

AN ASSESSMENT OF FALLS IN PATIENTS' ROOMS AND METHODS OF PREVENTION



BY DAVID L. CONDRA
CHAIRMAN AND CEO
DALCON COMMUNICATION SYSTEMS, INC.
AND EVANS CLINE, RESEARCHER



Dalcon Communication Systems, Inc.
3401 west end avenue, suite 305 | nashville, tennessee 37203
p: 615.843.9000 | f: 615.843.9001 | www.dalcon.com

Introduction

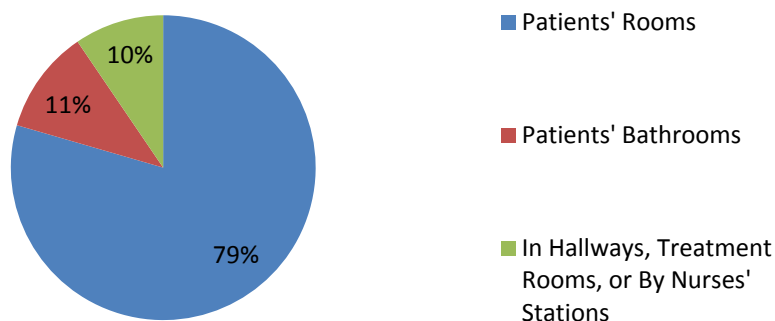
Hospitals nationwide are making efforts to reduce the rates of patient falls. Patient falls are measured by the rate at which patients fall during their hospital stays per 1,000 patient days and are an effective indicator of the quality and delivery of inpatient services.

Hospital-acquired injuries from falls in patients' rooms are covered in the list of "Never Events" published by the Centers for Medicare & Medicaid Services (CMS). Never Events are hospital-acquired conditions (HACs) that the National Quality Forum (NQF) defines as, "errors in medical care that are clearly identifiable, preventable, and serious in their consequences for patients, and that indicate a real problem in the safety and credibility of a health care facility."

Hospitals are held responsible for all Never Events and will be denied complete reimbursement if one such event does occur. The CMS has identified falls with injury on its current list of Never Events.

Falls are the third most common cause of unintentional injury death across all age groups and the leading cause among people 65 years and older (Centers for Disease Control and Prevention Injury Center, 2007). This statistic, coupled with the fact that **patient falls consistently compose the largest single category of reported incidents in hospitals**, provides a better understanding of the need to find more effective measures for preventing patient falls. Additionally, studies show that **79.5% of falls occur in patient rooms**, 11% in patients' bathrooms, and 9.5% in hallways, exam, or treatment rooms, or by the nurses' stations (Krauss et al., 2007).

Patient Falls Locations



Patient falls reflect poorly upon both the nurses and the hospitals and also cause patients and their families unnecessary physical and emotional pain. Aside from the costs of the emotional

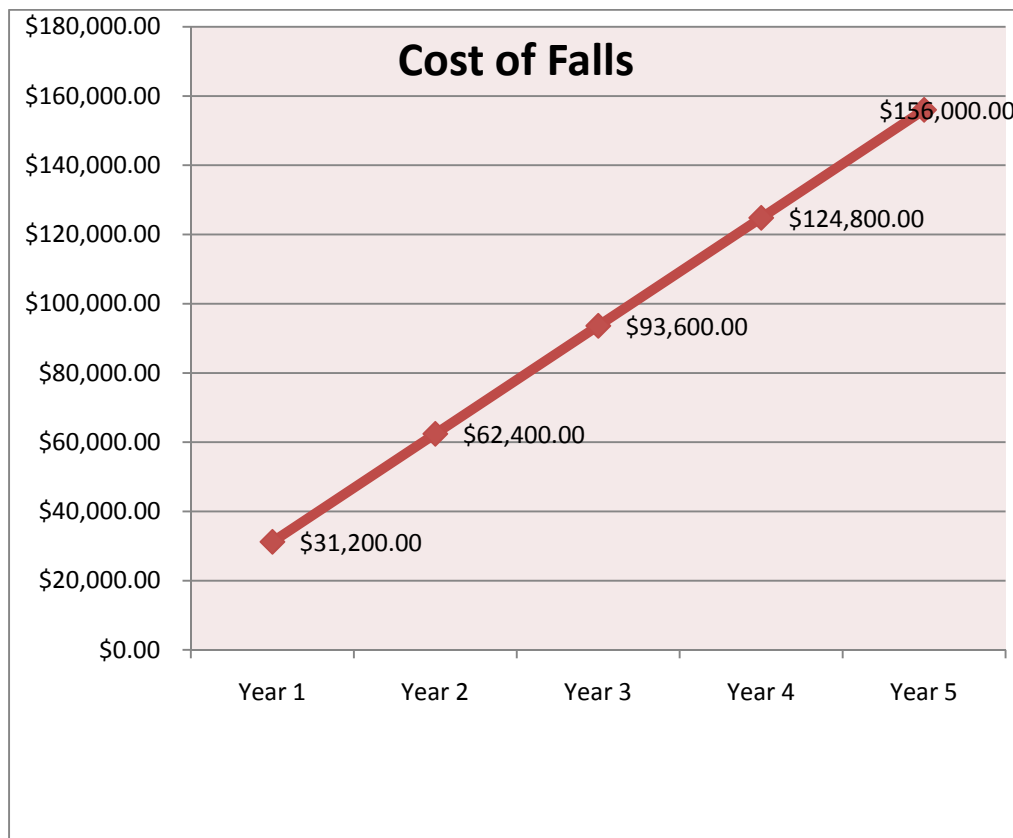
and physical pain inflicted upon patients who fall and their families, there is also a very real financial burden placed upon hospitals with high rates of falling patients.

The Hard Cost of Falls

About thirty percent of hospital falls result in injury (Stevens, 2004). In 2009, the average cost per fall with injury was around \$4000. (Inouye et al.). Additionally, the average number falls (with and without injury) in hospitals nationwide is about 4.75 per 1000 patient days (Kowalczyk, 2007).

Suppose we wanted to calculate the hard cost of falls with injury for a small, 50-bed hospital. Let us assume that the hospital has a fall rate of 4.75 falls per 1000 patient days (national average). Also, let us assume that the hospital has low occupancy rate around thirty percent. The hospital would see about 26 falls per year, with about 8 (7.8) of those falls resulting in injury.

After just one year, the total cost of falls with injury would be **\$31,200**. Over a five year period, the hospital would face a **total loss of \$156,000** (as shown below). These statistics do not include the possibility of litigation resulting from falls.



One lawsuit is filed for every 7.6 hospital injuries (Miller, Murtha, and Psoras, 2009). Litigation damages a hospital's reputation, and the costs litigation levied by patients injured from falls can reach well into the **tens of millions of dollars per hospital per year.**

Prevention Methods

Over the years, hospitals have incorporated many methods and techniques aimed at reducing fall rates. Often, falls prevention programs or falls risk assessment tools are utilized to help reduce falls. Falls prevention programs can function to educate both nurses and patients about factors that cause falls and the injuries that result from falls. Falls assessments tools include: the Morse Fall Scale, the STRATIFY tool, the Hendrich II Fall Risk Model, and the Schmid Fall Risk Assessment Tool (TideikSaar 2009).

Additional methods have included verbal contracts between patient and provider, risk-evaluation questionnaires, visual cues on the patient or in the room to identify fall risk, increases in nurse rounds, and modifying the patient room to reduce external risk factors. (Allina Hospitals & Clinics Falls Prevention Collaborative)

The Emergency Care Research Institute (ECRI) has published a list of more than 60 common falls prevention methods (Pelczarski & Wallace), which include the following:

- Develop a formalized methodology for therapy services (for example, physical therapy, occupational therapy) and nursing to integrate a patient's falls risk assessment.
- Develop and implement a list of medications likely to increase a patient's risk of falling for nurses to use as a reference when assessing a patient's falls risk.
- Enlist the pharmacy department to place stickers on medications indicating high falls risk.
- Utilize white boards at the nurse's station to identify patients at high risk of falling.
- Question family about patient behaviors related to time of day (for example, expected behaviors at morning and evening hours).
- Implement hourly rounds to assess or to address patient's personal needs (for example, toileting needs).

- Implement a patient sitter program for patients at high risk of falling who do not adhere to falls prevention interventions.
- Require housekeeping staff to perform routine checks to ensure bed alarms are working properly.
- Develop a tool for family and staff to identify patient behaviors that may result in fall.
- Educate all staff regarding the use of visual identifiers for high-falls-risk patients.
- Implement an education campaign on the organization's falls prevention program that includes new, existing, and per-diem staff.

Nurses' Concerns

Nurses bear the primary responsibility regarding patient care and, therefore, assume accountability when patients do fall. Nurses often find themselves over-burdened with the number of patients under their care, and the current technology used in hospitals can be confusing, thus lowering the efficiency of the nurses in the hospital.

The Joint Commission (2005) has interviewed many nurses and care providers on the topic of patient falls. The following quotations express their main concerns:

"Maybe we should group high-fall-risk patients closer together or group work assignments closer together so responsible nurses can hear the bed alarms."

"The bed pressure alarm system needs improvement in sending alerts to nurses: It's hard to hear the beeping sound from the bed alarm when it goes off."

"If the beds are equipped with alarms and if we could tie bed alarms into our pagers, we might be able to get there fast enough to prevent a fall."

"The bed pressure alarm is not connected to the responsible nurse's and nursing attendant's pagers, and is not connected to any blinking lights, just sound; it should be connected to pagers or call light signals."

"When some patients are on fall precaution, nurses stress and literally beat into patients' heads to use the call light when they want to go to the bathroom. Patients use the call light, and they are waiting 5, 10, 15 minutes and nobody shows up. These patients are

going to get up and go to the bathroom by themselves. I would not blame them. I mean, who is going to wait that long for somebody to come answer the call light and take them to the bathroom?"

Summary

In light of the statistics of hospital falls and injuries, we can see that the methods currently being used to prevent falls are clearly not sufficient. If hospitals hope to reduce patient falls, they must realize that quick, direct communication with the patient is key to accomplishing the goal.

While fall risk awareness and fall-prevention training can certainly help, the reality is that nurses cannot do much to help prevent a fall if they don't know immediately that the patient is beginning to move in a high-risk manner. Standard nurse call systems and bed fall alert beeper systems often do not accomplish the task of communicating these specific situations to the responsible caregiver.

Today, new systems are becoming available, such as *Dalcon Alert!* which, when combined with fall alert sensors, can get the pending danger to the right caregiver quickly. Specifically, *Dalcon Alert!*'s Remote Alert Monitor (RAM) connects with up to five devices that monitor the patient's condition; including IV pumps, bed fall pads, bed exit pads, and patient monitors. Whenever a patient triggers any of the devices connected to the RAM, the RAM sends a text alert to the wireless phone of the assigned nurse, as well as alerting the desk phone at the nurses' station, and even automated overhead paging the fall alert code and room number so that the nearest caregiver can respond quickly. By working with existing patient care devices, *Dalcon Alert!* can dramatically reduce patient fall rates, thus **saving hospitals tens of thousands of dollars annually**.

For more information, contact Dalcon at 615.843.9000

or visit our website at www.dalcon.com.

*Dalcon*SM
communicate. simply.

References

- Krauss, M.J., Nguyen, S.L., Dunagan, W.C., Birge, S., Costantinou, E., Johnson, S., et al. (2007). Circumstances of patient falls and injuries in 9 hospitals in a midwestern healthcare system. *Infection Control and Hospital Epidemiology*, 28(5), 544-550.
- Joint Commission, The. (2005a). Defining the problem of falls. In I.J. Smith (Ed.), *Reducing the risk of falls in your health care organization* (pp. 13-27). Oakbrook Terrace, IL: The Joint Commission on Accreditation of Healthcare Organizations.
- Joint Commission, The. (2005b). Strategies for addressing the root causes of falls. In I.J. Smith (Ed.), *Reducing the risk of falls in your health care organization* (pp. 29-50). Oakbrook Terrace, IL: The Joint Commission on Accreditation of Healthcare Organizations.
- Sharon K. Inouye, M.D., M.P.H., Cynthia J. Brown, M.D., and Mary E. Tinetti, M.D. Medicare Nonpayment, Hospital Falls, and Unintended Consequences. June 4, 2009. Accessed 3 Nov. 2009. <<http://healthcarereform.nejm.org/?p=449>>.
- Stevens, J. A. (2004). Falls among older adults-risk factors and prevention strategies. *In falls free: Promoting a national falls prevention action plan* (pp.318). Washington, DC: National Council on Aging.
- Allina Hospitals & Clinics Falls Prevention Collaborative. Preventing Falls in the Hospital. 2009. Accessed 2 Nov. 2009. <<http://www.allina.com/ahs/outcomes.nsf/ks/falls>>.
- Dr. Rein Tideiksaar. Falls Prevention in Institutions. January 2009. Accessed 2 Nov. 2009. <<http://www.seekwellness.com/fallprevention/institutional.htm>>.
- Miller, Murtha, and Psoras. The Medical Malpractice Myth. Accessed 2 Nov. 2009. <<http://www.mmplegal.com/practice-areas/medical-malpractice/medical-malpractice-myths/>>.
- Kathryn Pelczarski and Cynthia Wallace. Hospitals Collaborate to Prevent Falls. December 2008. Accessed 2 Nov. 2009. <<http://www.psqh.com/novemberdecember-2008/91-november-december-2008/277-hospitals-collaborate-to-prevent-falls.html>>.
- Centers for Disease Control and Prevention Injury Center. Preventing Falls among Older Adults. 2007. Accessed 21 Oct. 2009. <<http://www.cdc.gov/duip/preventadultfalls.htm>>.
- The Joint Commission. National Patient Safety Goals. Accessed 21 Oct. 2009. <[http://www.jointcommission.org/Patient Safety/NationalPatientSafetyGoals/07_npsg_facts.htm](http://www.jointcommission.org/Patient%20Safety/NationalPatientSafetyGoals/07_npsg_facts.htm)>.

Kowalczyk, Liz. Acute-care hospitals post data on falls. October 15, 2007. Accessed Nov. 3, 2009.
<http://www.boston.com/news/local/articles/2007/10/15/acute_care_hospitals_post_data_on_falls/>.

U.S. Bureau of Labor Statistics. CPI Inflation Calculator. Accessed 21 Oct. 2009.
<<http://data.bls.gov/cgi-bin/cpicalc.pl>>.