



Nurse Call Systems: The Nurse's partner in care

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The current economic uncertainty and intense focus on cost and quality of healthcare require prudent strategic capital investments. Nurse Call Systems applying digital technology and open architecture systems such as Rauland-Borg's Responder 5 are sound investments. The system's potential to support cost effective tools to meet quality standards at the bedside opens opportunities for innovative solutions that support nursing interventions and improve patient outcomes.

Critical Issues Facing the Industry

Ensuring patient safety is a priority in the minds and hearts of those who provide health care, and is vital to hospital financial outcomes in the current economic climate. Federal agencies, consumer advocates, and credentialing organizations all identify patient satisfaction and safety as critical issues facing the health care industry. The churn at the macro level of the industry, however, is creating rapid changes and drastic demands for nursing care in the acute care environment. As a result, the progressively increasing scarcity of nurses in the workforce and cost of demands for technology implementation requires new approaches for bedside nurses and nurse leaders.

Industry leaders and nurses must leverage resources to prevent missed nursing care and achieve acute care quality and safety expectations. The demand for measurable outcomes, evidence to support practice, public reporting and efforts to determine accountability risk a financial burden for the health care delivery system (IOM, 2000).

New Solutions Sought

The Patient Protection and Affordable Care Act signed into law in March 2010 has catalyzed the industry to seek new solutions to respond to preserve and protect revenues threatened by legislation changes. Two elements of the law impacting available revenue

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are hospital value-based purchasing and public reporting. The program ties a percentage of hospital payment to hospital performance on quality and safety measures related to common and high-cost conditions and patient satisfaction and increases transparency of hospital performance via information resources as a result.

The American Recovery and Reinvestment Act, passed in 2009

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allocates \$27 billion to incentivize investments in health information technology" (Hoffman & Podgurski, 2011). This legislation, known as *Meaningful Use*, outlines eligibility requirements for hospitals to obtain incentive funds from the government. Provisions of the law demonstrate the national drive for data to evaluate and report quality, by requiring the ability to transmit public information electronically, and report quality measures (Center for Medicare and Medicaid Services).

"A report by the National Research Council identified six major health-related application domains: consumer health, clinical care, administrative and financial transactions, public health, professional education, and research" (Institute of Medicine [IOM], 2001, p. 166).

Patient satisfaction metrics monitored and reported by CMS and known as HCAHPS include multiple elements of care that can be affected by the use of nurse call technology. Elements of care included in the HCAHPS survey include: (1 & 2) How well nurses and doctors

communicate with patients, (3) How responsive hospital staff are to patients' needs, (4) How well hospital staff help patients manage pain.

Research regarding the role and impact of the nurse in patient outcomes since the publication of the IOM report, *to err is human*, has explored multiple dimensions of the complex work environment of the nurse. Studies exploring labor standards, communication, environmental complexity, patient care needs and their correlation to adverse events such as falls demonstrate an "underlying premise that work environment of the nurse influences patient outcomes" (Kalisch, Landstrom, & Hinshaw, 2009 p.1510).

"Recent literature confirms that the nurses are increasingly being drawn away from the bedside, and asked to focus attention on other activities such as documentation, medication administration, and care coordination" (Advisory Board Nurse Executive Center, 2009, p. 26).

The Nursing Challenge

The challenge is to identify the strategies and resources that can mitigate the pull of the nurse away from the patient, enhance the nurse/patient relationship, and fill gaps created by staffing constraints. Acute care nurses' care decisions, made in the context of competing priorities and scarce resources, are pivotal to implementation of effective patient quality and safety interventions.

The problem arises when competing priorities for the nurses' time cause missed care and create opportunity for adverse events to occur and patient satisfaction to sag. "The IOM addresses the potential impact of technology on

errors, but does not address the choices facing nurses when they deal with these factors" (Kalisch et al., 2009, p. 1510).

Technology, in the form of Nurse Call systems, has the potential to mitigate missed nursing care. The Nurse Call system is literally the life line that connects the patient and the nurse and can potentially facilitate the *knowing* so vital to effective nursing decisions and care.

Integration of the call system with alarm systems and patient beds can support surveillance of patients. Rauland-Borg's Responder® 5 system sets the standard for systems that facilitate communication to team members regarding fall risk status, send reminders to staff that indicate rounding or follow up observation is needed or indicate the presence of care givers in the patient room.

When integrated with locator functions the call system can track staff entering and leaving patient rooms. Automated tracking and recording of call system activity can provide leadership and nursing staff with data to analyze intervention and adherence to patient safety protocols.

Communication and Patient Satisfaction

Nurse communication, response to call light, and pain management are significant drivers of overall patient satisfaction. The Rauland Nurse

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Call system attributes potentiate efficiency and responsiveness of staff by facilitating direct communication between patient and provider. The ability of the patient to connect directly to their assigned nurse provides a means of building trust and a sense of safety. The nurse can receive information via the call system through integration with other devices and the electronic medical record provides real time information at the nurse's finger tips. The ability to set reminders in order to proactively follow pain management interventions facilitates the meeting of clinical standards and further enhances the patient's sense of being cared for.

Innovative Workflows

The potential for integration with other digital systems opens the door for the development of innovations in work flows and communication that improve staff efficiency and create a healing environment for the patient. As an example, integration of systems like Rauland's Responder 5 with IV pumps allows alarm sounds to be removed from the patient room and sends them directly to the Nurse's remote communication device. The impact is a quieter patient room and relief of the patient from putting the call light on when the pump goes off. The Nurse appears to just *know*. Something so simple provides the patient a sense of safety and builds trust in the Nurse's care and attentiveness.

Integration with the ADT system allows display of the patient's name and demographic information when the patient calls. Responder 5 allows the provider to call the patient by name and further build the Nurse/patient relationship and communication. The personalization of care builds trust and a sense of safety that further facilitate healing, satisfaction with communication, and responsiveness to patient needs.

Fall Risk and Prevention

Integration of Nurse Call System with the patient bed is one of the most exciting opportunities to improve patient safety. Open architecture as characterized by the Rauland Responder 5 system allows integration with best of breed technology such as Stryker's smart bed.

The features available with such a marriage provide alerts that have significant potential to prevent falls. Hospital falls are nurse-sensitive adverse events that are a reflection of errors of omission recognized as missed nursing care.

The Center for Disease Control and Prevention (CDC) estimates that one in three adults age 65 and older fall each year and 20%-30% suffer moderate to severe injuries resulting in decreased ability to live independently. The cost of

falls places a significant burden on the community, hospitals, and economy.

Cost projections for fall injuries in adults aged 65 and older currently averaging \$17,500 is \$43.8 billion by 2020 (Quigley, Nelson, Watson, Wright, & Strobel, 2007) (Cost of Fall Injuries in Older Persons in the United States, 2005, 2010). The ability of the call system to transmit bed exit alarms and alarm off notices improve responsiveness and prevents safety measure failures by alerting staff if safety measures are not activated. The ability to designate patients at fall risk with over door lighting ensures all disciplines and staff are aware of at risk patients.

Additional features available on systems such as Rauland's Responder 5 include timed alerts that remind the Nurse it is time to round on the patient or reassess after pain medication administration. The ability to customize the system to opens the door for innovation with consideration of specific organization and patient population needs.

Technology and Nursing Care

Systems like Rauland's Responder 5 bring technology directly to the bedside and support the Nurse's intentions and interventions in a manner not realized before. The innovations in care and

potential to marry touch to technology are limited only by the imagination of the users. These cost effective systems bring a whole new dimension to the notion of *Meaningful Use* by directly linking the patient to their Nurse and bridging the gap between patient needs and staff resources available. The outcome can only be improved satisfaction and a safer more caring environment for patients and nurses.

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