

Improving Care Transitions And Reducing Acute Care Hospitalizations

New Jersey Care Transitions Project Home Health Experience

Authors: **Ya-ping Su**, PhD, Director, Research & Analytic Services, Healthcare Quality Strategies, Inc. (HQSI); **Andrew Miller**, MD, MPH, Director, Physician Services, HQSI; **Judith Miller**, MS, RN, Quality Improvement Specialist, HQSI; **Leah Kamin**, BA, Quality Improvement Analyst, HQSI; **Sai Loganathan**, PhD, Quality Improvement Analyst, HQSI; **Sandra Bennis**, RN, BSN, MBA, AVP/Executive Director, Virtua Home Care; **Gregory Busch**, DO, MS, Medical Director, Virtua Post Acute Services; **Kathleen Flannery**, BSN, RN, Administrator, Kennedy Home Health Care

Reducing hospital readmissions has been a focus of health care reform discussions as a way to improve quality and control costs. During 2005, almost 20% of all hospital stays for Medicare patients resulted in a readmission within 30 days and as many as 75.6% of these 30-day readmissions were considered preventable.^{1,2} The cost of potentially avoidable readmissions amounted to \$12 billion in Medicare spending in 2005.³ Since readmissions are sometimes the result of poorly coordinated patient care, new delivery models that improve patient-centered care and promote patient education are essential.

Formal home health care can be a frontline defense in reducing unnecessary acute and emergent care utilization by working with patients after they leave the hospital to manage and reconcile their medications, help understand warning signs and symptoms, and ensure that discharge instructions are properly followed. This article highlights two different strategies in the home health arena – one cutting edge and the other more traditional. Both have reduced readmissions and/or emergent care. The first is an adaptation of the Transitional Care Model (TCM) by Mary D. Naylor, PhD, FAAN, RN, in community home health agencies (HHAs), while the second is a more traditional intervention (consistent vigilance to reinforce existing policies: emphasize front-loading visits, improve medication management, and use risk assessment tools).

“Medicare is the largest payer of home health services in the United States. According to one study, in 2004, 50% of Medicare patients receiving those services began receiving them within 14 days after a hospital stay.⁷ The remaining 50% of them were referred from skilled nursing facilities, inpatient rehabilitation, other HHAs, hospice, or after receiving no prior institutional health services.”

Background

Under the Centers for Medicare & Medicaid Services’ (CMS’) Ninth Scope of Work, 14 Quality Improvement Organizations (QIOs) nationwide were funded to improve patient care transitions and quality of care and reduce unnecessary hospital readmissions through comprehensive community efforts. Healthcare Quality Strategies, Inc., (HQSI) was selected to participate in this initiative, which began on August 1, 2008. *The New Jersey Care Transitions Project* (NJCTP) community includes 44 ZIP Codes in southwestern New Jersey, across the Del-

aware River from Philadelphia, Pennsylvania. In 2008, approximately 100,000 Medicare beneficiaries were residing in this community, accounting for approximately 23,000 Medicare inpatient discharges per year, with a 19.6% all-cause, 30-day readmission rate. Eighty-five percent of the beneficiaries were white, 11% were black, and other races accounted for 4% of the population.⁴ These patients faced similar care transitions issues as identified in previous studies: a lack of adherence to post-discharge instructions, knowledge deficits, and medication errors that can result in preventable re-hospitalizations.^{5,6} In particular, medication errors and discrepancies after discharge are common and can threaten a patient’s safety. A study by Moore et al. found that half of patients discharged from an inpatient setting to an outpatient setting had at least one medication error.⁶

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The Role Of Home Health

Providing services in the patient's home offers a unique opportunity to educate patients to play a greater role in their own healthcare. In an effort to capitalize on the potential of home health care services to improve patient transitions, HQSI recruited all HHAs in the community. This article highlights the successful interventions from HHAs that are a part of the two health systems, Virtua and Kennedy.

HQSI employed both individual consultative and collaborative approaches. HHAs were instructed to select interventions from a change package created by HQSI that included home health interventions targeting patient/caregiver education, admission to home health following hospital discharge, advance care planning, disease management, discharge planning, multidisciplinary staff education, and cross-provider education. The change package also included a portfolio of Best Practice Intervention Packages (BPIPs) developed by the 2007 Home Health Quality Improvement National Campaign.⁸

In addition to the utilization of change packages, HQSI encouraged the HHAs to implement interventions that provide individualized patient education and engagement, such as the Care Transitions Intervention (CTI) coaching model⁹ and the TCM. Both models have shown that empowering and educating patients to better understand and manage their diseases, symptoms, and medications improved patient outcomes and reduced their risk of re-hospitalization.^{2,6} Virtua's HHAs adopted and implemented a variant of the TCM during 2009. Another HHA in the community began implementing the TCM with minimal changes in 2010. The TCM targets cognitively intact older adults with two or more risk factors, such as a history of recent hospitalizations, multiple chronic conditions or medications, and poor self-health ratings. Patients receiving services in TCM programs are generally sicker than those

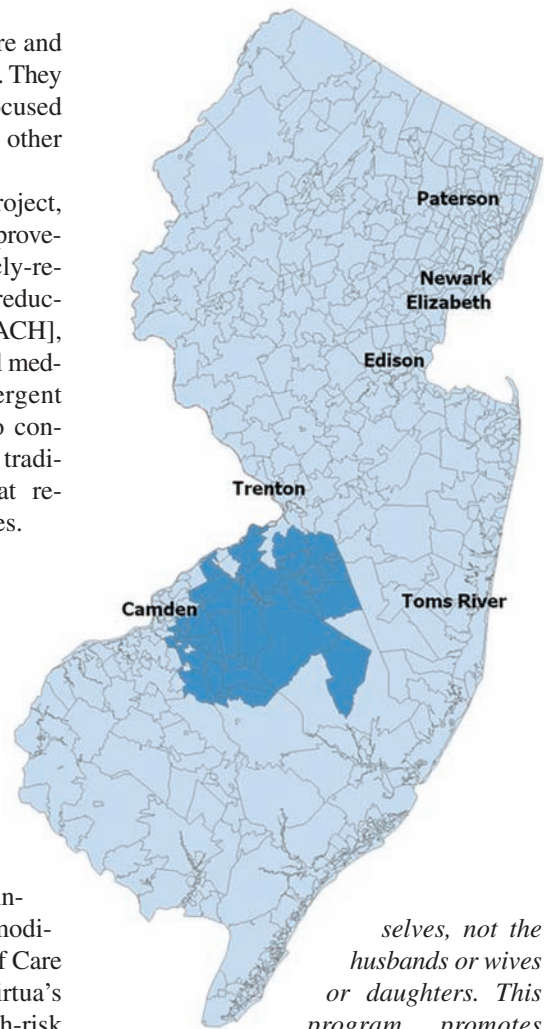
discharged home without home care and are afflicted with chronic conditions. They require more personalized and focused nursing care than those targeted by other models, such as CTI.

During the first year of the project, two-thirds of the HHAs showed improvement in at least one of three publicly-reported quality measures (rate of reduction in acute care hospitalization [ACH], improvement in management of oral medications, and reduction of emergent care).¹⁰ This article highlights two contrasting (new and cutting edge vs. traditional) intervention strategies that reduced ACH and emergent care rates.

HHA Success #1: Cutting Edge Multi-Faceted Approach With Adaptation Of TCM

As part of the NJCTP, HQSI assisted the two Virtua HHAs in adopting a variant of the TCM developed by Dr. Mary Naylor and her team at the University of Pennsylvania School of Nursing. This modified TCM was named Transitions of Care Program (TCP), and it expanded Virtua's basic ACH program to target high-risk patients with high acute care readmission histories. The TCP was one of the HHAs' multi-faceted approaches to further reduce their ACH rate. The others included a 40-unit telemonitoring program and a new chronic navigation program to help patients schedule appointments and tests after they've been discharged. Virtua's effort in reducing ACH rates is best summarized by the agencies' Director of Quality:

"Reducing ACH is the overarching concept, and each of the programs is a pillar. Each of the three pillars is an intervention for certain groups of patients. The Transitional Care Program is geared to patients who are willing and able to learn how to manage their chronic conditions. We work with the patients them-



selves, not the husbands or wives or daughters. This program promotes self-management."

At first, the three approaches – telemonitoring, chronic navigation, and TCP – operated separately, although all complemented the already existing program to prevent ACH. Since the establishment of a care transitions committee, an effort has been made to link these approaches and to have them be recognized by staff as having one goal: *keeping the patient at home.*

One of the major goals of the TCP was to evaluate the *feasibility, sustainability, and effectiveness* of the TCM in an HHA setting, with services that meet the criteria for Medicare reimbursement.

Transitional Care Model (TCM). The standard protocol of the TCM intervention starts with screening patients

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prior to discharge from hospitals. The screening includes selecting beneficiaries on multiple criteria, such as those who are cognitively intact, or have multiple chronic conditions, a history of frequent hospitalizations, or a poor self-health rating.

At the core of the Naylor TCM intervention is the intent to provide customized care to patients using evidence-based guidelines and protocols. Within 24 hours of the patient's enrollment into the program, the Transitional Care Nurse (TCN) visits the patient at bedside in the hospital. During the visit, the TCN performs a comprehensive assessment utilizing designated assessment tools, collaborates with the medical staff to coordinate inpatient care, and creates a streamlined care plan for post-discharge follow-up that incorporates the patient's goals. After discharge, the TCN visits the patient at home within 24 to 48 hours. During the first month, the TCN visits the patient once a week and then bi-monthly thereafter. The TCN contacts the patient by telephone in the weeks without a home visit. During the first visit and subsequent visits, the TCN provides the patient with a personalized emergency care plan, reinforces the skills needed to detect and manage symptoms, encourages and guides the patient to make timely physician follow-up appointments, and prepares him/her for the physician visit by generating a list of questions for the physician. On the day of the scheduled physician visit, the TCN accompanies the patient to the visit. During the visit, the TCN helps the patient obtain answers for his/her queries and aids the physician in ascertaining the details of the care provided while the patient was at the hospital. At the end of the program, the TCN helps the patient make a smooth transition to self-sustainability by keeping in constant contact, so that progress is made toward the patient's self-management goals and, when necessary, helping the patient receive services such as hospice and palliative care, assisted living, and other community-based services.

Adapting the TCM. To enable Virtua to maintain financial feasibility and sustainability under the current FFS reim-

bursement environment, key alterations were made to the standard protocol of the TCM intervention. Administrators were frank about their agencies' limitations when they met with HQSI and Dr. Naylor. One administrator said, "*In working with Dr. Naylor, we had to figure out how to do this in real life and real time. We needed to remain budget neutral and be practical.*" Dr. Naylor and her team helped the agencies to develop a revised version of the TCM. Instead of an advanced practice nurse, as described in the TCM, the agencies chose two baccalaureate-prepared nurses with backgrounds in cardiac care and home health. Shortly afterward, they hired two additional experienced home health nurses. The Naylor team helped the agency train the four nurses, who performed medication reconciliation, helped patients manage their medications, and taught patients about the warning signs that might send them back to the hospital, as in the original TCM.

The HHAs' intake coordinators at the hospitals screened potential patients in concurrence with the case managers. In addition to applying the TCM screening criteria, the HHAs limited their selection based on patients' geographic locations and targeted specific conditions: pneumonia, heart failure (HF), chronic obstructive pulmonary disease (COPD), and diabetes – four of the prime causes of readmission. In 2008, the 30-day readmission rates for patients with these diseases were significantly higher than the general population in the NJCTP community (23.79% compared to 19.43%).⁴

Although an initial hospital visit is part of the standard model, the TCP nurses do not visit the patient in the hospital before discharge. Since the majority of referrals are from hospitals belonging to the same health system as the HHAs, coordination between the agencies and the hospitals was expected to be more effective, thus diminishing the negative impact of deviating from the standard TCM. Moreover, the HHAs found that the initial hospital visit did not have the expected impact as patients were usually too ill and/or tired and anxious to effectively absorb information provid-

ed to them before discharge. The alterations to the visit schedule helped keep costs at a sustainable level. The TCP nurses do not accompany the patients to their physician follow-up visits as required by the TCM protocol because this is not a reimbursable home health benefit. However, the TCP nurses guide the patients in scheduling and preparing for their physician follow-up visits within seven to 14 days after discharge from the hospital.

Results. As of January 2011, 98 patients were enrolled in the TCP. HQSI conducted an analysis of Medicare claims, which only included data for patients with a hospitalization prior to enrollment in the program and who were enrolled by November 30, 2010 (N=81). Preliminary results of the TCP have demonstrated some success in slowing the revolving door of hospital readmissions through better management of patient care using a TCP home health nurse. Such a model can be considered by other HHAs.

Key improvements were shown in the following areas:

- The 30-day re-hospitalization rates for TCP have declined gradually over time (**Figure 1**), which can indicate the successful implementation of the program. Compared to patients enrolled during 2009, when the TCP was first introduced, 30-day re-hospitalization rates for the same quarters of 2010 showed a notable decrease from 30.0% in Q3 2009 to 13.3% in Q3 2010, and from 33.3% in Q4 2009 to 16.7% in Q4 2010 (Oct – Nov data). The linear trend presented in Figure 1 indicates a high R-squared value of 0.72 with statistically significant secular decreasing trending (Pearson correlation Coefficient: 0.83, p-value <0.0001)

- A comparison of the 30-day all-cause re-hospitalization rates showed that patients with HF enrolled in the TCP have lower re-hospitalization rates compared to HF patients discharged from the referring system hospitals and all HF patients receiving home health care services in the NJCTP community (**Figure 2**). However, this is not statistically significant due to the small number of HF patients in the program.

HHA Success #2: Going Back To The Basics

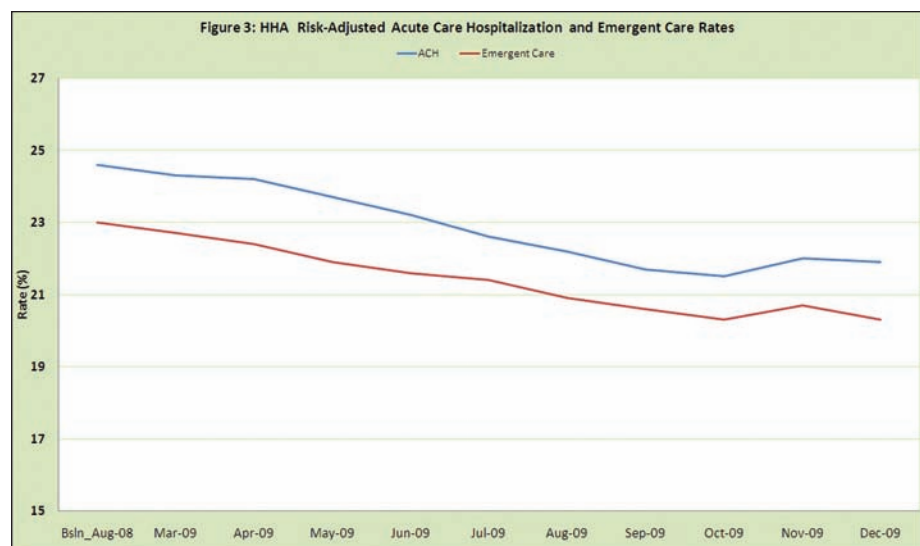
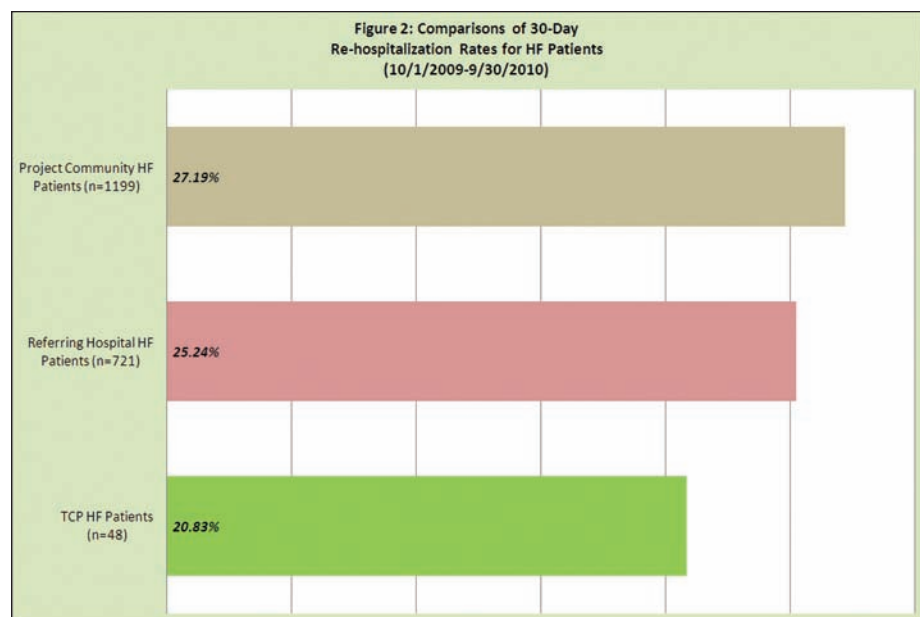
Kennedy Home Health Care took a more traditional evidence-based approach to reducing ACH rates. The HHA consistently reinforced existing policies: promoting front-loading of visits, improving medication management processes, and utilizing risk assessment tools. This well-rounded approach led to a continuous declining trend in hospital utilization, increases in front-loading visits, and improved oral medication management.

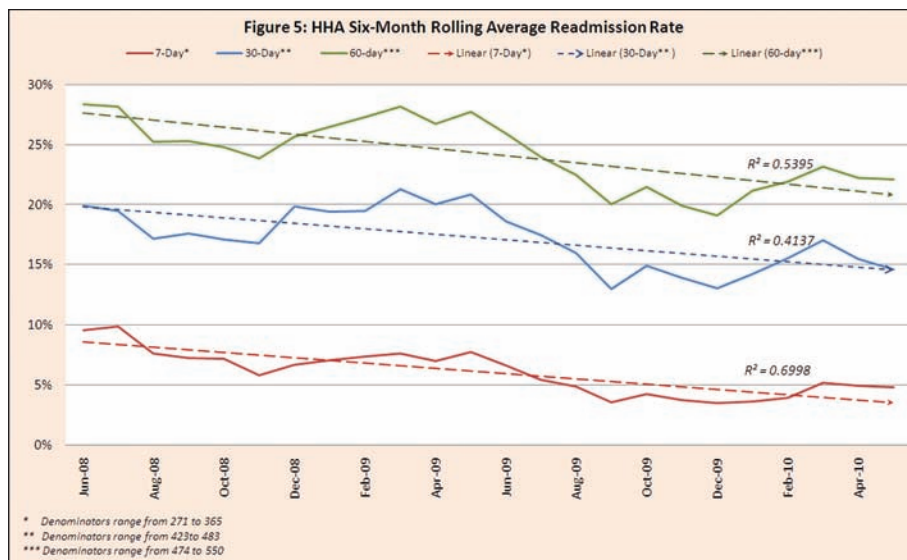
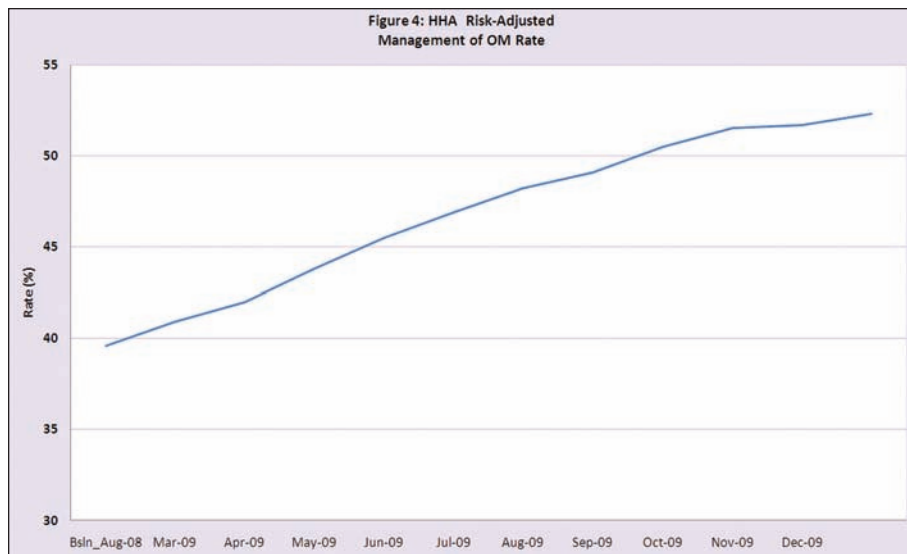
The HHA conducted a root cause analysis by reviewing the charts of patients who had recently been re-hospitalized. The reviews showed that in many cases where a readmission might have been considered preventable, a care plan reassessment or revision was missing. Essentially, care plans were not being revised as the patient's situation changed. In some cases, the nursing assessment was missing altogether. As a result, the nurses whose documentation was found to be deficient received targeted education and retraining. This ensured clear accountability and re-education of those most in need.

The agency expended effort emphasizing, reinforcing, and revising its medication management and reconciliation process. New oral medication (OM) processes focused on assessing a patient's ability to manage his/her OMs, completing a reconciled medication list, and developing a medication education plan based on a patient's risk of re-hospitalization. The HHA introduced a modified OM screen in its electronic medical record system and a linked assessment of a patient's ability to manage OMs and whether he/she is at high risk for re-hospitalization.

The HHA utilizes risk assessments to identify patients at high risk for re-hospitalization. One of the risk assessment tools adapted and utilized is the *Professional Practice Model*, developed by Personal Touch Home Care and At Home Care. This risk assessment is also used to guide patient education and to develop an initial care plan. Front-loading of visits (i.e., visiting the patient's home

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- The ACH rate declined from 24.6% to 21.9% (**Figure 3**).
- The emergent care rate, reported on Home Health Compare, declined from 23.0 % to 20.3% (**Figure 3**).
- OM management, reported on Home Health Compare, improved from 39.6% to 52.3% (**Figure 4**).
- One year after baseline (Mar-Aug 2008), readmission rates at 7 and 30 days for Mar-Aug 2009 had decreased from 7.62% to 4.87% and 17.17% to 15.97% respectively (absolute decrease of 2.75% and 1.20%, respectively) (**Figure 5**).
- The HHA’s 7-day, 30-day, and 60-day readmission rates consistently declined over the project period through April 2010 (Pearson Correlation Coefficients: -0.840, p-value <.0001, -0.643, p-value <.0007, and -0.734, p-value <.0001, respectively).

These improvements are clinically and economically important in the current environment of health care reform and cost cutting. *The interventions implemented by the HHA successfully improved the initial transition from the hospital to the home by getting a home health nurse to the home early, focusing on medication management and reconciliation processes, performing risk assessments, and targeting education to the home health nurses most in need.*

Conclusion

Frail and elderly patients with frequent hospitalizations, chronic illnesses, and inadequate social support systems are particularly vulnerable to readmission. Virtua’s TCP, combined with telemonitoring and a chronic navigation program, effectively targets patient populations that are at the highest risk of hospitalization. The TCP provides customized care to patients using evidence-based guidelines and protocols and incorporates patients’ goals into the care plan. The program helps patients make a smooth transition to self-management. Since

shortly after hospital discharge and with greater frequency in the beginning) is emphasized for all patients but particularly stressed for those patients at highest risk for re-hospitalization. Front-loading of visits allows clinicians to identify potential issues early and address them before they become serious enough for the patient to need re-hospitalization. Ideally, patients should have their first home health visit within 48 hours after discharge and sooner if they are a very high-risk case.

In addition to front-loading of visits, medication management/reconciliation interventions, and risk assessment interventions, the HHA implemented programs in other areas, including emer-

gency care plans, phone monitoring, fall prevention programs, utilization of a system-wide universal transfer form, and working with patients to identify red flags.

In order to achieve results, there is a strong need for leadership support. Kathleen Flannery, Administrator, Kennedy Home Health Care, commented, “*Agency leaders must commit time and financial resources for staff education and improvement strategies for medication management.*”

Results. The percent of the HHA Medicare beneficiaries with a claim for home health services within two days of hospital discharge increased from 46.37% to 55.70%.

actual implementation deviated from the standard TCM protocol, the program may not have achieved its maximum quality improvement potential. The lack of an initial hospital visit by the TCN may have limited patients' thorough understanding of the hospital's discharge instructions. The program may have missed an opportunity to ensure seamless transfer of information from hospital to physician, since the TCNs do not accompany patients to their first follow-up visits after discharge. *Expanding the scope of the HHA nurse to provide components of the TCM in a financially sustainable way may reduce risk of readmission for all HHA patients. Encouraging more active physician involvement, especially in prioritizing the first follow-up visit after a patient is discharged from the hospital, could also add to the efforts of reducing avoidable hospitalizations.* Although the HHAs have delivered this service without receiving additional reimbursement, the TCP could be resource intensive and difficult to adopt by other health systems.

The TCP highlights the effectiveness of front-loading visits, home visits by a professional, and using medication management to reduce ACH rates, which were the essence of the intervention strategies implemented by Kennedy Home Health Care. Kennedy utilized existing resources, reinforced and overhauled existing policies, and effectively reduced ACH rates. *This underscores the need to focus on consistent, effective implementation of existing policies and procedures that can lead to significant impact on reducing avoidable readmissions.*

The ability of all HHAs to adequately do their job depends on the quality and amount of information they receive from the referring hospital. It is not uncommon for a patient to be discharged without a clear understanding of his/her discharge instructions or without clear written instructions from the hospital. Often, pertinent information is not provided to the HHA. (e.g., transfer documents are inadequate, medication reconciliation is flawed, or there is little or no direct communication from the hospital on discharge).¹¹ Home health workers are challenged by the difficulties of getting in

touch with the patient's physician at the hospital. In some cases hospitals may not release information because they incorrectly believe it would be a Health Insurance Portability and Accountability Act (HIPAA) violation.⁸ Future HHA strategies might include cross-setting communication interventions to address these barriers.

Under the current health care reform law, readmission rates will soon impact Medicare reimbursements to hospitals. As hospitals try to reduce unnecessary readmissions, they should turn toward HHAs in their communities as one way to prevent readmissions. HHAs can use

their home health experience to focus future efforts in quality improvement. They should ensure that their staffs are adhering to processes and policies to make certain that high-risk patients are identified and that medication management is emphasized. **RR**

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