

Primary Care Providers' experiences with Pharmaceutical Care-based Medication Therapy Management Services

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Acknowledgements: The authors would like to thank the Fairview Medication Therapy Management Department for support and recruiting participants. We would also like to thank the participating providers who were interviewed for this research project.

Financial Disclosure Statement: Financial support for this study was provided by Fairview Pharmacy Services.

Conflict of Interest Disclosure Statement: The authors declare no conflicts of interest or competing financial interests related to this research.

Keywords: Medication therapy management; providers' experiences; qualitative study

Abstract

This study explored primary care providers' (PCPs) experiences with the practice of pharmaceutical care-based medication therapy management (MTM). Qualitative, semi-structured interviews were conducted with six PCPs who have experiences working with MTM pharmacists for at least three years. The first author conducted the interviews that were audio-taped, transcribed, and coded independently. The codes were then harmonized via discussion and consensus with the other authors. Data were analyzed for themes using the hermeneutic-phenomenological method as proposed by Max van Manen. Three men and three women were interviewed. On average, the interviewees have worked with MTM pharmacists for seven years. The six (6) themes uncovered from the interviews included: (1) "MTM is just part of our team approach to the practice of medicine": MTM as an integral part of PCPs' practices; (2) "Frankly it's education for the patient but it's also education for me": MTM services as a source of education; (3) "It's not exactly just the pharmacist that passes out the medicines at the pharmacy": The MTM practitioner is different from the dispensing pharmacist; (4) "So, less reactive, cleaning up the mess, and more proactive and catching things before they become so involved": MTM services as preventative health care efforts; (5) "I think that time is the big thing": MTM pharmacists spend more time with patients; (6) "There's an access piece, there's an availability piece, there's a finance piece": MTM services are underutilized at the clinics. In conclusion, PCPs value having MTM pharmacists as part of their team in ambulatory clinics. MTM pharmacists are considered an important source of education to patients as well as to providers as they are seen as having a unique body of knowledge – medication expertise. All PCPs highly treasure the time and education provided by the MTM pharmacists, their ability to manage and adjust patients' medications, and their capability to address patients' medication experiences. MTM pharmacists are seen as being different from dispensing pharmacists, and PCPs usually highlight that difference to patients as they refer them to MTM services. Lastly, it is apparent that MTM pharmacists struggle to explain what their role is within the healthcare team and they need to find a more effective way to explain the unique value they add to the care of patients.

Introduction

The face of healthcare is changing. Governments along with individual health systems are changing the way they take care of patients in efforts to make health care more affordable and the health system sustainable. Entire organizations are shifting to a team-based approach to health care, which requires collaboration between all health care providers to provide the best, most efficient and most cost-effective services to patients. The role of each health care provider is being reexamined and redefined, so that patients can be seen in the timeliest manner and by the most qualified provider.^{1,2}

In the world of pharmacy, this shift can be seen with the preparation of pharmaceutical care practitioners, or medication therapy management pharmacists, that are capable of working collaboratively with other members of the

health care team to ensure that patients are getting the best possible outcomes from their drug therapy.^{3,4,5,6}

Despite the availability of effective medications in the market, the problems associated with the use – misuse, underuse, and overuse- of medications are overwhelmingly present and well documented in the literature.⁷⁻¹² For patients with multiple chronic conditions the problem of inappropriate drug use is even more complicated as they usually see multiple providers, have complex medication regimens and are expected to fit the use of numerous medications into their daily lives. Thus, utilizing the efforts and resources of all members of the health care team will be needed to build a medication use system that can help

patients achieve desired treatment goals and to resolve drug therapy problems hindering progress toward goals.^{1,2,10,13,14} Medication Therapy Management (MTM) services can provide the structure for a rational medication use process in that a team-based care, that includes the MTM pharmacist, is delivered to guarantee that all of a patient's goals of therapy are met.^{3,10} Comprehensive medication management is a patient-centered service based on the philosophy and process of pharmaceutical care practice. It is defined as the standard of care that ensures each patient's medications, including prescription, nonprescription, and supplements, are individually assessed to determine that each medication is appropriate for the patient, effective for the medical condition, safe given the co-morbidities and other medications being taken, and able to be taken by the patient as intended. Comprehensive medication management includes an individualized care plan that achieves the intended goals of therapy with appropriate follow-up to determine actual patient outcomes.¹⁵

Several studies have suggested that collaboration and coordinated care between pharmacists and physicians can enhance patient care outcomes.¹⁶⁻²⁴ On the other hand, other studies have indicated that physicians looked at interprofessional collaboration as potential disruption of finances, patient-physician relationships and work satisfaction. Also, teamwork can be viewed by physicians and physician organizations as a potential threat to independence and autonomy.^{25,26}

Many studies have investigated physicians' perceptions and attitudes towards different aspects of pharmacy practice and pharmacist clinical roles.^{21-24,27,28} Our study explored the experiences of primary care providers with MTM services when they have been working closely with a pharmacist in ambulatory clinics for several years. The context of this study is a large health delivery system that has implemented standardized pharmaceutical care-based medication therapy management services in Minnesota in 1998. Ramalho de Oliveira, Brummel and Miller presented a detailed description and the main outcomes of a decade of delivery of MTM services to almost 10,000 patients at this system.¹⁰ The pharmacists at this MTM program work at a full time basis in ambulatory clinics and are not associated with any dispensing activities. One of the core components of pharmaceutical care practice is collaboration with other members of a patient's care team, and to date, no studies have been carried out to uncover the experiences of other health care providers with comprehensive MTM services in an ambulatory setting.

Methods

The setting

Fairview Health Services, in partnership with the University of Minnesota, consists of 7 hospitals and 48 primary care clinics throughout the state of Minnesota. Fairview Pharmacy Services, a subsidiary of Fairview Health Services, started developing MTM sites in 1998. Fairview Pharmacy Services currently has 23 pharmacists providing MTM services in 26 ambulatory care clinics. All of the MTM pharmacists at Fairview Pharmacy Services practice under the philosophy and patient care process of pharmaceutical care.^{3,6,10} All MTM pharmacists have a pharmaceutical care certificate from the Peters Institute of Pharmaceutical Care at the University of Minnesota and are credentialed by Fairview Pharmacy Services.

Fairview MTM pharmacists follow a standardized practice model, which ensures the consistent delivery of care to each individual patient. They provide an assessment, a care plan and a follow-up evaluation to each patient in order to prevent and resolve drug related problems and to make sure the goals of therapy are being achieved. Fairview MTM pharmacists work collaboratively in the clinic setting with all members of the team including providers (medical doctors, physician assistants and nurse practitioners), nurses, diabetes educators, behavior health clinicians and care coordinators. Some examples of patients that are referred to MTM services by any clinic staff member are: patients who are not reaching their therapeutic goals, patients taking multiple medications, patients who have questions about their medications, or patients who are not adherent to their medications.

Fairview MTM pharmacists practice under a collaborative practice agreement that allows them to initiate, modify, or discontinue drug therapy and order laboratory tests for multiple medication classes used to treat many complex and chronic medical conditions. They also participate in clinic conferences, when patients' cases are discussed and decisions are made between different members of the health care team. MTM pharmacists deliver care to patients in the clinic's consultation rooms, as any other member of the team, and document their work/decision making in the electronic medical record (EPIC[®]) as well as in the electronic therapeutic record (Assurance[®]).

Data collection and analysis

For this qualitative study, semi-structured interviews were conducted with six (6) primary care providers (PCP's) who were experienced and utilized MTM services in their practices. The interviews were conducted from February through April of 2010. PCPs, including Medical Doctors (MD's), Physician Assistants (PA's), and Nurse Practitioners

(NP's), working at one of Fairview Health Services' clinics and with a minimum of 3 years of experience working with a MTM pharmacist were invited to participate in this study. If a PCP expressed interest, the researchers would contact the PCP to set up face to face interviews. PCPs were assured of confidentiality; any information given could not be traced to individual subjects. This study was approved by the Institutional Review Board at the University of Minnesota. Interviews lasted sixty minutes on average. An interview guide was devised that listed open-ended questions focusing on providers' experiences, reactions, beliefs, behaviors, and expectations related to MTM services. Moreover, the role and value of MTM services in providers' practices were unearthed. Interviews were carried out in the providers' clinics by the first author. All interviews were audio-recorded, with permission, and then transcribed verbatim. Transcripts were read multiple times by the three authors for an understanding of the whole and coded into emerging themes. The final themes were identified, discussed and agreed upon. Participant statements referring to each particular theme were grouped, further explored, and compared with initial key ideas. Interpretations were discussed among all study investigators.

Hermeneutic phenomenology as described by Max van Manen inspired the qualitative approach applied in this study.²⁹ The goal of this research was to understand a human phenomenon and provider's experiences of this phenomenon (MTM services within primary care practices). Hermeneutic phenomenology is a research methodology aimed at producing rich textual descriptions of the experiencing of selected phenomena in the lifeworld of individuals that are able to connect with the experience of all of us collectively.³⁰ From identification of the experience of phenomena, a deeper understanding of the meaning of that experience is sought. This occurs through increasingly deeper and layered reflection by the use of rich descriptive language.

Results

A total of six PCPs were interviewed. The participants consisted of four medical doctors and two physician assistants. Three respondents were male and three were female. PCPs had an average of seven years of experience working with MTM pharmacists, ranging from three to twelve years of experience.

Six themes were identified upon analysis of the transcripts: (1) *"MTM is just part of our team approach to the practice of medicine"*: MTM as an integral part of PCPs' practices; (2) *"Frankly it's education for the patient but it's also education for me"*: MTM services as a source of education; (3) *"It's not exactly just the pharmacist that passes out the medicines at*

the pharmacy": The MTM practitioner is different from the dispensing pharmacist; (4) *"So, less reactive, cleaning up the mess, and more proactive and catching things before they become so involved"*: MTM services as preventative health care efforts; (5) *"I think that time is the big thing"*: MTM pharmacists spend more time with patients; (6) *"There's an access piece, there's an availability piece, there's a finance piece"*: MTM services are underutilized at the clinics.

1. *"MTM is just part of our team approach to the practice of medicine"*: MTM as an integral part of PCPs' practices

For the participants in this study, MTM services became an important component of their clinical practices. PCPs understood that the integration of MTM into the process of caring for their patients is part of the evolution of medicine, as it was clearly articulated by the following participant:

You'd almost have to be living in a cave these days not to be affiliated with MTM, or to be open to it. I know there's probably plenty of people who are a little resistant to new ideas and new people, and feeling like this is my job to write these prescriptions and change them as I see fit. But there's just a lot of bad medicine being practiced frankly, and newer isn't greater, it's not safer, necessarily...MTM is just part of our team approach to the practice of medicine.

Participants considered the inclusion of MTM into the care team is an innovation in the practice of medicine, which, as any change, might cause some resistance in the beginning. Over time, PCPs learned how to utilize MTM services in their practices and it became a part of their day-to-day lives at the clinics. PCPs described MTM pharmacists as *"another set of eyes to look at patients' needs and provide unique solutions to problems"*. The collaboration between the participants PCPs and MTM pharmacists was experienced through direct and transparent communication. MTM pharmacists communicate all their decisions and recommendations via the electronic medical record so that the other providers feel informed and involved in the care process, as stated by the following participant:

I know that my MTM is always going to let me know what's going on, they always forward changes so they let me know what they've done...I know this is a very collaborative relationship, so I don't have to be concerned that there are going to be things happening with my patients and changes made that I'm going to freak out about later.

MTM pharmacists persistently are in contact with providers sharing information through the electronic medical record, which gives providers peace of mind. Development of trust through open communication and willingness to collaborate create an environment in which PCPs can ensure their patients are receiving the best possible care. In this study, providers emphasized the confidence they have in the knowledge and competence of MTM pharmacists. They are also open to working together with the MTM pharmacist “to make changes and adjustments to meet our goals that we’re trying to reach together”. This means that providers and MTM pharmacists are ‘on the same page’, or they share the same goals for their patients. This seems to be an extremely important prerequisite for teamwork.

As it was mentioned before and should be emphasized once more, within Fairview Health Services, MTM pharmacists work under a collaborative practice agreement that allows them to initiate, modify and discontinue medications for many different medical conditions. The participants in this study appreciated the fact that pharmacists have that level of autonomy and found that to be very helpful to their practices and their capacity to resolve patients’ health problems. PCPs commented on the fact that MTM pharmacists are physically present at the clinic, which facilitates communication and relationship building. MTM pharmacists became part of their practices as they provide a service that augments their own patient care practices, as it is illustrated in the following passage:

I have a really busy practice, I have a lot of patients with a lot of medical problems, and I don’t have near enough time to spend, the time that the patient needs in all the education. And again, a lot of patients are on a lot of medications, so I really feel like it’s a huge augmentation to my practice to have MTM close by. The close by is a big piece of it too I think; the fact that MTM is right here in our clinics several days a week and also available through our medical records system. I can contact them any time and we’ve worked together enough and trust each other enough that you can talk to them anytime about questions about medications, questions about patients, so I feel like it has become an integral part of my practice.

Oftentimes there may be hesitancy on the part of the MTM pharmacist, for fear that providers may feel the pharmacist is impinging on their practices, or that providers are not open to pharmaceutical care or do not wish to collaborate. The PCPs interviewed in this study did not express this attitude by any means. On the contrary, PCPs seemed aware of this fear, but welcomed collaboration with the MTM pharmacist.

I’ve never felt uncomfortable with the situation. I think there are some practitioners who always feel a little threatened...they feel like somebody’s usurping their powers to make changes for their patients or to be the one who manages their patients, and I’m just not that type of provider. I welcome recommendations and teamwork and that kind of thing. I think there’s a lot of value there.

The narratives of PCPs emphasized the importance of developing trust between members of the health care team, the importance of clear communication, the willingness to collaborate and leveraging the strengths of individual team members to best care for patients.

2. “Frankly it’s education for the patient but it’s also education for me”: MTM services as a source of education

As MTM pharmacists further define their role and responsibilities on the health care team, PCPs underscored over and over again how important it is that MTM pharmacists provide education about medications. PCPs highly valued when MTM pharmacists educate patients regarding their medication regimens:

I use MTM when I feel like the patient needs more education on a medication. When I feel like we can improve their adherence to and success with a medication by making sure they’re taking it appropriately, making sure that they know what it’s for. It’s kind of that, the reason things work is patients need to think it’s going to work, the provider needs to think it’s going to work, it actually has to work, and they have to take it. So, if one of those is out of place, it’s not going to be a successful treatment. And having MTM to sort of be that champion for some of these treatments I think is very helpful.

Providers expected that the MTM pharmacist would dedicate a good amount of time educating patients about their medications. Moreover, an unexpected finding was that providers also depended on the MTM pharmacist for their own education, as this next quote indicates:

There’s two things: one, I hope that the patient can learn something...but also I think that I end up learning something because I read her notes, and her comments to me, and it’s like, “oh that’s a great idea, take this medication at night, or let’s do this, or split this pill in

half, or don't take it with this one", so frankly its education for the patient but it's also education for me.

Providers also relied upon their MTM pharmacist to bring a different perspective to a challenging patient case, for instance, when they feel a patient may need some additional help, or a different kind of help.

If the patient is seeing [the MTM], my philosophy is I've exhausted everything I can do, now its your turn to kind of look at things, and feel free to do whatever you need to do to sort of find better care. I mean, we're all trying to do the same thing.

Thus, PCPs relied on the MTM pharmacist's expertise in medications to provide in depth education to patients on their drug therapies. Additionally, PCPs cherished having the MTM pharmacist available to answer their own questions about new drugs, proper doses of medications, and safe prescribing. PCPs also depended on the MTM pharmacist to provide a second opinion on treatment options for patients.

3. "It's not exactly just the pharmacist that passes out the medicines at the pharmacy": The MTM practitioner is different from the dispensing pharmacist

When providers were asked how they describe MTM services or the role of the MTM pharmacists to others, a wide variety of responses were provided. They acknowledged that the focus of medication therapy management services is the patient and not a drug product. Interestingly, they usually described the service in terms of their knowledge of what a pharmacist traditionally does, compared to their experiences working with a MTM pharmacist.

I see you as a provider; I see your role as a medical provider on the team, which is sort of different than the druggist role that people sort of assume pharmacists take on.

Even when they referred a patient to MTM services, PCPs strived to differentiate the MTM pharmacist from the dispensing or more traditional pharmacist:

How do I explain [MTM to my patients]? I usually say they are a pharmacist with a doctorate, so I'd say "it's not exactly just the pharmacist that passes out the medicines at the pharmacy, but this is a person with a lot more knowledge about the specific diseases and how to treat them, we work together to help you manage this condition better.

Some providers had a difficult time explaining what the service was, as it is shown below:

I think it's hard to really explain it. It's like you really have to work with it and see how it can benefit everyone. Once you're actually working with that person [the MTM pharmacist] you really get a sense of that. So it's hard to just tell someone...I wonder how you would explain, if someone asked "what do you do?" How do you say it in a succinct, short...because for me, I could go on and on and on.

Perhaps because medication therapy management services are somewhat new to health care, or because most providers themselves had never experienced an MTM encounter, it was difficult for some providers to describe exactly what MTM was, or to have a clear way to explain the service to others. One provider asked the interviewer how she describes the service. Another provider mentioned it would be nice for the MTM pharmacist to provide scripting of how to describe MTM to patients, so the physician would have a convincing way to encourage patients to meet with the MTM pharmacist.

Having that quick little scripting that you can give patients. You want to have that quick little, "ok I'd like you to see our MTM pharmacist, this is what they do...". And then, just to know kind of what to say, exactly how to explain what they do, without sounding like your rambling on and on.

It does not appear that years of experience working with MTM services correlated with better or worse descriptions of medication therapy management. PCPs with as little as three years of experience working with MTM had no problems explaining what they thought MTM was and what type of work the MTM pharmacist does with patients. On the other hand, there were PCPs with up to twelve years of experience working with a MTM pharmacist who still had a difficult time describing MTM services to patients, and to the interviewer. Despite how a PCP described MTM services, every PCP made a distinction between "the pharmacist behind the counter" and the MTM pharmacist.

4. "So, less reactive, cleaning up the mess, and more proactive and catching things before they become so involved": MTM services as preventative health care efforts

One area that all providers seemed to agree upon was that MTM pharmacists are able to focus on many aspects of patient safety. Providers felt that a benefit of MTM services

was that the MTM pharmacist helped manage complex patients on many medications, and helped prevent or find a solution to a drug related problem a patient may be experiencing. Repeatedly, providers expressed that when they *“have a patient that has a lot of medications, is having some side effects, is having difficulty finding appropriate medications or tolerable medications to manage their problems...that those are good patients to send to MTM to do that review and to use them and their knowledge”* to help manage patients better.

Participants’ narratives suggested that providers utilized MTM pharmacist as a safety net for safe-prescribing practices that would in turn provide safety for the patient:

I think that is just patient safety is at stake. I mean, I really believe that. Because it just, docs are just, we just punt, we guess, we think we know. We don’t really know. Maybe they [pharmacists] don’t either, because I know it’s as much art as anything, but they’ve got the system in place to make it work so things don’t slip through the cracks.

In this case, the provider was referring to the rational decision-making process of pharmaceutical care, in which the MTM pharmacist assesses the indication, the effectiveness, the safety, and the convenience of a patient’s drug therapy. Even though PCPs cannot articulate well the kind of rational decision making pharmacists use, they know that they utilize a patient care process that is logical, consistent and reproducible. Furthermore, the provider indicated that he depends on the pharmacist’s expertise in pharmacotherapy to catch errors that may be made during prescribing. Again, the theme of collaboration is intertwined with providing safe and efficient care for the patient, as the following quote illustrates:

The role of the MTM is to make recommendations in terms of, if patients are having problems with medications or if there are more efficient or effective ways to manage whatever issue they’re discussing. I know it varies because sometimes it’s specific to something like diabetes or asthma, and sometimes it’s much more generalized when we say, “ok can you see my patient and they have 15 medications and they’re having some problems, can you help look at that?” Again, collaborative to help us figure out, “ok, they’re having problems, is it related to medications? Do you think there’s a change we could make here to create less problems for this patient, decrease the amount of side effects?” Collaborative helping with particular problems and then in general when we just say “just take a look

here and see what you think about this patient’s situation.”

Undoubtedly, MTM pharmacists are depended upon to help implement and oversee safety in the care of complex patients on multiple medications. However, as the role of the MTM pharmacist expands and grows, some PCPs are learning to utilize MTM services as a proactive measure to ensure patient safety, rather as a reactive measure.

I think that rather than being a reactive thing...rather than sorting through the mess or helping us wade through that, we’re now much more proactive. There is just, if pharmacokinetics is at work, and its diabetic care, or hypertensive care, or the use of a substance like nicotine, I really see the pharmacist having very unique, special, good knowledge along those lines. So, less reactive, cleaning up the mess, and more proactive and catching things before they become so involved.

According to the PCPs participating in this study, MTM pharmacists are contributing to preventative health efforts as they care for patients with several chronic conditions to ensure they are on appropriate medication regimens, finding ways to optimize their medications and meet goals of therapy before they become the stereotypical “train-wreck” patient on 15 or more medications.

5. “I think that time is the big thing”: MTM pharmacists spend more time with patients

Likely the most common theme identified in this study, the time MTM pharmacists are able to spend with patients was one of the most valued aspects of the service. PCPs repeatedly underscored the fact that MTM pharmacists can spend more time with patients than most providers. Within the Fairview system, MTM pharmacists meet with new patients for 60 minutes and follow-up patients for 30 minutes. Within that time, the MTM pharmacist ensures that the patient understands the reasons he or she is on each of their medications, educates the patient on how the medications work and strives to increase the patient’s understanding of the importance of taking their medications properly. Providers openly emphasized their lack of time and focus on educating patients about their medications. Overtime PCPs learned to utilize MTM pharmacists for drug education and started depending on them for that, as the following passage exemplifies:

It feels like MTM sometimes has more time with patients, because we’re sort of forced into the stereotypical mold of “see as many patients fast as you

can". It's really nice for me to see a patient, newly diabetic, newly asthmatic, COPD...take your pick of other conditions that we could add to that and say, "you know, I really want you to see our MTM and take some time with them, and they can kind of just go through, here's what your meds are for, here's the side effects, here's what's gonna happen". Because, usually what happens is, I get in there, and we talk about the diabetes, and I say, here's your metformin, have a good day, and only have 2 minutes to explain to them what it's for and why it works and what it's doing inside the body.

Many times, when PCPs meet with their patients, it is to address an acute need the patient has that day. It is common for chronic conditions to go unaddressed if it is not the source of an acute concern. Because the MTM pharmacist has more time to spend with the patient, providers believe that the pharmacist and the patient can focus the visit on the chronic medications and chronic conditions, ensuring that the patient is still working towards, if not achieving their goals of chronic therapy. When goals of therapy are not being met, the MTM pharmacist and the patient have time to make the proper changes to a patient's medication regimen, depending on what the patient's barriers to achieving goals of therapy are. As it is shown in the next quotation, PCPs recognized that MTM pharmacists use their time not only for educating patients about their medications but also for engaging in medication management:

I think that time is the big thing. The amount of time he's able to spend with patients. I mean, it's really hard to adequately manage a diabetic in 15 minutes. And the fact that he can manage the medication part too. So he can do the education, but he can also adjust medications, or change things, and just really get into the details.

According to the participants in this research, another way that MTM pharmacists use their time with patients is to address any behavioral or experiential issue that might be getting in the way of them getting the benefit of the drug therapy.

I try to use what I can to help them [patients] to understand what I'm recommending to them. So if they're fearful about something or if they're having a problem then I say, "Hey, let's use this resource [MTM]. This a knowledgeable person who can help us out and spend a lot of time with you, help you to understand this better."

Therefore, from the perspectives of the interviewed providers, MTM pharmacists have more time with patients and they use this time to educate them about medications, to manage/adjust medications and to address patients' experiences and behaviors regarding medications.

6. "There's an access piece, there's an availability piece, there's a finance piece": MTM services are underutilized at the clinics

The Medication Therapy Management Department within Fairview Health Services provides services to Medicaid beneficiaries taking 4 or more prescriptions to treat or prevent 2 or more chronic medical conditions, patients enrolled with contracted Medicare Part D plan sponsors, beneficiaries of contracted self-funded employers, all Fairview employees regardless of the number of diseases or medications, and private-pay patients. This means that at the time this research was conducted there were many patients seen at Fairview clinics that were not eligible for MTM services. Additionally, the majority of the MTM pharmacists split their time between two clinics, thus being only at one clinic for two or three days out of a week. In general, the MTM pharmacist is not available to one clinic exclusively and is not available to all patients. However, PCPs believed that most patients that are on medications would benefit from MTM services and they would use them much more often if it was a covered service:

Every single visit I see there's a prompt. The only time I wouldn't use a MTM person, would be someone who's not on any medications! So if virtually half our patients or more could utilize a MTM provider, why don't we do it more? I think part of it is expense. If it's not covered by insurance... [our MTM] can't do it out of the goodness of her heart. And frankly, right now, it's limited availability. Our patients are at our clinic now; most of them don't want to go back to the primary care center. They will if they have to, but that's not convenient anymore because they're so used to this easy access that we have. So there's an access piece, there's an availability piece, there's a finance piece.

It can be inferred that if the MTM practitioner had more of a presence in the clinic, and the services were either covered by all health plans or were available to any patient, MTM services would be utilized more.

From an insurance standpoint, I would utilize them a lot more if it was covered. Like practically for any patient that was on more than a few medications I probably would involve them. Or any chronic health conditions

where they may be able to help optimize which medications they [patients] are taking. I think it's a little limited, I wish I could use [MTM] a lot more, I really do. I just think that it's so limited because the patients don't even want to pay to come see me in three months for their diabetes, let alone see me and...healthcare is so tight.

Although the lack of availability of the MTM pharmacist at the clinic at a full-time basis limited the access of patients to the service, cost appeared to be the main reason for both underutilization of MTM services and frustration on the part of PCPs:

I love having [our MTM] here. I think it adds a lot of value. I mean it's extremely helpful. The drawback is that people have to pay for it. And not many insurance plans cover it. It's like to have that resource and not be able to use it to the full advantage, because of the barrier of payment, is frustrating because it's so valuable.

PCPs also mentioned that transportation could be an issue for patients who need to come back to clinic on a day when the MTM pharmacist is there. Several providers referred to the use of "telemedicine", or seeing patients via the intranet as a solution.

I know that there is already work on sort of almost that telemedicine type thing, where we're doing sort of video conferencing with patients and that helps in terms of those "I can't get to the clinic again" kind of thing.

On the whole, it seemed that providers would utilize MTM services more if the MTM pharmacist was in clinic more often and if the services did not have to be paid out of pocket by the patient. The fact that some patients' insurance will reimburse for the service, and others will not, is a source of frustration to PCPs as they believed most patients who take medication would likely benefit from the service. They also acknowledged that it is difficult for patients to pay out of pocket for MTM services when it is hard for them to pay for medical services. Finally, PCPs recognized telemedicine or virtual MTM as a potential way to circumvent the problem of accessibility of MTM pharmacists in the clinics.

Discussion

In this study, primary care providers shared their experiences with and perspectives on MTM services that had been available to their patients and clinics over the last several years. The experiences and points of view were mostly positive. The participant PCPs emphasized how they value having an MTM pharmacist in their clinics and that MTM

services had become an integral part of their practices. The physical presence of MTM pharmacists at the clinic and their ability to communicate about patients via the electronic medical record create the right environment for relationship building between PCPs and MTM pharmacists.

Providers stated that one of the things they treasure the most is the education that patients and themselves gain from MTM pharmacists. MTM pharmacists have a different type of expertise - knowledge about medications- that add to the knowledge of primary care providers. Another study conducted in an inpatient medical setting has also found that physicians and nurse practitioners felt that the addition of pharmacists on the team had a positive impact on overall patient care and a significant education benefit for other professionals.²⁴

Because collaboration and trust between PCPs and MTM pharmacists had developed over the years in the study setting, providers appreciated the fact that MTM pharmacists are able to not only educate patients but also to adjust their medications. MTM is a value-added service to the practice of PCPs in that MTM pharmacists provide education, assist physicians in managing patients' drug therapy and attend to patients' unique experiences and behaviors regarding their use of medications. Providers believed that one way that MTM pharmacists are helpful to them is due to the fact that collaborative practice agreements are in place within Fairview, allowing these pharmacists to initiate, modify or discontinue drug therapy for numerous medical conditions. The significance of collaborative practice agreements (CPAs) in this setting cannot be underestimated as they allowed MTM pharmacists to add more substantial value to the team. It is apparent that the implementation and subsequent expansion of these CPAs in this health delivery system strengthened the position of MTM services within the health care team. Thus, the authors would like to point out the importance of legislation that supports the execution of these agreements as the one in the State of Minnesota.

Interestingly, besides acknowledging that MTM pharmacists use their time with patients to provide education and adjust medications, PCPs also recognized the significance of having pharmacists to address patients' behaviors regarding medication taking. We understand that when PCPs referred to the behavioral aspects of taking medications, they were pointing out the ability of the MTM pharmacist to attend to and improve the patient's medication experience. Several studies have indicated that addressing the patients' feelings, understandings, concerns and behaviors around medications – the patient's medication experience– is one of the most important aspects of the practice of pharmaceutical care and

medication management services as these subjective experiences might be at the root cause of drug therapy problems.^{31, 32, 33} Thus, it is interesting to notice that PCPs acknowledged the positive influence MTM pharmacists can have in the behavioral aspects associated with drug therapy.

Furthermore, from providers' perspectives, MTM services should be utilized as preventative measures in patients with multiple chronic conditions to guarantee that patients are receiving the most benefit from their pharmacological treatments. They understand that pharmacists offer a safety net for the prescription process, which is also corroborated by other studies.^{22,24}

As healthcare changes to focusing more on delivering greater value, non-physician health care providers are starting to play a more significant role in the delivery of patient-centered services.^{1,2,5,11,12} In shifting to a team-based approach to care, inter-professional collaboration becomes essential to improve quality and efficiency. The inclusion of comprehensive medication management services in patient-centered medical/health homes is advocated by the Patient-Centered Primary Care Collaborative, a coalition of major employers, consumer groups, patient quality organizations, health plans, labor unions, hospitals, and clinicians who have joined together to develop and advance the patient centered medical home:

"For patients on multiple or chronic medications, pharmacists, who are trained to provide comprehensive medication management services, have the necessary expertise to help them and their health care team in the PCMH [patient-centered medical home] to maximize the benefits from the very effective medications available in this country."¹⁵

Another study, conducted in Pennsylvania, carried out focus groups with 23 physicians in order to understand the perceived benefits and concerns related to MTM provided by community dispensing pharmacists.²⁸ This study found that overall physicians had a negative perception of community pharmacist-provided MTM. Physicians felt that they were better suited to provide MTM services and were concerned with the preparation of the pharmacist and the lack of relationship between the PCP and the MTM pharmacist.²⁸ These two studies differ significantly. In the Pennsylvania study, many of the physicians were not familiar with MTM services, and only four of the twenty-three physicians worked side by side with a pharmacist to optimize patient care. In this study, each PCP had worked closely with a MTM pharmacist for a minimum of three years. Additionally, in most cases, PCPs in our study shared a common space, or

"provider office" in the clinic with the MTM pharmacist. Another point of interest in the Pennsylvania study is the finding that physicians were concerned with the training/preparation of the pharmacist and the need for "an established, trusting relationship" between the pharmacist and physician. In our study, this relationship was already established, and one could argue that this is a result of the close proximity and the length of time in which pharmacists and providers have worked together at the clinics. A previously developed theoretical framework for physician/pharmacist collaboration working relationships posits that the more the providers communicate with each other and the more physicians utilize pharmacists' services, the greater the collaboration between them.³⁴ We also believe that the clinic setting in which Fairview MTM pharmacists practice represents a major asset that allows for open communication and development of trusting relationships with PCPs. Other studies also indicate that proximity is an essential component for collaboration between physicians and pharmacists.^{22, 27,34}

Another important issue that emerged in this study was that PCPs wanted some guidance on how to explain MTM services to others. PCPs at times asked for scripting on how to describe the service or suggested that spending time with the MTM pharmacist may better increase their understanding of medication therapy management. Pharmacists, who work in collaboration with providers, may benefit by engaging in discussion of their role in patient care and be able to answer questions clearly about medication therapy management services. Other PCPs reported having a very clear understanding of MTM and often explained the service to patients by differentiating MTM pharmacists from "the pharmacist behind the counter". Another research that conducted focus groups with patients also indicated, in this case from patients' perspectives, that physicians have a hard time to explain to patients what MTM services are and how they can help patients.³⁵ Therefore, MTM pharmacists must make every effort to better describe what their roles are and what kind of value they are able to add to the health care team.

The MTM pharmacist was described as having "more knowledge" or a higher educational degree than a dispensing pharmacist – which is arguably untrue. Although the day to day functions and focus of a MTM pharmacist may differ from those pharmacists working in a community pharmacy, the education and training is generally the same. This then begs the question: do providers have an understanding of the training and qualifications of a pharmacist? Based on the American Medical Association Scope of Practice of a Pharmacist, released in September of 2009, the answer is

no.³⁶ The AMA states that “while pharmacists’ knowledge of drugs may be strong, their ability to collect and assess subjective and objective clinical patient information as a means to initiate drug therapy or to monitor therapeutic progress is neither taught nor emphasized in pharmacy school.”³⁶ However, the PCPs interviewed in this study and the many studies before mentioned in this paper suggest otherwise. This is likely a question to be addressed in future qualitative studies.

The six themes that emerged from this research can be contextualized in today’s changing healthcare environment. The United States government is searching for ways to make healthcare more affordable and make the health system sustainable. Within Fairview Health Services specifically, changes are being made to transform the health delivery system into an Accountable Care Organization (ACO). The goal of Accountable Care Organizations is to reduce, or at least control the growth of, healthcare costs while maintaining or improving the quality of care patients receive (in terms of both clinical quality and patient experience and satisfaction).³⁷ In this context, pressure has been placed into the hands of primary care clinics to find ways to be more efficient and more effective so that more value can be achieved. Based on the responses from PCPs, MTM services have been an integral part of bridging the gap between the old and the new approach to patient care. Interestingly, a recent perspective article discussed factors for why patients were not receiving optimal care.³⁸ This editorial suggested that patient adherence and health outcomes could be improved by focusing on optimizing and reconciling medications, coordinating care and sharing electronic data, and engaging and supporting patients on an individual level. The article goes on to say that there is currently no model available to do this. It is these authors’ belief that MTM services can help to bridge this important gap existing in today’s healthcare. Through patient and provider education as well as comprehensive medication management, pharmaceutical care-based MTM services can add significant value to primary care practices which might lead to improved clinical outcomes.

Lastly, it should be stated that presently MTM pharmacists within Fairview Health Services are delivering MTM services to patients virtually, as suggested by some participants in this study. Hence, even when the MTM pharmacist is not able to be physically present at the clinic as the patient comes back for a follow-up visit, he or she can be virtually present to care for that patient. This initiative is noticeably increasing the access of patients to MTM services.

Limitations

MTM pharmacists who work closely with PCPs were responsible for referring the providers to the researchers. Due to the nature of the relationship between the MTM pharmacists and the PCPs, one could argue that the researchers only interviewed PCPs who had positive experiences with MTM services. Another limitation of this study is that the primary researcher and interviewer was also a MTM pharmacist. Despite efforts to elicit honest and unbiased perspectives, it is possible that providers were unwilling to share less than positive perceptions of MTM services.

Conclusions

This study found that Comprehensive Medication Therapy Management services are treasured by primary care providers in the ambulatory setting. Primary care providers, who utilize MTM services in their practices, considered the MTM pharmacist to be an integral member of the health care team. Providers who have extended experience working with MTM pharmacists recognized that these professionals add significant value to the care of the patient not only by providing education about medications, but also by being able to manage and adjust medications as well as addressing behavioral challenges concerning medication taking. Furthermore, providers believed that instead of using MTM services as a reactive intervention in the care of very complicated patients, these services should be utilized as preventative measures in patients with multiple chronic conditions to guarantee that patients are receiving the most benefit from their pharmacological treatments. On the other hand, it is difficult and frustrating for providers when MTM pharmacists are not available at their clinics at a full-time basis and MTM services are not consistently covered by most health plans. Finally, it is apparent that MTM pharmacists struggle to explain what their role is within the healthcare team and they need to find a more effective way to explain the unique value they add to the care of patients.

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