

2015

# Promotion of the Hospital's Patient Portal

Courtnie Jones Burrell  
*Walden University*

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# Walden University

College of Health Sciences

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Courtne Burrell

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## Review Committee

Dr. Marisa Wilson, Committee Chairperson, Health Services Faculty  
Dr. Murielle Beene, Committee Member, Health Services Faculty  
Dr. Sue Bell, University Reviewer, Health Services Faculty

Chief Academic Officer  
Eric Riedel, Ph.D.

Walden University  
2015

Abstract

Promotion of the Hospital's Patient Portal

by

Courtne Burrell

MS, Walden University, 2012

BS, Medical College of Virginia. 1984

Project Submitted in Partial Fulfillment  
of the Requirements for the Degree of  
Doctor of Nursing Practice

Walden University

November 2015

## Abstract

The Centers for Medicare and Medicaid Services wanted to ensure that electronic health records were used in a meaningful manner to improve coordination and quality of patient care. In 2011, the federal government began offering monetary incentives to help healthcare facilities and providers adopt technology that supported patient access and increased their ability to manage their own health. The hospital where this project took place encouraged patients' involvement in their health by providing a patient portal, yet the public has underutilized it. The purpose of this project was to develop an evidence-based strategy for future implementation at the hospital that will increase patients' use of the hospital's portal. Education will be provided through an interaction between patients and a designated staff member. An informative video describing the functionality and benefits of the portal will be shown to patients to see if individualized education increases portal enrollment and participation in the portal. Adult learning theory informed this quality improvement project. In addition, the logic model served as the framework for the development of an evaluation strategy that the organization will use post implementation. The project targets social change through patient engagement. Ideally, patient portal education will increase portal enrollment, which will increase patients' knowledge of their health information. Evidence indicates access to one's own health information is a first step in improving and strengthening self-care and achieving better clinical outcomes.

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## Section 1: Overview of the Evidence-Based Project

### **Introduction**

There is an increased emphasis on patients taking a more active role in managing their health information, which has been associated with better clinical outcomes and patient empowerment (Dooling, 2012). The federal government is offering monetary incentives to help healthcare facilities and providers adopt a technology that supports patient access to their health information (Goldzweig et al., 2013). The American Recovery and Reinvestment Act (ARRA) was passed in 2009 to modernize the nation's healthcare infrastructure. Part of the ARRA is The Health Information Technology for Economic and Clinical Health Act (HITECH), which supports the adoption of electronic medical records (EHR). This act is meant to advance the use of the EHRs throughout healthcare systems. Using an electronic framework provides potential improvements in clinical decision-making, documentation, and patient safety (Centers for Disease Control and Prevention CDC, 2012). As a result of the ARRA and HITECH acts, the patient has greater access to their electronic medical information which can be used in making health care decisions with their health care team.

The Centers for Medicare and Medicaid Services (CMS) want to ensure that the EHRs are used in a meaningful manner that promotes the exchange of information to improve quality of care (CDC, 2012). Hospitals and eligible providers must meet certain criteria to be considered meaningful users of health information technology in order to receive a share of the 27 billion dollars in incentive money (Goldzweig et al., 2013). The CMS outlined Meaningful Use (MU) rules and divided them into three stages. Stage 1 of

the MU criteria provides the patient with electronic health information. Stage 2 allows the patient to view, download, and transmit their hospital information. The purpose of EHRs is to improve the quality and coordination of health care (CDC, 2012). Stage 3 is not finalized and is not scheduled to begin until 2017.

The goal of MU is multifaceted and can be divided into five patient-driven domains that improve outcomes. The first area is to improve healthcare quality, safety, and efficiency while reducing health disparities among population groups (HealthIT, 2014). The second purpose is to engage patients and families in their health care (HealthIT, 2014). The third objective is to improve coordination of care, and the fourth is to ensure privacy and security protection of personal health information (HealthIT, 2014). The last goal is to improve public health by analyzing the data collected over time and analyzing where improvements in quality need to be addressed (HealthIT, 2014).

One of the ARRA's aims is to move the United States towards a more patient-focused health system where there is collaboration between the consumer and the provider (CDC, 2012). When there is a partnership between the patient and physician, the quality and safety of healthcare improves, costs decrease, and patient satisfaction increases (Weston & Roberts, 2013). In the past, the actions of health care teams were not questioned; today patients are more knowledgeable and want to be involved in their health care decisions (McKennah, Keeney, & Hasson, 2009). The hospital encourages patient involvement by providing a patient portal. This tool, the patient portal, is linked to the EHR and offers a way for the patient to access their health information 24 hours a day (Hyden, 2013). Having portal access is a MU mandate. The patient portal is a way to

foster patient engagement and patient satisfaction (Weston & Roberts, 2013). Some consumers feel the portal has utility and value and has increased their health knowledge (Zarcadoolas, Vaughan, Czaia, Levy, & Rockoff, 2013).

Engaging and empowering the patient to manage their own healthcare is the focus of meaningful use (Dooling, 2013). In order for patients to feel a sense of empowerment, they need to believe they have some control over their future. The patient is becoming more informed and thus a more competent partner in his or her care (Ammenwerth, Schnell-Inderst, & Hoerbst, 2012). Potential benefits of this patient engagement include improved quality care and better patient compliance (Ammenwerth et al., 2012). Consumers also want to believe the healthcare community is committed to sharing that information and decision-making with them (Chambers & Thompson, 2008). The patient is more apt to be engaged if they perceive that the healthcare community values the patient portal for its benefits to the patient (Eysenbach, 2013). Patients report that the portal positively affects the communication between themselves and their provider and also increases their personal health knowledge and makes them feel valued (Delbanco & Gerteis, 2014). The shift to a more patient-centered model entails ensuring that the proper resources and educational tools are available to the patient, which is the responsibility of the healthcare organization (Tomsik & Briggs, 2013). Patient-centered education is a strategy to help decrease the revolving-door effect in healthcare (Tomsik et al., 2013). The EHR and the patient portal can provide a way for the patient to be informed and involved in their health care.

Not all patient portals provide the same features. The primary hospital portal gives the patient access to test and lab results along with a medication list, allergies, a discharge summary, and discharge instructions (Ammenwerth et al., 2012). The patient is free to use the portal to access clinical data and download or print off the findings if they so desire (Ammenwerth et al., 2012). The more sophisticated portals include the essential items plus the ability to communicate with the provider, manage medications, ask for refills, schedule appointments, pay bills, and obtain health information from other online resources (Zarcadoolsa et al., 2013). With the completion of a proxy form, other individuals such as parents, legal guardians, or caregivers, can be granted access to a patient's portal (Dooling, 2012). The input of the caregiver is valued because they advance the quality of care by sharing a common goal with the provider (Paul, 2013). Ultimately, it is the healthcare facility that determines what information is included in the patient portal.

### **Problem Statement**

Currently, patients in the hospital setting are not self-enrolling in the patient portal. According to the Director of Advanced Clinicals, the self-enrollment percentage is less than one percent (B. Scruggs, personal communication, August 6, 2014). The lack of self-enrollment is believed to be due to the lack of public knowledge regarding what the portal is and how it may benefit the patient (B. Scruggs, personal communication, August 30, 2014). When a nurse explains the functionality of the portal, the patient becomes more interested but seldom follows through with self-registration (B. Scruggs, personal communication, August 30, 2014). The portal may be new to the healthcare worker as

well and they may be uncomfortable educating the patient on its use. The problem addressed in this study is will an individualized education intervention increase patient usage of the portal and therefore access to their health information. There are brochures at all the information desks explaining the portal, but patients are not enrolling (B. Scruggs, personal communication, August 6, 2014). The hospital has to demonstrate that at least 5% of the patients discharged from the emergency department and inpatient wards have enrolled and accessed their portal to meet the CMS requirements (CMS, 2012). Before a patient can access their hospital portal, they have to enroll by using the email address and their medical record number (B. Scruggs, personal communication, August 6, 2014). Many patients do not want the hospital to know their email address and therefore are unable to register (B. Scruggs, personal communication, August 6, 2014).

### **Purpose Statement**

The purpose of this project was a proposal for future implementation of an evidence-based strategy encouraging patients to access their hospital's patient portal and start taking ownership of their health. As providers use the portal as a way to educate the patients about their condition, medications, and test results, this patient-centered tool enables better-informed patients to make better health decisions (Tomsik et al., 2013). As the health of individual patient increases, the health status of the greater community will be elevated (Drake, 2007).

Patients want to be able to function successfully in the healthcare system while being treated with dignity and respect (Delbanco et al., 2014) The public wishes to understand their illnesses, and some fear their physician is not telling them everything as

not to upset them (Delbanco et al., 2014). Patients want honesty and want to know how their disease will affect them and their family (Delbanco et al., 2014). They wish to know the health care plan and expected outcomes (Hyden, 2013). Patient portals can promote patient involvement in healthcare decisions by providing information to the individual that they can digest prior to meeting their provider potentially allowing them to take a more active position in their health decisions (Narcisse et al., 2013).

When a person gains greater control over decisions and actions affecting their health, it is called empowerment. It gives the patient a sense of self-worth and helps them to make autonomous healthcare decisions (Maslowski, 2012). Patients need resources to help develop this feeling (Koelen & Lindstrom, 2005). The patient portal can be such a resource. The portal is a communication tool that allows for the exchange of information between the healthcare team and the patient (Dooling, 2012). Once patients understand how to access the portal and how to use it to help them manage their health, they can progress towards a sense of control.

### **Project Goals**

The main objective of the project was for the future implementation of an evidence-based strategy encouraging patients to access their hospital's patient portal and start taking ownership of their health. Eventual implementation may generate information that could be used to quantify several accomplishable goals. Ultimately, a plan to determine if there is any difference in the portal registration of patients who receive portal education verses patients who do not receive portal education will be examined. Another objective will be to see if the educational implementation increases the patient's



knowledge of the portal. The third goal will be to see if the patients who access the hospital's patient portal feel the information provided will help them manage their health.

The needs assessment performed at the focus hospital found that the public was just starting to be familiar with patient portals as more and more healthcare centers are using them (B. Scruggs, personal communication, August 6, 2014). The vast majority of patients in the emergency room had never heard of a patient portal (B. Scruggs, personal communication, August 6, 2014). It is a future objective of the project to make the portal more readily available to the patient so they can easily view their health information.

Technology is one way to provide people with the needed information to take part in their care. As the hospital uses the portal to engage patients and to meet meaningful use standards, it will be important to educate the public on how to use the portal information to manage their health. As the patient gains access to their medical information they are better-informed and more likely to help in the decision making of their condition (Drake, 2007).

Nurses are instrumental in engaging patients in EHR's and information technology such as patient portals (Reilly & Polifroni, 2012). They are in a unique position to recognize patients who require additional resources to participate actively in their healthcare (Masloqski, 2012). Patient and nurse interaction is vital for portal enrollment promotion.

### **Theoretical Foundation**

Theories provide a way to understand an individual's behavior as well as the relationship between the event and the behavior in which constructs and concepts are

identified. They also connect practice and research. Research helps us identify patterns so standards of care can be developed, and care can be coordinated (McEwen & Wills). The change theory used in this project is diffusion of innovations by Rogers. This theory explains how ideas and new practices are spread through society (Hodges & Videto, 2011). With any new idea, there are people who initially adopt the idea, and they are called innovators (Hodges et al., 2011). Next there are early adopters (Hodges et al., 2011). Then there are the early and late majority adopters with the laggards being the last group of people to adopt the technology (Hodges et al., 2011). The rate of adoption forms a bell curve (Hodges et al., 2011). Using the innovators to motivate the patients to enroll will use the diffusion of innovations theory to investigate the adoption practice of a patient portal in the hospital.

The framework for patient education will be the adult learning model. Malcolm Knowles is responsible for developing this model (McEwen & Wills, 2011). Adult learners want to ensure what they are learning is valuable and how it can be used in their life (McEwen et al., 2011). They are mature and self-directed (McEwen et al., 2011). They come to the learning with a vast amount of experience which can be shared to enhance other's learning (McEwen et al., 2011). Learning is further strengthened if it can be integrated into the learner's experiences (McEwen et al., 2011). Another assumption is the adult learner's readiness to learn (McEwen et al., 2011). Motivation is the key to adult learning; if there is a situation or real life problem, an adult learner wants the information to resolve the issue (McEwen et al., 2011). Adults are motivated by a desire to solve immediate and practical problems (McEwen et al., 2011). Consumers who feel

healthcare tools to be of value demonstrate higher intentions of use (Agarwal, Anderson, Zarate, & Ward, 2013). One such tool is the patient portal. The hospital's portal can be used to monitor what tests and medications he or she received in the emergency department (B. Scruggs, personal communication, August 6, 2014). It will also provide a discharge summary and instructions, which will aid the individual in keeping track of his or her health journey (B. Scruggs, personal communication, August 6, 2014).

### **Significance of Practice**

The Institute of Medicine (IOM) has recommendations on how to reform the healthcare system. They recommend focusing on healthcare that is safe, effective, patient-centered, timely, efficient and equitable (IOM, 2010). Nurses and providers should partner with health organizations to redesign health care in the United States.

Better data collection and information infrastructure are needed so there is more efficient workforce planning and policy making. By collaborating with other healthcare facilities, the entire healthcare system will be able to provide quality care that is affordable, accessible, and leads to better health outcomes (IOM, 2010). Nurses have valuable insights and unique abilities to collaborate with other health care professionals in improving the quality and safety of care (Ridenour & Trautman, 2009). They also partner with others to help the patient with health promotion and prevention (Ridenour et al., 2009).

Patient care is improved when the patient assumes a more active role in the management of his or her health (Appleby, 2014). The patient portal facilitates the individual's access to their medical records allowing them to become a teammate in their

healthcare plan (Delbanco et al., 2014). Being knowledgeable about the information in the medical records may improve communication between the patient and provider (Ammenwerth et al., 2012). The IOM advocates that patient access to their medical information may increase the quality of care and reduce medical errors (2010). The patient role is changing to become more informed and responsible in their care (Ammenwerth, et al., 2012).

The significance of my project is the future implementation of an educational plan that will help educate the patient about a tool, the patient portal, which is available to help them organize their hospital medical information. The patient portal will help monitor the patient's success in meeting their health challenges by keeping a record of their tests and laboratory results. By creating a patient-centered approach, there is greater patient satisfaction and more information sharing (Archambault, 2011). Patients' families can participate in care and decision-making if they chose because the patient is able to access the clinical data found in the portal and share it with whomever they chose (Ammenwerth, 2012). Using the patient portal is just the initial step in creating collaboration between patients, families, practitioners, and healthcare leaders (Dooling, 2012). Implementation of the project may provide insight on how to disseminate education consistently and successfully to patients so the care they receive is patient-centered.

Thriving portal enrollment requires the physicians and staff to endorse and promote the portal (Hyden, 2013). Once the tools to actively engage patients and their families in their care are made available, everyone benefits by increasing care efficiency

and improving the management of chronic illnesses (Dooling, 2012). There does need to be ongoing interaction between the provider and patient fully to comprehend the data contained in the patient portal (Emont, 2011).

Based on the insights from the project's hospital's assessment, there could be improvements in the way the patient portal is marketed. Nurses should be encouraged to be more persuasive and more supportive of this patient empowerment tool. The educational plan could also be mirrored at similar hospitals. Finally, once this plan is implemented, the findings will add to the existing body of collaborative workings and knowledge that is used within organizations and assist in clarifying educational processes pertaining to the patient portal.

### **Evidence-Based Significance**

When people access their portals, they report that portals positively impact communication with their provider, improve knowledge, provide empowerment, and influence self-care (Zarcadoolas et al., 2013). The mainstream consumer is enthusiastic about the patient portal and thinks it has value and utility (Shaw & Ferranti, 2011). People who use the portal find having access to their medical information very useful (Eysenbach, 2013).

Studies have shown that vulnerable populations have low health literacy, inferior health behaviors, more moderate disease management skills, and poorer health outcomes than advantaged groups (Lyles et al., 2013). Racial and ethnic minorities along with poor and under-educated populations are considered to be at high risk for health concerns (Ancker et al., 2011; Goel et al., 2011). More than half of adults in the United States read

at or below an eight-grade level and some vulnerable populations read at a fifth-grade level or below (French & Larrabee, 1999). Most health information created for the general public is written at or above a tenth-grade level, which compounds low health literacy (Eysenbach, 2013; Smith, 2003). This population group also identified barriers to using the Internet due to its cost and their limited knowledge of the computer. Many nonusers of the portal identified they were uninterested in the Internet and computers. Lack of interest is a common theme in the older population who grew up without regular computer access or the Internet (Eysenbach, 2013). The disparity in overall use of the Internet is referred to as the digital divide (Lyles et al., 2013).

### **Implications for Social Change**

A massive amount of public money is being used to promote the improvement of healthcare in the United States (Murphy, 2010). In an effort to control healthcare expenditures, there have been increasing demands placed on the consumer to become more active in their wellbeing (Maslowski, 2012). Traditionally, patients have been viewed as a receiver of healthcare with the decisions of treatment being made by the clinicians. There is now more a collaborative effort to make care and decisions more patient focused. An informed patient is an empowered patient who can make better autonomous decisions (Doss, DePascal, & Hadley, 2011).

When a patient is the center of care, there is improved patient health and satisfaction (Delbanco et al., 2014). Adherence to treatment regimens and lower healthcare costs are also benefits of patient-centered care (Maslowski, 2012). The patient views participation in care as the exchange of information and the discussion of available

alternatives (Maslowski, 2012). Patients see health in terms of their quality of life. The healthcare worker views health as the absence of disease or illness (Fraenkel & McGraw, 2007). This project introduces the potential implementation of an educational plan designed to increase the public's awareness of the hospital's patient portal and the benefit of the portal to the patient. Consumers need to be educated on how to utilize their health care resources efficiently so they can realize their power in the healthcare relationship.

### **Definition of Terms**

For the purpose of this study the italicized words or phrases are defined:

*Meaningful Use:* Using certified electronic health record (EHR) technology to reduce health disparities while improving quality, safety, and efficiency. To help patients and families become more active in their health management and health care coordination. All the patient's health information is private and secure (U.S. Department of Health and Human Services, 2014).

*Electronic Medical Record (EMR):* A digital version of a paper chart that contains all of a patient's medical history from one practice. This record is used by providers to help diagnosis and treat patients (U.S. Department of Health and Human Services, 2014).

*Electronic Health Record (EHR):* A comprehensive patient history that is designed to contain and share information with all providers involved in a patient's care. Data in the EHR can be created, managed, and consulted by authorized providers and staff from across more than one healthcare organization. They also allow a patient's health record to move with them to other health care providers, specialists, hospitals,

nursing homes, and even across states (U.S. Department of Health and Human Services, 2014).

*Patient Portal:* A secure online website that gives you convenient 24-hour access to your personal health information and medical records from anywhere with an Internet connection (U.S. Department of Health and Human Services, 2012). The portal is tethered to the facility's electronic health record and gives the patient access to predetermined portions of the EHR and is maintained by the health service (Dooling, 2012). The portal allows the patient to view, print, and download portions of the medical records. Information included is the doctor visits, discharge summaries, medications, immunizations, allergies, and most lab results (HealthIT, 2014).

### **Assumptions and Limitations**

Statements that have not been scientifically tested, but are considered true are called assumptions (Grove, Burns, & Gray, 2013). The current project has several assumptions:

- That the desired information is in the patient portal.
- The patient portal will not change during the time of this project.
- The educational plan for the patients regarding the portal should show the portal's functionality, accessibility, and patient benefits.
- The educational plan should be affordable.
- That the educational plan will change patient behavior.



Theoretical and methodological restrictions or weaknesses in a study that may decrease the generalizations of the findings are called limitations (Grove, Burns, & Gray, 2013). The current project has these limitations:

- The passing of time allows for the diffusion of patient portal awareness and knowledge thus affecting the portal registration data.
- The future educational intervention developed for the project may not be generalized to another hospital setting.
- The future implementation and evaluation of the project may not be applicable to another hospital setting.
- The lack of effective team participation from other hospital staff members may limit the future generalization of the project.

### **Summary**

The goal of MU is for patients to take a more active role in their healthcare management. An informed patient is more apt to be more autonomous and a competent partner in managing their health needs (Ammenwerth et al., 2012). One way to do this is by accessing their hospital patient portal. The project's future implementation may lead to establishing an improved way to enroll patients in the hospital's patient portal. The goals are to improve quality, safety, and efficiency in health care while reducing health disparities. Other goals include improving care coordination, improving population and public health, while ensuring adequate privacy and security of personal health information (Barton, 2011) If these goals were met then there could be an improvement in health care quality and better patient outcomes.

## Section 2: Review of Scholarly Evidence

### **Introduction**

People are empowered to manage their health when they feel confident in their ability to achieve their goals (Archambault, 2011). There is now new technology and tools to help the individual. Information sharing through electronic medical records, patient health records, and the patient portal assists the consumer effectively participate in the planning of their medical care (CMS, 2012). Most consumers perceive that patient portals have great utility and value thus making it important that all peoples have equal access to this tool (Zarcadoolas et al., 2013). Providers and patients can work together to choose the best options for the individual. This project was created to help the patients understand the hospital's tool, the patient portal, and its benefit to them.

### **Literature Search Strategy**

The search for literature was conducted electronically from the Cumulative Index to Nursing and Allied Health Literature (CINAHL) database and THOREAU, which is a multiple database search engine. Articles older than 5 years were discarded unless they were considered landmark research. Terms used in the search included: *patient portal*, *portal*, *meaningful use*, *portal usage*, *portal access*, *MU*, and *stage two of MU*. The Boolean “and” and “or” were used between other words to expand the research search. The Internet also provided information from the CMS, HealthIT.gov, and U.S. Department of Health and Human Services. Findings on MU are currently being published due to the immerging information regarding the electronic conversion of the

healthcare system. Many of these studies are published by governmental agencies or through informatics journals.

### **Electronic Health Records**

The latest report from the Robert Wood Johnson Foundation revealed that 60% of acute care hospitals in the United States have at least a basic electronic health record (Gregg, 2014). At the end of 2013, 25.5% of hospitals had a comprehensive EHR (Gregg, 2014). A comprehensive EHR ensures the hospital system is capable of incorporating physician and nurse notes, advanced directives, radiologic and diagnostic test images, consultant reports, computerized physician order entry and decision support software (Gregg, 2014). Large hospitals and teaching hospitals were more likely to have comprehensive EHR systems (Gregg, 2014). Patient portals are attached to EHR, so the information in the electronic record populates the patient portal (Gregg, 2014). If the facility does not have an EHR system, then they do not have a patient portal feature for their patients.

The public is very or somewhat concerned about privacy and security of their medical records (Agarwal et al., 2013). A current study revealed that despite the concerns over privacy and security, the public wants their providers to use electronic health records (McCann, 2014). There was no difference between privacy and security concerns when providers used electronic records versus paper records (McCann, 2014).

### **Meaningful Use**

The federal government is aiming to have electronic health records (EHRs) in all

healthcare facilities (Barton, 2010). The Health Information Technology for Economic and Clinical Health (HITECH) Act has 27 billion dollars in incentives for hospitals and providers that implement EHRs and meet meaningful use criteria (Goldzweig et al., 2013). Having patients access the hospital's patient portal is one of the meaningful use requirements that have to be met to obtain the incentive money (Adler-Milstein et al., 2013). If the hospital does not have 5% of their inpatients and emergency room patients access the patient portal, they will not be eligible for the monies (Adler-Milstein et al., 2013).

### **Patient Portal**

The patient portal offers the patient secure access to health information that is determined by the facility (U.S. Department of Health and Human Services, 2012). The information is created and maintained by the hospital or an outside vendor and transfers to the portal for patient access (Dooling, 2012). Medication history, allergies, lab results, and patient summaries are a few of the features of the portal (Dooling, 2012).

Patients do need a computer with Internet access, computer literacy, and health literacy to enroll in the portal and to utilize its benefits (Levy et al., 2014). Not all patients are eager to enroll in the patient portal due to these patient level factors (Goel et al., 2011). The consumer may not enroll based on barriers to usage such as complex medical language and limited understanding of English (Zarcadoolas, 2013). The patient-provider communication that the portal provides is also enhanced when the patient trusts the physician and healthcare system (Ancker et al., 2011). Successful portal promotion

requires full physician and staff endorsement as well as demonstrations of the benefits of the portal (North et al., 2011).

Patient portals are beneficial to individuals with chronic conditions such as diabetes (Shaw & Ferranti, 2011). In Shaw's study (2011) of 6000 diabetics, 30% utilized the portal. The portals can provide education and support for the diabetic individual (Shaw et al., 2011). In a mixed methods study of 75 participants with type 2 diabetes, 81% were enrolled in the patient portal (Osborn, Mayberry, Wallston, Johnson, & Ekasy, 2013). They used the portal to request prescription renewal and to review their medication list (Osborn et al., 2013). ). The participants in the study who used the portal had better glycemic control (Osborn et al., 2013). As the patient becomes more involved in their care, the portal can be used for patient-provider communication thus potentially reducing inequity, improving outcomes, and increasing access to care (Shaw et al., 2011).

The Canadian Diabetes Association also found the response to the patient portal positive as long as the entrance was easy to learn and did not decrease the patient-physician relationship (Lau, Campbell, Tang, Thompson, & Elliott, 2014). The most valuable aspects of the portal that were identified were the personal alerts, access to personal laboratory values and communication with the doctor (Lau et al., 2014). The portal has been linked to improving outcomes for the diabetic patient (Lau et al., 2014). Patients in the study that accessed the portal were able to manage their risk factors better and thus achieve target A1C levels (Lau et al., 2014).

## **Patient Engagement in Health Technology**

The overarching goal of meaningful use is to encourage patient and family engagement (U.S. Department of Health and Human Services, 2014). The patient portal can be used as an information tool for the patient and the healthcare team. Now the patient can know the report results before meeting the physician so the conversation is focused on the partnered treatment plan and not explaining the test results (Perna, 2013).

Vulnerable populations are usually described as racial minorities, poor, uneducated, immigrants, and non-English speaking (Zaracadoolas et al., 2013). There is evidence that links poor health outcomes and disease management with low health literacy, which is found in this defenseless group of people (Zaracadoolas et al, 2013). It seems probable that people who are disadvantaged socially, economically, and educationally will be less likely to use the health portal. The benefits of the portal will be unequally distributed and better serve those with computer and health literacy (Zarcadoolas et al., 2013). In a large retrospective study of portal use, differences were found in portal use based on race, ethnicity, sex, language, insurance type, age, and health status (Ancker et al., 2011). These differences were first apparent with the likelihood of receiving an access code (Ancker et al., 2011). People less likely to receive portal access were minorities, non-English speaking persons, or people without insurance (Ancker et al., 2011). In the study, women were more likely than men to receive access codes even though there was no significant gender-based disparities inactivation or usage (Ancker et al., 2011). Older individuals were also shunned but once they gained access they were likely to activate the account (Ancker et al., 2011). To reduce disparities in portal usage,

policies should be implemented that support patients with the access to the portal, activation of the account, and portal usage (Ancker et al., 2011).

In a study to better understand the enrollment in the patient portal, it was found that 69% of the patients enrolled in the portal after the provider offered it (Goel et al., 2011). One-quarter of the Whites fail to enroll as compared to half of the Blacks (Goel et al., 2011). Once enrolled, they used it equally (Goel et al., 2011). In another study by Agarwal (2013), the researchers found that a strong patient-provider relationship influenced the acceptance of consumer health IT. Studies have proven that a solid patient-physician relationship results in better patient outcomes (Agarwal, 2013). There is increasing evidence this relationship may also influence technology (Agarwal, 2013). These studies show the power physicians have to affect portal enrollment.

There has been a national debate over the rationale for patients not registering for the portal. The lack of registration may be due to substantial patient populations that are elderly or destitute (Narcisse et al., 2013). Both of whom may not know how to use a computer or have access to the Internet (Narcisse et al., 2013). Persons with low incomes may be unable to afford a computer and broadband access (Narcisse et al., 2013). Another contributing factor is the patient's attitude toward the portal. The older individual may see little value in computers (Lugue et al., 2013). This attitude may be due to poor computer skills or a lack confidence in successfully enrolling into their patient portal (Lugue et al., 2013). Nineteen studies that assessed the attitudes towards the portal found that younger patients were more ready to enroll in the portal, had more trust in the Intranet, and had better computer literacy (Goldzweig et al., 2013). The older

patient might be more receptive to the patient portal use if they knew how it functioned and its benefits. If the adult learner understands the rationale for features being taught, the education is more effective (McEwen et al., 2011). Adults are problem solvers and learn best when the subject is of immediate use (Gatti-Petito et al., 2013).

There are structural barriers to the portal for the individual such as the lack of ability to navigate the healthcare system or technology (Shaw et al., 2011). The digital divide has the ability to further hinder the health of vulnerable populations by limiting their access to computer communication with their provider and ability to access their personal health information (Schickedanz et al., 2013). In a national study of older Americans over 65, it was found that health literacy was a significant predictor of Internet use (Levy, Janke, & Langa, 2014). If an individual had little health literacy, they were significantly less likely to use the Internet for health information (Levy et al., 2014). Less than one-third of the study participants used the Intranet for health information (Levy et al., 2014). This information is useful as it demonstrates that getting older individuals to enroll and to be able to navigate a patient portal may be a challenge. People with low health literacy are vulnerable of being left behind as society advances in technology (Levy et al., 2014).

Developers of health information applications need to consider getting feedback from individuals that use the current system. The application needs to align better with the patient's daily social interactions and activities if they want to boost engagement in self-care technology (Agarwal et al., 2013). If the technology addressed those issues, the patient would be more willing to use the information technology tools (Valdez, Holden,



Novak, & Veinot, 2014). The patients want more features in the portal (Archambault et al., 2011). When it comes to technology, patients want it to be convenient, accurate, and be able to communicate with their healthcare organization (Perna, 2013). In a recent interview with DeSalvo, National Coordinator for Health Information Technology at the U.S. Department of Health and Human Services, stated that one of her goals was to stop thinking of the patient as a patient, but think of them as a consumer (Appleby, 2014). With the thrust towards health management, people need to be more engaged in their health with the goal of not to become a patient (Appleby, 2014).

### **Evidence-based Practice Model**

To affect patient outcomes and provide new knowledge, health data must be transformed into a clinically usable form (Stevens, 2013). The factual information can then be assimilated into practice (Stevens, 2013). As the public demand for patient safety and quality improvement increase, so does the need for evidence-based practice (Stevens, 2013).

Rogers developed a theory to explain how, why, and at what rate new ideas and technology spread through cultures (Hodges et al., 2011). This change theory is called diffusion of innovations (Hodges et al., 2011). It is the process that occurs when people adopt new ideas, products, practice, or philosophy (Hodges et al., 2011). Initially, people are resistant to the new idea and its use (Hodges et al., 2011). As the early innovators embrace the idea and “spread the word”, more people start to become more open to the idea (Hodges et al., 2011). Eventually, the idea or product spreads throughout the population until a saturation point is reached (Kaminski, 2011). There are five types of

adopters of an innovation (Kaminski, 2011). They are the innovators, early adopters, early majority, late majority, and laggards (Kaminski, 2011). Rogers estimated the percentage of people in each category and found they represent the typical findings found in a bell-shaped curve (Kaminski, 2011).

Rogers agreed that getting new technology adopted can be challenging even when there are obvious advantages (Narcisse et al., 2013). When a person perceives an idea or practice as new, it is called an innovation (Narcisse et al., 2013). There are five steps in the change process (Narcisse et al., 2013). The individual initially passes through the new knowledge of an innovation to forming an attitude towards the change (Narcisse et al., 2013). Then there is the decision to accept or reject the idea (Narcisse et al., 2013). Next, there is the implementation and use of the new design and lastly confirmation of this decision (Narcisse et al., 2013). This choice is an information seeking and information processing activity (Narcisse et al., 2013). Initially the patient is uncertain about the advantages of the patient portal: “How does it work?” and “What are its advantages to me?” As the patient receives education on the functionality of the portal, its benefits, and reasons behind its implementation, they will be better able to accept the innovation.

When planning the implementation of a program, there are several characteristics of the diffusion of innovation theory that can be useful. The first is the relative advantage and this is when the service being provided is better than the current service (Hodges et al., 2011). In the case of a patient portal, it is a new service and in the past the patient had to go physically to medical records to get his or her medical information. Secondly is

compatibility, which reflects how much the program is consistent with existing values, past experiences, and needs of the adopters and target population (Hodges et al, 2011). Does the portal fill the desires of its users? Is the information the patient seeking available? Thirdly is how involved is the program (Hodges et al, 2011). Can the average person use and understand the portal? Trial ability is how much the system has been tested before being used. Lastly are observables (Hodges et al, 2011). How much is the patient portal being used? Is the public adopting the portal and at what rate? All of these factors play a role in the implementation of the program.

The problem identified with patient portal is its limited use. The portal is a way for individuals to take a more active role in their health management (U.S. Department of Health and Human Services, 2014). All ages of people can benefit from better health practices. The adult learning model will be used to help the nurse understand how to convey the value of the portal to the patient. Emergency room patients with an email address will be educated about the benefits and purpose of the portal. The nurse can assist the client in understanding the value of the portal as a way to monitor their lab work, medications, and discharge plan resulting in improved knowledge regarding the patient's health (Tomsik et al., 2013). The portal is a tool that can be used to increase a patient's level of well-being. People commit to engaging in behaviors that they believe are of value to themselves (Pender, 2002).

## Section 3: Approach

### **Introduction**

The purpose of this quality improvement project was to develop a best practice process that will address the implementation of an educational plan that assists patients in accessing their patient portal and becoming more engaged in their health. The hospital will take the responsibility to obtain the patient sample, to evaluate the usefulness of the video, and to implement the patient education process. This section addresses the project design, potential patient sampling, data collection tools, and data analysis techniques that will eventually be used to assess the findings. Lastly, an evaluation plan will be described that will allow the site to evaluate the merits of this project.

### **Project Design/Method**

To control the high healthcare costs, increased pressure has been placed on the consumer to take a more active role in their health (Maslowski, 2012). The Robert Wood Johnson Foundation found that patients who were disengaged in their care could cost 21% more to treat than highly engaged patients (Versel, 2014). The financial incentive to decrease healthcare costs and for hospital eligibility for the MU money is motivation for the hospital to encourage portal enrollment. The Get Well Network has been collecting data for more than 10 years that demonstrates that people who are active in their care consistently get better outcomes (Rowe, 2013). There is also information that shows that patients who understand their condition and care are more likely to get and stay healthy (Rowe, 2013). To have better patient outcomes and reduce cost, the facility must implement an educational intervention for patient portal enrollment.

This educational plan was developed for the adult participant. Adults make a commitment to learning when they can see its value, immediate usefulness, and relevance to their personal needs (Billings & Halstead, 2009). Multifaceted educational strategies are most useful when implementing practice change as in the case of public understanding of meaningful use. Future instruction would be given orally as well as visually and be provided for patients in the emergency room.

The facility will determine the patient's interest in learning more about the patient portal. If the hospital finds that the emergency room patient expresses an interest in the portal, the educational intervention will be instituted. The first step will occur at the time of emergency room registration. The registrar will give the patient a copy of the hospital's threefold brochure (Appendix A), which contains information on the patient portal. This booklet discusses the purpose of the portal, how to make the patient portal work for the patient, how access personal health information at any time, and how to self-enroll in the patient portal program. There is also a question and answer section along with a patient portal support toll-free phone number.

The patient portal concierge will ask the stable emergency room patient a pre-educational survey that consists of two questions. The first question identifies if the patient has ever heard of a patient portal. The second question determines if the patient wants more information on the function and benefits of the patient portal. If patients are interested in more information, the concierge will show the two and a half minute video (see Appendix B) explaining the portal. This video will demonstrate how to use the portal and will visually depict the function of the portal. It will provide actual photos of the

hospital's portal. The video is shown on an iPad that will also be used to register patients in the portal. The iPad is the property of the advanced clinical department, and it is this department that handles portal registration. If patients want to review the video when they get home, they can scan the code on the back of the brochure with a Smartphone to watch the demonstration again. If the patient does not have a Smartphone then the video can be accessed through the hospital's website. At the end of the video the patient will be encouraged to ask questions or voice concerns. If the patient is willing to comply with requirements, he or she can be enrolled in the portal.

After the educational intervention, the patient is given a postintervention survey that is administered by the portal representative. In the preliminary questions the patient is asked if the provided information was beneficial if the patient thinks he or she will access the portal and use the information to help manage their health. If the patient wishes to register while still an emergency room patient, the concierge will assist with the enrollment process if the patient desires. If not, the patient will be encouraged to register when they get home.

### **Population and Sampling**

To obtain a good cross-section of individuals, the population sample will eventually come from emergency room patients at the hospital setting. The evaluation plan calls for a sample of patients over the age of 18 who are not already enrolled in the hospital's patient portal. These individuals will be offered the educational opportunity.

### **Data Collection**

July and August of 2014, the advanced clinical staff at the facility conducted a

random needs assessment. This assessment was to determine if the low level of portal usage was due to a lack of interest by patients or because patients were unaware the hospital had one. The hospital found that the public was unaware of the existence of the hospital patient portal (H. Middlebrook, personal communication, August 30, 2014). Data analysis also indicated that if they did know about the portal, they did not know what it meant. They did not understand what information was on the portal and how it benefited them (H. Middlebrook, personal communication, August 30, 2014). The survey found that the public was unaware that the hospital had a portal and did not know what a portal was nor its function (B. Scruggs, personal communication, August 30, 2014). The needs assessment was used to determine the knowledge of the existing service. Knowing the barriers help identify the need for a particular service or support service such as those needed to educate and enroll the patient into the patient portal (Kettner, Moroney, & Martin, 2013).

To capture portal registration information in the future, two data collection tools will be implemented by the facility. One will be an electronic report that is accessed from the hospital's computer system. This report contains data on how many patients have enrolled in the hospital's patient portal (B. Scruggs, personal communication, June 29, 2014). It lists the patient's name, location, when they entered in the portal, and their discharge date (B. Scruggs, personal communication, June 29, 2014). This report will function as the baseline data for the number of people who truly activated and viewed their portal accounts each day (B. Scruggs, personal communication, June 29, 2014).

Once the consumer sees the account, it registers on the hospital's records as activated (B. Scruggs, personal communication, June 29, 2014).

The other data collection tool will be a survey given immediately after the educational video by the portal concierge to see if the educational component of the intervention was valuable. This survey is brief and given face-to-face only to those individuals not enrolled in the hospital's portal. This survey is in the form of a structured interview. It consists of two fixed questions that will need a positive or negative response.

The questions are as follows:

1. Was the information provided helpful?
2. Do you think you will access the patient portal to use the information there to help you in managing your health?

The UK National Institute for Health Research found that face-to-face interviews achieved the highest response rate (Varela-Lema, Ruano-Ravina, & Mota, 2012). Further, many systems including the national health statistics report have found significant improvements in response rates when short questionnaires were used (Varela-Lema et al., 2012). This survey method will also be cost effective, efficient, and administered by the hospital. It will also meet the educational intervention requirement.

If the survey reveals the patient wants more information, an educational plan will be initiated. The patient will be asked if he or she wants assistance with portal registration. If the patient does need help, he or she will be aided in registration. Lastly, the posteducation survey will be given. Upon the conclusion of the interaction, the patient



and family will be thanked for their participation and the time spent in the hospital's patient portal.

No health information will be ascertained for this project. Once the patient enrolls and activates the portal, the patient has access to their medical information (B. Scruggs, personal communication, June 29, 2014). The two Belmont principles of beneficence and respect for privacy guide the program. These values protect the participant from having others know their personal health history. It gives the participant the right to determine the use of their health information (Schonfield, Brown, Amoura, & Gordon, 2011).

### **Data Analysis**

Data analysis gives meaning to the data by reducing and organizing the information (Groves, Burns, & Gray, 2013). The facility will collect the data by reviewing the daily hospital computer reports. The report is used by the hospital for data collection to comply with CMS requirements for Stage 2 of MU (B. Scruggs, personal communication, August 6, 2014).

The posteducation survey will be offered to all patients who had the one-on-one education. Once again, the questionnaire is a structured interview with two questions.

The questions are as follows:

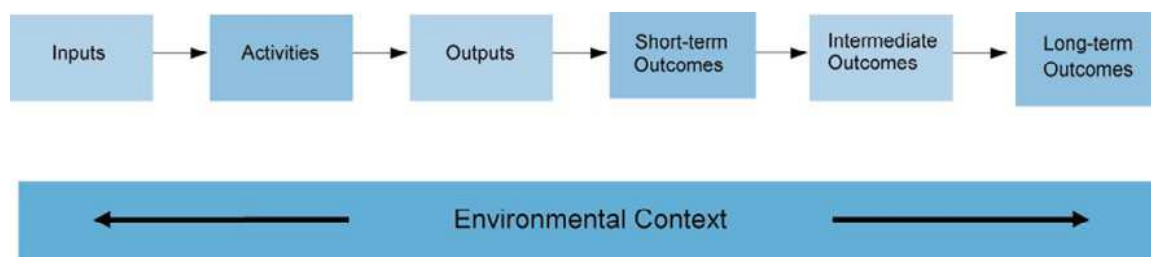
1. Was the information provided helpful?
2. Do you think you will access the patient portal to use the information there to help you in managing your health?

At this stage it might be hard to determine the outcomes of the project. After the hospital implements the project, the closed-ended survey results will be compiled and

entered into Microsoft Excel. The patient's responses will be coded using a number for each answer choice, yes = 1, no =2. A key explaining the system will be provided. The Excel spreadsheet will be used to organize the initial findings. Chi-square testing will be used to analyze data results.

### **Project Evaluation Plan**

The logic model will be the framework used for the program's design and evaluation. This framework demonstrates the causal relationships between various parts of a program with the outcomes (Hallinan, 2010). This model also links direct associations within the program while also depicting assumptions that may influence the outputs (Hallinan, 2010). The logic model helps to focus on the big picture of the program while understanding how each of the components affects one another. This example demonstrates how every component of the project is interrelated. It can be visualized as a flowchart that shows how different aspects of the program affect outcomes.



*Figure 1.* Sample Logic Model (CDC, 2011)

The first element is inputs, and these are the resources used (CDC, 2011). Data will include concierges, iPADS, laptops, consumers, brochures, patient portal video, and

the hospital paying the wages of the patient portal concierges. As time progresses, the potential federal incentive money the hospital receives would be an additional input element.

The second component is the interventions used to achieve the desired outcomes (CDC, 2011). In this project, it would be the education intervention to inform the patients about the hospital's portal. Prior to the education intervention, the concierge had to know how to enroll patients in the portal. They also had to know how to survey the patient and how to show the portal video on an iPad. The concierge learned how to enroll patients by taking an online course on Healthstream (B. Scruggs, personal communication, June 29, 2014). The director of advanced clinicals was able to download the patient portal on the iPad (B. Scruggs, personal communication, June 29, 2014). The advanced clinical department had to know how to run the enrollment computer report and how to maintain these reports. The department currently keeps records on daily enrollment numbers (B. Scruggs, personal communication, June 29, 2014). Lastly, there needed to be a hospital public awareness campaign of the patient portal. This component was underdeveloped. There were brochures at the registration desks and a picture of the brochure with "ask about the patient portal" on the hospital's closedcircuit TV. The registrars and hospital staff were not educated on what the patient portal looked like, what it is, what it included, importance, and value to the patient. This detail was missed during the planning phase of this project.

The third element is outputs(CDC, 2011). The consequences or changes that occur due to the program's response will be the output (CDC, 2011). One of the possible

outputs would be increased knowledge of hospital staff and consumers of the patient portal. Another possible output would be patients would take a portal brochure from the registration desk. Potentially, emergency department patients would be willing to participate in portal education. Lastly, there could be an enhanced perception of the benefits of utilizing the patient portal.

The last framework section is outcomes (CDC, 2011). The results are measured in terms of length (CDC, 2011). There will be short term, intermediate, and long term effects of the project (CDC, 2011). A potential short-term outcome could be an increase in portal enrollment rates of emergency department patients and an increased need for concierges to register these patients. Another possible short term outcome is the increased consumer demand for the hospital's portal. An intermediate outcome may be an increase in the number of patients hospital-wide participating in the enrollment process. A positive longterm outcome would be that patients would recognize the value of the patient portal and enroll. The consumer would use the portal to manage his or her health care information and become an active participant in their health. These various properties will define the conclusions of the program in terms of influence on the individual and population group.

During the entire process there will be the outside factor of the environment, which affects the project at every level (CDC, 2011). Examples of these outside factors would be the hospital's budget for the advanced clinical department. When the hospital is not meeting their fiscal goals, department resources such as concierge hours are cut. There is only one fulltime concierge and one part-time concierge. If one is sick or on

vacation, the enrollment rates may decrease. The portal is only in English, so if an emergency department patient does not understand English, they will not be given the portal information. Figure 2 shows the logic model as it potentially maps out the patient portal project.

*Figure 2: Patient Portal Logic Model*

| Inputs     | Activities        | Potential Outputs           | Potential Short-term and Intermediate Outcomes | Potential Long-term Outcomes |
|------------|-------------------|-----------------------------|--|------------------------------|
| Concierges | How to register   | ↑Knowledge of staff         | ↑ED enrollment                                 | ↑Recognition of value        |
| iPADS      | How to show video | ↑Knowledge of consumers     | ↑Need concierges                               | ↑Enrollment                  |
| Consumers  | How to survey     | ↑Taking of brochures        | ↑Consumer demand                               | ↑Useage to manage health     |
| Video      | Run report        | ↑Participation in education | ↑Overall enrollment                            | More active in health care   |
| Brochures  | Manage report     | ↑Perception of benefit      |  |                              |
| Wages      | Public awareness  |                             |  |                              |
| Laptops    |                   |                             |  |                              |

The program evaluation will focus on the change in patient knowledge and behavior. The hospital will want to know if the involved people are more knowledgeable about the hospital's patient portal and are the patients enrolling in the patient portal? The hospital wants to have a daily patient portal enrollment of 23 patients to meet the government's MU requirements (B. Scruggs, personal communication, August 6, 2014). If the patient does register, do they feel more like an active participant in their health information? A continuous evaluation of the program will provide feedback to the team members involved in the intervention, so there are constant improvements in the program. By involving team members in the project, they accept the plan and take

ownership of the project (Hodges et al., 2011). Team participants can synthesize the data and provide meaning to the information (Hodges et al., 2011).

### **Summary**

The emerging information technology tools have moved the United States toward a more patient-centered health care system. This system encourages the collaboration between the provider and the patient. Governmental incentives, organizational investments, and energy have promoted the adoption of MU. Besides fulfilling the government's requirement, the hospital wants to engage the patient to take a more active role in his or her health by providing the patient portal. This tool will give them access to parts of their health records so they will have a resource available to start feeling like a healthcare team member.

## Section 4: Findings, Discussion, and Implications

### **Summary of Findings**

The purpose of the project was to introduce an educational plan for future implementation that would increase the hospital's patient portal registration rate. Given that the plan has not been implemented, findings and corresponding supporting literature conclusions are not available for discussion. This section will explore the potential initiation of the evaluation tool, project strengths and limitations, recommendations, and possible implications for future policy, practice, research, and social change. Lastly, this section will discuss the future impact of the educational plan for patients and the hospital.

### **Evaluation Discussion**

Evaluation of the project is needed to provide information for discussion and planning regarding the sustainability of the educational plan and should highlight the project's future needs (White & Brown, 2012). The logic model will continue to be used in the assessment of the study and was initiated at the beginning of the project and provides the framework for evaluation. The implementation of the project is still in the activity phase; however I was able to begin a formative evaluation plan. The advanced clinical department will continue with the activity portion of the logic model for several months, and then they will start to evaluate the outputs. The department is comfortable with the project and the logic model as they have been stakeholders throughout the development of this project. The stakeholders have been given the resources to complete the evaluation. The advanced clinical director is also a higher education educator and states she is familiar with the evaluation process (B. Scruggs, personal communication,

June 20, 2015). This department will administer the evaluation plan; assess the project and the future implementation course of the study.

To begin the first phase of the assessment process, the actual patient portal education video should be examined by the hospital assigned stakeholders. The hospital's corporation produced this video. The functionality, results, and personal administrative data are discussed in the portal video. The patient is also shown how to sign onto the portal site and maneuver the actual icons. The video takes 2 minutes 38 seconds to view. To increase health-related knowledge and behavior, video interventions have been shown to be equally or more effective than written materials (Krawczyk, et al., 2012). The adult learning theory states that people have different learning styles and have preferences for sending and receiving information (Billings et al., 2009). . Auditory and visual input is the preferred method of learning as most people simultaneously process information through multiple senses (Knowles, 1973). When presentations have both visual and auditory components and are combined with interactive activities the learning and retention of information is increased in most adults (Knowles, 1973). The stakeholders can evaluate if the video was the deciding factor in the patient's decision to register.

The second thing to evaluate would be the responses to the post education survey questions. The survey consists of two items. One question asks if the information provided was helpful. The other question asks if the person would access the patient portal to use the information to help manage their health. The participant would need to have access to a computer to find the portal information useful. The responses to these issues, if positive, would validate the utilization of the educational intervention. If the



patients did not find the instructional video informative and useful, then the video should not be used as a method to increase portal enrollment. Ideally, the educational intervention will inform the public, and they will enroll in the hospital's patient portal. Until the intervention is fully implemented by the hospital, the usefulness of the educational video cannot be accurately assessed. The evaluation of the activities has been assessed and the lack of hospital workers and public awareness regarding the portal need to be addressed by the facility before the outputs are appraised.

### **Implications**

This project introduced the future implementation of an educational plan that would increase the hospital's patient portal registration rate. With the IRB's approval (#05-22-15-0282270) of the plan, the hospital can now implement the project. The implementation of this study may provide findings that affect policy, practice, research, and social change. This project may change how patients are informed about hospital services and may positively increase patient empowerment.

### **Policy Implications**

Health policy will be affected by the new MU Stage 3 guidelines from the CMS EHR Incentive Program, which are scheduled to begin in 2017 (NPRM, 2015). The recommendations from the Policy and Standards Committee have yet to be finalized but will continue to expand MU objectives that improve patient outcomes (NPRM, 2015). One of the recommendations that affect patients' access to their health care information include that more than 25% of patients who have been discharged from the emergency department or hospital must "actively engage" with their electronic records (Terry, 2015).

Another recommendation is for more than 35% of the patients discharged from the emergency department or hospital must be sent a secure message using the EHRs secure system or in response to a patient's secure message request (Terry, 2015). These recommendations will allow the public greater access to their health information and should promote patient-centered care.

### **Practice Implications**

This project is for the future implementation of an educational plan to promote patient's enrollment in the hospital's patient portal. The findings from the project will determine if there is a practice change. If the hospital finds that showing an educational video increases the enrollment rates, it should offer this service to all patients. It may be that having the video continuously run in the emergency waiting room or hospital lobby is enough of a change in practice that enrollment increases. The hospital may require that nurses ask if the patient would like more information about the patient portal when they perform the admission assessment of the patient. This question could easily be a part of the educational needs assessment, which the nurses currently perform on each admission.

The hospital's educational needs assessment highlights whom will be receiving the education, the methods they prefer to be educated, such as verbal, written, video, or a combination of the types. Knowing these factors would assist the patient portal concierges in being able to individualize the educational session to meet the needs of the patient. The adult learning model emphasizes that adults are individuals, and each has unique learning preferences (Knowles, 1973). The concierge would need education on the common characteristics of learners and preferred learning methods so the adult

learner can best respond to the new material. These are just potential ways that the practice of healthcare may be adjusted to meet the consumer's needs.

### **Research Implications**

The framework for the patient education is based on the adult learning theory. Adults are motivated to learn when they think the instruction will help them (McEwen et al., 2011). The learner asks questions such as: What is in it for me? Why do I need this information? How will I benefit from it? How can I make use of it in a practical manner? (McEwen et al., 2011). The question I have for the hospital is how to make using the portal appealing to the individual.

The concierges have not been instructed on how to explain the value of the portal to the patients. Besides tailoring the education, the concierge needs to make the portal information gained pertinent to the patient. The patient has to be motivated to learn about the portal. The concierge needs to use an educational method that best capitalizes on the patient's interest. A high priority should be to make available to the learner multiple formats on which to learn about the portal. The video should be effective since it demonstrates the portal's functionality instead of the concierge simply just describing the portal. No matter how entertaining or informative the content delivered is unless the learner is motivated, there will be no application of learning. Future research could explore patient motivation and satisfaction.

### **Social Change Implementation**

Meaningful use information is consistently evolving and growing. Literature is beginning to show that patients are starting to take a more active role in managing their

health and that they want more information. According to a 2014 survey released by the National Partnership for Women & Families, patients are significantly more interested in accessing their electronic health information than they were in 2011 (iHealthBeat, 2014). The potential impact of this project and eventual implementation of the educational component could affect social change by providing patient empowerment through increased patient knowledge and access to the portal. If the educational portal intervention becomes a hospital standard, then there is future potential that patient outcomes could improve, which could then lead to an increase in patient satisfaction.

### **Project Strengths, Limitations, and Recommendations**

#### **Strengths**

The project design offered a number of advantages. The educational portion of the implementation was easy to render, accessible, and mobile. The video can be downloaded to an iPad or it can be accessed through the hospital website that makes showing the video very portable. The future hospital stakeholders can implement this project without difficulty. The interviewer only has to ask four simple yes or no questions. The one-on-one interaction between the patient portal concierge and the patient facilitates and encourages communication as they share in this learning moment. The eventual implementation of the study to determine if having an educational intervention increases patient portal registration rates can serve to bridge the gap in evidence-based research regarding patient's knowledge of the portal and their participation in health information.

**Limitations**

The overriding weakness of this project is that it is to be implemented in the future. Without actual data on the implementation process, the hospital is unable to analyze and describe the outcomes. By keeping the indicators simple and practical, the hospital will be able to collect the data and measure the outcomes using the logic model. It is valuable to ask questions that prove and improve the success of the project. Formative evaluation concerns provide insight on how to improve the project's activities and short-term outcomes (Hulton, 2007). At the completion of the project, summative evaluation questions should be asked. The evaluation should provide information that is useful to the hospital and the consumer.

Another limitation may be the restricted amount of time and available resources to carry out the project. If the stakeholders do not have a large enough sample size, the project results will be compromised. Lastly, the entire project assumes the patient is computer literate and has access to iPADS, Smartphones or computers.

**Recommendations**

Future recommendations for the hospital would include identifying the true intent of the portal. Is having a portal only to receive the federal incentive monies or does the hospital truly want to have a portal that is meaningful? The EHR is meant to improve the quality and safety of healthcare (CMS, 2010). It is also to be used to engage patients and families in managing health care (CMS, 2010). Meaningful use is supposed to improve care coordination and public health (CMS, 2010). The hospital needs to look at a specific target group of patients and work with them in a very specific ways to ensure that the

patient can gain maximum benefit. This may be oncology patients or patients with a chronic health issue. This takes concerted effort and workflow redesign. Previously, there has also been no avenues made available to the patient for feedback on the portal.

The project results will need to be evaluated so the study can be re-evaluated and the design can be strengthened as needed. The sample size needs to be large enough to be representative of all ages, races, and gender. Using a convenience sampling design may create researcher bias and may not constitute an accurate representation of the overall population (Terry, 2012). Finally, the evaluation of the results eventually obtained from the research should be used to feed directly into another project that promotes patient engagement in the portal if the current project is not successful.

### **Analysis of Self**

#### **Scholar**

The importance and value of scholarship are evident throughout the doctor of nursing (DNP) curriculum. The DNP can apply knowledge and solutions to a given problem (Terry, 2012). It is the translation of research into practice and the dissemination of new knowledge that actually defines scholarship (Terry, 2012). This scholarly project has changed my awareness about research and the far-reaching implications it can have on society. Lastly, the importance of evidence-based research that is transformed into best practices for better patient care cannot go unrecognized. It is my goal to promote practices that improve patient outcomes.

**Practitioner**

As a DNP graduate, I will be prepared for numerous roles. DNP graduates are expected “to demonstrate refined assessment skills and base practice on the application of biophysical, psychosocial, behavioral, sociopolitical, cultural, economic, and nursing science as appropriate in their area of specialization” (American Association of Colleges of Nursing [AACN], 2006, p.16). This DNP project has exposed me to an entirely new skill set that is invaluable in my professional journey. By conducting a literature review, I was able to design a plan that could eventually result in evidence-based research that improves patient outcomes.

**Project Developer**

The DNP project has endured many refinements and rewrites. The leadership and guidance received has imparted the importance and value of research as well as the process. It is important to understand the entire project process and the different stages so the planned program can achieve the desirable results (Hodges et al., 2011). Planning an application that called for future implementation used my ability to foresee potential future challenges and potential project evolution. The logic model helped me identify potential issues and make recommendations to the stakeholders. An example of this would be the recommended training of the concierge in adult education. In preparing for committee and IRB approval, I grew in knowledge and skill, as these were new undertakings for me. Lastly, this project has increased my interest in the patient empowerment that can result due to access and understanding of personal health information in the patient portal.

### **Project Contribution for Future Professional Development**

The DNP proposal has positively impacted my personal growth as a professional and has excited me for potential future projects. The vast amount of fresh knowledge has empowered me to strive to meet the challenges of the ever-changing healthcare landscape. My professional development has been highlighted through the proposal process and through the planning and reporting related to this project.

### **Summary**

The purpose of this quality improvement project was to introduce the idea of an educational plan that would assist the patients in accessing their patient portals and thus becoming more engaged in their health outcomes. The evidence-based research in this field demonstrated gaps in knowledge of how best to inform patients of the portal and how to engage them in the enrollment process. Standardization of information given to patients regarding the portal needs to be addressed. This can be done in the future once the project's findings are assimilated, analyzed, and evaluated.



## Section 5: Scholarly Product

### **Introduction**

This DNP project was designed to be introduced at a later date as an educational plan that would increase the hospital's patient portal registration rate. The hospital will perform the implementation and evaluation of this project. This plan is significant because patient portals are designed to increase patient involvement in their care and to meet MU Stage 2 requirements.

### **Dissemination Plan**

As a nurse leader, I have the responsibility to disseminate evidence-based nursing research to clinicians. The Essentials of Doctoral Nursing Practice VIII Advanced Practice addresses the purpose of a scholarly project is to spread the learned knowledge to others (American Association of Colleges of Nursing, 2006). Studies can produce a body of knowledge that may be used to improve practice through the development of new clinical practices and guidelines. My project was a process improvement measure.

Publication of findings is a way to disseminate research results so they can be used to impact patient outcomes and can be cited by other authors who want to expand the findings (Oermann, Shaw-Kokot, Knafl, & Dowell, 2010). Examining how the project's educational plan may ultimately improve the patient portal registration process and lead to patients taking a more active role in their health management, underscores the value of evidenced-based research and process improvements. As a DNP, I can analyze the project and ask questions to improve the patient portal experience. My plan is to disseminate my project both internally and externally. The internal dissemination will be

in the form of a poster presentation to the hospital stakeholders, and the external dissemination will be to the journal, *CIN: Computers, Informatics, Nursing*.

### **Poster Board Presentation**

The poster presentation can be used as a means to promote conversation among colleagues on research that has yet to be completed (White & Dudley-Brown, 2012). The poster provides an outline and summary of the project. The primary content of the project can be easily identified (Valente, 2013). White (2012) addressed how the author of the poster has an obligation to interact and network with the viewer so the presenter can obtain feedback and market his or her work. This flow of communication is vital especially when the project is ongoing. For there to be a change in practice, the integration of recommendations to actual practice needs to be performed at the individual organization (Forsyth, Wright, Scherb, & Gaspar, 2010). The poster presentation as a means of dissemination will be a first way to inform the stakeholders about the new process of portal registration. This method of dissemination is fast and attracts more staff participation than oral presentations (Forsyth et al., 2010).

### **Publication Aspirations**

A manuscript for a professional journal allows for the permanent documentation of research, evidence-based practice projects, or case studies and a means of dissemination to the profession (White et al., 2012). The DNP Essentials of Clinical Scholarship and Analytical Methods for Evidence-Based Practice charges the nurses to disseminate the findings of primary and translational to improve healthcare outcomes (AACN, 2006). The project would apply to any HITECH or general nursing magazine. I

have chosen to submit a query letter and abstract to the journal, *CIN: Computers, Informatics, Nursing* and to the *American Journal of Nursing* (AJN). I chose these two journals because my project brought to light two concerns. One issue is the public's lack of knowledge and understanding of the patient portal, and the other is how the patient portal can be used to benefit the patient. I believe it will take both the informatics nurse and the bedside nurse to solve these deficits. I will only be able to submit a manuscript to one journal as neither publication considers manuscripts that are being reviewed by another publication or previously published manuscripts.

The journal, *CIN: Computers, Informatics, Nursing* focuses on nurses who use computers. The articles relate to the use of computers in nursing practice, education, administration, and research (CIN, 2015). The *AJN* goal is to promote excellence in health care through the dissemination of evidence-based, peer-reviewed clinical information and research (AJN, 2015). The informatics nurse needs to be aware of the problems associated with the enrollment of the patient in the hospital's patient portal. The bedside nurse needs to be aware what the patient portal is and how it can benefit the patient. That nurse has the most contact with the patient and will be the most likely person to field the questions from the patient. Each nurse most likely subscribes to the journal that best mirrors their nursing practice. The public publication of this study would allow me to contribute to the nursing profession through the improved standardization of patient portal education and potentially affect societal change.

### **Recommendations for Future Project Study**

This project is for future implementation, but its findings will strengthen the educational process of patients regarding the hospital's patient portal. Burns & Grove (2009) recommended broad sampling to ensure a large target population of diverse subjects. The hospital may repeat the evaluation to validate the results with another convenience sample.

Studies on patient portal usability and increased patient empowerment would be beneficial to the hospital and society as a whole. Studies are beginning to show that hospitals implemented the patient portal to receive MU incentive dollars but did not take into account the patient experience (Guerrero, 2015). Patients are becoming more empowered and have started to complain about inadequate patient portals with platforms not being mobile-friendly, features that do not work, and lack of pertinent data (Guerrero, 2015). These are all issues that the hospital should assess as it rolls out the patient portal in the future.

### **Conclusion**

It is important to remember that the problem of low patient portal registration is probably not unique to the projected hospital. This issue is very likely to be identified by other institutions and thus sharing this project's findings would have application beyond this one facility (Zaccagnini & White, 2011). This project brings to light the array of problems that currently hinder the CMS meaningful use recommendations for patient involvement. The dissemination of results will be shared via a poster presentation and professional journal publications. It is imperative that the project's findings are shared with the stakeholders and with others outside the immediate organization.

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Appendix A: Educational Material

**Patient portal**

Because who cares more about the future of **your** health than **you**?

Enroll now for **FREE** and **SECURE** online access to your personal health information


**HCA Va**  
Henrico, Parham & Retreat Doctors' Hospitals  
Campuses of Henrico Doctors' Hospital / An HCA affiliate

### Appendix B: Video

The video demonstrates how to use the portal and its function. It provides actual photos of the hospital portal and can be accessed at


<http://vimeopro.com/user23398763hca/hca/video/81621689>.

## Appendix C: Poster



## Promotion of the Hospital's Patient Portal

by  
Courtne Burrell MSN, RNC



**Background:**

- Financial incentives to healthcare providers
- Meaningful use
- Patient portal enrollment
- Portal to encourage patient involvement (Goldzweig et al., 2013).

**Findings:** Data will be collected by hospital at a future date once the educational plan has been implemented.

**Conclusions:** Analysis of the study's data findings is not available since it is to be implemented at a future date.

**Implications for Evidence-Based Practice:** Patients who take a more active role in supervising their health information have been associated with having better clinical outcomes and feeling more empowered (Dooling, 2012).

**Purpose:** To develop an evidence-based strategy with future implementation that helps patients to access their hospital's patient portal and start taking ownership of their health.

**Goal:** Development of an educational intervention and plan for future implementation and evaluation to enhance patients becoming more empowered and a more active participant in their health.

**Project Design:**

- The Adult Learning Theory
- Pre and post education survey
- Informational video
- Evaluate the impact of the video

**Significance:**

- Patients not enrolling in hospital's patient portal.
- Possibly due to knowledge deficit

**References:**

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Appendix D: Abstract for *CIN: Computers, Informatics, Nursing*

Many hospitals are not meeting the meaningful use criteria to receive the monetary incentives from the federal government. One cause is a lack of patient participation in their health. Hospital settings encourage patient involvement by providing a patient portal. The purpose of this process improvement project was to develop an evidence-based strategy for future implementation that helps patients access their hospital's patient portal. The goal of the project was to develop an evaluation plan of the short educational video to see if it enhanced patient empowerment and active participation in their health. The project design used the adult learning theory for the future delivery of the educational plan. The logic model was used to monitor the project's process. The hospital will implement the selection of participants and evaluate the usefulness of the educational video in increasing patient use of the patient portal. A positive conclusion will be if the patient portal utilization increases and patients become a partner in their health care needs. The literature supports the need for patients to take a more active role in managing their health information because it is associated with better clinical outcomes and empowerment.

*(Note: There was a 200-word limit)*

Appendix E: Abstract for *Advanced Journal of Nursing*

The Centers for Medicare and Medicaid Services want to ensure that electronic health records are used in a meaningful manner to improve coordination and quality of patient care. The federal government is offering monetary incentives to help healthcare facilities and providers adopt the technology that supports patient access to their health information as a way to increase patient participation in managing their health. The hospital setting encourages patient involvement in their wellbeing by providing a patient portal, which the public has underutilized. The purpose of this project was to develop an evidence-based strategy for future implementation that helps patients access their hospital's patient portal and start taking ownership of their health. The goal of the project was to develop an evaluation plan of the short educational video to see if it enhanced patient empowerment and active participation in their health. The project design used the adult learning theory for the future delivery of the educational plan of this quality improvement project. The logic model was used to monitor the project's process. The hospital will implement the selection of participants and evaluate the usefulness of the educational video in increasing patient use of the patient portal. A positive conclusion will be if the patient portal utilization increases and patients become a partner in their health care needs. The literature supports the need for patients to take a more active role in managing their health information because it is associated with better clinical outcomes and empowerment.