BEST PRACTICES

Managing Patients with Multiple Chronic Conditions

ADVOCATE MEDICAL GROUP CASE STUDY

Organization Profile

Advocate Medical Group is part of Advocate Health Care, a large, integrated, not-for-profit health care delivery system in Illinois. Founded in 1980, the medical group is the largest in the Chicago region, with more than 800 employed physicians.

Project Summary

Advocate Medical Group developed a chronic disease management program utilizing the patient-centered medical home (PCMH) model. The program engages patients in their care, improves communication between patients and healthcare providers, and increases care coordination. Since its initiation in November 2009 the program has enrolled more than 200 patients with multiple chronic conditions living in a predominantly low-income, African-American community. It is served by one of Advocate Health Care's urban hospitals and a large Advocate Medical Group practice that includes 8 primary care physicians (PCPs). The electronic medical record (EMR) system used at the practice site is Allscripts Touchworks.

Program Goals and Measures of Success

The goal of this continuing program is to examine its impact on patient satisfaction, inpatient utilization, medication knowledge, and physician satisfaction. Patient satisfaction is tracked through the use of Press Ganey monthly surveys. Results are shown in Figure 1.

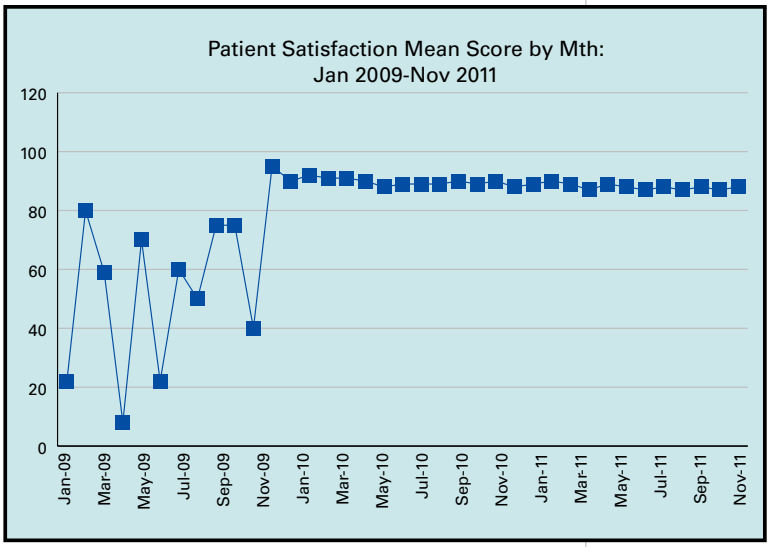

Figure 1

Provided as an educational resource by Merck

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Overall patient satisfaction was erratic prior to the implementation of the program. Starting in November 2009, consistency in patient satisfaction level was noted. Physician satisfaction was tracked through the use of American Medical Group Association (AMGA) physician surveys. However, due to the timing of the bi-annual surveys and unavailability of results, a customized PCMH survey was developed and provided to the site physicians at a monthly administrative meeting. Seven of the 8 physicians in the practice responded to the survey as noted in Figure 2.

What is your overall impression of the program?			
MD 1: Excellent	MD 2: Great	MD 3: Very good	MD 4: Good
MD 5: Mid-level providers are assets	MD 6: Working well	MD 7: Helpful	

Which service provided by the mid-level providers is the most helpful?			
MD 1: PharmD helps with complicated pts	MD 2: Up titration to optimal dose	MD 3: In-depth teaching & another set of eyes	MD 4: Patient education & drug tritation; monitoring
MD 5: Patient education & support	MD 6: All	MD 7: Accessibility & timely f/u	

Figure 2

Advocate's focus on heart failure as a key chronic disease is due to the large number of patients with this diagnosis—more than 1,000—at the program site. Proper treatment of heart failure is contingent upon appropriate medication dosing by the physician and active patient participation in care; poor compliance with medical recommendations remains a substantial problem.

From November 2009 to August 2010, 200 patients with multiple chronic conditions (including heart failure) were managed through the chronic disease program. Of those 200 patients, 60% had heart failure. Inpatient admissions for these patients with heart failure were tracked 10 months prior to the program start and up to 10 months after the program start (patients were referred to the program at different times).

Incident rate was calculated based on admission per patient month pre- and post-program and noted in Table 1. Inpatient admission rates were assessed through review of hospital claims.

Inpatient admissions pre-program	63
Total patient months pre-program	1,100 patient months
Inpatient admissions post-program	30
Total patient months post-program	650 patient months
Inpatient admissions/patient months pre-program	0.57
Inpatient admissions/patient months post-program	0.46

Table 1

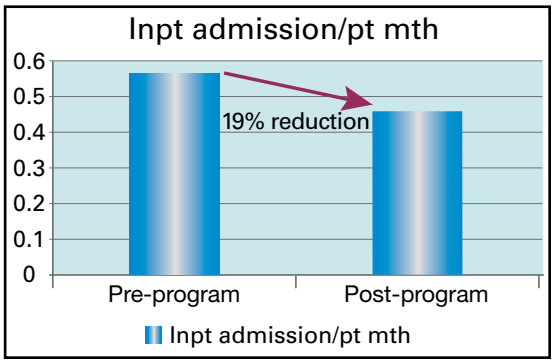


Figure 3

Population Identification

Patients were referred to the program by their PCPs. This population includes patients with two or more chronic conditions, such as heart failure, hypertension, hyperlipidemia, diabetes, and asthma.

Participants:	200
Ethnicity:	African American (90%); Hispanic/Latino (10%)
Sex:	60% female; 40% male
Age:	56 years or older: 85%
	19 to 55 years: 15%

The majority (60%) of the patients in the program have heart failure. This was due to an initial focus on heart failure patients as the program was rolled out at the site. Review of medical claims for 2008 and 2009 indicated more than 1,000 unique patients had a diagnosis of heart failure (ICD9 code 428) and approximately 400 patients had a primary or secondary diagnosis of heart failure.

Patients were monitored on two registries: one for the practice site using an Excel file and another within a care management software tool used by nurse navigators.

The Intervention

Program Design

Key elements of the Advocate chronic disease program were a multidisciplinary team; addition of a patient navigator; use of evidence-based medicine; incorporation of a care management software program; and use of an EMR. This program began in November 2009 and incorporated additional elements throughout 2010. Elements that were in place prior to the start of the program were the EMR, evidence-based guidelines, and an ancillary health care provider, namely a dietician. The EMR system used at the practice site includes health records, progress notes, labs/tests, referrals, e-prescribing, tasks, etc. The evidence-based guidelines for asthma, hyperlipidemia, hypertension, diabetes, COPD, heart failure, and asthma were approved though the site's Pharmacy & Therapeutics Committee. An on-site dietician had been available to the patients at this site for several years.

Multidisciplinary Team

Because PCP visits (regular appointments for existing patients) usually last 15 minutes, it was important for physician and patient satisfaction to incorporate other healthcare providers who could provide longer appointments for intensive education and monitoring of these high-risk patients.

Another factor that prompted the creation of a multidisciplinary team was the high incidence of multiple medication use. Because the majority of patients were elderly and had comorbid conditions, they were often taking a number of medications. There were issues with suboptimal dosage, inappropriate drugs, side effects, and compliance, among other problems. To assist with medication management and reconciliation, as well as provide drug and lifestyle education, a clinical pharmacist was included in the team. Additionally, a part-time advanced practice nurse or APN was hired to provide frequent monitoring and therapy management of patients, in particular, those with heart failure.

Over time, because the APN and clinical pharmacist work closely together, they have been cross-trained in some of the other's areas of expertise. This cross-training provides additional flexibility in patient visits and allows each clinician to better assist PCPs.

Previously, the practice site was composed predominantly of PCPs, nurses, and CMAs. Inclusion of an APN and clinical pharmacist had to be well planned in order to gain the acceptance and confidence of the PCPs. Initially, both the APN and the clinical pharmacist rotated with all eight PCPs so that they understood each doctor's practice style and were able to demonstrate their clinical knowledge. After a few days, the physicians were satisfied with their knowledge base and began referring patients to both the APN and clinical pharmacist, who monitored symptoms, provided patient education, and adjusted medications, as needed per clinical guidelines.

Another important position added to this growing multidisciplinary team was the nurse navigator. The medical group is supported by a 24-hour call center that includes nurse triage, scheduling, and an answering service. This call center was already performing some level of care coordination, although it was somewhat reactive in that patients start the process. To become proactive in managing moderate- to high-risk patients, nurse navigators were given the responsibility to contact patients in the program between office visits.

Protocols were developed for various situations that might develop based on discussions with patients. Critical information discovered by nurse navigators is either triaged immediately and/or forwarded to site clinicians through the EMR for follow-up.

Information Technology

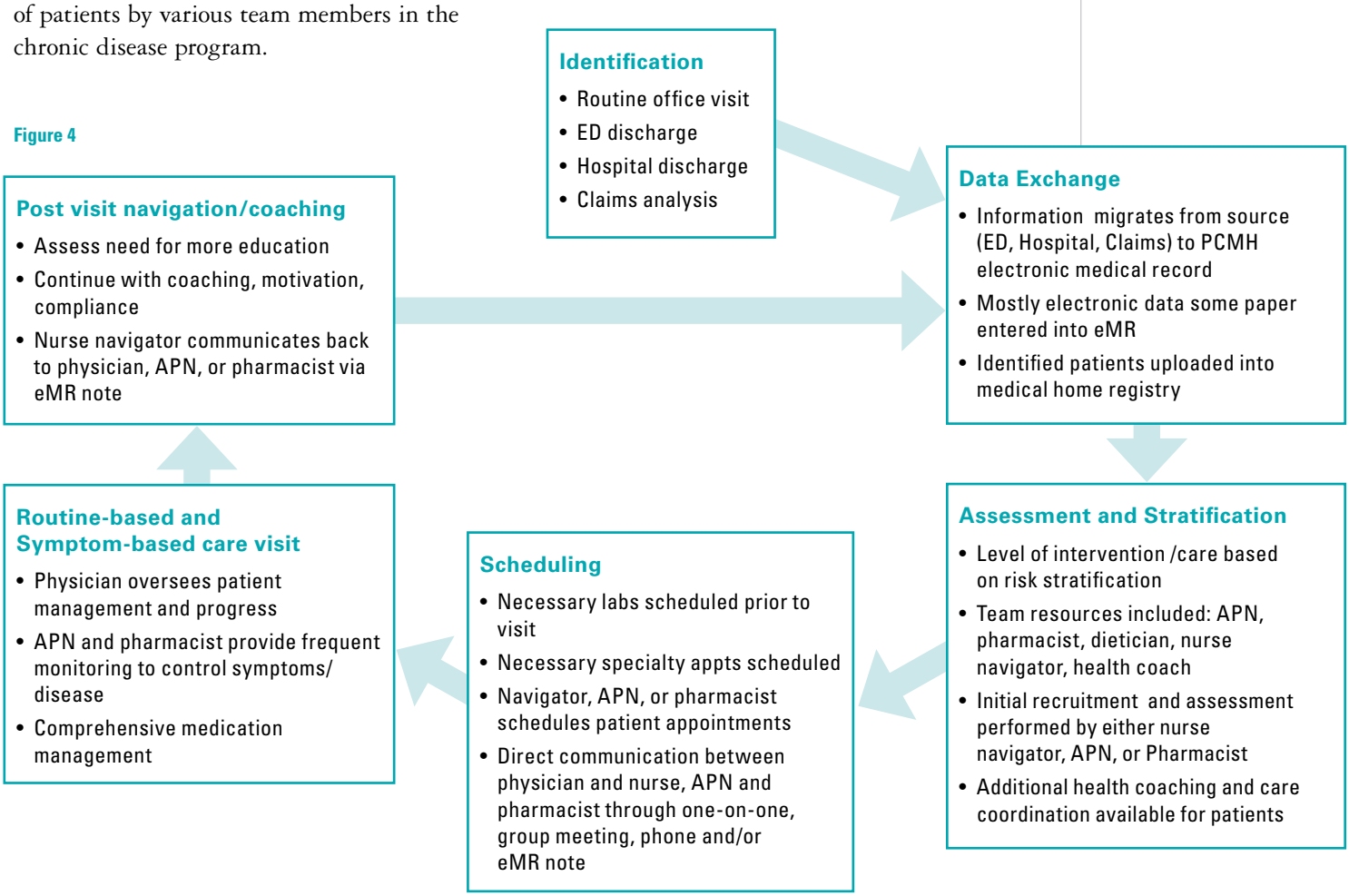
Patients are monitored and tracked using a care management program. This tool stratifies patients by risk and reminds nurse navigators when to contact the patient by phone for health monitoring and management. The software also leads the disease-specific discussions with the patients. It uses branching logic for key chronic disease states that is approved by NCQA and the Centers for Medicare and Medicaid Services and supports tailored, continuous discussions between nurse navigators and patients. Nurse navigators also provide care coordination including scheduling of clinician visits, addressing test results follow-up, and responding to certain case management-related questions.

Figure 4 describes the continuous monitoring of patients by various team members in the chronic disease program.

Training and Communication

To help all staff members understand the new program and to successfully incorporate new team members at the practice site, Advocate provided training and communication prior to program implementation and throughout 2010. Group meetings with the site's managers, staff, and physicians occurred at least monthly to promote idea exchange, discussion, and team acceptance. Also, a patient focus group was set up at the practice site. Patients were asked general and specific questions about their experience at the site and areas for improvement.

Figure 4



Leadership Involvement and Support

Proper treatment of heart failure is contingent upon appropriate medication dosing by the physician and active patient participation in care; poor compliance with medical recommendations remains a substantial problem. The program practice site serves a primarily African-American population in the Midwest that is at risk for cardiovascular disease, stroke, and diabetes. Heart disease is the leading cause of death in the service area with death rates 40% to 70% higher than the rate for the overall Chicago population.

Many of Advocate's patients in certain locations, such as this practice site, have a high level of disease acuity due to age and socioeconomic level. It was determined that additional clinical resources were needed to supplement patient visits to their PCPs. These chronic disease or multi-condition clinics are staffed by PharmDs, APNs, and/or specially trained RNs. Patients are given longer appointment times for additional education on disease, lifestyle, and treatment. This is an ongoing program; Advocate plans to expand it to support other sites that have patients with high acuity. Champions of this program are medical directors, practicing physicians who currently work with these clinics, specialists (endocrinologists, cardiologists, nephrologists, and other specialists as needed), and administration.

Implementing a chronic disease medical home program was based on the need to improve patient health outcomes and decrease inpatient hospitalization costs. The development of this chronic care program focuses on Advocate's 6 areas of priority or key results areas (KRAs):

- Health Outcomes
- Patient Satisfaction
- Associate Engagement
- Physician Engagement
- Growth
- Funding the Future

Program leaders include the director of Chronic Disease Management and Pharmacy for the medical group, who serves as project manager, oversees the implementation of the program, and manages both the APN and clinical pharmacist and program reporting. Advocate's medical director provides medical oversight.

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Lessons Learned

Key elements that contributed to the success of Advocate's chronic care management program were support and investment from management, including hiring of new support clinicians, creation of the outbound call center, and practice re-design; buy-in from PCPs; incorporation of multidisciplinary team members; and availability of technology (EMR and care management software). Without PCP support of this program and their encouragement for patients to engage with other team members it would not have been successful.

Additionally, arranging opportunities for the clinical pharmacist and APN to work closely with physicians prior to the start of the program to build relationships was essential. Many physicians had not worked closely with either a clinical pharmacist or an APN so it was important for them to understand each team member's strengths and contributions to patient-centered care.

There is a heavy burden placed on PCPs in today's practice. They must, on their patient's behalf, determine health care benefits, address administrative requirements of the health plan or government agency, and provide, and coordinate care. A team approach that enables a physician to rely on others to provide extended care for moderate- to high-risk patients helps promote better health outcomes for the patient and potentially less work-related burnout for the physician.

Lastly, developing a multidisciplinary team that allows each health care professional to practice at their highest level promotes an atmosphere of accountability to each other and to the patient. It's important to figure out what type of personnel should be incorporated into the team. For example, not every practice site may need a clinical pharmacist or an APN. It may be a case manager, health coach, dietician, or some other professional that may be a better fit based on the needs of that site's patient population. The program needs to be patient focused in order to be effective.

Challenges

One of the biggest challenges to sustaining this and any type of new program is operational management of the practice site. This encompasses standardizing processes from patient check-in to check-out, providing appropriate access, and realigning staff roles and responsibilities so everyone functions at the highest level. It's important to assess how well the physician practice functions prior to program implementation. Practices that do not function effectively will result in physician, nurse, and associate burnout, so it's highly recommended that any operational issues be corrected through performance improvement activities at the site. It is recommended that any practices that attempt to develop a similar program first determine their operational readiness before proceeding with the implementation of the program itself.

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