



# HEALTHCARE PROFESSIONALS' PERCEPTIONS OF MEDICATION THERAPY MANAGEMENT CLINICS

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## ABSTRACT

**Objective:** Medication therapy management clinics (MTM) in pharmacies are perceived and utilized differently by healthcare professionals. **Methods:** Ninety-seven healthcare professionals participated in an anonymous, cross-sectional survey to determine their perceptions and utilization of MTM clinics. It consisted of ten questions that were delivered via an online application that was secure. **Results:** 60 healthcare professionals completed the survey. 60% of respondents had referred patients to MTM clinic, and 80% were familiar with the clinic. Medication adherence and disease state management were the most common reasons for referral. Lack of knowledge about the referral process prevented patients from being referred to MTM clinics. Forty-five percent of providers rated MTM services as excellent, forty-three percent as good, twelve percent as fair, and zero percent as poor. MTM clinic pharmacists were identified as one of its strengths by healthcare providers for their comprehensive medication reconciliation, which included in-depth patient education and close follow-up. According to those familiar with the clinic, several recommendations can be made to improve the service provided by the MTM clinic; marketing efforts should be increased, collaborative practice agreements should be created between pharmacists and physicians, and brief progress notes should be written. **Conclusion:** MTM clinics are regarded as valuable resources in large, urban, academic institutions as they provide patients with detailed information about the medications and conditions they are prescribed. Due to MTM clinics' identified benefits, patients frequently refer themselves to these clinics for medication adherence and disease management.

**Key Words:** - Healthcare, Professionals, Therapy, Clinics.

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Received: 05.01.2023 Revised: 12.02.2023 Accepted: 27.02.2023

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## INTRODUCTION

The increased collaboration among healthcare providers has had a positive impact on patient outcomes [1-3]. Pharmacy professionals manage their patients' medication therapy with the help of other healthcare providers instead of just dispensing pills. Pharmacists are

spending more time providing direct patient care and teaching than performing distribution functions, according to the National Pharmacist Workforce Survey from 2009 [4]. MMA (Prescription Drug Improvement and Modernization Act of 2003) requires Medicare Part D insurers to offer medication therapy management (MTM) services to Medicare beneficiaries, aimed at improving medication use and reducing adverse drug events so that therapeutic outcomes can be improved. As a result of CMS's revision of the requirements in 2010, pharmacists and other qualified providers must provide MTM services to beneficiaries [5&6]. CMS evaluates MTM programs every year to ensure that they are effective in enhancing patient outcomes, so pharmacists should collaborate closely with other healthcare providers. Patients' safety and health care costs can be reduced and quality of care can be improved when physicians and pharmacists collaborate [7, 8].

In hospitals, physicians don't have a lot of information about MTM clinics. MTM services in the community are poorly understood by physicians, as well

as physician concerns about community pharmacists' clinical expertise. MTM clinics run by community pharmacies in the community were evaluated by Mcgrath and colleagues [9]. When it comes to assisting doctors with independent drug therapy decisions or providing specific disease-specific education, Alkahateeb and colleagues found that doctors are less likely to view pharmacist-run clinics favorably [10]. In a qualitative study conducted by MTM pharmacists, six primary care physicians were interviewed. In addition to being integral members of the team, pharmacists with expertise in medications appreciated MTM pharmacists. In the current literature, no quantitative assessment of MTM has been conducted in a hospital setting. Approximately 1800 prescriptions are written each month at the MTM clinic, with each patient filling 15 prescriptions [12]. Depending on the patient's needs, patients have routine visits every month or more frequently to evaluate their drug therapy, adverse effects, and adherence. An authorized healthcare provider and a pharmacist can collaborate on prescribing, modifying, or discontinuing a medication regimen. MTM clinic services are currently not being reimbursed, but research is being conducted to evaluate billing avenues. The MTM clinic model is based on collaboration between several healthcare providers. UI Health has not formalized its assessment of the relevance of this service, despite its existence for many years. Pharmacy staff at MTM were evaluated by a variety of healthcare professionals based on the perceptions of their services. A secondary outcome of the study was to examine how MTM clinics can be improved as well as what other healthcare professionals think of MTM clinics within a university medical center.

## METHODS

This cross-sectional, prospective, anonymous survey was conducted among 97 healthcare professionals at the urban health outpatient care center. The clinic rosters included contact information for several providers from the outpatient care center. Previous patients have referred the clinic. Two-to-six patients have been referred most frequently by providers, while two-to-ten patients have been referred by 27% of providers. Among the professionals working at Urban Health's outpatient care center are physicians, pharmacists, and nurses, ranging in age from 19 to 80. It was excluded in this study that medical providers who have worked at the MTM clinic for any length of time have been involved.

The survey consisted of ten questions and took approximately five minutes to complete. The survey instrument was not validated; however, questions were created based on current literature on an appropriate survey design [13&14]. Clinic strength and weakness questions were designed to gain insight into providers' types, specialties, clinic knowledge and understanding, and how they perceive strengths and weaknesses in the clinic. A total of seven questions were multiple choice,

while three were open ended. It was not possible for subjects to skip a question. Each open-ended question had a topic and was mutually exclusive among all questions. Research Electronic Data Capture (REDCap) was used to collect and manage data. Two follow-up reminders were sent two weeks after the initial survey. The Urban Health Institute's Institutional Review Board approved this study. In order to assess the study's results, the Center for Clinical and Translational Science (CCTS) used descriptive statistics such as frequencies and medians. Fisher's exact test was used to calculate statistical significance. All analyses were conducted using SPSS. A p-value of 0.05 on both sides was considered statistically significant.

## RESULTS

Out of 95 surveys sent, 60 were completed by medical professionals. We did not receive any undeliverable surveys. All surveys were completed in full, which allowed researchers to analyze all responses. There were 60 surveys completed by physicians, followed by nurses (14%), pharmacists (26%), and pharmacists (14%). Of the 60 surveys, 60% were completed by physicians. According to the survey, 40% of healthcare professionals practiced internal medicine, 8% practiced cardiology, and 12% practiced pulmonary medicine. MTM referrals were mostly due to medication adherence and disease state management ( $p=0.006$ ), according to 95% of respondents. There was no statistically significant difference between professions or clinics when it came to familiarity with the MTM clinic. There was no statistically significant difference in referral rates between respondents or clinics. Lack of knowledge about referral procedures prevented patients from being referred to MTM clinics. Rather than dispensing medications or placing them in pill boxes for patients, MTM clinics play an important role in helping patients adhere to treatments and manage disease states (Table 2). Providers' responses did not differ statistically based on their type of service.

A total of 45% of providers who knew about MTM pharmacists provided excellent care, 43% provided good care, 12% provided fair care, and 0% provided poor care. MTM pharmacists conducted a survey among healthcare professionals who admitted to reading clinical notes. Approximately 39% admitted to occasionally reading them, while 36% said they "never read them." Different types of providers responded at the same statistical rate. Doctors who referred patients to MTM clinics were analyzed by our team as a subset. 45% of healthcare providers read MTM clinical notes, 25% 'sometimes', 25% 'do not', and 11% 'do not' read MTM clinical notes, according to MTM pharmacists. A number of strengths of the MTM clinic have been recognized by healthcare providers, including detailed medication reconciliation provided by MTM clinical pharmacists, close follow-up with patients, effective communication

with providers, and extensive patient education and counseling. To improve the clinic, more marketing was recommended in order to raise awareness, a collaborative

practice agreement was created to improve patient care, and concise electronic medical records were created.

**Table No. 1. Demographics of respondents**

	Percent % n=60
Profession	60
Physician Pharmacist	26
Nurse	14
Clinic Employment	
Internal Medicine	40
Pulmonary	12
Cardiology	8
Antithrombosis	16
Other	24

**Table –2: Results (n=62)**

Question	Percent %
What is the Primary Role of MTM clinic?	
Dispense Medications Place medications in pillboxes	6
Aid with adherence and disease state management	4
	90
Number of Patients Referred to MTM clinic	
1-5	55
6-10	15
>10	30
How would you rate the care your patients receive from MTM clinic?	
Poor	0
Fair	12
Good	43
Excellent	45

## DISCUSSION

This study found a positive relationship between pharmacists and healthcare providers at a large, urban academic institution's MTM clinic. Despite McGrath and Alkhateeb's views, healthcare professionals increasingly view pharmacists at MTM clinics as essential patient care providers. Direct patient care is becoming more important as pharmacists improve adherence and manage diseases. In urban health clinics, patients receive extensive education, medications are adhered to more effectively, and disease states are managed more effectively, as well as detailed medication reconciliations are performed.

According to the survey, many providers are unaware of the program's existence despite its long history. Consequently, providers should provide more information about MTM services and market them more extensively. In addition, standardized referral processes may make it easier for providers to refer patients to the MTM clinic. Urban Health will distribute brochures in physician offices, along with an electronic referral form, to raise awareness of the program. Referrals to MTM clinics may increase as the referral process is simplified.

Nursing professionals also believe pharmacists and physicians should work together more in order to eliminate the need for them to act as intermediaries. It has been emphasized that physicians and pharmacists need to have more defined collaboration agreements, because fewer interruptions of their work flow would result from fewer interruptions for simple tasks such as medication refills and routine laboratory tests. A collaborative protocol pertaining to hypertension, diabetes, and medication refills is being developed by pharmacists and physicians at the Health MTM clinic. The documentation was also recommended by healthcare providers in the electronic medical record, be simplified so that notes are shorter and easier to read since many providers are not reading MTM clinic notes. Thus, pharmacists at MTM clinics rarely follow up on their recommendations. The pharmacy provider who fails to read the MTM clinic notes is often unaware that the pharmacist was approved to change medications by another physician. It is being evaluated by pharmacists at the MTM clinic how to shorten the MTM notes. They are also consulting with other MTM clinics.

Pharmacists' roles are therefore becoming more familiar to healthcare providers, and they accept pharmacist recommendations and collaborations more readily. Despite the fact that the results cannot be generalized to all settings, one can deduce that the results would be reproducible in a similar institution. Providers are also not motivated to complete the survey due to the low response rate. Nevertheless, the response rate of electronic surveys was higher than expected [15]. A validated survey questionnaire was designed using multiple references, but the survey questions weren't validated due to time constraints.

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### Cite this article:

Vonnala Pravallika\*, Gajji Saiteja Yadav, T Chanti, Konaparthi Swetha, Rajani Gunnam. Healthcare Professionals' Perceptions of Medication Therapy Management Clinics. *International Journal of Pharmacy & Therapeutics*, 11(1), 2023, 01-04.

## CONCLUSIONS

A MTM clinic provides more comprehensive education, improves medication adherence, and improves patient care. Moreover, MTM clinics can promote their services through marketing campaigns as well as collaborate more closely with physicians in order to achieve greater autonomy in titrating medications and ordering clinically relevant lab values. A large, urban, academic institution's clinic plays an important role in improving medication adherence and managing disease states. Several other institutions could benefit from pharmacist-run clinics, and staff at those institutions would perceive pharmacists as valuable assets.



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