

## Rethinking the Use of Position Change Alarms

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Personal alarms are alerting devices designed to emit a warning signal when a person moves in a way perceived to put them at risk, usually for falls. The most common types of devices are:

- A cord attached to the person's clothing with a pin or clip and ending with a magnet or pull-pin that activates when the person exceeds the length of the cord
- Pressure sensitive pads for chairs, wheelchairs and beds that activate when there is decreased pressure
- Pressure sensitive mats for the floor that activates when pressure is increased
- Light beams on the bed or door that activate when the person crosses the beam.

The Omnibus Reconciliation Act of 1987 (OBRA 87) implemented in 1990, resulted in a dramatic shift in thinking and practice related to the use of physical restraints and falls. The Quality of Care regulations to implement OBRA 87 require that there be no decline in a person's physical, mental, or psychosocial well-being, unless such a decline is an inevitable consequence of the person's disease or condition.

Restraints cause declines in a person's physical, mental, and psychosocial well-being. By keeping people from moving, restraints adversely affect people's respiratory, digestive, circulatory, and muscular systems, contribute to depression and isolation, and inhibit sleeping as well as independent eating, drinking, toileting, and natural repositioning. As nursing home staff came to understand the detrimental affects of restraints and changed practice, the use of position change alarms became wide spread. However, just as restraints cause harm by keeping people from moving, so do personal alarms. Meanwhile, there is no evidence to support alarms' usefulness in preventing falls or injuries. In fact, in most cases, falls continue to occur. In spite of that, staff, and sometimes families, gravitated to the use of alarms, and surveyors in many states began looking for them as part of the documented safety plan.

Quite often, staff respond to the alarm by directing a resident to sit back down instead of assisting residents with whatever is generating their movement (discomfort with the current position, a need for a drink, the bathroom, or simply a need to move). Often staff respond to the alarm and not to the person.

In addition to the harm alarms cause by immobilizing residents, and having no evidence that they prevent falls or injuries, they are difficult to utilize in a consistent way for a variety of reasons:

- Many persons dislike them and repeatedly hide or remove them
- The device can malfunction (cord breaks or detaches, battery dies, alarm fails to go off or is slow to respond)
- If too many are in use, the warning signal loses its effectiveness at alerting staff.

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For the person, there can be numerous negative consequences to his/her quality of life and mobility:

- Alarms create noise, fear and confusion for the person and those around them. For example, one gentleman would duck down when he heard the alarm as he was interpreting the sound to mean incoming missiles, bullets from his World War II experience
- If staff tell the person to sit down when the alarm goes off, the underlying need causing them to want to move is not being address
- As the use of the alarm decreases the person's overall mobility, he/she may be more at risk for fracture when he/she falls since the person may have increased weakness and osteoporosis and decreased balance and endurance
- The alarms can be experienced as embarrassing and an infringement of freedom, dignity, and privacy
- Skin break down can occur from being immobilized, and afraid to shift position or body weight while sitting for prolonged periods of time, or while lying in bed at night
- Sleep may be interrupted, or even impossible when residents lie still for fear of setting off the alarm if they shift their position or being awakened by the alarm
- Loss of independent bowel and bladder function can occur.

Clearly there are many people in LTC who are at risk for falls and injury and who need to have a safety plan in place. These plans need to be highly individualized and based on a thorough assessment of the risk factors that exist within the person and her/his clinical condition, in the physical environment and also the organizational environment. The alarms provide a clear example of an intervention that by attempting to prevent the risk of falling may actually increase the risk of serious injury from falling. They give a false sense of security and at the same time, absorb an inordinate amount of staff time responding to the alarm. In most cases, the best way to prevent the risk of falls with injury is to promote residents' balance, endurance, and overall mobility.

The residents' wishes and preferences have to be considered. If persons do not have cognitive impairment and are informed of the risks, they have a right to be mobile, even if that involves falling. If the person is cognitively impaired, his or her expressed wishes must be factored in. These wishes may well be expressed through behaviors that demonstrate any discomfort from the person's perspective. For people who are cognitively impaired, the alarms are particularly upsetting. They have been found to induce agitation during the day and interrupt sleep at night. Lack of deep sleep compounds agitation, and contributes to loss of appetite, and decreased balance and endurance. The medications used to treat agitation and sleeplessness often pile on to the problems.

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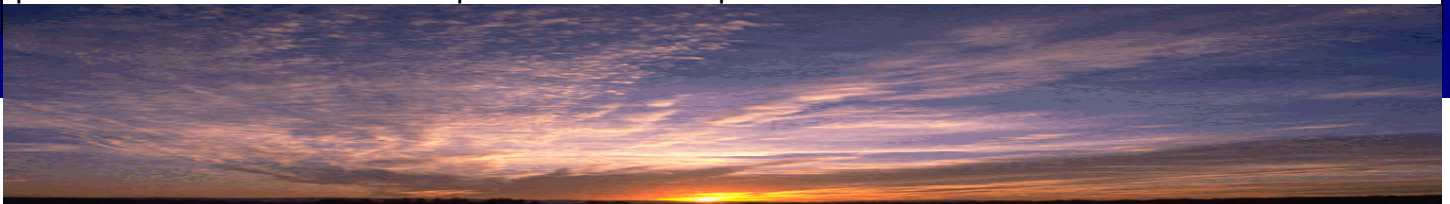
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For people who have had a recent change in health and ambulatory status (e.g., amputation, hip replacement, stroke or debilitating acute illness), there may be some value in using an alerting device temporarily as a reminder of the need to call for assistance. In a sense it acts as a substitute call light for at risk people who may not remember to use a call light. It might also be helpful in assessing the needs and patterns of newly admitted residents. Given that there is no clear evidence of the efficacy of the devices in reducing falls or injuries, any prolonged use should be very carefully and routinely assessed against the multiple adverse consequences that can inhibit healing. In some cases, premature and prolonged use of alarms contribute to such a severe decline in a resident's function that it may unnecessarily turn short-term residents into long-term residents. People who came to the nursing home to recover may never go home.

Originally alarms were designed for very short-term use to learn a resident's patterns. These patterns can more easily be learned through individualized care. Staff would have time for individualized care if they were not responding to so many alarms. However, when an alerting device is documented as being part of the short-term safety plan, staff have a responsibility to assure that they are being used as indicated in the plan (e.g., placed correctly on the person, length of cord adjusted properly, in good working order). If this is not done or if the resident consistently tries to remove it, the facility will be viewed as having not followed the person's safety plan and be at risk for deficiencies. So the reasonability of the plan has to be considered. It makes no sense to create a plan that you know the resident will consistently foil.

Since our culture tends to be over-protective of elders and to seek solutions in technology, and our traditional nursing home culture tends to focus on risk prevention instead of health promotion, it is easy to over rely on these devices. Because there is potential for harm, we need instead to find the underlying causes of falls and instability, and develop individualized approaches that take into account the strengths, possibilities, wishes and needs of each person. So when considering using personal alarms, it is important to ask, *"Will this cause immobilization and isolation for this person?"* *"Will this really increase the person's safety or is it more to help the caregivers (family and professionals) feel they are doing something?"*

As a culture we need to come to terms with the fact that in our long-term care settings we are working with the frailest of the frail much of the time. Some are going to fall, get injured and even die as a part of normal life and risk taking. There is no way to prevent all falls and people coming into new settings have an increased risk of falls. We certainly don't want to contribute to their risk of injury from falls by immobilizing them and causing their decline. The best we can do is work to strengthen balance and endurance and know as much as we can about the person. By doing so, we can respond to his/her needs and help him/her sleep, drink, shift, and move as safely, freely and comfortably as possible with our assistance when needed. With this approach, we can try to create plans of care that meet the unique needs of each person.



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As with any significant change in clinical practice, it is important to start slowly. In order to remove position alarms, identify residents who can most easily have a decrease in the amount of time alarms are in use for them. Remove the alarms a few hours at a time. Have all staff involved in watching and learning together, identifying any possible concerns, as well as possible strategies. Make sure to give staff the help and support they need as they proceed. Work together to mitigate risks and put in place the necessary interventions to meet residents' needs and build their capacity to function without alarms. Each success will teach you more about how to take on the next challenge.

You may want to start by putting an alarm on yourself, and having all who will be involved in an alarm elimination effort do the same. Wear the alarm for 30 minutes and then discuss the experience together. You'll be surprised by how uncomfortable it is and how much it has the psychological effect of restricting your movement. This kind of personal experience is a great teacher.

Essential ingredients for a successful process include:

- Consistent staffing so that staff know residents well and work well with each other
- Daily meetings on the unit where you are changing practice to discuss what staff are doing, learning, and needing
- Consistent communication across shifts to share information, ideas, and experiences
- Interdepartmental communication so that all who are on the floor can be knowledgeable partners in the effort
- Coordination with care planning processes
- Inclusion of the physician
- Review of factors contributing to risk of falls (e.g. medications, diet, activity, footwear, etc.)
- On-going communication with resident and family throughout the process and full inclusion of their input into decision-making.

For more information on how to eliminate alarms, see *Nursing Home Alarm Elimination Program: It's Possible to Reduce Falls by Eliminating Resident Alarms* by Brenda Davison, DON, Jewish Rehabilitation Center of the North Shore, Swampscott, MA. The article is available at [www.MassPRO.org](http://www.MassPRO.org). Brenda shares her story on the CMS Surveyor Training web cast, *From Institutional to Individualized Care, Part One: Integrating Individualized Care and Quality Improvement*, November 3, 2006, available from <http://cms.internetstreaming.com>. Copies of this program, and the accompanying train-the-trainer manual and handouts, can be obtained from the National Technical Information Services at 5285 Port Royal Road, Rm. 1008, Sills Bldg. Springfield VA 22161. Phone number: (703) 605-6186.

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