2018) revealed note taking is a major step in substantiating the participant's responses in case study research. Yin (2018) suggested using an electronic organization system would provide flexibility to manipulate data appropriately. Each behavioral health contributor was assigned a number, such as Participant 1, to protect their confidentially. I documented the corresponding participant's number and name in an Excel spreadsheet codebook and catalog information. The electronic data log included type of documentation, participant identification codes and collection dates, and computerized file locations. The purpose of de-identifying study contributors will protect the participant's confidentiality (Khanal, Rissel, & Lloyd, 2016). All data resides in a secure location in my residence for 5-years.

Data Analysis

Moustakas' (1994) modified van Kaam method of analysis was utilized. This method allowed exploration of experiences and let themes emerge naturally. The Moustakas (1994) van Kaam method generally consists of seven steps for analyzing qualitative data:

1. Preliminarily group elements (ideas) by giving initial codes.
2. Eliminate or exclude redundancies while noting repetitions of ideas.
3. Relate different codes to each other for possible compatibility (combine codes).
4. Present categories with evidence in the participants' own words and validate categories with two or more people judging their validation.

5. Determine potential themes across participants from the categories.
6. Meaningfully relate themes within and across participants to determine compatibility to the phenomena of study. Are individual ideas expressed by the majority of the sample, and compatible with the final themes on the whole?
7. Reflect on the themes in the participants' own words and synthesize findings into essence of the experience.

I gathered information by conducting semistructured interviews, recording fieldwork observations, and reviewing workplace documents, such as departmental meeting notes (Denzin & Lincoln, 2011). Questions in the proposed study remained open-ended so that exploring new or interrelated information could surface during the interview process. Structured interview questions are precise; thereby, restricting the participant's views (Patton, 2015).

I used Strauss' (1987) open coding technique as the underpinning analysis strategy of creating meaningful evidence from a myriad of information (Doody & Doody, 2015). Patton (2015) asserted that triangulation strengthens studies by combining research methods. I utilized methodological triangulation techniques to gather information by conducting semistructured interviews, recording fieldwork observations, and reviewing workplace documents, such as departmental meeting notes (Denzin & Lincoln, 2011). The purpose of using multiple sources of data is to corroborate the validity and credibility of the study findings (Yin, 2018).

Strauss (1987) discovered that open coding is the process of assigning codes based on textual data in which researchers relate conceptual categories and interview questions, and as a first step in identifying emerging patterns of information (Marshall & Rossman, 2016). Lawrence and Tar (2013) asserted open coding allows researchers to seek patterns without limitations or the need to apply filters. Vaismoradi, Turunen, & Bondas (2013) revealed that recognizing

central themes surfacing from two common approaches to analyzing data is unclear because researcher's use of qualitative content and thematic analysis techniques interchangeably. Lawrence and Tar (2013) asserted that open coding illuminated data without limitations in scope because the process does not include filters, which limit the application of coding data. The open coding process allows the researcher to examine patterns to ensure the research is clear of biases.

Yin (2018) asserted qualitative software tools could assist researchers illuminate codes while analyzing the data. Woods, Paulus, Atkins, and Macklin (2015) used ATLAS.ti software applying both inductive and deductive analysis techniques to his mixed method case study. I used the ATLAS.ti qualitative data software to perform code frequency and co-occurrence analyses. ATLAS.ti will mark information as case nodes associating coded passages to contextual themes. Many categories and themes emerged from deductive coding multiple data sources gathered from information pertaining to how behavioral healthcare managers working in a chemical dependency treatment facility believed as to the adoption of an EHR system. I applied open codes in an assortment of ways, such as linking codes to a word, a sentence, or a paragraph to order and synthesize the participant's views (Strauss, 1987).

I aligned the collection and analysis of themes to the literature review and the conceptual framework of the TAM authored by Davis (1986) to determine the adoption or acceptance of technology. The model provides a foundation of how external factors influence the attitudes and intentions of individuals who implement technology. Therefore, TAM allows researchers to forecast behavioral patterns of individuals utilizing information systems (Davis, 1986). The objective of TAM is to calculate the acceptance of information systems and to assist researchers to reveal PU and PEOU. PU and PEOU are aspects that influence users' decisions about how and

why people use technology. Before learning technology, individuals have the tendency to form attitudes and intentions towards the process.

Reliability and Validity

Additional data emerged from behavioral healthcare managers using semi- structured interviews, observations, and document analysis, which identified strategies that influenced the adoption of an EHR system. Triangulation of the study findings assisted me to resolve rival explanations (Denzin & Lincoln, 2011; Patton, 2015). Morse (2015) described how credibility, transferability, and confirmability could bring an element of trust to qualitative research. Reliability and validity are crucial factors in evaluating the quality of the study findings. Validity pertains to how well the research results align with reality. Reliability relates to the ability of a measure to yield consistent results under similar conditions (Venkatesh, Brown, & Bala, 2013). The information that follows contains information on data triangulation and transferability to support the research findings.

Reliability

Yin (2018) suggested the purpose of establishing reliability is to reduce inaccuracies in collecting data. Quantitative researchers demonstrate reliability by the ability to replicate results (Marshall & Rossman, 2016). However, replicating results, s not applicable in qualitative research because the basis for collecting data from individuals describing a unique perspective; therefore, the results are not generalizable.

Dependability

Yilmaz (2013) noted dependability relates to the replication of research findings using the same approach in collecting data. Jouin, Gouriveau, Hissel, Péra, and Zerhouni (2016) believed researchers demonstrate dependability by the ability for other researcher to replicate the data.

Marshall and Rossman (2016) demonstrated that dependability was an integral component of integrity in case study research. Baskerville and Wood-Harper (2016) posited that case study dependability refers to the informant's consistent account and the investigators' ability to collect and record information accurately. All notes, data, audiotapes, document reviews, and transcript information determine the dependability of data (Yin, 2018). Triangulation of the data and the data coding process demonstrated dependability of the study findings.

Sinkovics and Alfoldi (2012) noted a case study becomes dependable through the process of collecting data by building a chain of evidence. The chain of evidence includes using multiple forms of data in which qualitative researchers consider the difficulty of a phenomenon in a vibrant and dynamic environment (Marshall & Rossman, 2016; Yin, 2018). I used a case study protocol to document steps in the collection and analysis of data (see Appendix A). The process provided a chain of evidence to demonstrate the collection of data beginning with an overview of the central research question controlling the study. A review of the consent form ensured each participant had an accurate understanding of one's rights and illuminate the measures incorporated aimed to protect the confidentiality of the participants. The timeframe for expunging the data from the recording device provided participants a better understanding of what information will remain for 5 years from the guides of Walden University.

Data Saturation

Francis et al. (2010) revealed in a qualitative study, data saturation is essential. During the onset of data saturation, the researcher begins to gain an understanding of which direction to pursue throughout analysis (Marshall et al., 2013). Glaser & Strauss (1967) asserted that data saturation occurs when no new themes emerge from collecting data. A sample size of five participants met the data saturation requirement in understanding the research questions in the

proposed study. I adopted an ending benchmark in which two interviews was sufficient to achieve data saturation without new ideas arising.

Member Checking

Member checking enhanced the accuracy and consistency of the data collection process. The member checking process entails requiring the participants to review summaries and provide feedback before the data analysis process begins (Lincoln & Gupta, 1985). The process of member checking ensured that the data was credible, and the themes represent the true nature of the participant's perceptions. The case study protocol assisted me to maintain a strong focus and allow other researchers to view steps taken in collecting data. The case study protocol; further, could assist subsequent investigators to hold an understanding of decisions made in the data collection and analysis process, which substantiate the reliability and credibility of the study findings (Elo et al., 2014).

Validity

Yilmaz (2013) and Marshall and Rossman (2016) asserted participants validate research when; a) believing the results are correct or credible; b) when the methods used are transferable, and c) when the findings align with the conceptual framework. Houghton, Murphy, Shaw, and Casey (2015) suggested respondent validation occurs when study participants review findings and confirm the results reflect the participants' intended meaning shared during the interview process. Through member checking, members verify the interpretation of responses to the interview questions.

Triangulation is another process for ensuring validity (Denzin & Lincoln, 2011). Data triangulation refers to the comparison of data from multiple data sources. In the proposed study, data will originate from the use of semistructured interviews, fieldwork observations, and

workplace documents, such as meeting notes, to ensure the trustworthiness of the data. Behavioral healthcare leaders with different levels of experience and computer technology skills influenced his or her responses to the questions. Selecting behavioral healthcare leaders with differing experiential backgrounds provided a broad description of perceptions that strengthened the study's validity.

Credibility

A feature that enables others to understand the experiences through the interpretation of a participant and refers to ensuring rigor throughout the research process (Ravenek & Rudman, 2013; Morse, 2015). Credibility occurs by; a) adopting triangulation of the data to include interviews, b) by achieving data saturation; and c) by utilizing the member checking technique. I asked the first two study participants to review the narrative summary of the findings and offer an opinion as to the accuracy of the data interpretation. The participants agreed to offer corrections to the account should he or she notice errors. The quality of the data in the proposed study depends upon the participants' views to illustrate what factors influenced the adoption of the EHR system (Parker, 2014).

I limited engagement with the participants in the study to maintain separation of researcher bias from the research process (Patterson & Morin, 2012). Depicting only the opinions of the study contributors is significant to ensure segregation of my personal bias from infiltrating the research process. Otherwise, my pre-conceived feelings from working in the environment could unintentionally affect the findings in the study. The member checking process; therefore, is a vital element to ensure the behavior health care participants' views are accurate.

Transferability

Morse (2015) suggested transferability is the extent to which the findings of an inquiry may apply in other contexts or with other subjects. Transferability could allow other researchers to identify other areas of investigation that propagated from reviewing data analytic procedures (Marshall & Rossman, 2016). I documented data collection protocols, procedures, and interviewing strategies, such that other researchers may consider the decisions, implications, and validations to other investigations (Houghton, Murphy, Shaw, & Casey, 2015).

Confirmability

Ravenek and Rudman (2013) claimed confirmability refers to the idea that data should represent a view of the findings and not the researcher's bias. Confirmability occurs when the auditor confirms findings (Yilmaz, 2013). I used the ATLAS.ti qualitative data software to perform code frequency and co-occurrence analyses. ATLAS.ti marked information as case nodes associating coded passages to contextual themes (Woods et al., 2015). Many categories and themes emerged from multiple data sources gathered from information pertaining to how behavioral healthcare managers felt as to the adoption of an EHR system. The process assisted me in maintaining objectivity by correlating the analytical process close to the data.

Transition and Summary

The purpose of this qualitative case study is to identify strategies that healthcare managers working in a chemical dependency treatment facility located in the U.S. Midwest, used to move from a paper documentation platform to an EHR system. Five behavioral healthcare managers were interviewed to constitute a purposeful sample and provide in-depth knowledge to the phenomenon under exploration. Adoption of the informed consent process assisted me in protecting the participant's confidentiality and provided a means for them to withdraw from the

research at any time without penalty. In the next section, I have identified the themes and strategies that morphed from my study, recommendations for further research, and my reflections from my research.

Section 3: Application to Professional Practice and Implications for Change

Introduction

The purpose of this qualitative, exploratory, single case study was to identify strategies that managers in a Midwestern U.S. chemical dependency treatment facility used to successfully adopt an EHR system. I used the TAM theory by Davis (1989) to guide the direction of the study. The specific business problem is that some behavioral healthcare managers are unable to identify which strategies to use to successfully adopt EHR systems. Healthcare managers may use the results of this study to overcome barriers when implementing EHR systems. Behavioral healthcare managers may use findings from this study to identify strategies to implement EHRs to improve efficiency, communication, workflow, cost, and the quality of patient care services. The findings may also contribute to the existing knowledge regarding organizational management practices for successful EHR system design and implementation. The results may assist behavioral healthcare managers to exhibit positive characteristics such as providing exceptional judgement, motivating staff, and fostering engagement to achieve workforce efficiency (Chalofsky & Cavallaro, 2013; Twenge, & Donnelly, 2016*).* Finally, implementing an EHR system may improve the accessibility and retrievability, real-time availability, and confidentiality of patient records across the organization.

Presentation of Findings

The overarching research question for this study was "What strategies do behavioral healthcare managers use to support the implementation of an EHR system?" Examination of the primary study's research question formulated three themes (a) effortlessness use (b) adoption efficiency, and (c) transformational leadership behavior. The use of the ATLAS.ti software and the modified van Kaam method (Moustakas, 1994) provided the assistance I needed in

identifying the codes, which supported the relevant themes and strategies of the study when reflecting on the data collected from five participants. Three themes and eight strategies were identified during this data analysis process.

The findings of this study may contribute to the existing knowledge regarding leadership practices for successful EHR system implementation. The case study was conducted at a chemical dependency facility in the Midwestern United States, but the results are applicable to other chemical dependency treatment facilities. Data were collected and analyzed from semistructured interviews, review of notes, and review of company policies using the modified van Kaam method. The themes in this research involve both social and technical aspects of effective EHR implementation. Three themes emerged: effortlessness of use, adoption efficiency, and transformational leadership behavior.

Theme 1: Effortlessness of Use

One of the most studied characteristics of technology is an individual's PEOU. According to Davis (1989), the user expects the use of the technology system to be effortless. The general agreement is that technology acceptance increases when the PEOU increases (Davis, 1989; Wahab, Shamsuddin, Abdullah, & Hamid, 2016). PEOU has also become the sole determinant to the prediction of intention to use (Ma & Chan, 2014). PEOU increases individuals' intentions to use online services only when the consumers do not have access to concerns regarding security information (Chang et al., 2012).

Related to Theme 1, participants described their experiences regarding EHR systems and ease of use. The total counts for codes related to strategies of (a) improved scheduling (b) improved data analytics and reporting, and (c) improved patient care and communication, which was relevant for this interview question under investigation (see Table 1).

Table 1

Effortlessness of Use

Participant	Scheduling	Accurate assessments	Improve patient care and communication
Participant 1	14	7	2
Participant 2	10	11	4
Participant 3	10	11	4
Participant 4	8	11	2
Participant 5	1	1	1
Total	43	41	13

Participant 2 agreed that the EHR system is easy to use and said, "It is very well put together so that a person who is not real familiar with different systems or doesn't have much experience with computers can get on the EHR and begin scheduling patients very quickly by themselves." Participant 4 showed that Therasoft is an easy system to use because "I do not have to decipher someone's handwriting." The contributor could pull the information that she needs with ease. When working on an assessment, she could retrieve the previous assessment and have that information populate into the new assessment, which made updating information and tracking client visits easier.

Conversely, Participant 5 stated that the Practice Fusion system is a generic system and does not believe the system is tailored to use easily. This contributor had a difficult integration process and worked to determine how to circumvent system inadequacies when he "identified the system's shortcomings and how to bypass them" (Participant 5). In some cases, he needed to return to paper charting (Participant 5). Although both systems are fairly straight forward, participants agreed that utilizing one system versus two would increase acceptance.

Strategy 1: Improved scheduling. Scheduling problems occur when patients arrive and the clinic resources (staff, exam rooms, and providers) are not available to serve them (Hribar, Brown, Reznick, & Cheang, 2017). The mismatch of arrivals and availability can increase patients' wait time (Gupta, 2008). Improving efficiency of outpatient clinics is challenging in the face of increased patient loads, decreased reimbursements, and potential negative productivity impacts of using EHR systems (Hribar et al., 2017). However, EHR systems provide the platform to schedule appointments for doctor visits and to complete assessments (Participant 3).

Participant 3 agreed the Practice Fusion System was the preferred software for recording physician's notes and suggested "The doctors enter their notes in the system so schedulers could book future appointments." Although Participant 1 does not use everything both systems has to offer, they did suggest that Practice Fusion provides benefits to adoption of EHR as ease of use in scheduling and communicating with physicians about patient care all without much effort. Another benefit of adopting EHR was that when clients returned to the office for group or individual sessions, scheduling was easier because data was easily visible. The adoption of Practice Fusion was self-explanatory, and the process flow was easy to understand. Participant 3 stated, "The system will not let you make a mistake, because it will stop you; however, Therasoft is not as user-friendly to me." The primary use of the EHR is to enter new patient data, such as patient demographic and insurance information. Then, counselors can record patient assessments and treatment plans, for example. For returning clients, patient service representatives check in clients in the system, which alters staff members of the arrival. Participant 3 found that physicians seemed to favor Practice Fusion and were not interested in learning Therasoft.

Strategy 2: Improved data analytics and reporting. The implementation of EHR has transformed the healthcare industry from paper-based to electronic-based clinical transactions

(Jones et al., 2014). During the last decade, providers have been encouraged to implement EHR systems and use them to capture and share data to control quality and cost (Payne et al., 2015). There is a focus on designing and implementing a way to make systems increase in quality, efficiency, and safety (Payne et al., 2015). The EHR provides vast and complete health information of patients necessary in the delivery of quality healthcare (Huerta et al., 2016).

Patient care coordinators benefit by retrieving accurate data and allows them to complete the intake process faster. The data are also more reliable because the systems allow clients to access the Therasoft portal through the hospital's website and record their information in advance of their visit. Participant 3 suggested that "with clients entering their data, there is less room for error." Further, the EHR system collects and secures data faster and more accurately.

Additionally, Practice Fusion EHR system has been helpful from a medical and legal perspective when completing information online in a template format avoided the risk of overlooking data in a paper system. The system keeps a more thorough and comprehensive record of the patent encounter and gaining access to information is easy. Moreover, Participant 5 noted that EHR aids administration from a regulatory perspective because insurance companies require documenting steps methodologically for every encounter.

Strategy 3: Improved patient care and communications. Communication is important between providers who share care of a patient (Payne et al., 2012). All EHRs have message screens or boxed to facilitate communication between providers. Some messages that might need communicated are lab results, physician orders, appointments, provider request, and medication request.

Patient care has improved with the EHR system because care is coordinated and streamlined and more efficient because "everything is right there (Participant 2), which makes a

caregiver's work responsibilities easier to document and keep current, allowing counselors and physicians more time to spend with direct patient care. Participant 4 does not have to slow down and write things down, because EHRs allow them to type the information directly into the system. The flow is easy to memorize, meaning Participant 4 knows the questions clients will answer and making data entry easy to navigate.

Reviewing previous notes before the client arrives for their appointment also helps with continuity of care. Treatment plans and goals are available to review based on the patient's current condition. Participant 2 suggested, "I do not have to grab a chart every time. EHR saves time and decreases an employee's stress, which allows us to be more attentive to clients."

Further, Participant 3 stated that client care has improved since the adoption of the EHR system because patients receive faster service and better coordination of care. The time-saving opportunity allows physicians and counselors to spend more time serving patients. Moving to the EHR allows staff members more time to have normal conversations with patients. Participant 4 also suggested "patients are more comfortable when they feel that they are having a conversation rather than being interviewed."

Theme 2: Adoption Efficiency

Hospital information systems and EHRs are prerequisites for the efficient delivery of high-quality healthcare in hospitals (Nguyen et al., 2014). EHRs are convenient, portable and efficient, reduce clerical records, and support computerized decisions. The purpose of EHRs is to document and communicate patient information and conditions between the interdisciplinary team within and outside an organization (Mandl, 2014) and improve the quality of care (Nguyen et al., 2014). EHRs are an enabling technology that allows physician practices to pursue meaningful use tools, which significantly improves patient and provider convenience compared

with paper-based records (Singh & Sittig, 2016). EHR systems have improved quality, efficiency, and patient-centeredness of care among healthcare facilities (Koh, Brach, Harris, & Parchman, 2013). This is what led to Presidents Bush and Obama supporting the goal to increase the use of technology and the implementation of EHR systems (Clarke et al., 2014).

This theme related to participants describing experiences or situations that described how client care changed since adoption of the EHR system. Examination of data led to total counts for codes relating to the strategies of (a) functionality, and (b) improved performance, which was relevant for this interview question under investigation (see Table 2).

Table 2

Adoption Efficiency

	Two Systems	Improved Performance Workflow	Remote Access
Participant 1	20	2	1
Participant 2	1	4	1
Participant 3	14	0	0
Participant 4	19	4	0
Participant 5	30	0	1
Total	84	10	3

Participant 1's hospital system changed to an EHR system mainly because it is required, with the belief that all around efficiency would improve for the counselors and physicians and make it easier for managers to monitor staff's performance and improving patient care. Good implementation practices showed that retrieving patient information is more efficient and allows for faster access than in a paper chart. Participant 1 stated, "EHR allows the clinician to spend more time with their clients." Workflow also improved when moving from paper to EHR. Ease of quickly accessing documented information and reading notes decreased stress, especially in

critical situations (Participant 2). Participant 3 believed that nothing hindered performance during the transition from paper to EHR, and she was happy to transition to EHR.

Strategy 1: Improved performance—Workflow. Data security, data quality enrichment, personal comfort with security, efficiency, and personal importance of confidentiality are factors influencing the implementation of EHR systems (Alkadi, 2016). Healthcare providers have experienced numerous benefits when adopting an EHR system (Singh & Sittig, 2016). Workers have noted improved efficiency, productivity, and workflow. They have also realized improved patient care, coordination of care of patients with other providers, and improved ability to detect medication errors.

The EHR system is also efficient. Practice Fusion EHR system helps improve workflow. Staff members can access patient encounters quickly with the click of a button instead of fishing through physical documents. Employees can populate certain actions that are repetitive, so "you do not have to reproduce the same information over and over again manually" (Participant 5). Participant 4 agreed that she would prepare the chart before the patient arrived requiring the employee to fill out papers with the client's information. If the client canceled the appointment, the employee would destroy the chart. Now, with the EHR, the employee deletes the record from the system and reschedules the appointment. The EHR system keeps track of all appointments so recording the reason for cancellation is fast compared to searching through papers to locate the dates and reason for missed appointments.

Strategy 2: Improved performance—Remote access. Having remote access to medical records allows physicians and healthcare workers to look at a patient's medical history. With the appropriate program, a physician and healthcare worker can check labs, schedules, and medical history. Because EHR systems store information in various areas, using one with a single login

helps simplify the process (Vawdrey, Walsh, & Stetson, 2014). This is an important consideration when picking an EHR system for a practice.

The flexibility is essential for planning and organizing work especially for people who aim to maintain a work/life balance when traveling to the office is not always possible. Participant 4 can remote-in to the system application to schedule, change, or cancel appointments from home as well as view upcoming appointments and place reminder calls to patients. Without this system, Participant 4 would have to rely on others to gather information, such as the client's current contact information or prescription information, which was sometimes difficult to track because of information changes frequently. With EHRs, if a client needs medication refills called to their current preferred pharmacy, the information is readily available. The EHR contains required information to access government and pharmaceutical website, such as the Ohio Automated Rx Reporting System.

Strategy 3: Two systems. Many healthcare facilities have begun to use more than one EHR system in their organization (Payne et al., 2012). The organizations that use and support EHRs realize that to safely and efficiently use more than one EHR, a considerable amount of IT work will be necessary (Payne et al., 2012). Thorough understanding of the challenges in using more than one EMR is an important prerequisite to minimize the risks of using more than one EMR to care for patients in a single healthcare organization.

Participant 5 acknowledged their use of two EHR systems, Practice Fusion, and Therasoft, with a focus to allow physicians and clinicians to document patient medical encounters from start to finish through subjective, objective, assessment, and plan standardized methodology, but slanted towards medical addiction management. EHR stores a record of

everything encompassed in the diagnosis and treatment of patients to include subjective complaints, objective findings, physical findings, lab test, assessments, and treatment plans.

Therasoft EHR improved the time and accuracy of recording information to complete assessments, treatment plans, and individual plans, which is easy to use for most processes. The counselors leave messages for the doctors about their clients in Practice Fusion, which helps the continuity of care. EHR is better because the system saves time and helps ensure data accuracy. People do not have to try and decipher another person's handwriting. Participant 1 admitted that the organization began with 2 EHR systems until Therasoft is fine tuned to meet te organization's needs.

Before EHR implementation, office, and professional staff used paper charts to document assessments, treatment plans, and group notes. Using a paper chart, clinicians had to print treatment plans and decipher another person's writing sometimes causing a problem in providing a new course of action. Participant 4 noted, "things sometimes were missed." Participant 4 also purported that "using a computer was better because I type pretty fast and don't have to worry about my handwriting not being legible."

Theme 3: Transformational Leadership Behavior

An association exists between leadership styles and employee performance. The leadership styles could indicate the type of employees who excel in an organization. Highly motivated employees working in competitive companies have leaders who value and recognize one's contribution to the business. Effective leaders exhibit positive characteristics, such as providing exceptional judgment, motivating staff, and fostering engagement to achieve workforce efficiency (Chalofsky & Cavallaro, 2013; Twenge, & Donnelly, 2016*).*

The research topic explored with this theme was to have the participants described positive leadership strategies transitioning from paper to electronic records. Examination of data included in the qualitative case study gained attention as I reviewed the total counts for codes relating to the strategies of (a) managing personnel and (b) employee performance and engagement, which proved relevant for this interview question under investigation (see Table 3).

Table 3

Transformational Leadership Behavior

	Transformational Leadership	Engagement
Participant #1	15	2
Participant #2	7	1
Participant #3	7	2
Participant #4	11	0
Participant #5	1	0
Total	41	5

Initially, managers had to monitor staff even closer before EHR implementation to ensure job duties were on track, causing an increase in frustration for the managers. Managers needed to provide extensive training for some individuals, which was a very time-consuming initiative. Participant 1 stated, “She enjoyed using an EHR system” and acknowledged EHR is a good way to ensure the staff is providing patient care according to organizational and regulatory regulations.

Strategy 1: Managing personnel with positive human resource practices. García-cl, Jiménez-Barrionuevo, and Gutiérrez-Gutiérrez (2012) examined the association between leadership and performance and confirmed that leadership is a driving force in the performance of an organization. An affirmative level of accomplishment regarding staffing, training, performance assessment, and system of compensation led to positive leadership behaviors

(Cianci, Hannah, Roberts, & Tsakumis, 2014). García-Morales et al. (2012) claimed that leaders translate a vision to one's subordinates and influence employees' commitment, motivation, and trust, which enhance organizational performance.

Participant 1 demonstrated that leadership behaviors changed, and staff performance improved when the healthcare facilities moved from primarily paper processes to an EHR system. Managers monitor staff performance more objectively, and employees do not feel micromanaged. Timely feedback, both positive and negative, was a true administrative benefit for adopting the system (Participant 1). As far as improving worker performance, Participant 4 stated: "EHR helps me to work efficiently because initially, it took more than 2-hours to complete an assessment, and now the time is cut in half because writing things down on paper takes more time." Participant 2 stated that using transformational leadership style allows the managers to attend to their employees' needs. Kamal and Kamal (2014) stated that listening and learning what is valuable to the employee and communicating appreciation allows the employee to focus more on the job

Strategy 2: Transformational employee performance and engagement. Hoch and Kozlowski (2014) purported that effective leadership is a management strategy used to improve business performance. Positioned are effective leaders who provide working norms that uphold collective actions. Leuty and Hansen (2014) provided insight on the value of leadership on team performance. Strategies that employ leadership behavior that improve human resource and development achieve optimum results (Twenge & Donnelly, 2016). Employee performance improvement directly correlates with the ease of using the EHR system (Participant 2). EHR provided more job satisfaction for the managers who now have more time to review staff

performance and guide employees, while they make sure the organization is staying in compliance with the regulatory agencies.

The findings of this study may contribute to the existing knowledge regarding leadership practices for successful EHR system implementation. The case study was conducted at a chemical dependency facility in the Midwestern United States, but the results are applicable to other chemical dependency treatment facilities. The themes in this research involve both social and technical aspects of effective EHR implementation. The study included the following themes: (a) effortlessness of use; (b) adoption efficiency; and (c) transformational leadership behavior. They may provide additional knowledge into the barriers concerning the introduction of EHR systems into healthcare. Heart et al. (2017) asserted successfully adopted EHRs have the potential to increase ease of use, adoption efficiency, and use of transitional leadership behavior.

Healthcare managers may use the results of this study to overcome barriers when implementing EHR systems. The findings of this study will add and contribute to the existing knowledge regarding organizational management practices for successful EHR system design and implementation. When successfully adopted, EHRs have the potential to increase workplace efficiency, increase the quality of patient care, and reduce expenses for the hospital or health care facility (Heart et al., 2017).

Application to Professional Practice

Findings in this study have significant applications to professional practice that are relevant to behavioral healthcare managers. The findings of this study could be useful in determining how efficiently EHR systems can be implemented. The following strategies could be utilized when implementing an EHR system: (a) improved scheduling (b) improved data analytics and reporting (c) improved patient care and communications (d) improved performance

- workflow (e) improved performance – remote access (f) managing personnel with positive HR practices and (g) transformational employee performance and engagement. The strategies may assist behavioral healthcare managers to exhibit positive characteristics such as providing exceptional judgement, motivating staff, and fostering engagement to achieve workforce efficiency (Chalofsky & Cavallaro, 2013; Twenge, & Donnelly, 2016*).* The findings may also be useful in determining how to improve efficiency, communication, workflow, cost, and the quality of patient care services.

The specific business problem is that some behavioral healthcare managers are unable to identify which strategies to use to successfully adopt EHR systems. Properly utilizing an EHR is a strategy that can improve scheduling and communication with healthcare managers about patient care all without much effort. Electronic Health Record systems provide a platform to schedule appointments for doctor visits and to complete assessments. The system makes it easier to schedule appointments for clients returning to the office for groups and individual sessions. Healthcare professionals can enter their progress notes in the system so schedulers can book future appointments.

Another strategy that can be applied to professional practice is the ability to access patient encounters quickly with the click of a button instead of fishing through physical documents. Certain repetitive actions can be populated into the system in order to save time and energy. The EHR system will keep track of all appointments made or cancelled. The EHR can record the reason for cancellation in compared to searching through papers to locate the dates and reason for missed appointments.

Lastly, managing personnel with positive human resource practices. Leadership is a driving force in the performance of an organization (Cianci, Hannah, Roberts, & Tsakumis,

2014). An affirmative level of accomplishment regarding staffing, training, performance assessment, and system of compensation led to positive leadership behaviors. García-Morales et al. (2012) claimed that leaders translate a vision to one's subordinates and influence employees' commitment, motivation, and trust, which enhance organizational performance.

Implications for Social Change

The results of this study may assist behavioral healthcare managers to increase the quality of care through a better understanding of how best to implement EHR systems. By contributing to the body of knowledge regarding EHR adoption, I hope that my study assists behavioral healthcare managers in being better prepared to manage EHR systems. Increased EHR adoption allows better access to patient records in order to make better decisions regarding patient care (Ajami & Lamoochi, 2014; Valentino, 2016).

Davis (1989) asserted that business leaders can affect the business environment when they acquire the knowledge to implement a renowned software solution to provide timely, patient-centered information in a secure web environment; thereby improving patient outcomes. There are potential social benefits from the global implementation of EHRs, such as assisting physicians and health professionals, who are geographically isolated, in obtaining patient records (Ajami & Lamoochi, 2014). The implications regarding tangible improvements to individuals, communities, organizations, institutions, and cultures could affect social change and behavior pattern for behavioral healthcare managers and community residents. The adoption of EHR systems by behavioral healthcare managers might contribute to society by enhancing interaction among healthcare professionals and patients. EHR systems could help behavioral healthcare providers make efficient, effective decisions regarding patient care through (a) improved aggregation (b) analysis, and (c) communication of patient information (Liebovitz (2013).

Behavioral healthcare managers and their staff may be able to (a) communicate electronically with healthcare providers and patients (b) submit prescription renewals (c) retrieve health management information (d) effective scheduling (e) locate medical records without difficulty and (f) review and track health summary information and test results, allowing for enhanced decision making regarding treatment.

Recommendations for Action

The results of the study are relevant to behavioral healthcare managers who want to improve the quality of service they provide, reduce healthcare cost, and facilitate smooth EHR implementation. These recommendations may apply to various health care providers and might assist with EHR implementation. Researchers may use each of the themes identified to conduct research studies. Three themes emerged from my research: (a) effortlessness of use (b) adoption efficiency, and (c) transformational leadership behavior. Based on the study findings and themes, I recommend the following actions for behavioral healthcare managers:

1. Create an EHR committee to develop a change management workflow to coordinate EHR implementation process and phases from initiation to completion, with the aim of improving organizational efficiency, responsiveness and profitability.
2. Include all levels of management and staff in the development of the change management workflow process. Each stage of system changes needs to have collaboration from each discipline affected.
3. Research different EHRs, select a vendor, and install a system based on the practice needs, including interoperability.
4. Provide ongoing training to EHR users.
5. Plan for IT and EHR technical support for the EHR users.

6. Allow time for the behavioral healthcare managers, physicians, and staff to adapt and learn how to use the EHR system.
7. EHR managers should evaluate their management style and consider using transformational leadership to help guide the change management workflow process.

Recommendations for Further Research

Future researchers could replicate this study with a larger sample group of behavioral healthcare managers in other geographical locations in the United States The behavioral health care industry is continuously changing and growing. Katerndahl et al. (2015), asserted that health care systems are complex organizations that consist of components with competing values and varying levels of individual experiences of change. Future researchers could potentially uncover implementation strategies that may help behavioral healthcare managers improve patient care by improving the accuracy and clarity of medical records. I found three themes during this study that are worthy of further research. Also, researchers could focus case studies on different types of health care facilities that have adopted EHRs. Other types of studies could include observing people using EHR systems. A limitation noted in this study involved the use of the single case study design and biased opinion of the subjects.

Reflections

The Doctor of Business Administration Program at Walden University required dedication and hard work. The purpose of this qualitative, single case study was to identify strategies that behavioral healthcare manager's use to successfully adopt EHR systems to improve performance. After working in the healthcare field for many years, I formed an opinion about EHR systems. I believed EHR systems were more efficient than paper records. This study reinforced my opinion. However, I did not let my opinion influence the participants' opinion. I

used self-reflexivity before beginning the data collection to mitigate biases. In the research, the thoughts and experiences of participants illuminated from semistructured, open-ended interviews in the participant's natural setting, which aligns with a qualitative approach. Interviewing participants gave me a better understanding of the EHR implementation process. After the study was completed, I discovered the behavioral health managers were interested in identifying the gaps from the implementation of EHR systems and how to improve the process of effectively integrating them into their practice.

Conclusion

The findings of this research study included the following themes: (a) effortlessness of use; (b) adoption efficiency; and (c) transformational leadership behavior. Theme 1 and theme 2 both confirmed the TAM conceptual framework. Organizational strategies and training are ways to assist behavioral healthcare managers in the EHR implementation process (Heorbst & Schweitzer, 2015). They provided additional knowledge into the barriers concerning the introduction of EHR systems into healthcare. Heart et al. (2017) found that successfully adopted EHRs have the potential to increase ease of use, adoption efficiency, and use of transitional leadership behavior. The findings of this research study included the following strategies: (a) improved scheduling; (b) improved data analytics and reporting; (c) improved patient care and communications; (d) improved performance - workflow; (e) improved performance – remote access; (f) managing personnel with positive HR practices; and (g) transformational employee performance and engagement.

The results of this study are relevant to behavioral healthcare managers who want to improve the quality of service they provide, reduce healthcare cost, and facilitate smooth EHR implementation. The results of this study indicated behavioral healthcare managers should

consider developing and implementing strategies to implement EHRs in their practices. Leaders of other health organizations may use the results of this study to overcome barriers when implementing EHR systems. The findings of this study will add and contribute to the existing knowledge regarding organizational management practices for successful EHR system design and implementation. When successfully adopted, EHRs have the potential to increase workplace efficiency, increase the quality of patient care, and reduce expenses for the hospital or health care facility (Heart et al., 2017).

Using transformational leadership allowed workers to feel connected to their organization. Using a transformational leadership style allowed managers to attend to their employees' needs. Listening and learning what is valuable to the employees and communicating appreciation allowed employees to focus more on the job. Transformational leadership inspired team members because they expected the best from everyone, and they held themselves accountable for their actions.

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Appendix A: Interview Protocol

1. Create a folder for each participant (folder to include letter of introduction, informed consent, and copy of interview questions).
2. Attend the management meetings to solicit volunteer participants for the study. Set up interviews for appropriate date and time.
3. Arrive at the designated location 10 minutes prior to the scheduled time.
4. Advise each participant that the interview contains eight questions and will last one hour or less in length.
5. Advise participant that the researcher will take notes and record with an audio recorder.
6. Review the purpose of the study with participant.
7. Reinforce that participant may stop the interview at any time, the interview is confidential, and to ask for clarification as needed.
8. Review informed consent with participant.
9. Answer any questions the participant may have
10. Receive signed informed consent form.
11. Assign a number to the participant.
12. Provide privacy and comfort.
13. Take notes on the interview template.
14. Transcribe notes.
15. Have participants sign interview notes for validation after transcription is complete.
16. Place interview notes into each participants folder.
17. Enter information in the Atlas.ti software program.

Appendix B: Interview Questions

1. Based on your perceptions and experiences, describe the ways in which the electronic health record system facilitated your work with your clients?
2. Based on your perceptions and experiences, describe the ways in which the electronic health record system hindered your work with your clients?
3. Now that you have worked with the electronic health record system, based on your perceptions and experiences, tell me how you feel about using the system?
4. Based on your perceptions and experiences, summarize the top three factors that would be most helpful when transitioning from a paper charting system to an electronic health record system in a chemical dependency treatment facility?
5. Based on your perceptions and experiences, what were the barriers or challenges when transitioning from a paper charting system to an electronic health record system in a chemical dependency treatment facility?
6. Based on your perceptions and experiences, describe how client care has changed since electronic health record system was introduced?
7. Looking back at the overall change process involved with electronic health record system, based on your perceptions and experiences, tell me what you would advise leaders to do when planning and implementing this change?
8. Based on your perceptions and experiences, describe the characteristics and behaviors exhibited by leaders that you believed facilitated transitioning from paper to electronic records?

9. Based on your perceptions and experiences describe the characteristics and behaviors exhibited by leaders that you believed hindered transitioning from paper to electronic records?

Appendix C: CITI Collaborative Institutional Training Initiative

Certificate of Completion

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

Date of completion: 05/26/2017.

Certification Number: 2400661.