

Strategies for Reducing Falls in Long-Term Care

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Abstract: Preventing falls in nursing homes presents an ongoing challenge to the entire interdisciplinary care team. An essential first step is conducting a thorough falls risk assessment on the first day of admission and then implementing strategies to mitigate any identified risks. Despite best efforts on this front, some falls will continue to occur. These events necessitate a comprehensive root cause analysis that looks beyond the most obvious reasons for falls. Such reviews are essential in developing sustainable and efficacious fall prevention programs and in promoting a culture of safety. In this article, the authors provide two case scenarios that demonstrate why individual risks need to be carefully explored. They also review some common fall risk factors and interventions that can be used to reduce those risks.

Key words: Falls, falls prevention, fractures, root cause analysis, wheelchair use.

Harold's Case

Upon admission to our LTC facility, Harold was identified to have multiple risk factors for falls. Harold's primary diagnosis was Parkinson's disease, and he initially required assistance walking to and from the dining room for meals. Walking eventually became more difficult for him, so staff members started transporting him to and from the dining room by wheelchair. The loss of independence seemed to upset him, and one day he attempted to rise from his wheelchair in an effort to walk, which resulted in a fall.

Using root cause analysis, the antigravity team started with the following main question: "Why did Harold fall?" The answer seemed simple: "He tried to get up." Staff members often stop at the first question and answer and determine that they will try to prevent falls by keeping the patient seated with the use of alarms, call light reminders, or even restraints. Proceeding beyond the first question and answer, however, and involving the interdisciplinary team in the root cause analysis reveals there is much more behind Harold's fall:

"Why did he try to get up?"	Social worker: "He's upset about not being able to walk anymore."
"Why can't he walk anymore?"	Nurse: "He's weaker and seems to be getting stiff."
"Why is he weaker?"	Dietician: "He had a weight loss of 10% over the last month."
"Why is he stiff?"	Nurse: "He is due to see the neurologist soon to assess the changes in his Parkinson's symptoms."
"Is a medication adjustment needed?"	Physical therapist: "It may not be a medication issue. Immobility can cause stiffness and muscle weakening."
"Why is he losing weight?"	Dietician: "His meal intake has been less than 50% for several weeks."
"Why is he eating less?"	Nursing assistant: "He has a sore in his mouth and he won't wear his dentures."

Based on this dialogue, we determined that Harold's mouth sore made it difficult for him to eat, which in turn caused him to lose weight and become weak. This compounded his increasing stiffness and emotional upset about his loss of independence, which put him at increased risk for falls. By having a deeper understanding of the factors predisposing Harold to falls, the following care interventions were made to prevent Harold from falling again:

- Conduct comprehensive oral assessment and treat his oral impairment.
- Modify his diet to improve his nutritional status.
- Schedule a neurologic consultation to assess and treat advancements of his Parkinson's disease symptoms.
- Schedule a physical therapy consultation to provide muscle strengthening and improve balance.

Ruth's Case

Ruth was a tall, lanky woman who had been a professional tennis player in her younger years. She was interested in everyone and everything until she developed dementia as she aged and became nonverbal and wheelchair-bound, leading to her LTC admission. Her caregivers became extremely frustrated in their attempts to keep her safe in her wheelchair, as she would repeatedly slide forward asymmetrically into the sacral sitting position, pushing her right leg forward until she was on the front edge of the chair. Ruth would often attempt to rise from her chair when she was unsupervised, which resulted in her falling to the floor.

Rather than seeking the answer as to why Ruth was moving away from the back of her wheelchair and therefore pushing her right hip into extension, the interdisciplinary team focused on how to keep her in her chair and prevent her from falling. Staff members resorted first to using a lap buddy, a cushion that is placed into the wheelchair and across the lap of the individual to prevent him or her from trying to stand unassisted while providing upper body support and posture assistance. After she figured out how to remove the lap buddy, the team tried using an antithrust cushion and pelvic seat belt with the clasp in the back of her chair, as recommended by the occupational therapist. Despite these interventions, she continued her attempts to slide forward, causing her to slip off the wheelchair seat to the floor.

The interdisciplinary team had exhausted all of the easy answers as to the cause of Ruth's behavior. When they reexamined their basic assumptions, reviewed her medical history, and spoke with her family, they learned that Ruth had incurred multiple injuries to her right hip during her active career as a tennis player and that these injuries were treated with steroid injections. Subsequent radiographs and magnetic resonance imaging scans revealed an avascular necrotic femoral head as the cause of her right hip pain with weight bearing in a flexed position in the wheelchair. Unfortunately, the caregivers' initial solutions to her sliding had strapped her further into a position of pain, which she was unable to communicate verbally. The family opted against a total hip replacement due to her advanced dementia, and the problem was addressed by using a specialty cushion to offload the pressure under her hip, a recliner chair to decrease the hip flexion angle while sitting, and appropriate pain medication.

What Harold's and Ruth's Cases Teach Us

Although root cause analysis of falls is now common practice in LTC facilities, it is often done superficially due to time constraints, but as Harold's and Ruth's cases demonstrate, detailed root cause analysis is essential in properly identifying the cause of falls and in improving quality of life for the resident. In Harold's case, a variety of health problems worked collectively to lead to his fall, whereas in Ruth's case, the reason behind her fall was buried in her medical history. In addition, in Ruth's case, the staff sought ways to keep her in her wheelchair, rather than determining why she was trying to get out of it in the first place. The team interpreted Ruth's body language of sliding to the front of the chair as a dementia-related behavioral problem instead of a symptom of pain, and their initial interventions led her to experience even more pain. As these cases show, post-fall huddles with an honest discussion of the circumstances surrounding the fall with the entire interdisciplinary care team and even the resident's family members is critical, as each of these individuals may have important information that may help shed light on the actual cause(s) behind the fall.

Documenting these discussions and tracking falls data enable trends to be identified that will contribute valuable information as to when, where, and how each fall occurred. In addition, the interventions initiated to address fall risk factors must be monitored to determine their impact on the safety culture of the facility and the individual resident's safety and then modified until effective sustainable programs are in place. The use of quality improvement tools, such as the Plan-Do-Study-Act (PDSA) cycle, can assist facilities with this task.⁹ The PDSA tests a change by developing a plan to test the change (Plan), carrying out the test (Do), observing and learning from the results (Study), and determining what modifications should be made (Act). A comprehensive discussion of how to apply the PDSA in fall prevention programs is beyond the scope of this article, but what follows is a review of several factors that can contribute to falls among LTC residents and ways that these risks can be mitigated.