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Readmission Reduction Strategies for Patients Discharged to Skilled Nursing Facilities:

A Case Study From 2 Hospital Systems in 1 City

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Abstract

Background: Some hospitals seek integration with skilled nursing facilities (SNFs) to reduce readmissions while others focus more on patients discharged home.

Purpose: Our objective was to understand different approaches for readmission reduction for patients discharged to SNFs based on contrasting strategies from 2 competing hospital systems.

Methods: Employing a case study methodology, we compared 1 hospital system that integrated with SNFs to a competing system that did not. We compared interview data from clinical and administrative staff and publicly reported rehospitalization rate changes from the 2 systems.

Results: Analysis of integrating hospital system interviews noted providing patients detailed discharge information and educating SNF staff regarding care protocols. Integrated hospital system all-cause readmission rates declined by nearly 1 percentage point more than the

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nonintegrated hospital system (coefficient, -0.008 ; 95% confidence interval, -0.003 to -0.012) between 2014 and 2017.

Conclusion: As hospitals explore care transition improvements to SNFs, developing more embedded relationships highlights one approach to improve value.

Keywords

discharge; patient transfer; readmission reduction; readmissions; skilled nursing facilities

Reducing rehospitalizations has been a part of the health care agenda since public reporting began in 2009 and intensified when financial penalties started in 2012; these activities represent a new focus on postdischarge care management. Hospitals have approached the issue in a variety of ways, including evidencebased practices, formal integration with post-acute care institutional providers (eg, skilled nursing facilities [SNFs], inpatient rehabilitation facilities, and long-term acute care hospitals), or better matching of patients to the most appropriate discharge location.^{1–4} Value-based payment models, such as bundled payments and accountable care organizations, are also placing more focus on postacute care as a primary mechanism to reduce per capita cost of care in the Medicare population.^{5–9}

In 2017, approximately 20% of hospitalized Medicare fee-for-service beneficiaries were discharged to SNFs, and these patients are at higher risk for rehospitalization.^{10–12} To address the increased rehospitalization risk, some hospitals choose to extend care management to institutional settings through multidisciplinary teams, as shown by Rantz et al with the use of advanced practice registered nurses (APRNs), and/or through preferred networks of SNF providers that promote greater reductions in rehospitalization rates for those patients.^{4,13–16} Other hospitals, for fear of not adhering to Centers for Medicare & Medicaid Services (CMS) choice requirements, provide patients with little information at discharge and choose not to extend care management to institutional settings.^{17,18} Limited evidence exists at the present time to answer how best to manage the care of these patients during hospitalizations and transitions to SNFs. Additionally, little qualitative research has focused on hospital-SNF integration and its potential effect on rehospitalization.

For patients experiencing care transitions, effective integration most often requires greater coordination among caregivers between hospitals and postacute providers. In the case of the hospital-SNF transition, this process may consist of creating consistent discharge instructions, including nurse-to-nurse or even physician-to-physician communications, deploying hospital staff to a SNF or developing an embedded relationship to ease the transition.⁴ A more deeply embedded relationship can lead to greater efforts to focus on education, information transparency, and incentive alignment to enhance the care management process at the bedside. Through this level of coordination, hospitals and SNFs can transform the overall patient experience through mutual trust and accountability.

Rehospitalization risk can also be attributed to community risk factors, such as the proportion of the population never married or the number of general practitioners per capita.¹⁹ As a result, most studies account for community factors by including a zip code, county

level, or even hospital referral region fixed effect to a regression model. To date, no studies offer a direct withinmarket comparison of health system care management approaches.

While prior research has considered macro effects of patient concentration on outcomes, little research describes the micro-level changes within and between organizations and the transformed relationships that may contribute to improved outcomes. Attention to micro-level changes can provide meaningful insight into mechanisms of change that affect outcomes. The case study methodology used in this article focuses on micro-level changes to provide better understanding on how a more embedded approach may be associated with greater reductions in rehospitalization rates. To achieve this, we compared 2 hospital systems in the same city with divergent approaches to postdischarge care management in SNFs. One hospital used a geriatrician, who was part of a 3-person employed geriatric group, as medical director in a SNF to transform care models for their frail, elderly patients. This hospital interacted with and educated the SNF staff on a day-to-day basis. The other hospital did not approach postdischarge care management in the same structured way.

METHODS

This project was part of a broader study investigating changes in hospital-SNF relationships as a result of the Affordable Care Act and its rehospitalization penalties. We used a multiple case study method, visiting 2 hospitals in each of 8 geographically diverse markets across the United States, with at least 40 000 Medicare beneficiaries at the county level.¹⁷ Since our a priori hypothesis was that managed care penetration might influence hospital-SNF integration, we chose 4 sites with Medicare-managed care (MA) penetration above the 30% national average, at that time, and 4 sites with MA penetration below 30%. Site visits occurred from March to October 2015.

Within each site, we chose 1 hospital with a high rehospitalization rate and 1 equivalently sized hospital (based on staffed bed count) with a lower rehospitalization rate. We then chose up to 4 SNFs within the county that received referrals from the hospitals (ie, we targeted 2 SNFs per hospital). We chose 1 SNF per hospital with a high number of referrals from the hospital and 1 SNF per hospital with a low number of referrals from the hospital.

We found that 5 of the 16 hospitals we visited had developed more integrated relationships with SNFs. However, the market studied in this article was the only one where we found a contrast in the care management approach for patients discharged to SNF. As a result, for this article, we focus on findings from 2 competing hospital systems in 1 of the 8 health care markets that indicate contrasting types of care management and SNF engagement styles. We found that 1 hospital system, hereafter referred as the integrated system, employed a small group of geriatricians directing patients to a SNF in which 1 physician acted as the medical director. The competing hospital system, hereafter referred to as the nonintegrated system, did not approach postdischarge care management in such a structured way. These contrasting approaches are reflected in how they conduct their care management strategies and are explored in the qualitative themes identified in the results.

Interviewee recruitment

We were interested in revealing mechanisms of postdischarge care management and highlighting the evolving relationships between hospitals and SNFs. To achieve this, we developed a semistructured interview protocol to guide our qualitative data-gathering process. We recruited and interviewed discharge planners, strategic planning executives, chief medical officers, and hospitalists within the hospitals and administrators, directors of nursing, and admission coordinators in each SNF, yielding 8 total interviews analyzed for this study (of 138 interviews across 8 health care markets). The research team made revisions to the interview protocols based on pilot testing and internal consistency reviews. A more detailed description of instrument development has been previously published.¹⁷ Interviews lasted about 45 minutes and were conducted in-person, whenever possible. Interviews were audio-recorded and transcribed. The Brown University Institutional Review Board approved the study.

Qualitative data analysis

We applied deductive and inductive approaches to the data analysis.²⁰ We devised an initial coding structure based on topics in our interview questions and made modifications to it throughout the analysis to reflect new and emerging data.^{20,21} Interviews were coded by rotating 2-person teams where each member of the team analyzed all interviews by individually reading, coding, and then reconciling coding decisions with the other team member. We organized and managed the reconciled transcripts using the NVivo qualitative software program. After the coding and reconciliation process was completed, the full analysis team discussed emerging themes from the interviews to clarify patterns across interviews.¹⁷

Quantitative data analysis

To illustrate differences in rehospitalization rate reductions, we obtained publicly available all-cause rehospitalization rates for the 1-year period, Q3 2013 to Q2 2014, and the 1-year period, Q3 2016 to Q2 2017. We utilize a difference-in-difference regression analysis to compare the rehospitalization rate change in the integrated hospital to the nonintegrated hospital rehospitalization rate change. Because the hospitals are from the same hospital market, we believe this to be the most appropriate method, as it accounts for time-invariant trends in rehospitalization rates by subtracting the change in readmission rates in integrated hospitals from the concurrent change in the nonintegrated hospitals.^{22,23}

Our model includes an independent variable for whether the hospital was part of the integrated hospital system (1 for integrated and 0 for nonintegrated), an indicator variable for time (0 for the period Q3 2013 to Q2 2014 and 1 for the period Q3 2016 to Q2 2017), and an interaction between those variables. Standard errors are clustered at the hospital level and we employ analytic weights to account for the differences in hospital sizes within the 2 systems.

RESULTS

The publicly reported all-cause, weighted average rehospitalization rate for the integrated hospital system declined by 0.3 percentage points from 15.0%, in the 1-year period from the

third quarter of 2013 through the second quarter of 2014, to 14.7% in the 1-year period measured from the third quarter of 2016 through the second quarter of 2017. Over the same period, the publicly reported all-cause, weighted average rehospitalization rate increased from 13.7% to 14.2% in the nonintegrated hospital system (Figure). The difference-in-difference estimate of the change in the all-cause rehospitalization rate in the integrated hospital system relative to the change in the all-cause rehospitalization rate in the nonintegrated hospital system was -0.8 percentage points (95% confidence interval, -1.2 to -0.3) (Table).

The hospitals in the integrated hospital system experienced rehospitalization rate changes ranging from a 0.3-percentage point increase to a 1.2-percentage point decrease. In the nonintegrated hospital system, the rehospitalization rate changes ranged from an increase of 0.9 percentage points to a decrease of 0.6 percentage points (Figure).

Qualitative themes

The goal of our qualitative interviews was to reveal themes that highlighted patterns in strategies and initiatives that our 2 study hospital systems employed to manage transitions and reduce rehospitalizations between hospital and SNF in the wake of the Affordable Care Act and rehospitalization penalties. We also use the qualitative data to highlight themes across the 2 hospital systems and contrasts between them. Four overarching themes emerged from our qualitative data in comparing the 2 hospital systems within this particular site.

Successful systems of care are enhanced through better relationships and information exchange—Consistent with relational coordination theory,²⁴ a system of shared goals, shared knowledge, and mutual respect can positively affect transitions of care and help to reduce rehospitalizations for patients discharged to SNF. The strategy of the integrated hospital system was to embed an employed geriatrician into the culture of a SNF where the physician acted as the medical director:

We had toyed around with the idea of just going to post-acute rehab facilities and seeing our health system medical group patients, but we found that you can make a higher impact on readmission rate by actually being a presence in the facilities and being a part of staff education and a connection for after hours phone calls—being more than just that face that comes in a couple times a week.

As described, the geriatrician group believed the day-to-day contact with SNF staff would help to build trust, align goals, and open communication channels. This in turn would have a more meaningful and positive effect on the transition to SNF and on the care provided in the facility.

In addition to having a medical director presence in the SNF, the hospital system holds quarterly educational meetings with regional SNFs to keep them apprised of broader health care trends and to share best practices and areas of improvement. The hospital system also implemented case reviews with SNF partners to employ a more micro-focused approach to transitions of care improvements. Finally, the hospital system has biweekly readmission committee meetings to help build mutual respect across organizations by listening to SNF

staff members. These meetings are intended to help build a base of shared knowledge and mutual respect across facilities.

The hospital system is also trying to integrate many of its programs into its educational initiatives. By integrating long-term care into the educational process, their approach to postacute care becomes even more enmeshed into the culture of the organization, as recruitment will often come from the pool of residents training at the hospital system. Because improving patient care and outcomes is one of the primary drivers for these programs, the hospital system has initiated greater contact with patients to understand where transitions (specifically failed transitions) can be improved. The hospital system gathers information from all possible sources, building relationships with physicians, SNFs and other organizations, caregivers, and patients, and iteratively building a better system of care to provide better value to the community.

The nonintegrated hospital system had not sought deeper relationships with SNFs, though was planning to do so: “On an interim we are using more care managers to do more visits and rounding in the nursing facilities and assisted living facilities, at least for those that are assigned and/or have selected a [health system] care physician.” This hospital system had not approached the transitions process with the same level of urgency, or with the same level of focus on integration, tending to seek solutions to follow patients after discharge from one of their system hospitals, but not necessarily building the residual relationships with caregivers inside the postacute organizations.

Approaches to guarantee informed choice are valued but are different between hospitals—Providing choice to patients was an important tenet for both hospital systems. The integrated hospital system, though, provided additional information to patients to help them make an informed choice, letting the patient know an employed geriatrician was the medical director at 1 particular SNF. This strategy has had a remarkable effect on the referral patterns to the SNF: “When I started at [SNF] the number of [health system] patients at this particular building was probably somewhere around 30%, and now we’ve moved up to somewhere around 90%, and it’s purely from the hospital discharge planners knowing that I’m there, the hospitalists knowing I’m there.” Without restricting choice, the hospital system has made it clear how the patient’s care will progress under various scenarios. For an elderly patient, in this case under the care of a geriatrician, the added comfort of knowing they will not be lost in the transition process can help in the overall rehabilitation process and helps the patient make an informed choice.²⁵

The nonintegrated hospital system, while expressing interest in directing patients to a preferred network of SNFs and SNF interest in being part of a network, was prohibited from doing so: “We have tried to develop, for lack of a better term, using kind of payer language, a narrow network with post-acute care facilities, and our legal experts have said we’re not able to do that ... because they are very concerned about the requirement for the patient to feel that they have choice.” In both examples, the patient has the final choice, but the hospital systems differ in their interpretations of how much information is acceptable to provide to the patient.

Early successes can lead to broader implementation of postdischarge care management strategies, while early failure can lead to heightened scrutiny—

Successful programs often have a snowball effect. The integrated hospital system began with a grassroots effort among a group of 3 geriatricians and their high-risk patient pool. While hospital system leadership did not originate the idea, support followed after proven results: “When our service started it actually decreased both length of stay and readmission rates, so that kind of data, especially because of the changes in how hospitals are reimbursed, gets the attention of the administration and shores up support for something like this.” The initial success helped generate support for additional programs related to transitions of care, including a more formal preferred SNF network, an extension of teaching programs, and a greater focus on patients’ transitions from the hospital.

The nonintegrated hospital system attempted but failed to implement a model to extend patient care management to the SNFs. An effort to revive the program under a slightly modified structure is now subject to extensive financial review. Both hospitals began with similar ideas to extend care management to the SNF setting. The difference in implementation led them on divergent paths.

Critical mass of volume at a SNF is essential for success—The integrated hospital system’s geriatricians had originally targeted certain SNFs based on historic referral patterns and eventually chose one as a starting point in which to serve as medical director, rather than the model of following health system patients in many SNFs. They recognized the effectiveness of narrowing the scope of care management to a preferred set of facilities and, to ensure scale within the facilities, starting with facilities where the system hospitals have historically sent patients. Without scale, the hospital system would have had a difficult time justifying the expense for the level of integration with the staff desired by the geriatricians: “We have chosen the facilities that we are medical directors in according to the highest discharge numbers from each of the hospitals and then approach the [SNFs] saying we would love to have a medical director in your building.” As a result of the program’s success, the hospital system is exploring a more formalized preferred SNF network with several of the SNF companies in the city.

In contrast, as previously described, the nonintegrated hospital had previously attempted a strategy to extend care management to patients discharged to SNF by just seeing its own hospital system patients. The program was abandoned, as they did not have the critical mass of patients at many facilities:

I think it has to do with the structure of the program, and our physicians were only seeing [health system] patients, so if they were at a facility, we might only have 4 or 5 people there ... My understanding of a lot of programs is they contract with the facility and they see almost everybody, so that is much more efficient ... I think we need to limit it to a few facilities where we tend to have a lot of people. Otherwise somebody is just driving around all day. They don’t really develop the relationships with the staff.

Both hospital systems attempted models to follow patients in the SNF. One hospital system focused on a select network of facilities and deepening the relationships within the facilities.

Because the other hospital system focused on hospital system patients only and never achieved the critical mass necessary to justify the program, it did not reap benefits associated with a more integrated approach.

DISCUSSION

We studied 2 competing hospital systems in the same city to compare their divergent approaches to SNF integration. We found that the hospital system with a more deliberate approach to SNF integration experienced greater reductions in rehospitalization rates for patients compared with the competing hospital system that did not focus on greater SNF integration. In fact, the competing hospital system that did not focus on greater SNF integration experienced an overall increase in their weighted average rehospitalization rate. The integrated hospital system focused on the most vulnerable patients at the highest risk of rehospitalization, resulting in an overall reduction in all-cause rehospitalization rates within the entire hospital system.

Consistent with current models such as the Missouri Quality Initiative for Nursing Homes that utilizes APRNs to improve care through partnerships with nursing homes, the hospital system that pursued SNF integration recognized the positive effects of stronger relationships with SNF partners, embedding a geriatrician, rather than an APRN, in select facilities to serve as medical director.^{14–16} It also realized the necessity of scale, starting the process by approaching SNFs where the hospital system had historically sent a high volume of patients. Finally, the geriatric group employed by the hospital system recognized the necessity of including SNFs in their postdischarge care management approach, given the greater complexity and higher risk profile of their patients.

These findings are consistent with prior research showing greater reductions in readmission rates in hospitals that had developed preferred SNF networks and/or concentrated referrals to a fewer number of facilities.^{4,13} While the nonintegrated hospital system attempted to extend care management of its hospital system patients in SNF, it did not limit its efforts to high-volume facilities, partially because it felt it was not legally allowed to create narrow networks or provide patients with information about that hospital; therefore, it did not achieve the scale necessary to make the program financially viable or have any demonstrable effect on SNF length of stay or readmission rates.

Alternatively, the hospital system that integrated SNFs recognized the effect of the network, but more importantly, the benefits of relational coordination: shared goals, shared knowledge, and mutual respect. Postacute care was integrated into the discharge process through a readiness checklist and into medical resident education. The hospital system also recognized the need to involve patients in the process by instituting a readmission questionnaire. Success of the program led to additional funding and expansion and helped to justify additional programs related to transitions and postdischarge care management.

Many health systems are seeking solutions to postacute care management. We combined qualitative and quantitative data to highlight the positive influence of a more integrated approach to improve quality for high-risk patients discharged to SNFs. As shown in our

comparison, solutions require organizational buy-in and alignment and effective implementation to succeed. Further, the solutions described do not require significant capital investment, but rather additional time and focus to share information and attain goal alignment. This study highlights the importance of integration among caregivers in the process of transitioning patients along the continuum of care from hospital to postacute. Future research may include more rigorous study of specific interventions to improve care transitions for patients discharged to SNFs.

Limitations

While our in-depth case study allows us to assess micro-level differences in approach to SNF integration between 2 hospital systems in the same city, our study has several limitations. First, we were limited to 2 hospital systems in 1 city, so our findings may not be generalizable. However, our findings are consistent with prior research, including the larger study of which this case was a part. They also provide a unique natural experiment of contrasting approaches to patient management. Further, focusing on 1 city removes any between-market differences. Second, our findings are based on a limited number of qualitative interviews and are possibly subject to self-selection bias, the perceptions, and experiences of the individuals participating and how they interpreted the questions asked. While we were not asking about individual opinions, but rather hospital system initiatives, responses were consistent across interviewees. Third, there was a difference in the baseline rehospitalization rates across the 2 hospital systems, so the nonintegrated hospital system may have lacked the motivation to change. However, interviews indicated the hospital system did have a desire to follow their patients more closely in SNFs, but the execution of their strategy led them to abandon the program. Fourth, the changes in rehospitalizations are for all hospital patients, whereas the intervention was specific to patients discharged to SNFs, so there may have been additional readmission reduction programs implemented at the hospitals. Finally, given the nature of the research methods, we are unable to directly attribute changes in care management practices to reductions in rehospitalization rates, and, therefore, we are unable to make any causal inferences.

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Figure.
Rehospitalization rate changes.

Table.

Difference-in-Difference Analysis: Rehospitalization Rate Changes at Integrated Hospitals Compared to Nonintegrated Hospitals^a

Variables	Coefficient	SE ^b	P Value
System	0.0125	0.0022	<.001
Time	0.0049	0.0008	<.001
System × time	− 0.0077	0.0021	.005
Constant	0.1378	0.0016	<.001
Observations	20		

^aFrom CMS-reported readmission rates accessed through <https://whynotthebest.org/>

^bStandard errors (SE) clustered at the hospital level. Analytic weights applied based on number of staffed beds at each hospital.