Innovation Profile: Extreme Risk: reducing falls in the ICU

Snapshot

**Summary:** Denver Health Medical Center developed and implemented a fall risk tool specific to the intensive care environment. The tool was revised many times with staff input, and eventually implemented within the hospital’s EHR system. Development of the tool and related interventions reduced falls with harm within the medical ICU.

**Hospital Background:**
Safety Net Hospital

**Date first implemented:** 2009

Background

The high acuity and critical nature of the intensive care patient compounds risk and leads to fall-related injury. Falls occurring in the ICU result in extended length of stay, require diagnostic and follow-up care, and increase patient dependence and suffering. There is little research and there are few assessment tools available for use in a fall prevention program specific to the ICU setting. All ICU patients score high on the risk tools developed in medical-surgical units, so little extra vigilance or precaution is taken for the extreme risks.

What They Did

**Project Origins**

In early 2009 the hospital’s Medical Intensive care unit (MICU) experienced an increase in the number of reported falls. All MICU patients at this safety net hospital were considered at high risk for falls; these patients experienced falls despite high risk interventions being in place. Despite the designation of all ICU patients as high risk to fall with implementation of related interventions, fall rates in the medical ICU remained above the national mean. Though risk assessment tools have been developed, current tools do not provide adequate sensitivity to differentiate those at an elevated (or extreme) risk to fall who may require more intense interventions and vigilance.

**Description of the Intervention**

- **Data analysis and risk identification:** An analysis of 2008 and 2009 falls in the medical ICU, surgical ICU and step down unit was completed to identify common contributing factors. The reviewer looked at diagnosis, history, time of day, time of year (e.g., summer), presence of transfer orders
and other factors. Recurrent factors included intrinsic (related to the patient’s system) and extrinsic factors (such as high risk medication). These factors were identified as triggers, indicating a higher risk for falling in the ICU - an Extreme Risk.

- **Forming a team:** The Department of Patient Safety and Quality, the nurse manager in the MICU and a few staff members who became champions of the program were key people, and they developed ways to involve front-line staff to increase buy-in in the program. At first there was resistance by staff – greater attention to fall risks was an additional task in a busy environment – but over time staff became more engaged and enthusiastic. The MICU medical director showed great interest support for the project, and interest heightened after a serious 2009 fall. The project also involved other disciplines – project staff went to staff meetings in other departments and sent emails about the project.

- **Tool development:** An initial assessment tool was developed based on the triggers mentioned above, and subsequent revisions were made based on expert consultation with critical care nurses, educators, and managers. The triggers (criteria) were divided into two sets based on severity. The first set includes “high level” triggers where the presence of one trigger is sufficient to indicate an extreme risk of fall. The second set includes “low-level” triggers where the presence of two or more triggers together is required to indicate an extreme risk of fall. In the second set the presence of two or more triggers would indicate an extreme risk of fall. Feedback was continually solicited from the staff during the pilot and roll-out. Based on this feedback and analysis of “nearfall” events, the tool was modified to optimize the specificity and sensitivity of fall risk identification and implementation of effective, realistic interventions. The tool was originally paper based, as was the hospital’s documentation system. With the advent of an EHR the tool is now fully embedded electronically.

- **Development of interventions:** Extreme Fall Risk safety interventions were developed based on current high risk interventions, the fall data analysis, and available literature. Information on the Extreme Fall program was sent electronically to all ancillary departments to increase interdisciplinary awareness of the program and recognition of patients designated as Extreme Risk to fall. A sample of interventions:
  - Making fall risks part of nurse-to-nurse report – both at shift change and lunch breaks -- indicating that the patient is high risk. Including ancillary staff in this identification.
  - Talking to patients about their risk to fall, and providing education about using call lights
  - Visibility and communication about fall status is a key component that requires constant vigilance.
  - Active use of bed and chair alarms
  - New signage on patient’s door frames for better communication between all staff.

- **Performance feedback:** Creative data display boards increase staff motivation and promote program success.

- **Fall debriefs:** After an upsurge in falls at the end of 2010 the unit instituted a fall debrief process. As soon as there is a fall, the staff member involved with the patient who fell presents on the fall to fellow staff members and leadership. The goal is to get interaction between colleagues on what could have been done differently - more insight. This debrief is non-punitive – rather a chance for
learning, e.g., how to arrange pillows on a chair so the patient doesn’t slip. The group always talks about any harm that resulted from the fall.

**Did it Work?**

The development and pilot-testing of the Extreme Fall Risk tool provides the foundation for further investigation and testing of a predictive model that may yield a generalizable risk assessment for the critical care setting.

The Intensive Care Units have more accurate reporting of falls and almost no falls with injury – the harm level has been reduced. The staff has embraced fall reduction strategies. Next step is tool validation.

**Factors Important to Success**

- A Quality and Safety staff person (a former ICU nurse) played the major role in tool development
- The Department of Patient Safety, Quality and Regulatory support was important
- ICU Medical Director support was important
- Involvement of staff in tool development increased buy-in
- The implementation of fall debriefs averted backsliding to previous performance

*If you would like additional information about this success story please contact: admin@HENlearner.org*