BEST PRACTICES

Managing Patients with Multiple Chronic Conditions

MERCY CLINICS CASE STUDY

Organization Profile

Established in 1983, Mercy Clinics, Inc., is based in Des Moines, Iowa and covers the greater metropolitan area. Mercy's 50 clinic locations provided 878,000 patient visits in 2010. The medical staff comprises 150 physicians in 10 specialties; 70% are in primary care.

The organization completed the process of rolling out the Allscripts ambulatory electronic health record solution and all clinics are now using the system.

Project Summary

Mercy Clinics, Inc., adopted a person-centered philosophy that supports a patient-focused medical home, which provides coordinated care across providers and sites and embraces Wagner's Care Model and the IOM Aims. Within the context of the medical home, Mercy Clinics aims to improve preventive and complex chronic care for all patients served, and initially focused on diabetes and hypertension. The centerpiece of the chronic care management initiative is the health coach.

Program Goals and Measures of Success

The goals of the chronic care management program are:

1. A whole person orientation that provides or arranges for all the patient's health care needs.
2. Systems to ensure patients receive all the recommended evidence-based care they can benefit from and wish to receive.
3. Registries to track all patients' chronic care and preventive health care clinical goals.
4. Team-based care coordinated by health coaches and overseen by physicians.
5. Self-management support and ongoing relationships with coaches to help patients meet their goals.
6. Safety ensured by processes built into the system.
7. Improved access and options for patient communication with physicians and staff.

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Clinical Measures of Success From the Disease Registry **Table 1**

NQF Measure	Diabetes Measures	2005 Results	2006 Results	2007 Results	2008 Results	2009 Results	2009 Goal	Denominator
	Number of engaged clinics	5	8	10	11	12		
	Number of patients	3,023	5,079	6,888	9,090	10,449		
DM #1	% with HbAlc in last year	93%	94%	91%	79%	80.10%	94%	All Pts in database
DM #2	Poor control-HgAlc > 9.0 *Lower is better*			16%	18.80%	18.70%	<21%	All Pts in database Not done counts as > 9.0
DM #3	% with LDL in last year	82%	88%	86%	85%	70%	94%	All Pts in database
DM #4	% with LDL < 130	72%	77%	76%	76%	64%	80%	All Pts in database Not done counts as > 130
DM #5	% with LDL < 100		55%	58%	59%	51.60%	55%	All Pts in database Not done counts as >100
DM #6	% with Microalbumin in last year	76%	81%	78%	75%	56.40%	90%	All Pts in database
DM #7	Eye Exam documented			45%	62%	31%	70%	All Pts in database
DM #8	Foot Exam documented			29%		31.90%	70%	All Pts in database
DM #9	% with BP < 140/80			53%	66%	50.10%	75%	All Pts in database Not done counts as > 140/80
	% with BP < 140 systolic	86%	83%					Pts with BP in the last year
DM #14	% with HbAlc < 8.0	78%	82%	83%	74%	70.40%	75%	Pts with HbAlc in last year
DM #14	% with HbAlc < 7.0		60%	62%	53%	50.60%	50%	Pts with HbAlc in last year
	Hypertension Measures	2005 Results	2006 Results	2007 Results	2008 Results	2009 Results	2009 Goal	Denominator
	Number of Patients	1,268	3,508	10,674	15,415	18,648		
AMB #11	% with BP in the last year	96%	96%					All Pts in database
AMB #13	% with BP < 140/90			62.80%	57.20%	73.70%	80%	All Pts in database Not done counts as > 140/90
	% with BP < 140 systolic	75%	85%					Pts with BP in the last year
	Cancer P4P Screening Measures	2005 Results	2006 Results	2007 Results	2008 Results	2009 Results	2009 Goal	Denominator
AMB #28	Mammogram in the last 2 years				10.80%	8.77%	10%	P4P patients in database
AMB #29	Pap Smear in the last 3 years					2%	10%	P4P patients in database
AMB #31	Colon Cancer Screening in the last year				3%	4%	10%	P4P patients in database
	P4P Childhood Immunization Measure	2005 Results	2006 Results	2007 Results	2008 Results	2009 Results	2009 Goal	Denominator
	Number of Patients				532	601		
AMB #34	% fully immunized at age 2				90%	82%	85%	P4P patients turning 2 in reporting year
	P4P Asthma Measures	2005 Results	2006 Results	2007 Results	2008 Results	2009 Results	2009 Goal	Denominator
	Number of Patients				157	348		
AMB #1	% with freq of day and night symptoms documented				83%			P4P patients with confirmed dx of Asthma
	% with Asthma classified				50%	50%	80%	P4P patients with confirmed dx of Asthma
	% with persistent classification on long-term control medicine					97%	95%	P4P patients with persistent classification documented

Mercy Clinics measure diabetes, hypertension, and asthma clinical results with its disease registry and is beginning the measurement of coronary artery disease and cancer screening. The registry can create reports at the patient, physician, office, and enterprise levels. The primary quantitative measure of success for the chronic care redesign has been achieving the highest-level goals set forth in the pay-for-performance (P4P) program. Beyond the clinical measures, Mercy created measures and goals for each of the IOM Aims. The organization also migrated its goals to National Quality Forum (NQF) measures that will most likely provide benchmark data in the future, and added the more rigorous goals of the American Diabetes Association, such as HgA1c ≤7.0 in addition to HgA1c <8.0 which is also reported. Table 1 gives clinical results for the last 5 years.

The population impacted comes from Mercy's 15 of 19 adult primary care clinics. Mercy is continuing to work with the other clinics. Mercy adopted the NQF measurement set as the benchmark when applicable, but it has been a challenge to reconcile differences in measure calculations across such programs as NQF, the Physician Quality Reporting Initiative (PQRI), and Mercy's internal disease registry. The disease registry permits a great deal of flexibility in reporting, and this has been critical to success. What is most important is to define measures and goals and measure them consistently.

Outcomes measurement

In spite of aggressive goals, Mercy Clinics has shown pockets of steady improvement in clinical and process measures over time. The clinical goals also take into account whether or not the test has been done. A higher level of involvement by more providers and clinics resulted in better clinical outcomes. This confirms that the care redesign processes lead to better outcomes when fully embraced. The improved patient outcomes make a strong case for the care delivery redesign.

The introduction of health coaches in January 2006 resulted in not only a 51% increase in diabetes visits and a 178% increase in microalbumin testing, and a 46% increase in HbA1c testing, but also resulted in an increase in other comprehensive care procedures, such as complete physicals, immunizations, blood testing, and mammograms. The health coaches also were able to help physicians and nurses with workload.

This program has grown and currently, 6 clinics have at least 2 health coaches; of these 6, 3 employ 3 coaches. Currently, Mercy Clinics has 28 coaches at 17 family practice clinics, 3 internal medicine clinics, and 1 pediatric clinic. There are 112 physicians who participate in this program.

Population Identification

The diabetes registry (engaged and unengaged clinics) contains almost 11,218 patients. This is about 4.4% of the entire patient population and reflects almost all of the diabetes patients seeking care in Mercy Clinics. The hypertension registry (engaged and unengaged clinics) contains just short of 28,449 patients, which is about 11.2% of the entire clinic population. Mercy has made great strides over the past 3 years to expand the diabetes and hypertension registries to include the entire population and not just the P4P population.

Chronic Disease Registry

Mercy Clinics utilizes a very robust disease registry that will ultimately be able to capture the entire patient population. One registry is used to track all chronic care patients and to identify care gaps (opportunities) for these patients. Mercy clinic's approach to implementing a disease registry is that doing so is the single most important intervention to improve the quality of care for patients with chronic disease. Overseeing the disease registry is 1 of the core functions of health coaches.

The disease registry accomplishes 5 things:

1. accepts data electronically and manually at the point of care
2. creates individual patient summary reports
3. creates actionable lists of patients either overdue for care or not meeting outcome goals
4. creates performance reports
5. exports data needed to participate in P4P programs

Coaches are able to run their reports when they want to. When a clinic initiates this program, the coaches are responsible for entering data into the registry. Many clinics are now well seasoned and the coaches have delegated data entry to other staff in the clinic. They then oversee the disease registry to ensure data are entered correctly, efficiently, and in a timely manner. The coaches still run the reports and queries and spend much of their day reviewing patient lists to identify care gaps. Once these gaps are identified, contact with the patient is initiated to schedule timely and appropriate care. In this way, the coach work has transitioned from reactive care to proactive care.

Senior leadership recognizes the value of the disease registry and provided support to develop an effective interface between the registry and the new EHR system. Ultimately, the EHR will facilitate identification of the entire population with chronic disease as well as preventive care populations.

The Intervention

After Mercy Clinics joined the IHI IMPACT Program for Improving Care in Office Practices in 2002, there was a fundamental shift from *ad hoc* projects to a comprehensive plan to reorganize the care delivery system around Wagner's Care Model. It started with implementing a diabetes disease registry, but the organization also committed to work on all the dimensions of the model. The plan was to start small by testing a redesign for diabetes patients of 1 physician in a pilot practice and, if successful, to expand throughout the practices in the system. All physician participation in this program has been voluntary.

The diabetes registry provided accurate data about clinical outcomes of the patients. The initial physician reaction was that the data were incorrect. This concern was addressed by giving physicians lists of patients who were not meeting goals and asking the physicians to identify where errors were made. Soon the physicians were accepting the data, which led to many process changes as improving outcomes became the focus.

The data created a desire by the system physicians to improve and spread the momentum into the other dimensions of Wagner's Care Model, resulting in a more proactive approach to preventing missed opportunities. A standardized process was created for each patient with a chronic condition:

1. Previsit review by health coaches to identify all evidence-based care needed during the visit. Standing orders for chronic and preventive care were developed for the staff to draw labs and make referrals before the patient saw the provider.
2. Printing out the Registry Summary and attaching it to the chart before each visit.

3. The consistent use of a previsit chart review in checklist format to ensure staff delivered all evidence-based care and to improve coding accuracy.
4. Self-Management-Support (SMS) provided by health coaches to encourage patient behavior change and better health outcomes. Coaches were more effective than physicians, who were never trained in SMS and could not devote enough time to the task.
5. Coaches systematically work the registry data to find patients who are overdue for care or not meeting goals. Mercy Clinics found that 90% of patients identified in this way would come in for an individual appointment or shared medical appointment when contacted.

Key staff members

The vice president of quality designed the implementation plan, developed and communicated the medical home vision, enlisted clinic director support, and recruited physician champions in each group practice. The director of quality is a full-time MSN and nationally certified case manager who was instrumental in the plan design, especially SMS and recruitment, engagement, and education of the nursing staff. She remains responsible for the overall day-to-day operations of the health coach program. The education coordinator facilitated training for health coaches and other staff, promoted health literacy concepts, made available appropriate patient education materials, and organized and maintains the website. A full-time quality data analyst was added to the Quality Department in late 2009, enabling Mercy to streamline the current reporting process and add reports that had been on the back burner for quite some time. Since early 2010, a monthly Quality Dashboard has been shared with senior leadership. At each step in the plan design, the Quality Committee was consulted for input.

Physician champions were instrumental in creating the culture of quality because staff takes their cues from physician behavior.

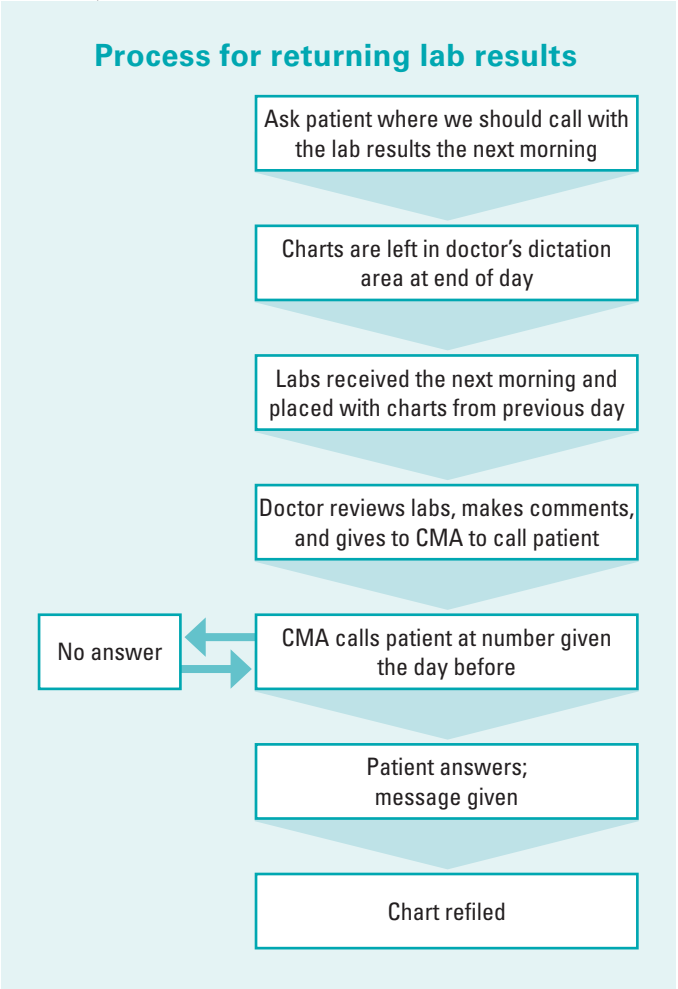
Health coaches have become the lightning rods for improvement and communication in their individual practices, and they have the support and trust of their clinic leaders to do so. They are the emerging quality leaders in the system. Health coaches have independently initiated expansion of their work to immunizations and women's preventive health and are leading process changes at their offices. Their skills at building relationships with patients have energized clinic practices and re-established the patient-centered focus at busy practices.

Information technology

In 2007, Mercy Clinics outgrew their initial access database; therefore, the organization became a development partner of the state and an alpha test site for a new comprehensive disease registry. This registry was based on Microsoft SQL Server and designed to capture and report on information for all disease states and preventive health care. Mercy sought adaptability for adding measures, sorting capability, security of data, intranet accessibility, password protection, transferring data to other vendors, and the ability to strictly maintain the integrity of the data. In May 2007, the organization successfully transferred all the information from the access database to the new SQL database and was able to enter data into the new system, but was unable to create reports useful for managing the patient population until late October 2007. When the registry was finally fully functioning, Mercy was 6 months behind and decided to focus on the P4P population to meet the 2007 year-end goals. Thanks to a heroic effort by health coaches, Mercy made an excellent recovery for the P4P population and now continues to update and expand the entire population of patients that it is proactively managing.

Workflow changes

Following are examples of process changes that significantly improved outcomes for patients. They required physician support but involved little or no change in provider behavior. In fact, the providers overwhelmingly support these changes as they have reduced interruptions and improved quality at the same time and the lab results protocol reduced incoming calls by 72%.



1. Improved coumadin therapy control. The process for patients requiring coumadin therapy monitoring was haphazard and unsatisfactory for patients, staff, and providers. Several years ago, 2 clinics changed their processes to implement coumadin clinics where the coach would utilize the disease registry, a standardized algorithm, and SMS communication techniques to manage coumadin therapy regimens. In 2009, clinic managers were challenged to replicate this very successful initiative in their own clinics. Eight clinics rose to the challenge with support from clinic administration and implementation led by management. To date, more than 1,000 patients are now tracked in this manner and 74% of this population has INR readings within goal.

2. Handling of lab results. Each physician in a clinic had his or her own process for handling lab results. A single lab results protocol was initiated for all providers in the system with the goal of appropriately documenting patient notification of each lab. This protocol requires all labs to be logged out, logged in, and logged when the patient has been notified. A majority of the clinics have implemented the process and are now working on timely notification, with a goal of informing the patient on the same day the results come in. In 2010 as part of the strategic plan, Mercy expanded this same process and concept to referrals and has seen some early success with this as well.

3. Diabetes standards of care. Patients commonly did not have needed tests and referrals performed at a diabetes office visit. The process was changed to have health coaches review the charts and, using standing orders, to order the care before the patient saw the provider.

Leadership Involvement and Support

Mercy Clinics' strategic plan focuses on People, Growth, Stewardship, and Quality. The Quality Pillar is the most robust and clearly sets the direction for the ongoing development of advanced primary care, population-based care, continuous ambulatory quality/performance improvement, and improved transitions of care.

Quality is a system responsibility and defects are much more likely to be due to defects in processes than due to poor performance of physicians or staff. It is the responsibility of management to make sure processes are in place, to create measures to evaluate their effectiveness, to prioritize which processes need work, and to make the resources available to proactively improve them.

Advice for others

- Sustainability needs to be included to move beyond the novel project.
- Don't wait for an IT solution. If you can't do it without IT, you can't do it with IT.
- A physician champion is needed in each site.
- A formal structure, such as a Quality Committee and paid, full-time quality staff, is necessary to drive change.
- Build the system change on an evidence-based practice model, such as Wagner's Care Model.
- Start small with 1 site, 1 physician, and a few key data points. If a change doesn't work in a small setting, it certainly will not work in a larger setting. Move it to 100% practice involvement once it is successful.
- Reliable measurements are imperative to gauge progress.
- HR policies should support change.

Including patients' voices is imperative. Mercy was surprised to learn from patient advisory workgroup quality and patient advisory councils that people with complex chronic conditions equate clinical quality of care with customer service. The organization measures patient satisfaction but now better understands the patient perspective. For example, Mercy was concerned that depression screening in clinic practices might be offensive or too emotionally charged for patients. However, when asked, patients provided an impassioned response and emphatically encouraged Mercy to begin. They said, "I couldn't deal with my diabetes until I dealt with the depression." Now, the PHQ-2 screening is a routine part of care for those with diabetes.

Mercy Clinics' strategic plan focuses on People, Growth, Stewardship, and Quality.

Lessons Learned

Challenges

In retrospect, the biggest barriers were practice culture and workflow. Because predictable urgencies were never planned, the offices seemed to operate in crisis mode. In such an environment there is always a reason to put off tasks to the next day or revert to old behavior. Adding new duties to already overstressed staff just would not work, so new positions and job descriptions such as health coach needed to be created. It was and continues to be a difficult cultural change to convince physicians to do today's work today and to plan for the future.

Another cultural issue was the physician focus on patient nonadherence rather than poor system performance as a reason for low population-based outcomes. Physicians now understand that 97% of patients will come in for care if they are adequately informed of the need, and there is little reason not to meet all of their process goals if the system is performing properly. Physicians are now taking some responsibility for patient adherence and are accepting the tools developed by the Quality Committee, such as a hypertension algorithm and medication adherence practice guideline, to help overcome clinical inertia. Outcome measurement feedback regarding medication adherence, specifically in hypertension patients, has led to improved outcome goals.

The concept of working in teams is a large and continuing cultural obstacle, especially for physicians. Physicians traditionally have felt they had to "do it all" and are still reluctant to rely on team members to get the work done. Some physicians initially insisted that only they could order lab tests instead of a nurse who reviewed the chart before the visit. Wagner's Care Model emphasizes the need for and the role of a prepared, proactive practice team. Trust is critical to the physician's acceptance of this team. Routine outcome data feedback is critical as it shows the results are better as a result of teamwork. Currently, the practice sites are at different stages of fully adopting Wagner's Care Model, but all are using registries.

Also, the health coach position has evolved. Initially, coaches worked on data entry and contacting patients not at goal, but over time the list of patients not at goal became much smaller. This freed up time for previsit review, which was a clinical activity and led to a requirement that health coaches be RNs. As higher-level caregivers were hired as coaches, lower-level employees were hired to perform data entry and contact patients. Now coaches are becoming increasingly involved in SMS. Many have their own patient schedules and bill insurance for visits whenever applicable. The coaches are now being relied upon by the physicians; they have become a well-established part of the culture in many clinics.

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