BEST PRACTICES

Managing Patients with Multiple Chronic Conditions

FLETCHER ALLEN HEALTH CARE CASE STUDY

Organization Profile

Located in Burlington, Fletcher Allen Health Care (FAHC) is Vermont's university hospital and medical center. In alliance with the University of Vermont, FAHC's mission is to deliver quality patient care—in an academic health care setting—to central and northern Vermont and the northwest corner of New York. Members of the University of Vermont Physician Practice Group at FAHC are employees of the hospital.

FAHC's primary service area covers 150,000 residents; it is also the catchment area for a tertiary referral service of more than 1 million people. Annually, the organization admits approximately 40,000 patients to the hospital and provides for more than 800,000 outpatient visits. FAHC also provides adult primary care at 9 ambulatory sites.

In April 2008, FAHC received state approval through the Certificate of Need process to begin a, 3-year phased implementation of an electronic health record (EHR) system, called PRISM, which connects virtually every key function in the organization. Based on EPIC, the EHR serves more than 30 facilities in Vermont, including the approximately 750 physicians who are credentialed at FAHC.

Project Summary

In 2008, FAHC was selected to implement a pilot Patient-Centered Medical Home (PCMH) project as part of Vermont's Blueprint for Health program. Components of the initial grant were focused on 4 core elements: interaction with community-based services, patient self-management, supportive information technology, and provider practice patterns. The PCMH model provides care and the coordination of care not only to patients seeking a medical intervention, but also to those who may not be aware of the need for preventive care. Additionally, the model provides more focused efforts and resources for patients with more complex disease processes.

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Program Goals and Measures of Success

The overall goal of the PCMH project was to develop multidisciplinary Blueprint Quality teams at each of FAHC's 9 primary care sites. Blueprint Quality team members included the site medical director, site supervisor, a nurse, a medical assistant, a scheduler, and a medical records specialist. Throughout the process of adopting the Dartmouth Clinical Microsystems methodology, the clinics received support, coaching, and education from 2 coaches. At the same time, an FAHC program development team worked to design the Fletcher Allen-PCHM model of care (Fig. 1), which is based upon: 1. a clearly identified primary care provider (PCP) responsible for directing the care of each patient; 2. a panel manager (PM) who assists the PCP by proactively tracking and managing preventive care for the PCP's entire panel of patients; 3. a multidisciplinary community health team (CHT) that provides patient education, care coordination, and case management; and 4. regular communication among the PCP, the PM, and the CHT.

The PCMH pilot began simultaneously at FAHC's Aesculapius Primary Care Internal Medicine site and at a non-affiliated, independent, local, private internal medicine practice. The pilot team wanted to examine if there was a difference in the implementation, uptake, and standardization of the medical home model of care when applied to 2 very different primary care settings. After the model had been fully rolled out at Aesculapius and in operation for 2 years, FAHC evaluated the results based on data and a patient satisfaction survey.

The team was interested in learning if patients who received care from Aesculapius, the non-affiliated practice, and the CHT felt better about how their care was provided. Starting in 2009, every 6 months, 3 of the nonmedical home practices randomly surveyed 100 patients regarding their feelings in several categories. These included their likelihood to increase physical activity and make diet changes as well as their access to care and coordination of care. This same survey was also administered to 100 random patients seen at the Medical Home and by the CHT. Initial review of the data showed that patients seen at the Medical Home and by the CHT provided more "Good" and "Very Good" scores (79.16%) when compared to the control practices (75%).

During the first 6 months of 2009, 59% of patients who were referred to the CHT with an A1C higher than 7 lowered their A1C to less than 7 6 months after their last visit with a CHT staff member. This was compared to a control group that showed that 7.5% of patients were able to lower their A1C to less than 7 in the routine patient care setting. Improvements were also seen in patients' body mass index and low-density lipoprotein control.

A reduction in the number of hospital admissions and emergency room (ER) visits for patients receiving services in the medical home and from the CHT was observed. For the cohort of patients that had received services in the medical home, we looked at their health care activity from 2 years before the program started up to 2 years postimplementation of the CHT—a span from October 2006 to June 2010. For the entire population of patients served by the medical home, hospital admissions decreased by 8.4% and ER visits by 15.7% when comparing data from the 2 years pre-PCMH with data from the post-PCMH implementation period. Using the same comparison, patients seen by the medical home and CHT have shown a 15.8% reduction in hospital admissions and a 15.7% reduction in ER visits.

Population Identification

The patient demographic of the pilot consisted of 60% females and 40% males with an average age of 54 years and a median age of 54. Seventy percent of the population had commercial insurance, with the remainder insured by a state-funded program, Medicaid, or Medicare. The demographic of the patients who received CHT services was similar and consisted of 66% females and 34% males, with almost the identical insurance mix. The average age was 56 years and the median age was 57. These data revealed that the CHT services were not being delivered primarily to patients over the age of 65, who would have been covered by Medicare or Medicaid, which had been the original assumption. Instead, the patients being served more closely resembled the general population of the clinic.

The original patient registries were created by analyzing FAHC's billing system to identify patients with diabetes and hypertension. This method proved to not be as accurate as hoped and required regular correcting. FAHC then implemented the DocSite (Covisint) computer registry by uploading the billing and demographic data and doing a cleanup of the registry sets. The registry was updated and maintained by the PMs, medical assistance, and providers. FAHC developed registries for diabetes, hypertension, mammograms, colonoscopies, and immunizations. The organization then purchased the EPIC electronic medical record system and further developed identification and reporting capabilities. This program allowed us to institute standardized reporting and reminder processes for the pilot clinic.

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The Intervention

The Fletcher Allen-PCMH model comprises the following elements (see Fig. 1):

Patient

The patient is at the heart of the model. The center of the pyramid represents pre-existing services offered to patients in primary care clinics. These are the traditional services with the possible exception of Behavioral Health, a component that the physicians have found invaluable to the success of the program. The standard clinic staffing of RNs, medical assistants, front office staff, and health information staff are also noted on the left side of the pyramid.

Primary Care Provider

The PCP sits at the head of the pyramid, showing that each patient has a clearly identified PCP who is responsible for directing his or her care.

Panel Manager

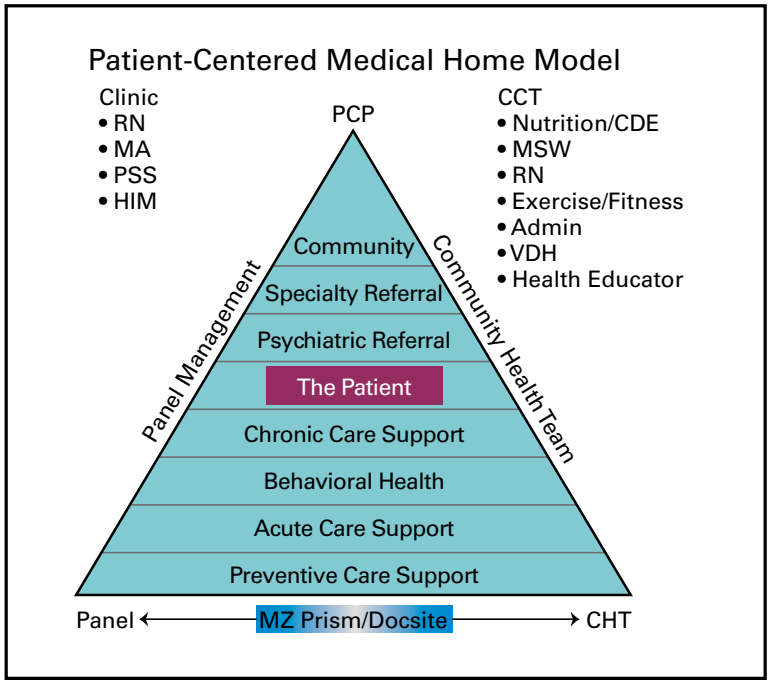
The PM assists the PCP by proactively tracking and managing preventive care for the PCP's entire panel. The PM also assists in the review and management of disease registries to examine whether or not patients are meeting clinical goals. Panel reports are generated though a web-based program called DocSite as well as the EHR. These reports are based on provider-developed algorithms that direct the PM to take specific actions based on the outcomes of the panel review. When a patient's results fall outside of the algorithm parameters, the PM coordinates with the PCP for further patient-based interventions.

Panel management allows the clinic to offer better planned visits. Planned visits ensure that chronic disease management can be tracked appropriately within the confines of the 15-minute acute visit and also ensure accountability in coordination of necessary care beyond the visit interaction. The panel management process improves tracking of the care provided to patients and ensures that each PCP is involved in the provision of evidence-based care.

Community Health Team

The CHT is a multidisciplinary group of health care professionals and administrative staff who surround the patient and improve access to services that meet that individual's specific needs. The CHT is designed to support a total patient population of 20,000. The team provides patient education, care coordination, and case management. It assists providers in making clinical and community-based patient referrals for additional support in meeting clinical goals. Patients are referred to the CHT by the PCP and other members of the health care team via an electronic referral form that is incorporated into the EHR.

Figure 1



The services provided by the CHT include, but are not limited to, nutrition and diabetes education, exercise and fitness support, medication compliance and acquisition, behavioral health, tobacco cessation, and connection to other community resources. These community resources may include referrals for support services as diverse as home heating and visiting nurses. After the patient is referred to the CHT, a team member contacts the patient within 48 hours to set up an appointment to meet at the patient's medical home. If ambulation or transportation is an issue, home visits can be made.

Communication

Ongoing communication among all 3 functions of the model is imperative to its success. CHT members meet weekly to ensure they are meeting the needs of each individual patient. CHT staff also provides patient updates to the PCP via the EHR. CHT staff members meet monthly with each PCP, and the PM meets at least quarterly with the PCP to review the status of patients.

The pilot clinic communicated with patients primarily by phone and regular mail. Patients were contacted with reminders regarding upcoming office visits, laboratory tests, and preventive care visit scheduling and follow-up. This was part of the outreach component work of the PM. The PM helped close the communication loop between the patient and the provider.

In addition to in-person interactions, the CHT used the telephone to communicate with patients who were referred to them for care. They would contact the patients to schedule appointments, check on progress toward achieving established health goals, and administer the 6-month follow-up evaluation and satisfaction survey. FAHC has also established a quarterly newsletter to share information about the program, describe success stories, and help patients identify support systems in their community.

Information technology

The implementation of the EHR has made it possible to associate patients with similar disease states, allowing the creation of patient registries. As these electronic systems improve, the use of registries will improve FAHC's ability to track the status of a provider's panel of patients and manage chronic conditions more successfully.

Workflow and process changes

Workflow for the management of patients with chronic disease prior to implementation of the medical home model of care was provider dependent and widely variable. Some work on chronic care management had been done prior to implementing the medical home, and some providers had maintained the gains whereas others had not. There was no formal process improvement program in place to design, implement, and monitor the effectiveness of these changes. Therefore, there were no universal workflows for chronic disease management. Without feedback on the success or failure of the program changes, the gains were not sustained. There was also no formal infrastructure for patient referral for social and supportive services. Follow-up care was not formalized, structured, or consistently monitored.

As part of the implementation of the medical home model of care and the CHT, a formal process improvement program was put in place. FAHC also developed disease-specific registries and reports, a standard approach to disease management that utilized algorithms, the integration of CHT referrals, and Healthier Living Workshops.

Leadership Involvement and Support

The implementation of the medical home and CHT was fully supported by the CEO and CMO. The successful implementation was incorporated into the strategic plan of the organization and was 1 of the goals the CMO took on.

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Lessons Learned

As the Fletcher Allen-PCMH program continues to grow, the development team has remained mindful of the challenges faced and the lessons learned. The team looks to continuously improve the care provided to patients. Here are a few of the lessons learned and key contributors to optimizing patient care:

- Change is hard. Everyone changes at their own pace in their own way. Be mindful and supportive. Providers and staff must "own" the change not just "buy into" it.
- Mistakes are treasure troves of opportunities if staff and providers are allowed to reflect, review, adapt, and change.
- Data collection is imperative and does not need to be complex. Keep it simple, easy, and relevant to the care of the patient. Do not collect data for data's sake. Make sure there is a purpose, goal, and expected outcome that everyone understands before proceeding.
- Create an environment where a "team" of caregivers can grow, learn, and support each other.
- A focus on and support for ongoing process improvement are needed. Leadership support and the assistance of a coach to help the teams make process improvement part of what they do every day and not just a project are critical to ongoing success.
- Communication to providers, staff, patients, and leaders is important to the success and understanding of the new "type" of care.
- Integrating on-site, brief, intervention-based behavioral health and a CHT makes the quickest impact on improving the outcomes of patients with chronic diseases.

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