

Fall Rate Reduced to Zero and Resulted in an Estimated Annual Savings of \$123,000

Abstract

To improve efficiency and patient safety, a community acute care hospital stopped the use of disposable bed alarms in favor of built-in bed exit alert and bed safety status monitoring systems. To standardize equipment and protocols, 20 Hill-Rom® VersaCare® beds were implemented. Before implementation, the hospital's medical and progressive care units were experiencing 1 fall every 10 days. After implementation, there were no falls reported during the 119-day follow-up period resulting in an estimated savings of \$18,444 in fall-related treatment costs. The hospital will save an estimated \$55,000 annually by not purchasing, stocking, and discarding disposable bed alarms. Additionally, if the current reduction in fall rate is maintained, the facility will save up to \$68,000 annually in fall-related treatment costs for a total annual savings of \$123,000.

Facility

A West Coast, licensed outpatient acute care community hospital.

Background

In US hospitals alone, it is estimated that there are up to 1,000,000 falls every year.¹ Of those, 50% result in injury and nearly one-third are preventable.^{2,3} Falls increase the average length of stay by 6.3 days, and the average cost of a hospital fall with serious injury is approximately \$14,954.⁴ Therefore, in-hospital fall prevention strategies are needed to improve patient safety and reduce avoidable costs.

This community hospital's environmental services manager questioned their use of disposable bed pad alarms (cost of \$50 each) when many of the beds appeared to be equipped with bed exit alarms. Upon further investigation, it was determined that some beds were obsolete and did not have proper alarm systems. To avoid confusion among the nursing staff and maintain consistency from bed to bed, the decision was made to implement disposable bed exit alarms.

In order to improve bed safety in the medical care and progressive care units, the hospital administrator decided to upgrade their existing Hill-Rom® beds and replace obsolete beds with Hill-Rom® VersaCare® beds equipped with 3-mode bed exit alert (with silence and auto reset) and SafeView® systems. The use of the built-in bed exit alert and bed safety status monitoring systems became the standard protocol across the units and the use of disposable bed alarms was discontinued. To ensure a successful transition, staff members received training on proper use of the bed alarm systems.

“The program increased our staff’s comfort level knowing that their patients are safe.”

Methods

Clinical outcomes were measured to evaluate the impact of the Hill-Rom® VersaCare® beds on patients and the facility. The average number of falls per 119 days was compared with the number of falls 119 days post-implementation. Fall-related treatment costs at baseline and 119 days post-implementation were calculated. Costs associated with disposable alarms, including inventory, labor, and disposal, were tracked.

Clinical Outcomes

During use of disposable bed alarms, the hospital reported an average of 1 fall every 10 days. Throughout the 119-day follow-up period after implementation of Hill-Rom® VersaCare® beds and discontinuation of disposable bed alarms, there were no reported falls in the medical and progressive care units. (Fig. 1)

In addition, the bed exit auto reset was well received by staff as it helped overcome the difficulty of remembering to manually reset the system after caring for the patient. Without bed exit auto reset, falls risk patients can potentially be left unprotected and exit the bed without staff awareness.

It was also reported that due to extended cleaning, the obsolete beds had rust on the frames, which increased the risk of infection. By replacing those beds with the new Hill-Rom® VersaCare® beds, patients were not exposed to rust or the associated risks.

Financial Success

During the 119-day follow-up period, the hospital saved \$18,444 in fall-related treatment costs. If the current reduction in fall rate is maintained, the facility could save up to \$68,014 annually in fall-related treatment costs. The hospital also saved \$47,000 a year by not purchasing disposable bed alarms. The cost of stocking and disposing of the alarms saved another \$8,000 a year in labor and landfill fees for a total savings of \$55,000 annually. This also reduced the amount of disposable waste by 1000 lbs. Overall, the hospital could save \$123,000 annually with the transition from disposable bed alarms to the Hill-Rom® VersaCare® beds equipped with 3-mode bed exit alert and SafeView® systems. (Fig. 2)

“We had a dramatic decrease in falls after implementing the built-in bed alarms.”

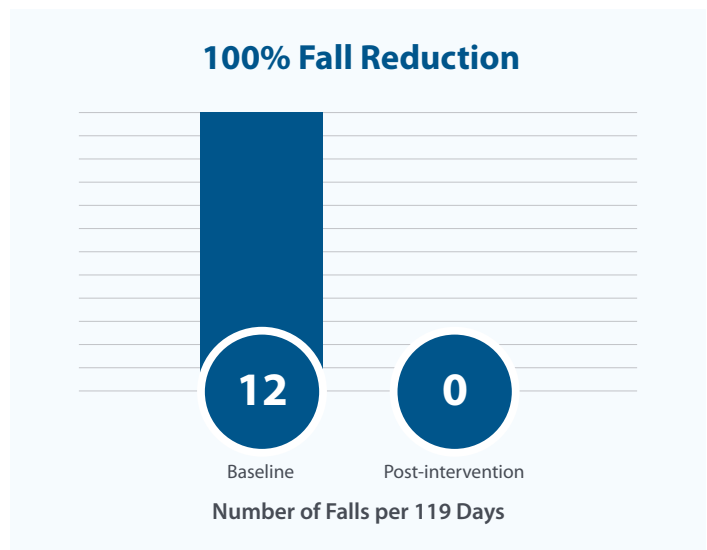


Figure 1. Implementation of the Hill-Rom® VersaCare® beds with 3-mode bed exit alert and SafeView® systems in place of disposable bed alarms reduced falls by 100% from baseline to 119 days post-intervention.

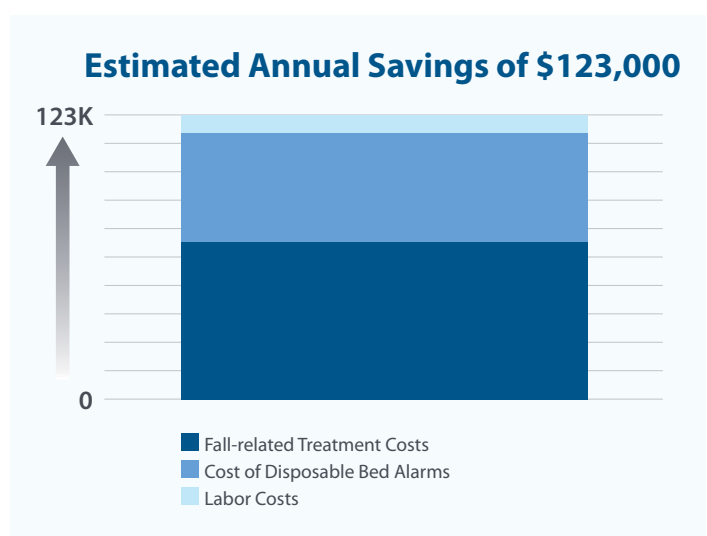


Figure 2. A cost of \$68,014 in fall-related treatment, \$47,000 in disposable bed alarm purchases, and \$8,000 in labor for stocking and disposal could be saved annually resulting from implementation of the Hill-Rom® VersaCare® beds equipped with 3-mode bed exit alert and SafeView® systems in place of disposable bed alarms.

Conclusions

Patients in the medical and progressive care units benefited from the Hill-Rom® VersaCare® bed with 3-mode bed exit alert and SafeView® systems. In this hospital, the program resulted in positive patient outcomes, including:

- A dramatic decrease in falls
- Reduced risk of complications and extended stays due to falls

In addition, the hospital saved an estimated \$55,000 a year by not using disposable bed alarms and they could potentially save up to \$68,014 annually in fall-related costs for a total annual savings of \$123,000. In the future, the hospital intends to expand the program to other units within the hospital and to other hospitals within their network.

Learn More

Hill-Rom® Fall Prevention Program:

<http://www.hill-rom.com/usa/Clinical-Resources/fall-prevention/overview/>

Hill-Rom® VersaCare® Med-Surg Bed:

<http://www.hill-rom.com/usa/Products/Category/Hospital-Beds/VersaCare-med-surg-beds/>

References

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3. Cameron ID, Gillespie LD, Robertson MC, et al. Interventions for preventing falls in older people in care facilities and hospitals. Cochran Database Syst Rev. 2012;(12):CD005465.
4. Wong CA, Recktenwald AJ, Jones ML, Waterman BM, Bollini ML, Dunagan WC. The cost of serious fall-related injuries at three Midwestern hospitals. Jt Comm J Qual Patient Saf. 2011;37(2):81-87.

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