

Patient Engagement Meets Personalized Interactive Communication and the 3P's: Patients, Providers and Payers

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Abstract- Chronic diseases comprised a large share of the estimated \$3 trillion in American healthcare expenses in 2013. The U.S. government started to penalize hospitals based on their readmission rates in 2013, and these fines are going to increase in the future. Patient engagement has become a criterion for (i) better outcomes, (ii) fewer hospitalizations, (iii) fewer visits to the ER, (iv) fewer readmissions after hospital discharge, and (v) more gratified patients. Now patients can manage their health by communicating to health professionals using mobile app technology. Personalized interactive communication is a key element of patient engagement, whether during a hospital stay or with their healthcare providers. Many healthcare providers have seen patient engagement increase as a direct result of adopting interactive electronic communications. Hospitals are specifically playing their role in the betterment of humanity by establishing websites and other tools that can help people monitor and manage their health. An effective means of patient engagement, Health Relationship Management Services (HRMS) is a combined effort of the 3 P's: Patients, Providers and Payers. HRMS monitors an individual's health and interactively communicates actionable information and provides interactive outlets for patient engagement. Patients can now manage their health by interacting with technological communication devices or systems.

Index Terms- Patient Engagement, chronic disease, personalized interactive communication, Health Relationship Management Services (HRMS), 3Ps, patients, payers, providers.

I. INTRODUCTION

Patient Engagement has emerged as the Holy Grail for the healthcare industry, and it boils down to the 3 P's: Patients, Providers (Doctors), and Payers (Insurance), which combined, make up a new healthcare paradigm called Health Relationship Management Services (HRMS) (Wilkins, 2012; Tehrani, 2016). Patient engagement is not only a key strategy for treatment of chronic conditions, it also provides improved, efficient, collaborative healthcare among the 3 P's (Eastwood, 2014; Tehrani, 2016).

Payers have long felt that patients engaged in their own healthcare are, in the long run, healthier than those who are not (Underhill, 2014). Payers have created patient engagement "incentive programs, social media campaigns," and provided health education on better lifestyles, routine wellness visits and

management of chronic diseases (Underhill, 2014). The goal is to educate individuals about the crucial role they play in maintaining their own health (Underhill, 2014).

Providers today are transitioning from simply delivering care to patients to becoming patient partners (Underhill, 2014). Providers can benefit from a technology strategy used by payers to analyze clinical data: Healthcare Effectiveness Data and Information Set (HEDIS) scores (Underhill, 2014). These scores can identify individuals who are at-risk for negative health outcomes due to lack of wellness care, missed appointments and unmanaged chronic disease, and allows providers to have a better understanding as to which chronic disease patients need more or which are at risk for readmission (Underhill, 2014). Providers should learn what types of incentives payers use and then create a plan to partner with them because, by working as a team, providers and payers can be more effective in engaging patients in their own care (Underhill, 2016).

For example, a health system can analyze data on all its diabetic patients to see who requires an A1C3 test that delivers an individual's average levels of blood glucose, which is also referred to as blood sugar, over a 3 month period, who hasn't seen a physician recently or who has other conditions—such as asthma or congestive heart failure—that could increase their risk for acute care. By identifying these high-risk patients and getting them the care they need before their condition becomes emergent, providers can not only reduce risk, but also improve patient relationships. (Underhill, 2014; National Institute of Diabetes, 2016).

Patient engagement has become a criterion for (i) better outcomes, (ii) fewer hospitalizations, (iii) fewer visits to the ER, (iv) fewer readmissions after hospital discharge, and (v) more gratified patients. Chronic diseases comprised a large share of the estimated \$3 trillion in American healthcare expenses in 2013 (Eastwood, 2014). The U.S. government started to penalize hospitals based on their readmission rates in 2013, and these fines are going to increase in the future (Diana, 2014). Thus, value-based payments have encouraged providers to embrace patient engagement. Providers may want to appoint a patient engagement advocate to turn planned ideas into actions who would be charged with seeking opportunities for improvement, program implementation and progress monitoring (Underhill, 2014). Engaged patients do what their health providers recommend because they believe that the prescribed treatment is the right one for them. Such patients are generally healthier and have lower healthcare costs compared to others who follow their

own ideas of thinking and behaving in regard to their health (Wilkins, 2012).

Personalized interactive communication is a key element of patient engagement, whether during a hospital stay or with their healthcare providers. Research shows that individuals want access to their medical records, they want to book their appointments and renew prescriptions online, and receive appointment reminders via email or text (Diana, 2014). Many healthcare providers have seen patient engagement increase as a direct result of adopting interactive electronic communications (Diana, 2014). Studies show that patients prefer email and online access over customary ways of communication with their caregivers (Diana, 2014). Also, when patients are personally engaged electronically, appointment no-shows decrease, so physicians can reschedule more patients and have more quality time with them (Diana, 2014).

Patient and Provider use of the Internet and mobile devices to deliver healthcare is rapidly increasing, leading to a variety of interventions that use the Internet and mobile phones to advance across a range of chronic illnesses with favorable results (Diamantidis & Stefan Becker, 2014). By 2017, there will be an estimated 200 million smartphone users, almost 65% of the country's total population, (eMarketer, 2016). Electronic devices are increasingly utilized as personal interactive communication tools by healthcare providers and patients (Pew, 2013; Buntin, Burke, Hoaglin & Blumenthal, 2011). Providers who use mobile technology to engage with chronic disease patients generally improve patient-provider communication, reinforce patient independence, and empower patients to become active participants in their own care (Diamantidis & Becker, 2014; Downer, Meara, Da Costa & Sethuraman, 2006).

Today's health technology helps engage patients to track and take control of their personal health. A wide range of innovative technology is now available for individuals to take an active role in their healthcare, such as wearable digital medical devices, remote health monitoring systems, and easily accessible personal health records that provide their physicians with personalized health data (Eastwood, 2013). With this technology, patients can track their personal health progress and interactively share their health data with their caregivers (Eastwood, 2013). Digital health technologies ranging from simple reminders to complex smartphone apps are quickly emerging to help people manage their health. Smartphones can be used to track vital signs, and even a person's mood (Eastwood, 2013). Nearly sixty percent of the U.S. population already utilizes smartphone app technology to track their diet, weight, and exercise routines, while about twenty one percent of the population utilizes technology to track mental health data (Eastwood, 2013). An online smartphone patient portal is another tool for promoting patients' adherence to medication after hospital discharge (Underhill, 2014).

To encourage people to take charge of their health, many payers have incentive programs wherein individuals can receive insurance discounts or even financial incentives for making better lifestyle choices (Underhill, 2014), such as an individual habitually utilizing a fitness tracker to logs steps per day (Underhill, 2014). Providers should contact Payers to find out about what incentives are offered and how to partner in such efforts. By joining forces, Payers and Providers can make

progress in engaging patients (Underhill, 2014). Providers can access patient health records to promptly answer patients' medication questions and deliver real-time information and feedback to enhance patient understanding, while, at the same time, reducing an overload of information (Underhill, 2014). As healthcare evolves, data-driven strategies for patient engagement has become progressively important (Underhill, 2014). Payer-patient engagement strategies are a starting place for Providers to build relationships with increasing patient commitment to their long-term health needs (Underhill, 2014).

Many patients have faced difficulty in managing their health and face challenges in accessing the healthcare system. Thus, providing them with improved ways to manage their conditions right in their own homes is going to be helpful in preventing costly, repeated hospital or doctor's visits, emergency room visits, and patient readmissions to hospitals. Engaged patients can use these interactive communication technologies to check on their physical changes, and by having this access, they can learn if they have changes in symptoms or signs of deteriorating health, and then call their provider to get treatment. Some new technologies also remotely monitor a patient's health and alert a communication center to contact the patient personally if actionable information is detected (Tehrani, 2016).

Providers are playing a role in the betterment of humanity by establishing websites and other tools that can help people monitor and manage healthcare. Hospital authorities and marketers have built personalized, interactive, and collaborative content with the functionality of self-service, so that patients can directly contact physicians if they have any issues. Direct questioning makes it easier for both patient and provider to understand and solve problems.

This method also allows the patients to get access to the results of their tests and medical records (Lenhart, & Madden, 2007). Forty-one percent of American patients are willing to change providers to have online access to their Electronic Medical Records (EMRs) (Accenture, 2016). As a result of the American Recovery and Reinvestment Act of 2009, Meaningful Use requires hospitals show that they are using certified Electronic Health Record (HER) technology using methods that can be measured significantly in quality and in quantity with the goal of achieving health and efficiency and to engage patients and their families in their own healthcare (HRSA, 2016). This will lessen risks by providing a method for healthcare providers to share patient information electronically, securely and HIPAA compliant (HRSA, 2016).

Interactive communication digital health technology now falls under the new umbrella term: Health Relationship Management Services (HRMS) (Tehrani, 2016), which is capable of providing all essential elements to the patients which are necessary for managing their healthcare. HRMS, metaphorically speaking, acts similar to a family physician who makes house calls and is accessible for contact anytime for regular patient checkups (Tehrani, 2016). HRMS provides all of the necessary elements for reading patient health data, restructuring that raw patient data using cloud analytics into actionable results for a response, and repeating the steps which reinforces the entire process. HRMS is recommended for hospital discharge patients, elderly patients living at home, and patients who are suffering from chronic diseases, such as

hypertension, heart diseases, and COPD, as they need constant monitoring for any health changes that may require urgent action (Tehrani, 2016).

Health is influenced by technology in a number of ways. Interactive communication utilization of technological health applications and patient engagement is important in leading a healthy life. Individuals can obtain personal health information about their conditions, their providers, and procedures so they can manage and enhance physical and mental health. Personal Emergency and Response System (PERS), text messages, phone calls, help the providers to get updates regarding the health of the patient. Many communication centers now contact a patient if they receive any emergency health alerts (Tehrani, 2016). It is not always possible to visit a doctor's office, yet care and proper screening are essential after treatment. Now patients can manage their health by communicating to health professionals using mobile app technology.

An effective means of patient engagement, Health Relationship Management Services (HRMS), monitors an individual's health and interactively communicates actionable information and provides interactive outlets for patient engagement. Patients can now manage their health by interacting with technological communication devices or systems. Patient engagement comes in many forms, such as wearable technology, smartphones, and apps that connect patients to portals where they can access health records, health news feeds, games, interactive online, and patient stories. Thousands of new mobile health apps that read such things as heart rates, measure organ health or count pushups serve a purpose by linking them to patient portals, which convert the portals into information centers which provide patients with tools to manage lifestyle changes that may occur with new diagnoses. Poor patient outcomes is often due to poor medication management once after hospital discharge (Underhill, 2014). Technology can help improve patient comprehension of medications to increase adherence, such as health apps that offer alerts and dosage information (Underhill, 2014). Providers now can "prescribe" an app to enable discharge patients to take their medications in the right way and on schedule (Underhill, 2014). Other interactive patient engagement applications include gamification, news feeds, health assist, social health groups, and interactive online magazines to engage patients by sharing health or Patient Health Narratives (PHN) which is illness related storytelling for inclusion (Meckl-Sloan, 2015). Such ways of communication help patients to stay engaged, healthy, and mentally active.

II. CONCLUSION

Patient engagement has evolved into a personalized interactive communication using the 3 P's between patients, providers, and payers, making patient information easily accessible. Patients now can manage their health by communicating to health professionals using mobile app technologies. Health Relationship Management Services (HRMS) is an effective means of patient engagement by constantly monitoring an individual's health, interactively communicating actionable information, and providing interactive outlets for patient engagement.

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