

Innovations in Quality Improvement in Long-Term Care

The purpose of this column is to discuss innovations and quality improvement advancements across the various long-term care settings. This column is coordinated by Marilyn J. Rantz, PhD, RN, FAAN, NHA rantzm@missouri.edu

Better Care, Better Quality

Reducing Avoidable Hospitalizations of Nursing Home Residents

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AN EFFORT to reduce hospital transfers of nursing home residents is a topic of interest to the Centers of Medicare & Medicaid (CMS) from a quality care and cost-savings perspective. In 2011, Medicare spent \$14.3 billion on hospital stays for nursing home residents. Costs for these admissions were

33% more per stay than for other Medicare hospitalizations.¹ In 2012, the US Department of Health and Human Services provided funding opportunities for organizations to test a series of evidence-based clinical interventions to improve health care in nursing homes with the goal of reducing potentially avoidable hospital admissions.²

In response to this opportunity, the Sinclair School of Nursing of the University of Missouri developed the Missouri Quality Initiative (MOQI) intervention and received funding under the Patient Protection and Affordable Care Act (Pub L No. 111-148) to implement this intervention.³ The MOQI intervention is a 4-year demonstration of a care coordination effort using advanced practice registered nurses (APRNs) in 16 nursing homes in a region of Missouri where the transfer rates were one of the nation's highest for Medicare readmissions within 30 days of discharge (rates of 16.7%-18.9% for medical discharges).⁴

The MOQI Intervention Model³ illustrates the key components of the intervention. An APRN guides the intervention delivering care

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to the residents and training the facility staff to improve their skills. An MOQI intervention team assists with medical care, care transitions, health information technology, and evidence-based INTERACT (Interventions to Reduce Acute Care Transfers) II assessment tools. The project promotes the use of INTERACT, which is a set of evidence-based clinical practice tools and strategies developed with funding from the CMS to reduce hospitalizations from nursing homes.⁵ The tools and strategies assist the nursing home staff in early identification, assessment, communication, and documentation about changes of condition in nursing home residents.

The APRN works collaboratively with the facility staff on assessing and managing chronic and acute conditions, recognizing early illness, using the INTERACT II tools, enhancing goals of care and end-of-life (EOL) discussions and advance directive (AD) decision making, and increasing the use of health information technology for improved communication.

PURPOSE

This study explores staff perceptions in a nursing home that successfully achieved 4 key project goals for the first 2 years of MOQI. Goals were to (1) reduce potentially avoidable hospital transfers; (2) reduce polypharmacy and antipsychotic medication use among nursing home residents; (3) increase goals of care discussions and completion of AD; and (4) introduce secure communications for electronic transfer of resident health information among health care providers, nursing homes, and hospitals. To successfully achieve these goals, the APRN needed to become an integral part of the nursing home, fit into its culture, and have leadership support for MOQI.

METHODS

The design is a single-facility case study using mixed-methods longitudinal quantitative measures of key project outcomes and qualitative measures through exploratory interviews

of the staff directly involved in the intervention in the nursing facility. Over the course of the project, data are collected and maintained in a relational database with a Web interface. Using descriptive statistics, comparative reports are prepared monthly and quarterly and are sent to nursing home leadership and all MOQI team members to monitor progress of the facility and encourage achievement of project goals.

Qualitative interviews explored staff perceptions of factors that contributed to the success of the MOQI intervention. Six individuals were interviewed separately by a PhD-prepared researcher: the APRN assigned to nursing home, the nursing home administrator, the director of nursing (DON), a registered nurse (RN), a licensed practical nurse, and a full-time social worker. A set of questions that related to the key goals of MOQI was asked of each interviewee. During these interviews, field notes were taken and analyzed for common themes.

QUANTITATIVE RESULTS

The primary outcome of MOQI is to reduce avoidable hospitalizations. Transfer rates steadily declined since summer 2014 (Figure 1). Transfer rates are calculated by dividing the number of hospital admissions by the number of resident-days for the month and then multiplying by 1000; thus, the rate of hospital transfers is per 1000 days. Our project goal for 2014 was 1.7, in 2015, it is 1.3, and for the final year, it will be 1.1 per 1000 resident-days. This facility is meeting MOQI goals.

Another key outcome is to reduce the numbers of long-stay residents who receive antipsychotic medication. Antipsychotic medications are approved by the US Food and Drug Administration for the treatment of schizophrenia and bipolar disease.⁶ Antipsychotics are divided into 2 classes, reflecting the 2 waves of historical development: conventional and atypical antipsychotics. Conventional antipsychotics were used for decades but produced various side effects, spurring the development of atypical

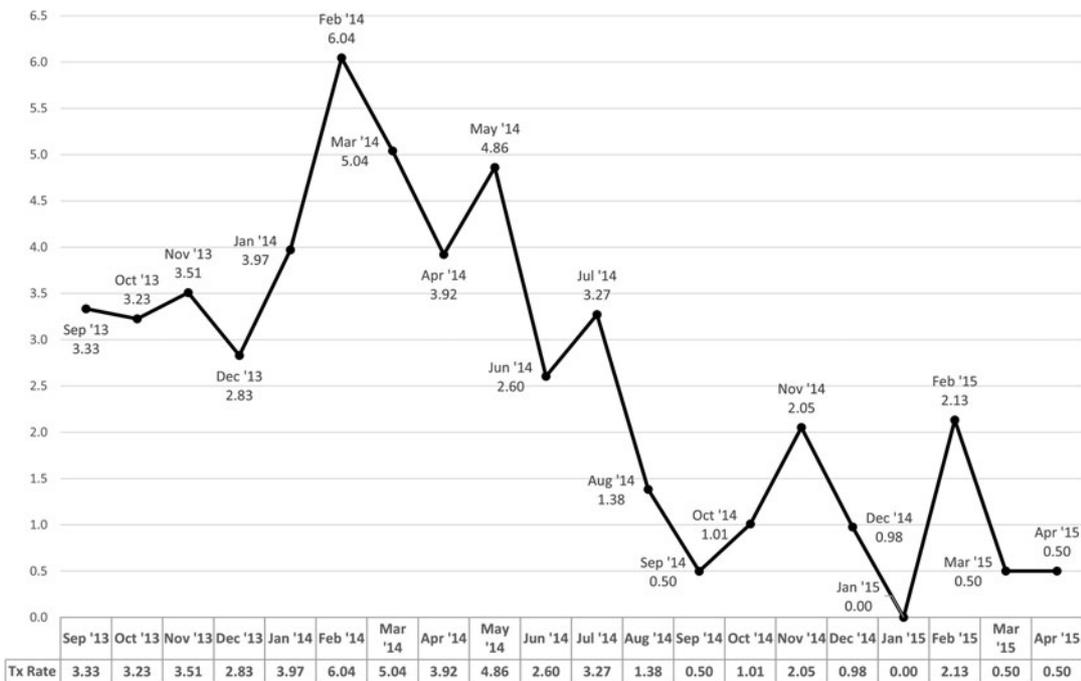


Figure 1. Case study nursing home hospital transfer rates: September 2013 to April 2015. Tx indicates transfer.

antipsychotics. There are 9 atypical drugs that have been used off-label (ie, for indications not approved by the US Food and Drug Administration) for the treatment of various psychiatric conditions.

Antipsychotic reduction among the elderly became a priority of the CMS when the Agency for Healthcare Research and Quality revealed in 2006 that, with few exceptions, there was insufficient evidence to reach conclusions about the efficacy of off-label uses of atypical antipsychotics.⁷ More importantly, there was strong evidence that atypical antipsychotics were associated with increased mortality among elderly persons with dementia. In 2011, the Agency for Healthcare Research and Quality reported that 23.9% of long-stay residents in US nursing homes were receiving antipsychotics.⁷ In 2012, the CMS started the Partnership to Improve Dementia Care in Nursing Homes to deliver care that is person-centered, comprehensive, and interdisciplinary and focused on protecting residents from being prescribed antipsychotics

unless there is a valid, clinical indication and a systematic process to evaluate each individual's need.⁸

When the APRN started working full-time at the nursing home, the percentage of long-stay residents who received antipsychotic medication was 30.8% (Figure 2). Six quarters later, the nursing home's percentage was 10.8%. Its use of these drugs is less than half the state and national averages as displayed by the dashed lines. Importantly, it also achieved no use of antipsychotic medications for residents with a diagnosis of dementia.

Increasing the use of AD and EOL discussions is another key outcome of MOQI. Each year, an inventory of the charts of participating residents is conducted to determine if there is an AD in the chart. Our inventory data indicate that from 2013 to 2014, there was a 9.8% increase in the number of ADs of participating residents in this facility.

Another key indicator of success in this area is the facility's performance on National Health Care Decisions Day. Each year, on this

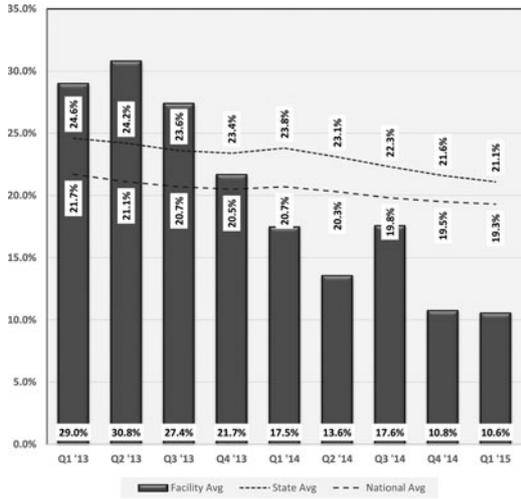


Figure 2. Percentage of long-stay residents who received an antipsychotic medication. Reporting period for facility data is 3 months; comparison reporting period for state/national average is 6 months, beginning 3 months prior to facility data date. Q1 facility data for January-March; Q1 comparison data for October-March. Q2 facility data for April-June; comparison data for January-June. Q3 facility data for July-September; comparison data for April-September. Q4 facility data for October-December; comparison data for July-December. Data source: CASPER available at www.nursinghomehelp.org.

day, all MOQI facilities sponsor AD clinics in which residents, family members, staff, and members of the community can receive information about AD and enact one if they desire. To promote the event, the nursing home staff and the ARPN in this facility organized local community events including media coverage, visits to senior centers, and sponsoring a public open house to promote awareness about the importance of AD enactment. In year 2 of MOQI, the nursing home enacted 51 ADs during the event, as compared with 30 in year 1, an increase of 70%. This facility had record performances for both years in comparison with the other 15 facilities.

A goal of MOQI is to facilitate implementation of a health information exchange (HIE) using technology to support timely and accurate communication about care delivery and coordination activities to improve hos-

pital readmission rates. Nursing homes have significant amounts of HIE between a variety of health care providers and agencies. Some of these exchanges occur with technology, some do not. In this case study, our exemplary facility sent and received 372 electronic messages over 6 quarters since the HIE became functional, and more electronic messages were sent ($n = 200$) than were received ($n = 172$). The range per quarter sent and received was 13 to 115.

QUALITATIVE RESULTS

In the analysis of the field notes, a coding method was used and core categories were identified and formulated around the study aims; general themes emerged within the core categories. Themes are discussed in the identified core categories: setting the stage for success, reducing transfers, reducing antipsychotic and polypharmacy, increasing ADs, and initiating and using electronic transfer of health information.

When asked what set the stage at their nursing home to be successful with the key goals, the major theme that emerged was commitment from management. The nursing home administrator was described as supportive of the MOQI process and having a larger vision for the facility. The management team was viewed as “cohesive and working together” on the key goals of the initiative: “The home began to experience differences when ‘the mind-set changed by staff from just being a study to providing better care’ as a result of the MOQI intervention.”

Education emerged as a theme in reducing hospital transfers. Respondents viewed the APRN as key in improving assessment skills through training. The APRN provided ongoing education, irrespective of an employee’s role, and the nursing staff became more confident in their ability. Participants expressed that they felt “uplifted” and “empowered.”

Participants also talked about APRN role modeling behavior as part of the training. The staff observed the APRN in action. The

APRN offered recommendations about the best course of action when a condition change occurred and explained to the staff why that action was appropriate. Through these explanations, the staff learned new ways of managing resident care. The respondents discussed repeatedly how this process and the support of the APRN provided them with the confidence to behave differently.

Using INTERACT assessment tools such as Stop and Watch and SBAR are important parts of MOQI. Persistence from the APRN and the DON was essential to the use of the tool becoming standard practice and an expectation of nursing employees. Eventually, more staff members completed these tools. As the clinical skills of the nurses improved, the nursing staff were observed asking questions and consulting other nurses for validation, reflecting the development of critical thinking skills. New employees were exposed to the use of Stop and Watch and SBAR as expectation of employee performance. One nurse remarked, “The tools helped them to organize their observations about the condition change.”

The facility has co-medical directors who were willing to be involved in MOQI and were seen as leading the reduction of transfers. The APRN worked to develop relationships with both physicians, and through modeling and education, she was able to show them that having an APRN in the nursing home could lead to quality care through better monitoring of residents and early recognition of acute illnesses.

Early in year 2 of MOQI, the APRN communicated to the nursing staff that they could consult via the phone when the APRN was not on duty in the home. This action was viewed as a turning point in reducing avoidable transfers. Nurses use the SBAR tool when they call the APRN reporting a resident’s condition; together, they make informed decisions about clinical actions needed. At the end of year 2, the DON communicated the expectation in writing that nurses were to complete an SBAR, contact the DON or APRN before transferring a resident, and consult with one of them to

determine a course of action, except in true emergency events.

Feedback reports were used by the APRN to focus education efforts on problem areas. These reports were viewed by the staff as essential to see their progress as the months progressed. As one respondent said, “Success leads to more success.” As the MOQI intervention and data collection progressed, each facility received its feedback reports from the MOQI Operations Team (see Figures 1 and 2). Reports provide a visual picture of the key MOQI goals: hospital transfer rates, AD discussions and completions, medication reviews, condition changes, transfers that could have been potentially prevented, conditions that put the residents at risk for hospital admissions or readmissions, and antipsychotic usage scores.

Another theme identified as contributing to success was the use of root-cause analysis and quality improvement practices for hospital transfers. These analyses examined conditions of risk related to hospital transfers, and results were used by the APRN and the DON in educational programs to enhance clinical knowledge. Facility leaders require all staff members to attend these programs. This method was seen as essential to helping change the culture related to hospital transfer prevention.

Daily stand-up meetings attended by interdisciplinary leaders are another practice viewed as contributing to the decrease in hospital transfers. These meetings allow for immediate feedback about transfers that occurred in the last 24 hours, and as one respondent shared “made the transfer personal” as the event was critiqued by all members. Follow-up with the staff involved in the transfer was performed using a no-shame, no-blame method so that learning can occur and the staff can prevent another transfer.

The respondents were consistent in identifying 2 themes that led to the remarkable decline in antipsychotic medication use—medication reviews and education. The actions of the APRN were key. She conducted repeated medication reviews and teamed with

the pharmacist who provided medication consultations to the nursing home. The APRN then led an aggressive educational effort to teach all nursing home staff, residents, and family members about the risks and adverse effects of antipsychotic use in the absence of an appropriate diagnosis. Hand in Hand, a CMS-approved program,⁹ provided a framework for the education. The focus is person-centered care for persons with dementia and the prevention of abuse.

As months progressed, the impact of the education and persistent efforts of the APRN to attempt gradual dose reduction resulted in declining numbers of residents on antipsychotics. As medications were discontinued, respondents shared positive changes that were observed in residents; they were more alert and able to perform some of their activities of daily living. The nurses, who were initially fearful of gradual dose reduction, started to observe positive effects of less medication, such as fewer falls and more opportunities to interact with these residents. Family members noticed the changes and were happy to have their family member "back in their world."

Two key themes that emerged in the category of increasing use of AD and EOL discussions were discussions about goals of care and AD planning. Respondents indicated that the information provided by the APRN and the MOQI operational team influenced nursing home leadership to see the value of having these discussions for each resident and using an AD planning approach to resident care. The care plan team started to include discussions on goals of care in their weekly meetings, which flowed naturally into resuscitation goals. End-of-life discussions in all care plan meetings and on admission are now routine. End of life is listed on the care plan checklist, reflecting integration into the nursing home's systems.

Education about AD is offered yearly and on all 3 shifts, providing the staff opportunity to learn about and complete their own AD. The nursing home staff view assisting residents to complete an AD, which requires notarization in Missouri, as a "benefit" of working at the nursing home. Having completed an AD them-

selves helps them understand why it is important to know what residents want done as they approach the end of their life and for the staff to honor their requests.

The facility's social worker is viewed as a key player in AD awareness and completion, and is experienced at "lifting the stigma of the uncomfortable topic." Ongoing EOL discussions now happen at the nursing home with repeated discussions on the topic and follow through by the social worker in a professional but personal manner. The management team is viewed as supporting these discussions. Both the APRN and the social worker are viewed as role models for their team approach in advance care planning and tackling EOL discussions. They have provided education and training to the social workers and social service departments in the other 15 facilities.

Leader commitment and enthusiasm emerged as themes in initiating and using electronic transfer of health information. Leaders in this exemplar facility demonstrated characteristic signs of eagerness and willingness to extend the use of electronic HIE and the desire to build relationships with other health care providers. Specifically, HIE users were eager to incorporate electronic information exchange with hospice organizations, a mobile wound solutions company, and when conducting home health referrals.¹⁰ Leaders in this organization wanted to maximize accessibility of the HIE system for the staff. Greater accessibility occurred through a growing technology infrastructure including strong wireless connectivity systemwide, computer installation at nursing desks, and adding links to HIE on computer desktops to facilitate greater use. As leaders built relationships with other providers, the facility began to develop a positive reputation among providers, including a large hospital system, for providing good care. In this case, good care was associated with providing complete information that was accurate and timely.

DISCUSSION AND IMPLICATIONS

Using case study methodology to explore the underlying reasons for success in an

exemplar facility provides insights that can help others in their journey to reduce unnecessary hospitalizations of nursing home residents. In this analysis, several key strategies were effective. First, there is a cohesive leadership team that integrated the APRN into their team and worked to shift the mind-set of staff from “just being a study to providing better care.” Leadership commitment and enthusiasm for the project were recurrent themes across categories. Second, the APRN continually educates the nursing staff and role models early illness assessment skills; education was a theme that emerged across categories in the interviews. Leaders express that the INTERACT tools are the standard of practice, and nursing employees are expected to consistently use them. Daily stand-up meetings are held by the leadership and the direct care staff involved in each transfer within 24 hours in a “no-shame, no-blame” way. The APRN provides consultation by phone when not on duty so that nurses can get help making clinical decisions about someone with a change in condition before transferring to the hospital. This is a written policy and the staff complete an SBAR tool and call, except in a true emergency.

In addition, the APRN taught staff, residents, and family members about the risks and adverse effects of antipsychotic use, did gradual dosage reduction of these medications, and taught about person-centered care and strategies for helping those with dementia. Education and medication review were themes that emerged in this category. All staff members participate in EOL decision making for themselves, and the nursing staff focus on the goals of care in weekly care plan meetings as well as EOL discussions with families and residents. Both the APRN and the facility’s social worker role model how to have comfort-

able EOL discussions. True to the themes that emerged, this facility embraces a “goals of care and AD planning” approach to resident care. Finally, leaders eagerly reach out to build relationships with other health care providers to work on ways to exchange accurate, timely, and complete health information electronically about residents and patients they share. The themes of commitment and enthusiasm of the leadership in accepting technological advances point to the importance of these factors in moving a facility forward in this area.

There are serious implications for the well-being of the residents who are transferred to the hospital when it is unnecessary. Hospitalizations of frail and chronically ill older people can lead to complications that develop during hospital stays, such as additional morbidity, loss of functional abilities, development of decubiti, infections, and death.⁵ Residents who are in the later stages of dementia are at risk in transfers, including increased confusion because of unfamiliar surroundings and care givers, lack of hospital staff’s ability to meet their special needs, and the inability to communicate their goals of care wishes. Many acute illnesses of residents with dementia, such as pneumonia, can be treated in the nursing home without a significant effect on mortality, level of functioning, or health-related quality of life.⁷

CONCLUSION

Reducing unnecessary hospitalizations of nursing home residents can be achieved as this case study reveals. Key implementation findings can help guide others as they pursue ways to accomplish this goal. Most importantly, reducing unnecessary hospitalizations leads to better quality and better care.

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