

## Alarm-free Environments: Guidelines for a Safe, Smooth Transition

Pressure-sensitive safety alarms – sensors attached to mattresses, chair pads and clothing that sound when residents attempt to ambulate – actually may cause more falls than they prevent.<sup>1</sup> A growing body of evidence suggests that by diminishing movement and activity, and increasing residents’ anxiety, agitation and disorientation, indiscriminate use of safety alarms may exacerbate risk while decreasing quality of life. As a result, many senior living communities are considering curtailing their reliance on these devices.

Safety alarms have become a polarizing issue within the aging services industry. Critics contend that routine use of personal alarms can lead to complacency among caregivers, less frequent visual monitoring and more falls. Advocates, on the other hand, caution that strict adherence to alarm-free policies may result not only in unnecessary falls, but also in survey citations and lawsuits alleging that vulnerable residents lacked sufficient safeguards.

The question of whether to move toward an alarm-free environment has significant safety, regulatory and liability implications, requiring careful review of a variety of risk factors. This edition of *AlertBulletin*® is designed to aid leaders in reviewing and updating policy in this area, focusing on five key steps in the decision-making process:

1. **Examining the current regulatory climate** in relation to pressure-sensitive alarms.
2. **Identifying the root cause(s) of falls** among residents with personal safety alarms.
3. **Developing alternative monitoring methods** for at-risk residents.
4. **Obtaining the support of staff, residents and families** prior to making any policy changes.
5. **Testing proposed changes** within controlled study groups before implementing an organization-wide policy shift.

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### REGULATORY CHANGES

As part of a wider effort to make aging services settings more homelike and less institutional, regulatory agencies are encouraging a general reduction in safety alarm usage. The following federal updates suggest that the presence of alarms may invite additional scrutiny during the survey process:

- **Section P0200 of the Minimum Data Set** (scroll down to page P-8 or 537 of the PDF), added in 2017, notes that “the efficacy of alarms to prevent falls has not been proven; therefore, alarm use must not be the primary or sole intervention in the plan.” The updated regulation requires providers to report alarm use – including chair, floor mat, motion sensor, and wander and elopement detectors – for each resident. In addition, the section classifies alarms designed to monitor a resident’s position change as “physical restraints,” a designation that tends to elicit closer attention during site inspections. Finally, the section adds a numerical code, which permits surveyors to rate the frequency of alarm use and helps them determine whether alarms are being used primarily for purposes of resident safety or staff convenience.
- The survey tool **Physical Restraints Critical Element Pathway**, from the Centers for Medicare & Medicaid Services (CMS), now prompts surveyors to observe the degree of safety alarm use within the facility and note any potential negative consequences for residents.

<sup>1</sup> According to one [case study](#) in a 45-bed aging services setting, the number of falls dropped 32 percent after alarms were removed and monitoring increased. In addition, a special focus facility that [reduced alarm usage by 90 percent](#) experienced a 50 percent decrease in resident falls and a 60 percent decline in injurious falls by adopting a personalized, “culture change” approach to fall prevention.

Furthermore, a number of regulatory F Tags, which are used by surveyors to assess the quality of care provided to residents, relate to alarm usage. Relevant tags include the following:

- **F Tag 252 (Environment)**, which states that aging services organizations should strive to eliminate widespread use of audible seat and bed alarms.
- **F Tag 258 (Noise)**, which confirms a resident's right to control unwanted noise and addresses the connection between privacy and reasonable sound levels.
- **F Tag 221 (Restraints)**, which establishes the right of residents to be free from any physical restraints (now including position change detectors) that are imposed for reasons of discipline or convenience, and which are not needed to treat medical symptoms.<sup>2</sup>

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## ROOT CAUSE ANALYSIS

By conducting a root cause analysis (RCA) of resident falls prior to initiating policy discussions, organizations can determine why residents are moving or ambulating without assistance, identify environmental risk factors and process flaws, and make necessary policy/procedure changes. The analysis also can help ascertain whether alarms contribute to falls and what alternative safety strategies should be considered.

The chart below depicts a typical three-step RCA for a resident fall:

### Sample Three-step Root Cause Analysis

#### STEP 1 - WHAT HAPPENED?

- **Compile the evidence**, including observations, examinations, interviews and resident assessments.
- **Note the resident's position**, surroundings and floor surface conditions.
- **Conduct a [post-fall huddle](#)** to share information.

#### STEP 2 - WHY DID IT HAPPEN?

Identify the physical, psychological and behavioral factors that contributed to the fall, asking whether the resident was...

- Feeling pain?
- Needing a bathroom?
- Sitting for too long?
- Bored and/or lonely?
- Emotionally agitated?
- Reaching for personal items?
- Reacting to hallucinations or delusions?

#### STEP 3 - HOW CAN WE PREVENT IT FROM HAPPENING AGAIN?

After ascertaining the root cause(s) of the fall, take appropriate corrective actions and modify policies/procedures as necessary, guided by the following questions:

- **What measures should be taken** to prevent the problem from recurring?
- **How and when** will these measures be implemented?
- **Who will be responsible** for instituting needed changes?
- **How will changes be audited** and outcomes evaluated?

<sup>2</sup> CMS defines convenience as "any action taken by the facility to control or manage a resident's behavior with a lesser amount of effort by the facility [that is] not in the resident's best interest."

## ALTERNATIVE MONITORING METHODS

For residents with advanced dementia or decreased safety awareness, continued use of personal safety alarms may be justified. However, as overall alarm use diminishes in the facility, alternative monitoring techniques should be considered. The following measures can help staff minimize the risk of potentially harmful movements by at-risk residents:

- **Promote consistent staffing assignments**, so that caregivers know the daily routines of their charges.
- **Institute purposeful rounding**, in which nursing assistants check on high-risk residents at least once an hour.
- **Assess residents' personal environment**, in order to identify when and why they attempt to ambulate unassisted. For example, awkward furniture placement may cause excessive reaching for everyday items, or light switches may be inconveniently situated.
- **Observe how residents transfer from bed to chair**, noting whether grab bars, chair lifts or other assistive devices are needed.
- **Identify residents' personal habits and preferences** to better anticipate situations that may place them at risk for a fall, such as when they tend to go outside, feel hungry or fatigued, or need to use the bathroom.
- **Introduce more frequent activities into resident care plans**, such as music therapy or exercise, to avoid extended sedentary periods and improve balance and resilience.
- **Encourage huddles at the start of shifts**, in which frontline staff discuss any resident needs or medical conditions that may affect mobility or general safety.
- **Ask family members for their insights and recommendations** about fall risks, mobility issues and potentially effective interventions.

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## ORGANIZATION-WIDE SUPPORT

Ongoing staff education and communication are essential elements in the transition to an alarm-free environment, serving to enhance cooperation and reduce resistance to change. When introducing a new alarm policy, explain to caregivers the health, safety and quality of life problems associated with alarm usage (see "The Cons of Alarm Usage" below) and assure them that alarm removal reflects industry and regulatory trends.

Many residents and families perceive alarms as a valuable safety measure and may not be aware of their drawbacks. They, too, should be fully informed of policy changes regarding alarm use, preferably via face-to-face discussion about the reasons for alarm removal, as well as the proposed time line and alternative fall-prevention strategies.

For optimal communication, designate an individual to answer questions and address concerns. In addition, consider drafting and distributing an [alarm elimination explanatory brochure](#) for residents and family members, which ensures an approved and consistent message on this sensitive topic.

### THE CONS OF ALARM USAGE

Personal alarms in residential settings may ...

- **Interrupt sleep**, contributing to chronic fatigue and impaired balance.
- **Induce agitation**, confusion and fear in residents.
- **Exacerbate pre-existing conditions**, such as incontinence and pressure injuries.
- **Reduce resident mobility** and participation in activities of daily living.
- **Create a more institutional atmosphere**, rather than a homelike environment.
- **Adversely affect resident dignity** and autonomy.
- **Foster a false sense of security** for both staff and residents.
- **Promote a reactive approach to falls**, rather than a proactive one, on the part of caregivers.
- **Require staff to spend time troubleshooting mechanical failures** and resident manipulation of alarms.
- **Produce "alarm fatigue"** and intensify caregiver stress.
- **Increase the potential for survey deficiencies** stemming from excessive alarm use, including findings of undue restraint.

## CONTROLLED STUDIES

By conducting alarm reduction tests on a subgroup of residents, organizations can compile valuable data, note potential challenges, fine-tune the transitional process, and bolster staff and resident/family support. A smaller group is easier to study and may yield informative results more rapidly than a larger one. For best results, consider starting with no more than eight or 10 residents who are newly admitted, have not fallen in over 30 days, and/or live in one "neighborhood" or unit.

Regardless of initial outcomes, organizations should commit to at least three months of testing and analysis of findings. To sustain momentum, schedule frequent quality assurance/performance improvement meetings that focus on documenting progress, measuring staff and resident compliance, and refining the overall plan.

Widely viewed for decades as a reasonable and appropriate safety tool, pressure-sensitive alarms are increasingly considered problematic. Every aging services organization must make its own decision regarding alarm policy after assessing its resident profile, specific risk factors, and regulatory and liability climate. If the decision is made to reduce or eliminate alarm use, leadership must plan and implement a comprehensive transitional process, which includes a proactive approach to resident monitoring and fall prevention.

## QUICK LINKS

- Belt, J. "[Sound the Alarm: Attention Needed for Personal Alarms.](#)" American Association of Nurse Assessment Coordination, August 16, 2017. (Member-only content.)
- Crogan, N. and Dupler, A. "[Quality Improvement in Nursing Homes: Testing of an Alarm Elimination Program.](#)" *Journal of Nursing Care Quality*, January-March 2014, volume 29:1, pages 60-65. (Available for download through ResearchGate.)
- "[Guidance Provided for New Regulations on Coding Restraints and Alarms.](#)" LeadingAge Wisconsin, November 3, 2017.
- "[Root Cause Analysis.](#)" VA National Center for Patient Safety, U.S. Department of Veterans Affairs, updated November 15, 2017.
- Wilhide, J. "[P0200: Alarms – Deeper Dive into Coding and Survey Implications.](#)" LeadingAge, October 5, 2017.



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