

Congestive Heart Failure Readmission Prevention Program

Background

In June of 2010, MedStar was asked to collaborate on a program with area cardiologists to prevent 30-day readmissions. Over the course of the past three years, we have evolved a program that has resulted in an 8.6% readmission rate for the enrolled patients compared to a 21% readmission rate in the community.

Program Components

Patient Education & Scheduled Home Visits:

An enrolled patient receives a series of home visits conducted by a specially trained MedStar Mobile Healthcare Practitioner. These home visits are designed to:

1. Educate the patient and patient's family on the appropriate ways to manage their disease process.
 - a. Diet and weight compliance
 - b. Medication compliance
 - c. Healthy lifestyle changes
2. Educate the patient how to utilize their primary/specialty care network to help manage the disease process.
 - a. When to call for an appointment
 - b. Important information to share with care providers

These home visits are weighted to be more frequent in the first week post-discharge and then gradually become less frequent as the patient is empowered to manage their own care. The first visit is typically the longest duration as this visit includes a detailed assessment of the patient's environment, a full review of all their prescribed medications, and a complete assessment of vital signs and 12 lead ECG tracings. The patients are also provided educational workbooks to document their progress.

During the intake visit, the patient is also asked to assess their own health status using the EQ-5D-3L process by EuroQol.

During subsequent visits, the patient is reassessed, including periodic IStat Point of Care Chem 8 lab analysis to check the patients BUN, creatinine, and other important lab values.

Unscheduled Home Visits:

The patient is provided a 10-digit, non-emergency access number for the MedStar Mobile Healthcare Provider in the event they would like a phone consultation or an unscheduled home visit between scheduled visits.

9-1-1 Responses:

Enrolled patients are tracked in MedStar's 9-1-1 computer aided dispatch (CAD) program. In the event of a 9-1-1 call to the residence, the normal EMS system response is initiated, but the MHP is also dispatched to the scene. Once on-scene, the MHP may be able to intervene and prevent an unnecessary ambulance trip to the emergency department by employing the use of the alternative protocols available to the patient enrolled in this program.

Record Keeping:

Patients enrolled in the program have a continual electronic medical record (EMR) that allows all care providers mobile access to the patient's entire course of assessments and treatments during enrollment, including care notes, lab values, vital signs, ECG tracings and treatments initiated. These records can be electronically provided to any care giver with access to a fax or email account.

Diuretic Protocol:

In consultation with the patient's PCP, Cardiologist or the MedStar Medical Director, patients who are suffering fluid retention can either have their medications adjusted in the field, or in some cases, receive IV diuretics with an in-office follow-up appointment to prevent an unnecessary trip to the Emergency Department.

Care Coordination:

MedStar hosts monthly meetings with all case workers, community service agencies and other care providers to review the program and enrolled patients in an effort to help meet any needs of the enrolled patients and to improve program resource coordination.

Graduation:

After 30-days, the patient is graduated from the program, provided a graduation certificate, a patient satisfaction survey and the patient is asked to re-assess their own health status using the EQ-5D-3L process by EuroQol. This data is tracked to help measure program effectiveness and identify area of potential improvement.

Enrollment Process

- The facility designates a CHF liaison that is the main point of contact for the MedStar Mobile Healthcare Program Coordinator. They will discuss these cases and track specific data sets, to be reported back on a monthly basis.
- Caseworker identifies a CHF patient that has had at least 1 readmission for Dx of CHF within previous 30 days of current admission
- Caseworker verifies that this patient has an active PCP or Cardiologist that the MedStar MHP Paramedic CP can contact.
- Caseworker reviews patient's history with the hospitals CHF liaison to help ensure that the patient meets the enrollment criteria.
- Caseworker discusses the program with the patient and if they agree to enroll, the appropriate authorization forms should be signed by the patient at this time.
- The CHF liaison will then call the MedStar MHP Coordinator to set up an initial visit with the patient and the on duty MHP, preferably while the patient is still in the hospital.
- Caseworker will then fax or email copies of the signed authorization forms, H&P and face sheet to the MedStar MHP Coordinator.
- MHP Coordinator will enter this patient into EMR and scan in all hospital information provided.

Results:

Expenditure Savings Analysis (1) CHF Program

Based on Medicare Rates

Analysis Dates: July 1, 2012 - July 31, 2013

Number of Patients (2): 24

Category	CHF 9-1-1 Transports to ED		
	Base	Avoided	Savings
Ambulance Charge	\$ 1,668	23	\$ 38,364
Ambulance Payment (3)	\$ 421	23	\$ 9,683
ED Charges (4)	\$ 904	23	\$ 20,792
ED Payment (4)	\$ 774	23	\$ 17,802
ED Bed Hours (5)	6	23	138
Inpatient Charge (4)	\$ 25,000	23	\$ 575,000
Inpatient Payment (4)	\$ 17,500	23	\$ 402,500

Total Charge Avoidance	\$634,156
Total Payment Avoidance	\$429,985

Per Patient Enrolled	CHF
Charge Avoidance	\$26,423
Payment Avoidance	\$17,916

Notes:

1. Comparison based on 1 predicted 30-day readmissions for enrollees
2. Patients enrolled into CHF-P Program
3. Average Medicare payment rec'd by MedStar
4. Base expenditures derived from AHRQ reports
5. Provided by John Peter Smith Health Network

Patient Self-Assessment of Health Status (1)

As of: 7/31/2013

Sample Size	CHP			CHF			NTSP		
	Pre 12	Post 10	Change	Pre 26	Post 26	Change	Pre 8	Post 18	Change
Mobility (2)	2.417	2.300	-4.8%	2.346	2.615	11.5%	2.750	2.611	-5.1%
Self-Care (2)	2.583	2.500	-3.2%	2.423	2.654	9.5%	2.750	2.667	-3.0%
Perform Usual Activities (2)	2.333	2.300	-1.4%	2.269	2.500	10.2%	2.750	2.556	-7.1%
Pain and Discomfort (2)	1.667	2.400	44.0%	2.154	2.423	12.5%	2.750	2.444	-11.1%
Axiety/Depression (2)	1.667	2.000	20.0%	2.154	2.346	8.9%	2.750	2.722	-1.0%
Overall Health Status (3)	3.333	6.600	98.0%	5.385	7.115	32.1%	6.750	6.778	0.4%

Notes:

1. Average scores of pre and post enrollment data from EuroQol EQ-5D-3L Assessment Questionnaire
2. Score 1 - 3 with 3 most favorable
3. Score 1 - 10 with 10 most favorable

