Fall prevention in the acute care hospital setting is complex. RAND® Health conducted a detailed systematic literature review in 2012 and assessed the effectiveness of 102 fall prevention interventions in acute care hospitals. Their assessment found that “interventions need to be targeted towards individual settings, depending on patient and staff needs as well as already present approaches to prevent falls.” Successful evidence-based fall prevention programs are multifaceted in nature and include multiple elements of risk assessment and risk-specific interventions, caregiver and patient education, and technology.

Deaconess has shown a trend in decreasing patient falls since fiscal year (FY) 2009/2010, when quality improvement (QI) efforts were implemented to prevent patient falls. Deaconess continues to focus on enhanced patient safety programs via evidence-based QI initiatives, and fall prevention has become standard of care, with a strong clinical culture centered on patient safety. The following case history presents the successful, multifaceted fall prevention QI intervention for 2 units at this acute care facility.

**CASE HISTORY**

**BACKGROUND**

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**METHODS**

**Clinical Setting:** Medical-Telemetry Unit (32 beds); Ortho (32 beds)

**QI Intervention Dates:** March to end of May 2012 pilot; June 2012 to present ongoing intervention – most recent data through first quarter FY 2012/2013

**QI Interventions:** Although evidence-based QI efforts has been ongoing on both units since FY 2009/2010, a gap analysis of best practices in late 2011 identified several additional fall prevention QI interventions, which were implemented as follows:

- February 2012: Fall Policy and Procedure updated to incorporate technology and risk-specific interventions. Electronic medical records updated to alert of fall risk in header for all-discipline view
- Definitions of falls (assisted and unassisted)
- Beds standardized on both units
- Bed-exit technology to be used to monitor patient position who are at high fall risk (>9) in zone 2 on Medical-Telemetry and in zone 1 on Ortho
- iBed Awareness technology to be used to monitor bed position for patients who are at high fall risk (>9) (2 side rails, brake, bed exit, low height)
- Fall-risk colors standardized to yellow
- Chair alarm added to interventions
- Compliance-monitoring audits incorporated
- March 2012: Nursing staff and ancillary staff education on revised Fall Policy and Procedure administered before QI initiative
- March 2012: Standardization of bed technology* and nursing/ancillary staff in-servicing on

*Stryker S3® Med/Surg Bed configured to include Chaperone® Bed Exit with Zone Control® and iBed® Awareness Smart Bed Monitoring Systems (Stryker Corporation, Kalamazoo, MI)
appropriate use of beds and risk-specific interventions
- April 2012 to end of May 2012: 90-day pilot study
- May 2012: Began receiving fall data from the quality council: average age, assisted falls, orientation, injury status, circumstances of fall, if protocol had been in place before a fall.
- June 2012: Based on successful 90-day pilot study, QI interventions adopted into standard of care
  - Process changes including compliance rounding and monitoring
  - Bedside reporting
  - Safety huddles on falls discussed twice daily at change of shift
- Electronic medical record notifications (score for high fall risk reviewed for every patient on unit; clerical associate contacted every RN to provide reminders for high fall-risk patients; visual cues provided for fall prevention safety reminders)
- Bed exit alarms ring to staff phones.
- Pre- and post-fall medical record documentation audits for RNs and PCTs
- Communication enhanced regarding fall prevention metrics for team awareness and continuous process improvement
- Fall debrief tool utilized: This intervention was coordinated by the charge nurse; the tool is utilized immediately after a fall, and staff communicate all details surrounding a fall and ensure that lessons are learned where possible.

RESULTS
The histogram of fall rates per 1000 patient days demonstrates an ongoing downward trend in falls on both units. Ongoing best practices in evidence-based fall prevention have yielded a reduction in in-patient falls, from 5.17 to 3.88 per 1000 patient-days (25%) on Medical-Telemetry and from 4.68 to 3.99 per 1000 patient days (15%) on Ortho (Figure A).
The ongoing success of this multifaceted QI intervention is due in large part to standardization of products and processes. The integration of risk-specific technologic interventions, combined with comprehensive education, increased communications, and transparency have helped to ensure that best practices in fall prevention are carried out across the care continuum.

**Standardization:** Lack of standardization in fall prevention is a barrier to patient safety. By standardizing bed technology and signage and fall-risk coloring to yellow, confusion was eliminated, and staff were able to comply with fall prevention best practices.

- All beds* were standardized with iBed Awareness (bed position monitoring) and Bed Exit technology (patient position monitoring).
- Fall-risk color was standardized to yellow.
- To ensure standardized communications, signage was updated to include signs with a yellow star denoting high fall risk outside the patient’s room and above the patient’s bed.

**Compliance:** One of the main focuses of this QI intervention was compliance monitoring, which required ongoing daily monitoring of adherence to fall prevention interventions. Charge nurses on Medical-Telemetry had the “Spa Team” (PCT audit), monitored fall compliance every shift and conducted online audits. In addition, ancillary staff (eg, laboratory, radiology, housekeeping, transport) were provided with in-servicing to ensure that they understood how they were affecting falls and how to improve compliance with fall prevention.

**Education:** Staff received education on best practices in fall prevention, and the facility’s fall Prevention Policy and Procedure. The educational program reviewed topics such as the importance of fall signs on the outside of a patient’s door and inside the room; definitions of falls; what to do if a patient falls; standardization of fall risk color with a yellow armband, yellow socks, and a yellow star; standardization of the number of side rails that need to be up; and all risk-specific interventions.

- Mock bed-alarm drills were practiced to reward compliance with rapid response.
- Mock room-hazard drills were conducted to reward staff who were able to demonstrate knowledge of fall prevention.
- Hourly rounding videos were shown.
- Bedside role-play was conducted to illustrate the importance of safety discussions, and staff were rewarded for knowledge.

**Transparency:** Falls data are posted publicly so that visitors, staff, and others can see them, which maintains transparency. Fall prevention efforts are communicated via fliers and one-on-one discussions with nursing staff.

**Communication:** Increased communications were integral to the success of this QI initiative.

- A Falls Team was developed and meets monthly to review fall incidents and QI initiatives and to set goals for ongoing success.
- A Fall Education Communication Board was posted in the conference room to provide visual reminders of fall prevention interventions, algorithm, and fall rates.
- Bed-exit alarms communicated the location of the alarm via a phone carried by the nurse and the PCT, to ensure a rapid response.
- Results of QI efforts were communicated and awards made (30-, 60-, and 90-day no falls awards) for successes and milestones on an ongoing basis, to ensure staff buy-in.
- The use of visual aids and verbal communication cues increased communication and provided reminders to adhere to fall prevention best practices.
- Physical Therapy reviewed patient safety, assessment, and proper techniques of ambulation with nursing staff to reinforce best practices.

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CLINICAL IMPLICATIONS

Deaconess will continue to strive for elimination of preventable patient falls by ensuring best practices in fall prevention, and multifaceted QI initiatives are customized for its staff and patients. These efforts are ongoing and constantly adapting to patient’s needs, advancing technology, and evidence-based best practices.

REFERENCES