MEDICAL MANAGEMENT PROGRAM
LAKELAND REGIONAL MEDICAL CENTER

Publication Year: 2013

Summary:

The Medical Management Program provides individualized care plans for frequent visitors presenting to the Emergency Department with chronic medical conditions.

Hospital: Lakeland Regional Medical Center

Location: Lakeland, Florida

Contact: Maureen Leckie BSN, RN
Maureen.Leckie@lrmc.com

Category:

- C: Clinician Initial Evaluation &Throughput

Key Words:

- Care Manager
- Continuity of Care
- Follow-Up
- Frequent Flyer
- Information Systems
- Patient Satisfaction
- Medical Home

Hospital Metrics:

- Annual ED Volume: 172,000
- Hospital Beds: 851
- Ownership: Private, Not-For-Profit
- Trauma Level: 2
- Teaching Status: No

Tools Provided:

- Results Graphs

Clinical Areas Affected:

- Clinics
- Ancillary Departments
- Emergency Department
- Pharmacy

Staff Involved:

- ED Staff
- Nurses
- Pharmacists
- Physicians
- Registration Staff

Innovation

The Medical Management Program provides individualized care plans for frequent visitors presenting to the Emergency Department with chronic medical conditions.

Frequent visitors to the Emergency Department create a unique challenge for already overcrowded EDs. These patients often lack appropriate follow up care. Without a primary care provider or "medical home" where they may seek treatment, these patients are often on suboptimal treatment regimens for their illness. Many of these patients have the potential for their care to be optimized through a coordinated individualized care plan. We sought to provide a standardized care plan for these patients with the goal of improving the patient's quality of life and to decrease the number of their ED visits.

The Medical Management Program provides individualized care plans for frequent visitors presenting to the Emergency Department with chronic medical conditions. The program is led by a multidisciplinary team of healthcare providers seeking to improve the quality of care, by promoting consistency in care and treatment through individualized care plans.

Innovation Implementation

A multidisciplinary team focused on standardizing the care for patients that frequent the Emergency Department (ED) for chronic medical conditions. The team is composed of two physicians (ED Medical Director and the Chief Quality and Medical Information Officer) two pharmacists (ED pharmacist and the hospital pain management pharmacist), and one ED nurse manager. The team reviews patients with multiple ED visits in a 6 month period, reviews each patient's medical record and develops an individualized plan of care. The physician leaders have final approval of the patient's plan. The ED nurse manager provides leadership for the group through coordinating meetings, researching patient referrals to the program, and ensuring individualized plans are kept up to date in the electronic medical record. The pharmacists provide care plan recommendations to the physicians, lend expertise on medication properties, and meet with patients to discuss their care plan.

The Medical Management Program was developed after identifying inconsistencies in the management of patients that present on multiple occasions to the Emergency Department for their healthcare. In the busy setting of the Emergency Department, little time is available for addressing chronic medical problems that do not warrant admission to the hospital. The common ED approach is to address the immediate medical complaint and longer term management is not a priority. A preliminary search revealed that our ten most frequent visitors to the ED represented close to 1000 visits over the course of a year. We realized that we needed to bring a team together to look at the patient from a holistic point of view and address their medical issues in an organized, balanced, thoughtful manner.

- The Medical Management Program is aimed to decrease the rate of readmission to the ED in those patients identified to have high rates of utilization and readmission.

- The program institutes individualized care plans for each patient enrolled. Care plan team meetings are held quarterly. The meeting agenda includes a review of patients who have previously been enrolled in the program and development of plans of care for new patients.

- Prospective patients are identified by the ED physician staff and physicians on the hospital medicine service. After identifying a prospective patient, information such as the number of recent visits, reason for visit, past medical history, medication history, ED treatment history, previous diagnostic work-up, in-patient admission history , primary care provider status, and allergies are reviewed. With this information the team collaborates on creating a care plan that will address the patient's medical needs.

- Once the care plan is finalized, it is entered in the patient's electronic medical record where may be easily accessed on future visits by the treating healthcare provider.

Physician engagement is vital to the success of the program and the ED physician group discussed and approved the medical management program prior to going live with the project. Adherence to the plan is also essential to the success of the program. However, if a patient presents to the ED with a condition other than that outlined in the care plan, the plan does not impede the physician's ability or discretion to treat that condition.

For instance, if a patient's individualized plan of care for their chronic condition is to avoid the use of opiates, but presents with an acute fracture, the physician may choose to treat with opiates as needed. If a plan is deemed by a treating physician to no longer be effective, the patient will be reassessed by the multidisciplinary team. To improve patient compliance with the program the patient will be offered the opportunity to discuss their care plan with a pharmacist while still in the ED during the hours pharmacists are available.

During off hours the patient can make an appointment with the pharmacist to discuss the care plan the next day. The pharmacist will perform a thorough medication assessment and discuss their recommendations with one of the physicians on the interdisciplinary team.

With the implementation of our electronic medical record we found additional success in ease of use of the program. Prior to the implementation of our electronic medical record there were challenges in disseminating the care plans to the physicians and identifying the patients on arrival to the ED. With the electronic medical record in place, patients are identified with an icon on the ED electronic tracking board, and the individualized care plans are easily retrieved with two clicks of a mouse.

Timeline

Several months of planning were needed prior to the implementation of the Medical Management Program. The process began in August 2008 with selection of one well known patient for enrollment. After 3 months, with the initial framework established, an additional 8 patients were added to the program.

The following quarter, the Medical Management Program referral was marketed to our ED physicians with a goal of enrolling up to 15 patients per quarter.

Results

In order to quantify the success of our Medical Management Program a data analysis on enrolled patients was performed. All patients enrolled in the Medical Management Program from September 2009 through July 2012 were included. Data includes date of enrollment, number of visits in a 6 month period prior to enrollment, number of visits in the 6 month period following enrollment, and in order to quantify sustainability, number of visits in the 6 - 12 month period following enrollment. Patients were excluded from the analysis if data was missing or unavailable.

- A total of 63 patients were included in the data analysis. Paired t-test was used in the statistical analysis between enrollment periods.
- For the 6 month period prior to enrollment, the average number of visits per month was 3.22 (standard deviation (SD) 1.87).
- Visit history ranged from 4 to 49 visits during the 6 months prior to enrollment (median = 16).
- In the 6 months following implementation of the individualized care plan, the average number of visits per month decreased to an average of 1.39 (SD 1.38).
- This results in significant decrease of 57% or 1.83 visits per month per patient ($P < 0.0001$).

Additionally, to evaluate the sustainability of the initial results, a comparison was made of the 6 month period prior to enrollment to the 6 - 12 months following care plan implementation.

- The results show sustained decreases in revisits up to a full year after enrollment with 0.7 (SD 0.95) average visits per month at between 6 - 12 months following care plan implementation when compared a baseline of 3.22 (SD 1.87).
- This reflects a significant 78% (P<0.001), or 2.5 visits per month absolute decrease in the number of average visits per month.
- Of particular interest, these 63 patients accounted for a total of 1217 visits during the 6 months prior to implementation of a care plan.

After implementation, the total number of visits over the following 6 months decreased to 527 visits. This reflects a suggested reduction of 690 Emergency Department visits after the implementation of the Medical Management Program for these patients. **(Results Graphs)**

Cost/Benefit Analysis

The costs associated with implementing individualized care plans are minimal. To develop and sustain our program has not required any additional staff or resources. The associated costs are only the time spent by the multidisciplinary team managing the program and meeting quarterly. Approximately 4 hours of nursing time is needed to research referred patients prior to each meeting and quarterly meetings are no longer than 1 hour. Additionally, our engaged physicians provide their services as part of their regular hospital administrative duties. The potential costs savings of implementing our program are significant.

The Agency for Healthcare Research and Quality published a report in 2003 titled the Healthcare Cost and Utilization Project (HCUP). In this report they identified the average "treat and release" Emergency Department visit to cost $302, which includes both hospital and physician costs. In the 63 patients analyzed in our study, this translates into a savings of approximately $208,380 when visit history is compared 6 months before care plan implementation to the following 6 months after implementation.

Advice and Lessons Learned

- The electronic record makes it much easier to track and to adhere to the plan of care as the number of patients enrolled in the program increases. With limited numbers of patients a paper based system can work. But with large numbers of patients, each individual ED physician has difficulty tracking who is in the program and adherence to the plan of care suffers.

- A multidisciplinary team is crucial to success. Physician leaders give the treatment plan "authority" that allows the treating physician the ability to intervene with the patient in a way that stops "doctor shopping".

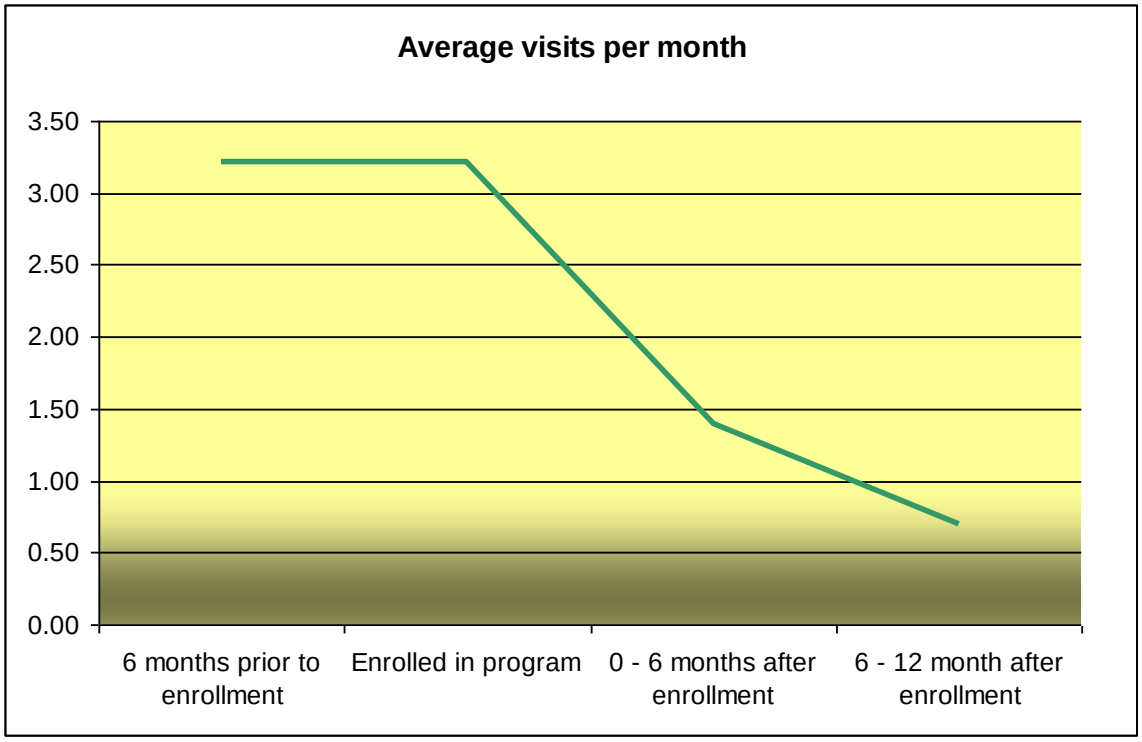
- The nurse leadership is critical to keep the program momentum going. The pharmacy leadership provides critical knowledge regarding medication interactions, side effects and appropriate long term medication regimens. We found that many patients were reluctant to comply with the new treatment plans initially but many subsequently found that their quality of life significantly improved leading to less frequent need to visit the ED. We also believe that many patients sought treatment elsewhere particularly those with chronic pain syndrome.

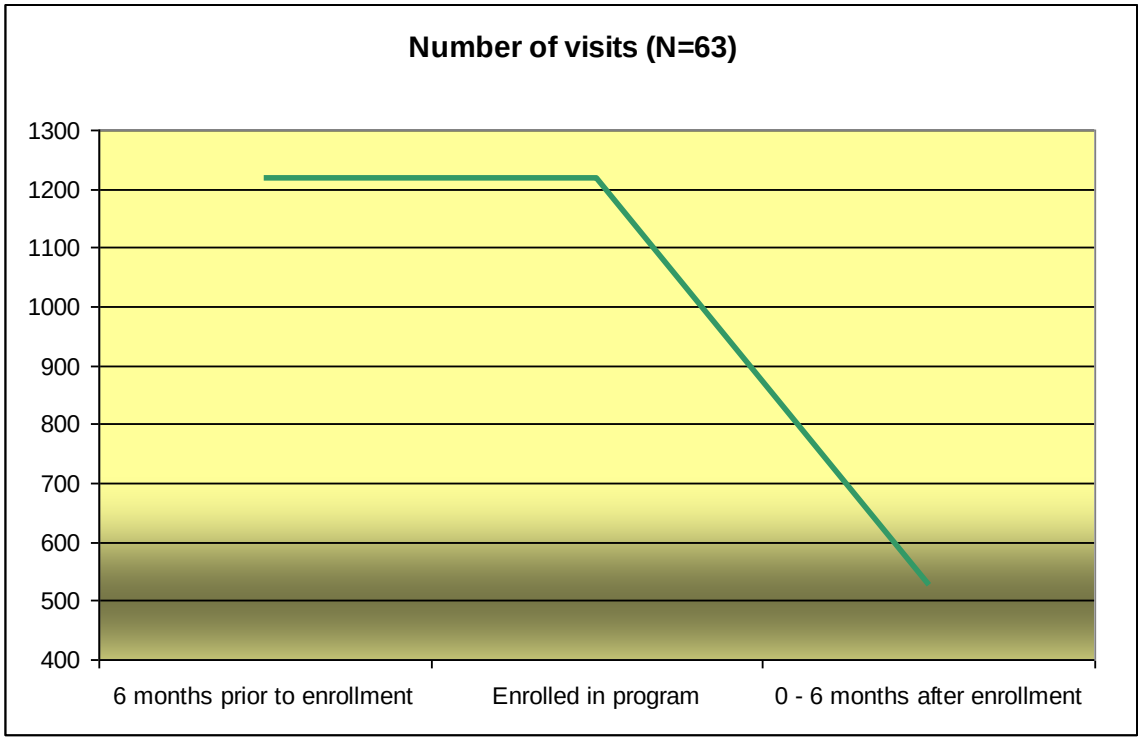
Sustainability

As stated above, very few costs are associated with the start up or sustaining our program. The only real resources crucial to the success of the program are engaged clinicians with a continued drive to see the program succeed. Although not associated with a hard dollar value, time of our multidisciplinary team is required for the continued success of our program. Time commitments vary between each provider, but never exceed 8 hours per quarter.

Tools to Download

- **Results Graphs**


Average visits per month
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
6 months prior to enrollment
Enrolled in program
0 - 6 months after enrollment
6 - 12 month after enrollment


Number of visits (N=63)
1300
1200
1100
1000
900
800
700
600
500
400
6 months prior to enrollment
Enrolled in program
0 - 6 months after enrollment