Organizational Profile

The former MedCentral Health System became part of the OhioHealth network in March 2014. OhioHealth Mansfield is the largest medical community between Cleveland and Columbus.

The OhioHealth Heart and Vascular Institute (HVI) provides tertiary cardiovascular care in a hospital of 326 beds with a service area of 400,000 residents. There has been a longstanding congestive heart failure (CHF) service as part of the former hospital system, which was under the guidance of a single advanced practice provider. More recently, we have developed a formal CHF committee. This multidisciplinary heart failure committee includes cardiologists, hospitalists, two heart failure advanced practice providers, cardiac educators, inpatient pharmacist, dietitians, social service, nursing case manager and nursing administration, palliative care medicine, emergency room physicians, and hospital and HVI administrative staff. This group has been meeting actively for approximately three years.

Executive Summary

We became a member of the AMGF heart failure advisory process in 2015. We have 10 active cardiology physician members, this includes physicians at two outreach sites. We have two advanced practice providers. In 2015, we saw 467 heart failure patients in the hospital; in 2016 we saw 569 heart failure patients.

In the outpatient heart failure clinic from August 2016 through February 2017 we saw on average 13 new patients per month. Approximately 48 patients per month were discharged from the hospital during a similar time span with a discharge diagnosis of heart failure. The cardiology service was on average seeing five inpatients daily identified as heart failure patients on the active daily service list.

Program Goals and Measures of Success

One of the major goals of the congestive heart failure program was to reduce the 30-day readmission rate. Beginning in FY2014 Q4, there has been a progressive increase in the readmission rate in our hospital system. The current system goal is a 30-day readmission rate of 16.6%. Beginning in October 2016 when our rate was 23.7%, there has been a general decline in the 30-day readmission rate. Most recent statistics from January 2017 showed a readmission rate at 30 days of 13.8%.

Intervention

We developed two specific interventions to try to reduce the 30-day readmission rate. The first intervention was the identification of patients in the emergency room who had been recently discharged from the hospital with a primary diagnosis of congestive heart failure (CHF). This involved the input of our IT services, discussion with emergency room personnel, and a review of the coding process. Since many patients come back to the emergency room shortly following a discharge, we needed to have the case managers identify those patients who were labeled with a primary diagnosis of CHF.

The other identification was made once the patient’s record was completely coded, to determine if CHF was a primary diagnosis, which then triggered a notification. In the emergency room electronic medical record, we developed a notification symbol that would allow nursing and emergency room personnel to identify patients with a recent (within 30 days) primary discharge diagnosis of CHF on their patient tracking board.

A dedicated observation unit opened up within our hospital in the fall of 2015. Our goal is to identify those patients in the emergency room who may benefit from treatment in the observation unit for CHF over short duration, those who may not be significantly ill. It is too early in this program to assess our results.

The second specific intervention involved the development of a home monitoring protocol. This protocol involves the use of a GoHome Telemonitoring device made by Monitored Therapeutics, Incorporated. We applied for and received a grant for the use of this device in the local patient population. The device includes a CarePortal, which allows the monitoring of weight, pulse oximetry, and blood pressures with transmissions back to the CHF clinic for review. Patients are instructed to obtain measurements twice daily for the three-month intervention period. Patients are eligible for this protocol if they are an established CHF patient or have new CHF defined as having ejection fraction ≥40%. We currently have 12 patients...
actively enrolled in this protocol, and to date there have been no readmissions among this patient population. Our goal is to enroll 100 patients.

Outcomes and Results

The 30-day readmission rate has fluctuated during participation in the AMGA HF Collaborative and is currently at 24.1%. Rates for ACE/ARB therapy, already high when the Collaborative began, remain high at 80.8%. Beta blocker also remains high at 80.5%.

Lessons Learned and Ongoing Activities

What we have learned, and what is eminently known to programs that deal with CHF, is that the patient population is complex, typically with multiple comorbidities. The patient population may be composed of nearly 50% of patients with heart failure with preserved ejection fraction and treatment requires close collaboration of cardiologist with hospitalist and emergency room personnel. We are currently in the process developing a multidisciplinary team to round on the CHF inpatient population. We need to better develop the transition to the outpatient arena, using both home telemonitoring devices as well as home healthcare services. One of the biggest challenges that we will face, as well as other heart failure programs face, is the cost of the services required for this complex patient population.
Patient Story

We have had many success stories with the heart failure clinic in preventing hospitalizations. We get phone calls daily with questions and concerns. Many of these are reassurance and support, but enough are legitimate symptoms of heart failure that need addressed. These are addressed over the phone or an appointment is made at their earliest convenience. The majority of these symptomatic calls are treated and avoid a hospitalization.

The Monitored Therapeutics Telemonitoring can be helpful to aid in early detection. Two participants have potentially avoided hospitalizations due to this monitoring. Both had weight gains and were symptomatic. Phone calls were made and treatments changed to avoid a potential crisis. Both of these participants were not computer savvy and surprisingly were very compliant with the devices. In both cases, the patients would not have called us with their weight gain.
Appendix

Figure 1A: Measure 1 - ACE/ARB/ARNi (Ohio Health)

Figure 1B: Measure 2 - Beta Blocker (Ohio Health)

Figure 2: Measure 3 - Readmission Rate (Ohio Health)
Project Team

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A multidisciplinary team consisting of pharmacist, dietitians, case management, hospitalist group, ED physicians, laboratory, and several hospital administrators.