

Executive Summary

Health From robotic surgeries to big data mining, technology continues to make a significant impact on healthcare. On the heels of Meaningful Use and electronic health record (EHR) adoption, one area that is beginning to be further impacted by technology is patient education.

Simply put, the role of patient education in healthcare is vital to the effectiveness of prevention and treatment. Printed education materials have traditionally served as the default mode of communication in many healthcare encounters, given their relative adaptability and limited expense. However, as healthcare providers increasingly strive to provide more patient-centered care, more diverse and adaptable methods of communication are becoming an attractive option for patient education.

According to a 2011 study by the Pew Internet and American Life Project, 59 percent of Americans use the Internet to research healthcare-oriented information. Unfortunately, this information is not always written in a way that is comprehensible to most adults. Studies have shown that the average American adult reads at approximately a seventh or eighth grade level, but the readability of even government-funded websites often exceeds the seventh grade level. Furthermore, patients who search for information online can be misinformed. They may not understand their disease or symptoms enough to know where to research them online.

While web-based tools would appear to be an important avenue for patient education, even a well-designed tool will not be effective if it is not used. Despite the extensive health-related information available online, there is a gap between the interest in web-based educational tools and real-world usage — only 6 percent of patients in one study viewed online education material. This is consistent with other studies that exhibit low viewing rates of web-based interventions.

Improved patient education is important because, as one study revealed of patients 50 years or older, 76 percent leave the hospital or physician's office confused about what to do next. Approximately 50 percent of adults have trouble using or understanding health information.

Boosting patient engagement through technology is seen as a critical task for healthcare. As a result of reform, hospitals and healthcare organizations are embracing the potential of multimedia and interactive capabilities in education.

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- ⁴ Competing on patient engagement. (study) 2012, October 25. Health Care Advisory Board.
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The Problem:

For years, healthcare providers have relied heavily upon patient education to fill in the gap beyond the actual care environment.

When considering patient education solutions, part of the dilemma is that different patients have varying educational needs and preferences. In reality, given the disparity of learning preferences, patient education solutions cannot be made all-inclusive. This means that there is not a one-size-fits-all solution for patient education. Consequently, healthcare providers will continue to benefit from using a variety of different resources and multiple modalities with their patients. It would also seem increasingly beneficial for providers to practice asking each patient about their preferred learning method early in the care management process.

Effective patient education can be tied to potential cost savings related to readmissions. According to the Agency for Healthcare Research and Quality (AHRQ), patients are 30 percent less likely to be readmitted to the hospital when they understand their discharge instructions, medication regime, and both the need and importance of making and following through with their medical appointments.

Since we know that people actively involved in their health and healthcare tend to exhibit better outcomes, patient education could be the best pathway to increasing patient engagement and activation.

In an analysis of more than 30,000 patients at a large healthcare delivery system in Minnesota, researchers found that those with the lowest activation scores — that is, people with the least skills and confidence to actively engage in their own healthcare — incurred costs that averaged 8 to 21 percent higher than patients with the highest activation levels.

Solutions:

There are a variety of options available for patient education, from highly technical varieties to more traditional, conventional methods. Since younger patients tend to be more computer literate, they may prefer multimedia applications for their education. Interactive technology provides opportunities for both engagement and education, which likely explains why some hospitals are offering interactive technologies as part of a marketing strategy. These technologies tend to be more adaptable to patient diversity and preferences than more traditional methods.

One of the key factors involved in patient education success is the timing of education. It is becoming increasingly important to investigate the extent to which providers allocate adequate time for patients to absorb and apply their knowledge, explain it, and provide a return demonstration, if applicable.

Additional research-oriented studies have shown that multimedia patient education programs, provided with follow-up by trained health professionals, reduced falls among cognitively intact hospital patients. For example, even with a high variability in hospital costs associated

with patient falls in Australia, there was a 52 percent probability that a complete multimedia education program was both more effective and less costly — from the health service perspective — than providing usual care alone.

A 2010 study of emergency room patients and visitors illustrates this variation in learning preference. Of those surveyed in an emergency department setting, 34 percent of subjects chose brochures/book, 25 percent selected video, 24 percent preferred speaking with an expert, 14 percent chose the use of a computer, and 3 percent selected another mode of learning (e.g., a class).

Furthermore, efforts to engage patients through various health information technologies tend to yield patients who are more participative in their own care, more engaged, and ultimately more educated about their health. It is reasonable to believe that an educated patient is also a more engaged patient.

With the success of online video in today's culture, it's not surprising that video has proven to be an effective educational tool in certain care scenarios. For example, in a controlled trial of 78 subjects who received either online, video-based, or written education materials on the description and detection of melanoma, subjects in the online video group demonstrated significantly increased knowledge compared to those in the written education group.

Perhaps the increased use and proliferation of smartphones could also usher in the next wave of patient education. Smartphones, tablets, and other mobile devices will also allow healthcare providers to prescribe video content for educational purposes. This content can be consumed at the convenience of the patient, or those providing care for the patient.

Meanwhile, hospitals and doctors are already incorporating tablet computers into their processes. In fact, a world-renowned medical center began using content- and app-loaded tablets in 2012, to help guide patients through their hospital experience. Each heart surgery patient is given a tablet during their stay, helping them to visualize and prepare for their plan of care.

Concluding Summary:

While the methods and modalities of patient education have evolved somewhat, one could argue that — with so many additional ways to communicate — we might be perched upon the threshold of a unique opportunity to improve overall patient education variety and success. Whether we like it or not, our medical lives are syncing with the way we live in real life.

Perhaps what we will soon expect from our healthcare providers is more accessibility, since our electronic health record will become increasingly valuable to all of us. Meanwhile, studies continue to reinforce that patient engagement is a major factor in achieving better outcomes.

When patient literacy is also accounted for, multimedia alternatives to patient education may prove to be more beneficial in the future.

However, just as more care is not necessarily better care, more patient education is not necessarily better patient education. It seems that no matter the method or modality, the message is that patient education must be effective and clear, and it must occur across the continuum of patient care.

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