Leveraging Clinical Communications Technology to Prevent Missed Nursing Care
Maintaining a competitive edge in the value-based purchasing era

Patricia Smith MBA, BSN, RN
### Installing Responder in Hospitals *

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
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* A summary of results following installation of Responder 5 at nine hospitals.
Hospitals in the U.S. face a constant struggle to avoid any missed opportunity to meet organizational and clinical outcome expectations. This error of omission, or missed care, may come in the form of an unmet patient need that leads to an adverse event or dissatisfaction. It can lead to or be the result of inefficient use of the nurse’s time, or missed communication among team members and with patients.

Missed care in responding to patient demands is caused by gaps in labor resources, communication, and physical resources such as technology (Kalisch, 2006). These factors ultimately can affect the patient’s hospital course or home care success.

This concept of missed care — an error of omission of required patient care — was initially identified in 2006 by Kalisch’s qualitative study, describing nine elements of nursing care regularly missed: ambulation, turning, delayed or missed feedings, patient teaching, discharge planning, emotional support, hygiene, intake and output documentation and surveillance (Kalisch, 2006, p. 307-309).

Missing any of these elements of care can have a significant impact on the patient outcomes experienced.

Industry leaders and nurses are being forced to leverage limited available resources to prevent this missed nursing care and still achieve acute care quality, safety, and financial expectations.

**MISSED CARE RELATED COSTS**

Inevitably, there is a cost to these missed opportunities. Missed care can lead to hospital acquired complications such as pneumonia, general weakness and the resultant increased potential for falls, skin breakdown, and poor nutritional status that interferes with healing. Inadequate surveillance of patients leads to adverse events, failure to rescue, and delayed medical management. Missed patient education, discharge planning and emotional support affect patient cooperation with the treatment plan and can increase length of stay and lead to a readmission.

The patient safety movement, regulatory interventions affecting the payment system, and the technology boom are exerting significant force on the business strategy and care delivery priorities of the contemporary hospital. Social and legislative forces affecting industry decisions regarding technological investments indicate a demand for: measurable outcomes, evidence to support practice, public reporting, determination of accountability, and financial implications for the healthcare delivery system (IOM, 2000).

These external forces influence hospital leadership’s strategic objectives, and the passing of the Center for Medicare Services (CMS) Patient Protection and Affordable Care Act in 2010 ushered in the era of Value-Based Purchasing (VBP) Reimbursement Program.

The CMS VBP reimbursement model drives a dramatic paradigm shift in healthcare economics with the intent to drive quality and safety in hospitals, as well as affect the cost of healthcare by incentivizing hospitals and paying based on demonstrated quality outcomes.

**TECHNOLOGY IN ALLEVIATING MISSED CARE**

This reimbursement model has the potential to significantly affect the financial stability of hospitals. Nurses are in the unique position to identify and implement innovative and evidence-based practice by improving clinical processes of care by applying evidence to improve efficiency, effectiveness and safety (Aroh, Colella, Douglas, & Eddings, 2015).

The choices of technology for clinical workflows and communication can address many of the antecedents to missed care. By enabling appropriate response to patient demands, creating efficiencies that conserve labor resources, and supporting communication and role performance, technology can support clinical practice, prevent missed care, and create life lines that connect the nurse to the patient and care team members.

Technology solutions like Responder® Enterprise, an advanced nurse call and communication system, are uniquely positioned to respond to the complex clinical demands associated with gaps in the physical resources antecedent that lead to missed nursing care. Responder
applies digital technology and open architecture that sets the standard for device integration. The capability of achieving interoperability with multiple systems including the Electronic Medical Record (EMR) without the use of middleware enables Responder to support safe practice processes while creating opportunities to improve efficiency.

Responder’s attributes can automate support for evidence-based practice strategies such as alerts, rounding, special precaution communication, white board communication, protocol management, and automatic team notifications (“Rauland,” 2016). The open architecture supports best of breed integration and interoperability.

MULTIPLE DIMENSIONS AND A DYNAMIC DANCE

The previous study was retrospective and gives a small indication of the results realized with the implementation of Responder.

The opportunity cost is remarkable and demonstrates how significant the cost of doing nothing is on the clinical environment, the patient experience and ultimately the financial viability of the organization. The study findings demonstrate the organizations’ focus on operating costs, patient experience, and nurse experience.

The ideal model for study of the impact of technology such as Responder would include baseline metrics based on what role the technology plays in meeting specific organization strategic objectives. The system supports the dynamic dance between the outcomes in each category.

Technology improvements affect the overall environment of care, and time savings affect productivity, staff satisfaction loops back affecting patient experience, safety and teamwork.

The improvements identified by the studied organizations impact all four antecedents of missed care. Responder users report improved meeting of patient needs, improved use of labor resources, and workflows support of roles and communication. Integration and reports provide physical resources that support the nursing process and provide metrics to continually evaluate and improve.

Research regarding the role and impact of the nurse on patient outcomes since the publication of the IOM report, To Err is Human, identifies multiple dimensions of the complex work environment of the nurse, and studies exploring labor standards, communication, environmental complexity, patient care needs and their correlation to adverse events demonstrate that the work environment of the nurse influences patient outcomes.

Sustaining these nursing interventions is contingent on consistent, appropriate use of available resources and technologies. And the increasing scarcity of nurses in the workforce requires new approaches for bedside nurses and nurse leaders. This review of reports by nine organizations that have implemented Responder indicates that implementation of the system can have a positive impact on the clinical environment, with results that indicate the system can reduce missed Nursing Care and provide outcomes necessary to meet strategic objectives and respond to Nursing leadership challenges.
REPORTED OUTCOMES

A review of results following installation of Responder at nine organizations was conducted. Organizations studied included two post-acute care facilities, six acute care facilities and one children’s hospital. Their reports were reviewed for key words associated with strategic objectives and challenges identified by Chief Information Officers and Chief Nurses and VBP domains (CIO,2015) (Sherman, 2014).

Categories included: patient satisfaction, patient safety, productivity, staff satisfaction, teamwork/communication, integrations, and reports, with results reported by the installations as:

Patient Satisfaction
- 100% of facilities reported noise reduction and overall improved satisfaction
- 1 reported 13% improvement in HCAHPS noise scores
- 1 reported 45% improvement in HCAHPS noise scores
- 1 reported HCAHPS scores increased from 74% to 82% from 2012 to 2015
- 1 organization developed a workflow on Staff Terminal specifically for family

Patient Safety
- 50% of the facilities indicate the system supports fall prevention strategies
- 1 reports call light response has improved 32%
- 1 reports a 30% decrease in falls
- 1 reports patient falls decreased to below 2.7/1000 patient days

Productivity
- 100% report some type of improved productivity through improved workflows, saved steps, saved time, or improved response
- 38% specifically mention teamwork and team communication improvements and time saving associated communication.

Staff Satisfaction
- 88% report improvement in staff satisfaction associated with the system.
- Satisfaction is improved due to training and ease of training as well as staff participation in planning and implementation.
- Increase time available for clinical care or patient/family communication
- Report anticipation of continued implementation, integration, and innovation

Integration
- 100% of organizations indicate phone integration and associated improvement in communication and efficiency
- 75% of organizations indicate RTLS integration
- 1 organization reports significant improvements associated with integration of electronic white board information effectiveness in saving time and improving communication
- The pediatric organization reports integration with RTLS and interactive patient TV creating significant improvement in patient/family communication and increased sense of security

Reports
- 75% of the organizations indicate that the reports features are valuable leadership tools to assist in ongoing monitoring and improvement efforts

Responder outcomes realized by the studied organizations improved their competitive potential in the VBP era.

Ensuring maximum reimbursement based on performance in HCAHPS, process of care measures, outcome measures, and efficiency is part of the solution.

There are also gains realized in operating costs associated with organizational efficiencies.

Examples of these opportunity costs include:
- Saving RN time: 1 hour/shift/nurse @ $35.00 per hour on a unit staffing 5 nurses per shift for 365 days in 1 year = $127,750.00 per unit per year
- Fall prevention: Joint Commission cost per fall with serious injury $14,000.00 Prevent 6 falls per year = $84,000 per year (JCHO 2015)
- RTLS: #of Beds x 3 pieces of equip = $96,000, 60 minutes of saved nursing time/shift = $136,222
  Savings per 100 bed facility = $232,222.00 (“RTLS Calculator,” 2016)
- Retention of staff: RN turnover cost $60,000.00 per nurse
  Decrease turnover by 3 RN year = $180,000.00

Total potential savings 100 bed facility per year: $623,972.00 ($6239.00/bed/year)
Rauland Responder® users report improved meeting of patient needs, improved use of labor resources, and workflows support of roles and communication.

REFERENCES


Patricia Smith MBA, BSN, RN
Patricia is currently CEO of the Healthcare consulting company, Future NuCare LLC.
Previously, she served as Director of PCU and Telemetry Stroke Unit at Baptist Medical Center in San Antonio, Texas. She earned a Diploma in Nursing at Newman School of Nursing, Emporia Kansas, Bachelors in Nursing at University of Alabama Huntsville, Masters in Business Administration at Friends University, Wichita, Kansas and is currently a Doctoral Candidate in the University of Phoenix, Management and Information systems and Technology program.
She began her nursing career in the United States Army Nurse Corp.

Patricia has more than 30 years of experience in clinical, leadership and consultative roles in Emergency and Trauma Services, Outpatient Services and In Patient acute care.

This synopsis was prepared for Rauland by the author.

If your facility has interest in performing a third-party Value Base Purchasing assessment and analysis, please contact Rauland to determine resource availability and project parameters. The assessment is provided at no cost. The only investment is the collaboration time with Rauland analysts to develop your data and related analytics.