

Implementing a Fall Alarm Program to Reduce Fall Risk

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Introduction

Fall alarms serve as an "early warning system"; they alert nursing staff when "at-risk" residents are engaging in activities that are likely to result in falls. Fall alarms can play a vital role in helping staff to prevent falls. However, the inappropriate selection and/or misuse of fall alarms may actually predispose residents to falls and injuries. The purpose of this article is to provide long term care facilities with guidance on the selection and appropriate utilization of fall alarms in reducing fall risk and guidance on incorporating fall alarms into a fall prevention program.

Common Uses of Fall Alarms

Fall alarms can serve a variety of useful functions:

- Alarms warn staff that the resident has changed position and is about to leave their bed, chair, wheelchair or toilet. This may give staff enough time to assist the resident.
- Alarms warn staff that the resident has shortly left the bed, chair, wheelchair or toilet. This may give staff enough time to intercept the resident before a fall
- Alarms promote speedy assistance to residents who have already fallen in order to promptly care for the resident. This can help reduce fall complications, such as the amount of time that a resident lies unaided.
- Alarms, in some cases, can warn residents themselves. When a resident attempts to leave their bed, the exit alarm can activate a verbal reminder through speakers/intercoms reminding the resident to wait for staff. In some cases the sound of the alarm may prompt the resident to sit back in bed, chair, wheelchair or toilet (i.e., the alarm warns the resident that they are "doing something that they shouldn't be doing") and/or remind the resident to call for assistance.
- Alarms may serve as an alternative to nurse call bells in residents who are noncompliant or unable to use their call bell because of cognitive and/or physical impairments. Exit alarms, which do not require active participation by residents to trigger, may be preferable to nurse call systems, which demand active participation by individuals to activate.

- Alarms may serve as an assessment or planning tool by monitoring the frequency of attempts to leave the bed, chair or wheelchair, which can help identify emerging trends and interventions. Coupled with initial and ongoing risk assessments, fall alarms can inform staff about a resident's habits. For example, a resident may consistently attempt to arise at a certain hour to go to the bathroom, while another resident may get up at nonspecific times, driven by an urge to wander. As a result of such a "history," nurses can adjust their attention and care to each resident's habits and needs.
- Alarms allow staff more freedom of time (avoiding constant supervision of residents at risk) and theoretically, completely eliminate the need to continually check on residents who have a tendency to falls. This provides nurses more opportunity to work with residents as opposed to spending time on surveillance or being frequently interrupted to observe patients.

Indications for Fall Alarms

While it can be argued that all residents are at some degree of fall risk and may benefit from a fall alarm, certain residents benefit more than others from an alarm. Consequently, the use of fall alarms should be based on specific resident criteria and/or risk factors.

Criteria

- Resident experiences fall(s) from bed, chair, wheelchair or toilet.
- Resident experiences fall(s) shortly after leaving bed, chair, wheelchair, toilet or is found on floor after an unwitnessed fall.
- Resident has impaired mobility/ demonstrates unsafe bed, chair, wheelchair or toilet transfers.
- Resident has a history of cognitive/communicative problems (e.g., forgets to use call bell or ask for assistance, can't remember or follow instructions).
- Resident has a history of nocturia (i.e., excessive urination at night).

Risk Factors

History of Falls

Resident has fallen at least one time in the past 30 days (or other facility specified time frame). A history of falling is one of the most reliable predictors of future falls. Residents with recurrent falls may repeat the circumstance or characteristics of their falls, such as leaving their bed and toileting at night. Knowing the circumstances of a resident's fall(s) can help design targeted interventions and the appropriate use of fall alarms.

Balance or Gait Problems

Resident has problems walking or standing without assistance from a walker or requires staff assistance. Common disorders such as stroke, Parkinson's, dementia and arthritis can affect a patient's balance and ambulation skills.

4 or More Medications

Multiple medications can inhibit a resident's motor skills and/or personal safety awareness and increase fall risk. Common drugs include those that act on the central nervous system, such as sedatives and tranquilizers.

Muscle Weakness

Any weakness or impairment of the legs and/or arms (e.g., from arthritis, muscular weakness, stroke, etc) can inhibit a resident's safe transfers, ambulation and balance.

New Admission

Any resident who is newly admitted to a facility should be watched thoroughly until their condition is fully assessed. Many falls occur during the early period of institutionalization or the first 72 hours of stay.

Continence Problems

Residents who have bladder problems will be more inclined to get up without assistance to use the bathroom. Patients with nocturia, incontinence and those requiring toileting assistance are especially at high fall risk.

Cognitive Problems

Altered mental status (e.g., confusion, disorientation or impaired memory) is one of the most important risk factors for falling. Cognitive losses can cause errors in judgment (i.e., inability to recognize a difference between safe and hazardous transfers), forgetting to use the nurse call bell or not recognizing the purpose of the call bell (i.e., not making a connection between pushing a button and getting help), and not asking for assistance or not recognizing a need for assistance (i.e., overestimating the ability to transfer and walk safely or denying any mobility limitations).

Mobility Problems

Inability to ambulate and transfer safely and independently. Diseases directly affecting mobility (i.e., strength, flexibility and balance) include acute and chronic conditions that affect the muscular, skeletal or neurological systems and limit the resident's ability to move about safely.

Selection of Fall Alarms

Selecting the correct or most appropriate fall alarm should be based on a process, which consists of:

- Identify a multidisciplinary team. The decision to introduce fall alarms affects many levels of the organization; as a result, a multidisciplinary team involving all stakeholders that may be affected by the introduction of exit alarms should be formed. Team members to consider include key personnel from nursing, medicine and rehabilitative therapy, as well as staff responsible for purchasing decisions, administrative leadership, front-line staff who will be using the technology, family representatives, insurance/legal representatives, quality improvement staff, risk managers, etc.
- Identify which residents could benefit from fall alarms and/or specific resident groups that fall alarms are intended to target. Performing a root cause analysis of falling events (i.e., asking why the fall occurred and how future falls may be prevented) can sometimes help identify the need for fall alarms.
- Consider how specific fall alarms will affect or complement a fall prevention program. Fall alarms work best when integrated into a fall prevention program (i.e., in other words, fall alarms should not be considered as the sole solution to fall or injury prevention). This is a fact that is not always clearly understood. To be effective, fall alarms need to be implemented with care and with a clear understanding of their benefits and limitations.

- Choose the “right” fall alarm(s) for residents. There are benefits and disadvantages to most fall alarms. To a large degree, the right alarm will depend on certain resident characteristics that may interfere or defeat the use of fall alarms, such as dementia, restless behavior, incontinence, being light weight, etc.
- Choose the “right” fall alarm for staff. Many technologies, including fall alarms, directly affect nursing workload and procedure. Consideration of these issues is paramount when deciding upon which specific alarms to purchase. The best fall alarm is one that nurses find user friendly (i.e., one that is easy to use and does not malfunction and/or result in nuisance alarms). Nursing feedback and involvement in the evaluation, purchasing and implementation process is essential.
- Purchasing the “right” fall alarm(s). Once a decision has been reached to purchase exit alarms, there are certain features to look for that will help determine which type is the most appropriate.

Keys to Success

Aside from selecting the right fall alarm, the effective use of alarms is dependent upon several factors:

- Maintaining strong organizational or management support for fall prevention programs, including use of fall alarms.
- Educating and training staff on the use of fall alarm (s) (i.e., know what fall alarms are, know how exit alarms work and know which residents benefit from a fall alarm). As well, ongoing staff education on fall prevention and the utilization of fall alarms as a potential preventive strategy is important.
- Checking fall alarms on a regular basis to ensure that they are functioning properly (i.e., to verify they send an alarm if a patient arises), sufficiently audible with respect to distance and that staff response to alarms.
- Auditing the use of fall alarms to ensure that staff are using them properly and that alarms are effective in helping to reduce falls.
- Choosing a “champion” or coordinator. Assigning a designated staff member to provide leadership, oversight and coordination for both fall alarms and fall prevention can help to ensure the successful integration of alarms.

Summary

Fall alarms are designed to help nurses monitor residents at fall risk. While alarms are not a guarantee against falls, the appropriate use of alarms in combination with multidisciplinary strategies make up a large piece of the “fall prevention” puzzle.