

This case study is one in a series describing medication management program development in six integrated Minnesota health systems.

This series includes case studies for: Essentia Health, Fairview Health Services, HealthPartners, Hennepin County Medical Center, Mayo Clinic, and Park Nicollet Health Services.

Across these health systems, we explored the evolution of medication management services and the factors that influenced the design of each institution's care model. We also investigated how leaders established the program's presence as a priority service and sustained organizational support for the service.

Data was collected via semi-structured interviews with key stakeholders within each health system. A separate publication outlines results of a thematic analysis of these interviews. These case studies represent a summary of the interviews with each individual organization, providing a narrative of the organization's program development experience.

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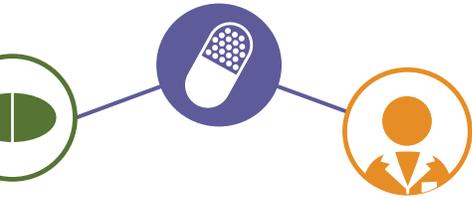
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www.hcmc.org

Disproportionate share/safety net integrated health system.

- 100,000 patients in the health system

Medication Management within HCMC

- Coordinated program across service lines started in 2006
 - Oncology pharmacist started in 1998
 - HIV pharmacist started in 2000
 - Transplant clinic medication management services started in 2002
- 12 clinical pharmacist FTEs
- 14 clinics with medication management services
- 10,000 annual medication management services encounters
- Collaborative practice agreements
 - Anticoagulation
 - Asthma
 - Diabetes
 - Dyslipidemia
 - Hypertension
 - Medication Refills
 - Oncology
 - Smoking cessation
 - Transplant

THE BEGINNING

A commitment to improving patient safety and quality was and continues to be the driving force behind Hennepin County Medical Center's (HCMC) implementation of comprehensive medication management services. What began as an Edward Deming team-based quality improvement project in the mid 1990's has become an integrated and valued service that spans inpatient and outpatient settings with 10,000 patient encounters annually.

Today, program leaders point to a pilot project to improve medication refill management in an internal medicine clinic as the beginning of HCMC's journey to comprehensive medication management services. A team of medical, nursing, pharmacy and clinic management staff identified important safety issues with medication refills within the medicine clinic. "We didn't know what medications patients were on. It was the gorilla in the barn. Everything was about these medications; there were a lot of poly-pharmacy and medication adherence issues. It was obvious we needed help managing medications," noted one medical staff member.

With C-suite support, the leadership team brought the departments together, broke

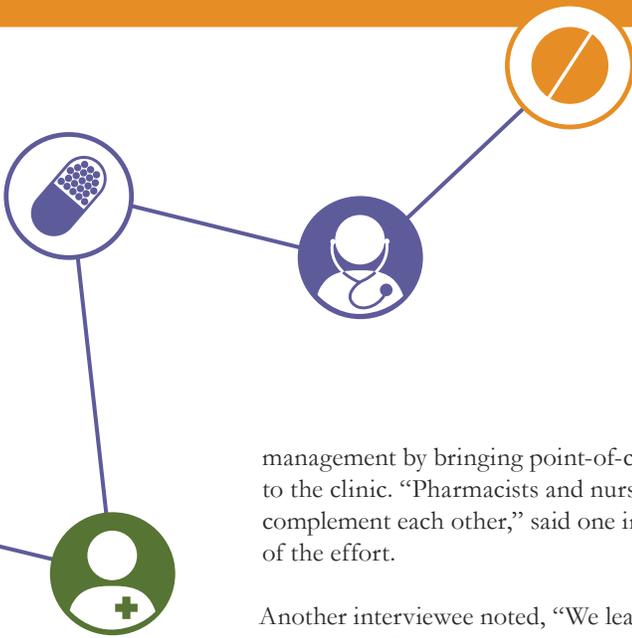
the top of their training," remembered one interviewee.

The team was able to lay the groundwork so medication management services could expand to the organization's anticoagulation

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down silos, shared their areas of expertise and explored ways to use this expertise to improve medication use and safety. "The team came together for a common cause and they were really passionate about the effort and wanting to work with each other, striving to practice at

clinic. A sentinel medication event that occurred in a patient during their transition from inpatient to outpatient care also served as a catalyst to improve the clinic's quality. Pharmacy and nursing staff teamed up to take a more proactive approach to anticoagulation



management by bringing point-of-care testing to the clinic. “Pharmacists and nurses really complement each other,” said one interviewee of the effort.

Another interviewee noted, “We learn a lot from pilots. Sometimes they stick. Sometimes they don’t. The medicine clinic is a great example where we piloted a program and the team members said, “I want more!””

BEYOND THE FIRST PILOTS

Beyond the medicine and anticoagulation clinics, proactively seeking grant support allowed HCMC to place pharmacists in the HIV specialty clinic. One interviewee noted that the importance of medication adherence was a key factor. “HIV research shows

During these pilot programs, several infrastructure issues had to be tackled and in some cases, they continue to evolve. First, the medical and pharmacy information systems had to be integrated in order to give the medical staff an accurate view into the patient’s medication profile. A precursor to today’s information technology integration was the creation of a “toggle” to bridge the two systems. Another challenge was working with the Office of the Medical Director (OMD) to credential the pharmacists who were providing the medication management services. “Getting universal provider numbers (UPN—the predecessor to today’s national provider identifier or NPI) for the pharmacists was a hurdle,” noted one interviewee. Upon reflection, the team wished they had brought in representatives from the OMD earlier in the service development process. Similarly,

Pharmacists were embedded in the clinic allowing development of relationships with medical staff and the financial advocates who ensured each patient’s medications were covered by insurance.

compliance rates need to be 85%—that’s very high.” By putting pharmacists in the clinics and also opening a satellite pharmacy to provide medications, medical providers were given accurate information and feedback on their patient’s medication therapy that had been absent before. “Having the satellite pharmacy was a key to service growth,” noted interviewees. Because of it, pharmacists were embedded in the clinic allowing development of relationships with medical staff and the financial advocates who ensured each patient’s medications were covered by insurance.

Soon after, pharmacists were also placed in the cancer center and transplant programs as well.

interviewees also said they wished they had brought representatives from the billing area into the pilot projects. “Billing and coding for services has been and continues to be an evolving challenge,” stated one interviewee. Clarification about how to bill medication management services through AMA CPT codes was sought through CMS and it allowed the team to adjust their practices accordingly.

In spite of early success, financial pressures forced a decision to discontinue pharmacist-provided medication management services in the medicine clinic around 2000. Involvement in the cancer, HIV and transplant areas continued, however.

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GROWTH AND EVOLUTION

In 2006, efforts to reestablish medication management services in the internal medicine clinic began. A precipitating factor was the organization’s incoming critical care pharmacy resident who had a strong interest in ambulatory care. The resident expressed a desire to focus some of her time on reestablishing medication management services in the internal medicine clinic. In addition, new pharmacy leadership joined HCMC, which added a strong administrative champion for the efforts. Also, the Medicare Part D program’s medication management services regulations had been established at this time, further supporting the service’s reestablishment.

“We began by targeting patients who were on eight or more medicines,” said an interviewee. “That turned out to be nearly every patient in the clinic. So we had to increase the target to patients on 10 medicines, then finally those on 15 medicines.” Relationships developed between the pharmacists and medical residents,

a pharmacist? You should get a pharmacist.” When medical residents moved between various clinics and departments within the system, they began to ask, “Why can’t we have a pharmacist here?”

“Being present and integrated into the team really grew the services,” reflected one interviewee. “It builds camaraderie as a professional which is really important.” The quality and consistency of the pharmacist-provided services also contributed to their growth. Medical staff routinely request curbside consults. Interviewees all agreed that having the right people is key. A medical staff member offered, “The pharmacists are always professional. They are here and want to be part of the team. They want to help.” Another said, “I’ve seen five pharmacists now in my time at the clinic and there has never been one who is lackadaisical about their job. Building trust with them is very easy because they do not let things fall down.” Hiring the right pharmacists is an important part of the HCMC pharmacy leadership team’s culture. “We are particular

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spurred by the face-to-face and word-of-mouth exchange of information. Medical residents learned quickly they could request a pharmacist referral and receive consistent follow up, which added momentum for the service. So did conversations among medical residents in the staff dining room. One interviewee reflected on a conversation during which one medical resident shared with another some difficulty they were having with a patient. The response was, “I have a pharmacist, why don’t you have

about who we hire,” said one team member. They recalled a departmental job posting that had more than 20 applicants. None of the applicants were hired because they were not considered to be “the right fit” for the team they were building in the department.

Another factor that positioned medication management services for growth in the organization was measuring impact and return on investment. HCMC’s culture is data-driven.



“That means the success in the HIV clinic alone may have saved nearly \$100 million dollars.”

In 2008, the pharmacy leadership created a system to measure the number of medication management visits. That year, the number of patient visits to the service grew to about 100 per month. By the fourth quarter of 2013, it had reached nearly 1,000 per month. Interviewees said patients are very satisfied with the service. One stated, “Patients love their time with the pharmacist.”

Examples of other positive metrics come from the cancer center, discharge clinic and HIV services. In the cancer clinic, the pharmacist works proactively with the patient financial advocate to ensure that the appropriate prior authorizations for treatment are secured and the patient’s treatment will be reimbursed. “In 10 months, the pharmacist was able to document \$777,000-\$1 million in recouped reimbursements,” said one interviewee. Clinical metrics have been equally impressive.

Since the beginning of medication management services in the clinic, of 100 HIV-positive mothers who gave birth, only one baby was born with HIV and that mother had not been treated prior to her admission for delivery. Because data suggest that it costs approximately \$1 million to treat an HIV-infected individual

discharge. The staff indicates that this has led to reductions in hospitalizations and emergency room visits. Recognition of this impact on care became more important when the Minnesota Care Program (a component of Minnesota Medicaid) was transitioned to the “Coordinated Care Delivery System” with limited finances dedicated to indigent care. “It forced our organization to think differently,” said one interviewee, reflecting on how previous quality measures influenced how the service was viewed when resources became more scarce.

As one interviewee said, “It was very important to show the line between what they [the pharmacists] did and a direct improvement in the patient’s overall health outcome.”

TODAY

HCMC’s goals with respect to medication management remain focused on improving patient safety and quality. Areas for service growth and expansion include congestive heart failure, pain management, transitions of care, homeless care and senior care. The senior care effort is an example of how the pharmacy team has proven its value. Medical leadership staff

Areas for service growth and expansion include congestive heart failure, pain management, transitions of care, homeless care and senior care.

during their lifetime, one interviewee points out, “That means the success in the HIV clinic alone may have saved nearly \$100 million dollars.”

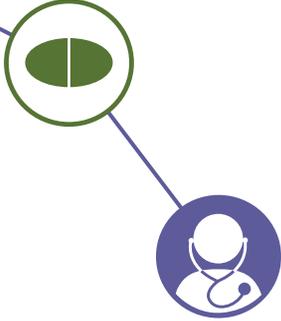
More recently, pharmacists have been deployed to provide medication management services during the acute care discharge process with patient follow up three to seven days post-

came to the pharmacy leadership and expressed interest in having a pharmacist providing medication management services in the Senior Care clinic. As a sign of their commitment to the service, the clinic allocated funding in its own budget to pay for a portion of the pharmacist’s salary. “That was saying, ‘We value this. We are willing to pay for this.’” said one interviewee.

Conceptual timeline for the growth of the HCMC medication management program relating to culture, relationships, operations, and results.

FOUNDATIONAL → **FORMALIZED** → **SUSTAINABLE** →

CULTURE	Innovation to promote patient safety and quality		
	Pilot for best practices		
	Collegiality among health care team members		
RELATIONSHIPS	Breaking down silos	Interdepartmental requests and shared resourcing	
	Existing relationships with pharmacists		
OPERATIONS	Hiring the right pharmacists		
	Medication refill & Anticoagulation pilots	Medicine Clinic residency project	Expand throughout health system
	Pharmacists in oncology and HIV clinics		
	Transplant clinic based medication management		
RESULTS	Proactive evaluation by pharmacy		Decreased hospitalizations
	Pilot evaluations	Evaluation of ROI	Total cost of care



The pharmacy leadership team says it will remain committed to reviewing medication use, improving it and showing how medication management services can save money. An example was changing the organization’s diabetes care model from inpatient to outpatient, with education and medication management which are more effective in this setting. Pilots will also continue because they help build momentum through achieving short-term goals. “The long-term goals are always out there, but sometimes the short-term goals become a little more important because those are the ones that help you take the next step and eventually get to the long term goal.” said one pharmacist.

Today, pharmacists providing comprehensive medication management services are a collegial, collaborative group that work together as a team and are committed to providing excellent internal customer service. As one interviewee reflected on the group’s journey, “People were

really passionate and wanted to work together. And, we had fun. It was actually fun working together and we still have fun.” Another notes, “As an organization, we move via pilots and the truth – our medication management pilots have established a truth that this service is important to the organization achieving its goals.”

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Themes Associated with Service Integration

The information for each case study included in this series was gleaned via semi-structured interviews with key program leaders from each of the six participating health systems. Thematic analysis revealed 13 themes across the health systems. Each took a unique approach in the development of medication management services, but with few exceptions, each theme was identified by all of the health systems as part of the process.

A component of this work was to explore the health systems' service development efforts in relationship to John Kotter's 8-Step Process for Leading Change.¹ This 8-Step Process was further grouped into three distinct stages which we aligned with the identified themes as outlined in the table below.²

At HCMC, the importance of the team, notably, including pharmacists on the team was emphasized as central in the development of medication management services. Additionally, recognizing clinical areas in which pharmacists could contribute was key.

FREQUENCY KEY	
Not Discussed	○○○
Occasionally Cited	●○○
Frequently Cited	●●○
Area of Emphasis	●●●

STAGE OF CHANGE ²	THEME	DEFINITION	FQ
Creating a Climate for Change	External Influences	Stimulating factors outside of pharmacy leadership such as changes in the organization, policies, or structure that contributed to the implementation of medication management services within the organization; relationships with outside parties (e.g., the University) that lead to initiating medication management services; programs designed to meet community measures (e.g., HEDIS).	●○○
	Pharmacists as an Untapped Resource	Recognizing the untapped experience and expertise of pharmacists; recognizing problems that existed in care delivery that could be most effectively addressed by pharmacists; disease state management programs that first started using pharmacists (e.g., anticoagulation, diabetes, HIV).	●●●
	Principles and Professionalism	The moral commitment that providing medication management services was the right thing to do for patient care drove program initiation; the organization's vision created roles highly desirable to many pharmacists.	●○○
	Organizational Culture	An organizational environment that is supportive of innovation, piloting new ideas and strives to improve patient quality and safety while reducing cost.	●○○
Engaging and Enabling the Whole Organization	Momentum Champions	Individuals that were key in establishing and moving medication management services forward; leadership support and enthusiasm; gathering key players.	●○○
	Collaborative Relationships	Existing relationships with medical staff and health care staff that facilitated the implementation of medication management services.	●○○
	Supportive Care Model Process	Administrative tools used to establish a process that fosters success of medication management services (creating service consistency; documentation standards; referral processes; resource sharing; collaborative practice agreements).	●○○
	Service Promotion	Creating buy-in from providers, patients, and financial stakeholders; spreading the service through word of mouth, mailings, brochures, etc.; Identifying patient advocates willing to share their medication management stories.	●○○
	Team-Based Care	Working in a team environment in which pharmacists are recognized as valued members of the team; making pharmacists accessible; embedding pharmacy services into the team; hiring the right people for the job who are passionate about providing services at the highest extent of their clinical abilities.	●●●
Implementing and Sustaining the Change	Implementation Strategies	Purposeful actions to ensure a successful initiation of medication management services within the organization.	●○○
	Overcoming Challenges	Hurdles and barriers that hindered the implementation or expansion of medication management services; acknowledging mistakes that were made along the way.	●●○
	Measuring and Reporting Results	Having data to support medication management services; creating transparency of data; patient satisfaction.	●○○
	Sustainability Strategies	Post-service implementation strategies to expand and optimize services. This includes optimizing resources, establishing goals, ensuring financial sustainability, etc.	●○○

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1. Kotter J. Leading Change. Boston: Harvard Business School Press; 1996.
2. Cohen DS. The Heart of Change Field Guide. Boston: Harvard Business School Press; 2005.