

Reducing Physical Restraints in Arizona Nursing Homes

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In this article, the Nursing Home Project Team from Health Services Advisory Group, Inc. (HSAG), the Medicare Quality Improvement Organization (QIO) for Arizona, discusses its collaboration approach to assisting 11 nursing homes targeted for improvement by the Centers for Medicare & Medicaid Services (CMS) and describes successful efforts these nursing homes made to safely decrease their use of physical restraints. Although not yet finalized/approved by CMS, preliminary evaluative data show that the nursing homes were able to collectively reduce their physical restraint use by a relative improvement rate of 84.7 percent without a statistically significant increase in resident falls and falls with fractures.

Background: The Medicare QIO Program

The Medicare Quality Improvement Organization (QIO) Program consists of a national network of 53 QIOs responsible for each state, territory, and the District of Columbia. QIOs work with health care providers, consumers, and stakeholders to ensure that care received by Medicare beneficiaries is effective, timely, patient-centered, and equitable.¹ QIOs are private, mostly not-for-profit organizations that are staffed by professionals who are trained to review medical care, help Medicare beneficiaries with quality-of-care complaints, and assist health care providers to improve their care quality. QIO contracts are three years in length, with each 3-year cycle referenced as an ordinal Statement of Work (SOW).²

In August 2008, Health Services Advisory Group, Inc. (HSAG—the Medicare QIO for Arizona) began work on the 9SOW, which extends through July 2011. In the 9SOW, QIO work focuses on the priorities of beneficiary protection, patient safety, prevention, health disparities, chronic kidney disease, and care transitions. The patient safety component of the 9SOW—referred to as the National Patient Safety Initiative (NPSI)—is a focused effort designed to protect patients by implementing evidence-based practices to improve health care processes and systems. Since 2008, the NPSI has directly benefited over 120,000 patients through the hospitals and nursing homes that participate in QIO-led patient safety initiatives.³

This article specifically discusses 9SOW efforts related to improving the safety and care in nursing homes by decreasing physical restraint rates.

Restraints Defined

Awareness regarding physical restraint use in nursing homes has increased since the United States Congress passed the Omnibus Budget Reconciliation Act (OBRA) of 1987. That Act overhauled the way nursing homes are surveyed under Medicare/Medicaid Certification by creating a new set of comprehensive regulations, including detailed guidance on physical restraint utilization. Through OBRA, the Centers for Medicare & Medicaid Services (CMS) designated F-221 as the regulation for physical restraint utilization in nursing homes. F-221 defines a physical restraint as “any manual method or physical or mechanical device, material, or equipment attached or adjacent to the resident’s body that the individual cannot remove easily which restricts freedom of movement or normal access to one’s body” (42 CFR 483.13(a)).⁴ The intent of this regulation is for each person to attain and maintain his or her highest practicable well-being in an environment that prohibits the use of restraints for discipline or convenience and limits restraint use to circumstances in which the resident has medical symptoms that warrant the use of restraints. Table 1 lists some examples of restraints.

Table 1.

F-221 Physical Restraint Examples*

- Using side rails that keep a resident from voluntarily getting out of bed
- Tucking in or using Velcro to hold a sheet, fabric, or clothing tightly so that a resident’s movement is restricted
- Using devices in conjunction with a chair—such as trays, tables, bars, or belts—that the resident cannot remove easily, that prevent the resident from rising
- Placing a resident in a chair that prevents the resident from rising
- Placing a chair or bed so close to a wall that the wall prevents the resident from rising out of the chair or voluntarily getting out of bed

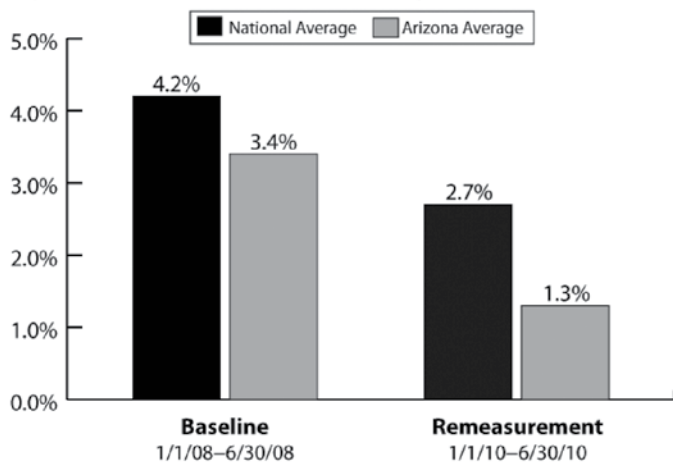
*State Operations Manual: Appendix PP—Guidance to Surveyors for Long Term Care Facilities.

Physical Restraints in Nursing Homes

Research and standards of practice show that the belief that physical restraints ensure safety is often unfounded. In practice, restraints have many negative side effects and risks that, in some cases, far outweigh any possible benefit that can be derived from their use. Restraints not only may not prevent falls, they can cause great harm—including strangulation, loss of muscle tone, decreased bone density (with greater susceptibility for fractures), pressure sores, decreased mobility, depression, agitation, loss of dignity, incontinence, constipation, and, in some cases, resident death. Benefits of refraining from the use of physical restraints have been well-documented in long-term care literature: they include improvement in residents' quality of life, greater autonomy, use of fewer anti-psychotic medications, less skin breakdown, and fewer serious injuries due to falls.⁵ Ongoing research has clearly demonstrated that physical restraints can be both physically and mentally damaging for residents, cost more in terms of resources, and can increase the incidence of serious injuries.

Direct factors influencing restraint use include trying to reduce falls and managing individuals with problematic behavior. Other, more indirect factors include resident mobility, alertness, consciousness, mental function, and behavior, as well as the fear of consequences for complications of falling or inability to address problematic behavior.⁶ Figure 1 shows 2008 and 2010 national and statewide physical restraint rates.⁷

Figure 1. National and Arizona Physical Restraint Rates*



*Data from the Quality Improvement and Evaluation System (QIES): CASPER Quality Indicator / Quality Measures Reporting System

A National List of Targeted-for-Improvement Nursing Homes

In February 2008, CMS published a national list of nursing homes targeted for high-risk pressure ulcer and/or physical restraint improvement. Nursing homes with a physical restraint rate greater than or equal to 11.00 percent during the selection period (Q4 2006 to Q2 2007) were placed on this list and designated as targeted-for-improvement nursing homes. (Restraint rates are derived from resident assessment data—the Minimum Data Set, or MDS—each nursing home is required to submit to the state survey agency on a prescribed schedule for each resident.) QIOs—under their CMS 9SOW contracts—were directed to successfully recruit

nursing homes on this list from their respective states and work with them to collectively reduce physical restraint utilization by 20 percent relative improvement.

Working to Reduce Physical Restraints—An IHI Collaborative Approach

To achieve the relative improvement rate goal for physical restraint reduction, HSAG implemented an Institute for Healthcare Improvement (IHI) Collaborative-like approach with the 11 targeted-for-improvement Arizona nursing homes recruited from the CMS list and formed the HSAG Physical Restraints Collaborative in September 2008. The IHI Collaborative Model,⁸ is a short-term (6- to 15-month) learning system that brings together teams from health care settings to seek improvement in a focused topic area. The learning system encompasses a series of face-to-face learning sessions with action periods between each session that focus on rapid-cycle quality improvement, followed by a summative outcomes congress. The HSAG Physical Restraints Collaborative aligned with the CMS 9SOW to address areas of patient harm—in this case, physical restraint utilization—for which there is evidence of how to improve safety by improving health care processes and systems. A main objective of the Collaborative was to bring forward several components from previous CMS quality improvement initiatives, allowing participants to build on progress made in physical restraint reduction with other providers nationwide.

The HSAG Physical Restraints Collaborative

HSAG launched its Physical Restraints Collaborative after carefully identifying target audiences, participant training needs, the most advantageous training location, and optimal training modalities. HSAG chose training modalities that had been successful in face-to-face learning sessions and on-site visits with these types of nursing home facilities. Target audiences included the facility administrators, directors of nursing, MDS coordinators, and direct-care staff. These disciplines were selected as target audiences because of their strong influence in designing and facilitating care processes, as well as their ability to ensure proper documentation of device/restraint utilization. HSAG's Phoenix office was chosen as the learning session venue due to its central location in proximity to the Collaborative participating nursing homes.

From September 2008 through March 2010, HSAG conducted five Collaborative learning sessions and one Collaborative teleconference. An Outcomes Congress is scheduled for early 2011. Between these sessions, HSAG staff members conducted follow-up site visits and teleconferences to provide consultation and technical assistance and to monitor participants' progress on managing the changes necessary to implement the practices and materials presented in the trainings. These visits constituted the action periods of rapid-cycle improvement designated by the IHI Collaborative Model.

Initial Collaborative learning sessions provided toolkits and resources to educate attendees on CMS regulations, the physical restraint definition, daily processes of care for physical restraint reduction and management, and physical restraint alternatives and systematic reduction. These early sessions also ensured that participants understood how the physical

restraint quality measure was calculated from MDS resident assessment data.⁹ Information gathered from these early sessions indicated that not all nursing home staff members had a complete understanding of the physical restraint definition, and it was thus inconsistently applied. In-depth discussions on scenarios of physical restraint utilization allowed participants to come to a consistent understanding and definition of physical restraints. Moreover, nursing home staff often did not consider the effect of the devices based on the individuals' physical functionality. Using the now understood definition of a physical restraint, Collaborative participants discussed real-life situations/examples to further understand the effects that physical restraints have on nursing home residents.

Examples:

1. *Some staff members were inclined to code a specialized wheelchair with a seat belt for a quadriplegic resident as a restraint, even though the seat belt was for positioning only. The seat belt, in this scenario, did not restrict the resident's movement or access to one's own body due to the resident's inability to move his/her upper and lower extremities.*
2. *As a safety reminder, some residents use a Velcro seatbelt on their wheelchairs that they can easily and consistently remove when asked by staff or inspectors. This, for definition purposes, is a device rather than a physical restraint according to the CMS F-221 regulation. However, facility staff members were also inclined to classify this example as a physical restraint.*
3. *Some staff members did not code a low bed from which a resident was unable to rise as a physical restraint, even though it prevented the resident from rising.*

Subsequent Collaborative learning sessions and on-site visits focused on falls management programs, the use of restraint alternatives, and behavior management of cognitively impaired residents with poor safety awareness. In addition, Collaborative participants were provided with tools designed to help nursing homes implement daily processes of care for physical restraint reduction and management.

Collaborative participants also took part in the Agency for Healthcare Research and Quality (AHRQ) Nursing Home Survey on Patient Safety. The survey is designed to assess patient safety culture in nursing homes, raise staff awareness about patient safety issues, evaluate the impact of patient safety improvement initiatives, and track changes in patient safety culture over time.¹⁰ Additionally, Collaborative participants will participate in a remeasurement of the AHRQ survey so that HSAG can compare baseline survey results to remeasurement results as a means of evaluating the effectiveness of the Collaborative.

Restraint Alternatives and Systematic Reduction

As mentioned above, participants learned the concepts of restraint alternatives and systematic reduction while participating in the Collaborative. These concepts are to be integrated into the care planning process as nursing home care teams identify and treat resident health, functional, and psychosocial problems.¹¹

Some general principles of the restraint alternative concept involve playing to a resident's strengths/likes, encouraging independence, involving a resident's family, and offering a resident choices. The medical and behavioral conditions of a resident need to be carefully evaluated so that least-restrictive therapeutic, environmental, and equipment interventions can be put into place. Examples of some restraint alternatives for specific medical and behavioral conditions are provided in Table 2.

Table 2.
Restraint Alternatives for Specific Behaviors¹²

| Residents who are verbally abusive and demonstrate poor safety awareness | Residents who wander and have cognitive impairment issues |
|---|---|
| Evaluating the resident for pain using the PAIN in Advanced Dementia (PAINAD) Scale | Utilizing diversion-type activities that correspond with past lifestyles/preferences |
| Assessing the resident for other physical needs such as hunger, thirst, position changes, and bowel and bladder urges | Considering how medications, diagnosis, activities of daily living, schedule, weather, or other residents affect or relate to wandering |
| Developing resident trust by assigning consistent caregivers whenever possible | Creating theme/memory/remembrance boxes |
| Reducing external facility stimuli (overhead paging, TV, radio noise) | Identifying a resident's customary routines and allowing for preferences |
| Teaching/Implementing relaxation techniques (tapes, videos, music) | Assessing a resident's personal agenda and validating behaviors |

Discussing possible restraint alternatives was particularly helpful during on-site visits and when attending restraint/falls management weekly meetings at participating nursing homes. These discussions often sparked fresh and innovative ideas for implementing falls management programs for their identified resident populations. Consistent implementation of restraint alternatives into daily care processes also allowed these nursing homes to move toward a restraint-free environment while ensuring their residents' safety and well-being.

With regard to systematic reduction as a means of creating a restraint-free, safe environment for residents, the F-221 regulation states, "As with other restraints, for residents who are restrained by side rails, it is expected that the process facilities employ to reduce the use of side rails as restraints is systematic and gradual to ensure the resident's safety while treating the resident's medical symptom"¹⁴

Examples of systematic and gradual physical restraints reduction include:

- *Providing therapy or restorative care to enhance bed mobility, ambulation, transfers, and gait control.*
- *Placing the bed lower to the floor with a protective mat beside the bed.*
- *Providing frequent monitoring by staff with periodic assisted toileting for residents who attempt to arise to use the bathroom.*

Through the process of systematic and gradual reduction of physical restraints, Collaborative nursing home staff members and residents began

to experience confidence that physical restraints can indeed be reduced, and often eliminated, without an increase in resident falls and also falls with fractures.

Derailing the Myths

Although many of the Collaborative nursing homes were experiencing significant success with restraint reduction, there were still some nursing homes that were very cautious in starting their journey to untie the elderly. This was due to misperceptions and beliefs in long-standing myths—by residents, family members, and even nursing home staff members—that proved to be significant barriers to physical restraint reduction. HSAG's experience providing technical assistance in past SOWs validated that these myths were alive and widely believed among nursing home residents, family members, and staff members. These myths included:

Myth: Restraints prevent falls and injuries.

Fact: Restraints are often actually the cause of injuries or even death.

Myth: It is a nursing home's moral responsibility to safeguard people by using restraints.

Fact: Nursing homes are responsible for caring for people and helping them stay as healthy and happy as possible. Restraints usually do not help reach those goals.

Myth: Residents do not mind being restrained. It makes them feel secure.

Fact: No one likes to feel helpless or trapped. A restraint can cause residents to become depressed, confused, agitated, angry, or withdrawn.

Myth: There are not any other options to protect my loved one.

Fact: This may be true in a very few cases, but most nursing home residents can be safely cared for without using restraints.

Myth: As a Power of Attorney (POA), I can ask a nursing home to use restraints on my loved one.

Fact: Only a physician can order a restraint for a patient. Staff members may not use restraints when they are not medically needed, even if the resident's family members request or approve their use. A restraint is like any other medical treatment: you need to know what medical symptoms are being treated. If there is not a medical reason for the restraint, it should not be used.

In an effort to quell these myths and decrease the pro-restraint support exhibited by some nursing home resident family members, Collaborative participants were introduced to the concept of "Making the Right Choice" during HSAG's on-site visits. *Making the Right Choice: What You Need to Know About Restraints in Nursing Homes*²¹³ is a short informational brochure that educates hospital staff about nursing home regulations regarding restraint utilization, family members about the dangers of restraint use, and nursing home staff regarding the concept that physical restraints are not a means to prevent falls—that they can sometimes cause greater harm and injuries than the falls they are intended to prevent. HSAG recommended that this tool be provided to prospective residents and their family members not at the time of admission, but rather at the

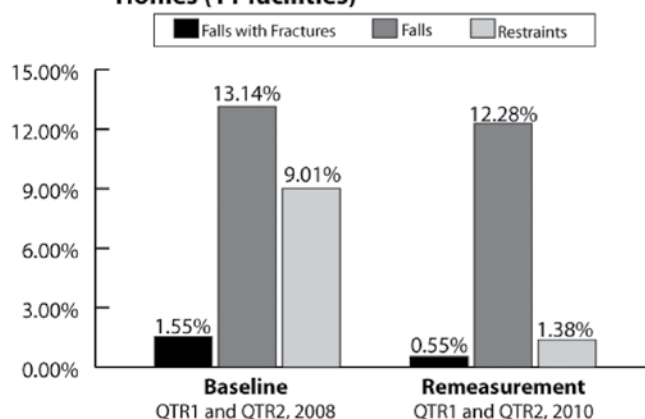
time of initial inquiry. Additionally, Collaborative nursing home staff members were advised to communicate with primary referral sources to explain nursing home regulations and potential dangers pertaining to physical restraint utilization. *Making the Right Choice* was found to be an excellent vehicle for communicating nursing home regulations to acute care staff members and resident family members.

Collaborative Outcomes

From the onset of the HSAG Physical Restraints Collaborative, the primary goal was to achieve at least 20 percent average relative improvement in the physical restraint quality measure within the 11 CMS targeted-for-improvement Arizona nursing homes. Secondary goals of the Collaborative were to ensure that resident falls and falls with fractures did not increase and to derail the commonly held myths involving physical restraint reduction.

Based on the Certification and Survey Provider Enhanced Reporting (CASPER) QI/QM Report (CASPER is a software program that houses submitted MDS data and provides reports on that data) from the Baseline Period (Q1–Q2, 2008) to the Remeasurement Period (Q1–Q2, 2010), preliminary evaluative data—although not yet finalized/approved by CMS—show that physical restraint utilization decreased from an absolute rate of 9.01 percent to 1.38 percent (a statistically significant difference at the $p = 0.01$ level). This represents an average relative improvement of 84.7 percent. Given the change in rates from baseline to remeasurement, approximately 146 nursing home residents were freed from physical restraints in Arizona nursing homes because of the implementation of this project. Not only was the primary goal of 20 percent relative improvement in restraint rates met, the secondary goals were achieved as well. The statistically significant improvement in restraint rates was achieved without an accompanying increase in resident falls and falls with fracture(s). See Figure 2 for more detail.

Figure 2. **Quality Indicator / Quality Measure Rates for CMS Targeted-for-Improvement Nursing Homes (11 facilities)***



*Data from the Quality Improvement and Evaluation System (QIES): CASPER Quality Indicator / Quality Measures Reporting System

To date, more than half of the targeted-for-improvement nursing homes are restraint free. Three of the nursing homes each have one physically restrained resident and continue to work toward a restraint-free environment.

Conclusions and Implications

Based on the reported outcomes of the HSAG Physical Restraints Collaborative, the work accomplished by the 11 targeted-for-improvement nursing homes demonstrates that statistically significant physical restraint reduction can take place without increasing resident falls or falls with fractures. By reducing—and often eliminating—physical restraint use, nursing home residents can enjoy a heightened quality of care and quality of life, while reducing the prospect of serious injury.

The statistically significant reduction of physical restraint use in these targeted-for-improvement nursing homes is attributed to the following interventions:

- *Educating Collaborative participants on how to implement the correct CMS definition of a nursing home physical restraint (regulation F-221).*
- *Working with Collaborative nursing home staff members on effective alternatives to physical restraint use.*
- *Utilizing the practice of systematic reduction of physical restraints.*
- *Derailing myths of physical restraint reduction and “Making the Right Choice.”*

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