Main Line Health®

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Inpatient and Ambulatory Care Collaboration to Decrease Readmissions of Patients with Congestive Heart Failure

Abstract

Congestive heart failure (CHF) accounted for the Organization's highest 30-day readmission rate during Quality Year April 1, 2020 – March 31, 2021. The Organization's Clinical Environment Workgroups (CEWs) in collaboration with Ambulatory Care Management and Home Care partnered to improve quality of care of CHF patients in the acute, sub-acute and emergency department settings.

The Organization's novel CEW structure facilitates interdisciplinary team members to organize and design standardized care processes that treat patients across the continuum of health care, optimize efficiency, and mitigate risk through communication and engagement. Specifically, with regard to CHF, the Inpatient (IP) CEW redesigned its CHF Inpatient Protocol and Order Set according to updated, evidence-based practice. The aforementioned project led to another innovative pilot at one campus where Hospitalist Advanced Practice Providers (APP) conducted Telemedicine visits with patients who transitioned from inpatient care to home. As a result of these replicable efforts, the organization exceeded its goal to decrease CHF readmissions between April 2021-December 2021. Building upon these improvements, the Emergency Department (ED) CEW decided to partner with Home Care to schedule in-home visits for patients who transition from the ED to home.

In summary, transitional health care that is collaborative across inpatient and ambulatory health care settings, can lead to significant reductions in readmission rates of CHF patients.

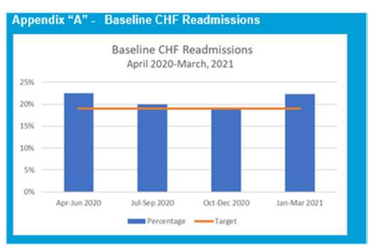
Goal

Increase quality of care to CHF patients by decreasing the organization's CHF readmission rate of 22% (QY 2020 average) to meet or exceed its target of ≤19%. A precursor to the above goal was to facilitate and build data reports/dashboard through the EPIC EMR (electronic medical record) to determine opportunities for improvement.

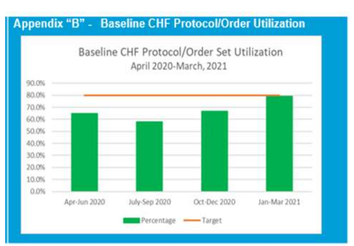
Baseline Assessment

- CHF readmission rate above target at an average of 22%, (Appendix "A").
- EPIC Order Set data report realized the Organization's average utilization rate was 68%, (Appendix"B"), well below the Organization's target of 80%.
- The Emergency Department (ED) Clinical Environment Workgroup (CEW) thereafter evaluated EPIC data that showed a %% discrepancy between CHF and non-CHF patients who returned to the ED within 30 days between January 2020 and August 2021.

Appendix "A" - Baseline CHF Readmissions



Appendix "B" - Baseline CHF Protocol/Order Utilization



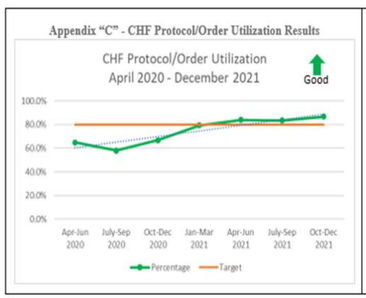
Interventions

- The CHF Protocol and Order Set were streamlined and updated
- The IP CEW developed an EPIC CHF Dashboard to monitor readmissions rates, specialty consults including palliative care, and identification of whether patients had assigned primary care providers for follow-up.
- The EPIC Order Set Utilization Report was used to monitor ongoing compliance
- A Hospital to Home pilot was then initiated at one campus to determine if APP telemedicine visits with patients discharged from hospital to home would increase the quality of transitional care interventions.
- The ED CEW thereafter identified an opportunity to decrease or eliminate return of patients to the Organization's EDs (originally discharged to home from an ED within 30 days).

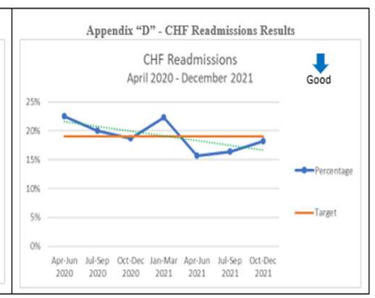
Results/Improvement

- Improvement to Protocol/Order Set use from an average of 68% to an average of 85% (Appendix "C"), surpassing target of 80%.
- Organization readmission rate decreased to an average of 17% exceeding target of 19% (Appendix "D").
- Notable improvement in CHF readmissions translates to improved quality of care to exceed expectations of a vulnerable patient population.

Appendix "C" - CHF Protocol/Order Utilization Results



Appendix "D" - CHF Readmissions Results



Initiative Innovation

- CEW structure provided space for new ideas, and drives improvement across the Organization, with a continuous focus on innovation, learning and optimization.
  - Hospital to Home Telemedicine recommendation provided by frontline providers in the CEW, and piloted at one campus. Results were superior patient satisfaction. Quality interventions during the pilot included improvements to facilitate affordable medications, orders for lab work, physician care follow-up and management of socioeconomic needs.
  - Also set in motion was ED CEW collaboration to partner with Home Care to decrease CHF patients returning to the ED.

Improving Health Equity

CEW team members include analysts who segment data by demographic factors of zip code, race, gender, age and insurance payer (Medicare/Medicaid) to determine disparities in care for improvement opportunities. The interventions described focused upon patients age ≥ 65 from the Medicare and Medicaid population. Pursuant to this data being developed, disparities in palliative care consults for CHF patients according to race was identified. A new pilot project is underway to investigate root causes and address the disparity.

Engaging Patients/Families

The CEWs frequently review and action plan around HCAHPS and Press Ganey data to determine voice of the customer requirements. Patients and families were specifically engaged through surveys conducted around the Hospital to Home Telemedicine pilot. Patients indicated that the collaborative care of the APP and Ambulatory Care Management was Very Good (75%) or Good (25%), n=60. Additionally, 55% strongly agreed and 45% agreed they knew the next steps for their medical care follow-up.

Steps for Successful Replication

- Develop a systems structure similar to the CEW model that provides space for clinical disciplines to collaborate across care settings.
- Partner with technology, analytics and performance improvement professionals to develop Epic data for Readmissions, Protocol/Order Utilization, Return to the ED, Disparities in Care
- Evaluate data for improvement opportunities
- Update protocols/order sets according to evidence based practice and providers' requirements
- Encourage collaborative care across inpatient/ambulatory settings to generate innovative ideas and intelligent risk taking (Hospital to Home Telemedicine)
- Share information broadly to inspire iteration or new improvements (ED/Home Care Collaboration, Palliative Care Disparities)

Leadership Commitment

The Organization's Executive and CEW Leaders support team members in improvement activities by removing barriers to change and prioritizing resources to CEWs across the Organization. Leaders encourage CEWs to incorporate inpatient and ambulatory collaboration projects. Recently, the Hospital to Home Telemedicine pilot was approved by leadership to expand and was provided the additional resources to implement a design that was tested and verified.

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