Emerging Heart Failure Strategies Improve Outcomes and Reduce Readmissions

Learn how innovative hospitals leverage processes, people and technology to better manage this complex patient population and avoid potential CMS readmission penalties.

BY ELIZABETH HANES, RN

old by the numbers, the story of heart failure startles even experienced health care leadership.

Behind the numbers, of course, are real human beings with serious medical conditions. These patients want and need to avoid hospitalization just as much as their doctors and other care providers want to keep them out of the inpatient setting.

“Historically, heart failure has been one of the least well-managed conditions,” said David Laird, CEO of Heart Hospital of Austin in Texas. “However, we can change that by providing the highest quality of clinical services and by proactively managing readmissions.”

That has been easier said than done.

“Part of the challenge [in managing] heart failure is predicting when these patients will end up in the hospital,” said Kunjan Bhatt, MD, director of heart failure for Austin Heart. “In the past, there has been no good way to anticipate changes in patient status before heart failure symptoms emerge.” And once a patient shows up at the emergency room with fluid in the lungs, doctors are already playing catch-up.
The complexity and magnitude of heart failure’s economic burden has also resulted in a series of financial reform programs from the Centers for Medicare and Medicaid Services (CMS). These programs, called the Hospital Value-Based Purchasing and Readmissions Reduction programs, penalize and sometimes incentivize facilities based on benchmarked mortality and readmission rates, as well as a hospital’s per-patient costs across 30 days of care. Since heart failure has a high ratio of discharges per patient (1.26) over a one-year period, hospitals that cannot effectively manage these patients could carry significant financial risk.

In this environment, technology partners must develop groundbreaking solutions with health care providers focused on reducing the need for costly admissions and readmissions. St. Jude Medical (SJM) is one such company that has pioneered innovations such as the Quadra™ CRT System and CardioMEMSTM HF System, both of which have demonstrated to drastically improve clinical and financial outcomes.5,6,7,9,10,12

“We understand that health care providers are looking for technological breakthroughs that allow them to better manage the complex care of patients and lower the cost and risk associated with treating them,” said Mark Carlson, MD, Chief Medical Officer of St. Jude Medical. “We are focused on partnering with health care providers to search for new ways to meet the growing needs for innovative solutions that truly deliver value through improved care and reduced costs.”

Across the country, hospitals and physician groups are putting together new strategies that combine processes and people with emerging technologies to keep heart failure patients healthy. By partnering with medical technology providers and implementing best practices, health care institutions can create heart failure-focused programs that reduce hospitalizations, readmissions and mortality—programs that may also help providers avoid Medicare readmission penalties.

Create a Heart Failure-Focused Program

When WVU Healthcare in West Virginia began seeing heart failure readmission rates around 40% at the 30-day mark, its leadership decided to tackle the issue head on. The organization, which operates a 531-bed tertiary care center, mounted a renewed effort to improve the management of heart failure patients, with goals to streamline continuity of care and avoid readmissions by using new medical technologies.

“Keeping patient care in mind, we smoothed the transition from inpatient to outpatient by assigning a nurse practitioner to be the patient’s primary point of contact both during and after hospitalization,” said Mary Lynne Withrow, director of WVU Healthcare’s cardiovascular service line. “The nurse practitioner gives clear instructions and facilitates patient interaction on an ongoing basis. This helps the patient feel connected to the care team even after they go home.”

Close communication between patients and caregivers fos-
ters a strong relationship that can lead to improved patient compliance to the prescribed lifestyle modifications. Patients often struggle to modify their diets or quit smoking to avoid exacerbating their heart failure symptoms. Improving continuity of care can lead to better compliance and, in turn, a reduction in readmissions.

“The strategies we put in place resulted in a 50% reduction in 30-day hospital readmission rates. We are now looking to new technologies such as pulmonary artery pressure monitoring [CardioMEMS HF System] to help further reduce 30-day readmissions going forward,” Withrow said.

Heart Hospital of Austin initiated a similar program in late 2014 that, as a first step, combines supportive care with technology solutions to ultimately improve outcomes and reduce readmissions. “The more a patient is hospitalized, the worse the outcomes,” Bhatt said. “We know that and we have always felt we could do better at managing readmissions.”

Streamline Process and Devote Successful Technology to Your Program

As health care strategy moves toward population management, institutions that manage expensive diseases will need to utilize resources that improve patient health outcomes over the long term. For heart failure programs, that means training and devoting the proper staff to managing the high level of hands-on care these patients require—both inside and outside of the care setting.

“We’ve found nursing to be one of the most critical links in this process [of caring for hospitalized heart failure patients],” said Robert Hull, MD, WVU Healthcare’s director of congestive heart failure. “When nurses have achieved heart failure certification and they’re at the front of the patient care effort, they represent highly valuable team members as direct caregivers and patient educators.”

Another integral part of any heart failure-focused program should be the use of the latest medical technology to deliver better patient outcomes while simultaneously reducing costs. Some of today’s medical devices can do just that.

Cardiac resynchronization therapy (CRT), for example, has been critical to managing and even improving symptoms of some of the sickest heart failure patients. Traditional CRT devices lack options in how pacing therapy is delivered, which results in complications that can lead to surgical revision or discontinuation of CRT treatment. In response, SJM developed and introduced the Quadra CRT System that increases pacing options for physicians. Compared with standard bipolar pacemaker technology, this technology has been shown to lower hospitalization costs by 87%, lower hospitalization rates by 53% and achieve an 18% relative reduction in all-cause mortality.7

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Mary Lynne Withrow // WVU Healthcare

“Part of better and more efficient care is doing things right the first time,” Hull said. “The great thing about the new quadripolar pacing technology is it gives you multiple combinations to try to get a lead working on the patient’s heart. In my experience, this has really cut the need for additional procedures to reposition the leads.” The evidence supports this experience. The SJM Quadra System alone has been featured in more than 100 publications demonstrating improved clinical and economic outcomes.

Deploy Remote Monitoring for Better Patient Outcomes and Reduced Readmission Rates

Historically, patients wound up in the hospital with shortness of breath and other unpleasant symptoms before heart failure treatment could be administered. Even telemonitoring vital signs such as weight, blood pressure and intrathoracic impedance did not result in the proactive care necessary to significantly reduce mortality or heart failure hospitalizations.11 Today, innovative technology like the CardioMEMS HF system is breaking new ground in remote patient monitoring as it enables physicians to manage heart failure before symptoms develop. This is the only available device that remotely provides clinicians with data on changes in pulmonary artery pressure, a precursor to the presentation of heart failure symptoms.8 The clinician can utilize the data and direct the patient to alter medication or provide other therapeutic interventions, such as dietary education, without requiring an office visit or hospital admission.

Improving Outcomes with the Quadra™ CRT System

- **87%** LOWER HOSPITALIZATION COSTS
  In first 100 days post-implant.

- **53%** LOWER HOSPITALIZATION RATE
  Due to HF and LV lead surgical revision.

- **18%** RELATIVE REDUCTION
  IN ALL-CAUSE MORTALITY
  N = 23,178 at 1.6 months when compared to bipolar CRT systems.
In response to data like this, the CMS has deemed the technology to represent a “substantial clinical improvement” over the current standard of care and granted both add-on and pass-through payment status to the device. Even better, some physicians say the technology fosters a closer bond between practitioner and patient, which leads to better communication and patient compliance.

“This technology is the icing on the cake, in terms of transit of care for heart failure,” Hull said. “Now that we have a way to follow a number [relating to pulmonary artery pressure], we can treat the condition before we ever get to the stage where fluid develops in the lungs.”

Of course, these benefits can only be realized if patients transmit the data. Working with a device maker that combines remote monitoring technology with best practices in workflow to address patient compliance can greatly impact clinical and financial outcomes.

“Many times technology drives a wedge between caregiver and patient,” WVU Healthcare’s Hull said. “The unique thing about [the CardioMEMS HF System] is it benefits the care process because the caregiver communicates with the patient when necessary based on weekly monitoring results. We’ve seen increased patient compliance when using this device.”

To learn more about the St. Jude Medical heart failure-focused programs, visit sjm.com/focus.

Exceptional Outcomes for Patients and Hospitals

Hospitals and physician groups stand at the beginning of a new era of improving heart failure patient outcomes while reducing costs. To make this transition, they must put together heart failure-focus programs, devote adequate resources to the program and partner with medical technology manufacturers like SJM that can offer a comprehensive solution. Not only will improved care benefit patients and potentially extend their lives, but reducing readmission rates will financially benefit systems by helping them avoid the Medicare penalties and other costs.

10. Additionally, for patients with heart failure and reduced ejection fraction (HFrEF) already on guided-directive medical therapy, a retrospective analysis showed that it reduced mortality by 57%. 12