Nursing home operators can see reducing readmissions as an opportunity to bring **creative solutions** to the table and increase their value.
Executive Summary

Next Steps in Nursing Home Quality Measurement: Adapting to a Changing Patient Population and Health System Change

Quality Trends: By the Numbers

Special Update: Advancing Excellence in America’s Nursing Homes

Hospitalization of Nursing Home Residents

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Focus on Rehabilitation Measures

Transitional Care: Challenges and Opportunities for Nursing Home Residents

Appendix
One of today’s leading topics in discussions of health care quality is admission to acute care hospitals. Skilled Nursing Facilities (SNFs), which admit post-acute patients with multiple comorbid diseases and functional impairments, have unique challenges that differ from managing traditional hospital discharges to home. Additionally, increasingly frail chronic nursing home residents also have substantial risk of hospitalization. In nursing homes, providing services to prevent or treat acute illness and avoid hospitalization has always been one of many competing quality concerns, but not until recently did this become a leading policy issue.

This chapter begins with a discussion of the current policy imperatives related to hospital readmission and their implications for nursing homes. The current focus on readmissions among hospital discharges has made this a major issue for SNFs. In addition, nursing home value-based purchasing is designed to incentivize nursing homes to reduce readmission to hospitals for not only post-acute patients, but also to reduce hospitalization among chronic long-stay nursing home residents.

One challenge facing nursing homes involves the development and use of valid measures to track hospitalization rates, and to compare rates between facilities and over time. Essential measurement issues are identifying hospitalizations that are potentially avoidable, and adequately adjusting for differences in risk of readmission for the varied population of nursing home residents. From both a policy and practice perspective, these are critical.

The chapter concludes with a discussion of evidence-based approaches to reduce admissions to hospital that have been developed specifically for the nursing home sector. Given both the residents that nursing homes treat and the resources they have and do not have available, strategies that target specific types of residents and those that take a more global approach are considered. In both policy and practice, solutions for nursing homes must be tailored to the unique problems and needs of the sector.
Public Policy: The Driving Force

Concerns about hospital readmission of Medicare patients were a predictable consequence of the Hospital Prospective Payment System (PPS) enacted in the early 1980s. As hospital stays were shortened in order to reduce acute care costs, patients were discharged “sicker and quicker” to various post-acute settings. Nursing homes providing Medicare SNF care responded by admitting and treating these more medically complex patients; changes that were already evident by 1986.¹

Because of continued pressures to contain hospital costs, the trend of shortening hospital lengths of stay continued, and the role of nursing homes in providing post-acute care grew. Between 1993 and 2006, hospital length of stay for Medicare heart failure patients had a relative decrease of over 25 percent, associated with a relative increase in SNF discharges of 53 percent (Table 1).² Over this 14-year period, 30-day hospital readmissions had a relative increase of 16 percent.

Thus, declining acute hospital stays resulted in a substantial increase in the use of SNFs for post-hospital care. Nevertheless, readmissions to the hospital increased, suggesting that some patients were discharged from the acute hospital before they were stable enough for post-acute care, at least the post-acute care available in 2006. While mortality in 30 days decreased over this same period, that decrease was particularly pronounced in the acute care hospital probably due to improved treatments. Reducing these rising readmissions for heart failure, for example, is the aim of current the current policy.

The heart failure findings are consistent with trends for all Medicare patients. For all conditions, the hospital readmission rate within 60 days for Medicare discharges increased from 23 percent to 31 percent, over the 26-year period between 1976–78 and 2003–04.³ This represents about a 25 percent relative increase in readmissions over this 27-year period.

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Not surprisingly, rising readmission rates shifted the policy focus from reducing hospital lengths of stay to reducing readmissions to hospital. Public reporting on the Hospital Compare website started reporting readmissions to hospital for heart failure, pneumonia, and acute myocardial infarction discharges along with the hospital mortality rates for these conditions that had been previously reported.4

As required by the Patient Protection and Affordable Care Act (ACA) this will result in monetary penalties for hospitals with higher than expected readmission rates for specific discharge diagnoses. Beginning in 2012, hospitals with the worst performance on readmission of hospital discharges for the above three conditions will face a reduction in total Medicare reimbursement. In 2015, the reductions will be more significant and other conditions will be added, including chronic obstructive pulmonary disease and several cardiovascular surgical procedures and vascular conditions.

While the focus of the ACA is hospitals, and to some extent physicians who manage patients during and after the hospital stay, 50 percent of the patients receiving post-acute care in 2008 were admitted to SNFs.5 In addition, pneumonia and heart failure were two of the most prevalent admitting diagnoses to SNFs, representing 3.6 percent and 4 percent, respectively, of SNF admissions in 2008. With the rising rate of hospital discharges to SNFs and the increasing complexity of SNF admissions, readmissions to hospital from nursing homes is a major issue for hospitals. The result is that preventing hospital readmissions is becoming a major focus of nursing home performance efforts.

Increasing this emphasis is the Value-Based Purchasing Demonstration for Nursing Homes that is also aimed at reducing readmissions to hospital. In this demonstration, the most heavily weighted performance measures are rates of readmission for short-stay admissions to nursing homes, and hospital admission rates for long-stay nursing home residents. In fact, the cost savings that will be gained by reducing admission to hospitals are the proposed source for the incentive pool that will be used to pay for improved nursing home performance.

These pressures on nursing homes to reduce hospitalization have always been present in Medicare-risk managed care environments, but not in the traditional Medicare program. The potential for financial loss or gain associated with hospital use under capitation has always created incentives for managed care organizations to reduce hospital readmission from nursing homes.

With all these policies, however, nursing homes may well find themselves challenged to reduce readmissions to the hospital for short-stay patients, and the frequency of admissions for long-stay residents. Nursing homes that choose to compete for higher reimbursed Medicare patients and participate in Accountable Care Organizations (ACOs) will be compelled to demonstrate their performance in this regard.

4 www.hospitalcompare.hhs.gov/hospital-search.aspx
5 American Health Care Association and Alliance for Quality Nursing Home Care. 2010 Annual Quality Report.
The Challenges That Nursing Homes Face

**MEASURING PERFORMANCE BASED ON READMISSION TO HOSPITAL**

In the hospital sector, the initial focus was on developing a standardized approach to measuring performance based on readmission of hospital discharges. The current measure for hospitals is the rate at which patients discharged from hospitals are readmitted in a 30-day time period.

In comparing readmission rates among hospitals and creating financial incentives to reduce readmissions, a major problem is that the risk of readmission among discharged patients varies considerably. If this differential risk is not taken into consideration, rates cannot be compared across hospitals. In fact, as found in the early releases of hospital mortality rates, those hospitals that treat the most acute and complex patients generally have higher unadjusted readmission rates. And not surprisingly, those hospitals that are best equipped and highest quality often admit the most complex patients, leading to higher mortality and readmission rates.

Condition-specific performance measures have been used in the hospital sector in order to control for differences in readmission risk for patients with different conditions. The rates of readmission differ for patients with different conditions, and the comorbid diseases that increase the readmission risk for one condition differ from those that increase the risk for another condition. Thus, the measures on Hospital Compare are stratified by patient condition (i.e., heart failure, pneumonia, acute myocardial infarction), and then they are risk-standardized differently for each discharge diagnosis in order to make valid comparisons across settings.6, 7, 8 By risk standardizing these readmission measures, CMS reduces the incentive for hospitals to selectively admit lower risk patients as a strategy to reduce hospital readmissions.

The same rigor as applied in hospitals has to be applied to measurement of readmissions from nursing homes. The measures, however, are different from the nursing home perspective. For example, the denominator for nursing home rates is nursing home admissions, not discharges, since the nursing home admission corresponds to the time of hospital discharge.

In addition, the rate of readmissions to hospital for nursing home admissions is highest in the first weeks after start of nursing home care and decreases gradually until about 90–100 days, when the rate of readmissions becomes fairly steady (Figure 1). The risk of readmission is not constant in this initial period: it is highest immediately after admission.

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FIGURE 1

SNF DAYS UNTIL REHOSPITALIZATION

to the nursing home and gradually decreases. Thus, within the first 100 days it makes sense to measure the rate at which patient stays end in an admission to a hospital over the total number of admissions.

Once the rate of hospital admissions becomes fairly steady at about 100 days, then the risk of admission is relatively constant for each day. For long-term residents of nursing homes, therefore, the more logical hospital admission measure is the number of admissions to hospital per nursing home day (or 100 days), pooling days across residents. Researchers clearly distinguish between hospitalizations of new admissions and long-stay residents because they reflect different policy and care issues. For these reasons, the value-based purchasing demonstration for nursing homes has separate measures for short- and long-stay residents.

Because nursing home care and hospitalization of nursing home residents is often unrelated to a resident’s primary diagnosis, disease-specific hospitalization measures defined by the hospital discharge diagnosis or primary admitting diagnosis to the nursing home are less appropriate. Rather, the focus in nursing homes is on reducing avoidable admissions. The challenge is to determine whether there are avoidable admissions, how to define them, and how to prevent them.

ARE THERE AVOIDABLE HOSPITAL READMISSIONS FROM NURSING HOMES?

Over the past decade, several different methods have been used to determine the extent to which hospital readmissions from nursing homes are avoidable. Although variability exists in the estimated rates of avoidable hospitalizations, a consensus has emerged that a significant number of readmissions or first-time admissions to hospital are avoidable. In addition, a great deal has been learned about the causes of hospital admissions and the types of nursing home residents at greatest risk.

A structured implicit record review led to the first well-publicized estimate of “appropriateness” of hospital transfers and Emergency Department visits for nursing home residents. This approach involved two physicians conducting a chart review to “rate a transfer or admission appropriate when no lower level of care would suffice to deliver safely the services the resident required.” This study concluded that 40 percent of hospital transfers were “inappropriate,” which increased to 45 percent when advanced directives were taken into consideration. Characteristics of the acute illness, resource needs and availability of services, and the quality of acute care in the nursing home all contributed to reviewer’s determination of the appropriateness of hospital transfers.


Ten years later, a larger and modified structured implicit record review found that 67 percent of hospitalizations were “potentially avoidable.”

The expert panel most commonly cited greater availability of physicians, NPs, and PAs for on-site assessment of acute changes in clinical status of nursing home residents; the need to improve overall care quality for residents with acute changes in condition; and the ability to obtain diagnostic tests and administer intravenous fluids as important in preventing avoidable hospitalizations. They also cited the need to reduce the amount of futile care and improve advance care planning to reduce avoidable hospitalizations.

These studies clearly suggested that a significant portion of hospitalizations could be prevented; however, it should not be inferred that these rates of “inappropriate” or “potentially avoidable” hospitalizations are the actual proportion of hospitalizations that were unnecessary. Retrospective assessment, or hindsight, differs from making the decision of whether or not to hospitalize a nursing home resident in real time.

The studies did provide valuable insight into the causes of readmission and the challenges facing nursing homes. Both studies concluded that the quality of acute care in nursing homes, availability of acute care resources in a nursing home (including MDs or NPs), and the presence of advanced directives were critical determinants of preventing hospitalizations. These are all under the influence of a nursing home and therefore make a strong case that hospital admission rates can be viewed as a performance measure for nursing homes. In the current policy climate, this performance measure has gained importance.

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HOW TO IDENTIFY POTENTIALLY AVOIDABLE HOSPITALIZATIONS AND MEASURE RATES

Other studies have emphasized how to more easily identify potentially preventable hospitalizations using the data available in administrative data sets, rather than through retrospective chart review. One approach was to identify potentially preventable hospitalizations based on Ambulatory Care Sensitive Conditions (ACSCs), for which it is believed that good outpatient care can potentially prevent the need for hospitalization.

These “Prevention Quality Indicators” include potentially preventable hospitalizations for chronic diabetes, respiratory conditions, and circulatory conditions, as well as for acute dehydration, bacterial pneumonia, and urinary tract infections. In 2008, about 17 percent of hospitalizations from all settings (largely the community) were considered potentially preventable because they occurred for one of these conditions. Others have used these or different subsets of ACSCs to identify potentially preventable hospitalizations from nursing homes.

Based on literature related specifically to hospitalization of nursing residents, five conditions were identified as “potentially avoidable” hospitalizations for nursing home residents. These five conditions include hospitalizations for a primary or secondary diagnosis of: heart failure, respiratory infection, urinary tract infection, sepsis, and/or electrolyte imbalance (Table 2).

MedPAC chose to use this rate of potentially avoidable hospitalizations as the basis for their performance measure for SNFs. Extensive study of this measure led to the following conclusions. First, the minimum number of admissions for a stable measure of readmissions was found to be 25 admissions. Second, in nursing homes there was a high correlation among the condition-specific rates so it was determined that they could be validly combined into a single composite measure of readmission for any of the five conditions. Finally, an adequate risk adjustment model was estimated to control for differences in risk of hospitalization between nursing homes and over time in the same home.

The validity of this performance measure is demonstrated in part by the relationship to staffing levels for skilled staff. Higher rates of hospitalization using this measure were shown to be associated with lower nursing home staffing ratios for RN staffing hours and for combined RN, ADON, and DON staffing hours. Also, higher staff turnover for RNs and licensed staff were associated with increased hospitalization using this measure.

Because this measure and these methods have proven to be robust, they are being used for performance measurement in the Nursing Home Value-Based HDR Report.
Purchasing Demonstration by CMS, and by MedPAC to monitor rates of potentially avoidable hospitalizations for nursing homes.

From a clinical perspective, potentially avoidable hospitalizations defined in this manner were never intended to mean that no hospitalizations should occur from nursing homes for these conditions – they are not all preventable. In fact, some patients definitely should be hospitalized for acute treatment of these conditions. Hospitalizations for these conditions are just more likely to be avoidable than hospitalizations for many other conditions, yielding lower hospitalization rates for these conditions with high quality nursing home care. Thus, interventions aimed at reducing hospitalizations for these conditions make sense as a starting place for nursing homes that are trying to reduce hospitalization rates.

**Recommended Approaches to Reducing Avoidable Hospitalizations**

The recent emphasis on care transitions and for hospital discharges for the CMS specified conditions relates largely to primary care and follow-up for the larger number of Medicare patients discharged home, often without any post-acute care. While solutions such as more intensive follow-up after hospital discharge with case management, patient empowerment, improved transfer of patient information, improved communication, and remote monitoring have been successful in these types of transitions, only some of these address the issues that arise in nursing homes. The patients discharged to nursing homes are different in many respects and the systems issues, while sometimes similar, are not identical.

**Preventing readmission from nursing homes requires solutions designed for the SNF population and the nursing home environment.** An important policy issue is the recognition of this distinction and encouragement of interventions that are aimed at reducing readmissions for the more complex and frail patients who are discharged to SNFs. These involve approaches that enhance the capacity of SNFs to provide the necessary services to avoid readmissions. Some approaches are targeted on specific types of patients and others are more global systemic approaches (Box 1).

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**STRATEGIES FOR REDUCING AVOIDABLE HOSPITALIZATIONS**

**Targeted Strategies**
- Disease Management Programs for ACA conditions frequently discharged to SNFs (e.g., heart failure and pneumonia)
- Assessing Patient Risk for Readmission
- Increasing Advanced Care Planning (e.g., MAPP) for those at high mortality risk

**Global Strategies**
- Measuring and Monitoring Risk-Adjusted Rates
- Intervention Toolbox (e.g., INTERACT II)
- Advanced Practice Nurses/Physician Assistants
- Dedicated Physician Coverage Aimed at Managing Acute Decline

**BOX 1**
TARGETED APPROACHES TO REDUCING AVOIDABLE HOSPITALIZATIONS

Given that the ACA will go into effect in 2012, the nursing home sector can demonstrate value in the fee-for-service system by partnering with hospitals to reduce readmissions particularly for patients with pneumonia and heart failure, which represent significant numbers of SNF admissions. This can be accomplished in part with initiatives for management of patients with these two conditions, including specialized programs. The same type of monitoring systems that are used in outpatient settings can be adapted to nursing home care for these conditions.

However, the hospital readmission rates that CMS calculates are not based solely on readmissions for the same diagnosis as the discharge diagnosis. Even when a SNF does a superb job managing heart failure for a patient with this hospital diagnosis related group, if the patient is readmitted for COPD or a fall, then it will count as a readmission for that discharge diagnosis. That is, the rates are for all-cause readmissions among patients with the selected hospital discharge diagnosis.

Thus, while managing pneumonia, heart failure, and acute MI is important, nursing home care still needs to focus on preventing readmissions for any reason. The set of readmission conditions used in the Value-Based Purchasing demonstration is much broader (it does include respiratory infections and heart failure), and is based on both primary and secondary diagnoses, which is more tailored to the nursing home population.

SNF patients are often at risk for readmission due to their multiplicity of diseases, their functional disabilities, and in many cases cognitive deficits. If a targeted strategy is used, therefore, it should go beyond a narrow disease management focus. Such a strategy should involve assessing each patient’s risk for readmission for all causes and identifying the specific sources of risk. Interventions can then be targeted on the patients and patient problems with the greatest risk of readmission. This is still a targeted approach, but it is targeted on patients at highest risk of readmission from SNF and the sources of their risk.

One successful intervention targeted reducing hospitalizations for patients at high risk of death through an intensive intervention related to advanced directives. Site of death in the hospital as opposed to the nursing home has been shown to vary widely and is most strongly associated with presence of Do Not Resuscitate (DNR) or Do Not Hospitalize (DNH) orders. Given that just 32 percent of Medicare SNF patients had DNR orders and 2 percent had DNH orders in one national study, interventions aimed at obtaining advanced directives have the potential to reduce hospitalizations. Although advanced care planning is important for all nursing home residents, this intervention used a targeted approach by screening to identify those at highest risk of death, and then providing intensive discussions and initiating palliative care. This targeted strategy and the tools in this program, termed Making Advanced Planning a Priority (MAPP), markedly reduced hospitalizations among nursing home residents with high mortality risk.


GLOBAL STRATEGIES FOR REDUCING READMISSIONS

An important part of any strategy to reduce readmissions is accurate measurement and monitoring of risk-adjusted hospitalization rates. The above measurement discussion is important from the perspectives of comparing hospital admission rates across nursing homes, tracking rates within a single facility over time, and determining whether interventions are having a favorable effect. All of this requires rigorous measurement methods to ensure that one is not misled by anecdotes or by not controlling for exogenous and endogenous factors. Clearly defining universal readmission measures and methods (e.g. risk adjustment) for nursing homes is a high policy priority if we are going to be able to compare sites and interventions.

With respect to care, the challenge is to effectively intervene before it is too late. The most comprehensive global toolbox that is currently available for reducing hospital admission is Interventions to Reduce Acute Care Transfers, or Interact II.\(^{24}\) Interact II includes communication tools, care paths, advanced care planning tools, and forms for quality improvement. Interact II was found to reduce unadjusted hospitalization rates by 17 percent when used over six months in a collaborative that also involved leadership education, nursing staff education, facility champions, and conference calls.\(^{25}\)

With respect to improving the quality of response to acute illness in nursing homes, many studies have

\(^{24}\) www.interact.geri.u.org

shown the favorable impact of advanced practice nurses.\textsuperscript{26, 27} Even more effective is the use of Geriatric Nurse Practitioners/Physicians Assistants working in collaboration with dedicated and knowledgeable physicians. The Evercare model, with its widespread success in reducing hospitalizations, is one model of such care.\textsuperscript{28} Without the financial incentives under this managed care model, organizations must find creative ways to more fully engage physicians in the care of nursing home residents and fund advanced practice nurses.

**Conclusions**

The imperative for reducing readmissions to hospitals from all settings, and decreasing potentially avoidable hospitalizations for nursing home residents comes from many sources. These include the evolution of hospital policies; the changing relationships between hospitals and nursing homes; new nursing home policies; and most importantly, recognition of the disruption that care transitions cause for residents. Although a decline in nursing home care quality is not the cause of this growing problem; nursing homes can be an important part of the solution. Nursing home operators can see this as an opportunity to bring creative solutions to the table and increase their value. Because this has not in the past been the focus of care in nursing homes, solutions are in the early stages and will substantially improve with experience. While embracing these opportunities, nursing home providers need to balance the resources devoted to this issue with all other aspects of nursing home quality. Nursing home providers must address this challenge while continuing to meet all the needs of short-term residents, such as the provision of effective rehabilitation care, and continuing to enhance care and quality of life for the increasingly complex population of long-term residents.

The use of condition-specific hospital readmission measures that are risk adjusted has important implications for nursing homes. First, the stratification by condition means that nursing homes may be able to specialize in care for patients with selected clinical conditions, and reduce the risk of readmission. Second, the risk adjustment reduces the incentive for nursing homes to admit only lower risk patients as a strategy to demonstrate their value to hospitals by a low rate of readmissions to hospital. Third, these methods set a rigorous standard for measuring hospitalization rates in nursing homes.

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