

# Population Health NEWS

## Patient Interactive Education, Engagement Generate Successful Outcomes

by Richard Bootes and Susie Sonnier, MS, RN

**P**atient engagement, outcomes, patient-centered care and patient experience are some of the latest buzzwords driving hospitals and healthcare to meet standards of care, regulatory requirements and fiscal mandates. Hospitals are rapidly shifting patient care models from volume-based to value-based care with an intense focus on quality, safety and outcomes.

With value-based purchasing and patient-centered care in the industry spotlight in 2017, patient engagement continues to be a primary focus for hospitals and caregivers. Patient education is an important element for improving health and patient outcomes and increasing patient satisfaction.

Yet a conventional practice to engage patients in their care—video-based, patient education—is being neglected by too many hospitals despite demonstrated success over decades. Today, technology systems for patient engagement deliver interactive video for patient education, as well as integration with electronic medical records and other systems that provide entertainment and access to a broad range of hospital services. Something as simple as televisions in patient rooms are an ideal platform for engagement.

The industry, however, is signaling a growing recognition in the value of empowering patients in their own care. These interactive patient engagement systems are gaining popularity and producing remarkable results, including treatment of populations with chronic conditions and successfully reducing readmissions. Even so, the industry lags behind the curve for automating interactive patient education, one of the most critical aspects of patient engagement. Many hospitals still use paper handouts prior to patient discharge; however, research has shown that the use of videos for education increases retention up to 50% compared to conventional paper handouts that often are not read or easily understood.<sup>1</sup>

The key to interactive patient care is engaging patients and family members as customers who have service and quality expectations. Just as the hospitality industry views in-room televisions as a primary technology interface to engage customers, many hospitals have recognized the benefit of patient-specific education through in-room televisions with on-demand educational videos. This strategy also educates family members, expanding knowledgeable support when patients continue their recovery at home.

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Industry research firm Deloitte issued a recent report<sup>2</sup> that found that hospitals with better patient-reported experience also perform better financially. According to the Deloitte Center for Health Solutions, “Improving the patient experience can help a hospital improve its financial performance by strengthening customer loyalty, building reputation and brand and boosting utilization of hospital services through increased referrals to family and friends.”

The report concludes that hospital executives should consider investing in the tools and technologies necessary to better engage patients and enhance patient experience.

### Evolution of Patient Education

Health and patient education and engagement have evolved from passive, oft-neglected practices to full consumer expectations and doctrines of satisfaction and standards of care. Patients in previous decades were given little, if any, information about their conditions and treatment plans. Patients were expected to merely conform and follow instructions. Sending a patient home with a stack of handouts was the standard practice. No thought was given to health literacy, education levels, differing cultures or language requirements. The expectation was that a patient would accept and retain needed instructions.<sup>3</sup>

Nurses have many responsibilities ranging from shift reports, handoffs, admissions and transfers and managing clinical records to many other patient coordination activities. These tasks take time away from attention at a bedside. Patient teaching and psychosocial support fall to a dismal 7% of nurses' time and presence with patients. Lack of time is the number one constraint of delivering patient and caregiver education.<sup>4</sup> In addition, many caregivers might believe they lack the knowledge to teach patients. Other barriers include patient health literacy and cultural differences.

For decades, the industry has known that interactive, video-based patient education is superior to paper handouts. Rolling carts with VHS players were standard in the 1970s and 1980s. By the early 2000s, video on-demand systems were implemented with patient education videos on patient in-room televisions through interactive voice response (IVR) using the telephone in rooms. The standard practice leaped from VHS tapes with scheduled viewing times to digital, on-demand education in multiple languages.

In 2009, The Joint Commission adopted hospital accreditation standards for patient-centered communication and education. Today, the systems integrate smart TVs, Internet-based software platforms and interactive applications and mobile devices with a library of condition-specific, educational videos.

**Table 1**  
**Trends in Healthcare That Offer Opportunities for Education**

Trend	Patient Education Opportunity
Newly insured populations are growing in numbers. <sup>a</sup>	Access new healthcare consumers; explain coverage and primary prevention strategies for health.
Positive health outcomes in chronic disease conditions are vital for healthcare facilities to address.	Lessen readmissions by providing simple, prioritized education and instructions to key learners. Organize discharge information clearly. <sup>b</sup>
Technology is a vital force in healthcare. Use of electronic and portable technology is exploding by all ages of healthcare seekers. <sup>c</sup>	Technology can be a vital vehicle to deliver health education. Mobile devices, applications and interactive systems can deliver point-of-care education to tech-savvy consumers. Information can be distributed across a continuum of settings to affect changes and improvements in health status. <sup>d</sup>
Healthcare consumers are partners in healthcare delivery and design. Patient-centered care, shared decision making and patient engagement are all considerations in healthcare delivery. <sup>e</sup>	Health behavior and changes are dependent on expectations and readiness of a patient to incorporate and learn behaviors to affect health changes. Aligning education encounters with expectations can improve health outcomes. <sup>f</sup>

Note. Table adapted from the following sources: (a) PwC Research Institute, 2014. (b) Burger, 2014. (c) Volandes, Kennedy, Davis, Gillick, & Paache-Orlow, 2013; Glick & Moore, 2001. (d) PwC Research Institute, 2014. (e) Fleming, 2014; Glick & Moore, 2001. (f) Adams, 2010.

Patients and families expect to receive education using technology similar to what they use in everyday living. Patients have increased expectations that they will be fully engaged as healthcare partners in their care needs and services.<sup>5</sup> Many research studies share that patient expectations closely correlate with patient satisfaction and thus, deem the attention and development of strategies to enhance successful outcomes for patients and families.<sup>6</sup> Hospital satisfaction score improvements have been reported with 10 to 42% increases using interactive, on-demand technologies.<sup>7</sup>

Caregivers prescribe videos, which the patient controls from the bedside. The systems generate activity reports for staff to review, document and measure learning and patient comprehension. In addition to entertainment content including movies, Internet and games, systems provide dedicated channels to support additional capabilities, such as answering post-video questions to assess the need for additional patient education. Electronic medical records can document condition-specific, clinical education. Interactive systems are also used for pain assessment, ordering meals, filling medication prescriptions, requesting chaplain visits and other patient needs, such as adjustments to room temperature and lighting.

Engaging, meaningful encounters can be delivered to populations to promote and improve healthy lifestyles, increase treatment adherence in chronic disease management and improve medication adherence routines.<sup>8</sup>

**Table 2: Benefits of Interactive Patient Engagement Systems**

Benefit	Discussion	How Interactive Solutions Impact
Improved patient satisfaction and engagement	<ul style="list-style-type: none"> <li>• Patient satisfaction and patient experience are key drivers in operational goals.</li> <li>• Communications between patient and caregivers is a quality goal.</li> <li>• Education is a highly perceived need and expectation of patients.<sup>a</sup></li> </ul>	<p>Deliver real-time data to meet communication and information direct to patients and caregivers.</p> <p>Improved health literacy.</p>
Improved health literacy	<ul style="list-style-type: none"> <li>• Video can help improve health education in various cultural and literacy levels. This is key to successful outcomes.<sup>b</sup></li> </ul>	<p>Materials and screens can be selected to individualize to the population demographics and preferences of clients. Materials can be selected to literacy and cultural norms of a facility.</p>
Improved health outcomes	<ul style="list-style-type: none"> <li>• Outcomes measurements are critical to meet in healthcare facilities.</li> <li>• Readmissions are costly to the facility and patient and are penalized if excessive.<sup>c</sup></li> </ul>	<p>Patient education and bundle initiatives can be designed to incorporate interactive education, quizzes and the need for teach backs in patients with chronic conditions prior to discharge.</p> <p>Analytics and data from system usage and surveys can demonstrate efficacy of patient teaching efforts to measure outcomes.</p>
Improved workflow of clinical staff	<ul style="list-style-type: none"> <li>• Efficient condition-based curriculum can be prescribed by clinicians for patients/caregivers.</li> <li>• Education can be accessed by patient/caregivers in optimal teachable moments, freeing up nurses for other patient-centric tasks.</li> <li>• Streaming many manual processes can be a timesaver and optimize time at the bedside for caregivers.<sup>d</sup></li> </ul>	<p>Considerate planning and bundling of patient education can be arranged for patient needs and conditions.</p> <p>Staff can order patient-specific education at bedside and attend to other tasks as videos are being watched.</p> <p>Quizzes/surveys can be built to assess knowledge or retention.</p> <p>Videos can be watched as many times as patient need dictates before discharge.</p> <p>Many patient requests for information can be placed in menus and pages for easy access by patients or families in a browsable format.</p> <p>Interfaces can integrate with electronic health records for documenting patient education when programming is accessed and viewed.</p>
Meeting regulatory requirements	<ul style="list-style-type: none"> <li>• Regulatory agencies have mandated education for patients.</li> <li>• Multiple patient education standards are part of national patient safety goals and core measures.</li> <li>• Credentialing agencies and programs have education requirements to meet.</li> <li>• Meaningful use objectives can be met with successful interfaces with health education technologies.<sup>e</sup></li> </ul>	<p>Interactive systems can house these mandated education items to prescribe to patients. Some best practices auto-prescribe education on admission so the education plan reflects these required teachings.</p> <p>Education can be pushed to a patient's education plan by a physician's order. For example, an anti-coagulant video could be generated with a CPOE order for Coumadin.</p>
Increased cost savings	<ul style="list-style-type: none"> <li>• Healthcare costs are at an all-time high.</li> <li>• CMS imposes significant financial penalties on hospitals with high readmission rates. Avoidable readmissions cost CMS an estimated \$17 billion per year.<sup>f</sup></li> <li>• Paperless systems can shift to mobile technology solutions to save costs and improve information retention and use of information.<sup>g</sup></li> </ul>	<p>Interactive education systems can educate and assess retention of needed chronic disease management prior to discharge.</p> <p>Follow-up and reteaching can be planned for by assessing efficacy of hospital education.</p> <p>Readmission rates have decreased with the use of effective and well-planned hospital education.</p>

Note. Table adapted from the following sources: (a) Kalyani et al., 2014. (b) Burger, 2014; Murphy, D, 2014. (c) Brooks, 2015; Burger, 2014. (d) Storfjell et al., 2008. (e) Ahern et al, 2012. (f) Burger, 2014. (g) Burger 2014; Medevdeff, 2014.

Charleston Area Medical Center Health System in Charleston, W.Va. uses an automated patient education process to drive improved clinical outcomes. The system has reduced readmissions for chronic obstructive pulmonary disease by 30% and congestive heart failure by 22% through a comprehensive clinical strategy that includes video-based, patient education.

“Interactive video using patient television is an effective way for our patients to learn about their disease and how to manage their health condition,” says Donald Lilly, M.D., associate chief medical officer at the medical center. “Many of our patients are visual learners and can better retain information from videos than from reading patient handouts. They spend much more time watching television than reading written material in their daily lives so it seems more natural for them. Videos along with corresponding quizzes stimulate conversation and facilitate learning for the whole family. When patients involve their own family members while they’re still in the hospital, they have more support and a greater chance of compliance once they go home. That helps to keep them from coming back to the hospital.”

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Patient engagement and education technology continue to make great strides. Interactive platforms can extend education to patients before admission or a planned procedure and then after hospitalization, push important post-hospital care education to mobile devices. Improved mobile integrated experiences, adaptive user experiences and rewards-based approaches to engage patients in coordinated care across healthcare providers are being developed. All of these improvements are founded on the cornerstone of educating and involving patients in their care.

<sup>1</sup> Murphy D. “Hear, See, Do: How Videos Improve Patient Education.” SurroundHealth. March 14, 2013.

<sup>2</sup> Betts D. “The Value of Patient Experience.” Deloitte. 2017.

<sup>3</sup> Lorenzi N. “Patient Television Systems: Educational and Clinical Applications Could Provide Improved Engagement.” *Health Facilities Management*. Sept. 3, 2014.

<sup>4</sup> London F. “No Time to Teach.” Pritchett & Hull. 2009.

<sup>5</sup> “Improving Quality Health Care: The Role of Consumer Engagement.” Academy Health. October 2007.

<sup>6</sup> Jayasankar SJ. “Patient Expectations: How Do They Matter?” American Academy of Orthopedic Surgeons. 2009.

<sup>7</sup> Wiklund E. “Hospitals Find New Benefits in ‘Interactive Patient Systems.’” *Healthcare IT News*. 2011.

<sup>8</sup> Adams RJ. “Improving Health Outcomes With Better Patient Understanding and Education.” *Risk Management & Healthcare Policy*. Oct. 14, 2010; 3:61-72.

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