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Interactive fall prevention technology is replacing restraint use

Implementing non-restraint bed and chair sensor alarms as fall prevention tools to augment a robust multifactorial fall prevention initiative can lower fall rates and keep patients safe, as these organizations have already proven.



Frontline Patient Safety Experts

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All four have been involved in implementing technology, such as bed and chair sensors, in their facilities.

What issues are your organization addressing using the Posey® HeadStart® Notification Sensor Chair Belts?

Hess: The problem we're solving is increasing patient falls. High fall rates were continuing to climb, and even now we have one nurse to five patients and one CNA for 42 patients some days. This is a different time in nursing where staffing is a huge crisis, not even a problem, a crisis. When we are working with bare-bones staff especially, this product gives us more of a head start to get into a patient's room versus a pad alarm which tells us the patient is already up. The belt alarm lets us know the patient is getting up, and it gives us time to get to them. That's why we use them; these belt alarms help us keep our patients safe and give staff peace of mind.

Johnson: When we looked at fall injuries (occurring in our facility), we learned that 75% to 80% of them happened right beside the bed and so many of those are bathroom related. We knew we had to change the way we delivered fall prevention services. It couldn't be all or nothing every time for every patient. These devices allow nurses to provide patient-centered, individualized fall prevention care based on the nurses' clinical assessment.

Chu: We use this product to minimize restraint use and for early notification of patient mobilization. To obtain buy-in from top leadership, we used our organization's fall data while showcasing our facility's lack of safety tools for confused patients. We needed an alternative to restraints for these patients.

How is this technology a part of your multilayered fall prevention initiatives?

Hess: The belt alarm is our alarm of choice for all our high fall risk patients as long as they can teach back, and it can be fitted properly. Some challenges we've faced have been with patients whose girth is too wide, then we use pad alarms. There's a huge time difference between when a patient stands up (pad alarm) versus when they begin taking off the belt alarm.

Johnson: These products fit our 'less restrictive interventions' criteria and work alongside our fall prevention and injury prevention bundles. When assessed, not all patients need all the interventions in our fall prevention bundle. Since the HeadStart Sensor Alarms are not part of the bundle, nurses are able to complete individual fall assessments and initiate use of the belts as a nursing intervention. Just as fall risk bundles are reassessed daily, use of these products is reassessed daily.

Chu: In May 2022, we went live with a new policy where we added a new patient risk category which included 'persons at risk for falling who also are unable to follow safety instructions.' This product is a tool that can be used before restraint application and instead of a sensor pad for these patients.

How do you identify patients who would benefit from self-releasing technology-based safety belts?

Hess: We have the Hester Davis Scale for Fall Risk Assessment tool built into our electronic medical record (EMR). Patients who score two or higher in mobility or mental status automatically qualify for the Posey HeadStart Notification Sensor Chair Belts if they can teach back. Some of our moderate fall risk patients get this belt too. We just love it. We are a level two trauma center and use it everywhere except the emergency department, clinics, and birthing center. We even have them in the inpatient rehab unit.

Johnson: Once this belt was introduced to us, we thought, this is a game changer because some patients need just a gentle reminder of “I’m supposed to ask for help before I get up.” This device is optimal for patients who don’t quite understand the significance of their fall risk and what could happen if they get up on their own. They may not understand their environment or are confused because they’re not at home anymore. We don’t want to put restraints on these patients. These belt alarms are a great alternative.

Chu: When we introduced the Posey HeadStart Bed Belts in May 2022, we could not come to a clear consensus for mandatory usage. We decided to leave that up to the critical thinking skills of our nurses, who are trained and well suited to know what is best for patients. We stock them hospital-wide and allow nursing judgment to indicate use.

According to the Centers for Medicare & Medicaid Services (CMS), self-releasing alarm belts are classified as fall prevention tools, not restraints. Does your organization consider the Posey HeadStart Notification Sensor Chair Belts a restraint?

Hess: It depends if the patient can teach back or not. Some patients can pull the yellow strips and take off the belt, but they can’t say back to me, “I have to pull these yellow strips to take it off.” If they don’t have the knowledge base to teach back, we consider it a restraint. To qualify to use the belt as intended, patients must teach back to the nurse.

Chu: We reached out to The Joint Commission, and, based on the intent, they are not restraints. In our policy we state that patients have to be physically capable of releasing the belt themselves. We do not consider them a restraint. As long as the hook-and-loop fastener is placed in the front and the patient is physically capable of removing it, the belt is utilized as a reminder and/or an early warning system for the staff to be able to respond quickly to hopefully prevent a fall.

Johnson: We document the use of these belts in our EMR flowsheets in the ‘additional interventions’ or ‘less restrictive interventions’ sections. We document here because we want to give credit to the fact that these belts are not restraints; they are a less restrictive intervention. We encourage staff to use them as in “Before you jump to a restraint, which is a lot of work, here is something you can try. You don’t need an order to use these like you do for restraints.” If nurses take them out and use them and find it’s not working with a patient, they can reassess the situation and move in another direction.

Kirkman: For us, considering the belts as a non-restraint alternative comes down to education, demonstration, and documentation. Nurses must provide education to the patient on how to remove the device and the patient must be able to successfully demonstrate how to remove it themselves. Documentation in the EMR reflects that the patient was educated with return demonstration on this particular intervention. We want a very clear distinction between what is a restraint and what is not.

Johnson: I've been so proud of our nurses. They're busy, overworked, and caring for very sick patients, yet they are still using critical thinking. We had a unit call us about a patient who weighed so little the chair alarm would not work for her. When we asked if they'd tried the chair alarm belt, they said she had hand contractures and was unable to return demonstrate, so it wasn't an option. The nurses realized that it becomes a restraint if the patient can't use it as intended.

How do the Posey HeadStart Notification Sensor Chair Belts support move initiatives within your organization?

Johnson: Initially, there was concern and pushback from our physical therapy department, who felt perhaps the belts would encourage staff to allow patients to remain in bed or in a chair for extended amounts of time rather than getting them up. This concern came on the heels of additional factors that already impact patient mobility, such as staffing shortages, sicker patients, and more geriatric patients on our units. The PT/OT department was concerned the belts would be used in ways not intended. To address this, nurses do clinical assessments to determine which patients would benefit from the belts. Using these belts has helped us minimize restraint use while maintaining patient mobility, which is important in avoiding complications from bed rest.

Kirkman: We have a big mobilization initiative right now that helps direct the nurses' clinical judgment because we don't want patients in beds or chairs all day. What we've found is that these belts prioritize safety because we're able to use them as part of our initiative to get patients up in chairs and moving as soon as possible while keeping them safe. It certainly helps that they're so easy to use.

What are the benefits of the Posey HeadStart Notification Sensor Chair Belts?

Hess: We needed to do something to help our fall rates after COVID happened. The belts give us time to get to our patients so we can help them get out of their chairs safely. When we were evaluating this product, I was the one who helped roll this out across the hospital because the functionality of it was super easy to use and easy to integrate into our culture. And I don't know how much this product costs, but I'm sure it's not as much as treating a fall.

Johnson: We did a pilot study with these belts. The nurses found the belts to be very user- and patient-friendly. I think we will see more and more fall prevention products considering nursing satisfaction.

Kirkman: The difference is being reactive or proactive. Some of our interventions are preventative, like a typical bed or chair pad alarm, which can lead to a 'reactive' situation because we can't get to the patients in time to help them; they're already up. So, when presented with the option to get to the patient before they get up — an option to be proactive instead of reactive — that was very enticing.

Chu: For the staff, the chair belts provide a level of comfort in knowing that when the patient is trying to mobilize, the belt will alarm, and they will have time to respond to the patient.

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