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Meeting Meaningful-Use Requirements With Electronic Medical Records in a Community Health Clinic

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Abstract

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Doctoral Study Submitted in Partial Fulfillment
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Abstract

Small nonprofit medical practices lack the technical expertise to implement electronic medical records (EMRs) that are consistent with federal meaningful-use requirements. Failure to comply with meaningful-use EMR requirements affects nonprofit community health care leaders' ability to receive reimbursement for care. Complexity theory was the conceptual framework used in this exploratory single case study. The purpose of the study was to explore the strategies nonprofit community health care leaders in Washington, DC used to implement EMRs in order to comply with the meaningful-use requirements. Data were collected via in-depth interviews with 7 purposively-selected health care leaders in a nonprofit clinic and were supplemented with archival records from the organization's policies and legislated mandates. Participants' responses were coded into invariant constituents, single concepts, and ideas to develop theme clusters. Member checking was used to validate the transcribed data which was subsequently coded into 4 themes that included: access to information, quality of care, training, and reporting implications. Recommendations include increased effectiveness of training provided to health care leaders or the perceptions of the patients as stakeholders in EMR implementation. By using strategies that facilitate seamless movement of information within a digital health care infrastructure, business leaders could benefit from improved reimbursement for services. Implications for social change include progress and transformation in the way health care access is provided.

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Dedication

I dedicate this doctoral study to the women in my family whose shoulders have allowed me to stand tall. My grandmother, Esther Richardson, taught me the true value of humility and strength of hope. The love and faith of family has carried me when all else has failed. More important than their support or wisdom, they gave me a God of my understanding that has never left nor forsaken me.

Acknowledgments

I would like to thank each of my committee members and research participants for their support to ensure this study came to fruition. A special acknowledgment goes to my chair, Dr. Marilyn Simon, and my APA coach, Toni Williams, for never allowing me to give in to frustration. It has been a privilege to grow under your guidance.

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Section 1: Foundation of the Study

Legislators enacted the Health Information Technology for Economic and Clinical Health (HITECH) Act as part of the American Recovery and Reinvestment Act of 2009. This act called on health care providers to adopt electronic medical records (EMRs) in order to improve the quality of care by providing open access to health information (HITECH, 2009). Computerized access to health care information requires organizational leaders to refocus internal operations to remain viable and legally compliant (Kruse, DeShazo, Kim, & Fulton, 2014). Expanded requirements of the HITECH legislation include new expectations for the systems that capture medical information and for providers' treatment of that information (Jamoom & Hing, 2015). Increases in the technological infrastructure of a health care organization are costly, especially for those at the community level (Gilmer et al., 2012). Operating costs of electronic medical record (EMR) systems are higher per patient in community-based health care than in larger medical facilities, although the return on investment is still positive (Jang, Lortie, & Sanche, 2014).

EMRs in the health care industry help to improve efficiency, the credibility of the records, and the reimbursement from insurance providers (Higgins et al., 2012). Inefficiencies in operations stifle sustainability practices in organizations by wasting capital resources (Padula, Duffy, Yilmaz, & Mishra, 2014). Leaders of health care organizations and businesses in an information-transparent culture are striving to improve health outcomes at a reasonable cost by implementing sustainable technology measures (Jang et al., 2014). While the positive effects of EMR implementation are well documented, a resistance to operational changes in some medical practices still exist (Lakbala & Dindarloo, 2014).

Background of the Problem

Change involves perceived and unforeseen obstacles that can impede sustainability in organizations (Montani, Odoardi, & Battistelli, 2014). One perceived obstacle associated with the implementation and maintenance of electronic medical records is the increase in cost and decrease in productivity associated with the new technology (Hatton, Schmidt, & Jelen, 2012). The benefits of a computerized electronic medical record system can include improved outcomes and access to patient information that enhances communication among various disciplines (King, Patel, Jamoom, & Furukawa, 2014). These benefits require a level of organizational commitment that challenges the current culture and internal operations of a given health care setting (Lega, Prenestini, & Spurgeon, 2013). Researchers' observations of provider interactions with patients have indicated that EMR use may impersonalize the physician–patient relationship, and privacy concerns have left a majority of medical records stored on paper (Meeks, Takian, Sittig, Singh, & Barber, 2014; Street et al., 2014). At this juncture, health care leaders should refocus cultural practices to receive the full reimbursement benefits of EMR use consistent with federal meaningful-use requirements (Gold, McLaughlin, Devers, Berenson, & Bovbjerg, 2012).

Health care organizations are complex systems that must meet the needs of internal and external stakeholders (Yip, Phaal, & Probert, 2014). Providers in single small clinical settings are less likely than larger providers to have the available resources for

EMRs (Heisey-Grove, Danehy, Consolazio, Lynch, & Mostashari, 2014). As recently as 2012, only 28% of primary care physicians had an operational EMR system (Hsiao, Hing, & Ashman, 2014). Integrated EMRs improve access to timely and accurate data for patients as well as for insurance reimbursement practices (Graetz et al., 2014). Rural nonprofit practices lack the technical expertise often gained through larger organizations' affiliations or schools needed to implement EMRs that are consistent with the meaningful-use requirements (Green et al., 2015). Failure to comply with the meaningful-use EMR requirements affects nonprofit community health care leaders' ability to receive reimbursement for care (Tolar & Balka, 2012). However, the initial investment and implementation of EMRs imposes a financial risk for providers which may decrease the sustainability of practices that provide services in marginalized areas (Brunt & Bowblis, 2014).

Problem Statement

Leaders in nonprofit health care systems in the United States have failed to leverage the advantages of the meaningful-use requirements for EMRs needed to sustain reimbursable clinical operations and improve patient outcomes (Adler-Milstein et al., 2015). At the end of 2014, 75% of hospital providers had transitioned to the basic EMR, with smaller providers still lagging in adoption (Adler-Milstein et al., 2015). The general business problem is the failure of health care organization providers to meet meaningful-use standards resulting in reimbursement penalties that affect the sustainability of operations (Blumenthal & Collins, 2014). The specific business problem is that nonprofit community health care leaders lack strategies to implement electronic medical records that are consistent with meaningful-use requirements.

Purpose Statement

The purpose of this single case study was to explore the strategies nonprofit community health care leaders used to implement electronic medical records that are consistent with meaningful-use requirements. The population for this study included health care leaders in a nonprofit community clinic in Washington, D.C. These leaders participated in semistructured interviews to share their experiences implementing EMRs that are consistent with meaningful-use requirements. My analysis of stakeholders' experiences may contribute to positive social change by providing a robust understanding of the EMR implementation process, thereby accelerating the dissemination of complete, accurate, and timely medical knowledge.

Nature of the Study

I selected a qualitative research methodology for this study because it enabled me to include perceptions and experiences necessary to identify the human behaviors associated with a phenomenon (Rennie, 2012). I decided against using a quantitative or mixed method because both involve collecting and analyzing numerical data to describe, explain, predict, or control phenomena of interest (Wester, Borders, Boul, & Horton, 2013), which was not my focus for this study.

My focus was on exploring strategies nonprofit community health care leaders developed for EMR implementation consistent with meaningful-use requirements. A case study design involves exploring a complex phenomenon through the participants' experiences (Yin, 2014). For this reason, I concluded that the case study design was the most appropriate design for my purposes.

Other qualitative designs I considered for this study included phenomenology and ethnography. A phenomenological design is an approach researchers use to explore and describe the lived experiences and perceptions of events (Skiba, 2014), which was not my intent. An ethnographic study was not appropriate because of its primary focus on the cultural perspectives of participants within ethnographic studies (Yin, 2014). Given my intent to explore a specific and complex phenomenon, a single exploratory case study design was the most appropriate design for this study on strategies for electronic medical record implementation.

Research Question

The guiding research question for the study was: What strategies do nonprofit community health care leaders use to implement electronic medical records that are consistent with meaningful-use standards?

Interview Questions

The central research question provided a point of departure for my review of the related literature, and served as the basis for the following interview questions:

1. How was your goal of implementing an EMR system instrumental to your organization’s success at meeting federal meaningful-use requirements?
2. What challenges did you experience in implementing the electronic medical record system?

3. What strategies did you use to implement the electronic medical record system in a way that was consistent with the meaningful-use requirements?
4. How did organizational culture and the attitudes of employees affect the implementation of the EMR system?
5. How do you think implementing an electronic medical record system that is consistent with meaningful-use requirements affects the clinical operations within the organization?
6. What other insights would you like to add regarding your experience implementing an electronic medical record system that is consistent with meaningful-use standards?

Conceptual Framework

The basis of the study was complexity theory. Complexity theory serves as a lens through which researchers can evaluate the adaptive and learning skills that health care leaders develop from interactions (Karwowski, 2012). The theory originated from the research studies of Stuart Kauffman at the Santa Fe Institute in 1980; Howard Sherman and Ron Schultz developed it further with a business focus (Kauffman & Johnsen, 1991). Complex adaptive systems randomly act in concert with each other based on established rules of engagement and integration of resources (Edgren & Barnard, 2012). Complexity is a delicate state that exists somewhere between chaos and balance, and is characterized by coevolution (Falconer, 2002).

Similar to other purposefully designed and controlled systems, leaders design health care organizations to provide a sustainable service that must model a changing environment (Martin, Weaver, Currie, Finn, & McDonald, 2012). Stakeholders, who include organizational leaders as well as external participants, rely on nonlinear interactions to support the patient continuum of care (Yip et al., 2014). Complex agents in health care organizations react to relationship changes within the environment that create a catalyst for change (Hughes, 2013). Complexity theory in these systems operates independently, chaotically, and creatively to support the governing objective (Reiman, Rollenhagen, Pietikäinen, & Heikkilä, 2015). Elements described in complex adaptive systems act randomly as agents in concert with each other based on established rules (Mittal, 2013), although the rules have no specific direction, and the agents evolve based on their interactions (Reiman et al., 2015). One suggestion to use in understanding the impact of complexity is to view the perception of organizational change as a system of evolution (Kuipers et al., 2014).

Change within an individual agent affects the collective system over time. Organizational theorist Lorenz described change as an inevitable process that produces an equal response (Burnes, 2005). Adaptive and dynamic systems can help to reach short-term goals and establish learning patterns that continue to evolve and shape the experience of an organization (Reiman et al., 2015). Although the complexity of the system is unpredictable, patterns of behavior provide leaders with the ability to influence outcomes (Waltuck, 2011). The health care system, as a complex organization of multidisciplinary entities, experiences change on varying levels (Katerndahl, Wood, & Jaén, 2015). Complexity theory was suitable as the conceptual framework for my exploration of multiple-agent interactions at play in the implementation of EMRs.

Definition of Terms

In this section, I offer operational definitions of the various key terms that I used in this research study. Each definition includes precise contextual meanings regarding complex systems and health care.

Complex adaptive systems: Unpredictable self-organizing systems that are adaptive to changes within the environment. The adaptive nature of these systems does not challenge the stability of an organization (Mittal, 2013).

Complexity theory: A theory that describes the nature of how unpredictable nonlinear agents work independently in support of a larger system or larger actions (Mittal, 2013).

Electronic medical records (EMRs): Complete patient medical records captured and transferred through a computer system (Bennett, Doub, & Selove, 2012).

Meaningful use: The objective of the HITECH legislation that establishes the purposeful use health care providers must meet when using electronic medical records to capture, monitor, and report medical information (Neuner, Fedders, Caravella, Bradford, & Schapira, 2015).

Patient Protection and Affordable Care Act: An act signed by President Obama to improve the standards of care, reduce waste, and decrease costs (Berwick & Hackbarth, 2012).

Sustainability: The practice or end result of a goal of longevity, that requires integrating internal and external resources to move an organization forward to meet all relevant requirements, especially technical, economic, environmental, and social requirements (Ameer & Othman, 2012).

Assumptions, Limitations, and Delimitations

Assumptions

Assumptions are the concepts at play in a study that the researcher perceives as true without tangible evidence (O'Brien, Harris, Beckman, Reed, & Cook, 2014). In this study, I assumed that knowledge of health care information could influence participants' perception of the facts in the study. Researchers narrate the learned experiences and perceptions based on the assumptions gained from participants' views or understanding of a phenomenon (Coenen, Stamm, Stucki, & Cieza, 2012). Open and transparent communication with research participants can serve as a means to mitigate any preconceived notion by the researcher on the topic of study. Qualitative methods require an in-depth inquiry into the perceived perceptions of the participants (Frels & Onwuegbuzie, 2012). I also assumed that participants had the ability to focus on the interview questions within the context of the study (see Appendix A), and that they would answer the questions honestly, without feelings of retribution based on those answers. Voluntary participation served to ensure confidentiality, and I assured participants could leave the study without any retribution. Because the study involved exploring the perceptions of stakeholders regarding their experience with implementing electronic health information, I also assumed that participants had experience in using electronic medical records to support patient care.

Limitations

Limitations are the restraints of research that can affect the legitimacy of the findings (Rubin & Rubin, 2012). The single case study design may limit the transferability of findings to other organizations in different geographical locations. Another limitation to consideration is the misinterpretation of the data or the biased opinion of the subjects. Full disclosure of the research process with documentation on the steps taken can ensure replication (Wahyuni, 2012).

Delimitations

Delimitations are elements in a study that limit its scope (Yin, 2014). Delimiting factors in this study included a specific focus on a single nonprofit health care facility in the Washington, DC, area. I also limited my inquiry to the participants' perceptions and practices of using electronic health information to meet the needs of patients in this particular setting. My research involved only those who had a part in the internal operations of the organization.

Significance of the Study

Contribution to Business Practice

There is a growing need for leaders of community-based clinics to develop adaptive business strategies without compromising the continuum of health care. In a study of physicians' use of EMRs, DesRoches, Worzala, and Bates (2013) found that there was a perceived increase in the quality of decision making and communication among physicians. By storing health information electronically, health care providers can finish their patient charting more quickly, making time to see additional patients

(Giardina, Menon, Parrish, Sittig, & Singh, 2014). Health information technology has the potential to improve quality-of-care issues in under-resourced settings (Appari, Johnson, & Anthony, 2013), and health care providers should recommend the most reasonable course of treatment (Ellner et al., 2015). These factors contribute to the cost and quality of care provided to patients through active collaboration among stakeholders.

The use of health information technology has increased in organizations whose leaders have nurtured a collaborative culture focused on quality improvement (Appari et al., 2013). Technology implementation improves the effectiveness and efficiency of the services provided. King et al.'s (2014) review of studies concerning the benefits of health information technology revealed improvements in provider performance, decision support, and outcome measures after full implementation. Among health care providers in the United States, primary care physicians are the least likely to use an electronic medical record system (Howard et al., 2013). Technology that is unused cannot lead to a guaranteed successful operation (Richards, Prybutok, & Ryan, 2012).

Implications for Social Change

The values and culture of an organization define the perceptions and practices stakeholders use to measure sustainability (Ruiz-Palomino & Martínez-Cañas, 2014). Health care leaders capable of improving patient outcomes while reducing costs can build sustainable financial outcomes (Ameer & Othman, 2012). The full fruition of a paperless system has yet to occur in health care settings (Hsiao, King, Hing, & Simon, 2015). If leaders of healthcare organizations maintain an awareness of technological changes that affect the cohesiveness of the business culture and respond appropriately, then they will be able to sustain their organizations in the face of such changes (French & Holden, 2012).

The evolving demands of a complex health care system require a collaborative effort to translate technology implementation into a successful outcome (Gleason & Farish-Hunt, 2014). Thirty-two million individuals were likely to have gained access to health services in the United States following health care reforms in 2014 (Yeager, Walker, Cole, Mora, & Diana, 2014). These factors contributed not only to an increase in organizational costs, but also to patients' increased access to quality health care (Sommers, Buchmueller, Decker, Carey, & Kronick, 2013).

Improvements to the well-being of those less able to afford health care can occur through the expansion and availability of services, yet the lower rates of EMR implementation in nonprofit clinics may impede such expansion (Whitacre & Williams, 2015). Researchers have shown that prolonged access to health care plays a key role in minimizing health disparities (Hale, Goldner, Stern, Drentea, & Cotten, 2014). Access to patient information allows providers and support staff to provide fully informed care, and may help reduce health disparities in at-risk populations by providing them with timely service (King et al., 2014).

A Review of the Professional and Academic Literature

Organizational leaders use accurate integrated data provided through health care technology to improve business operations, enhance the quality of care, and increase the timeliness of service (Howard et al., 2013). There is a concern that stand-alone system advancements in technology do not increase access to health care for marginalized people in society (Howard et al., 2013). Use of electronic medical records within the community of office-based providers increased to 71%, according to a 2012 survey (Hsiao et al., 2014). Notwithstanding the noted leadership in technological research, the United States still has varying levels of consistency among health care organizations regarding the use of computerized health records (DesRoches et al., 2013).

Only 19% of the office-based physicians interviewed in a 2007-2012 survey of electronic medical records use were ready for the meaningful-use requirement (Hsiao et al., 2014). Less than half of the primary care providers using an EMR in 2012 had a system that met the meaningful-use requirements (Terry, 2012). This lack of collaboration and resistance to using effective technology cannot improve outcomes or produce sustainable business practices (Karagiannis et al., 2014).

Different stakeholders in a given industry do not find change equally acceptable. Among stakeholders in health care organizations, physicians provide the most resistance to adopting an electronic medical record system into their operations (Yeager et al., 2014). The federal government is leading efforts to improve the use and adoption of electronic medical record systems (King et al., 2014), and it has enacted a movement to change the processing of health information as part of the American Recovery and Reinvestment Act of 2009 (Blumenthal & Collins, 2014).

Federal government leaders committed approximately $1.2 billion in federal grants to improve EMR use in health care organizations (American Recovery and Reinvestment Act, 2009). Financial incentives provided through the American Recovery and Reinvestment Act and designated specifically to promote the expanded use of EMR systems have led many health care professionals to reexamine the cost and resources required for implementation (Fleming et al., 2014). However, resistance to a complete electronic medical information system remains in some sectors. This level of resistance is consistent among stakeholders who are concerned by the cost of change despite the support of the federal government and the recognized potential for improvement (King et al., 2014).

Research Strategy

The purpose of this qualitative single case study was to explore the strategies health care leaders use to implement electronic medical records to meet meaningful-use requirements set by the HITECH legislation. Little research exists regarding how health care leaders have perceived and addressed the collaborative practices that have resulted from the complexity of electronic medical records (Kruse, Regier, & Rheinboldt, 2014).

I conducted a literature review to establish an inclusive foundation for insight into the emerging demands for computerized medical records. Additionally, this literature review serves as a means of elaborating further on the topic by informing the reader of other scholarly work and their interconnected relationships regarding relevant practice-based application (Leeman & Sandelowski, 2012). My search for peer-reviewed books, journal articles, dissertations, and government-published data began in the Walden University library's Internet search portal.

The continuous comparison of data collected from participants and the literature supports the validity of a study (Aluwihare-Samaranayake, 2012). The primary source I used to gather materials for the literature review was the Walden library, which provided access to the following databases: ABI/INFORM Complete, Business Source Complete, Health & Medical Complete EBSCOhost, ProQuest, and Science Direct. I also used the following online search engines: Google, Google Scholar, Questia, and Yahoo. In this search for scholarly literature, I included texts published between 1945 and 2016. The earlier literature helped me establish the historical perspective and foundation for a holistic view of the research topic and theoretical framework. I identified and evaluated approximately 265 articles over a period of 24 months and used 257 relevant articles in the literature review. My extensive review of articles included 216 peer-reviewed articles from 2012 to 2016 and 41 such articles from 2011 or earlier. The review also included 11 seminal book references. This means that 85% of the articles I used for this review were published in the previous 5 years.

Historical Perspective of Medical Records

The United States has a history of health information management that dates back to 1928 with the standardization efforts of the American College of Surgeons. By the end of World War II, the importance of a comprehensive and integrated health record had become increasingly apparent in the provision of care (Crum-Cianflone, Fairbank, Marmar, & Schlenger, 2014). Medical documents were in paper format until the 1960s, when Lawrence Weed introduced problem-oriented medical records to collect and disseminate patient information.

In the 1980s, the development of EMR systems occurred mostly through academic collaborations. The years following these milestones for EMR development involved increased development, as well as the need for oversight into the quality of medical information to prevent errors in patient care. Adopting the electronic version of the medical record revealed inconsistencies in documentation (Long, Stockley, & Dahlen, 2012). Medical errors by providers add billions to health care costs in the United States (Liang & Lovett, 2014). The aim of the Patient Protection and Affordability Care Act of 2010 was to improve patient medical care (Blumenthal & Collins, 2014). The electronic medical record became an instrument to improve efficiency as well as decrease negative incidents (Tolar & Balka, 2012). The HITECH Act promotes quality of care by providing incentives to providers for meeting EMR use requirements (Higgins et al., 2012). As the complexity of medical records evolved, so did the requirements of the structure and implications for their use (Boonstra, Versluis, & Vos, 2014). The complexity in the implementation and maintenance of an EMR system reflects the complex environment in which it exists (Jha et al., 2009).

Complexity Theory

Complexity theory offers a framework for understanding the nonlinear connections of stakeholders in health care organizations, and it serves as a lens through which to view the collective interactions of teams and the collaborative efforts of individual members in a health care organization (Noël, Lanham, Palmer, Leykum, & Parchman, 2013). Components or agents within a common system interact and develop adaptive and evolving skill sustainability measures through internal and external influences (Chaudoin, Milner, & Pang, 2015; Karwowski, 2012). Adaptive systems are complex and noted for how they use random actions to integrate resources (Edgren & Barnard, 2012). In health care settings, organizational phenomena can be factors similar to the readjustment of an organization in response to external demands (Sturmberg, Martin, & Katerndahl, 2014).

The phenomenon of developing sustainability implementation strategies through interactions includes noticeable components within an organization that conflicts with external and internal demands (Sturmberg et al., 2014). The interactions of nonlinear elements of change are characteristic of complexity (Martin et al., 2012). An organizational structure within a complex environment promotes innovation and flexibility to meet the nonlinear challenges of operations. The basic description of the complexity theory is the theorizing of the emergence of consistency and collaborations within complex systems. A challenge that some have made to this theory was that individuals in organizations are intentional creatures with an awareness of the required outcome (Paley, 2010). This notion from Paley counters the complexity theory of unpredictable outcomes that independent systems contribute to the outcome of the whole (Paley, 2010).

Health care systems are complex organizations consisting of multidisciplinary components with competing values that experience change on varying levels (Katerndahl et al., 2015). The reactions of complex agents within the environment can serve as catalysts for change (Hughes, 2013). Complexity within the components operates independently, chaotically, and creatively to support the governing organizational objective (Larsen, Manning, & Pedersen, 2013). Organizational elements evolve from the lessons gained from their interactions through collaboration (Mittal, 2013). Within the health care environment, changes in policies, various supporting ancillary services, and the uncertain nature of information technology are indicative of a complex system (Katerndahl et al., 2015).

Health Care Industry Overview

Research into the challenges of using electronic medical records has shown an absence of parity among individuals who could benefit from system access (Marrast, Zallman, Woolhandler, Bor, & McCormick, 2014). Improvements to the health care industry satisfy a moral obligation as well as the need to improve economic stability in the United States (Miriovsky, Shulman, & Abernethy, 2012). A growing need exists for stakeholders in the health care industry to mitigate abusive practices and develop adaptive business strategies that improve collaboration without compromising the continuum of health care (Swanson et al., 2012). Gilmer et al.'s (2012) examination of clinical decision support systems revealed quality outcomes had improved without a significant increase in cost. In a different study on the impact of electronic health records, a neutral correlation emerged between increased workflow and investments into the information of a health care facility (Fleming et al., 2014). The promotion of health information exchanges using electronic medical records gained momentum in the government in 1998 (Liao & Chu, 2012). Changing the current strategic path for organizations on electronic medical records usage might involve losing ground and credibility with stakeholders through a shift in infrastructure and the introduction of new technology.

One requirement of the HITECH Act is that personnel in the health care industry use EMRs in exchange for incentive payments (Blumenthal, Davis, & Guterman, 2015).

That is, the HITECH Act made reimbursement from Medicare and Medicaid contingent on the adoption of a certified electronic medical record system through (Appari et al., 2013). Abiding by the act involves challenges for personnel in the health care industry due to the requirements of an interoperable electronic medical record system and standardized certification criteria (Blumenthal & Collins, 2014). These goals are challenging for health care leaders in rural communities and small nonprofit settings with limited access to resources (Fernald, Wearner, & Dickinson, 2014).

The focus of the HITECH Act is to improve the quality of care in the most cost-efficient and patient-centered environment. Having access to lifesaving health information can be helpful to those normally isolated from such information (Hale et al., 2014). Advancements in electronic health services have led to improvements in the quality and outcomes of medical services offered (Kreps & Neuhauser, 2010). Using electronic medical records could decrease the cost of care and improve quality (Agha, 2014). However, the cost-benefit analysis process used to justify economic outcomes serves only as a tool to establish a logic that supports the foundation for decision making (Fritz, Tilahun, & Dugas, 2015).

The sustainable use of electronic medical records to improve provider performance, decision support, and outcome measures requires continuous improvements (Bennett et al., 2012). Electronic medical records can enhance clinical decision support through reminders and alerts that improve patient compliance, and the use of electronic medical records for decision support is evident primarily in multiple-physician practices

(Kern et al., 2013). Using electronic medical records also serves to improve and monitor patient safety (Sittig & Singh, 2012).

The specific problem is that health care leaders in community health clinics are unable to implement medical information systems without impeding operations, increasing the cost of care, and thereby limiting access (Hatton et al., 2012). Managing the return on investment and cost of implementation of an electronic medical record system requires investments that go far beyond equipment and software updates (Valdmanis, DeNicola, & Bernet, 2014). The financial implications include the cost of loss of production, education, and ongoing information management (Hatton et al., 2012).

Cost benefit is a valuable asset in larger federal health care systems such as the U.S. Department of Veterans Affairs (Byrne et al., 2014). Hospitalization and preventable health issues are inefficient factors in health organizations that increase costs (Valdmanis et al., 2014). Revenue streams mainly from grants, donations, or other government funding support specific public needs in rural community clinics. Smaller providers of care such as community clinics have limited resources, and the impact of cost can be greater (Adler-Milstein, Bates, & Jha, 2013). Federal funds used for the adoption of EMR capabilities in community settings increased access to local care as well as opportunities for meeting the meaningful-use requirements (Gabriel, Jones, Samy, & King, 2014).

Health Care Challenges

A functional understanding of the health care industry, stakeholders, financial implications, and organizational missions is important in understanding the effect of electronic medical records in community clinics. Lack of improvement in health care operations has cost over $81 billion in the United States (Hillestad, Bigelow, Bower, & Girosi, 2005). Using computerized technology has transformed the work environment and the way organizational leaders conduct daily operations (Avolio, Sosik, Kahai, & Baker, 2014). The cost of health care services has reached over $527 billion, despite the declining economic trend that began in 2009 (Truffer et al., 2010). Fast, efficient, and cost-effective services provided in a safe manner are consistent concepts in the medical industry. Stakeholders seek improvements to patient outcomes using electronic medical records to increase both efficiency and cost (N. J. Zhang et al., 2013).

The requirements outlined in the HITECH Act require the collection of specific demographic data, along with other resource-intense requirements (Appari et al., 2013). The main objective is to continue improvements to the medical information infrastructure and thereby expand the quality of care to those marginalized in society (Kreps & Neuhauser, 2010). Information must be readily available to provide accurate and immediate care to patients.

The Patient Protection and Affordability Care Act include requirements to decrease the occurrence of medical errors and to improve and protect access to patient medical records (Tsai & Rosenheck, 2014). Improvements to information sharing drive the need for change to the delivery of health care (Yeager et al., 2014). Enhancements to information systems in health care provide an environment for improvements in patient outcomes (Arbune, Wackerbarth, Allison, & Conigliaro, 2014). The importance and need for electronic medical records are increasingly becoming a part of the resources required by physicians to improve patient outcomes in a safe environment (Kleefstra, Zandbelt, de

Haes, & Kool, 2015). Electronic medical records streamline processes and reduce the redundancies found in processing paper medical records (Blumenthal et al., 2015).

Researchers at the Healthcare Information and Management Systems Society reported that 87% of hospital leaders surveyed in 2005 were planning to implement or had implemented an EMR system (Jha, DesRoches, Kralovec, & Joshi, 2010). Only 23% of providers reported using EMRs in the outpatient setting (Jha et al., 2010). Researchers continue to explore the level of resistance and physician adoption practices using electronic medical records in their practice (Thakur, Hsu, & Fontenot, 2012).

Implementation strategies vary depending on the size and organizational structure of the facility (Boonstra et al., 2014). Some key issues and concerns associated with the implementation and use of electronic medical records are physician participation, administrative workflow changes, ethical dilemmas, security, training, and sustainability (Riddell, Sandford, Johnson, Steltenkamp, & Pearce, 2014). Successful implementation improves with full participation and the leadership of physicians in organizational quality and financial goals (Buell, 2012). Changes in the market necessitate a revision of current management strategic planning, philosophy, and communicating those changes (Lanham, Leykum, & McDaniel, 2012).

Infusing over $1 billion in grant funding to assist leaders of health care organizations with the implementation of electronic medical records is a demonstration of the importance of computerization to the federal government (Howard et al., 2013). The American Recovery and Reinvestment Act is the structure that framed the HITECH legislation. The legislation encouraged the adoption and meaningful use of health information technology and authorized incentive payments to providers who use certified EMRs in their practice (Appari et al., 2013).

In 2010, researchers used the National Ambulatory Medical Care Survey to assess providers and their intent to apply for incentives based on the meaningful-use requirements (Bruen, Ku, Burke, & Buntin, 2011). The providers targeted in the survey provided direct care in office-based practices (Bruen et al., 2011). Although the number of those who could qualify was large, the number of providers in solo practices predicted to be capable of implementing electronic medical records remained low (Bruen et al., 2011). Providers operating in office-based practices have faced increased costs for implementation as well as increased staff hours (Fleming et al., 2014). The quality of care in facilities changes based on the changes in the environment of care (Paré et al., 2014). The implementation of electronic medical records is a noted change meant to improve quality through the reduction of errors (Wallace, Maxey, & Iyer, 2014). Reimbursement decreased beginning in 2015 if health care providers did not meet the mandated changes for the meaningful-use requirements (Krishnaraj, Siddiqui, & Goldszal, 2014).

Adapting to Changes in the Health Care System

The integrative practice of implementing change promotes sustainability in an environment of constant evolution both internal and external to the organization (Deeg, 2009). Health care organizational leaders who intend to implement or maintain an electronic medical record system must define the needs of stakeholders (Richards et al., 2012). Collaborations with stakeholders increase with the expectations of a changing society (Peters, Waples, & Golden, 2014). Information technology serves as a catalyst that promotes business process reengineering and the growth of those leading this change (Margherita, 2014). Leaders of complex organizations in a nonlinear dynamic environment can build sustainability that is cognizant of its environmental impact (Martin et al., 2012). An adaptive and forward-thinking business entity continuously engages in opportunities for learning (Fizzanty, Russell, & Collins, 2013), but a lack of competency in information technology leadership in the clinical setting may lead to a dysfunctional environment (Goldberg, 2012). Emerging social and cultural demands influence the response of leadership in meeting those needs (Rafferty, Jimmieson, & Armenakis, 2013). Due to change and uncertainty, organizational leaders must depend on an agile leadership strategy to thrive and remain viable (Marques, 2015). Innovative practices, organizational flexibility, and community integration are key components of sustainability and organizational agility (Bauer, Thielke, Katon, Unützer, & Areán, 2014). A study on using information in primary care indicated a level of equality between learning or growth and the ability to translate access to information into practice (Delaney et al., 2012).

Using EMRs leads to organizational learning that demonstrates the promotion of improved outcomes through enhanced communication practices with patients (Kruse et al., 2014). Health literacy as a skill is a priority that benefits individuals as well as society (Mårtensson & Hensing, 2012). Health literacy refers to the extent to which consumers have the capacity to obtain, process, and understand basic health information to make informed health decisions (Kruse et al., 2014). The call for increased health literacy and communication will thereby raise expectations for health care systems and make them more effective, efficient, and accessible to the masses. The sense of urgency for coordination resulted in a new position under an executive order, the national coordinator for health information technology, who established the framework for a national interoperable health information infrastructure (U.S. Government Printing Office, 2004).

Electronic health records have an important role in the health of patients as external stakeholders as well as in the financial stability of health care organizations (Kern, Edwards, Pichardo, & Kaushal, 2015). The benefit of the American Recovery and Reinvestment Act for the implementation of EMRs was to reduce errors and costs while increasing access to care (Sheikh, Sood, & Bates, 2015). Organizational leaders with vision master the art of change and search optimistically for opportunities to collaborate with stakeholders in pursuing sustainable growth. Evidence of these collaborations stimulated a cooperative effort in the Caribbean and Latin America with the Virtual Health Library (Abdala & Taruhn, 2007).

The Virtual Health Library serves as a portal of information for research initiatives and scientific journals. Collaborating helps to improve access to information in different countries (Abdala & Taruhn, 2007). A majority of the patients studied in rural Canadian communities who had access to electronic health information used the Internet to seek health information (Abara, Narushima, & Abara, 2010). Innovative steps described by Abdala and Taruhn (2007) within the Virtual Health Library could become building blocks for expanding access and supporting the full implementation of a holistic electronic medical record system that serves to encourage collaboration among stakeholders. Research into implementation strategies that include the perceptions and collaboration of stakeholders beyond physicians can decrease resistance (Yeager et al., 2014). A broader understanding and commitment to the cultural environment is vital in sustaining an organization’s existence (Henfridsson & Lind, 2014). Maintaining an awareness of the customs and cultural traits increases the chances of an organization’s longevity in that environment.

Barriers to Implementation

Information technology changes how businesses compete, and technology has gained strategic significance (Kenneally, Curley, Wilson, & Porter, 2013). Commitment to change relates to the benefit or expected effect of change on an individual (Kruse et al., 2014). Enhancements to health care information have met considerable resistance from an organizational standpoint (Yeager et al., 2014). Barriers to change in the health care industry delay the needed improvements to the quality of care and advancements in the delivery of service (Kruse et al., 2014). The immediate concern of those involved in implementation is the return on investment of time, resources, and cost (Kruse et al., 2014).

Resistance or acceptance of change rarely refers to the specific characteristics of a select group of stakeholders in using electronic medical records (Weeger & Gewald, 2015). However, electronic medical record acceptance has encountered resistance from internal and external sources that impede the sustainability of organizations (Kruse et al., 2014). A primary association exists between the returns on investment from using electronic medical records and revenue or patient outcomes for resistant doctors (Forrester, Hepp, Roth, Wirtz, & Devine, 2014). Limited capital resources have delayed the implementation of electronic medical records (Jha et al., 2009). Acceptance of electronic medical records among physicians and health care organizations is slowly increasing (Jamoom & Hing, 2015). The momentum in this movement is occurring because of changes in reimbursement requirements based on the American Recovery and Reinvestment Act of 2009, as well as monetary incentive programs for providers who demonstrate meaningful use of electronic medical records (Blumenthal et al., 2015).

Continued resistance of health providers in implementing EMR negatively affects not only technology integration into clinical practices but also the knowledge base required to maintain sustainability (McAlearney, Robbins, Kowalczyk, & Chisolm, 2012). The Lippitt model is an approach to managing change in complex organizations (Lippitt et al., 1958). The model establishes a systematic process that integrates organizational learning ability with the requirements of the new technology (Wei, Yi, & Guo, 2014). Acceptance and collaboration of new technology require embracing new specialized learning within the culture of the organization. Leaders of health care organizations must embrace opportunities for collaboration with their complex stakeholders to pursue sustainability while improving access (Richards et al., 2012). The adoption of information technology by physicians into practice is critical to the sustainability of a health facility (Appari et al., 2013).

Stakeholders

Stakeholders from inside and outside an organization influence its sustainability and learning environment. Sustainable alignment occurs when the organizational culture coevolves to facilitate the changing organizational goals (Vessey & Ward, 2013). Internal and external stakeholders coexist to support the whole organization in a complex organization. Learning or growth begins from the individual or within a group (Chiva, Ghauri, & Alegre, 2014). The culture of an organization is a reflection of the collectively learned behaviors of the stakeholders in response to challenges (Minoja, 2012).

Stakeholders act as catalysts that encourage and nurture organizations to cross boundaries through adaptation (Youtie & Corley, 2011). Various administrators, providers, and support staff act as complex agents within the dynamics of a health care organization's culture. People in cultures who historically adapted to challenges through collaborative efforts learned to manage the competition within their environments without sacrificing their existence (Belias & Koustelios, 2014). The views and dynamics of the stakeholders in maintaining organizational sustainability through information technology are critical to understanding the phenomena that nonprofit community health organizations experience through electronic medical records. Outcomes improve by expanding the learning experience of a collaborative culture (Buschmann, 2012).

Leaders implementing major change efforts should consider the expectations of external stakeholders (Phipps, Prieto, & Verma, 2012). In health care organizations, sustainable and innovative practices guide leaders in complex environments (Karworski, 2012). Satisfaction and quality of service correlate to patients' trust in their provider (Zineldin, 2015). The exclusion of stakeholders from the change process can have an adverse effect on their trust and job involvement (Fugate, Prussia, & Kinicki, 2012). A lack of consideration for internal and external stakeholders places the success of implementation at risk (George, McGahan, & Prabhu, 2012).

Adopting Technologies in the Health Care System

Leaders of nonprofit health care organizations have not yet fully realized the full benefit of health information technology in the United States (Fernald et al., 2014). The United States has become a noted leader in information technology but has not fully leveraged the advantages of providing access to electronic health information (Schoen et al., 2012). Adopting electronic medical records in the United States led to a projected savings of over $77 billion in medical costs annually (Hillestad et al., 2005). A method of maintaining a consistent purpose in operations is to build collaborations that gain the support of organizations as a whole. Progressive managers have subscribed to the theory of building the organizational skill set to meet the evolving demands of the marketplace (Felício, Gonçalves, & da Conceição Gonçalves, 2013). Organizational leaders have recognized the need for a continual response to changes in the environment to remain a viable business operation. Leaders motivate the masses while ushering employees toward a common objective (Phipps et al., 2012).

Expected levels of commitment and flexibility are attributes that leaders cannot coerce into an organization (Denning, 2013). The process of influencing change sanctions a sense of power (Kearns, Livingston, Scherer, & McShane, 2015). Risk taking in a changing environment is essential for leading innovation and change effectively (Cucciniello & Nasi, 2014). A basis for the success of any organization is the ability to share vital information that fosters growth. The term organizational learning can help to describe the collective and collaborative approach to improving performance (Phipps et al., 2012). Leaders use their behavioral attributes to guide and encourage organizational learning (Gangadharan, Kuiper, Janssen, & Luttighuis, 2013). Combined levels of awareness of external and internal stakeholders influence sustainability. Organizations must move with the same purpose of continuing the mission.

Organizations with supportive learning environments can thrive responsibly with the perception of sustainability within the organizations to expand beyond economic boundaries to include measures such as quality outcomes (De Matos & Clegg, 2013). A health care system, as an agent within a complex society, is inevitably its own customer. These agents have the capacity to adapt and learn from their interactions (Nan, Zmud, & Yetgin, 2013). The various multisystem connections that operate independently and in collaboration serve as the basis for the complexity of electronic medical records (Mittal, 2013).

Leadership in Complex Organizations

Leaders of diverse and complex organizations maintain the core ethical principles of the organization in consideration of the varying ethical practices of the stakeholder subcultures (Thompson, Thach, & Morelli, 2010). Changes in the social, political, and economic environment can influence cultural changes within the organization as a whole for leadership (Rafferty et al., 2013). Leadership in organizations is a process of influence that shapes organizational development (Kearns et al., 2015). Regulatory changes in the health care industry have necessitated changes to linear practices. Linear processes impede the creativeness and passion needed for success (Sarooghi, Libaers, & Burkemper, 2015). Management must remodel previous approaches used for standard challenges into ones more fitting for an evolving environment (Denning, 2013). Rigid practices and methods used in the past surrender to the diverse forces of an evolving global market. This awareness should inspire a pairing of strategic management with the social responsibilities of an organization, which can change the systems thinking of the organizational culture (Perla, Bradbury, & Gunther-Murphy, 2013). Improvements in the organizational culture are dependent upon collaborative efforts (Tolar & Balka, 2012).

Cultural changes fuel the need for organizational transformation. Leaders as change agents influence the culture of their respective industries. Decision makers often lead in complex environments with multiple agents through the emergence of coevolutionary processes rather than individual innovation (Matei & Antonie, 2014). Part of an organization’s competitive position comes from the ability of its stakeholders to share information and benefit from the unique collaborative competences of its members.

The Business of Health Care

Nonprofit health care providers in community settings enhance the quality of life, provide access to needed services, and encourage economic growth (Auer, Twombly, & De Vita, 2011). Leaders of nonprofit organizations enhance the livelihood of the community through social development services supported by state and federal efforts (Petrovsky, James, & Boyne, 2015). Competition among nonprofit organizations for these state and federal funds began to increase as the stability of the economy became more uncertain (Felício et al., 2013). The demand for the services provided by nonprofit organizations increased at the same time. Health care spending costs are likely to reach 20% of the total gross domestic product in the United States by 2023 (Sisko et al., 2014).

The level of uncertainty in the economy affects the availability of funding to nonprofit organizations and the level of service their staff can provide (Cherniack, Dussetschleger, Farr, & Dugan, 2015). Financial sustainability is a major concern for leadership in the nonprofit organization (Felício et al., 2013). Organizational finances for nonprofit health care entities are the main barrier to the successful implementation of electronic medical records (Gorli, Kaneklin, & Scaratti, 2012). Fostering an organizational culture that promotes innovation improves performance while ensuring sustainability (Winnard, Adcroft, Lee, & Skipp, 2014).

The inability of organizations to maintain economic stability results in downsizing or failure (Cherniack et al., 2015). Competition among nonprofit organizations increases as the availability of traditional financial resources decreases (Felício et al., 2013). Financial constraints have redirected the attention of leaders within nonprofit organizations from strategic mission-centric efforts to daily operational tasks to remain viable (Wellens & Jegers, 2014). Continued longevity in nonprofit health organizations requires new alliances and collaborations built through strategic alliances (Walter, Kellermanns, & Lechner, 2012).

Within health care, which is a complex business culture, leadership must guide the various resources necessary for the continued success of an organization (Lanham et al., 2014). Leadership focuses the limited resources in nonprofit organizations toward tactical operations more than strategic initiatives that support longevity (Wellens & Jegers, 2014). Maintaining a healthy culture is a critical success factor for continued longevity (Scutchfield, Prybil, Kelly, & Mays, 2015). The culture of any organization includes individuals with shared beliefs, practices, and acceptable actions (Hall, Lazarus, & Swannack, 2014).

Business Culture

Ethical perceptions of an organization should resonate loudly in the mission, vision, and values of the organization. Establishing and maintaining relationships that promote goodwill and trust can increase the possibility of a fruitful long-term relationship (Perla et al., 2013). Inefficiencies in operations can decrease an organization’s adaptability in changing environments, can increase waste, and are counterproductive sustainability measures (Padula et al., 2014). Inefficiency in communication between providers adds to wasted funds and a decrease in quality (Marx, 2014).

Business practices in varying organizational cultures are reflective of and influenced by politics, geography, and customs that are both internal and external to the organization (Chua, Morris, & Mor, 2012). Understanding the diverse cultures and consumer acceptance of current business practices becomes increasingly paramount as business transactions become increasingly global (Hawk et al., 2012). Inadequate business processes, diminishing resources, and rising costs are by-products of wasteful practices found in the health care industry (Himmelstein et al., 2014). Trust and acceptance are important to operating efficiently in the marketplace. Cultural influences are key components in forming moral standards and establishing a trusting business (May, Luth, & Schwoerer, 2014). Leadership can spend time analyzing the makeup of stakeholders to discern their motivation and definition of success. Studying the expectations and measures of success can greatly increase opportunities for other encounters. The meaning and interpretations of these dilemmas can serve as a basis for navigating in a changing environment.

The expectation of leading integrative measures or changes in a diverse socioeconomic landscape has traditionally fallen upon those tasked with managing the business of the organization. Leadership must have the ability to motivate the masses while maintaining the strategic direction of the organization (Phipps et al., 2012). However, commitment, flexibility, and morality are qualities that leaders cannot force into the fabric of the organization (Denning, 2013). The inclusion of these traits occurs most effectively through enthusiasm and empowering others to lead in establishing a learning organization environment (Shore & Zollo, 2014). The challenges of maneuvering in a changing environment require innovation and motivating measures (Matei & Antonie, 2014). The learning experience gained in a changing environment enhances the leadership skills of management as well as organizational learning.

Analysis of Health Care Industry

By 2023, health care spending cost is likely to consume 20% of the total gross domestic product in the United States (Sisko et al., 2014). The Patient Protection and Affordable Care Act of 2010, signed into law by President Obama, is evidence of the government's commitment to changing the health care industry (Blumenthal & Collins, 2014). The goals of these changes are to improve the standards of care, reduce waste, and decrease cost (Appari et al., 2013). Changes in the health care market open opportunities for the growth of consulting and providers of newer technology. A competitive business environment, change, and uncertainty require agile leadership (Marques, 2015).

Leveraging internal and external resources to remain viable has been the approach used in organizations to pursue sustainability (Matei & Antonie, 2014). Changes in ethical practices require an awareness of the social customs and economic trends of the marketplace in business (De Matos & Clegg, 2013). Awareness remains effective by pairing strategic management with the social responsibilities of an organization. Paper-reliant operations hinder information sharing and create opportunities for interoffice misfiling and lost paperwork.

Patients' historical and current medical documentation is the key element to a successful encounter. Electronic or automated processes often bring to light incomplete or inconsistent information. Providers spend less time revisiting patients' compliance and more time concentrating on the outcome of visits. Delays in care due to an antiquated process reflect negatively on patients' perception of a facility, which inevitably changes the systems thinking of the organizational culture. Both complement the sustainability of the organization and the consideration of the social responsibilities that support human flourishing. Internal and external resources both depend on the development and improvement of this skill set through collaborative efforts (Kreps & Neuhauser, 2010). A systemic approach to managing policy change within organizational settings is most effective when it includes those at the forefront of the change (O'Malley, Grossman, Cohen, Kemper, & Pham, 2010).

Benefits of Electronic Medical Records

Medical records serve as historical documentation of patient medical encounters, as well as plans of action for an individual's care. Each discipline within a medical facility contributes to this documentation based on the patient's medical need. No health record is complete or serves a purpose with missing, incomplete, or unavailable information (Dobrzykowski & Tarafdar, 2015). The physical availability of the medical record and logical ease of use can expedite access to care for patients (Dobrzykowski & Tarafdar, 2015). The accuracy of content and availability determine the usefulness of medical records. Preconceived notions on the usefulness of an electronic version of the medical record led to resistance from providers that emerged as unwarranted after full implementation (Kruse et al., 2014). Adopting electronic medical records into clinical operations brings to light any inconsistencies in the function of the systems (Long et al., 2012).

An added benefit of using electronic medical records is the consistent flow of patient-centered information. Readily available access to information supports clinical operations and improves quality patient outcomes (Kern et al., 2013). Combined availability and increased access improve the reliability of the information that providers use to measure quality (Bardhan & Thouin, 2013). Access to care improves for previously uninsured patients with the implementation of government-mandated health coverage (Long et al., 2012). There is an assumed increase of costs and needed resources to stabilize current health condition with those now entering the health care market (Hibbard & Greene, 2013). Electronic health information supports a new partnership that transcends previous barriers in educating patients on preventive care (Street et al., 2014). Transitioning from a paper process to the full electronic medical record places priorities on physical equipment in comparison to resources that support the workflow (Kruse et al., 2014).

Change in Practice

Congressional legislation formulated the HITECH Act as part of the American Recovery and Reinvestment Act of 2009 to improve the quality of care through the meaningful use of electronic medical records (Blumenthal et al., 2015). Meaningful use establishes the baseline requirements needed for exchanging medical information across various care settings (Furukawa, 2013). Included as mandates of the meaningful-use requirements are a set of objectives that health care providers must meet to qualify. Information shared through certified EMRs to support clinical decisions is an objective of the meaningful-use requirements (Appari et al., 2013). The American Recovery and Reinvestment Act stipulated three main components for meaningful use through using a certified EMR: (a) using the system in a meaningful manner, (b) the electronic exchange of health information, and (c) the submission of clinical quality measures (Furukawa, 2013). Stages in the EMR incentive program are as follows: data capture, advancement of clinical practices, and improved outcomes (Furukawa, 2013). Not all EMR systems meet the standardized requirements of the national coordinator for health information technology for certification.

Certification requirements of EMRs center on standardization to ensure the interoperability and safe transmission of patient information (Blumenthal & Collins, 2014). The interoperability of systems and the competitive nature of information technology vendors have added to the slow progression of health information exchange

(Furukawa, 2013). The intent is for EMRs used in the care of patients to serve as an accessible resource for improving patient care. Incentive payments used to encourage provider participation are also a means of reimbursing them for the information technology needed to meet the meaningful-use requirements (Blumenthal et al., 2015). Providers can receive the incentive payment from either Medicare or Medicaid. Incentive payments are specific to the individual provider and not designated for practices or medical groups in which the provider may be a member (Blumenthal & Collins, 2014). Providers who failed to meet the 2015 meaningful-use implementation requirements face penalties that impede reimbursements.

The transition of internal operations to meet the requirements of the EMR incentive program has uncovered inefficiencies in workflows that can prohibit timely access to care (Govil, Wood, & Barr, 2012). Lack of input from the users of this new technology encourages resistance that creates a formidable barrier regarding the use of EMRs (Nguyen, Kruger, Greysen, Lyndon, & Goldman, 2014). Low rates of provider collaboration to meet meaningful-use requirements can incur a 2% penalty (Shin, Menachemi, Diana, Kazley, & Ford, 2012).

Expanding Health Care Markets

The expansion of the global market has led to a need for changes in industries accustomed to linear operations. Cultural changes fuel the need for organizational transformation. Sustainability requires an awareness of the environment, social interactions, and economics of the marketplace (De Matos & Clegg, 2013). Health care spending increased 3.9% in 2011 to approximately $2.7 trillion within the United States

(Hartman, Martin, Benson, & Catlin, 2013). Expansions of markets require management to move toward solutions that maintain a healthy vision for the organization without sacrificing ethical standards or corporate social responsibility. Adaptation requires collaboration from all levels of the organization (Cucciniello & Nasi, 2014). Leadership through empowerment can promote ownership in the process of decision making that is reflective of the values of an organization. An organization that has leadership from all levels raises the morality of the internal culture while committing to social advocacy for external stakeholders (Weiskopf & Willmott, 2013).

Leaders of organizations reflect a commitment to the process of change and the pursuit of ethical practices through flexibility and dedication, which is daunting when considering the true complex environment of health care. However, the success of change in culturally diverse markets depends on everyone’s collaborative efforts. Communicating the mind-set, values, and organizational learning across diverse specialties entails another challenge (Hogan & Coote, 2014). The primary goal of management is to establish this level of trust through culturally effective communication (Mishra, Boynton, & Mishra, 2014). Some believe leaders have only a legal, not an ethical, obligation to uphold. The consistency of open collaborations builds trust, credibility, and authenticity based on open exchanges from within and outside the organization (Mishra et al., 2014). A conflict of interest arises when a regulated requirement supersedes individual stakeholder interest.

Multicultural consumers have various values and customs that reflect their culture. Cultural influences are key components in forming moral standards and establishing a trusting business. Learning to market or communicate within the customs of the customers demonstrates an eagerness for collaboration (Lauring & Klitmøller, 2015). These components provide a holistic approach to multicultural learning for business leaders, regardless of their physical location. Communicating cultural issues and practices benefits all levels of an organization (Hogan & Coote, 2014). Approaches to carry out organizational learning become embedded within the shared culture of beliefs, values, and evolved practices (Minoja, 2012).

Within a virtual environment, everyone in an organization shares the responsibility to be more conscious of the organization's success and industry business trends. Virtual teams involve using multiple skill sets of employees from dispersed locations to achieve closer coordination with partners (Hoch & Kozlowski, 2014). These teams have some barriers to success, but like any endeavor, they require active collaboration and commitment to the continued success of the organization. Access to information is important to all stakeholders, both internal and remotely located (Greene, Dasso, Ho, & Genaidy, 2014). The availability and access to culturally sensitive information enhances decision making and is critical to sustainability. Technology increases the opportunity to expand the organizational learning experienced through virtual teams immersed in distant markets.

The need to maintain sustainability in a complex and changing environment such as the learning organizational environment inspires change (Kuipers et al., 2014). Purposeful acts of inclusion often promote a sense of ownership in the change process that resonates throughout the organizational culture (Hideg & Ferris, 2014). If a culture has shared beliefs, practices, and theories of socially acceptable actions, then a respectful appreciation of the business practices and traditions of those within this new frontier can establish a competitive advantage (Venus, Stam, & van Knippenberg, 2013). Social respect in business should not conflict with the goal of increasing profits (Steiner et al., 2014). Collaboration and inclusive planning engage stakeholders in the transition of an organization (Denning, 2013). Engaging and flexible approaches to ethical practices can establish learning patterns that continue to evolve and shape the experience of the organization (Christensen, Mackey, & Whetten, 2014). Preconceived practices of conducting business must remain adaptable to the changing requirements.

Implications on Current Operations

External changes in the marketplace define an organization’s internal cultural environment through changing demands. The methods and practice of obtaining medical information require different approaches based on the needs of the changing environment (Jamoom & Hing, 2015). Continuous learning, flexibility, and an embracing culture of change provide the foundation for efficient, cost-effective care (Channon, Riley, & Sussman, 2012). The continuous flow and transportability of information are requirements of the HITECH Act that promote the needs and expectations of the stakeholders (Blumenthal et al., 2015). Changes to current practices are inevitable but are also requirements during this transition. The focus of shared leadership in a changing environment promotes a knowledgeable, creative workforce that limits an organization’s exposure to risk (Drescher, Korsgaard, Welpe, Picot, & Wigand, 2014). Limited financial resources in diverse organizations such as community clinics can hinder the transition and adaptation of new technology (McCullough, Zimmerman, Bell, & Rodriguez, 2014).

Ethical Challenges

Ethical challenges in a diverse organizational setting can develop into learning resources that promote sustainability and raise the organization’s level of socially responsible business practices. Challenges can produce unwarranted anxiety that directly affects the internal operations and the quality of services provided to external customers. Sensitivity awareness and preparation are important for addressing issues that may challenge preconceived notions of normal practices (Guha, Grover, Kettinger, & Teng, 1997). Established dialogues with open discussion among involved members can evolve into meaningful lessons learned, and complacent practices of the past have surrendered to the diverse and dynamic forces of a growing global market.

Leaders of organizations must accept and assume the expected responsibility for collaborative change in building the organizational skill set to meet the evolving demands in a complex environment (Taplin, Foster, & Shortell, 2013). Organizational leaders with a moral purpose use ethical challenges to inspire others to their cause. The sense of purpose transfers and resonates throughout the organization to provide the driving force needed in a competitive environment (Taplin et al., 2013). These evolving demands are the factors that influence change and promote progressive learning. The interconnectedness of cultural challenges requires a progressive learning organization that can maneuver in an evolving global market (Nambisan, Kreps, & Polit, 2013). Using strategic planning applications that provide transparent and rigorous assessments of the current environment and empowering the leadership qualities within each member is important for meeting the key measure of sustainability in diverse markets (Shore & Zollo, 2014). Leaders of an adaptive organization use short-term goals and establish learning patterns that continue to meet the challenges faced. A willingness to practice in an inclusive and ethical manner can bridge the cultural divide to establish a universal culture.

Financial Implications

Financial implications are important aspects of any organization's business practices. The continual integration of finance in the implementation of information improvements in health care organizations is also important (Slight et al., 2014). Legislative changes such as HITECH promote the adoption of electronic medical records through financial incentives, integration of clinical paper operations, and education of health providers (Meeks et al., 2014). Each of these areas requires a financial investment by organizational leaders. Implementation, training, hardware, software, and loss of productivity are just some of the concerns associated with the full operation of electronic medical records (Fleming et al., 2014). The major motivator that drives the implementation and acceptance of the electronic medical record is its mandated use for the reimbursement of services (DesRoches et al., 2013). Although incentives motivate, the return on investment remains an important concern of those who manage operations. Installation expenditures, training of human capital, and initial reduction in productivity all affect the sustainability of implementing organizations (Fleming et al., 2014).

Sustainability Practices

An organization is a purposefully designed and controlled system that produces a service or product that affects society (Martin et al., 2012). The value generated through a business is more than just the tangible finances created as an outcome. Commitment and responsiveness to the needs of society are sustainable and value-driven outcomes (Cunningham, Galloway-Williams, & Geller, 2010). Socially sustainable development in a complex organization that operates in a nonlinear dynamic environment should foster human capital sustainability measures that promote the growth and development reflective of the organization’s commitment to longevity. Development as a learning process and the need to unlearn unproductive behaviors are important (Martin et al., 2012).

Concepts of sustainability apply not only to business entities that are profit oriented but also to those that provide a not-for-profit service (Lumpkin, Moss, Gras, Kato, & Amezcua, 2013). Business leaders struggle to find a competitive edge that ensures their organization’s survival among the fittest in an evolving economy. The need for sustainability applies in not only the industries that are traditionally nonprofit but also those that are profit oriented (de Lange, Busch, & Delgado-Ceballos, 2012). Choices of strategy must align with the mission of the organization (de Lange et al., 2012). Management communications to stakeholders establish the expectations of an organization in a changing society (Peters et al., 2014). Sustainable goals that enable a competitive edge in an environment with diminishing financial resources are a challenge for any business model.

Strategies for Sustainability

Organizational leaders need direction to remain viable in constantly evolving markets. Strategic planning is a situational assessment that involves taking into consideration the industry, culture, and internal and external environment of an organization to enhance its legitimacy in remaining a sustainable entity (W. L. Buchanan, 2013). Purposeful links exist between longevity and a business fulfilling its mission (Martin et al., 2012). A sustainable organizational culture is result centered and geared to maximize economic outcomes (Cunningham et al., 2010). Sustainability requires a balance between internal and external environmental, economic, and social factors (de Lange et al., 2012). A major objective of any business, regardless of the product or service provided, is sustainability (De Matos & Clegg, 2013). The collaboration of organizational leaders encourages open communication that promotes sustainable change (Kreps & Neuhauser, 2010). The promotion of and consistent operations in a changing environment are indicators of an organization's sustainability (Martin et al., 2012). An evolving landscape of business coupled with technological advances makes sustainability increasingly difficult for organizational leaders. Leaders of a successful business continuously position the organization to flourish (Farndale, Pai, Sparrow, & Scullion, 2014.

The direction and activities that organizational leaders take to ensure survival represent an organization's strategic choice (Christensen et al., 2014). Consistency is the only constant found in a competitive and evolving global market. A theory of building an organizational skill set may help to meet the evolving demands of competition (Farndale et al., 2014). The strategic choice model involves the direction and activities the leaders of an organization take to achieve sustainability (Christensen et al., 2014). This model, based on the assumption of consistently regulated actions, secures a competitive advantage in a given market. An autocratic style of planning provides a basis for leadership's vision of how an organization can best meet its mission.

A focus of the strategic choice model is the strength of the individual to forecast a set long-term vision of milestones (Christensen et al., 2014). However, the strategic choice method does not stress leveraging creative collaborations from internal resources. The health care industry is evolving from a transactional environment to an outcome-based economy (Blumenthal et al., 2015). A complex internal environment in an organization reflects Burnes's (2005) concern toward the dynamic and nonlinear systems' ability to change. Leaders of complex organizations that operate in nonlinear dynamic environments can build sustainability and be cognizant of its environmental impact (Martin et al., 2012).

Sustainability as a goal needs the integration of internal and external resources to move an organization forward. Collaborative sustainable strategies of internal and external stakeholders are a complexity of the health care industry (Yip et al., 2014). The solution for innovative strategies as well as partnerships should include the complexity of technical, economic, environmental, and social requirements (Ameer & Othman, 2012). A major concern with the meaningful-use requirements of the HITECH legislation is the ability to integrate all medical information requirements to afford the financial penalties that began in 2015. Collaborative strategies from health care leaders build innovative practices in adapting electronic medical records (Kruse et al., 2014). Innovative quality improvements increase the delivery of services as well as the longevity of organizations (Jaca, Viles, Mateo, & Santos, 2012). Promoting health information resources is vital to organizations' internal resources, mission, and sustainability (Mårtensson & Hensing, 2012). However, in a survey of providers, only 41.5% of providers in the United States were using an electronic medical record system fully or partially (Hsiao et al., 2014). This lack of consistency compromises the quality of care provided to patients while maintaining a higher cost of care. The information infrastructure improvements implemented within health care organizations can build equilibrium between sustainability and reasonable costs of care to patients (Hillestad et al., 2005).

Transition and Summary

Section 1 included an introduction to the business background, the purpose, and the foundation of the qualitative study supported by a review of peer-reviewed literature. The globalization movement in the health care industry has included new opportunities for organizational leaders to expand into unfamiliar territory. Globalization often refers to the connectivity of various cultures and economies (Haque & Pathrannarakul, 2013). Changes in business practices or operations require an awareness of the social customs, economic trends, and strategic alignment to the expanding needs of the shareholders (De Matos & Clegg, 2013). The electronic medical record as a promising instrument in the health care industry supports sustainability through the portability and accuracy of medical information to improve the availability of records and reimbursement from insurance providers (Higgins et al., 2012). Using electronic medical records includes recognized benefits, yet some health care providers remain reluctant to make this change in the physician–patient relationship (Doyle et al., 2012). An objective of Section 2 is to provide an in-depth outline of the framework and method selected to support the qualitative research process.

Section 2 is a discussion of the project. The research framework established within Section 2 includes the method, design, participants, and treatment of the data. Section 3 includes a synthesis of the findings of the study through the analysis, as well as recommendations for additional research.

Section 2: The Project

Section 2 includes a discussion of the project. In this section, I offer the purpose statement, and discuss my role as researcher, participants, research method and design, population sampling, and research ethics. Data collection, data organization techniques, data analysis techniques, reliability, and validity are additional discussion topics, followed by the transition and summary.

Purpose Statement

The purpose of this exploratory single case study was to explore the strategies nonprofit community health care leaders used to implement electronic medical records that are consistent with meaningful-use requirements. The population for this study included health care leaders in a nonprofit community clinic in Washington, D.C. Nonprofit community health care leaders participated in semistructured interviews to share their experiences with implementing medical records systems that are consistent with meaningful-use requirements. My analysis of stakeholders' experiences may contribute to positive social change by providing a detailed understanding of the implementation of electronic medical records, thereby accelerating the dissemination of complete, accurate, and timely medical knowledge.

Role of the Researcher

The role of the researcher is to function as the primary instrument for the data collection process and to maintain strict adherence to ethical guidelines (Yilmaz, 2013). The researcher's role in a qualitative study includes being a data collection instrument, analyst, and collaborator (Yin, 2014). The researcher in a qualitative study functions as the integral agent for the design, data collection, analysis, and reporting the results in adherence to ethical guidelines (Yin, 2014). The primary source of data for this study was interviews with nonprofit health care leaders. Researchers in qualitative research who interpret social interactions from the perspective of the participant require an emphasis on descriptive procedures to ensure validity and reliability (C. Marshall & Rossman, 2014). Incorporating quality assurance and peer-review checks with the participants helped me to ensure the accurate collection, transcription, and analysis of the data (Grossoehme, 2014).

In accordance with the *Belmont Report*, I adhered to three principles of ethical conduct: respect of a person, beneficence, and justice (U.S. Department of Health and Human Services, 1979). My adherence to principles of the *Belmont Report* ensured compliance and transparency to the research participants in reference to the research risk, benefits, and protection of their privacy. The qualitative study did not include any participants who were part of vulnerable populations, such as prisoners or children. The final doctoral study provides the Walden IRB approval number to ensure ethical compliance.

A qualitative study includes an opportunity for biased interpretations and external influences that compromise study results. Continued interactions and fieldwork observations can bias a researcher’s perspective (May, Li, Mencl, & Huang, 2014). Preconceived beliefs and opinions can also influence researchers’ perceptions of the participants’ personal accounts, and interactions with participants may lead to misinterpretations or influenced responses (May, Li et al., 2014). To mitigate any bias influence, Sorsa et al. (2015) recommended bringing issues to light and engaging in bracketing to block one’s experience. Researchers use bracketing to set aside their preconceived notions to ensure the validity of a study (Sorsa, Kiikkala, & Åstedt-Kurki, 2015).

The credibility of the research process is dependent on the skill of the researcher as the main instrument used to collect, organize, and interpret the data (Grant & Schmittdiel, 2015). Researchers who follow the principles that support epoché transcend their own experiences and concentrate on those of the participants (Moustakas, 1994). Researchers can block their own experience to explain a phenomenon regarding the participant’s inherent system of meaning by bracketing, which is a systematic way of setting aside various assumptions (Sorsa et al., 2015). By setting aside my prejudgments, I was able to develop new knowledge. Regardless of any prior working knowledge of the participants, my goal was to operate within the objective boundaries between their experiences and new meanings I gained from the research data.

The researcher’s role in a qualitative study includes that of a data collection instrument, analyst, and collaborator (Yin, 2014). The use of a documented qualitative interview protocol ensures the credibility of the research (Kristinsson, 2007). I used an interview protocol as a procedural guide for the interview process (Appendix A). The in-person method of data collection leads to an unobstructed view of the participants that serves as the sole means by which a qualitative researcher collects data (Rubenstein, 2011). Use of a semistructured interview allows some level of flexibility to encourage an honest discussion with participants compared to questionnaires or other data-gathering instruments (Rowley, 2012).

Participants

To be eligible for this study, participants had to be nonprofit health care leaders in a Washington, D.C. clinic who had used strategies to implement electronic medical records that are consistent with meaningful-use requirements. My objective was to gain insight into the strategies that health care providers use to implement electronic medical records in a nonprofit clinic. To obtain sufficient information, my plan was to interview a minimum of six participants to reach data saturation. Small sample sizes are adequate when researchers are insiders (Unluer, 2012). Data saturation occurs after the researcher has reached a point of repetitive or redundant responses (Yin, 2014). In qualitative research, data saturation establishes the sample size (Walker, 2012).

Eligibility Criteria

The eligibility criteria for participants in this study were that they must be health care leaders who had strategies for implementing electronic medical records in a nonprofit clinic. Health care leaders have the responsibility of leading and influencing diverse teams in reaching the mission of the organization (Taplin et al., 2013). Managers as leaders can provide an atmosphere of trust through coaching techniques (Beattie et al., 2014), but the power to influence others is not a characteristic held solely by those with leadership positions. Holding a position of influence does not automatically bestow the individual with leadership qualities (Edwards, Schedlitzki, Turnbull, & Gill, 2015). My inclusion of individuals with varying roles provided the opportunity to include different perspectives in the study (Rowley, 2012). All interview participants had some influence over directing or leading the implementation of electronic medical records.

Strategies for Gaining Access to Participants

Based on the national average of office-based physicians with EMR-capable systems, the geographic region I selected for the study was particularly appropriate. Approximately 47% of office-based physicians in the Washington, D.C. area have EMR-capable systems, compared to a national average of 43% (Hsiao et al., 2014). Researchers initially gain access to participants by securing approval from the organization under study and then sending an open invitation to potential participants (Rowley, 2012). I gained initial access to the research participants through telephone calls or e-mails using the contact information provided by the clinical director.

The organization chosen for this study was a nonprofit organization that provides comprehensive outpatient medical, dental, and mental health services. Use of an organization agreement provided evidence of the willingness and approval of the organization leaders to participate in this research (see Appendix B). Additional challenges to gaining access can include the willingness and availability of participants (Rowley, 2012). As a strategy to gain access to the participants, I identified potential participants by using the organization’s internal phone directory after gaining the approval and cooperation from organizational leaders. I then contacted potential participants by phone, and in a follow-up email. A draft of the e-mail is in Appendix C. Before gathering data I requested written permission from the organization (see Appendix B) as a requirement of the Institutional Review Board (IRB) application process. I have kept answers to the interview questions confidential to reduce any influence on the participants and to protect their privacy (Gibson, Benson, & Brand, 2013).

Strategies for Establishing Working Relationship With Participants

The researcher is the main instrument in a qualitative study, and is responsible for promoting the integrity and credibility of the study (Yin, 2014). Establishing a rapport between a researcher and a participant increases the level of open and frank discussion in a qualitative study (Roulston, 2014). Self-disclosure with a participant in reference to the purpose of a study and the projected length of time increases the amount of rapport with the participant (Seidman, 2013). Establishing a mutually trusting relationship and understanding of the study with the participants is necessary to produce quality data (Rowley, 2012). An awareness of the cultural landscape and organizational practices provides an understanding of the social norms (Unluer, 2012). This level of entrenchment in the organizational structure can lead to improvements in the depth of engagement between a researcher and a participant (Unluer, 2012).

The study involved establishing contact with the potential participants after the completion of the IRB approval process. I notified each potential participant of my ethical commitments in the study, including their ability to leave the study and the confidentiality of the information provided (see Appendix C). Individuals who wished to participate contacted me either by phone or through their personal e-mail to protect their confidentiality. A researcher's willingness to display outward expressions of judgment, surprise, or shock increases a participant's willingness to talk openly in a nonthreatening environment (Qu & Dumay, 2011). Projecting an open and knowledgeable approach in communicating with the participant is important in establishing oneself as a research professional (Rowley, 2012).

Research Method and Design

The intent of the study is to reveal the strategies that health care providers use to implement an electronic medical record to meet the meaningful-use requirements. This section includes the framework used to expand the nature of the study. I provide a justification for the method and design selected, along with reasons for not selecting other methods and designs.

Research Method

Qualitative research involves exploratory analysis and is important for identifying trends before their emergence in quantitative databases (Bernard, 2013). Management research based on quantitative methods does not sufficiently support the realist perspective of understanding the lived phenomenon in a practitioner-oriented discipline (Goldberg, 2012). The level of understanding of a phenomenon from the viewpoint of the participants in the environment under study decreases when choosing a quantitative method (Galvin & Todres, 2012). Qualitative research involves exploring the holistic interpretation of experiences that explain a phenomenon through the understanding of the participant (Yilmaz, 2013).

The focus of qualitative research is exploring the formation of lived experiences based on the individual beliefs and cultural influences of the participants (Denzin, 2012). Researchers in a qualitative study value the participants’ perspectives and the ways the perspectives inform the personal meaning held by the participants with the potential to develop a different perspective for future studies (Houghton, Casey, Shaw, & Murphy, 2013). A qualitative study is inquiry based and involves exploring a phenomenon through questions, narrative descriptions, and analyses of emerging themes (Wolcott, 2014). Researchers seek to understand the meanings individuals make of their experiences (Houghton et al., 2013). Using the qualitative method aligns with the goal to explore the strategies used by the participants to implement electronic medical records consistent with the meaningful-use requirements.

The qualitative approach goes beyond the perceived set boundaries of the quantitative approach. Researchers use qualitative research to establish clarity in a phenomenon experienced through perception; this objective is distinct from the objective in quantitative research (Dworkin, 2012). Qualitative researchers seek to answer questions that may not support using predefined variables that extend beyond a quantifiable perspective (Frels & Onwuegbuzie, 2012).

A quantitative approach, which I initially considered for the study, involves collecting and examining data in an unbiased manner through instruments such as surveys (Rubin & Rubin, 2012). A quantitative approach involves examining the relationship between the independent variable and the dependent variables to answer proposed theories (Yilmaz, 2013). A quantitative method would include a focus on numerical data and statistical processes to provide unbiased information used to assess individual experiences associated with the research question (Klassen et al., 2012). The quantitative approach conflicts with the holistic view advocated through the qualitative method (C. Marshall & Rossman, 2014) and was inappropriate for this study.

The advocacy and participatory worldview considered under the quantitative method often include a focus on a political agenda that calls for reform, thereby highlighting a need to improve the lives of the participants (Suhonen, de Villiers, & Sutinen, 2012). Concepts of the advocacy and participatory worldview operate equally in qualitative and quantitative research approaches with a proactive and social agenda as a driver (Hicks et al., 2012). However, the worldview may collectively shape the experiences, beliefs, and understanding of the practical applications of the research in a natural setting that does not prohibit responses (Neuman, 2011).

I considered using the mixed-methods approach to combine unbiased statistical information from the quantitative method with the holistic perspective of the qualitative method (W. Zhang & Creswell, 2013). The mixed-methods approach can deviate from the intent to explore participants' lived perspective through variations in the questioning used (Malina, Hanne, Nørreklit, & Selto, 2011). Using the mixed-methods approach, although supportive of the qualitative method, can complicate the intent of exploring participants' experiences through variations in the questions used (Malina et al., 2011). Adaptation patterns established in developments within health systems are more complex than a researcher can explore in a mixed-methods analysis (Bernard, 2013). Issues with implementation, typically noted as centered in behavioral attitudes, transcend quantifiable methods (McAlearney, Hefner, Sieck, Rizer, & Huerta, 2015).

The qualitative research approach might allow for a deeper discovery into the phenomenon's relevance to health service research by focusing on the participants' lived experience (C. Marshall & Rossman, 2014). Conducting a qualitative method involves providing a rich perspective of the social and cultural phenomenon studied (Toloie-Eshlaghy, Chitsaz, Karimian, & Charkhchi, 2011). Researchers using the qualitative method encourage the exploration of known and unknown phenomena in a field of discovery such as health care (Klassen et al., 2012).

Social constructivists seek to explore the complexities of a phenomenon through a holistic viewpoint. Qualitative management research serves as a conceptual instrument in identifying the form of management used to categorize the lived experiences of the stakeholders (Nelson et al., 2015). The qualitative method served as an appropriate framework for exploring and identifying the participants' experiences with the phenomenon from the perspective of the researcher's lens (Creswell & Miller, 2000). Organizational leaders' perceptions of information technology implementation in health care organizations may help to build an understanding of the equilibrium between sustainability and reasonable cost of operations in providing care to patients (Epstein, 2007). A detailed analysis of the environment is necessary to understand the complexities and dynamics of an organization's practices to maintain sustainability during implementation.

Research Design

I compared the qualitative designs of the case study, phenomenology, and ethnography and chose a case study design for this study to determine an answer to the research question that required an understanding of social or organizational processes. The case study research design promotes an exploration of issues based on in-depth interviews and archival data (Moll, 2012). I explored the strategies of nonprofit health care leaders used to implement the use of electronic medical records. A functional understanding of health care stakeholders and their organizational mission was pertinent to this research.

Another qualitative design, ethnography, involves seeking commonalities among individuals with a focus on the culture over time in a natural setting (Creswell & Miller, 2000). The intent of this study is to reveal experiences rather than the culture in which these experiences occurred. A case study also involves a broad, in-depth exploration of a phenomenon in its natural setting (Yin, 2014).

In a case study research, researchers examine a single case or multiple cases through in-depth data collected from multiple sources and the case-based themes reported, rather than explore individuals' personal experience and perception. Using such a broad perspective requires a central theme that resonates throughout the questions (Creswell & Miller, 2000). The primary source of data in this study was in-depth interviews with health care leaders in a nonprofit health care clinic. Interviews are an appropriate method in research to gain knowledge from the experiences of individuals (Jalongo, 2013). Semistructured interviews include flexibility in the style or format of the questions (Qu & Dumay, 2011). Semistructured interviews are less rigid than structured interviews and therefore encourage a reflective response from participants (Rowley, 2012). For these reasons, I selected a qualitative method and an exploratory case study design. The study involved analyzing, coding, and reviewing transcripts of the interviews for themes. Additional information came from the literature review and the review of archival published information from the website of the U.S. Department of Health and Human Services.

To reach saturation, according to Yin (2014), the sample size needs enough members to establish repetitive or redundant responses. Data saturation is the point at which no new information or insight emerges (Seidman, 2013). The two-step process to address validity included initially selecting a minimum sample size (n = 6) based on the literature review. If data saturation occurred, then the second step involved two more interviews, as recommended by Walker (2012).

Population and Sampling

A purposeful sampling strategy provides participants from varying medical disciplines and levels of leadership authority in an organization (Dworkin, 2012). Obtaining diverse participants to meet the intent of the research is the objective of purposeful sampling (Walker, 2012). The population for this study was nonprofit health care leaders who have strategies to implement an electronic medical record system successfully. Sampling, as a cornerstone of research integrity, can vary based on research design and questions (Uprichard, 2013). Purposive sampling is a process for selecting participants who have experienced a phenomenon and could lead to answers to a research question (B. Marshall, Cardon, Poddar, & Fontenot, 2013). The purposeful sampling method is a nonprobability method of sampling in which a researcher purposefully selects participants who suit the purpose of a study (Wilson, 2012). Purposive sampling was appropriate for targeting appropriate participants for this study to align participants with the research question. The participants were nonprofit health care leaders with strategies to implement the use of electronic medical records.

To answer the research question, I interviewed seven participants who had strategies to implement electronic medical records. A semistructured interview process with open-ended questions lasting approximately 45 minutes is suitable for exploring participants' perspective, as well as for maintaining the focus of a study (Gough & Madill, 2012). Data saturation is the guiding principle that affects sample size in qualitative research and typically occurs after a researcher has finished identifying themes (Walker, 2012). A small sample size of at least six participants is adequate when those interviewed are experts (Thomas & Magilvy, 2011). The small sample size is consistent with Unluer's (2012) assertion that a small sample size is adequate when a researcher is considered an insider within the field of study.

A goal of the in-person interviews was to obtain information to answer the central question of how the perceptions, experiences, strategies, and collaboration of organizational leaders have affected the meaningful-use requirement. Community health care organizations in the Washington, DC, area are at the epicenter of information technology in a collaborative business environment. The size of community health clinics and the services provided vary depending upon the area and needs of the community.

Participants solicited for the study were nonprofit health care leaders with strategies to implement the use of electronic medical records. The participants had daily interactions with electronic patient information or an active role in supporting clinical operations. Solicited health care leaders at the health care clinic selected for the study provided varying levels of outpatient care comparable to other nonprofit clinics in the Washington, DC, area. Administrative and clinical staff members of the nonprofit community clinic were the participants for this study. The participants were the main source of information. Similar nonprofit health care organizations with the same mission operate in the Washington, DC, area. Participants for this study had a focus on the strategies for implementing an electronic medical record in a nonprofit health care clinic. Stakeholders as participants in the study encourage participation through active engagement in the research (Rowley, 2012).

The target population within the exploratory case study was administrative and clinical care providers in a metropolitan nonprofit community clinic. Seven participants who shared an organizational relationship through their use of electronic medical records in the organization were the participants. The selection criterion was a predetermined group of participants. Recruitment of participants took place for approximately 30 days to ensure a maximum number of participation or until repeating themes begin to emerge as referenced by Robinson (2014). I scheduled a time and location for the interviews on-site or at a location within commuting distance of the organization. The location of the interview was at the discretion of the interviewee, as long as it was a private, comfortable location within commuting distance, such as a conference room at a local library. Flexibility encourages open and frank conversations with participants (Qu & Dumay, 2011; Rowley, 2012).

Ethical Research

Research ethics is essential for protecting participants' rights, safety, dignity, and well-being (U.S. Department of Health and Human Services, 1979). This exploratory case study involved collecting data through semistructured interviews. A qualitative interviewing process can include an established method of fostering the routine evaluation of ethical issues (Aluwihare-Samaranayake, 2012). Before I collected any data from participants, Walden University's IRB reviewed the study proposal for ethical compliance (IRB Approval No. 04-13-16-0172508, expires April 12, 2017). Adherence to ethical practices supports the credibility of a study (Jacob & Furgerson, 2012).

Informed consent (see Appendix D) serves as an assurance of a researcher's commitment to ethical practices, as recommended by researchers at the National Institutes of Health (Skinner et al., 2015). An informed consent form includes (a) a description of the study, (b) rights of the participants to withdraw, (c) the voluntary commitment of the participant, and (d) the reach method objective to safeguard sensitive information (Kristinsson, 2007). Participants were able to withdraw from the study at any time during the interview process. I distributed the informed consent form in person or via e-mail prior to the interview. Receiving information prior to an interview can alleviate a participant's concerns (Rowley, 2012). No participants received incentives in exchange for an agreement to participate. Any data collected will remain locked in an office file cabinet for five years before I archive the data on an external hard drive. The information will be accessible only to me.

Interactions between a researcher and participants can result in biased interpretations of roles (May, Luth et al., 2014). Researchers should take note of any potential bias through self-reflexivity prior to beginning the data collection process (Pezalla, Pettigrew, & Miller-Day, 2012). To protect the participants, I did not use names that identified the participants. Maintaining the integrity of research includes protecting the participants' right to anonymity and possibly influencing the response given (Smit, 2012).

Data Collection Instrument

The primary instrument for data collection in a qualitative study is the researcher (Yin, 2014). The interview is the primary format used to collect data in a qualitative study to understand participants' experience of a phenomenon (Bernard, 2013). In a semistructured interview performed in a relaxed environment, participants can focus on the topic of discussion (Yin, 2014); however, using an interview as the sole source of data without supporting documentation can threaten the validity of a study (Al-Yateem, 2012). Although interviews were the main source of data for this project, archival data sources from the organization's policies and legislated mandates also underwent analysis. I obtained organizational documents and policies and received approval through the organization (see Appendix B). To improve the productivity as well as the validity of interviews, use of a tape recorder can help (Houghton et al., 2013). The purpose of collecting data in this study was to understand the strategies nonprofit health care leaders had used to implement electronic medical records consistent with the meaningful-use requirements. The intent of the data collection process is to obtain meaningful responses through unstructured thought-provoking questions (Bernard, 2013). Interviews serve as the conduit to gain an understanding of a specific phenomenon (Rowley, 2012; Thomas & Magilvy, 2011). The structure and use of the open-ended interview question format can encourage open communication and expand upon the participants' analysis (Wheeler & Bell, 2012). The focus of the information collected is to understand the strategies that nonprofit health care leaders use to implement an electronic medical record to meet the meaningful-use requirements. The open-ended interview questions contained in the interview protocol (see Appendix A) were in a semistructured format to explore the experiences of the participants.

The basis of the interview questions for the study was Behravesh's (2010) study of end users' perspectives of health information technology implementation narrowed to an idiographic mode of inquiry specific to the stakeholders of a nonprofit community health care organization. Asking participants the same set of questions and reviewing the transcript of their responses help to ensure the integrity of a study (Plakhotnik, 2012). Beginning the interview session with general questions concerning a participant's background encourages open and fruitful discussion (Aberbach & Rockman, 2002). Researchers monitor changes in scope and perspective for adherence during interviews. I encouraged participants to inform me if any question was outside their experience. The study did not include a pilot study because I was able to ask additional questions and to answer questions that arose from participants.

The process for enhancing the reliability and validity of an instrument is to design the instrument to ensure dependability and credibility (Truglio-Londrigan, 2013). The composition of the interview protocol designed for collecting data to answer the research question increases the reliability (Yin, 2014). I used the questions in the interview protocol instrument (see Appendix A) to ensure consistency during the interview process. The questions were clear and in a semistructured format so participants could share their perceptions and ideas of the phenomenon of adapting an electronic medical record system.

Data triangulation increases reliability in research data and promotes clarity in understanding a phenomenon (Yin, 2014). The documents used for data triangulation originated from the organization’s previous policies, legislated affordable health care mandates, and the U.S. Department of Health and Human Services website. Access to internal organizational documents and policies resulted from a signed agreement between organization leaders and me and served as an additional data source (see Appendix B). Health care systems as a single unit, or with complex components, undergo change based on regulations but have a capacity to adapt through networking, mentoring, and other informal learning interactions (Sturmberg et al., 2014). My goal as the researcher was to operate within the objective boundaries gained from the research data.

Data Collection Technique

Open and clear discussions on the purpose of the study provided transparency for each interested participant. The principal method of data collection in a qualitative case study is interviewing participants to understand their experience regarding a phenomenon (Yin, 2014). The semistructured interviews lasted an average of 45 minutes for each participant. Using the complexity theory as guiding conceptual frameworks, I explored the strategies with study participants using a semistructured interview format. The process involved recording the interviews, analyzing the transcripts, coding the data, and developing themes that answered the main research question. Archival data in the form of documents from the organization's policies, procedures, and published legislated guidance enhanced data triangulation.

The chief clinical officer at the nonprofit organization received a request for approval of this study as a representative of the organization after I gained the Walden University IRB's permission to conduct the study. An agreement for access to organizational policies and procedures is in Appendix B. With the approval received, I sent e-mail invitations (see Appendix C) and an attached consent form (see Appendix D) to potential participants. The participants, selected through the purposeful sampling method, provided a signed informed consent form at the time of the interview. The principal method of data collection was face-to-face interviews guided by six semistructured interview questions lasted an average of 45 minutes for each participant. Using face-to-face interviews provided a greater understanding of how the perceptions, experiences, and strategies of organizational leaders affected the meaningful-use requirement.

The study involved following an interview protocol (see Appendix A) to collect data in the interview process to ensure consistency. An interview protocol serves as a guide for the discussion in a predetermined format. Participants reviewed, discussed, and signed the informed consent form before the interview (see Appendix D). I greeted participants and provided an opportunity to introduce their experience using electronic medical records. Data collection included an Olympus digital audio-recording device and involved writing down observations during the interviews. The observation notes supported the recording instrument's validity (Creswell & Miller, 2000). Transcribing the audio recordings to use in the analysis took place after completing the interviews. A rigorous and methodical practice is necessary for the collection, analysis, and interpretation of data (Hanson et al., 2011). The quality review of the data began at the start of the data collection process and involved encouraging further discussion through the design of the questions (Yin, 2014). Member checking is a means of validating the data synthesized from participants' responses to ensure the accuracy of the data (Anosike, Ehrich, & Ahmed, 2012). Member checking occurred at a scheduled time after the initial interview process, as indicated in the interview protocol (see Appendix A). During member checking, each participant acknowledged that the emerging themes were consistent with the participant's description of his or her experience.

Protecting participants and safeguarding the data help to ensure research integrity is paramount. The interview information contains the date, time, and general participant demographics as well as responses. The information collected will remain protected and stored on a password-encrypted database for 5 years.

The semistructured interview questions used in this inquiry originated in part from a previous study of end users' perspectives of health information technology implementation, although the questions for this study had a narrower focus than in the study performed by Behravesh (2010), which was a nonprofit community health care facility. I monitored changes in scope and perspective during the interview. A central goal of the research is to create new knowledge (Plummer & Acs, 2014). As recommended by Moustakas (1994), participants need encouragement to expand upon their lived experiences. In the semistructured interview format, researchers ask probing questions that arise during the interview (Wheeler & Bell, 2012). Member checking is a method that ensures the accuracy of the interpretation of the information obtained from participants (Rowley, 2012). Member checking the data synthesized from participants' response ensures the accuracy of the data (Anosike et al., 2012). Member checking occurred at a scheduled time after the initial interview process.

Data Organization Technique

The data collected for this research originated from semistructured one-on-one interviews organized into sections based on the participants. Each category of research resources provided a holistic foundation of electronic medical record implementation. Data and material used include literature review articles, interview notes, and transcripts. I will save the transcribed information for 5 years, as recommended by Jacob and Furgerson (2012). I captured specific interview information such as date, time, and general participant demographics in a log. Participants had a unique alphanumeric identifier based on their clinical or administrative position to protect the confidentiality of the participants, as suggested by Gibson et al. (2013).

NVivo10 was the tool used for managing, coding, and organizing the data into themes for further qualitative data analysis. The software alleviates reliability concerns associated with human error (Castleberry, 2014). Researchers use NVivo10 textual analysis software to build a reliable foundation based on grouping themes. Data analysis software such as NVivo10 supports using transcription and includes coding capabilities that increase the quality of the information captured (Castleberry, 2014). The study involved creating themes developed from the data by recording interviews, transcribing notes, and coding data to reflect the perceptions and experiences of the research participants, as recommended by Stone (2013). Researchers use field notes to identify themes that are applicable to rich narrative data (Smit, 2012).

A computer thumb drive is the means for storing participants’ transcribed interviews. A locked file cabinet is an appropriate storage location for safeguarding the data, audio tapes, thumb drive, and a backup disc of the separate Microsoft Word files for each participant, as recommended by Mutula (2014). The data will remain archived for 5 years after the completion of the study. Protecting data ensures the reliability, consistency, and repeatability of the research procedures (Yin, 2014).

Data Analysis

The purpose of data analysis is to synthesize information into a construct that is descriptive of a participant’s experience (Wilson, 2012). NVivo10 software was suitable for managing the data and facilitating the accuracy of data analysis. The qualitative analysis of data using software involves a content review and frequency count of the information collected through the interview questions (see Appendix A) from the perspective of the participants’ reflective interpretations (Jalongo, 2013). Researchers develop themes from the synthesis of data using coded phrases and words (Bluhm et al., 2011). I performed data triangulation based on documentation obtained from more than one data source in this study. Triangulation enhances the reliability and credibility of a study (Marshall & Rossman, 2014). The data sources used for data triangulation came from archival data from the U.S. Department of Health and Human Services website regarding meaningful-use requirements and organizational policies. Using multiple sources of documentation serves to enhance the depth of a study and to reduce bias (Yin, 2014).

Semistructured interviews were the primary data source for this study. A process to establish meaning from the interview data involves coding participants' statements into clusters of invariant constituents, single concepts, or ideas to develop theme clusters (Stone, 2013). I used a five-stage data analysis process in this study. The data analysis consisted of the following steps recommended by Yin (2014):

1. Collect the data.
2. Separate the data into similar groupings.
3. Group the data into themes.
4. Assess the data.
5. Develop conclusions.

I imported the transcribed data from the interviews into NVivo from a Word document for grouping. NVivo provides tools for data analysis and validity (Buchanan & Jones, 2010). Each participant received a copy of the preliminary analysis of the data to verify the content. Analyses of qualitative data include developing categories of relevancy to the research (Mazaheri et al., 2013). I used a color-coding system to identify themes and key phrases within data as recommended by Wilson (2012). I then used data codes to establish patterns from the data, research theory, and expected goals of the study. The coding process is a method of characterizing the content of the data into meaningful themes or trends (Smit, 2012).

Arranging the codes by color revealed the participants’ level of access expectation (purple), influence into implementation training (yellow), operational reporting benefits of the system (green), and quality improvements (red). Theme discovery occurs through the manifestation of similar expressions in the data (Opler, 1945). I compared reoccurring themes that aligned with the research question, problem, and conceptual framework to the existing literature for emergent concepts to improve internal validity, as recommended by Vaismoradi, Turunen, and Bondas (2013). This analytical approach was also suitable to use with supporting documents such as internal policies, notes, and legislated guidance. Combined outcomes included themes that provide an understanding of what strategies nonprofit health care leaders use in the implementation of electronic medical records to meet the meaningful-use requirements.

Reliability and Validity

The strength and reliability of a case study depend on the design and measures used to capture the supporting evidence (Yin, 2014). Researchers’ subjective influence may limit the reliability and validity of the data collection and findings in some cases (Smit, 2012). The legitimacy and credibility of a study are in part dependent upon the transferability of the content of the findings (Yilmaz, 2013).

Reliability

Researchers traditionally used reliability in reference to quantitative studies with a positivist perspective and strived to achieve data analysis procedures that other researchers could replicate to obtain the same or similar findings (Grossoehme, 2014). Qualitative researchers should provide a detailed protocol for data collection to ensure another researcher can replicate the procedure used for another qualitative study (Yin, 2014). The trustworthiness of a qualitative study depends on the transferability, dependability, and credibility of the data (Lincoln & Guba, 1985). Data collected from the interviews stemmed from the interview questions, and each interview participant provided a unique perspective and unique data. I followed an interview protocol (see Appendix A) that supported the reliability of the study, data collection, and data analysis. Following the procedures of an interview protocol ensures the credibility and transferability of a study (Yin, 2014). Transferability increases when there is transparency in the design, data collection, and coding (Lincoln & Guba, 1985). In brief,

1. I asked each participant the same interview questions.
2. I reviewed the transcribed data and notes for clarity.
3. I performed a review of the data analysis with each participant through member checking to ensure the credibility of the information captured.
4. I ensured the data analysis interpretations used for color-coding themes were consistent during member checking.

Validity

The validity of research is dependent upon evidence-based interpretations of the findings (Smit, 2012). Documenting processes for consistency to add clarification as a means of exposing any biased interpretations seen from the researcher's point of view can help to mitigate any occurrences of validation and quality issues (Denzin, 2012). I triangulated methodological data in the review of emerging themes based on information received from participants and organizational documents. Triangulation is a method to ensure credibility in data interpretation (C. Marshall & Rossman, 2014). The data triangulation elements are as follows: (a) obtain information from participants, (b) review archival documents, (c) review organizational documents such as policies and procedures. Collecting information through triangulating data mitigates failures in reliability and validity (Denzin, 2012).

Triangulation is another means of cross-referencing research that adds validity and credibility (Fielding, 2012). Descriptive procedures can help to ensure validity and reliability (Grossoehme, 2014). Qualitative research includes internal determinants of validity to ensure the dependability and trustworthiness of a study (Yin, 2014). Member checking and participants' verification of the data analysis is a means to achieve research dependability and ensure the accuracy of the interpretation of the data (Anosike et al., 2012).

Internal validity refers to the valid conclusions generated using a research instrument (Yin, 2014). A method of internal validity involves returning completed transcription analysis to participants as a means of verifying the accuracy of the transcribed data and the qualitative findings (Rowley, 2012). The participants' review of the data analysis enhances the validity of the study (Wolcott, 2014).

Transition and Summary

Section 2 included a description of the processes and procedures used for the research data in the qualitative exploratory case study. The objective of this section was to describe the research steps used to ensure the credibility of research practices. This section included in-depth information on the method, ethical concerns, population, sample, reliability, and validity. Each section included detailed information that supported the structure and integrity of the study.

Section 3 includes the findings from the study, as well as the applicability of business practices. Key findings and results appear in detail. The final section also includes a summarization of the investigation and implications for social change.

Section 3: Application to Professional Practice and Implications for Change

Introduction

In this section, I present findings from my analysis of data gathered from open-ended, semistructured, face-to-face interviews with leaders in nonprofit community health care organizations. Section 3 includes an in-depth overview of the study, a presentation of the findings, discussions of its application to professional practice and implications for social change, and recommendations for action. The section concludes with recommendations for further studies and a reflective summary on my experience conducting the study.

The purpose of this exploratory single case study was to explore the strategies nonprofit community health care leaders use to implement electronic medical records that are consistent with the meaningful-use requirements. The study included seven nonprofit health care leaders in Washington, D.C., who shared their experiences implementing electronic medical records in ways consistent with meaningful use. The participants revealed the key strategies developed in their implementation and use of the electronic medical records.

All the participants expressed challenges in understanding the exact metrics used to meet meaningful-use requirements. Each participant understood the specific discipline’s role in implementing and using the electronic medical record in support of the meaningful-use requirements. Only four of the seven participants (57%) had any extensive formal training to expand their understanding of the complete functionality of electronic medical records. Only three participants (42%) were able to explain their overarching organizational progress toward full implementation. The participants' support in using computerized medical records varied based on their clinical function and training. Each participant understood that the objective of implementing the electronic medical record was to improve access and the quality of data. In the following sections, I analyze the themes derived from the collected data.

Presentation of Findings

The guiding research question for the study was as follows: What strategies do nonprofit community health care leaders use to implement electronic medical records that are consistent with meaningful-use standards? In this case study, I collected data from primary sources that included scholarly literature, participant interviews, notes, and archival organizational data. The primary source of data was in-depth interviews with leaders of a nonprofit community health care organization. The study involved triangulating the data received from participants and the organizational documents. Triangulation is a method used to ensure credibility in data interpretation (C. Marshall & Rossman, 2014).

Drawing on complexity theory as guiding conceptual framework, I used a semistructured interview format to explore the participants' strategies for EMR implementation. The participants responded to the same interview questions, and I recorded their responses for accuracy. A professional transcription service transcribed the responses of each participant. Each of the participants validated the synopsis of their response through member checking, a validation method used to ensure the accuracy and intent of the participant's recorded response (Fusch & Ness, 2015). Further review of the data collected appears in the following subsections. Four themes emerged from the data: (a) access to information, (b) quality of care, (c) training, and (e) reporting implications.

Participant Demographics

The participants I solicited for this study were nonprofit health care leaders who had strategies to successfully implement an electronic medical record system. Leaders at the health care clinic selected for the study provided varying levels of outpatient care comparable to leaders at other nonprofit clinics in the Washington, D.C. area. A requirement of the study was that participants have daily interactions with electronic patient information or an active role in supporting clinical operations.

A purposeful sampling strategy provided participants from varying medical disciplines and levels of leadership authority in the organization (Dworkin, 2012). My objective for using this sampling method was to obtain diverse participants to meet the intent of the research. Recruitment took place over the course of approximately 30 days to ensure that I obtained the required number of participants to ensure data saturation. The demographics of the administrative and clinical staff selected through purposeful sampling appear in Table 1.

Table 1

Participant Demographics

Participant	Professional discipline	Range of years with organization
P1	Compliance and outreach coordinator	5-10
P2	Supervisory medical administration	1-5
P3	Billing and coding	1-5
P4	Nursing	1-5
P5	Supervisory billing and coding	5-10
P6	Medical physician	1-5
P7	Medical referral specialist	1-5

Overview and Thematic Development

The primary source of data was in-depth interviews with health care leaders in a nonprofit health care clinic. Additional information came from scholarly literature and archival information from the U.S. Department of Health and Human Services website. I compared reoccurring themes that aligned with the research question, problem, and conceptual framework to the existing literature in order to identify emergent concepts, as recommended by Vaismoradi et al. (2013). My analytical approach to internal policies, notes, and government legislation was the same.

In the review of emerging themes, I triangulated the methodological data based on the information received from participants and organizational documents. The transcribed interviews, notes, and data reflected the perceptions and experiences of the research participants. I used NVivo10 textual analysis software to manage, code, and organize the data into themes for further qualitative data analysis. NVivo10 supports the use of transcription and includes coding capabilities that increase the quality of information captured (Castleberry, 2014). I developed the themes from the synthesis of data using coded phrases and words. Researchers can code participants’ statements into clusters of invariant constituents, single concepts, or ideas to develop theme clusters (Stone, 2013).

Theme 1: Access to Information

All seven participants (100%) noted access to information as a key concern in the implementation of electronic medical records. Internal and external stakeholders have an interest that drives the demand for access to patient information in the clinical setting (Greene, Dasso, Ho, & Genaidy, 2014). Timely access to clinical information improves the outcome of care (Jensen et al., 2015). The traditional focus in health care environments is on the provider's efficiency as opposed to the patient outcomes (Kleefstra, Zandbelt, de Haes, & Kool, 2015). Participant 2 stated, "I think more outsiders should get electronic medical records, because a lot of practices are still using paper, and I've had situations where they lost documents, and we can never get those." All the participants provided comments which indicated that the availability of medical information is a contributor to improved access to care. External stakeholders use access to clinical information to measure the quality of care as well as to contain costs (King, Patel, Jamoon, & Furukawa, 2014). Table 2 includes examples of the comments captured during the interviews with the participants.

Table 2

Theme 1: Access to Information

Participant	Participant comments
P1	"Clinics can share the information in the neighborhood of hospitals."
P1	"Gives us the information that we need on our clients on a daily basis on the changes and giving the opportunity for the whole team to be able to know what's going on with our clients medically."
P2	"Make sure that everyone has access to the same information and also that the appropriate people have access as well."
P3	"More outsiders should get electronic medical records because a lot of practices are still using paper."
P4	"We used to get the paper record. Sometimes it's misplaced, and by then the chart is found, it takes half an hour or so. Now we see them right away."
P5	"I bet if I go in there, I can find it because I developed sort of a base of understanding from which to operate."
P6	"The nonprofit clinics within certain I guess radius, with a total of 12 clinics who can share in the neighborhood hospitals."
P7	"It's easy to look up your files, see where you've been, what happened here with you. I think they understand that."

Health care leaders recognize the collaborative impact that access to the EMR has on clinical outcomes as well as patient compliance. Improved access to health information is more than just availability; it requires additional oversight and governance in complex environments with varying types of users (Henriksen, Burkow, Johnsen, & Vognild, 2013). Adherence to rules of governance ensures the quality of the data as well as the expanding possibilities for access to care. The full capabilities and responsibilities of access to patient information through EMRs are still evolving internally and externally to the organization.

Theme 2: Quality of Care

The basis of Theme 2 is the recognized need to increase patient quality of care. Decreased organizational performance as providers of care is one reason for decreased patient outcomes (Kleefstra, Zandbelt, de Haes, & Kool, 2015). More often than not, failures of communication and information flow increase errors that compromise quality (Keenan, Yakel, Lopez, Tschannen, & Ford, 2013). A main objective of the HITECH Act was to improve the quality of care for patients (Yeager et al., 2014). All of the participants recognized that the objective of for using the EMR is to improve patient services. P2 stated, “The quality of care to the patient has gotten better, and the amount of patients being immunized or getting vaccinations is better since then. Also, we got data to compare the quality measures.” The EMR acts as an instrument to improve efficiency and decrease incidents (Tolar & Balka, 2012). Access to patient information gives the provider needed information to provide appropriate care and services to the patient. Prior paper methods prevented the timely review of patient information. Health care leaders’ integration of health care technology improves the quality of care, as well as business operations (Howard et al., 2013). Table 3 includes examples of the comments captured during the interviews with the participants.

Table 3

Theme 2: Quality of Care

Participant	Participant’s comments
P1	“I understand the purpose of meaningful use, just measuring the quality of care and efficiency of the care that an individual is receiving. I think it just needs to be more finite in the requirements in terms of from a provider perspective and just some of the challenges that they may face in obtaining this information from the patient in order to meet the measures for payment.”
P2	“I mean, we have to know your information if we want to serve you effectively.”
P3	“It’s more detailed. Quality is really, really good, for me.”
P4	“The quality of care to the patient has gotten better, and the amount of patients immunized or getting vaccinations is better since then. Also, we got data to compare the quality measures.”
P5	“I think it makes it safer. I really do. You have – I think it’s wonderful for patient education documents and also for giving clients notes about what happened during their visit because it’s really hard to remember everything that goes down in a medical visit. So I think it’s wonderful for that. The medications. I think it prevents errors. It directs you to correct dosing.”
P6	“We just implemented the two - I think it’s – what’s it called, the exchange where we’re able to see amongst other clinics to see what other services are being rendered to patients to not duplicate services.”
P7	“Hopefully encourages them to do their notes in a timely manner and not wait which makes the record more accurate in my opinion.”

The objective of the EMR regulation was to reduce errors and costs while improving the quality of care (Sheikh, Sood, & Bates, 2015). The quality health of care increases with an increase in the number of providers using an EMR (Sommers et al., 2013). The low EMR adoption rate in nonprofit clinics is equally reflective of the slow rate of change in the quality of care. Electronic health information imposes timely and auditable measures that improve outcomes (Kleefstra, Zandbelt, de Haes, & Kool, 2015).

Theme 3: Training

The successful implementation of information technology applications for use in varying levels within an organization depends on the training and support provided to the end users (Riddell et al., 2014). Only 57% of participants remembered any formal training on the complete functionality of electronic medical records at the organization. Training is one of the most common obstacles for EMR implementation and prolongs the adoption rate of providers (Otto & Nevo, 2013). The review of the organization's archival documentation, such as policies and procedures, did not produce any discipline-specific or updated training materials. Over half the participants shared concerns regarding the availability of learning methods for the implementation and use of electronic medical records. P5 stated, "Just the learning curve. It was probably a good three months before I felt comfortable with it. And that's because it's been my first electronic medical record." Table 4 includes examples of the discussion captured during the interviews with the participants as it relates to training within the organizational setting as well as available external resources.

Table 4

Theme 3: Training

Participant	Participant comments
P1	“I just think that it has to be the right system, and everyone needs to know how to use it effectively and correctly.”
P2	“Some of the staff has electronic record background training, but not everybody. If you are a program director, this does not mean that you necessarily have background training with electronic records. So someone would just show you what to do. We do have one-day training.”
P3	“I know of the one-day training but it doesn’t go into detail like I would want it to. But we help each other with questions.”
P4	“Not that much of a learning curve because most of the staff that has used it before, so there is a learning curve, but it’s probably about two weeks or so. So getting used to a new system of electronic medical record is no challenge.”
P5	“Just the learning curve. It was probably a good three months before I felt comfortable with it. And that’s because it’s been my first electronic medical record. I think if I went to a different electronic medical record, I would catch on faster.”
P6	“Not one-on-one. Yes, it’s definitely individualized training as they come and as I see changes that may be applicable to the services that they provide. There are a lot of meaningful use measures, but many don’t apply to use to our setting.”
P7	“Hopefully encourages them to do their notes in a timely manner and not wait which makes the record more accurate in my opinion. And again, educate the provider’s on the patient population better.”

Within complex organizations of multidisciplinary entities, each agent encounters change on varying levels (Katerndahl et al., 2015). Building the organizational skill set establishes consistency to meet the evolving demands of new requirements (Farndale et al., 2014). Training establishes the equilibrium and consistency that promotes sustainability in a complex environment (Martin et al., 2012). Adaptive systems learning patterns evolve and shape the experience of an organization (Reiman et al., 2015). Patterns of behavior provide the ability to influence outcomes in complex environments (Waltuck, 2011).

Theme 4: Reporting Implications

The complexity of using electronic medical records for decision support and reporting is evident more in multiple-physician practices than in solo community clinics (Kern et al., 2013). Health information systems have evolved from financial reporting into capturing, managing, and analyzing clinical data to improve patient outcomes (Adelson et al., 2014). One of the key objectives of the HITECH Act was to improve patient safety and efficiency of care using incentive-based meaningful-use criteria (Adler-Milstein, Everson, & Lee, 2014). Each participant (100%) expressed some level of understanding in reference to the intent of meaningful use but not the specific contribution of his or her discipline. P4 replied, “The quality of care to the patient has gotten better, and the amount of patients being immunized or getting vaccinations is better since then. Also, we got data to compare the quality measures.” Standardization of the reporting tools for the clinical data captured improves the quality of care. P7 stated, “You can get a report, but I don’t know what it’s really including, which provider, what service type, what visit type, all of those, and I cannot change that.” Lack of conformity in reporting decreases the level of compliance. Health care leaders have developed adaptive learning skills from interactions within this complex environment. The collaborative practices of the health care leaders are developed as a result of the complexity of the electronic medical records implementation. Table 5 includes examples of the participant’s comments captured during the interviews.

Table 5

Theme 4: Reporting

Participant	Participant comments
P1	"It's giving us the information that we need on our clients on a daily basis on the changes and giving the opportunity for the whole team to be able to know what's going on with our clients medically. We will be able to show the changes, the increases and the decreases of medications and the medical care that a client is getting on a daily basis. That's very effective."
P2	"Everybody's on one page. I don't have to come and tell you what I've done. You can look in the system and see for yourself. So it definitely helps with time utilization."
P3	"I think more outsiders should get electronic medical records, because a lot of practices are still using paper, and I've had situations where they lost documents, and we can never get those. If it's not in the eCW (EMR software), they should try to get something electronic."
P4	"The quality of care to the patient has gotten better, and the amount of patients being immunized or getting vaccinations is better since then. Also, we got data to compare the quality measures."
P5	"To be really honest with you, I have a hard time understanding the meaningful use requirements. They tell us what we need to do in order to be in compliance I guess with meaningful use, and so that would be at the end of the visit."
P6	"Not for additional income, but just measuring the quality of services the members are actually rendering. So just making sure that the providers are reporting that data accurately in the system so that we can give the appropriate recognition for providing the service because you get penalized if you don't report and you get penalized if you don't report enough."
P7	"The thing with ECW and their reports is you don't know what's behind them so that you can get a report, but I don't know what it's really including, which provider, what service type, what visit type, all of those, and I cannot change that. Creating reports that would give us those measures, because I don't think there are standard reports."

Reimbursements for care are based on the accuracy of the information that providers use to report to CMS (Bardhan & Thouin, 2013). The integrity of the data and compliance with meaningful use criteria are paramount any organization seeking Medicare reimbursement funding for care (Bardhan & Thouin, 2013). Cumulative statistical data captured and reported provide an overview of current health issues based on demographic and cultural settings. The trending and reporting of health outcomes indices improve learning for internal and external stakeholders that may have an immediate impact to improve the livelihood of the patient.

Application to Professional Practice

An analysis of the strategies nonprofit community health care leaders have used to implement electronic medical records consistent with the meaningful-use requirements resulted in the identification of the following themes: (a) access to information, (b) quality of care, (c) training, and (e) reporting implications. The findings of this study may contribute to increased implementation rates for health care providers in community clinics, as well as access to care for the patients they serve. Health care organizations, as complex systems, must meet the needs of internal and external stakeholders to remain viable providers of care (Yip et al., 2014).

The cost of implementing EMRs imposes a financial burden on providers that decrease the sustainability of the practice in marginalized areas (Brunt & Bowblis, 2014). The implementation and use of EMRs also promote improved outcomes through access to patient information among various disciplines (King et al., 2014). Obstacles for full implementation still exist, even with the incentives provided to providers for their participation. Implementation concerns of EMRs include training, hardware, software, and loss of productivity (Fleming et al., 2014). The major motivator that promotes implementation is its mandated use for reimbursement of services (DesRoches et al., 2013). Regardless of the support of the federal government and the recognized potential for improvement, resistance is consistent among stakeholders who are still weighing the cost of change (King et al., 2014).

Implications for Social Change

Competing demand in a complex health care system requires a collaborative effort for successful outcomes (Gleason & Farish-Hunt, 2014). An estimated 32 million individuals gained access to health services in the United States in 2014 as a result of the Patient Protection and Affordable Care Act (Yeager et al., 2014). The cost leaders of health care organizations incur to provide quality health care increases with an increase in the number of those enrolled (Sommers et al., 2013). The availability of data generated by electronic medical records (EMRs) supports positive social change through the transformation of care provided.

Compared to larger health systems, nonprofit clinics have lower rates of implementing electronic medical records (Whitacre & Williams, 2015). Prolonged access to health care affects health disparities among those most in need (Hale et al., 2014). An effective measure of the value and benefit of health care in the United States is access to that care. The EMR system is a required component for reimbursement of services as well as for improving the quality of health care (Makam et al., 2013). Increased use of EMRs among all providers can increase the delivery of health care services (Silverman, 2013). A socially conscious society can improve the health outcome of its citizen through greater access to electronic health information.

Recommendations for Action

The purpose of this exploratory single case study was to explore the strategies nonprofit community health care leaders used to implement electronic medical records consistent with the meaningful-use requirements. The health care leaders in this study shared their strategies implementing medical records consistent with meaningful-use requirements. Use of the complexity theory was appropriate to understand the nonlinear connections and adaptive measures of stakeholders in a health care organization setting (Chaudoin et al., 2015; Karwowski, 2012). Current and future nonprofit health care leaders' attention to this study can improve collaboration in multifunctional work environments in implementing new information systems requirements. I recommend health care leaders of nonprofit clinics use the findings within this study as a learning tool. My plan is to share the final publication with the District of Columbia Primary Care Association (DCPA) and the Office of the National Coordinator at the Department of Health and Human Services to assist other nonprofit health entities with strategies to improve EMR implementation consistency with meaningful use. The plans of action recommendations that emerged from this study that may assist nonprofit clinical leaders are:

1. Establish role specific training on EMR implementation business processes training that emphasizes individual as well as collaborative requirements expectations.

2. Develop workflow organizational change management processes to illustrate processes, roadmaps, and implementations configurations that provide full disclosure of processes and teaming objectives.
3. Implementation of system changes needs to have collaboration from each discipline affected. Establishment of integrated teams to build credibility as well as serves as the champion for the initiative.

Recommendations for Further Research

Health care systems are complex organizations that consist of components with competing values and varying levels of individual experiences of change (Katerndahl et al., 2015). Each of the themes identified reflected the common themes found in the nonprofit clinical setting concerning implementing EMRs consistent with meaningful use. The focus of this qualitative study was on the perception of health care leaders in this setting. A limitation noted in this study involved the use of the single case study design and biased opinion of the subjects. A recommendation for future research includes expanding the study to multiple clinical sights to increase transferability of findings. Also, the use of a quantitative study mediates biases in data analysis (Klassen et al., 2012). The quantitative framework may provide a statistical view of the effectiveness of health care leader's strategies on clinical operations in implementation EMR consistent with meaningful use.

Reflections

This doctoral study involved an opportunity to understand the complexities of mandated medical information technology from the perspective of the end user. I have worked in health administration for over 23 years, and I have experience with implementing a computerized patient record system in a large federal facility. I was initially concerned that my history of working with electronic health information would influence my perspective, but the experiences shared by the nonprofit health care leaders were quite different from those I had years ago. I used self-reflexivity prior to beginning the data collection to mitigate biased opinions, as suggested by Pezalla et al. (2012).

Additional concerns included gaining access to participants due to their limited availability. However, through consistent communication and remaining flexible to time schedules, I was able to establish mutually acceptable interview times. The use of open-ended interview questions encourages open communication (Wheeler & Bell, 2012). Researchers need additional time for member checking to validate the synopsis of the information collected from participants (Fusch & Ness, 2015).

Conclusion

The focus of the HITECH Act was to improve the quality of care in the most cost-efficient and patient-centered environments. Providers who did not implement an EMR system consistent with meaningful use by 2015 are subject to financial penalties (Wright et al., 2014). Access to health information resources is vital to an organization's internal resources, mission, and sustainability (Mårtensson & Hensing, 2012). Four themes emerged in this study on the strategies nonprofit community health care leaders have used to implement electronic medical records consistent with the meaningful-use requirements: (a) access to information, (b) quality of care, (c) training, and (e) reporting implications. Leaders of other nonprofit organizations might be able to use the findings identified in their strategies for implementing EMRs.

References

Abara, E., Narushima, M., & Abara, E. (2010). Patterns of computer and Internet usage among urology patients in two rural Northern Ontario communities. *Canadian Urological Association Journal, 4*, 37-41. Retrieved from http://www.cuaj.ca/en/index.asp

Abdala, C., & Taruhn, R. (2007). Access to health information in Latin America and the Caribbean. *Journal of Electronic Resources in Medical Libraries*, *4,* 41-50. doi:10.1300/J383v04n01_05

Aberbach, J. D., & Rockman, B. A. (2002). Conducting and coding elite interviews. *Political Science & Politics, 35*, 673-676. doi:10.1017/S1049096502001142

Adelson, K. B., Qiu, Y. C., Evangelista, M., Spencer-Cisek, P., Whipple, C., & Holcombe, R. F. (2014). Implementation of electronic chemotherapy ordering: An opportunity to improve evidence-based oncology care. *Journal of Oncology Practice*, *10*, 113-119. doi:10.1200/JOP.2013.001184

Adler-Milstein, J., Bates, D. W., & Jha, A. K. (2013). Operational health information exchanges show substantial growth, but long-term funding remains a concern. *Health Affairs*, *32*, 1486-1492. doi:10.1377/hlthaff.2013.0124

Adler-Milstein, J., DesRoches, C. M., Kralovec, P., Foster, G., Worzala, C., Charles, D., . . . Jha, A. K. (2015). Electronic health record adoption in US hospitals: Progress continues, but challenges persist. *Health Affairs*, *12*, 2174-2180. doi:10.1377/hlthaff.2015.0992

Adler-Milstein, J., Everson, J., & Lee, S.-Y. D. (2014). Sequencing of EHR adoption among US hospitals and the impact of meaningful use. *Journal of the American Medical Informatics Association*, *21*, 984-991. doi:10.1136/amiajnl-2014-002708

Agha, L. (2014). The effects of health information technology on the costs and quality of medical care. *Journal of Health Economics*, *34*, 19-30. doi:10.1016/j.jhealeco.2013.12.005

Aluwihare-Samaranayake, D. (2012). Ethics in qualitative research: A view of the participants' and researchers' world from a critical standpoint. *International Journal of Qualitative Methods*, *11*, 64-81. Retrieved from https://ejournals.library.ualberta.ca/index.php/IJQM/index

Al-Yateem, N. (2012). The effect of interview recording on quality of data obtained: A methodological reflection. *Nurse Researcher, 19*(4), 31-35. doi:10.7748/nr2012.07.19.4.31.c9222

Ameer, R., & Othman, R. (2012). Sustainability practices and corporate financial performance: A study based on the top global corporations. *Journal of Business Ethics*, *108*, 61-79. doi:10.1007/s10551-011-1063-y

American Recovery and Reinvestment Act of 2009. Pub. L. No. 111-5 §4101 (2009).

Anosike, P., Ehrich, L. C., & Ahmed, P. (2012). Phenomenology as a method for exploring management practice. *International Journal of Management Practice*, *5*, 205-206. doi:10.1504/IJMP.2012.048073

Appari, A., Johnson, M. E., & Anthony, D. L. (2013). Meaningful use of electronic health record systems and process quality of care: Evidence from a panel data analysis of US acute-care hospitals. *Health Services Research*, *48*, 354-375. doi:10.1111/j.1475-6773.2012.01448.x

Arbune, A., Wackerbarth, S., Allison, P., & Conigliaro, J. (2014). Improvement through small cycles of change: Lessons from an academic medical center emergency department. *Journal for Healthcare Quality*, *36*(6), 5-68. doi:10.1111/jhq.12078

Auer, J. C., Twombly, E. C., & De Vita, C. J. (2011). Social service agencies and program change: Implications for theory and policy. *Public Performance & Management Review*, *34*, 378-396. doi:10.2753/PMR1530-9576340303

Avolio, B. J., Sosik, J. J., Kahai, S. S., & Baker, B. (2014). E-leadership: Re-examining transformations in leadership source and transmission. *Leadership Quarterly*, *25*, 105-131. doi:10.1016/j.leaqua.2013.11.003

Bardhan, I. B., & Thouin, M. F. (2013). Health information technology and its impact on the quality and cost of healthcare delivery. *Decision Support Systems, 55*, 438-449. doi:10.1016/j.dss.2012.10.003

Bauer, A. M., Thielke, S. M., Katon, W., Unützer, J., & Areán, P. (2014). Aligning health information technologies with effective service delivery models to improve chronic disease care. *Preventive Medicine*, *66*, 167-172. doi:10.1016/j.ypmed .2014.06.017

Beattie, R. S., Kim, S., Hagen, M. S., Egan, T. M., Ellinger, A. D., & Hamlin, R. G. (2014). Managerial coaching a review of the empirical literature and development of a model to guide future practice. *Advances in Developing Human Resources*, *16*, 184-201. doi:10.1177/1523422313520476

Behravesh, B. (2010). *Understanding the end user perspective: A multiple-case study of successful health information technology implementation* (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3412017)

Belias, D., & Koustelios, A. (2014). The impact of leadership and change management strategy on organizational culture. *European Scientific Journal*, *10*(7), 451-470. Retrieved from http://www.uac.pt/destaque/european-scientific-journal

Bennett, C. C., Doub, T. W., & Selove, R. (2012). EHRs connect research and practice: Where predictive modeling, artificial intelligence, and clinical decision support intersect. *Health Policy and Technology*, *1*, 105-114. doi:10.1016/j.hlpt.2012.03.001

Bernard, H. R. (2013). *Social research methods: Qualitative and quantitative approaches* (2nd ed.). Thousand Oaks, CA: Sage.

Berwick, D. M., & Hackbarth, A. D. (2012). Eliminating waste in US healthcare. *JAMA: Journal of the American Medical Association, 307*, 1513-1516. doi:10.1001/jama.2012.362

Blumenthal, D., & Collins, S. R. (2014). Healthcare coverage under the Affordable Care Act: A progress report. *New England Journal of Medicine*, *371*, 275-281. doi:10.1056/NEJMhpr1405667

Blumenthal, D., Davis, K., & Guterman, S. (2015). Medicare at 50: Moving forward. *New England Journal of Medicine*, *372*, 671-677. doi:10.1056/NEJMhpr1414856

Boonstra, A., Versluis, A., & Vos, J. F. (2014). Implementing electronic health records in hospitals: A systematic literature review. *BMC Health Services Research*, *14*, 370. doi:10.1186/1472-6963-14-370

Bruen, B. K., Ku, L., Burke, M. F., & Buntin, M. B. (2011). More than four in five office-based physicians could qualify for federal electronic health record incentives. *Health Affairs, 30*, 472-480. doi:10.1377/hlthaff.2010.0932

Brunt, C. S., & Bowblis, J. R. (2014). Health IT adoption, productivity and quality in primary care. *Applied Economics, 46*, 1716-1727. doi:10.1080/00036846.2014.884705

Buchanan, J. M., & Jones, L. (2010). The efficacy of utilizing NVivo for interview data from the electronic gaming industry in two jurisdictions. *Review of Management Innovation & Creativity, 3*(5), 1-15. Retrieved from http://www.intellectbase.org/journals.php#RMIC

Buchanan, W. L. (2013). *Exploring sustainability: The key to corporate profitability in the 21st century* (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3604426)

Buell, J. M. (2012). Physician leadership development: A strategic imperative for integrated healthcare delivery. *Healthcare Executive, 27*, 18-20, 22- 26. Retrieved from http://www.ache.org/PUBS/hcexecsub.cfm

Burnes, B. (2005). Complexity theories and organizational change. *International Journal of Management Reviews*, *7*(2), 73-90. doi:10.1111/j.1468-2370.2005.00107.x

Buschmann, F. (2012). To boldly go where no one has gone before. *Software IEEE, 29*, 23-25. doi:10.1109/MS.2012.18

Byrne, C. M., Mercincavage, L. M., Bouhaddou, O., Bennett, J. R., Pan, E. C., Botts, N. E., . . . Cromwell, T. (2014). The Department of Veterans Affairs' (VA) implementation of the virtual lifetime electronic record (VLER): Findings and lessons learned from health information exchange at 12 sites. *International Journal of Medical Informatics*, *83*, 537-547. doi:10.1016/j.ijmedinf.2014.04.005

Castleberry, A. (2014). NVivo 10 [software program]. Version 10. QSR International; 2012. *American Journal of Pharmaceutical Education, 78*, 25. doi:10.5688/ajpe78125

Channon, B. S., Riley, E. G., & Sussman, J. H. (2012). Achieving sustainable cost transformation. *Healthcare Financial Management: Journal of the Healthcare Financial Management Association*, *66*(3), 72-82. Retrieved from http://www.hfma.org/Content.aspx?id=3295

Chaudoin, S., Milner, H. V., & Pang, X. (2015). International systems and domestic politics: Linking complex interactions with empirical models in international relations. *International Organization*, *69*, 275-309. doi:10.1017/S0020818314000356

Cherniack, M., Dussetschleger, J., Farr, D., & Dugan, A. (2015). Workplace cohort studies in times of economic instability. *American Journal of Industrial Medicine*, *58*, 138-151. doi:10.1002/ajim.22417

Chiva, R., Ghauri, P., & Alegre, J. (2014). Organizational learning, innovation and internationalization: A complex system model. *British Journal of Management*, *25*, 687-705. doi:10.1111/1467-8551.12026

Christensen, L. J., Mackey, A., & Whetten, D. (2014). Taking responsibility for corporate social responsibility: The role of leaders in creating, implementing, sustaining, or avoiding socially responsible firm behaviors. *Academy of Management Perspectives*, *28*, 164-178. doi:10.5465/amp.2012.0047

Chua, R. Y., Morris, M. W., & Mor, S. (2012). Collaborating across cultures: Cultural metacognition and affect-based trust in creative collaboration. *Organizational Behavior and Human Decision Processes*, *118*, 116-131. doi:10.1016/j.obhdp.2012.03.009

Coenen, M., Stamm, T. A., Stucki, G., & Cieza, A. (2012). Individual interviews and focus groups in patients with rheumatoid arthritis: A comparison of two qualitative methods. *Quality of Life Research*, *21*, 359-370. doi:10.2307/41411730

Creswell, J. W., & Miller, D. L. (2000). Determining validity in qualitative inquiry. *Theory Into Practice, 39*(3), 124-130. doi:10.1207/s15430421tip3903_2

Crum-Cianflone, N. F., Fairbank, J. A., Marmar, C. R., & Schlenger, W. (2014). The Millennium Cohort Family Study: A prospective evaluation of the health and well-being of military service members and their families. *International Journal of Methods in Psychiatric Research*, *23*, 320-330. doi:10.1002/mpr.1446

Cucciniello, M., & Nasi, G. (2014). Evaluation of the impacts of innovation in the healthcare sector: A comparative analysis. *Public Management Review*, *16*, 90-116. doi:10.1080/14719037.2013.798026

Cunningham, T. R., Galloway-Williams, N., & Geller, E. (2010). Protecting the planet and its people: How do interventions to promote environmental sustainability and occupational safety and health overlap? *Journal of Safety Research*, *41,* 407-416. doi:10.1016/j.jsr.2010.08.002

Deeg, J. (2009). Organizational discontinuity: Integrating evolutionary and revolutionary change theories. *Management Revue, 20*, 190-208. doi:10.1688/1861-9908

Delaney, B., Peterson, K., Speedie, S., Taweel, A., Arvanitis, T., & Hobbs, F. (2012). Envisioning a learning healthcare system: The electronic primary care research network, a case study. *Annals of Family Medicine*, *10*, 54-59. doi:10.1370/afm.1313

de Lange, D. E., Busch, T., & Delgado-Ceballos, J. (2012). Sustaining sustainability in organizations. *Journal of Business Ethics, 110,* 151-156. doi:10.1007/s10551-012-1425-0

De Matos, J. A., & Clegg, S. R. (2013). Sustainability and organizational change. *Journal of Change Management*, *13*, 382-386. doi:10.1080/14697017.2013.851912

Denning, S. (2013). Why Agile can be a game changer for managing continuous innovation in many industries. *Strategy & Leadership*, *41*, 5-11. doi:10.1108/10878571311318187

Denzin, N. K. (2012). Triangulation 2.0. *Journal of Mixed Methods Research, 6*(2), 80-88. doi:10.1177?1558689812437186

DesRoches, C. M., Worzala, C., & Bates, S. (2013). Some hospitals are falling behind in meeting ‘meaningful use’ criteria and could be vulnerable to penalties in 2015. *Health Affairs*, *32*, 1355-1360. doi:10.1377/hlthaff.2013.0469

Dobrzykowski, D. D., & Tarafdar, M. (2015). Understanding information exchange in healthcare operations: Evidence from hospitals and patients. *Journal of Operations Management*, *36*, 201-214. doi:10.1016/j.jom.2014.12.003

Doyle, R. J., Wang, N., Anthony, D., Borkan, J., Shield, R. R., & Goldman, R. E. (2012). Computers in the examination room and the electronic health record: Physicians' perceived impact on clinical encounters before and after full installation and implementation. *Family Practice*, *29*, 601-608. doi:10.1093/fampra/cms015

Drescher, M. A., Korsgaard, M. A., Welpe, I. M., Picot, A., & Wigand, R. T. (2014). The dynamics of shared leadership: Building trust and enhancing performance. *Journal of Applied Psychology*, *99*, 771-783. doi:10.1037/a0036474

Dworkin, S. L. (2012). Sample size policy for qualitative studies using in-depth interviews. *Archives of Sexual Behavior, 41*, 1319-1320. doi:10.1007/s105080120016-6

Edgren, L., & Barnard, K. (2012). Complex adaptive systems for management of integrated care. *Leadership in Health Services*, *25*, 39-51. doi:10.1108/17511871211198061

Edwards, G., Schedlitzki, D., Turnbull, S., & Gill, R. (2015). Exploring power assumptions in the leadership and management debate. *Leadership & Organization Development Journal*, *36*, 328-343. doi:10.1108/LODJ-02-2013-0015

Ellner, A. L., Stout, S., Sullivan, E. E., Griffiths, E. P., Mountjoy, A., & Phillips, R. S. (2015). Health systems innovation at academic health centers: Leading in a new era of healthcare delivery. *Academic Medicine, 90,* 872-880. doi:10.1097/ACM.0000000000000679

Epstein, E. M. (2007). The good company: Rhetoric or reality? Corporate social responsibility and business ethics redux. *American Business Law Journal*, *44,* 207-222. doi:10.1111/j.1744-1714.2007.00035.x

Falconer, J. (2002). Accountability in a complex world. *Emergence, 4*(4), 25-38. doi:10.1207/S15327000EM0404_4

Farndale, E., Pai, A., Sparrow, P., & Scullion, H. (2014). Balancing individual and organizational goals in global talent management: A mutual-benefits perspective. *Journal of World Business*, *49*(2), 204-214. doi:10.1016/j.jwb.2013.11.004

Felício, J. A., Gonçalves, H. M., & da Conceição Gonçalves, V. (2013). Social value and organizational performance in non-profit social organizations: Social entrepreneurship, leadership, and socioeconomic context effects. *Journal of Business Research*, *66*, 2139-2146. doi:10.1016/j.jbusres.2013.02.040

Fernald, D., Wearner, R., & Dickinson, W. P. (2014). Supporting primary care practices in building capacity to use health information data. *eGEMS*, *2*, 1094. doi:10.13063/2327-9214.1094

Fielding, N. G. (2012). Triangulation and mixed methods designs data integration with new research technologies. *Journal of Mixed Methods Research*, *6*, 124-136. doi:10.1177/1558689812437101

Fizzanty, T., Russell, I., & Collins, R. (2013). Learning from failed supply chains: The application of complex adaptive systems and a modified safe framework in evaluating proposed system improvements. *International Journal of Agile Systems and Management, 6*, 232-258. doi:10.1504/IJASM.2013.054979

Fleming, N. S., Becker, E. R., Culler, S. D., Cheng, D., McCorkle, R., Graca, B. D., & Ballard, D. J. (2014). The impact of electronic health records on workflow and financial measures in primary care practices. *Health Services Research*, *49*, 405-420. doi:10.1111/1475-6773.12133

Forrester, S. H., Hepp, Z., Roth, J. A., Wirtz, H. S., & Devine, E. B. (2014). Cost-effectiveness of a computerized provider order entry system in improving medication safety ambulatory care. *Value in Health*, *17*, 340-349. doi:10.1016/j.jval.2014.01.009

Frels, R. K., & Onwuegbuzie, A. J. (2012). Interviewing the interpretive researcher: An impressionist tale. *Qualitative Report*, *17*(30), 1-27. Retrieved from http://tqr.nova.edu/

French, S. L., & Holden, T. (2012). Positive organizational behavior: A buffer for bad news. *Business Communication Quarterly*, *75*, 208-220. doi:10.1177/1080569912441823

Fritz, F., Tilahun, B., & Dugas, M. (2015). Success criteria for electronic medical record implementations in low-resource settings: a systematic review. *JAMA: Journal of the American Medical Informatics Association*, *22*, 479-488. doi:10.1093/jamia/ocu038

Fugate, M., Prussia, G. E., & Kinicki, A. J. (2012). Managing employee withdrawal during organizational change the role of threat appraisal. *Journal of Management*, *38*, 890-914. doi:10.1177/0149206309352881

Furukawa, M. F. (2013). Meaningful use: A roadmap for the advancement of health information exchange. *Israel Journal of Health Policy Research*, *2*, 26. doi:10.1186/2045-4015-2-26

Fusch, P. I., & Ness, L. R. (2015). Are we there yet? Data saturation in qualitative research. *Qualitative Report, 20,* 1408-1416. Retrieved from http://tqr.nova.edu/

Gabriel, M. H., Jones, E. B., Samy, L., & King, J. (2014). Progress and challenges: Implementation and use of health information technology among critical-access hospitals. *Health Affairs*, *33*, 1262-1270. doi:10.1377/hlthaff.2014.0279

Galvin, K., & Todres, L. (2012). Phenomenology as embodied knowing and sharing: Kindling audience participation. *Indo-Pacific Journal of Phenomenology*, *12*, 1-9. Retrieved from http://www.sabinet.co.za/

Gangadharan, G. R., Kuiper, E. J., Janssen, M., & Luttighuis, P. O. (2013). IT innovation squeeze: Propositions and a methodology for deciding to continue or decommission legacy systems. *IFIP Advances in Information and Communication Technology 402,* 481-494. doi:10.1007/978-3-642-38862-0_30

George, G., McGahan, A. M., & Prabhu, J. (2012). Innovation for inclusive growth: Towards a theoretical framework and a research agenda. *Journal of Management Studies*, *49*, 661-683. doi:10.1111/j.1467-6486.2012.01048.x

Giardina, T. D., Menon, S., Parrish, D. E., Sittig, D. F., & Singh, H. (2014). Patient access to medical records and healthcare outcomes: A systematic review. *JAMA: Journal of the American Medical Informatics Association*, *21*, 737-741. doi:10.1136/amiajnl-2013-002239

Gibson, S., Benson, O., & Brand, S. L. (2013). Talking about suicide: Confidentiality and anonymity in qualitative research. *Nursing Ethics*, *20*, 18-29. doi:10.1177/0969733012452684

Gilmer, T., O'Connor, P., Sperl-Hillen, J., Rush, W., Johnson, P., Amundson, G., . . . Ekstrom, H. (2012). Cost-effectiveness of an electronic medical record based clinical decision support system. *Health Services Research*, *47*, 2137-2158. doi:10.1111/j.1475-6773.2012.01427.x

Gleason, R. P., & Farish-Hunt, H. (2014). How to choose or change an electronic health record system. *Journal for Nurse Practitioners*, *10*, 835-839. doi:10.1016/j.nurpra.2014.06.010

Gold, M. R., McLaughlin, C. G., Devers, K. J., Berenson, R. A., & Bovbjerg, R. R. (2012). Obtaining providers' 'buy-in' and establishing effective means of information exchange will be critical to HITECH's success. *Health Affairs*, *31*, 514-526. doi:10.1377/hlthaff.2011.0753

Goldberg, D. G. (2012). Primary care in the United States: Practice-based innovations and factors that influence adoption. *Journal of Health Organization and Management*, *26*, 81-97. doi:10.1108/14777261211211106

Gorli, M., Kaneklin, C., & Scaratti, G. (2012). A multi-method approach for looking inside healthcare practices. *Qualitative Research in Organizations and Management: An International Journal*, *7*, 290-303. doi:10.1108/17465641211279761

Gough, B., & Madill, A. (2012). Subjectivity in psychological science: From problem to prospect. *Psychological Methods*, *17*, 374-384. doi:10.1037/a0029313

Govil, M., Wood, C., & Barr, T. R. (2012). Achieving meaningful use and operational efficiency. *Journal of Oncology Practice*, *8*(2), 70. doi:10.1200/JOP.2011.000443

Graetz, I., Reed, M., Shortell, S. M., Rundall, T. G., Bellows, J., & Hsu, J. (2014). The next step towards making use meaningful: Electronic information exchange and care coordination across clinicians and delivery sites. *Medical Care*, *52*, 1037-1041. doi:10.1097/MLR.0000000000000245

Grant, R. W., & Schmittdiel, J. A. (2015). Building a career as a delivery science researcher in a changing health care landscape. *Journal of General Internal Medicine*, *30*, 880-882. doi:10.1007/s11606-015-3178-9

Green, L. A., Potworowski, G., Day, A., May-Gentile, R., Vibbert, D., Maki, B., & Kiesel, L. (2015). Sustaining “meaningful use” of health information technology in low-resource practices. *Annals of Family Medicine*, *13*, 17-22. doi:10.1370/afm.1740

Greene, R. A., Dasso, E., Ho, S., & Genaidy, A. M. (2014). A person-focused model of care for the twenty-first century: A system-of-systems perspective. *Population Health Management, 17,* 166-171. doi:10.1089/pop.2013.0040

Grossoehme, D. H. (2014). Overview of qualitative research. *Journal of Healthcare Chaplaincy*, *20*, 109-122. doi:10.1080/08854726.2014.925660

Guha, S., Grover, V., Kettinger, W. J., & Teng, J. T. (1997). Business process change and organizational performance: Exploring an antecedent model. *Journal of Management Information Systems, 14*, 119-154. Retrieved from http://www.jmis-web.org/

Hale, T. M., Goldner, M., Stern, M., Drentea, P., & Cotten, S. R. (2014). Patterns of online health searching 2002–2010: Implications for social capital, health disparities and the de-professionalization of medical knowledge. *Research in the Sociology of Healthcare: Technology, Communication, Disparities and Government Options in Health and Healthcare Services*, *32*, 35-60. doi:10.1108/S0275-495920140000032016

Hall, D. M., Lazarus, E. D., & Swannack, T. M. (2014). Strategies for communicating systems models. *Environmental Modelling & Software*, *55,* 70-76. doi:10.1016/j.envsoft.2014.01.007

Haque, S., & Pathrannarakul, P. (2013). E-government towards good governance: A global appraisal. *Journal of E-Governance, 36*, 25-34. doi:10.3233/GOV-120328

Hartman, M., Martin, A., Benson, J., & Catlin, A. (2013). National health spending in 2011: Overall growth remains low, but some payers and services show signs of acceleration. *Health Affairs*, *32*, 87-99. doi:10.1377/hlthaff.2012.1206

Hatton, J. D., Schmidt, T. M., & Jelen, J. (2012). Adoption of electronic healthcare records: Physician heuristics and hesitancy. *Procedia Technology, 5*, 706-715. doi:10.1016/j.protcy.2012.09.078

Hawk, S., Kaiser, K. M., Goles, T., Bullen, C. V., Simon, J. C., Beath, C. M., & Frampton, K. (2012). The information technology workforce: A comparison of critical skills of clients and service providers. *Information Systems Management*, *29*, 2-12. doi:10.1080/10580530.2012.634292

Heisey-Grove, D., Danehy, L. N., Consolazio, M., Lynch, K., & Mostashari, F. (2014). A national study of challenges to electronic health record adoption and meaningful use. *Medical Care*, *52*, 144-148. doi:10.1097/MLR.0000000000000038

Henfridsson, O., & Lind, M. (2014). Information systems strategizing, organizational sub-communities, and the emergence of a sustainability strategy. *Journal of Strategic Information Systems*, *23*, 11-28. doi:10.1016/j.jsis.2013.11.001

Henriksen, E., Burkow, T. M., Johnsen, E., & Vognild, L. K. (2013). Privacy and information security risks in a technology platform for home-based chronic disease rehabilitation and education. *BMC Medical Informatics & Decision Making*, *13*(1), 1-13. doi:10.1186/1472-6947-13-85

Hibbard, J., & Greene, J. (2013). What the evidence shows about patient activation: Better health outcomes and care experiences; fewer data on costs. *Health Affairs*, *32*, 207-214. doi:10.1377/hlthaff.2012.1061

Hicks, S., Duran, B., Wallerstein, N., Avila, M., Belone, L., Lucero, J., . . . Hat, E. W. (2012). Evaluating community-based participatory research to improve community-partnered science and community health. *Progress in Community Health Partnerships: Research, Education, and Action*, *6*, 289-299. doi:10.1353/cpr.2012.0049

Hideg, I., & Ferris, D. L. (2014). Support for employment equity policies: A self-enhancement approach. *Organizational Behavior and Human Decision Processes*, *123,* 49-64. doi:10.1016/j.obhdp.2013.11.002

Higgins, T. L., Kudler, N. R., Lindenauer, P., Brown, P., Gentes, J., & Nelson, H. (2012). How quickly do clinicians adopt EMR notes? *Physician Executive*, *38*(2), 52-58. Retrieved from http://www.physicianexecutive.com/

Hillestad, R., Bigelow, J., Bower, A., & Girosi, F. (2005). Can electronic medical record systems transform healthcare? Potential health benefits, savings, and costs. *Health Affairs, 24,* 1103-1117. doi:10.1377/hlthaff.24.5.1103

Himmelstein, D. U., Jun, M., Busse, R., Chevreul, K., Geissler, A., Jeurissen, P., . . . Woolhandler, S. (2014). A comparison of hospital administrative costs in eight nations: US costs exceed all others by far. *Health Affairs*, *33*, 1586-1594. doi:10.1377/hlthaff.2013.1327

Hoch, J. E., & Kozlowski, S. W. (2014). Leading virtual teams: Hierarchical leadership, structural supports, and shared team leadership. *Journal of Applied Psychology*, *99*, 390-403. doi:10.1037/a0030264

Hogan, S. J., & Coote, L. V. (2014). Organizational culture, innovation, and performance: A test of Schein's model. *Journal of Business Research*, *67*, 1609-1621. doi:10.1016/j.jbusres.2013.09.007

Houghton, C., Casey, D., Shaw, D., & Murphy, K. (2013). Rigour in qualitative case study research. *Nurse Researcher*, *20*(4), 12-17. doi:10.7748/nr2013.03.20.4.12.e326

Howard, J., Clark, E. C., Friedman, A., Crosson, J. C., Pellerano, M., Crabtree, B. F., . . . Cohen, D. J. (2013). Electronic health record impact on work burden in small, unaffiliated, community-based primary care practices. *Journal of General Internal Medicine*, *28*, 107-113. doi:10.1007/s11606-012-2192-4

Hsiao, C. J., Hing, E., & Ashman, J. (2014). Trends in electronic health record system use among office-based physicians: United States, 2007-2012. *National Health Statistics Report*, *75*, 1-18. Retrieved from http://www.cdc.gov/nchs/nhis/nhis_nhsr.htm

Hsiao, C. J., King, J., Hing, E., & Simon, A. E. (2015). The role of health information technology in care coordination in the United States. *Medical Care*, *53*, 184-190. doi:10.1097/MLR.0000000000000276

Hughes, R. G. (2013). Improving patient safety within the context of everyday chaos and complexity. *Creative Nursing*, *19*, 42-44. doi:10.1891/1078-4535.19.1.42

Jaca, C., Viles, E., Mateo, R., & Santos, J. (2012). Components of sustainable improvement systems: Theory and practice. *TQM Journal*, *24*, 142-154. doi:10.1108/17542731211215080

Jacob, S. A., & Furgerson, S. (2012). Writing interview protocols and conducting interviews: Tips for students new to the field of qualitative research. *Qualitative Report, 17*, 1-10. Retrieved from http://tqr.nova.edu/

Jalongo, M. R. (2013). Professional wisdom and writing for publication: Qualitative interviews with editors and authors in early childhood education. *Early Childhood Education Journal, 41*, 65-79. doi:10.1007/s10643-012-0569-y

Jamoom, E., & Hing, E. (2015). *Progress with electronic health record adoption among emergency and outpatient departments: United States, 2006-2011* (NCHS Data Brief No. 187). Retrieved from http://www.cdc.gov/nchs

Jang, Y., Lortie, M. A., & Sanche, S. (2014). Return on investment in electronic health records in primary care practices: A mixed-methods study. *JMIR Medical Informatics*, *2*(2), e25. doi:10.2196/medinform.3631

Jensen, R. E., Rothrock, N. E., DeWitt, E. M., Spiegel, B., Tucker, C. A., Crane, H. M., ... & Cella, D. (2015). The role of technical advances in the adoption and integration of patient-reported outcomes in clinical care. *Medical care*, *53*, 153-159. doi:10.1097/MLR.0000000000000289

Jha, A. K., DesRoches, C. M., Campbell, E. G., Donelan, K., Rao, S. R., & Ferris, T. G. (2009). Use of electronic health records in U.S. hospitals. *New England Journal of Medicine, 360*, 1628-1638. doi:10.1056/NEJMsa0900592

Jha, A. K., DesRoches, C. M., Kralovec, P. D., & Joshi, M. S. (2010). A progress report on electronic health records in U.S. hospitals. *Health Affairs, 29*, 1951-1957. doi:10.1377/hlthaff.2010.0502

Karagiannis, T., Maio, V., Del Canale, M., Fabi, M., Brambilla, A., & Del Canale, S. (2014). The transformation of primary care are general practitioners ready? *American Journal of Medical Quality*, *29*(2), 93-94. doi:10.1177/1062860613513077

Karwowski, W. (2012). A review of human factors challenges of complex adaptive systems: Discovering and understanding chaos in human performance. *Human Factors, 54,* 983-995. doi:10.1177/0018720812467459

Katerndahl, D., Wood, R., & Jaén, C. (2015). Complexity of ambulatory care across disciplines. *Healthcare, 3*(2), 89-96. doi:10.1016/j.hjdsi.2015.02.002

Kauffman, S. A., & Johnsen, S. (1991). Coevolution to the edge of chaos: Coupled fitness landscapes, poised states, and coevolutionary avalanches. *Journal of Theoretical Biology*, *149*, 467-505. doi:10.1016/S0022-5193(05)80094-3

Kearns, K. P., Livingston, J., Scherer, S., & McShane, L. (2015). Leadership skills as construed by nonprofit chief executives. *Leadership & Organization Development Journal*, *36*, 712-727. doi:10.1108/LODJ-11-2013-0143

Keenan, G., Yakel, E., Lopez, D. K., Tschannen, D., & Ford, B. Y. (2013). Research and applications: Challenges to nurses' efforts of retrieving, documenting, and communicating patient care information. *Journal of the American Medical Informatics Association,* 20, 245-251. doi:10.1136/amiajnl-2012-000894

Kenneally, J., Curley, M., Wilson, B., & Porter, M. (2013). Enhancing benefits from healthcare IT adoption using design science research: Presenting a unified application of the IT capability maturity framework and the electronic medical record adoption model. In M. Helfert & B. Donnellan (Eds.), *Design science: Perspectives from Europe* (Vol. 338, pp. 124-143). Cham, Switzerland: Springer. doi:10.1007/978-3-319-04090-5_12

Kern, L. M., Barrón, Y., Dhopeshwarkar, R. V., Edwards, A., Kaushal, R., & with the HITEC Investigators. (2013). Electronic health records and ambulatory quality of care. *Journal of General Internal Medicine*, *28*, 496-503. doi:10.1007/s11606-012-2237-8

Kern, L. M., Edwards, A. M., Pichardo, M., & Kaushal, R. (2015). Electronic health records and healthcare quality over time in a federally qualified health center. *Journal of the American Medical Informatics Association*, *22*, 453-458. doi:10.1093/jamia/ocu049

King, J., Patel, V., Jamoom, E. W., & Furukawa, M. F. (2014). Clinical benefits of electronic health record use: National findings. *Health Services Research, 49,* 392-404. doi:10.1111/1475-6773.12135

Klassen, A. C., Creswell, J., Plano Clark, V. L., Smith, K. C., & Meissner, H. I. (2012). Best practices in mixed methods for quality of life research. *Quality of Life Research*, *21*, 377-380. doi:10.1007/s11136-012-0122-x

Kleefstra, S. M., Zandbelt, L. C., de Haes, H. J., & Kool, R. B. (2015). Trends in patient satisfaction in Dutch university medical centers: Room for improvement for all.

British Medical Journal Health Service Research, 15(112), 1-9. doi:10.1186/s12913-015-0766-7

Kreps, G. L., & Neuhauser, L. (2010). New directions in eHealth communication: Opportunities and challenges. *Patient Education and Counseling*, *78*, 329-336. doi:10.1016/j.pec.2010.01.013

Krishnaraj, A., Siddiqui, A., & Goldszal, A. (2014). Meaningful use: Participating in the federal incentive program. *Journal of the American College of Radiology*, *11*, 1205-1211. doi:10.1016/j.jacr.2014.09.012

Kristinsson, S. (2007). Autonomy and informed consent: A mistaken association? *Medicine, Healthcare and Philosophy, 10*, 253-264. doi:10.1007/s11019-007-9048-4

Kruse, C. S., DeShazo, J., Kim, F., & Fulton, L. (2014). Factors associated with adoption of health information technology: A conceptual model based on a systematic review. *JMIR Medical Informatics*, *2*, e9. doi:10.2196/medinform.3106

Kruse, C. S., Regier, V., & Rheinboldt, K. T. (2014). Barriers over time to full implementation of health information exchange in the United States. *JMIR Medical Informatics*, *2*(2), e26. doi:10.2196/medinform.3625

Kuipers, B. S., Higgs, M., Kickert, W., Tummers, L., Grandia, J., & Van der Voet, J. (2014). The management of change in public organizations: A literature review. *Public Administration*, *92*, 1-20. doi:10.1111/padm.12040

Lakbala, P., & Dindarloo, K. (2014). Physicians’ perception and attitude toward electronic medical record. *SpringerPlus*, *3*(63). Retrieved from http://www.springerplus.com/content/3/1/63

Lanham, H. J., Leykum, L. K., & McDaniel, R. R., Jr. (2012). Same organization, same electronic health records (EHRs) system, different use: Exploring the linkage between practice member communication patterns and EHR use patterns in an ambulatory care setting. *Journal of the American Medical Informatics Association*, *19*, 382-391. doi:10.1136/amiajnl-2011-000263

Lanham, H. J., Sittig, D. F., Leykum, L. K., Parchman, M. L., Pugh, J. A., & McDaniel, R. R. (2014). Understanding differences in electronic health record (EHR) use: Linking individual physicians' perceptions of uncertainty and EHR use patterns in ambulatory care. *Journal of the American Medical Informatics Association*, *21*, 73-81. doi:10.1136/amiajnl-2012-001377

Larsen, M. M., Manning, S., & Pedersen, T. (2013). Uncovering the hidden costs of offshoring: The interplay of complexity, organizational design, and experience. *Strategic Management Journal*, *34*, 533-552. doi:10.1002/smj.2023

Lauring, J., & Klitmøller, A. (2015). Inclusive language use in multicultural business organizations: The effect on creativity and performance. *International Journal of Business Communication*. Advance online publication. doi:10.1177/2329488415572779

Leeman, J., & Sandelowski, M. (2012), Practice-based evidence and qualitative inquiry. *Journal of Nursing Scholarship*, *44*, 171-179. doi:10.1111/j.1547-5069.2012.01449.x

Lega, F., Prenestini, A., & Spurgeon, P. (2013). Is management essential to improving the performance and sustainability of healthcare systems and organizations? A systematic review and a roadmap for future studies. *Value in Health*, *16*, S46-S51. doi:10.1016/j.jval.2012.102004

Liang, B. A., & Lovett, K. M. (2014). Error disclosure. In A. Agrawal (Ed.), *Patient safety: A case-based comprehensive guide* (pp. 329-340). New York, NY: Springer.

Liao, J., & Chu, D. (2012). The state of health information exchange. *Journal of Health & Medical Informatics*, *3*, 1-2. doi:10.4172/2157-7420.1000e102

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic Inquiry*, *289*-331. Newbury Park, CA: Sage Publications.

Lippitt, R., Watson, J., & Westley, B. (1958). *The dynamics of planned change*. New York, NY: Harcourt, Brace World.

Long, S. K., Stockley, K., & Dahlen, H. (2012). Massachusetts health reforms: Uninsurance remains low, self-reported health status improves as state prepares to tackle costs. *Health Affairs*, *31*, 444-451. doi:10.1377/hlthaff.2011.0653

Lumpkin, G. T., Moss, T. W., Gras, D. M., Kato, S., & Amezcua, A. S. (2013). Entrepreneurial processes in social contexts: How are they different, if at all? *Small Business Economics*, *40*, 761-783. doi:10.1007/s11187-011-9399-3

Makam, A. N., Lanham, H. J., Batchelor, K., Samal, L., Moran, B., Howell-Stampley, T., . . . Halm, E. A. (2013). Use and satisfaction with key functions of a common commercial electronic health record: A survey of primary care providers. *BMC Medical Informatics & Decision Making*, *13*, 1-7. doi:10.1186/1472-6947-13- 86

Malina, M. A., Hanne, S. O., Nørreklit, H., & Selto, F. H. (2011). Lessons learned: Advantages and disadvantages of mixed method research. *Qualitative Research in Accounting and Management, 8*, 59-71. doi:10.1108/11766091111124702

Margherita, A. (2014). Business process management system and activities: Two integrative definitions to build an operational body of knowledge. *Business Process Management Journal*, *20*, 642-662. doi:10.1108/BPMJ-04-2013-0050

Marques, J. (2015). The changed leadership landscape: What matters today. *Journal of Management Development*, *34*, 1310-1322. doi:10.1108/JMD-02-2015-0010

Marrast, L. M., Zallman, L., Woolhandler, S., Bor, D. H., & McCormick, D. (2014). Minority physicians' role in the care of underserved patients: Diversifying the physician workforce may be key in addressing health disparities. *JAMA Internal Medicine*, *174*, 289-291. doi:10.1001/jamainternmed.2013.12756

Marshall, B., Cardon, P., Poddar, A., & Fontenot, R. (2013). Does sample size matter in qualitative research? A review of qualitative interviews in IS research. *Journal of Computer Information Systems*, *54*, 11-22. Retrieved from http://www.iacis.org/jcis/jcis.php

Marshall, C., & Rossman, G. B. (2014). *Designing qualitative research* (6th ed.). Thousand Oaks, CA: Sage.

Mårtensson, L., & Hensing, G. (2012). Health literacy—A heterogeneous phenomenon: A literature review. *Scandinavian Journal of Caring Sciences*, *26*, 151-160. doi:10.1111/j.1471-6712.2011.00900.x

Martin, G. P., Weaver, S., Currie, G., Finn, R., & McDonald, R. (2012). Innovation sustainability in challenging health-care contexts: Embedding clinically led change in routine practice. *Health Services Management Research*, *25*(4), 190-199. doi:10.1177/0951484812474246

Marx, M. (2014). Examining the structural challenges to communication as experienced by nurse managers in two US hospital settings. *Journal of Nursing Management*, *22*, 964-973. doi:10.1111/jonm.12091

Matei, A., & Antonie, C. (2014). The new public management within the complexity model. *Procedia-Social and Behavioral Sciences*, *109*, 1125-1129. doi:10.1016/j.sbspro.2013.12.599

May, D. R., Li, C., Mencl, J., & Huang, C. C. (2014). The ethics of meaningful work: Types and magnitude of job-related harm and the ethical decision-making process. *Journal of Business Ethics*, *121*, 651-669. doi:10.1007/s10551-013-1784-1

May, D. R., Luth, M. T., & Schwoerer, C. E. (2014). The influence of business ethics education on moral efficacy, moral meaningfulness, and moral courage: A quasi-experimental study. *Journal of Business Ethics*, *124*, 67-80. doi:10.1007/s10551-013-1860-6

Mazaheri, M., Eriksson, L. E., Heikkilia, K., Nasrabadi, A. N., Ekman, S.-L., & Sunvisson, H. (2013). Experiences of living with dementia: Qualitative content analysis of semi-structured interviews. *Journal of Clinical Nursing, 22*, 3032-3041. doi:10.1111/jocn.12275

McAlearney, A. S., Hefner, J. L., Sieck, C., Rizer, M., & Huerta, T. R. (2015). Fundamental issues in implementing an ambulatory care electronic health record. *Journal of the American Board of Family Medicine*, *28*, 55-64. doi:10.3122/jabfm.2015.01.140078

McAlearney, A. S., Robbins, J., Kowalczyk, N., & Chisolm, D. S. (2012). The role of cognitive and learning theories in supporting successful EHR system implementation training: A qualitative study. *Medical Care Research and Review, 69*, 294-315. doi:10.1177/1077558711436348

McCullough, J., Zimmerman, F. J., Bell, D. S., & Rodriguez, H. P. (2014). Electronic health information exchange in underserved settings: Examining initiatives in small physician practices & community health centers. *BMC Health Services Research*, *14*, 415. doi:10.1186/1472-6963-14-415

Meeks, D. W., Takian, A., Sittig, D. F., Singh, H., & Barber, N. (2014). Exploring the sociotechnical intersection of patient safety and electronic health record implementation. *Journal of the American Medical Informatics Association*, *21*(e1), e28-e34. doi:10.1136/amiajnl-2013-001762

Minoja, M. (2012). Stakeholder management theory, firm strategy, and ambidexterity. *Journal of Business Ethics*, *109*, 67-82. doi:10.1007/s10551-012-1380-9

Miriovsky, B. J., Shulman, L. N., & Abernethy, A. P. (2012). Importance of health information technology, electronic health records, and continuously aggregating data to comparative effectiveness research and learning healthcare. *Journal of Clinical Oncology*, *30*, 4243-4248. doi:10.1200/JCO.2012.42.8011

Mishra, K., Boynton, L., & Mishra, A. (2014). Driving employee engagement the expanded role of internal communications. *International Journal of Business Communication*, *51*, 183-202. doi:10.1177/2329488414525399

Mittal, S. (2013). Emergence in stigmergic and complex adaptive systems: A formal discrete event systems perspective. *Cognitive Systems Research*, *21*, 22-39. doi:10.1016/j.cogsys.2012.06.003

Moll, S. (2012). Navigating political minefields: Partnerships in organizational case study research. *Work*, *43*, 5-12. doi:10.3233/wor-2012-1442

Montani, F., Odoardi, C., & Battistelli, A. (2014). Individual and contextual determinants of innovative work behaviour: Proactive goal generation matters. *Journal of Occupational and Organizational Psychology*, *87*, 645-670. doi:10.1111/joop.12066

Moustakas, C. E. (1994). *Phenomenological research methods*. Thousand Oaks, CA: Sage.

Mutula, S. M. (2014). Managing research data in the information society. *African Journal of Library, Archives and Information Science*, *24*, 119-121. Retrieved from http://www.inasp.info

Nambisan, P., Kreps, G. L., & Polit, S. (2013). Understanding electronic medical record adoption in the United States: communication and sociocultural perspectives. *Interactive Journal of Medical Research*, *2*, e5. doi:10.2196/ijmr.2437

Nan, N., Zmud, R., & Yetgin, E. (2013). A complex adaptive systems perspective of innovation diffusion: An integrated theory and validated virtual laboratory. *Computational and Mathematical Organization Theory*, *20*, 52-58. doi:10.1007/s10588-013-9159-9

Nelson, G., Patterson, M., Kirst, M., Macnaughton, E., Isaak, C. A., Nolin, D., . . . Goering, P. N. (2015). Life changes among homeless persons with mental illness: A longitudinal study of Housing First and usual treatment. *Psychiatric Services, 66,* 592-597. doi:10.1176/appi.ps.201400201

Neuman, W. L. (2011). *Basics of social research: Qualitative and quantitative approaches*. Upper Saddle River, NJ: Prentice Hall.

Neuner, J., Fedders, M., Caravella, M., Bradford, L., & Schapira, M. (2015). Meaningful use and the patient portal patient enrollment, use, and satisfaction with patient portals at a later-adopting center. *American Journal of Medical Quality*, *30*, 105-113. doi:10.1177/1062860614523488

Nguyen, O. K., Kruger, J., Greysen, S. R., Lyndon, A., & Goldman, L. E. (2014). Understanding how to improve collaboration between hospitals and primary care in postdischarge care transitions: A qualitative study of primary care leaders' perspectives. *Journal of Hospital Medicine*, *9*(11), 700-706. doi:10.1002/jhm.2257

Noël, P. H., Lanham, H. J., Palmer, R. F., Leykum, L. K., & Parchman, M. L. (2013). The importance of relational coordination and reciprocal learning for chronic illness care within primary care teams. *Healthcare Management Review*, *38*, 20-28. doi:10.1097/HMR.0b013e3182497262

O'Brien, B. C., Harris, I. B., Beckman, T. J., Reed, D. A., & Cook, D. A. (2014). Standards for reporting qualitative research: A synthesis of recommendations. *Academic Medicine*, *89*, 1245-1251. doi:10.1097/ACM.0000000000000388

O'Malley, A., Grossman, J., Cohen, G., Kemper, N., & Pham, H. (2010). Are electronic medical records helpful for care coordination? Experiences of physician practices. *Journal of General Internal Medicine, 25*, 177-185. doi:10.1007/s11606-009-1195-2

Opler, M. E. (1945). Themes as dynamic forces in culture. *American Journal of Sociology, 5*, 198-206. doi:10.1086/219787

Otto, P., & Nevo, D. (2013). Electronic health records: A simulation model to measure the adoption rate from policy interventions. *Journal of Enterprise Information Management*, *26*, 165-182. doi:10.1108/17410391311289613

Padula, W. V., Duffy, M. P., Yilmaz, T., & Mishra, M. K. (2014). Integrating systems engineering practice with health-care delivery. *Health Systems*, *3*(3), 159-164. doi:10.1057/hs.2014.3

Paley, J. (2010). The appropriation of complexity theory in healthcare. *Journal of Health Services Research & Policy*, *15*, 59-61. doi:10.1258/jhsrp.2009.009072

Paré, G., Raymond, L., de Guinea, A. O., Poba-Nzaou, P., Trudel, M. C., Marsan, J., & Micheneau, T. (2014). Barriers to organizational adoption of EMR systems in family physician practices: A mixed-methods study in Canada. *International Journal of Medical Informatics*, *83*(8), 548-558. doi:10.1016/j.ijmedinf.2014.06.003

Perla, R. J., Bradbury, E., & Gunther-Murphy, C. (2013). Large-scale improvement initiatives in healthcare: A scan of the literature. *Journal for Healthcare Quality*, *35*, 30-40. doi:10.1111/j.1945-1474.2011.00164.x

Peters, R., Waples, E., & Golden, P. (2014). A real options reasoning approach to corporate social responsibility (CSR): Integrating real option sense making and CSR orientation. *Business and Society Review*, *119*, 61-93. doi:10.1111/basr.12025

Petrovsky, N., James, O., & Boyne, G. A. (2015). New leaders' managerial background and the performance of public organizations: The theory of publicness fit. *Journal of Public Administration Research and Theory*, *25*, 217-236. doi:10.1093/jopart/muu008

Pezalla, A. E., Pettigrew, J., & Miller-Day, M. (2012). Researching the researcher-as-instrument: An exercise in interviewer self-reflexivity. *Qualitative Research, 12*, 165-185. doi:10.1177/1468794111422107

Phipps, S. A., Prieto, L. C., & Verma, S. (2012). Holding the helm: Exploring the influence of transformational leadership on group activity, and the moderating role of organizational learning culture. *Journal of Organizational Culture,* *Communications and Conflict, 16*, 145-156. Retrieved from http://www.alliedacademies.org/public/journals/JournalDetails.aspx?jid=11

Plakhotnik, M. S. (2012). Review of 'essentials of qualitative interviewing'. *Human Resource Development Quarterly*, *23*, 421-424. doi:10.1002/hrdq.21127

Plummer, L. A., & Acs, Z. J. (2014). Localized competition in the knowledge spillover theory of entrepreneurship. *Journal of Business Venturing*, *29*, 121-136. doi:10.1016/j.jbusvent.2012.10.003

Qu, S. Q., & Dumay, J. (2011). The qualitative research interview. *Qualitative Research in Accounting & Management, 8*, 238-264. doi:10.1108/11766091111162070

Rafferty, A. E., Jimmieson, N. L., & Armenakis, A. A. (2013). Change readiness a multilevel review. *Journal of Management*, *39*, 110-135. doi:10.1177/0149206312457417

Reiman, T., Rollenhagen, C., Pietikäinen, E., & Heikkilä, J. (2015). Principles of adaptive management in complex safety–critical organizations. *Safety Science*, *71*, 80-92. doi:10.1016/j.ssci.2014.07.021

Rennie, D. L. (2012). Qualitative research as methodical hermeneutics. *Psychological Methods*, *17*, 385-398. doi:10.1037/a0029250

Richards, R. J., Prybutok, V. R., & Ryan, S. D. (2012). Electronic medical records: Tools for competitive advantage. *International Journal of Quality and Service Sciences*, *4*, 120-136. doi:10.1108/17566691211232873

Riddell, M. C., Sandford, K. G., Johnson, A. O., Steltenkamp, C., & Pearce, K. A. (2014). Achieving meaningful use of electronic health records (EHRs) in primary care: Proposed critical processes from the Kentucky Ambulatory Network (KAN). *Journal of the American Board of Family Medicine*, *27*, 772-779. doi:10.3122/jabfm.2014.06.140030

Robinson, O. C. (2014). Sampling in interview-based qualitative research: A theoretical and practical guide. *Qualitative Research in Psychology*, *11*, 25-41. doi:10.1080/14780887.2013.801543

Roulston, K. (2014). Interactional problems in research interviews. *Qualitative Research*, *14*, 277-293. doi:10.1177/1468794112473497

Rowley, J. (2012). Conducting research interviews. *Management Research Review*, *35*, 260-271. doi:10.1108/01409171211210154

Rubenstein, P. (2011). Why (and how) the growth of social media has created opportunities for qualitative research in organizational development. *TIP: The Industrial-Organizational Psychologist*, *49*(2), 19-26. Retrieved from http://www.siop.org/tip/

Rubin, H. J., & Rubin, I. S. (2012). *Qualitative interviewing: The art of hearing data* (3rd ed.). Thousand Oaks, CA: Sage.

Ruiz-Palomino, P., & Martínez-Cañas, R. (2014). Ethical culture ethical intent, and organizational citizenship behavior: The moderating and mediating role of person–organization fit. *Journal of Business Ethics*, *120*, 95-108. doi:10.1007/s10551-013-1650-1

Sarooghi, H., Libaers, D., & Burkemper, A. (2015). Examining the relationship between creativity and innovation: A meta-analysis of organizational, cultural, and environmental factors. *Journal of Business Venturing, 30,* 714-731. doi:10.1016/j.jbusvent.2014.12.003

Schoen, C., Osborn, R., Squires, D., Doty, M., Rasmussen, P., Pierson, R., & Applebaum, S. (2012). A survey of primary care doctors in ten countries shows progress in use of health information technology, less in other areas. *Health Affairs*, *31*, 2805-2816. doi:10.1377/hlthaff.2012.0884

Scutchfield, F. D., Prybil, L., Kelly, A. V., & Mays, G. P. (2015). Public health and hospitals: Lessons learned from partnerships in a changing health care environment. *American Journal of Public Health*, *106*, 45-48. doi:10.2105/AJPH.2015.302938

Seidman, I. (2013). *Interviewing as qualitative research: A guide for researchers in education and the social sciences* (4th ed.). New York, NY: Teachers College Press.

Sheikh, A., Sood, H. S., & Bates, D. W. (2015). Leveraging health information technology to achieve the “triple aim” of healthcare reform. *Journal of the American Medical Informatics Association*, *22*, 849-856. doi:10.1093/jamia/ocv022

Shin, D. Y., Menachemi, N., Diana, M., Kazley, A. S., & Ford, E. W. (2012). Payer mix and EHR adoption in hospitals. *Journal of Healthcare Management*, *57,* 449-450. Retrieved from http://www.ache.org/pubs/jhmsub.cfm

Shore, B., & Zollo, G. (2014). Managing large–scale science and technology projects at the edge of knowledge: The Manhattan project as a learning organisation.

International Journal of Technology Management, *67*, 26-46. doi:10.1504/IJTM.2015.065895

Silverman, R. D. (2013). EHRs, EMRs, and health information technology: To meaningful use and beyond. *Journal of Legal Medicine, 34*, 1-6. doi:10.1080/01947648.2013.768134

Sisko, A. M., Keehan, S. P., Cuckler, G. A., Madison, A. J., Smith, S. D., Wolfe, C. J., . . . Poisal, J. A. (2014). National health expenditure projections, 2013–23: Faster growth expected with expanded coverage and improving economy. *Health Affairs*, *33*, 1841-1850. doi:10.1377/hlthaff.2014.0560

Sittig, D. F., & Singh, H. (2012). Electronic health records and national patient-safety goals. *New England Journal of Medicine*, *367*, 1854-1860. doi:10.1056/NEJMsb1205420

Skiba, J. M. (2014). A phenomenological study of the barriers and challenges facing insurance fraud investigators. *Journal of Insurance Regulation, 33*, 87-114. Retrieved from http://www.naic.org/store_jir.htm

Skinner, H. G., Calancie, L., Vu, M. B., Garcia, B., DeMarco, M., Patterson, C., . . . Schisler, J. C. (2015). Using community-based participatory research principles to develop more understandable recruitment and informed consent documents in genomic research. *PloS One*, *10*(5). doi:10.1371/journal.pone.0125466

Slight, S. P., Quinn, C., Avery, A. J., Bates, D. W., & Sheikh, A. (2014). A qualitative study identifying the cost categories associated with electronic health record implementation in the UK. *Journal of the American Medical Informatics Association*, *21*(e2), e226-e231. doi:10.1136/amiajnl-2013-002404

Smit, P. (2012). *A phenomenological examination of supply chain professionals' experiences to improve cash-to-cash positioning* (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3510290)

Sommers, B. D., Buchmueller, T., Decker, S. L., Carey, C., & Kronick, R. (2013). The Affordable Care Act has led to significant gains in health insurance and access to care for young adults. *Health Affairs*, *32*, 165-174. doi:10.1377/hlthaff.2012.0552

Sorsa, M. A., Kiikkala, I., & Åstedt-Kurki, P. (2015). Bracketing as a skill in conducting unstructured qualitative interviews. *Nurse Researcher*, *22*(4), 8-12. doi:10.7748/nr.22.4.8.e1317

Steiner, J. L., Norko, M., Devine, S., Grottole, E., Vinoski, J., & Griffith, E. E. (2014). Best practices: Developing ethical guidelines for pharmaceutical company Support in an Academic Mental Health Center. *Psychiatric Services*. doi:10.1176/appi.ps.54.8.1079

Stone, L. (2013). Making sense of medically unexplained symptoms in general practice: A grounded theory study. *Mental Health in Family Medicine*, *10*, 101-111. Retrieved from http://www.mhfmjournal.com/

Street, R. L., Liu, L., Farber, N. J., Chen, Y., Calvitti, A., Zuest, D., . . . Agha, Z. (2014). Provider interaction with the electronic health record: The effects on patient-centered communication in medical encounters. *Patient Education and Counseling*, *96*, 315-319. doi:10.1016/j.pec.2014.05.004

Sturmberg, J. P., Martin, C. M., & Katerndahl, D. A. (2014). Systems and complexity thinking in the general practice literature: An integrative, historical narrative review. *Annals of Family Medicine*, *12*, 66-74. doi:10.1370/afm.1593

Suhonen, J., de Villiers, M. R., & Sutinen, E. (2012). FODEM: A multi-threaded research and development method for educational technology. *Educational Technology Research and Development*, *60,* 287-305. doi:10.1007/s11423-011-9223-4

Suri, H. (2011). Purposeful sampling in qualitative research synthesis. *Qualitative Research Journal, 11*, 63-75. doi:10.3316/QRJ1102063

Swanson, R. C., Cattaneo, A., Bradley, E., Chunharas, S., Atun, R., Abbas, K. M., . . . Best, A. (2012). Rethinking health systems strengthening: Key systems thinking tools and strategies for transformational change. *Health Policy and Planning*, *27*, iv54-iv61. doi:10.1093/heapol/czs090

Taplin, S. H., Foster, M. K., & Shortell, S. M. (2013). Organizational leadership for building effective health care teams. *Annals of Family Medicine*, *11*, 279-281. doi:10.1370/afm.1506

Terry, N. P. (2012). Anticipating Stage Two: Assessing the development of meaningful use and EMR deployment. *Annals Health Law*, *21*, 103-119. Retrieved from http://lawecommons.luc.edu/annals

Thakur, R., Hsu, S. H. Y., & Fontenot, G. (2012). Innovation in healthcare: Issues and future trends. *Journal of Business Research, 65,* 562-569. doi:10.1016/j.jbusres.2011.02.022

Thomas, E., & Magilvy, J. (2011). Qualitative rigor or research validity in qualitative research. *Journal for Specialists in Pediatric Nursing, 16*, 151-155. doi:10.1111/j.1744-6155.2011.00283.x

Thompson, K. J., Thach, E. C., & Morelli, M. (2010). Implementing ethical leadership: Current challenges and solutions. *Insights to a Changing World*, *4*, 107-130. Retrieved from http://franklinpublishing.net/insightstoachangingworld.html

Tolar, M., & Balka, E. (2012). Caring for individual patients and beyond: Enhancing care through secondary use of data in a general practice setting. *International Journal of Medical Informatics*, *7*, 461-474. doi:10.1016/j.ijmedinf.2012.01.003

Toloie-Eshlaghy, A., Chitsaz, S., Karimian, L., & Charkhchi, R. (2011). *A classification* of qualitative research methods. *Research Journal of International Studies, 20,* 106-123. Retrieved from http://www.eurojournals.com/international_studies.htm

Truffer, C. J., Keehan, S., Smith, S., Cylus, J., Sisko, A., Poisal, J. A., . . . Clemens, M. K. (2010). Health spending projections through 2019: The recession's impact continues. *Health Affairs*, *29*, 522-529. doi:10.1377/hlthaff.2009.1074

Truglio-Londrigan, M. (2013). Shared decision-making in home-care from the nurse's perspective: Sitting at the kitchen table: A qualitative descriptive study. *Journal of Clinical Nursing*, *22*, 2883-2895. doi:10.1111/jocn.12075

Tsai, J., & Rosenheck, R. (2014). Uninsured veterans who will need to obtain insurance coverage under the Patient Protection and Affordable Care Act. *American Journal of Public Health*, *104*(3), e57-e62. doi:10.2105/AJPH.2013.301791

Unluer, S. (2012). Being an insider researcher while conducting case study research. *Qualitative Report, 17*(58), 1-14. Retrieved from http://tqr.nova.edu/

Uprichard, E. (2013). Sampling: Bridging probability and non-probability designs. *International Journal of Social Research Methodology*, *16*, 1-11. doi:10.1080/13645579.2011.633391

U.S. Department of Health and Human Services. (1979). *The Belmont report*. Retrieved from http://www.hhs.gov

U.S. Government Printing Office. (2004, April 30). Incentives for the use of health information technology and establishing the position of the national health information technology coordinator. *Federal Register, 69*(84). Retrieved from https://www.federalregister.gov/

Vaismoradi, M., Turunen, H., & Bondas, T. (2013). Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. *Nursing & Health Sciences*, *15*, 398-405. doi:10.1111/nhs.12048

Valdmanis, V., DeNicola, A., & Bernet, P. (2014). Public health capacity in the provision of healthcare services. *Healthcare Management Science*, *18,* 475-482. doi:10.1007/s10729-014-9277-z

Venkatesh, V., Brown, S. A., & Bala, H. (2013). Bridging the qualitative-quantitative divide: Guidelines for conducting mixed methods research in information systems. *MIS Quarterly*, *37,* 21-54. Retrieved from http://www.misq.org

Venus, M., Stam, D., & van Knippenberg, D. (2013). Leader emotion as a catalyst of effective leader communication of visions, value-laden messages, and goals.

Organizational Behavior and Human Decision Processes, 122, 53-68. doi:10.1016/j.obhdp.2013.03.009

Vessey, I., & Ward, K. (2013). The dynamics of sustainable IS alignment: The case for IS adaptivity. *Journal of the Association for Information Systems*, *14*(6), 283-311. Retrieved from http://aisel.aisnet.org/jais/

Wahyuni, D. (2012). The research design maze: Understanding paradigms, cases, methods and methodologies. *Journal of Applied Management Accounting Research, 10*, 69-80. Available from http://www.cmawebline.org/jamar

Walker, J. L. (2012). Research column: The use of saturation in qualitative research. *Canadian Journal of Cardiovascular Nursing*, 22, 37-41. Retrieved from http://pappin.com/journals/cjcn.php

Wallace, S., Maxey, K., & Iyer, L. (2014). A multi-case investigation of electronic health record implementation in small-and medium-size physician practices. *Journal of Information Technology Case and Application Research*, *16*, 27-48. doi:10.1080/15228053.2014.912478

Walter, J., Kellermanns, F. W., & Lechner, C. (2012). Decision making within and between organizations rationality, politics, and alliance performance. *Journal of Management*, *38*, 1582-1610. doi:10.1177/0149206310363308

Waltuck, B. A. (2011). Exploring chaos and complexity. *Journal for Quality and Participation, 34*(3), 20-21. Retrieved from http://asq.org/pub/jqp/

Weeger, A., & Gewald, H. (2015). Acceptance and use of electronic medical records: An exploratory study of hospital physicians' salient beliefs about HIT systems. *Health Systems*, *4*, 64-81. doi:10.1057/hs.2014.11

Wei, Z., Yi, Y., & Guo, H. (2014). Organizational learning ambidexterity, strategic flexibility, and new product development. *Journal of Product Innovation Management*, *31*, 832-847. doi:10.1111/jpim.12126

Weiskopf, R., & Willmott, H. (2013). Ethics as critical practice: The "Pentagon Papers," deciding responsibly, truth-telling, and the unsettling of organizational morality. *Organization Studies*, *34*, 469-493. doi:10.1177/0170840612470256

Wellens, L., & Jegers, M. (2014). Effective governance in nonprofit organizations: A literature based multiple stakeholder approach. *European Management Journal*, *32*, 223-243. doi:10.1016/j.emj.2013.01.007

Wester, K. L., Borders, L. D., Boul, S., & Horton, E. (2013). Research quality: Critique of quantitative articles in the journal of counseling and development. *Journal of Counseling and Development, 91*, 280-290. Retrieved from doi:10.1002/j.1556-6676.2013.00096.x

Wheeler, L., & Bell, R. (2012). Open-ended inquiry. *Science Teacher, 79*, 32-39. Retrieved from https://learningcenter.nsta.org/browse_journals.aspx?journal=tst

Whitacre, B. E., & Williams, R. S. (2015). Electronic medical record adoption in Oklahoma practices: Rural-urban differences and the role of broadband availability. *Journal of Rural Health*, *31*, 47-57. doi:10.1111/jrh.12086

Wilson, C. V. (2012). *Post implementation planning and organizational structure of enterprise resource planning systems* (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3512581)

Winnard, J., Adcroft, A., Lee, J., & Skipp, D. (2014). Surviving or flourishing? Integrating business resilience and sustainability. *Journal of Strategy and Management*, *7*, 303-315. doi:10.1108/JSMA-11-2012-0059

Wolcott, H. F. (2014). The shadow. *Qualitative Research in Organizations and Management: An International Journal, 9*, 2. doi:10.1108/QROM-07-2013-1164

Wright, A., Feblowitz, J., Samal, L., McCoy, A. B., & Sittig, D. F. (2014). The Medicare electronic health record incentive program: Provider performance on core and menu measures. *Health Services Research*, *49*, 325-346. doi:10.1111/1475-6773.12134

Yeager, V. A., Walker, D., Cole, E., Mora, A. M., & Diana, M. L. (2014). Factors related to health information exchange participation and use. *Journal of Medical Systems, 38*(8), 1-78. doi:10.1007/s10916-014-0078-1

Yilmaz, K. (2013). Comparison of quantitative and qualitative research traditions: Epistemological, theoretical, and methodological differences. *European Journal of Education, 48*, 311-325. doi:10.1111/ejed.12014

Yin, R. K. (2014). *Case study research: Design and methods* (5th ed.). Thousand Oaks, CA: Sage.

Yip, M. H., Phaal, R., & Probert, D. R. (2014). Stakeholder engagement in early stage product-service system development for healthcare informatics. *Engineering Management Journal*, *26*(3), 52-62. doi:10.1080/10429247.2014.11432020

Youtie, J., & Corley, E., (2011). Federally sponsored multidisciplinary research centers: Learning, evaluation, and vicious circles. *Evaluation and Program Planning*, *34*, 13-20. doi:10.1016/j.evalprogplan.2010.05.002

Zhang, N. J., Seblega, B., Wan, T., Unruh, L., Agiro, A., & Miao, L. (2013). Health information technology adoption in US acute care hospitals. *Journal of Medical Systems*, *37*, 1-9. doi:10.1007/s10916-012-9907-2

Zhang, W., & Creswell, J. (2013). The use of "mixing" procedure of mixed methods in health services research. *Medical Care*, *51*(8), e51-e57. doi:10.1097/MLR.0b013e31824642fd

Zineldin, M. (2015). Determinants of patient safety, satisfaction and trust: With focus on physicians-nurses performance. *Clinical Governance: An International Journal,* *20*(2), 82-90. doi:10.1108/CGIJ-12-2014-0038

Appendix A: Interview Protocol

A. Participant Selection
   1. After obtaining the organization’s agreement, I identified potential participants with the cooperation of the organizational leaders and with the assistance of human resource staff at the participating nonprofit site. The next step involved establishing contact with the individuals via e-mail to introduce the study and ask for voluntary participants.

   2. Each potential participant was be notified of the ethical commitment of the study and the confidentiality of information provided. Individuals who wished to participate made direct contact either by phone or through their personal e-mail to protect their identity.

B. Participation Expectation
   1. Participants reviewed and discussed any questions from the informed consent form prior to initiation of the interview (see Appendix D). At any time during or before the interview process the participant retained the right to withdraw from the study.

   2. Each of the participants were given an opportunity to share their experience in using the electronic medical record as it pertains to the same interview questions.

C. Data Collection
   1. The data collected for this research originated from semistructured one-on-one interviews. The instruments used to collect the data include the use of an Olympus digital tape-recording device and observation notes taken during the interviews. The notes taken support the recording instrument’s validity (Creswell & Miller, 2000).

   2. Interview information contained date, time, and general participant demographics as a reference point for saving the information for 5 years. Transcribed data and notes are reviewed for clarity by the researcher and participant for consistency. Member checking is the process of the participants reviewing the analysis and interpretations of the data from the interviews to ensure the validity of the data captured. The establishment of a follow-up date and time for questions, analysis

and interpretations of the data from the interviews occurred at the end of the interview session.

D. Research Question

The guiding research question for the study is as follows: What strategies do nonprofit community healthcare leaders use to implement the use of electronic medical records consistent with meaningful-use standards? The following interview protocol contains the questions used to explore the central research question.

Interview Protocol	
What you will do	**What you will say—script**
Introduce the interview and set the stage—often over a meal or coffee	Good morning or afternoon I want to first thank you for taking the time to participate in this research study. The purpose of this qualitative study is to explore the strategies nonprofit community health care leaders have use to implement electronic medical records consistent with the meaningful-use requirement. The outcome may produce an understanding of how nonprofit health leaders leverage the electronic medical information resources in meeting the growing needs of the healthcare consumer. As the researcher, I wanted to assure you that the information provided will be kept confidential as indicated in your signed consent form. The qualitative research data is collected using interviews to understand the experiences and processes from the perception of the participant. These questions used are presented in an open manner to encourage you to answer as openly as possible. The interview will last approximately 30 to 60 minutes with an additional 20 minutes at an established date to review the synthesized data captured during the initial interview. Before we proceed are there any questions concerning the intent of this study or anything that I have stated? I will begin the recording by stating the date, time and asking the participant's professional discipline.
• Watch for non-verbal queues	1. How has your goal for implementing an electronic medical record system met the meaningful-use requirements?

• Paraphrase as needed • Ask follow-up probing questions to get more in-depth	2. What challenges did you experience in implementing the electronic medical record system?
	3. What strategies did you use to implement the electronic medical record system that was consistent with the meaningful-use requirements?
	4. How did organizational culture and the attitudes of employees affect the implementation of the EMR system?
	5. How do you think implementing an electronic medical record system that is consistent with meaningful use affects the clinical operations within the organization?
	6. What other insights would you like to add regarding your experience implementing an electronic medical record system consistent with meaningful-use standards?
Wrap up interview thanking participant	This concludes the interview and I wanted to thank you again for your participation.
Schedule follow-up member checking interview	The follow-up meeting to discuss the synthesis of the information interpreted from each question, should last approximately 20 to 30 minutes. What date and time frame would you like to be scheduled?
Follow–up Member Checking Interview	
Introduce follow-up interview and set the stage	Thank you for this follow-up member checking meeting to review for validity that the synthesized data represent the correct answers. If I missed anything or you like to add anything, please feel free to add that information as we review.
Share a copy of the succinct synthesis for each individual question	Question and succinct synthesis of the interpretation
Bring in probing questions related to other information that you may have found—note the	1. How has your goal for implementing an electronic medical record system met the meaningful-use requirements? Question and succinct synthesis of the interpretation—perhaps one paragraph or as needed
	2. What challenges did you experience in implementing

information must be related so that you are probing and adhering to the IRB approval. Walk through each question, read the interpretation and ask: Did I miss anything? Or, What would you like to add?	the electronic medical record system? Question and succinct synthesis of the interpretation—perhaps one paragraph or as needed
	3. What strategies did you use to implement the electronic medical record system that was consistent with the meaningful-use requirements? Question and succinct synthesis of the interpretation—perhaps one paragraph or as needed
	4. Can you explain how organizational culture and the attitude of employees affect the implementation of an electronic medical record system? Question and succinct synthesis of the interpretation—perhaps one paragraph or as needed
	5. How do you think implementing an electronic medical record system that is consistent with meaningful use affects the clinical operations within the organization? Question and succinct synthesis of the interpretation—perhaps one paragraph or as needed
	6. What other insights would you like to add regarding your experience implementing an electronic medical record system consistent with meaningful-use standards? Question and succinct synthesis of the interpretation—perhaps one paragraph or as needed
	If there is no additional information that you would like to add, this concludes the follow-up meeting. Thank you for your contribution of time and knowledge to this study.

Appendix B: Letter of Cooperation From the Research Partner (Organization)

Date

Tony Richardson

Dear Mr. Richardson

LETTER OF COOPERATION FROM THE RESEARCH PARTNER (ORGANIZATION)

Based on the review of your proposed research study, (Organization's Name) has decided to grant you permission to conduct the study entitled Meeting Meaningful-Use Requirements with Electronic Medical Records in a Community Health Clinic. You are authorized to conduct the interviews for the purposes of collecting data from healthcare leaders. The participation of the individual is voluntary based on their own discretion.

It is understood that the organization will allow 6 to 10 healthcare leaders who have developed strategies to implement the electronic medical record to voluntarily participate in the 30 to 60 minute recorded interview. The participants will answer questions from their experience and perspective. It is also understood that the researcher may ask for copies of internal documents such as policies or procedures relating to strategies to meet Meaningful-Use Requirements.

(Organization) reserves the right the withdraw from the study at any time and understands that the data collected will remain confidential with the exception of the student's supervising faculty/staff

Appendix C: Introductory E-mail

Date

Dear (Participant Name),

Tony Richardson
[Address redacted]

May 1, 2016

Dear Sir/Madam:

I would like to invite you to participate in a research study I am conducting to explore the strategies nonprofit community health care leaders have use to implement electronic medical records consistent with the meaningful-use requirements. I were invited you to participate because the strategies you used in the implementation of the electronic medical records at the nonprofit community clinic consistent with the meaningful-use requirements. The data collected is confidential and your participation is voluntary.

The interview is expected to last approximately 60 minutes and with questions focused primarily on your strategies and experiences in the implementation of the electronic medical record. The interview will be recorded and for accuracy and you will have an opportunity to review the transcribed data analysis prior to inclusion in the study. If you agree to participate in this study, review, sign and attached the consent form with your reply confirming your interest to participate. Please feel free to ask questions to ensure that every aspect of your participation is clear before signing. Thank you for any consideration given to participating in this study.

Appendix D: Consent Form

This is an invitation to take part in a research study to describe the phenomena of strategies that nonprofit healthcare leaders have developed from the implementation of electronic medical records consistent with meaningful use requirements. This study is being conducted by a researcher named Tony Richardson, who is a doctoral student at Walden University. You were invited for the study because of your previous or current contribution as a healthcare leader in the nonprofit healthcare setting that implemented electronic medical records. This form is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part.

Background Information:

The purpose of this study is to explore the strategies nonprofit community health care leaders have use to implement electronic medical records consistent with the meaningful-use requirements. The qualitative research data is collected using interviews to understand the experiences and processes from the perception of the participant. The single case study implies that this reach is focused on one issue within an organization. The outcome may produce an understanding of how nonprofit health leaders leverage the electronic medical information resources in meeting the growing needs of the healthcare consumer

Procedures:

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

- Answer questions that involve your experience with electronic medical information in the patient centered environment. The questions are presented in an open manner to encourage you to express yourself as openly as possible.
- Allow your interview to be taped for validation and reliability of the data collected.
- Dedicate approximately 30 to 60 minutes of your time for this interview.
- Participate in follow-up member checking for at least 20-30 minutes to review for validity that the synthesized data represent the correct answers.

Voluntary Nature of the Study:

Your participation in this study is voluntary. This means that everyone will respect your decision of whether or not you want to be in the study. No one at Walden University will treat you differently if you decide not to be in the study. If you decide to join the study now, you can still change your mind during the study. If you feel stressed during the study you may stop at any time. You may skip any questions that you feel are too personal.

Risks and Benefits of Being in the Study:

There are minimal risk to the participants' privacy and confidentiality. These risk are minimized by protective measure to ensure the protection of the participant's privacy and confidentiality. Your cooperation will contribute to the nonprofit health care leaders' understanding of the strategies used to meet Meaningful Use Requirements.

Compensation:

There is no compensation for this interview.

Confidentiality:

Any information you provide will be kept confidential. The researcher will not use your information for any purposes outside of this research project. Also, the researcher will not include your name or anything else that could identify you in any reports of the study.

Contacts and Questions:

You may ask any questions you have now or later by contacting the researcher via telephone at XXX-XXX-XXXX. If you want to talk privately about your rights as a participant, you can contact Dr. Dr. Leilani Endicott at Walden University via email (irb@waldenu.edu). Walden University's study approval number is 04-13-16-0172508.

The researcher will give you a copy of this form to keep.

Statement of Consent:

I have read the above information and I feel I understand the study well enough to make a decision about my involvement. By signing below or replying to this email with the words, "I consent," I understand that I am agreeing to the terms described above.

Printed Name of Participant ________________________________

Date of consent ________________________________

Participant's Written Signature ________________________________