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Increasing Utilization and Awareness of an Existing Patient Portal Application

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Executive Summary

Introduction of the Problem

Patient Portal Applications (PPAs) are computer software applications that are intended to improve quality and access to health care by engaging patients to be more active in managing and monitoring their health. Additionally, PPAs assist patients with direct communication to their providers. At a large Midwestern multispecialty clinic, only 17% of patients were using the existing PPA. After several meetings with the director of health information management and the director of nurse practitioners at this clinic, many ideas were discussed and brainstormed for how we could we increase the PPA usage and promote the benefits to their patient population. Due to a large geriatric population and limited use of technology for the majority of the patient population the clinic serves, we chose to implement the intervention through face-to-face consultations and interviews with patients promoting the PPA. We conducted these consultations at a prominent high traffic area of the clinic. During the interviews, we assessed patients' perceived benefits and barriers to the PPA and encouraged and assisted with PPA sign-up.

Literature Review

Researchers have indicated that PPAs have the capability to empower patients to better monitor and manage their own healthcare, provide meaningful use, and enable enhanced patient-provider communication (Agarwal, Anderson, Zaratc, &Ward, 2013; Bell et al., 2016; Elkind, & Higgins, 2017; Mook et al., 2018; Nahm et al., 2017; Peremislov, 2017; Powell, 2017; Shaw, Casterline, Taylor, Fogle, & Granger, 2017; Turvey et al., 2014; Weingart et al., 2013). Researchers showed that PPAs help achieve meaningful use of electronic health records (EHR) by allowing patients more access to their healthcare information, which enables patients to have

a more active role in their health care management (McAlearney et al., 2016). Despite evidence that PPAs help patients achieve better health outcomes via better management and tracking of their own healthcare, PPA usage and adoption has been remarkably low (Mook et al., 2018; Nahm et al., 2017; Powell, 2017).

Researchers indicated that PPA adoption rate is 25% on average, and for the most comprehensive PPAs, there was only a 46% adoption rate (Mishuris et al., 2015). One of the barriers to adoption and usage was a lack of awareness of PPA existence and its benefits (Nahm et al., 2017; Powell, 2017; Turvey et al., 2014). It is specified in the literature that promoting PPA use and awareness was an important step to increasing use and gaining participation, and that provider endorsement played an influential role on patients' willingness to adopt and use PPAs (Elkind, & Higgins, 2017; Vydra, Cuaresma, Kretovics, & Bose-Brill, 2015). The attitudes and actions of providers regarding PPAs significantly influenced patients' values and attitudes of health portals (Vydra et al., 2015). Researchers indicated that encouragement to activate an account by a provider significantly increased portal use, whereas dismissing or passively ignoring a patient's interest in a PPA impeded patient adoption and hindered usage (Shah & Liebovitz, 2017).

Other barriers included poor computer and health literacy, limited patient access to technology, and security and privacy concerns. (Kao & Liebovitz, 2017; Mook et al., 2018). Not having access to computers or smart phones and/or having low technological literacy limited patients' adoption and usage of PPAs (Turvey et al., 2014; Vydra et al., 2015). In addition, researchers reported that a majority of older adults prefer phone communication over digital messaging for communication and healthcare management (Irizarry et al., 2017). Researchers

indicated a need to provide computer literacy and training for vulnerable patients to utilize the service (Tieu et al., 2015).

Project Methods

The goal of this project was to increase usage and awareness of patient portal applications, and by doing so to empower and involve patients more directly in their own healthcare management. We perceived PPAs to be intuitively useful for healthcare and chronic disease management and were surprised at the underutilization rates. Another goal of this project was to assess barriers that prevented adoption and utilization of the PPA at this healthcare organization. Additionally, we wanted to improve patient-provider communication via PPAs.

To achieve these goals we conducted face-to-face consultations/interviews with patients at a prominent, accessible, heavy-traffic area of a large family practice clinic site two days a week during the month of June 2018. A predetermined series of questions was asked by the DNP team member to the patient and answers were systematically documented. These questions assessed patients' knowledge and usage of the existing PPA. Additionally, the team member provided written and verbal education with the goal of raising awareness of the benefits and key features of the PPA. At the conclusion of the interviews, on-site portal signup was offered to interested patients, and all participants were provided with written information on how to sign up at home. We also offered alternative solutions to those with technology limitations (i.e. those having a lack of computer/internet access) and suggested that they could access computers at the local library, senior center, or use a friend/family member's computer or device. This project was approved by the SIUE Institutional Review Board on April 10, 2018.

Evaluation

We interviewed a sample of 82 patients at a large Midwest clinic for evaluation of patients' awareness and use of an existing patient portal application. Of those interviewed, 72% of patients reported a prior awareness of the PPA's existence, while the remaining 28% only learned about the PPA on the day of the interviews. Interestingly, more than half (61%) of the patients who were previously aware of the PPA reported being active users of the application. By contrast, only 39% (23 out of 59 respondents) knew about the PPA but were not users. We asked this latter group why they chose not to have/use a PPA account, and the responses fell into four general categories: 1) technology limitations (e.g., patient did not have a computer nor internet or reported being computer illiterate), 2) application is too difficult to use, 3) application is not useful, and 4) data security concerns. Of these, technology limitations were by far the most common issues reported by respondents, a finding that was consistent with the overwhelmingly large proportion of elderly respondents who comprised the sample.

For those active PPA users, we asked what elements of the PPA they liked and used most. The findings revealed that PPA users most valued the ability of the app to provide access to health data and records, followed closely by the facilitation of communication and scheduling.

After providing education on the key features and benefits of the PPA to the participants of the study, we successfully signed up 11 individuals on-site on the day of their interviews. Approximately half of these new signups (5 out of 11) were individuals who were totally unaware of the PPA prior to that day. An additional 14 patients reported that they would sign up for the PPA at a later date. Overall, we found that short face-to-face educational contacts can be a useful method for increasing patient use of PPAs. That said, patients' technological limitations remained a factor that will continue to limit PPA use.

Impact on Practice

The immediate impact of our project was an increase in patients' awareness of an existing health portal. For some patients, this meant making them aware of a resource of which they were previously unaware. For others, it involved explaining the benefits of a resource that they knew existed, but saw no reason to use. For a final subset of patients, those for whom technological limitations (e.g., no home computer or internet access) prohibited the usage of the health portal, we provided education on available resources within the community such as public libraries and senior centers, both of which can provide the technological tools/support to access the online health portal.

Unfortunately, our research methodology does not allow us to formally explore the long-term impacts of our patient education efforts. For example, follow-up studies would be needed in order to determine whether our efforts increased the portal's usage rates, or for example, whether any increase in usage is sustainable in the long term. That said, we find it reasonable to assume that once patients are educated on both the benefits and low risks of portal usage and are made aware of the technological resources available to them, the usage of the health portal will increase and remain consistently high over time.

Additionally, our project's findings do hold considerable importance for the long-term future of the health portal. By studying patients' perceptions regarding barriers to portal adoption and use, and communicating our findings to those personnel responsible for the continued operation of the portal, it is our hope that beneficial modifications can be made that will enhance patient usage of the portal in the future. Such modifications would likely include efforts to address patients' data security concerns, educational campaigns to promote the benefits of the portal, and creative solutions to overcome patients' technological limitations. Such endeavors will require effort and investment on the part of those responsible for the operation of the health

care portal, but our project's findings suggest that such efforts are likely to provide considerable benefits in both the short- and long-term.

Conclusion

Health portals allow patients to directly communicate with their providers and to track and manage their health by providing access to health records, laboratory results, diagnostic interpretations, and individualized health education materials. Moreover, there is a known increase in health outcomes when patients are empowered to track and manage their health and chronic disease.

Thus, an important goal/challenge for healthcare providers is to increase patient use and awareness of health portals. To achieve this goal, providers must build patient trust regarding portal privacy and security. Additionally, patients' technological limitations need to be explored and addressed in order to provide equal and universal access to PPAs. Lastly, more education regarding health portals is needed for patients and providers related to the benefits and utility of PPAs.

Research, discussion, and advancement of PPAs will need to be ongoing for portals to fully live up to the capability of empowering patients to better manage their healthcare, provide meaningful use, and to provide enhanced patient-provider communication. In short, the providers of PPAs must do more to ensure that patients are aware of and willing/able to use this important resource. As our project indicates, outreach efforts involving face-to-face patient education sessions may be one simple and effective way to educate patients and increase their use of PPAs.

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