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Home Health Initiatives Reduce Avoidable Readmissions by Leveraging Innovation

The mission of the Alliance for Home Health Quality and Innovation is to lead and support ***research*** and ***education*** on the value home health care can offer to patients and the evolving U.S. health care system. Working with researchers, key experts and thought leaders, and providers across the spectrum of care, we strive to foster solutions that will improve health care at home through quality and innovation.

The Alliance has compiled a series of case studies to illustrate how many home health care providers are decreasing avoidable hospital readmissions by using innovative programs and technology solutions to manage complex conditions such as heart failure. In each of the following profiles, a home health care provider reduced their acute care hospitalization rates through a strong care management program combined with the use of in-home technologies.[1] Each profile seeks to identify key elements that led to their success.

One of the primary goals of health care reform is to provide better outcomes for patients by including reducing unnecessary hospitalizations. The Affordable Care Act requires the Centers for Medicare and Medicaid Services (CMS) to track unnecessary hospital readmissions and penalize providers for "excess readmissions." The Readmission Reduction Program, which became effective in fiscal year 2013, targets hospitals and applies between a 0.01% and 1% penalty of Medicare revenue, with higher penalties for high rates of heart failure, myocardial infarction (heart attack), and pneumonia. Approximately 2,217 U.S. hospitals may face penalties as high as $280 million.[2] Home health care providers can play a critical role in reducing unnecessary rehospitalizations through better-coordinated care transitions from acute to post-acute care settings.

As many home health agencies continually look for ways to improve patient care, technology has played an increasing role in comprehensive chronic care management programs. Some home health providers use telehealth systems and other technologies to assist in avoiding rehospitalizations and to improve quality of life and patient satisfaction. ❖

How Does CMS Measure the Rate of Acute Care Hospitalization (ACH)?

Until January 2013, CMS measured Acute Care Hospitalization (ACH) through the Outcomes Assessment and Information Set (OASIS) reporting tool. Home health care providers indicated the date that the patient began home health services, the setting where the patient received care before starting home health, and the setting the patient goes to after leaving home health. Using these data points, CMS calculated rates of ACH, tracking when a patient discharged from an acute care hospital into home health returns to the hospital setting. Under current measurements, CMS uses Medicare claims data to determine a home health agency's rate of ACH.

Additionally, home health care providers report a wide range of data through the OASIS reporting tool including: whether clinicians have completed required clinical processes, patient outcomes, and the quality of care. Many of the OASIS measures are made publicly available to patients through Home Health Compare.[3] Home health providers may also voluntarily report their OASIS data to the Home Health Quality Improvement Campaign (HHQI) to measure and track patient outcomes and pursue quality improvement initiatives.[4] It is important to note that ACH rates cannot be compared to 30-day readmission rates due to different data points, endpoints and time periods.

[1] For the purposes of this paper, the term "telehealth" remote patient monitoring systems that allow home healthcare providers to monitor a patient's symptoms and vital signs remotely.

[2] See Amy Boutwell, Time to Get Serious About Hospital Readmission, Health Affairs (Oct. 10, 2012), available online at: http://healthaffairs.org/blog/2012/10/10/time-to-get-serious-about-hospital-readmissions/.

[3] See What is Home Health Compare?, available online at: http://www.medicare.gov/homehealthcompare/About/What-Is-HHC/What-Is-HHC.aspx. For additional information on the various data sources used in Home Health Compare, please visit: http://www.medicare.gov/homehealthcompare/Data/Quality-Measures/Quality-Measures-List.aspx.

[4] See http://www.homehealthquality.org/.

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CASE STUDY

Visiting Nursing Association of Western New York

Home Health Team Improves Care Transitions From Hospital to Home, Reducing Acute Care Hospitalization Rates by 38%

"The program focused on supporting the transition between the hospital and the home using a telehealth program to track patient progress."

BACKGROUND: The Visiting Nursing Association of Western New York (VNA of WNY) is the largest home health agency in Western New York. Founded in 1885, VNA of WNY cares for over 22,000 patients annually with over 400,000 home visits; VNA of WNY has an average of 535 patients on telehealth at any given time. In 2007, VNA of WNY initiated a targeted, comprehensive hospital-to-home program with CARDIOCOM® telehealth monitoring for patients with cardiac conditions including heart failure (HF), hypertension, post coronary artery bypass graft surgery, atrial fibrillation, coronary atherosclerosis, as well as patients with chronic obstructive pulmonary disorder (COPD). The program focused on supporting the transition between the hospital and the home using an appropriate health program to track patient progress. The data collected through telehealth allows VNA of WNY to monitor daily changes, identify those in need of early intervention, and communicate to the managing physician to prevent an unnecessary hospitalization.

RESULTS: Over the course of the program, the VNA of WNY reduced their Acute Care Hospitalization (ACH) rate by 11 points, from 29% in 2005 to 18% in 2008, which represents a 38% improvement from the baseline rate.[1] Patients also reported high satisfaction with the program and indicated that they would highly recommend the program to friends and family. The Centers for Medicare & Medicaid Services (CMS) Patient Experience of Care Surveys for Home Health reported VNA of WNY ratings of 9 – 10 (10 being the highest) at or above the national and New York state benchmarks. Additionally, because of these demonstrated results, VNA of WNY has been able to develop expanded partnerships with private payers.

These partnerships have allowed VNA of WNY to expand the scope of their services and to provide additional disease and telehealth management services to the private payers' patient populations outside of the usual episodes of care and homebound requirements.

Under the new Medicare claims methodology, the overall rate of unplanned hospitalizations was 16% for all VNA of WNY home health patients between October 2011 and September 2012, below the national average of 17% and the New York state average of 18%.[2]

[1] The VNA of WNY used an internal methodology to track ACH rates. The VNA of WNY identified a control group that was not enrolled in the telehealth program compared to the intervention group. The 60-day recertification date or the discharge date triggered inclusion in the study. The VNA of WNY also tracked ACH rates using Strategic Healthcare Programs, LCC. (SHP) processes. SHP tracks patient telehealth information to provide comparison outcomes for Telehealth vs. Non-Telehealth patients. In order for a patient to be "On Telehealth" for outcome reporting, they must have been using a telemonitor for at least 50% of the clinical episode (Start of Care/Resumption of Care to Discharge/Transfer). SHP follows the same risk-adjusted methodology as Home Health Compare. It is important to note that ACH rates cannot be compared to 30-day readmission rates due to different data points, endpoints and time periods.

[2] Data from Medicare Home Health Compare, http://www.medicare.gov/homehealthcompare/search.html.

"If the telehealth data indicates that a patient is at-risk, the clinical team contacts the patient and takes steps to correct their treatment."

PATIENT PROFILE: VNA of WNY targeted a high-risk population of patients with cardiac conditions and COPD. Since the inception of the program, over 6,389 patients have received telehealth services to support the management of their disease.

THE CARE TEAM:

- Home Health Care Clinical Team, including the home health nurse, physical and occupational therapists
- Primary Care Physician
- Telehealth Team, including five Registered Nurses (RNs) and one Licensed Practical Nurse (LPN)

HOW THE VNA OF WNY IMPROVED ACH RATES: The VNA of WNY's care transitions program had several elements that contributed to the reduction in avoidable acute-care hospitalizations: (1) a highly trained telehealth team; and (2) a structured transition and intervention processes based on daily telehealth information.

Smooth Transitions from Hospital to Home: When the hospital discharges a patient from the targeted patient population to VNA of WNY's home health care, the telehealth team installs the telehealth system in the patient's home at the home health admission or Start of Care (SOC).

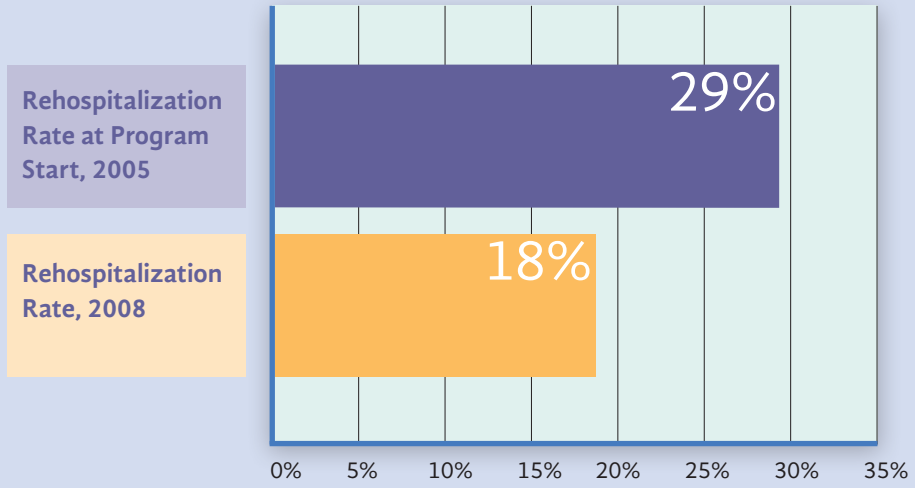
HOW THE CARE TEAM AND TECHNOLOGY WORK TOGETHER: For a typical hypertension patient, the day begins with a telehealth check-in that includes measurement of their weight, blood pressure, and answering health related questions. Less than a minute later, the telehealth team receives the patient's information. The next step is to determine whether the patient is adhering to their medical regime and if their medications and prescribed plan of care are having the desired effect. If there is an issue with a patient's medications or plan of care, the care team works with the patient's physician to make the appropriate adjustments.

Telehealth nurses coordinate communication between patients, the home health field nurse, and the physician. The telehealth system supports patient education by querying patients about their current health status with questions tailored to each patient's diagnosis. The telehealth system also collects key vital sign information such as weight and blood pressure from the patient. The patient begins a daily routine of monitoring their health information and receiving spoken education automatically through the telehealth system based on the questions answered and the patient's disease process. This additional education supplements home health instruction and supports behavior change for the patient. The clinical team uses the data to track signs and symptoms of the patient's progress and to flag any warnings that the patient's disease may be worsening. If the telehealth data indicates that a patient is at-risk, the clinical team contacts the patient and takes steps to correct their treatment.

"Under the new Medicare claims methodology, the overall rate of unplanned hospitalizations was 16% for all VNA of WNY home health patients between October 2011 and September 2012, below the national average of 17% and the New York state average of 18%."[2]

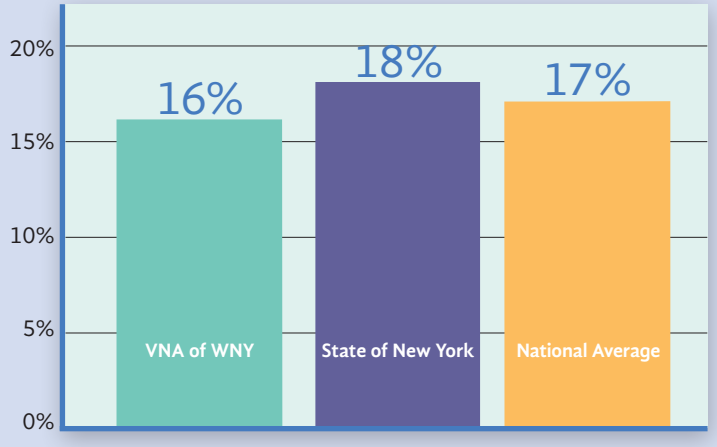
Focus on Accountable Care: VNA of WNY began the program with the goal of reducing preventable acute-care hospitalizations. In order to change the culture of the agency, VNA of WNY set-up a program of accountability at all levels of care. The agency selects clinicians on the telehealth team for their ability to use clinical judgment skills to determine when a patient might need specialized attention. Everyone — from the physician to the home health nurse to the telehealth team — was responsible for the outcomes that were measured and shared system-wide. ❖

Initial Program Impact, VNA of WNY



Overall ACH Rates for VNA of WNY

Oct. 2011 - Sept. 2012 (Home Health Compare)



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CASE STUDY

Norwell Visiting Nurse Association and Hospice

Early Intervention and Patient Education Lead to a Significant Decrease in Acute Care Hospitalizations

BACKGROUND: Norwell VNA and Hospice is an independent nonprofit home health care agency serving Boston's South Shore since 1920. The agency's reputation for providing cost-effective, exceptional services with innovation and integrity has established its position as a regional leader in 21st century home care. Norwell has been named to the HomeCare Elite™ Top Agencies in the country for the last seven years. Norwell has an average daily census of approximately 600 home health care patients.

Beginning in October 2011, Norwell Visiting Nurse Association and Hospice (Norwell) established a task force with a sole focus to prevent unnecessary hospital readmissions. Norwell's care management team focused on early intervention using CARDIOCOM® telehealth technology. Using real-time information received through the telehealth technology, the Norwell program empowered 115 patients (from March through November 2011) with a primary diagnosis of heart failure (HF) to take control of their health through timely and targeted patient education. Since the inception of the program, Norwell has provided telehealth services to support the management of their disease in over 8,300 patient months of service.

"The goal of the program is early intervention, health maintenance and the continued prevention of avoidable acute hospitalization episodes for HF and COPD patients."

RESULTS: Norwell's care management program, combined with telehealth technology, successfully reduced the organization's overall ACH rate in 2011 from 25% to 20% as reported in Home Health Compare. HF patients included in Norwell's telehealth program, ACH rate was 19%.[1] Of the 115 patients in the program, 22 were hospitalized within 30 days and four were discharged to hospice care. The two most prevalent reasons for hospitalization were dyspnea and falls.[2]

Under the new Medicare claims methodology, the overall rate of unplanned hospitalizations was 16% for all Norwell home health patients between October 2011 and September 2012, below the national average of 17% and the Massachusetts state average of 18%.[3]

PATIENT PROFILE: Norwell enters all patients with a history of HF (regardless of whether the diagnosis is primary or secondary) into their care management program. The goal of the program is early intervention, health maintenance and the continued prevention of avoidable acute hospitalization episodes for HF and COPD patients.

[1] Norwell calculated this rate through a manual tracking process where the numerator included HF re-admissions and the denominator included all patients on the HF formal protocol excluding planned admissions. This methodology is non-risk adjusted. Strategic Healthcare Programs, LCC. (SHP) processes patient information for the purpose of providing outcomes data for an agency's patients. SHP data is real time and follows similar methodology of Home Health Compare. It is important to note that ACH rates cannot be compared to 30-day readmission rates due to different data points, endpoints and time periods.

[2] The typical patient hospitalized during the first week of home health care tended to be 88 years old, female, living alone and with a OASIS M1032 Rehospitalization Risk Score of 4.1.

[3] Data from Medicare Home Health Compare, http://www.medicare.gov/homehealthcompare/search.html."

"The Telehealth team includes a Nurse Practitioner (NP), three Registered Nurses (RNs) on a rotating schedule, and one technician to manage the telehealth equipment."

THE CARE TEAM: Norwell's Rehospitalization Task Force is comprised of several different teams, with each focusing on a different area of patient care:

- High-Risk Patients
- Case Management
- Hospital Admissions
- Telehealth
- Palliative Care

The Telehealth team includes a Nurse Practitioner (NP), three Registered Nurses (RNs) on a rotating schedule, and one technician to manage the telehealth equipment. The telehealth team works closely with the home health care team to manage the patient's conditions. The home health team includes the home health nurse, the agency's Medical Director, occupational and physical therapists, case managers, home health aides, nutritionists, and medical social workers.

WHY TARGET HEART FAILURE PATIENTS?

Norwell's program targeted patients with heart failure (HF) because:

- HF patients typically have high rates of re-hospitalization;
- Patients managing chronic disease benefit from education on how to best self-manage their condition at home and with family or personal caregivers;
- A strong chronic care management program including early intervention and patient education has been successful at reducing ACH rates for HF patients in the past; and
- Telehealth monitoring devices capture both subjective and objective information which in turn enables clinicians to track patient health data and intervene if their condition deteriorates. By flagging changes such as weight gain, a clinician caring for a HF patient can surmise that weight gain may indicate fluid retention and signal the need for a change in medication or clinical support.

HOW NORWELL REDUCED AVOIDABLE ACH FOR HF PATIENTS:

There are two foundational elements to Norwell's program: (1) a strong clinical commitment to integrated chronic care management and (2) early intervention using telehealth technology.

Frequent Clinical Contact at the Start of Care: At the start of care, the team's nurse practitioner identifies high-risk patients based on OASIS responses M1032 (Risk for Hospitalization) and M1034 (Patient's Overall Status). Norwell then "front loads" visits for high-risk patients during the first week of care, a strategy that increases the number of interactions between the patient and their home health care team at the beginning of care.

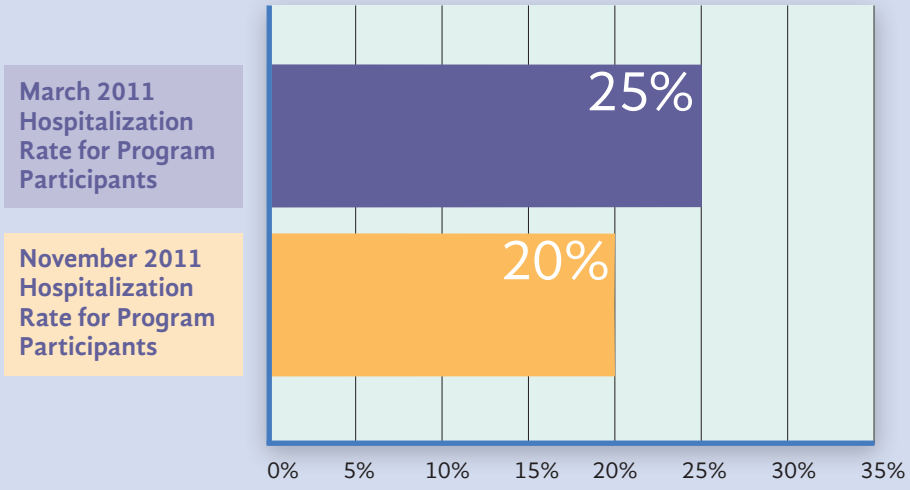
Within twenty-four hours of discharge, the home health team meets with the patient to complete the OASIS assessment, reconcile patient medications, and assess home safety. The home health nurse assesses the patient's readiness to use telehealth technology,

installs the telehealth system if appropriate, and teaches the patient how to use the equipment. After set up, patients measure their vital signs and respond to health status questions that are immediately sent to Norwell's Care Team to determine whether the patient's data warrants further intervention.

Within forty-eight hours, the nurse returns to the patient's home to continue patient education on self-management of their disease. The telehealth system works as a teaching

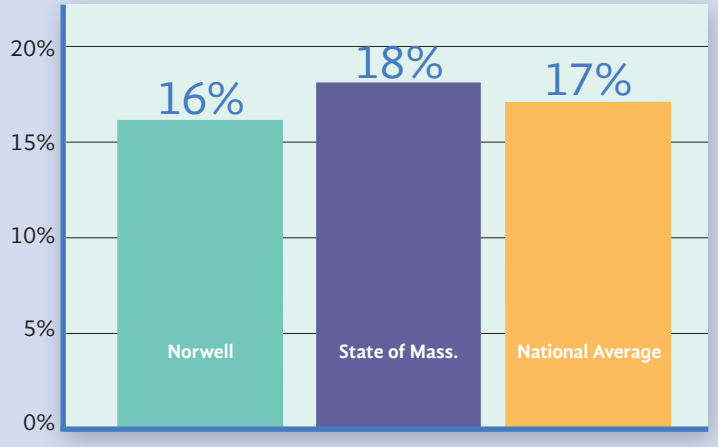
"Under the new Medicare claims methodology, the overall rate of unplanned hospitalizations was 16% for all Norwell home health patients between October 2011 and September 2012, below the national average of 17% and the Massachusetts state average of 18%."[3]

Initial Program Impact, Norwell



Overall ACH Rates for Norwell VNA

Oct. 2011 - Sept. 2012 (Home Health Compare)



"The telehealth system gives staff objective, targeted data to support their clinical decisions, including each patient's vital status information that may indicate when a patient's conditions appear to be worsening."

tool to help the patient recognize the signs and symptoms that may indicate their HF is worsening. For example, it can provide a comparison to the prior day's weight or a physician specified "dry weight." The telehealth system can also provide daily health status assessment and education. Based on the patient's responses, the telehealth equipment helps the patient understand the daily behaviors that influence their health condition and provides data to the clinician to track the patient's progress.

Timely Care Coordination: Throughout the episode of care, the team conducts bi-weekly interdisciplinary case conferences and utilizes the Integrated Chronic Care Model (ICCM).[4] The nurse practitioner leads the case conferences that include all of the patient's clinicians. The team works collaboratively with case managers and physicians to optimize the plan of care and foster self-care behaviors.

The telehealth system gives staff objective, targeted data to support their clinical decisions, including each patient's vital status information that may indicate when a patient's conditions appear to be worsening. If the clinical assessment warrants a change in the plan of care then the physician is contacted or a visit is scheduled. The telehealth technology helps the clinical team focus on at-risk patients and identify signs of worsening health before the patient requires a costly rehospitalization. ❖

[4] See PM Suter, et al., Best practices for heart failure: a focused review, *Home Healthcare Nurse,* (July – August 2012), available online at: http://www.ncbi.nlm.nih.gov/pubmed/22664959.

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CASE STUDY

At Home Healthcare

Managing Disease and Avoiding Unnecessary Acute Care Hospitalizations for High Risk Heart Failure Patients

BACKGROUND: Since 1986, At Home Healthcare has provided home care services to patients and families throughout Texas. Today, At Home has 15 offices located throughout East Texas and Northeast Texas servicing patients and clients in 64 counties. Recognizing the need to improve clinical outcomes for patients with heart failure (HF) and decrease acute care hospitalization (ACH) rates, At Home initiated a CARDIOCOM® telehealth transitions program in May 2011. At Home worked directly with hospital discharge planners to address the need of high-risk patients. Following hospital discharge, the agency identified HF patients who were cognitively functional or had a caregiver who could assist in the use of a telehealth device.

"At Home worked directly with hospital discharge planners to address the need of high-risk patients."

RESULTS: Between 2011 and 2012, the overall ACH rate for the agency decreased from 20% to 18%.[1] Thirty-day rehospitalization rates also decreased. Under the telehealth program, no HF patients were readmitted to the hospital for issues related to HF from May 2011 through the end of 2012. Since the inception of the program, At Home Healthcare has provided telehealth services to help HF patients manage their disease for over 500 patient months of service. At Home is expanding the telehealth program in 2013 to include patients with chronic obstructive pulmonary disease (COPD).

Under the new Medicare claims methodology, the overall rate of unplanned hospitalizations averaged 14.8% for all reported At Home home health patients between October 2011 and September 2012, below the national average of 17% and the Texas state average of 15%.[2]

PATIENT PROFILE: At Home's current program treats any patient with a diagnosis of HF, regardless of whether the diagnosis is primary or secondary. Such patients are selected for the program based on patient choice, cognitive capacity, and physician approval. At any given time, there are approximately 100 HF patients in the program. The agency started their program with a focus on HF patients to develop stronger partnerships with acute-care hospitals to meet the shared goal of reducing avoidable rehospitalizations.

[1] At Home calculated their acute care hospitalization rates using the Home Health Gold analytical software to track outcomes in their telehealth population and non-telehealth population. To determine the rate of hospitalization, the care team enters the start and end dates of telehealth service, and then calculates the outcomes using non-risk adjusted Home Health Compare methodology. It is important to note that ACH rates cannot be compared to 30-day readmission rates due to different data points, endpoints and time periods.

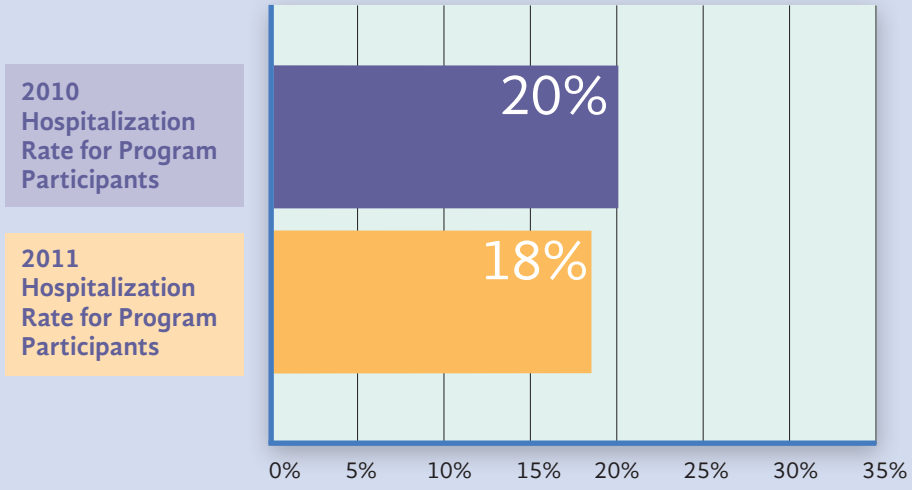
[2] Data from Medicare Home Health Compare, http://www.medicare.gov/homehealthcompare/search.html.

THE CARE TEAM:

- Home Health Care Clinical Team, including the home health nurse, physical and occupational therapists
- Primary Care Physician
- Additional nursing support, including a dedicated telehealth nurse and a team of RNs on rotation

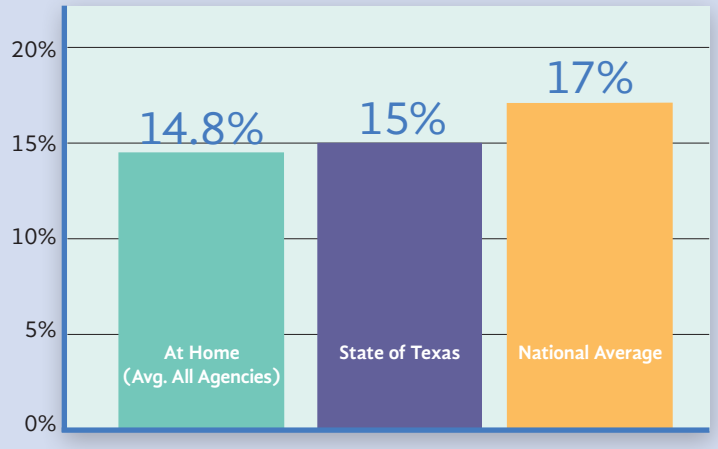
"Under the new Medicare claims methodology, the overall rate of unplanned hospitalizations averaged 14.8% for all reported At Home home health patients between October 2011 and September 2012, below the national average of 17% and the Texas state average of 15%."[2]

Initial Program Impact, At Home Healthcare



Overall ACH Rates for at Home Healthcare

Oct. 2011 - Sept. 2012 (Home Health Compare)



"The agency works closely with their hospital partners to ensure that the patient starts care at home within 24 hours of hospital discharge."

HOW AT HOME IMPROVED ACH RATES FOR HF PATIENTS: At Home credits the reduction in their ACH rates to three factors: (1) structured patient education guides developed by the agency; (2) the development of a care transitions program; and (3) support from the telehealth system.

Patient Education: The first element of At Home's program is the use of structured patient education guides. At Home developed each guide based on clinical evidence with a comprehensive focus on how patients can manage their disease. The guidebooks are written on a sixth grade reading level to remain accessible to a wide range of patients.

For HF patients, the 45-page guidebook explains how the heart works, the role of medication and its side effects, and when to report problems to a nurse. The Home Health Clinical Team uses the guide during their follow up visits to teach patients how to better manage their disease.

Managing Care Transitions Through Early Intervention: The second element of the At Home program is a strong care transitions program. The agency works closely with their hospital partners to ensure that the patient starts care at home within 24 hours of hospital discharge. Upon hospital referral, the home health nurse performs a preadmission screening with each patient and their caregivers via phone. The preadmission screening identifies the patient's needs and concerns prior to beginning post-acute care. The screening also provides an opportunity for patient education using the protocols in the appropriate guidebook. The nurse asks the patient whether they filled their prescriptions, have all their needed supplies, and if they made their follow up physician appointment. If a patient is facing barriers to care, At Home's intake nurses works with the patients to find solutions.

Support from the Telehealth System: The third element of the At Home program is utilizing telehealth. Telehealth bridges the gap in communication between the patient and their health care team. Information on the patient's symptoms and vital signs are relayed to the care team daily. This enables the care team to identify which medications are working, whether the patient is adhering to their treatment plan and if treatment is effective. Telehealth also promotes patient self-care. At Home patients reported they enjoyed having access to their personal data in order to track their successes and see evidence of their improved health. ❖