Best Practices in Managing Patients with Heart Failure Collaborative Case Study

Centura Penrose-St. Francis Hospital
Organizational Profile

Penrose-St. Francis Hospital (PSF) is a full-service 522-bed acute care facility in Colorado Springs, Colorado. PSF is a joint venture of Catholic Health Initiatives and Adventist Health System, and a part of Centura Health, the largest clinically integrated network in the Colorado and western Kansas region. Centura Health includes 17 hospitals, 12 affiliate hospitals, 6 senior living communities, health neighborhoods, community outreach clinics, physician practices and clinics, as well as home care and hospice services. Centura delivers acute care to more than half-a-million individuals each year.

PSF was established in Colorado Springs in 1890 and later became the first radiation cancer treatment center west of the Mississippi. PSF has over 23,000 annual admissions and 104,000 emergency department (ED) visits.

Colorado Springs Cardiology, a cardiology group affiliated with PSF, has 22 physicians, 13 mid-levels, and 4 heart failure (HF) specialists. They treat adult general, interventional, electrophysiology (EP), and structural cardiology, with over 63,000 visits per year.

Executive Summary

PSF has participated in the voluntary Center for Medicare and Medicaid Innovation (CMMI) Bundled Payments for Care Improvement (BPCI) initiative since April 2015, focusing on redesigning the care of congestive heart failure (CHF) patients. The goal of the PSF project has been to redesign HF care within and tailored to a bundled payment reimbursement environment. Strategies toward this goal include intensifying care management, better managing care transitions, reducing 90-day episode costs, reducing readmissions, reducing utilization of skilled nursing facilities (SNFs), and improving quality metrics.

Success was achieved in both these areas from baseline to study period, and further within the study period itself. Readmissions dropped from 47% at baseline to 39% during the study period. Readmission cost per episode decreased from $3,825 at baseline to $2,828 during the study period. SNF average cost per episode went from $3,026 at baseline to $3,790 during the study period.

Program Goals and Measures of Success

The goal of the BPCI Initiative from CMMI is to reduce costs associated with 90-day treatment episodes, through enhanced provider collaboration and care delivery redesign, while maintaining or improving care quality.

In line with those goals, PSF chose two specific goals that are each both financially-based and excellent surrogates for overall CHF clinical quality: readmission rates (90-day all-cause) and SNF utilization. While these measures represent the two biggest opportunities for cost-savings associated with CHF care collaboration and redesign, they also measure the quality and effectiveness in collaboratively provided and redesigned clinical care.

Averting readmission to an acute care facility can only be achieved through sound clinical care, and decrease of SNF utilization is dependent upon coordinating alternative effective treatment in lower levels of care and by moving the patient through the care continuum based on clinical needs rather than benefit allowances.

Initiative success, then, was measured through a combined ability to provide 90-day, all-inclusive episodes of care at a cost lower than three-year historical averages, while maintaining or reducing baseline 90-day all-cause readmission rates and SNF utilization—percent of patients discharged to a SNF, average SNF length of stay (LOS) and average SNF costs. These data are obtained from Medicare claims data (provided through the BPCI program), providing the ability to capture information related to any readmission or SNF, any readmission, and any outpatient treatment (billed to Medicare) no matter where located or how affiliated.

Population Identification

The population for the BPCI-CHF program was the population used for this initiative. The population consisted of patients discharged from PSF with a primary discharge diagnosis of CHF—Medicare Diagnosis Related Group (DRG) 291-293—who have Medicare A/B as their primary insurance. This PSF population has historically averaged 200 patients per year, with an average age of 79.6 years, with 53% being male.
One factor that proved challenging for this population was the fact that inclusion in the program was dependent upon final primary DRG, which is not determined until after discharge. While it is relatively easy to identify patients with CHF, coding complexities in this highly polychronic (average 4.9 chronic comorbidities) group make it challenging to ascertain in advance of discharge which of the patient’s health conditions will emerge as their primary discharge DRG.

Additionally, the fact that average time to final coding for PSF patients was approximately six days post-discharge when the program began, and an important window of opportunity was lost for both pre- and first week post-discharge management of the patients, with implications for both readmissions and SNF utilization. This issue was somewhat resolved in the midst of the study period, with final coding shortened to 1-2 days post discharge.

This patient population was managed in the acute-care setting by an individualized combination of cardiologists (and cardiology extenders), hospitalists (and extenders), and primary care physicians (PCPs). Post-acutely, these patients were managed by individualized combinations of Cardiology, SNF-Medicine, PCP, and other Specialty Medicine: again presenting unique longitudinal management challenges due to their polychronicity.

Most patients received their post-acute care in Colorado Springs or the surrounding PSF catchment area, but under CMMI program guidelines, PSF was also financially responsible for a number of out-of-state patients who had been hospitalized in Colorado Springs while travelling and who returned to their home states for their post-acute care.

## Intervention

As PSF’s two specific goals are derivatives of redesigned care provision and management, multiple strategies were used in an attempt to affect them. These strategies largely flowed from both initial and ongoing multidisciplinary, multi-specialty care redesign teams. Significant care delivery changes included:

- Hiring of a Transitions Care Manager to facilitate transition to SNF, home health, or other outpatient services
- Hiring of a Transition Pharmacist to conduct discharge medication reconciliation and education, perform post-placement medication reconciliation with SNFs, or call patients at home to check for medication procurement and education understanding. The Transition Pharmacist also oversees the Concierge Pharmacy “meds-to-beds” program—providing medications from the hospital’s outpatient pharmacy prior to discharge
- Building and modifying a post-acute patient tracking and recording system using Salesforce CRM software
- Standardizing patient and caregiver education across the care continuum
- Implementing acute-care and outpatient palliative care consultations
- Implementing OP HF Clinic referrals for all indicated patients
- Committing HF Clinic to see ED-diverted and other decompensating patients the next business day and multiple times per week when indicated
- Creating a SNF “preferred provider” panel, continually refined based on performance
- Ensuring collaboration between the Transitions Care Manager and SNFs/Home Health on treatment goals and length of stay
- Establishing care-redesign workgroups
- Initiating a Remote Patient Monitoring program
- Using the hospital’s electronic medical record (EMR) to stratify patients regarding risk of readmission
- Coordinating with SNF-ists when available in select SNFs
- Diverting ED patients to CHF OP Clinic or Observation Unit
- CHF University: education for patients and caregivers

## Outcomes and Results

As the AMGA study period (beginning 2015Q4) lagged six months behind the BPCI initiative start date (2015Q2), many of these care-redesign strategies had already been implemented at the start of the study period. Thus, comparison to the baseline period (all pre-BPCI) is a more accurate or “true” indicator of the effectiveness of these interventions.

Readmissions (90-day all-cause) dropped from 47% (number of readmissions including multiple per patient/number of episodes) at baseline to 39% during the study period (absolute decrease 8%, relative decrease 17%).
Readmission cost per episode (total readmission charges/number of episodes) decreased from $3,825 at baseline to $2,828 during the study period.

SNF utilization measured in average cost per episode (total SNF charges/number of episodes) went from $3,026 at baseline to $3,790 during the study period.

All three of these measures demonstrated downward trends during the study period.

**Lessons Learned and Ongoing Activities**

Both readmission rates and SNF utilization were decreased from baseline to the study period (and within the study period), demonstrating that the care-redesign measures that were implemented during this project were able to significantly affect the cost and quality of care.

Most of the changes are attributed to the Transitions Care Manager, as that position directly affects both the readmission rates and the SNF utilization (which accounted for almost all of the related cost savings to date). It is expected that this would be the same for other chronic disease-state patients being treated within a bundled payment model.

As mentioned, timely patient identification for this model has been problematic but was able to be at least partially resolved. The other major barrier to further success relates to the change in financial paradigm related to success within bundled payment models. Within these models, investments are made to reduce utilization and cost, while in the standard fee-for-service reimbursement model, investments are made to grow volume, utilization, and revenue.
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