

# Impacting Successful Outcomes:

## Optimizing Patient Interactive Education and Engagement

Twenty-first century health care dictates that technology-driven solutions assist caregivers to optimize patient engagement and education to impact outcomes and cost savings for healthcare facilities. Savvy patients and caregivers are looking for solutions for expectant education on a diversity of health care needs while hospitalized or seeking care in medical facilities. Interactive patient engagement solutions and systems meet both the patient and facility's needs by optimizing information and education at the patient point of care. These solutions can promote communications, patient engagement, improve outcomes, and meet regulatory requirements with innovative and individualized design and implementation of these systems in healthcare facilities.

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**1.0****Increasing Complexity of Healthcare Delivery and Patient Expectations**

Twenty-first century health care encompasses a complexity of divergent needs based on multi-faceted populations, regulatory requirements, and cost considerations for healthcare facilities nationwide. Many major issues focus on or around satisfying patient experiences, realizing improved outcomes, and complying with a multiplicity of healthcare regulations and requirements that govern health care. Clinicians must not be only knowledgeable in medical practice and delivery, but technologically savvy and proficient. Modern day patients present with more complex health needs and increased expectations that they will be engaged as healthcare partners in their care needs and services (Robert Wood Johnson Foundation, 2007). 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 (Jayasankar, 2009).

Patient and family education is a common denominator solution to influence patient outcomes that can be used at each point of contact in healthcare delivery. Practitioners can engage and employ timely and effective patient education interventions at multiple points of need. Engaging, meaningful encounters can be delivered to health-seeking populations to promote and improve healthy lifestyles, increase treatment adherence in chronic disease management, as well as improve medication adherence routines (Adams, 2010). Hardwiring patient education strategies and providing time-efficient tools to deliver patient education at a patient's point of care can be a worthy investment for healthcare facilities and care managers to consider. Patient education needs to be intentional and meaningful to both the deliverer and the recipient in order to influence knowledge acquisition, behavior changes, and realize improved institutional outcomes (Jayasankar, 2009). Table 1 illustrates healthcare trends that can create opportunities for patient education.

**2.0****Current Conundrum: Patient Education Expectations and Provision Barriers**

Direct care provision is often a challenging and complex set of skills and time management that healthcare practitioners have struggled to keep pace with in recent years. Patient expectations are often surveyed in hospital settings. One qualitative study demonstrates a major expectation of hospital patients is to have “education by nurses regarding their disease, experiments, examinations, disease stages and disease future and diet”. The study suggests these education expectations are often informally met and cause dissatisfaction when they are not met (Kalyani, Kashooli, Molazem, & Jamshidi, 2014, page 4). Education of patients and families fall behind what Storfjell, Omoike, and Ohleson (2008) term non-value added time, or NVH. These NVH tasks include shift report, handoffs, admissions and transfers, managing clinical records, and other patient coordination activities. These tasks take time away from the bedside. Up to 47% of nurses’ time is considered NVH activity. 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 (London, 2009). Other constraints to patient education center on the competence of staff to provide meaningful education. Caregivers feel as if they are not qualified to teach patients. Confidence lapses exist in seasoned nurses as well as new graduates to teach patients basic skills for disease management. Cultural diversity, low literacy, acuity of patient conditions, patient readiness to learn and shorter length of stays or encounters all impact the ability to impart meaningful education to patients and caregivers (Freda, 2004). Facility-wide barriers may include a lack of tools to provide quality education materials or content to patients. Tools such as videos, TV carts, charts, models or other teaching materials are often difficult to find, or are out of date. Finally, a lack of administrative support or expectation to include patient education in everyday workflow can impede teaching. Mainstream competencies or skill checks do not exist for patient education thus diminishing its importance in mainstream workflow (Barber-Parker, 2002; Ghorbani, Solemani, Zeinali, & Davaji, 2014).

### 3.0 Interactive Patient Engagement Systems: One Solution for Patient Education

Fortunately, there are solutions that meet the barriers and constraints of quality patient education delivery. Technology has developed to adjunct the health care practitioner's ability to meet patient expectations, engage patients in active learning, and improve clinical outcomes as well as meet regulatory standards for patient education. Patient interactive systems, or on-demand video systems, can address many complex needs a facility may have for patient engagement and education at the patient's point of care: the bedside. These systems partner with other patient education activity to enhance the learning process. They are not a singular, stand-alone method of teaching. These systems have been placed in countless facilities around the country to engage, educate and entertain patients in a more contemporary and satisfying means. (Eagle, 2012, Wicklund, 2011)

#### Patient Benefits

Within these systems, a patient can order condition-specific education, browse through hospital services, and perhaps order their next meal. Internet access may be available to search websites or send e-mails. Entertaining movies can be cued up to watch and enjoy, or relaxation content can be played to reduce hospital-induced anxiety or reduce pain levels. Depending on the platforms and interfaces chosen, these systems can be personalized to the hospital preferences and offer patients and caregivers an impactful care experience that is controlled by their choices and needs (Milner Fenwick, n.d). Hospital satisfaction score improvements have been reported with 10%-42% increases using interactive, on-demand technologies (Wicklund, 2011). Patient education libraries are available with quality media for patients and caregivers to review, and perhaps take knowledge assessment quizzes or surveys to assess retention and knowledge gain. Teach back mechanisms can be triggered to staff to reinforce concepts that may need extra explanation or elaboration (Milner Fenwick, n.d).

Video education has been shown to be more effective than paper education as a means of conveying relevant health and condition information to certain patient populations. Videos can be chosen in various languages, literacy levels, and formats to align with patient population demographics in a facility service area. Videos enhance retention up to 50% by using visual and audible media to demonstrate and inform patients and caregivers on needed self-care skills. Video education can deliver a uniform standard of education in facilities so that a patient or caregiver gets consistent instruction rather than multiple versions of practice from differing caregivers (Murphy, 2013).

Another expanded feature of interactive systems' are the customizable on-screen menus that can help patients and their families find needed hospital services such as the cafeteria or access spiritual care on accessible menus and pages. Notifications can be embedded in information screens to forward a call or e-mail to order home prescriptions from a retail in-house pharmacy (if available in the facility). Real-time service recovery notifications can be incorporated into these systems to report items such as room cleanliness, the need for ice chips or increased noise levels. Staff can then more quickly respond, adjust or fix these issues in a real-time manner to improve patient comfort or satisfaction. This can translate out to better post-discharge survey results. Generationally, patient populations are increasingly more technologically savvy and have expectations of more sophisticated amenities when they enter their health care experience.

**3.0**

By using an interactive engagement system, patient populations encounter a more realistic means of education and engagement in their patient room with these multi-functional and customizable systems (Eagle, 2012).

**Facility Benefits**

The patient benefit of interactive systems is comprehensive for many apparent reasons, but hospital staff and administrative objectives can also be realized from these innovative technologies. Table 2 outlines the benefits of interactive patient engagement systems in facilities.

**Considerations for These Systems**

The best housing for a myriad of patient education and engagement needs can be an interactive system investment. Multiple companies develop these systems for hospitals and care facilities. Healthcare facilities must determine what needs and processes exist that can be enhanced or impacted by interactive patient technology. Interactive system companies have informative websites and can be contacted to set up demonstrations and hands-on experiences with their systems. Cost, content, scalability, service, support, and company reputation are key factors in deciding an appropriate system to meet the needs of your facility's population and healthcare system (Milner Fenwick, n.d.). Numerous initiative integrations, workflow enhancements, or facility application stories are documented on the product websites. These white papers and case studies document success stories of these systems in hospitals ranging in size and locations around the country.

The complexity of today's healthcare demands innovative and efficient strategies for optimizing patient and caregiver involvement in their care and outcomes. Healthcare consumers are insisting on more time-saving and technology-based solutions to help them meet their healthcare needs and services. Time efficiency, cost savings, and improved scores on numerous methods of performance measurement must be documented and reached in order to maintain an optimal edge in today's healthcare markets. Interactive patient education systems give a facility a discernable advantage over those facilities that do not have the technology delivery. Interactive system companies have dedicated teams of personnel that are clinically, technically and professionally proficient to help hospitals integrate these systems into workflow management. Benefits can be realized by optimizing and scaling these systems to the desired outcomes of both care recipients and care deliverers.

**Table 1**  
**Trends in Health Care 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, 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 the 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).

**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>	Deliver real-time data to meet communication and information direct to patients and caregivers.
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>	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 the facility.
Improved health outcomes	<ul style="list-style-type: none"> <li>• Outcome 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 initiatives and bundle initiatives can be designed to incorporate interactive education, quizzes, and the need for teachbacks 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>• Streamlining 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 bedside order patient specific education 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>

**Table 2, continued.**

Improved workflow of clinical staff, conti.		<p>Many patient requests for information can be placed in menus and pages for easy access by patients or family 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 anticoagulant video could be generated with CPOE order for Coumadin.</p>
Increased cost savings	<ul style="list-style-type: none"> <li>• Health care costs are at 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 re-teaching 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(Storjell et al., 2008). e(Ahern et al, 2012). f(Burger, 2014).g(Burger 2014; Medevdeff, 2014).



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