

INCREASING PATIENT PORTAL ACTIVATION THROUGH INCREASED
PROVIDER PROMOTION TO PATIENTS

by

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DEDICATION

I want to dedicate this project to my husband, my daughter, who is on her way, my parents, and my siblings.

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ABSTRACT

Purpose: Quality improvement project aimed to increase patient portal activation through increased provider promotion.

Background: Patient portals give patients access to after-visit summaries, medication lists, lab results, appointment reminders, and a means of communication with their providers. Though there is increasing interest in patient portals, a notable underutilization occurs from both patients and providers. Increased provider interest and promotion of the patient portal to their patients can increase patient interest and increase patient portal activation.

Methods: An educational huddle was developed and delivered to providers and clinic staff members regarding the importance and benefits of patient portals. Pre- and post-surveys were administered to participants to identify how many providers promote the portal, why they do or do not promote it, and how likely they are to start promoting after learning its benefits.

Results: Ten participants were involved: four providers, one nurse, three medical assistants, and two front desk/receptionists. Some 80% reported they did not promote the portal before the educational huddle, and 50% reported that they would still need to promote it after the educational huddle. Highlights for the lack of promotion include a need for more awareness of the portal, its usability, and its components for the hesitancy in promotion. The portal activation percentage improved from 32% to 39% in the two-week timeframe of the project.

Conclusion: The study findings were positive in improving the promotion of the patient portal and understanding what keeps providers from promoting the portal. It has a more significant impact in setting the foundation for future practice implications. A common theme of the lack of promotion was a lack of confidence due to unawareness of the patient portal. This knowledge

deficit can guide future quality improvement projects within the San Luis Walk-in Clinic to optimize the benefits of the patient portal.

INTRODUCTION

The American Association of Nurse Practitioners (AANP, 2022) practice model focuses on patient-centered care through care priorities based on patient and family education, shared decision-making, promotion of health, provision of competent care, facilitation of entry into the healthcare system, and promotion of a safe environment. Facilitating these Standards of Practice for Nurse Practitioners (NPs) using Electronic Health Records (EHR) connects the patients close to the healthcare system. Patient portals were created as an extension to the EHR to give patients access to their care at any time, further enhancing the standard entry into the healthcare system, improving patient understanding of their medical status, and ensuring the patient has the means to communicate with the healthcare team (Federman et al., 2018; Ramsey et al., 2018). The patient portal encourages patients to be involved in their care, improving communication with the provider to ensure optimized care goals are achieved and understood. One EHR component promotes patient's shared responsibility for their care through a clinic summary, also known as an after-visit summary (AVS) (Federman et al., 2018; Hirabayashi et al., 2020). Various factors, such as the patient's educational level, health status, the complexity of the treatment plan, and a higher number of comorbidities, limit the effectiveness of patient-provider communication due to decreased retention. Though there is growing evidence of the benefits of patient portals to improve patient engagement, there is a lower usage among underserved populations. One barrier identified is limited provider and staff involvement in promoting the patient portal (Casillas et al., 2020).

Background Knowledge and Significance

The passing of the Health Information Technology for Economic and Clinical Health (HITECH) Act of 2009 pushed healthcare into a technological state to promote increased patient wellness. The Centers for Medicare and Medicaid Services (CMS) further expanded this by promoting and incentivizing meaningful use of EHR by providing a patient portal that includes essential information such as clinical summaries to patients after their visit, also known as the after-visit summary (AVS), as well as an updated list of current medications, lab results, and appointment reminders (Hummel & Evans, 2012). The AVS provides the patient with relevant information about their visit, including the provider's contact information, date and location of the encounter, medication list, referrals, follow-up details, some pertinent lab values, and even a detailed plan of care for the patient to follow (EHR Incentive Program, 2014). For many patients, having this information on hand can be crucial as often patients forget what they discussed during the visit, including their diagnosis, new or discontinued medications, and referrals. An AVS supplements oral communication and promotes patient engagement during and after the visit (Ramar et al., 2020). Though not mandated by CMS, the potential of the AVS to improve the patient's healthcare experience is beneficial. EHR AVS should be utilized in all practice settings to improve patient and provider communication and increase patient satisfaction (Mir et al., 2019).

The healthcare organization can choose what the patient portal consists of and how the patient can access it. Some clinics offer patients a printed version of an AVS that contains the date, time, name of the provider, and information on follow-up or referrals, while others give the patients a date card with their next appointment. However, many clinicians find printing the AVS

impacts the workflow of their office as they would have to enter all the information before the end of the patient visit, which means the patient would have to wait to get an accurate and updated AVS (Hirabayashi et al., 2020). Other clinics incorporate the AVS within the electronic patient portal within two to three days, giving providers time to update the patient's visit summary and include all medication changes and referrals (Federman et al., 2018). However, studies show a low rate of patients accessing their AVS via a patient portal, limiting the potential benefits the AVS can bring to the patient and the providers (Federman et al., 2018).

Furthermore, Federman et al. (2018) found that only 30% of patients from a clinic were accessing the EHR to view the AVS. Another option to improve its use would be printing an AVS for the patients after the visit, which is more accessible for patients without Internet access. There is a high interest in patient portals, both by providers and the patients and families; however, there is growing evidence of barriers by both parties, including social, economic, and patient and provider perceptions of the portal (Casillas et al., 2020; Hans et al., 2018). Though providers found patient portals helpful for patients to access their medical information, there is provider resistance due to workflow shift concerns with patient portal engagement and reimbursement concerns (Hans et al., 2018).

Local Problem

The San Luis Walk-in Clinic (SLWC) Family Medicine department in Somerton, Arizona, cares for patients from pediatrics to adults. SLWC developed a patient portal accessible to patients to access their health records online; however, providers report that patients do not use it, so they do not rely on the portal as part of their care (R. Scott, personal communication, January 20, 2023). Data from the nursing informatics department, also known as their

information technology (IT) department, shows that only 30% of all the patients in the Family Medicine department enrolled in the patient portal within the last quarter (SLWC, 2023). Current providers admit a need for more consistency in the patient portal's promotion, attributed to a high front desk staff turnover rate and lack of patient education by medical assistants and providers (R. Scott personal communication, January 20, 2023). This lack of patient involvement in the patient portal potentially hinders communication between parties. Providers are concerned that the communication breakdown starts at the beginning of the visit, with patients concerned about not understanding the purpose of the visit and treatment changes made during their visit. (R. Scott, personal communication, January 20, 2023). There is also a concern that patients need to gain knowledge of their medications at the start of the visit. When medications change, patients are at higher risk for medication errors due to a lack of understanding of these medications (Federman et al., 2018). Patients also feel inundated with the information shared during the visit, making it difficult to remember specific details, such as their diagnosis, the medications given to them, and the reason behind their prescriptions (Federman et al., 2018). Though the AVS contains all the information regarding their visit and treatment plan in their portal, patients need access. Based on an environmental assessment of the clinic, a more significant promotion of the patient portal is needed, both with visuals and increased education and encouragement from the staff and the providers.

Intended Improvement

Project Purpose

This quality improvement (QI) project aimed to promote greater use of the SLWC patient portal among all the Family Medicine department patients by promoting access to the AVS. The

goal was to enhance patient-centered care by improving communication between clinic staff, providers, and their patients, improving patient satisfaction with their care, and empowering the patient with further health knowledge by employing staff and provider involvement in promoting the patient portal at every patient visit.

Project Question

Will increased provider and staff clinic promotion of the online patient portal to patients increase the total patient enrollment to 50% in the portal within two weeks?

Project Objectives

The proposed project's objectives include:

- 1) Conduct an education session for staff members, including providers, nurses, medical assistants (MA), and front/reception staff, to reinforce the patient portal as a resource to patients before, during, and after the visit.
- 2) Collect a pre- and post-survey questionnaire assessing how often clinic staff remind patients about the patient portal and barriers and facilitators to promoting patient use of the portal.
- 3) Evaluate the effectiveness of the educational session on provider and clinic staff involvement in promotion and impact on patient enrollment.

Theoretical Framework

The project aimed to educate clinic staff and providers to promote the patient portal among the patients, thus increasing the rate of providers promoting the portal and the percentage of patients that activate it. The goal of the project was to increase the staff and providers' knowledge of the importance and benefits of the patient portal and persuade them to increase the

promotion and use of the patient portal for their patients. Roger's Diffusion of Innovation Theory guided the theoretical framework of this project.

Roger's Diffusion of Innovation

According to Rogers's diffusion of innovation theory, there are four main elements: the innovation itself, communication channels, time, and the social system (Rogers, 2003). The diffusion of the innovation is affected by how it is communicated through channels of knowledge, persuasion, decision, and adoption or rejection of the innovation (Mohammed et al., 2018; Rogers, 2003). These factors further influence the adoption of the innovation based on the relative advantage, compatibility, complexity, trialability, and simplicity, causing some to be the innovators, early adopters, early majority, late majority, or laggards (Rogers, 2003).

Innovation

Roger's Theory defines innovation as an idea or practice new to be adopted by a group or individual; however, new does not mean *newly* created. Instead, it can be something already there but is new knowledge to the individual or group (Rogers, 2003). The SLWC adopted the portal in 2019, but providers believe its use did not expand due to the pandemic and the belief that provider and staff turnover increased, thus not placing great importance on promoting the portal but instead just getting staff trained quickly (R. Scott, personal communication, January 20, 2023). Thus, promoting the portal consistently would be a newly adopted practice for the clinic.

Communication Channels

Communication is the process by which information is created and passed on from individual to individual or group to group. In contrast, information passes on via communication

channels (Rogers, 2003). This can affect how well the innovation can be adopted, as the communication channel can promote it or be a communication barrier. For this project, the communication channels started with a flyer to remind clinic staff and providers to educate them on the need for increased portal promotion. The channels then expanded to each provider, encouraging their patients to sign up for the portal, and the front desk staff reinforced the portal to the patients as they checked out. The flyers posted for the patients are a communication channel, as the paper flyer is a reminder and description of the portal.

Time

The diffusion process further breaks down into the innovation-decision process, the innovativeness of the unit of adoption, and the innovation rate of adoption (Rogers, 2003). The group's five main steps in the innovation process are knowledge, persuasion, decision, implementation, and confirmation (Rogers, 2003). The group forms attitudes based on the knowledge gained from the innovation, decides whether to adopt or reject the innovation, officially implements the innovation, and confirms the use of the innovation (Mohammed et al., 2018; Rogers, 2003). Provider and clinic staff education increases knowledge on how incorporating the promotion of the patient portal can lead to increased portal activation and enrollment. Other factors can come into play with persuasion, such as the provider's and clinic staff's perceptions and attitudes about the change in their workflow and the benefits the portal can bring to the practice, developing innovativeness. The unit's innovativeness can lead to innovators, early adopters, early majority, late majority, and laggards, affecting the adoption rate. Providers have some pushback on patient portals as they believe that it can impact their workflow, which can cause their innovativeness to stay caught up (Hans et al., 2018). This can

influence the timeframe of everyone adopting the innovation. Pre- and post-surveys were used to assess if providers and staff at the SLWC promoted the portal after the project implementation.

Social System

The social system is a set of interrelated units that come together for the same goal; the interrelatedness and the system's norms can affect the adoption of the innovation (Rogers, 2003). Within the system, there can be innovative opinion leaders, those who oppose change, a change agent who attempts to influence the group's decisions, and an aide who can also affect the adoption of the innovation (Rogers, 2003). Furthermore, three types of innovative decisions characterize a social system: optional innovative decision, made by an individual independent of the system; innovative collective decision, made by consensus among the members; and innovative authority decision, made by relatively few individuals but that possess power or status (Rogers, 2003). The stakeholders in this process are the patients, providers, and clinic staff, which include the front desk and medical assistants. Though they plan to come together to promote the patient portal, each member can affect the adoption.

Literature Synthesis

Evidence Search

The literature review identified the benefits of patient portals and provider perceptions and attitudes toward the portal (Appendix F). Given that most providers in the SLWC know that the patient portal is available to patients, the literature search focused on finding what barriers providers can have with the patient portal. Two search engines were used, including PubMed and Cumulative Index of Nursing and Allied Health Literature (CINAHL), accessed via the Arizona Health Sciences Library from the University of Arizona. The PubMed search included the

Medical Subject Headings (MeSH) function in which the search terms “patient portal,” “provider attitudes,” “provider perspectives,” “satisfaction,” “patient engagement,” and “increased patient use.” This search yielded 17 articles. The search was further narrowed to only include articles within five years in English and abstracts, from which six articles were included in this review. The same search terms were used in CINAHL, which yielded three articles in this review.

Comprehensive Appraisal of Evidence

Technological advances have allowed patients greater autonomy over their health through patient portals; however, there still needs to be a connection between the patients, providers, and patient portal use. Crockett and Carter-Templeton (2020) report that over 90% of providers offer access to the portal, but less than 30% of patients activate the account; however, there is still growing research to understand why this lack of patient involvement is occurring. Ochoa et al. (2017) found that while most patients were willing to try using a patient portal, only some providers would recommend it due to concerns about the drain of efficiency. Many factors can affect the patient’s involvement in accessing their patient portal. These can come from the patients, providers, and staff sides. Providers’ attitudes and perceptions can persuade or dissuade patients from accessing the portal (Ochoa et al., 2017). The provider’s reluctance to promote the portal can come from concerns over the change in their workflow both in promoting the portal as well as the process changes to include visit documentation within the portal (Crockett & Carter-Templeton, 2020; Hans et al., 2017; Ochoa et al., 2017). Greater patient involvement stemmed from increased provider encouragement, whether it be to increase awareness and transparency of the existence of the portal or providing some assistance in setting up the portal (Cross et al., 2021; Elers & Nelson, 2018; Lyles et al., 2021; Ramsey et al., 2017; Wright et al., 2021).

Provider Attitudes and Perspectives

Every clinic has different components included within their patient portal, with the most consistent of them being an abbreviated EHR summary that includes a patient's lab results, current medications, and the ability to see the provider visit notes such as those in an AVS (Hans et al., 2017; Ramsey et al., 2018). Due to this increased access to medical information, providers feel there is a risk to security and privacy if patients can access everything they document, posing a significant risk for patients and misunderstanding their health information (Cresswell et al., 2022; Crockett & Templeton, 2020). Other concerns included a change in their workflow, whether it is from taking time to educate patients on how to use the portal during their visit or if, depending on the portal, further steps are required to make the information accessible via the portal, which again will take time away from patients and their medical need (Crockett & Templeton, 2020; Elers & Nelson, 2018; Ochoa et al., 2017). The final concern is that before pushing patients to start using the patient portal, the team needs to evaluate the portal's usability and level of complexity and its appropriateness for the patient population (Ramsey et al., 2017, 2018; Cresswell et al., 2022).

Provider Encouragement Enhances Patient's Willingness

Patients have reported a great willingness to use a patient portal, believing it facilitates communication with their provider. However, many studies found that providers must start this communication loop by promoting the portal. Increased awareness and encouragement of the patient portal by their providers was recognized as a stimulus for portal use (Wright et al., 2022). The level of provider engagement with the portal positively correlated with patients using the portal, and involvement ranges from mentioning the portal to devoting time to showing the

patients how to use it (Wright et al., 2022). The most significant improvement in patient use was when providers or clinic staff devoted a visit specifically to activating and educating the patients on the patient portal, and, if not an entire visit, at least having someone trained with the portal to answer any questions the patients may have, This was especially helpful in older populations (Cross et al., 2021; Ramsey et al., 2018; Lyles et al., 2020).

Strengths of Evidence

Breakthrough in technology continues to push for EHR use in medical settings, and acts, such as the HITECH Act, incentivize a continuation of the EHR by using patient portals. Research shows excellent benefits from patient portals for both patients and providers. Quality improvement (QI) projects are already in motion to promote patients' enrollment on the patient portal by assisting them in enrollment (Crocket & Carter-Templeton, 2020). These projects include interventions to promote the portal, including awareness and engagement of the portal, starting with providers engaging with the patients, which supports the purpose of this project (Wright et al., 2022). Cresswell et al. (2022) found that reducing bias on portals by assessing stakeholders' needs can improve portal adoption. These biases can include the provider's belief that the portal is not as beneficial due to time constraints or complexity based on the patient's comorbidities, as the patient's biases of not using it because they are not aware of the portal or they find it too difficult to use (Cresswell et al., 2022). This supports the purpose of asking providers the reason why they promote the portal or do not. Cross-sectional surveys used in descriptive studies, level VI evidence, explored these perceptions and found that though patients find great benefit in having their health information at hand, there is still provider resistance that limits the amount of promotion they provide for the patient portals (Cross et al., 2021; Wright et

al., 2022). A qualitative study by Elers and Nelson (2018), which is also level VI evidence, found that there was less than 20% uptake of the patient portal with little promotion by the clinics and its staff.

Weaknesses, Gaps, and Limitations of Evidence

The literature search yielded limited articles with a high level of evidence. There is only one systematic review but no meta-analyses or randomized control trials. The search keywords incorporated providers' perceptions and perspectives, which could have led to more qualitative studies, cross-sectional studies, and case reports, which have lower levels of evidence. Crocket and Carter-Templeton (2020) provided specific education and assistance in activating and navigating the patient portal; however, there was no description of the program itself in the study, and this goes beyond the scope of this project, as the study focused on assisting patients on creating an account. Many studies varied in the capability and usability of the portals, which can cause variations in the perspectives of the feasibility of patient adoption. For example, Ramsey et al. (2017) describe the portal use, MyChart Genius, as part of a group project that comes with a mobile application that would make it easier to access for patients as well as a trained group to help patients with troubleshooting the portal, which would not be available for this study.

On the other hand, Ochoa et al. (2017) reported a portal that did have the accessibility of a bilingual portal; however, it was not mobile-friendly. Lyles et al. (2021) found that individualized patient training was beneficial to increase patient portal use; however, this is beyond the target of this project's goal. The gaps in the literature and this research project were a focus on age group as SLWC is a Family Medicine clinic that has pediatric, adult, and elderly

populations; however, many studies focused on adults 18 and over. Cross et al. (2021) focused on older adults and found that older adults older than 65 require more assistance and encouragement to use the patient portal.

METHODS

Project Design

This QI project used a pre- and post-survey design to measure the effectiveness of a patient portal education session for providers. Another measure of patient portal education was patient enrollment in the patient portal. Increased patient portal utilization stems from many factors, with provider promotion being one of them. This QI project intended to educate providers on the importance of promoting the portal to their patients to improve the percentage of total enrolled patients. A quantitative and qualitative approach aided in determining the effectiveness of increased provider promotion in increasing the number of patients enrolling in the patient portal by using self-reported pre- and post-survey questionnaires and monitoring the pre-and post-intervention enrollment rates.

The following intended outcomes were measured after the educational session provided to the clinic:

- 1) Providers will more consistently promote the patient portal to their patients. The promotion will start at the beginning of the patient's visit, during the visit with the provider, and after their visit by the front desk staff.
- 2) Increase patient portal enrollment to 50% after increased provider promotion in two weeks.

Model for Implementation

The purpose of the QI project is to improve a sub-optimally used system, and by improving, it increases safety and efficiency in patient care and involvement. Improvement drives healthcare, and science-driven improvement ensures that the change is evidence-based (Institute of Healthcare Improvement [IHI], 2023). The IHI created the Model for Improvement: Plan-Do-Study-Act (PDSA) to help guide a QI project and document the test of change. The model provides a framework that starts with questioning the need for change and if it will be an improvement, then deciding what the change will consist of and how it will be measured and evaluated (IHI, 2023). This tool guides the implementer to develop a plan for the project, carry out the test, study the changes, analyze the results, and act on the results (IHI, 2023). The PDSA tool guided this QI improvement project to assist in guiding change and evaluating the effectiveness of the change.

Setting and Stakeholders

The QI project took place at the SLWC Family Medicine. The Clinical Services and Patient Safety Coordinator authorized this QI project (Appendix A). Key stakeholders identified for this project were the patients and the staff members, which include providers, nursing staff, medical assistants, and front desk staff. The patients are primary stakeholders because they receive information by accessing the patient portal, which can increase their autonomy in their care. Support from providers, which in the SLWC is by four nurse practitioners, three medical assistants, one nurse, and two front desk staff, is essential to consistently promote the portal to the patients.

Planning the Intervention

The intervention started on Monday, September 18, 2023, with a weekly huddle. Due to the day of the week and the huddle starting before business hours, the portal enrollment rate encompasses data from the Friday before the start of the intervention to the Friday before the conclusion of the intervention. Participants received a disclosure form at the start of the huddle (Appendix B). Participants received the pre-implementation survey at the beginning of the huddle (Appendix D). The initial surveys with two questions measure how many providers and staff members remind their patients of the portal's availability and a free-text question about why or why not they promote the portal. A printed post-survey (Appendix D) had three questions measuring how many providers promote the portal, how likely they are to continue promoting the survey, and the free text questions as to why or why not they promote the portal. A short verbal educational presentation to the clinic staff highlighted the importance of promoting the portal and its potential benefits (Appendix E). Critical points for the huddle included the benefits of the portal from the patient's aspect, such as having their health care at hand and being able to see their results, refill their medications, and communicate with the providers. The presenter informed providers and staff that research showed that provider promotion of the portal increases patient enrollment, which improves patient satisfaction. Printed handouts with reminders on the patient portal were posted in the staff lounge, inside every patient exam room, in the waiting area, and at the front desk to increase visibility to staff and patients (Appendix C).

Participants and Recruitment

The clinic hosts weekly huddles; thus, there were no recruitment flyers as the intervention occurred at an already mutually agreed date and time of huddle. In the weekly huddle before the

planned intervention, the moderator of the meeting, the unit nurse, introduced the project topic within the following week's minutes (planned topics). The goal was to have 100% of providers and staff members in the huddle before the start of the clinic day to participate. The patient participants included those who visited the clinic over the two weeks after the Monday huddle from all four different providers in the clinic. Patients, partners, significant others, or any family member or friend accompanying the patients received a portal promotion every visit.

Consent and Ethical Considerations

Ethical principles that guided this project were the consideration for beneficence, which is to promote the good of others, which in this project would be to promote the good of providers to improve patient use of the portal (Polit & Beck, 2017). Approval from the Institutional Review Board (IRB) at the University of Arizona was received before the implementation of the project to ensure ethical implementation (Appendix A). The providers and clinic staff provided implied consent by completing the surveys. Patient privacy was maintained by only accounting for the percentage of portal activation without patient identifiers.

Data Collection

Pre-implementation printed survey responses were collected at the end of the educational huddle, and post-intervention surveys at the huddle a week following the conclusion of the two-week implementation period. The surveys did not include personal identifiers to protect privacy, and all participants received black pens to maintain surveys as anonymous as possible. Survey responses were entered in a password-protected Excel spreadsheet for documentation accessible only to the writer. Pre-surveys consisted of two questions: the first was a 'yes' or 'no' question regarding whether they currently promote the patient portal to their patients, and the second was

a free text question asking why or why not they promote the portal. The post-implementation survey includes the same two questions plus a third using a 5-point Likert scale asking how likely they are to start promoting the portal more consistently to their patients. Patient portal activation percentages were obtained from the nursing informatics/IT department at the end of the day on Friday before each huddle.

Data Analysis

Responses to the survey were entered into a Microsoft Excel spreadsheet. Survey data was analyzed using descriptive statistics and categorical results as percentages. Ordinal data depicts Likert-scale results for the post-implementation survey's third question, where zero was "extremely likely" and a four was "extremely unlikely." Themes, developed using thematic analysis, depict the responses to the second question, which focuses on identifying the reason for portal promotion or lack thereof.

RESULTS

The unit nurse, who also serves as the moderator to weekly huddles, introduced the project on the September 11, 2023, huddle as planned. The pre-implementation survey and educational huddle were distributed and collected on September 18, 2023, and post-implementation surveys were given and collected on October 2, 2023. A total of 10 participants were at the huddle and completed pre- and post-surveys. The percentage of portal activation was obtained from Friday, September 15, 2023, to Friday, September 29, 2023, to allow for the preparation of data collection before the huddle and at the study's conclusion before the post-implementation surveys.

Sample Size

Ten staff members (n=10) attended the educational huddle: four providers, one nurse, three medical assistants, and two front desk/receptionists and there was 100% participation from staff. All huddle participants completing the pre-survey were asked to avoid adding personal identifiers to the survey to keep it anonymous, and all surveys were returned. The total percentage of portal activation included all the department's patients on the dates provided by the SLWC IT department.

Outcomes

The percentage of patient portal activation at the start of the project was 32% and by the end of the project, it was at 39%. Ten pre-implementation surveys evaluated whether or not providers and clinic staff promoted the patient portal (Table 1):

- 1) 8 out of 10 (80%) providers did not promote the portal to their patients.
- 2) Themes found for lack of promotion included:
 - a. Lack of confidence in the usability and value of the portal (n=2).
 - b. Unfamiliarity with the portal, thus, wanted to avoid misguiding patients (n=4).
 - c. Lack of awareness of portal still being available to patients (n=2).

Ten post-implementation surveys completed two weeks after the educational huddle and the patient flyers posted around had the following outcomes (Table 1):

- 1) 5 out of 10 (50%) providers promoted the portal.
- 2) Reasons for lack of promotion included:
 - a. Members were unsure of how to answer patient's questions regarding the portal, so they stopped promoting it to other patients (n=3)

- b. Needed more information on how to use the portal (n=2).

Table 1

Common Themes for Lack of Promotion

Pre-Implementation



Lack of confidence on the usability and value of the portal

Unfamiliarity with the portal itself, thus did not want to misguide patients

Lack of awareness of portal still being available to patients

Post-Implementation



Unsure of how to answer patient's questions regarding the portal

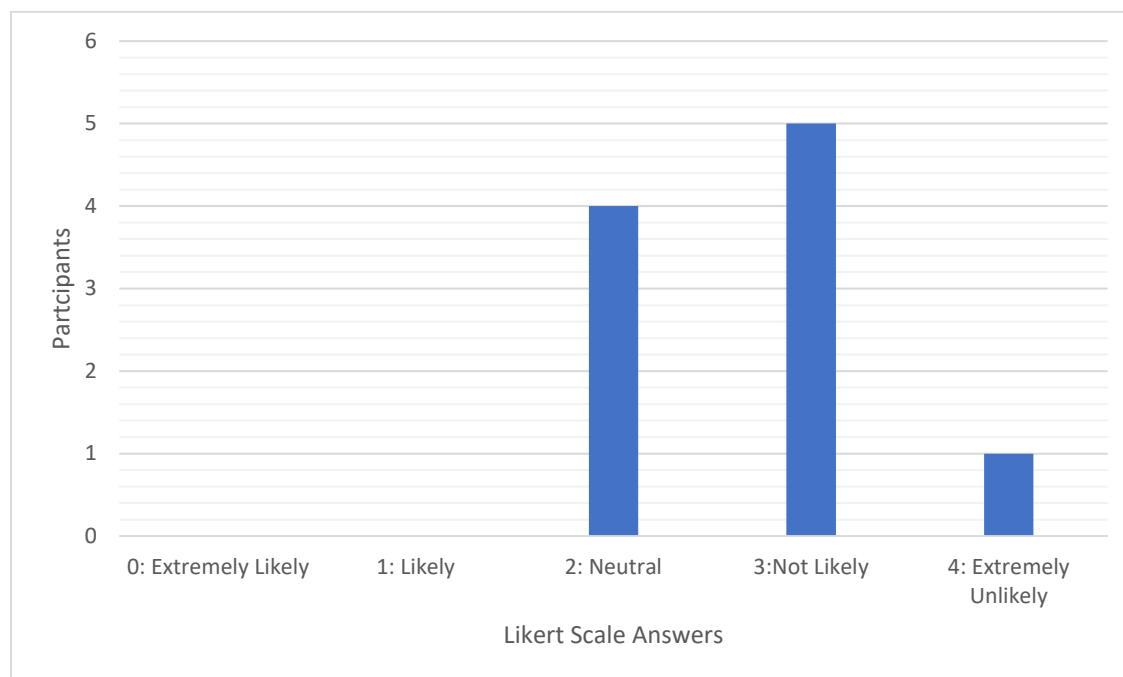
Needed more information on how to use the portal

Likert scale post-survey on a scale of 0-4, with "0" being "extremely likely" and "4" "extremely unlikely" that they would start promoting the portal after the educational huddle (Figure 1).

Figure 1

Likert-Scale Results

Question: How likely are you to start promoting the patient portal after the huddle?



DISCUSSION

This quality improvement (QI) project intended to increase patient portal activation by increasing provider promotion of the patient portal. Though there was a slight improvement in total patient portal activation, it did not meet the expected percentage. Some resistance was observed as there was only a 30% increase from the start of the project to the end. The central theme found in this hesitance was unawareness of the portal, whether from its existence, usability, or components. This unawareness limited their confidence in promoting to the patients.

Unawareness of the Portal

Most (80%) of providers reported unfamiliarity with whether the patient portal existed, what it consisted of, and its usability. This impacts the provider's willingness to promote the

portal due to fear of misinforming patients, being unable to answer the patient's questions regarding the portal or their hesitancy on how it will affect their workflow. Research shows that simply promoting the portal and making patients aware that a portal is available can improve enrollment (Wright et al., 2022). However, limited benefit is seen if the providers and staff members are not confident in what they present to the patient. Cresswell et al. (2022) found that addressing stakeholders' concerns and biases toward patient portals before rolling out the portal to patients improves providers' confidence in portals and a greater likelihood of patients' and providers' longer-term adoption of the portal. Thus, providers and staff members need further training to become familiar with the portal.

Summary

This QI project intended to increase patient portal activation by increasing provider portal promotion. Using a patient portal has many benefits, including increased patient satisfaction in their care, improved communication with providers, and potentially improved treatment compliance (Cresswell et al., 2023; Elers & Nelson, 2018). Though there was a minimal increase in total portal activation from 32% to 39%, it was still below the project's goal. Providers and clinic staff needed to be more confident in the portal, which limited their participation in promoting it to their patients. Though the educational huddle and patient flyers did increase portal awareness to all subjects by educating them on the benefits of the portal, it did not aim to increase knowledge on how to use the portal.

Implications for Practice

San Luis Walk-In Clinic providers and staff found that improving awareness of the patient portal was the first step in increasing the use of the patient portal. Providers expressed

interest in learning more about the portal to gain knowledge and feel more confident promoting it to their patients. Practice plans include provider training by creating a simulation portal for providers and clinic staff. This training would include involving the information technology team to create the simulation portal experience for all providers and all clinic staff members.

Furthermore, greater emphasis is needed on assisting patients in setting up the portal such as asynchronous exemplar video for providers and patients might be beneficial. Plans include incorporating the promotion of the patient portal with every visit.

Limitations

Though there was a slight improvement in patient portal activation, numerous other limitations should be addressed. The portal activation percentages were taken for the entire department census rather than focusing on the patients seen in the two weeks. This could have underestimated the impact of the portal promotion on activation. Also, this study focused on informing and educating providers and staff members about the benefits of having the patients use the portal rather than educating them about how the portal works and its usability. Thus, they still needed to increase their confidence in the portal itself. Finally, this study did not consider the patient's technology abilities and accessibility, which can also impact the total activation percentage.

DNP Essentials Addressed

The American Association of Colleges of Nursing (AACN) outlines eight Doctor of Nursing Practice (DNP) Essentials, five of which are addressed in this project, including *Scientific Underpinnings for Practice* (DNP Essential I), *Organizational and Systems Leadership for Quality Improvement and Systems Thinking* (DNP Essential II), *Clinical Scholarship and*

Analytical Methods for Evidence-Based Practice (DNP Essential III), *Information Systems/Technology and Patient Care Technology for the Improvement and Transformation of Healthcare* (DNP Essential IV), and *Interprofessional Collaboration for Improving Patient and Population Health Outcomes* (DNP Essential VI) (AACN, 2206). The basis of this QI project was the scientific knowledge that patient portals are an essential tool. The extensive literature review underlined the pivotal role providers and healthcare systems play in assuring the portals are being promoted and used to their full potential, thus incorporating the need for organization and system leadership to help promote this QI project. Within the organization, the collaboration of this investigator, providers, nurses, medical assistants, front desk staff, and the IT department helped build the foundation of this project and will be needed to promote the patient portal's further use to patients.

Conclusions

In an ever-changing and always-growing medical field, technology is a significant driver, but the basic principles of patient care will stay the same. Patient portals bring patients closer to providers and the clinic by providing their health profile at the comfort of their homes or fingertips. Through the portal, patients can access their results, medication list, ability to request prescriptions, appointment reminders, and after-visit summary, and some may even have the option to communicate with their provider directly. Optimizing the use of patient portals starts with simple promotion and advertisement. However, there is still a need for a foundation of knowledge from the promoters to feel confident in what they are promoting to their patients. This QI project highlighted the need for more awareness from providers and clinic staff on the patient portal and further research to improve its usability.

Plan for Sustainability

The patient flyer with information on the patient portal placed in exam rooms, staff lounge, and waiting area will continue to be available for patients to see. Providers and staff members who have already included promoting the portal within their workflow may continue. The findings from this study brought to light the need for further education of the patient portal to increase confidence in the portal. Thus, the plan for sustainability includes continuing future quality improvement projects to promote increased provider confidence through education and training on the portal's components.

Plan for Dissemination

A summary of the project findings and implications for research will be provided to the Clinical Services and Patient Safety Coordinator to disseminate during the quarterly quality improvement meetings.

APPENDIX A

SITE APPROVAL/THE UNIVERSITY OF ARIZONA INSTITUTIONAL REVIEW BOARD

AUTHORIZATION LETTER

San Luis Walk-In Clinic
950 E. Main Street Building B
Somerton, AZ 85350

June 27, 2023

University of Arizona Institutional Review Board
c/o Office of Human Subjects
1618 E Helen St
Tucson, AZ 85721

Please note that Ms. Jacqueline Fuentes Camacho, UA Doctor of Nursing Practice student, has permission of the San Luis Walk In Clinic Clinic to conduct a quality improvement project at our facility for her project, "Increasing Patient Portal Activation Through Increased Provider Promotion to Patients."

Ms. Camacho will conduct a survey of health care providers at San Luis Walk-In Clinic. She will recruit providers through morning huddle. The huddle will provide a description of the project, what they will be asked to do, the time involved, and a link to the hard copy of the survey. Ms. Camacho's activities will be completed by *August 2023*.

Ms. Camacho has agreed to provide to my office a copy of the University of Arizona Determination before she recruits participants. She will also will present aggregate results to the providers at their monthly staff meeting.

If there are any questions, please contact my office.

Signed,



San Luis Walk-In Clinic Clinical Services and Patient Safety Coordinator



University of Arizona IRB
 845 N Park Ave., Suite 537A
 Tucson, AZ 85719
 Fax: 520-621-9810
VPR-IRB@arizona.edu

NOT HUMAN RESEARCH

August 25, 2023

Jacqueline Fuentes Camacho

Dear Jacqueline Fuentes Camacho:

On 8/25/2023, the IRB reviewed the following submission:

Type of Review:	Initial Study
Title:	Increasing Patient Portal Activation Through Increased Provider Promotion to Patients
Investigator:	Jacqueline Fuentes Camacho
IRB Submission ID:	STUDY00003477
Sponsor:	None
Prime Sponsor:	None
IND, IDE, or HDE:	None
Documents Reviewed:	<ul style="list-style-type: none"> • Camacho_DNP Huddle.docx, Category: Recruitment Materials; • Camacho_DNP Patient Flyer .docx, Category: Other; • Camacho_DNP survey.docx, Category: Data Collection Tool; • Camacho_J-Advisor Attestation.pdf, Category: Other; • Camacho_J-Disclosuretemplate-DeterminationofHumanResearch (1).doc, Category: Consent Form; • Camacho_J-IRB Protocol for Determination of Human Research v2022-10 (5).docx, Category: IRB Protocol; • Camacho_Updated DNP Site Letter .pdf, Category: External Site Authorization;

The IRB determined that the proposed activity is not research involving human subjects as defined by DHHS and FDA regulations.





University of Arizona IRB
845 N Park Ave., Suite 537A
Tucson, AZ 85719
Fax: 520-621-9810
VPR-IRB@arizona.edu

IRB review and approval by this organization is not required. This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these activities are research involving humans in which the organization is engaged, please submit a new request to the IRB for a determination. You can create a modification by clicking **Create Modification / CR** within the study.

All Covered Individuals must disclose all sponsored and non-sponsored Research Projects to the Office for Responsible Outside Interests (OROI) prior to Conducting Research if the individual is an Investigator. Please visit the [OROI](#) website for more information.

We value your feedback and would appreciate you taking the time to complete our survey about your experience with the IRB staff:
https://uarizona.co1.qualtrics.com/jfe/form/SV_ahQ04WxNA06b42i.

If questions arise at any time during your study, please email the general IRB inbox at VPR-IRB@arizona.edu.



APPENDIX B

CONSENT DOCUMENT (DISCLOSURE AND CONSENT FORM)

Increasing Patient Portal Activation Through Increased Provider Promotion to Patients
Jacqueline Fuentes Camacho

The purpose of this project is to increase provider promotion of the patient portal at the San Luis Walk-in Clinic.

If you choose to take part in this project, you will be asked to attend an educational presentation and complete a pre- and post-intervention survey. It will take approximately 5 minutes to listen and complete the survey. There are no foreseeable risks associated with participating in this project. You will receive no immediate benefit from your participation. Your responses are anonymous. Your name will not be collected or linked to your answers.

If you choose to participate in the project, participation is voluntary, refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled. You may withdraw at any time from the project. In addition, you may skip any question that you choose not to answer. By participating, you do not give up any personal legal rights you may have as a participant in this project.

For questions, concerns, or complaints about the project, you may call Jacqueline Fuentes Camacho, RN/DNP student at (928) 988-2811.

You agree to have your responses used for this project.

APPENDIX C

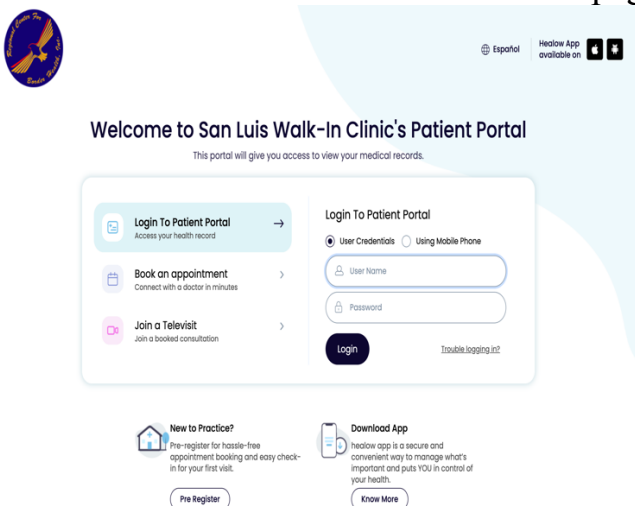
RECRUITMENT MATERIAL (PATIENT PORTAL FLYERS)

Did you know you can:

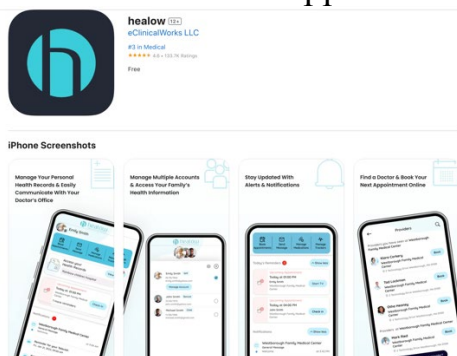
- Access your test results
- Make appointments
- View your medications and ask for refills
- Contact your doctor
- Conduct a telehealth visit

All from your computer or phone?

Visit the San Luis Walk-In Clinic Homepage and look for the patient portal.



Or download the Healow app to have access directly from your phone.



Your health is right at your fingertips!

APPENDIX D

EVALUATION INSTRUMENTS (PRE- AND POST-IMPLEMENTATION SURVEYS)

Pre-Implementation Survey

Do you talk about the patient portal with the patient (whether to ask if they have an account, need help setting up an account, or use it for communication, medication refills, etc.)?

- Yes
- No

Why do you or do you not promote the portal to the patients?

Post-Implementation Survey

Do you talk about the patient portal with the patient (whether to ask if they have an account, need help setting up an account, or use it for communication, medication refills, etc.)?

- Yes
- No

Why do you or do you not promote the portal to the patients?

How likely are you to start promoting the patient portal after the huddle?

- 0- Extremely Likely
- 1- Likely
- 2- Neutral
- 3- Not Likely
- 4- Extremely unlikely

APPENDIX E

PARTICIPANT MATERIAL (HUDDLE POINTS PRESENTATION)

INCREASING PATIENT PORTAL ACTIVATION THROUGH INCREASED PROVIDER PROMOTION TO PATIENTS

Did you know that SLWIC's portal lets our patients:

- Communicate with providers.
- Have a list of their medications at hand.
- See their results and have a copy of them.
- Request a copy of their medical records without having come to the clinic.
- Conduct a telehealth visit.

Did you the benefits of the portal include:

- Greater patient satisfaction.
- Greater patient involvement in their care.
- Access to their after-visit summary, so it will be easier to remember the topic of their visit.

And did you know that only 30% of our patients are currently enrolled in the patient portal?

Let's do our part and remind our patients of the resources we have available to them. Research shows that even just mentioning the portal to our patients makes them more inclined to enroll.

Flyers will be posted in each exam room, just point to it and encourage patients to enroll in the portal. The flyer includes the benefits of enrolling as well as tips on enrolling online via the Internet or by downloading the app.

Thank you for your attention and cooperation!

APPENDIX F
LITERATURE REVIEW GRID

Project Question: Will increased provider and staff clinic promotion of the online patient portal to patients increase the total patient enrollment to 50% in the portal within two weeks?

Pub. Year; Author's Last Name	Title of Publication	Type of Study	Main Outcomes of Findings	Support for and or Link to Project
Crockett & Carter-Templeton, 2020	A portal adoption program to enhance patient satisfaction in primary care	Quality improvement	<p>Portal adoption program specifically placed to help patients enroll in the patient portal.</p> <p>79% of patients activated their account on their first visit in the implementation period. New patients had a higher percentage of activating their portal which was 90%.</p>	<p>This supports the idea that specifically addressing portal usage during the visit can improve the patient's willingness to enroll in the portal.</p> <p>Provides limitation to study in that more than promotion is needed to increase the rate of enrollment</p>
Ochoa et al., 2017	Patient and provider perspectives on the potential value and use of a bilingual online patient portal in a Spanish-speaking safety-net population	Brief communication	<p>77% of patients believe the patient portal is beneficial in improving patient care</p> <p>Most providers were hesitant about the patient portal, with only 39% of providers recommending it to their patients.</p> <p>Found that providers' attitudes toward the portal substantially impact the likelihood of patients adopting the portal</p>	<p>This supports the idea that the project is beneficial for patients due to increased portal awareness. Also supports the impact providers can have on patient's willingness to use the portal as they can substantially impact the likelihood of patients adopting its use.</p>
Cresswell et al., 2022	The role of formative evaluation in promoting digitally based health equity and reducing bias for resilient health systems: The case of patient portals	Case report	<p>Addressing stakeholder's needs is important before deploying patient portals.</p> <p>Evaluation of providers' perceptions and biases should guide the implementation of the portal, otherwise, patient portals</p>	<p>Supports reason to include attitudes and perceptions of providers on the patient portal.</p> <p>Limitations to study as no formative evaluation will be conducted, rather a survey.</p>

Pub. Year; Author's Last Name	Title of Publication	Type of Study	Main Outcomes of Findings	Support for and or Link to Project
			<p>can reinforce health inequities and compromise health equities.</p> <p>Assisting providers in first understanding the patient portal use and its benefits can improve perceptions.</p>	
Elers & Nelson, 2018	Improving healthcare through digital connection? Findings from a qualitative study about patient portals in New Zealand	Qualitative study	<p>Patient portals can improve communication between patients and providers, however, there is a low uptake of patient portals.</p> <p>20% or less of patient portal uptake.</p> <p>Further evaluation is needed to look past enrollment numbers and focus on the efficiency of use of the portal, rather than simply “tick in the box.”</p>	<p>This supports the idea that a patient portal is beneficial to improve patient-provider communication.</p> <p>Limits the usability of the study as it questions the benefits of focusing on enrollment percentage versus using the technology to its full potential.</p>
Ramsey et al., 2017	Increasing patient portal usage: Preliminary outcomes from the MyChart Genius Project	Quality improvement	<p>MyChart genius project team members assisted adolescent patients in patient portal sign-up and evaluated usability and satisfaction rates.</p> <p>84% percent in enrollment after assistance.</p> <p>79% were satisfied or very satisfied with the project.</p>	<p>This supports the idea that there will be increased patient enrollment if there is assistance in the patient portal.</p> <p>Limits used in the study as there is no specific assistance that can be provided, goal is for increased provider promotion. The population was different as a clinic in the study does not often work with adolescents.</p>
Wright et al., 2022	Predictors of online patient portal use among a diverse	Cross-sectional survey	Factors for increased patient portal use include increasing	Supports the goal of the study to increase awareness of the patient portal

Pub. Year; Author's Last Name	Title of Publication	Type of Study	Main Outcomes of Findings	Support for and or Link to Project
	sample of emerging adults: Cross-sectional survey		<p>patient engagement through visual and verbal promotion.</p> <p>Strategies should include increasing awareness of portal access and encouraging patients to enroll with fewer clinical encounters to do so.</p>	<p>and increase engagement and enrollment.</p> <p>Does not specify who should increase awareness, while this study focuses on providers and clinic staff.</p>
Hans et al., 2018	The provider perspective: investigating the effect of the Electronic Reported Outcome (ePRO) mobile application and portal on primary care provider workflow	Qualitative	Review on how electronic mobile application and patient portal affect provider workflow. Themes found upon provider evaluation included liability concerns, increased documentation, increased provider anxiety with regard to potentially affecting workflow. Also found resistance in adapting behavior to patient portal promotion.	Supports study in provision of education huddle to providers on benefits of increased promotion of patient portal.
Cross et al., 2021	Patient portal use, perceptions of electronic health record value, and self-rated primary care quality among older adults: Cross Sectional Survey	Cross-sectional survey	<p>Reinforced older adults require greater promotion on healthcare technology. Also reinforced idea that increased patient portal use improve communication with providers, increased awareness in health, and greater satisfaction.</p> <p>Found that if providers set expectation of perceived usefulness and perceived ease of use it can increase the patient's intention to enroll in the patient portal and</p>	Supports study's idea of patient portal promotion from providers can increase patient's intention to enroll in the patient portal. Reinforces purpose of educational huddle to include benefits of patient portal.

Pub. Year; Author's Last Name	Title of Publication	Type of Study	Main Outcomes of Findings	Support for and or Link to Project
			potentially increase level of portal use.	
Lyles et al, 2020	Using electronic health record portals to improve patient engagement: Research priorities and best practices	Systematic review	<p>90% of health care systems offer patient portals, however only 15-30% of patients make use of the portal.</p> <p>Interventions that provided one on one training on using the patient portal had greatest enrollment and usability.</p> <p>Greater research needed in finding optimal workflows to incorporate portal education without increasing provider resistance.</p>	Supports the fact that patient portals are prevalent in healthcare, however there is decreased usage.

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