

Attitudes toward and factors affecting implementation of medication therapy management services by community pharmacists

Christina MacIntosh, Courtney Weiser, Atal Wassimi, Jason Reddick, Nicole Scovis, Mignonne Guy, and Kevin Boesen

Abstract

Objective: To compare the attitudes of community pharmacy managers who did and did not contract with Mirixa to provide Medicare Part D medication therapy management (MTM) services in 2006.

Design: Cross-sectional descriptive study.

Setting: United States in 2006.

Participants: 100 pharmacy managers contracted to provide MTM services in 2006 and 100 pharmacy managers not contracted to provide MTM services in 2006.

Intervention: Telephone-administered survey of independent community pharmacy managers.

Main outcome measures: Pharmacist knowledge of and attitudes toward Medicare Part D MTM services.

Results: 200 pharmacy managers completed the study ($n = 100$ for each group). Pharmacists who contracted with Mirixa to provide MTM services in 2006 were more familiar with Medicare Part D MTM (80% vs. 59%, $P = 0.001$). Significantly more pharmacists contracted with Mirixa to provide MTM services agreed that they were qualified to provide MTM services (96% vs. 88%, $P = 0.01$) and strongly agreed that an annual personal medication review would benefit patient outcomes (59% vs. 45%, $P = 0.04$). No significant difference was found between groups with regard to other variables addressed in the survey.

Conclusion: Results of this study suggest that familiarity with Medicare Part D MTM services was a key factor in whether pharmacists chose to contract to provide MTM in 2006. Additionally, significantly more pharmacists who contracted felt strongly that personal medication reviews would improve patient outcomes.

Keywords: Medicare, medication therapy management services, attitudes, pharmacists, disease management, pharmacy services.

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The Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (MMA) created a prescription drug plan for Medicare-eligible patients and required plan sponsors to develop medication therapy management (MTM) services for patients with multiple chronic conditions, taking multiple prescription medications, and with projected medication costs greater than \$4,000 annually.¹ (MMA states that the projected drug spend threshold be specified in program guidance. It is currently set at \$4,000.) MMA specifies that MTM programs should enhance patient understanding, increase adherence, detect adverse events, and detect patterns of over- and/or underuse and must be coordinated with certain other Medicare care management programs. Although MMA specifically mentions pharmacists, it does not specify who should provide MTM services or specify minimum program standards. In other words, MMA does not designate pharmacists, nurses, physicians, or other health professionals as the primary providers of MTM services and does not specify the method of delivery (e.g., in person, via telephone, via informative letter). Many

published studies suggest that community pharmacists are uniquely positioned to provide MTM services.²⁻⁴ Consequently, MMA provides a tremendous opportunity for community pharmacists to develop and deliver MTM services.

Unfortunately, of the hundreds of Medicare Part D plans, few use community pharmacists to provide MTM services.^{5,6} Plan sponsors may be taking a “wait-and-see” approach, choosing to base future decisions of optimal provider and method of delivery on how community pharmacists respond to current opportunities. In 2006, the largest opportunity for community pharmacists to provide Medicare Part D MTM services was through MemberHealth (MHRx), one of the large national prescription drug benefit plans. MHRx’s drug plan, Community Care Rx (CCRx), in partnership with Mirixa Corporation (branded under the name Community MTM Services, Inc., in 2006) delivered their MTM program through thousands of community pharmacies nationwide with more than 40,000 cases completed, including a small percentage of patients who declined the services.

Mirixa provides innovative patient care solutions through a unique Web-based software platform that pharmacists use to deliver and document MTM services and to bill plan sponsors for performing the services. To begin providing MTM services to eligible patients, community pharmacists needed to contract with the Part D plan sponsor and separately with Mirixa for the use of the Web-based software. Pharmacies were not charged for using the Mirixa system. Once contracted, pharmacists were able to provide MTM services to qualified patients and receive reimbursement. Although a large number of pharmacies have contracted with Mirixa, a significant number chose not to contract in 2006. MTM sessions for some patients of pharmacies that chose not to contract with Mirixa in 2006 were performed by pharmacists at the University of Arizona College of Pharmacy’s Medication Management Center (UA MMC). UA MMC pharmacists used the Mirixa platform to identify MTM-eligible patients and to deliver and document MTM services provided via telephone.

In addition to providing MTM services in 2006, UA MMC provided technical support for the network of community pharmacists providing MTM services using the Mirixa platform. Support ranged from simple username and password retrieval to peer consultations for difficult cases. Furthermore, UA MMC participated in network recruitment, notifying community pharmacies of pending eligible patients. Similar to other stakeholders, UA MMC felt that most community pharmacists would be excited about a new opportunity to receive reimbursement for providing clinical services and were puzzled by the number of pharmacies that chose not to participate in 2006. Consequently, UA MMC research focused on determining which factors affected implementation of a community pharmacy-based MTM program.

Objective

The objective of this study was to assess the attitudes of community pharmacy managers who were and were not contracted with Mirixa to provide Medicare Part D MTM services in 2006.

At a Glance

Synopsis: Familiarity with Medicare Part D medication therapy management (MTM) services appeared to be a key factor in determining whether independent community pharmacy managers did or did not contract with Mirixa to provide MTM services in 2006. A significantly higher percentage of Mirixa-contracted pharmacists (80%; n = 100) believed that they were familiar or very familiar with MTM compared with noncontracted pharmacists (59%; n = 100). Significantly more Mirixa-contracted pharmacists (96%) agreed that they were qualified to provide MTM services compared with non-Mirixa-contracted pharmacists (88%). More than one-half (59%) of contracted pharmacists, compared with 45% of noncontracted pharmacists, strongly agreed that an annual personal medication review would benefit patient outcomes.

Analysis: Most pharmacists surveyed agreed that MTM services would be perceived favorably by patients, would improve clinical outcomes, and were best provided by a pharmacist. However, those not contracted with Mirixa to provide MTM were less familiar with MTM and less likely to believe an annual medication review would improve patient outcomes. This difference suggests that pharmacists who were educated on Medicare Part D and MTM services were more likely to seek opportunities to provide MTM services through programs like Mirixa. Previous research has shown that motivated pharmacists will overcome barriers to providing expanded pharmaceutical services to patients in community pharmacy. To better prepare community pharmacists to assume their roles in collaborative patient care, education and support must focus on qualifications and requirements of MTM.

Methods

Sample determination

Using a database available from Mirixa, researchers identified 1,033 independent pharmacies with MTM-eligible patients. Pharmacies affiliated with any chain, franchise, or buying group were excluded from the study. With an estimated response rate of 20% and a population of approximately 1,000 pharmacies eligible to complete the survey, a target sample size was set at 200 ($n = 100$ contracted and $n = 100$ noncontracted). Pharmacies were excluded from the study if the pharmacy manager could not be contacted during the data collection period from February 1 through 15, 2007. Pharmacies that did not have any Mirixa-identified MTM-eligible patients, regardless of contract status, were not included. Pharmacies that contracted with Mirixa to provide MTM services before June 2006 were not included because the data were not made available to researchers. The study was approved by the University of Arizona Institutional Review Board (IRB).

Study design and instruments

This survey-based descriptive study compared the attitudes of pharmacy managers who contracted and did not contract with Mirixa during 2006, as well as determined barriers to implementation of MTM services (Appendix 1 in the electronic version of this article, available online at www.japha.org). The questionnaire was pretested before study data were collected to ensure instrument validity; approximate time of questionnaire administration was 5 minutes. A surveyor team of eight prepharmacy students, three PharmD candidates, and two registered pharmacists was assembled to administer the survey. To ensure reliability of questionnaire responses, all surveyors completed instructional training on appropriate survey administration protocol, including the meaning and definition of survey terms and how to notate pharmacist responses on the questionnaire. Surveyors also received printed instructions for obtaining pharmacy telephone numbers from a randomized list

organized through an website available to all surveyors. Pharmacies were removed from the list by surveyors as the questionnaires were completed.

Data collection procedures

Potential participants were sorted by stratified random selection based on whether they were enrolled in the Mirixa program. Contract status was provided by Mirixa; survey researchers were blinded to contract status until all surveys were complete. Pharmacies were faxed a cover letter and a copy of the questionnaire for reference before being contacted by telephone. During each telephone interview, participants provided informed consent per IRB-approved processes, survey questions were administered, and the researcher recorded the pharmacist's responses to a series of 12 questions and/or statements. Responses were immediately repeated to participants to ensure accuracy and quality control. Surveys were conducted until a total of 100 completed surveys were reached in each group. Survey data were included if the participant answered some or all of the questions.

Data analysis

Summary statistics were calculated by group (Mirixa-contracted versus not Mirixa-contracted in 2006) for each variable. Comparisons of frequencies and percentages of responses were calculated using chi-square analyses (Table 1). The *a priori* alpha level was 0.05.

Results

Of 100 Mirixa-contracted pharmacists, 80% rated themselves as familiar or very familiar with MTM compared with 59% of noncontracted pharmacists ($P = 0.001$). Significantly more Mirixa-contracted pharmacists (96%) agreed that they were qualified to provide MTM services, compared with 88% of the 100 non-Mirixa-contracted pharmacists ($P = 0.01$). Of the contracted pharmacists, 59% strongly agreed that an annual personal medication review would benefit patient outcomes

Table 1. Responses to survey assessing attitudes toward and factors affecting implementation of MTM services by community pharmacists

Item	Not Mirixa- contracted in	Mirixa- contracted in	<i>P</i>
	2006	2006	
<i>n</i>	100	100	
Familiar or very familiar with Medicare Part D MTM	59	80	0.001
Feel a pharmacist should be the primary provider of MTM services	77	81	0.48
Agree that they are qualified to provide MTM services	88	96	0.01
Agree that MTM functions are an important part of the role of a pharmacist	96	97	0.40
Strongly agree that an annual personal medication review would benefit patient outcomes	45	59	0.04
Agree that patients receive adequate information about chronic diseases	17	17	0.96
Agree that sufficient time is available to maximize patient outcomes	21	20	0.30
Agree that pharmacists struggle with setting aside time for one-on-one patient meetings	64	66	0.63
Agree that patients would find MTM services valuable	93	96	0.07
Agree that a pharmacist monitoring medications will improve patient outcomes	83	94	0.58
Plan to participate in CCRx MTM in 2007	70	92	0.0003

Abbreviations used: CCRx, Community Care Rx; MTM, medication therapy management.

compared with 45% of noncontracted pharmacists ($P = 0.04$). No significant difference was found between groups in regard to the other variables addressed.

Of the aggregate independent pharmacists surveyed, 94% agreed that patients would find MTM services valuable and 89% agreed that medication monitoring by a pharmacist would improve patient outcomes compared with monitoring by another health professional. Of those surveyed, 79% stated that the most appropriate primary providers of MTM services were pharmacists. Additionally, 97% agreed that review of a patient medication profile and provision of intervention(s) to prevent adverse events were important aspects in the role of a pharmacist, and only 17% stated that patients receive adequate information about their chronic disease(s) from their providers. When presented with challenges to workload and resources, 64% stated that they did not have sufficient time available for patient care services to maximize patient outcomes, and 65% indicated that pharmacists struggle with setting aside enough time during business hours to meet one-on-one with patients.

Among Mirixa-contracted pharmacists, 92% indicated that they planned to participate in the CCRx MTM program in 2007, compared with 70% of pharmacists not contracted with Mirixa ($P = 0.0003$).

Discussion

Given the opportunity to provide clinical services to patients, the current research, as well as research conducted by others,⁷ sought to explore the reasons why some pharmacists have embraced MTM and others have not. The answer may lie in the contradictions uncovered in this research. When asked about the value of providing clinical services to patients, most pharmacists were in agreement that MTM services would be perceived favorably by patients, would improve clinical outcomes, and were best provided by a pharmacist. However, when pharmacists were asked specifically about their familiarity with MTM provided through Medicare Part D programs, the differences between the contracted and not contracted groups were highlighted. Specifically, those not contracted were less familiar with Medicare Part D MTM and less likely to think an annual medication review would improve patient outcomes. This difference suggests that pharmacists who educated themselves about Medicare Part D and MTM services sought opportunities to provide MTM services through programs like Mirixa. This contradiction also emphasizes the need to create MTM standards. The survey questions in this study were based on the five core elements of MTM as put forth by the American Pharmacists Association (APhA) and the National Association of Chain Drug Stores (NACDS).⁸ Although pharmacy associations generally agree on these standards of MTM, the Centers for Medicare & Medicaid Services has given no clear guidance on elements that constitute MTM. This may add to the discordance of the responses of individual pharmacist respondents.⁹

Difficulty training personnel to provide MTM was listed as a barrier in a study by Law et al.¹⁰ that revealed moderate interest in MTM by community pharmacies. The authors found that the most commonly reported barriers to providing MTM in 2004

were lack of time, lack of trained personnel, and limited reimbursement. The researchers suggested that addressing these barriers may encourage pharmacists to provide MTM services. Given that Medicare has established a policy of reimbursement for MTM services, a challenge to the pharmacy community is to discover new methods to overcome time and staffing barriers to provide this valuable service. Other attitudes and barriers assessed by Law et al. did not differ between groups, indicating that these barriers or attitudes did not factor into the decision to provide MTM or could be overcome by those choosing to provide MTM.

Previous research has shown that when pharmacists are motivated, they will overcome barriers to providing expanded pharmaceutical services to patients in community pharmacy. Research by Willink and Isetts¹¹ described innovative community pharmacy practices, including MTM services. The researchers found that implementing MTM was successful when pharmacists were motivated to implement such programs. Davanzo et al.² showed that pharmacy providers can implement a successful MTM service package in a range of environments. Considering factors such as time, technology, and staffing involved in implementing MTM, they created a model for providing pharmaceutical care services. Future research may uncover characteristics of and catalysts for motivating pharmacists to implement MTM services.

To better prepare community pharmacists to assume their roles in collaborative patient care, education and support must focus on qualifications and requirements of MTM. Based partially on the results of this survey, the University of Arizona College of Pharmacy has conducted continuing education programs to address deficits in familiarity with MTM requirements and qualifications to provide MTM. In 2007, UA MMC provided a free nationwide MTM training tour to independent pharmacy owners. Additionally, APhA and the NACDS Foundation have developed MTM training programs that are available for purchase. The intent of these associations is to increase interest in receiving reimbursement for the provision of clinical services that will improve patient outcomes and decrease costs associated with multiple chronic conditions.

Limitations

Several limitations should be considered when interpreting the findings of this research. Information on whether pharmacists were affiliated with the National Community Pharmacists Association (NCPA) was not assessed in this study; therefore, any relation to NCPA, despite the fact that Mirixa is owned by NCPA, cannot be assumed or extracted for potential bias. This study excluded chain pharmacies and the opinions of pharmacists who chose not to participate in this survey; as a result, generalizing results to the entire community pharmacy sector may not be possible. Additionally, although Mirixa-contracted pharmacies had at least one MTM-eligible patient, these study participants may or may not have performed MTM services in 2006. Although the contracted pharmacists had no control over the actual number of MTM-eligible patients received, this limitation may call into question pharmacists' attitudes and

perceptions formed on limited or no experience in the delivery of MTM services. The amount of reimbursement for performing MTM services was not addressed, neither was the impact of reimbursement on contracting statuses. Demographic variables including but not limited to length of time in practice, type of degree (PharmD or BPharm), and pharmacy ownership may demonstrate differences in pharmacists' attitudes but were not included in this study because they were not considered a central component within the scope of this research.

Conclusion

In conclusion, taking the initiative to contract to provide MTM services may be linked to a higher level of familiarity and greater confidence in professional qualifications of pharmacists called upon to perform these clinical services. Although many barriers exist in the implementation and provision of MTM, taking the initial step to contract, combined with gaining a level of comfort in the understanding of requirements to contract, greatly increases the likelihood that pharmacists will provide MTM services. For pharmacists who chose not to provide MTM, the lack of initiative to contract may be linked to a limited understanding of the requisite skills or requirements, leading to a perception that limited value exists in delivering this service to patients.

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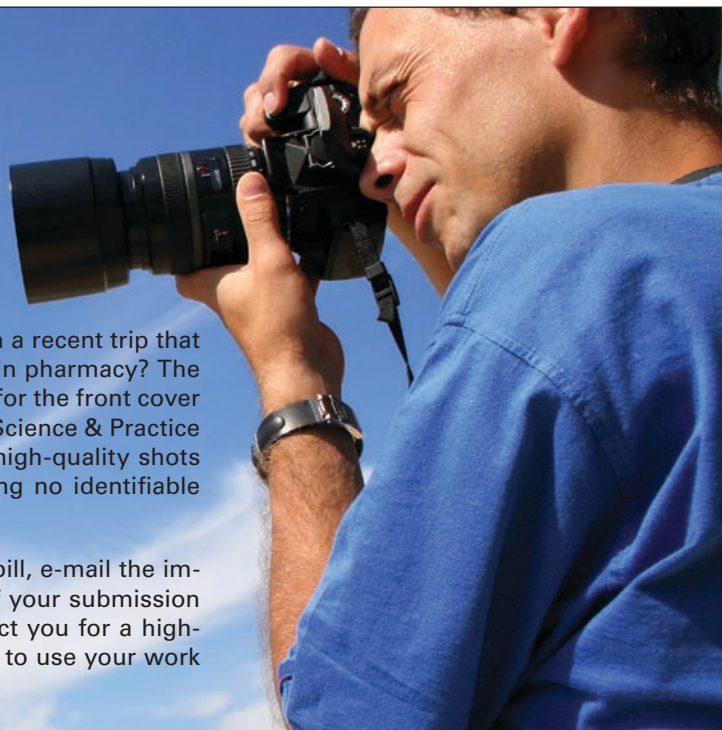
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Appendix 1. Survey assessing attitudes toward and factors affecting implementation of medication therapy management services by community pharmacists

1. Please rate your level of familiarity with medication therapy management as it pertains to Medicare Part D from 1 to 5 as follows:

- 1 = not familiar
- 2 = somewhat familiar
- 3 = not sure
- 4 = familiar
- 5 = very familiar

2. Who do you feel should be the primary provider of medication therapy management services?

For the purpose of this survey, medication therapy management is defined as a pharmacist-provided patient care program consisting of these five core elements:

- Medication therapy review
- A personal medication record
- A medication action plan
- Intervention and referral
- Documentation and follow-up

With this definition in mind, please rate the following statements:

3. I am qualified to provide medication therapy management to patients.

- 1 = strongly disagree
- 2 = disagree
- 3 = neither disagree nor agree
- 4 = agree
- 5 = strongly agree

4. Beyond the processes of normal dispensing functions, reviewing a patient's medication profile and providing interventions to prevent adverse events is an important aspect in the role of a pharmacist.

- 1 = strongly disagree
- 2 = disagree
- 3 = neither disagree nor agree
- 4 = agree
- 5 = strongly agree

5. An annual personal medication review would benefit patient outcomes.

- 1 = strongly disagree
- 2 = disagree
- 3 = neither disagree nor agree
- 4 = agree
- 5 = strongly agree

6. Patients receive adequate information about their chronic disease(s) from their providers.

- 1 = strongly disagree
- 2 = disagree
- 3 = neither disagree nor agree
- 4 = agree
- 5 = strongly agree

7. The time I have available for patient care services is sufficient to maximize patient outcomes.

- 1 = strongly disagree
- 2 = disagree
- 3 = neither disagree nor agree
- 4 = agree
- 5 = strongly agree

8. During business hours, the pharmacist at your location struggles with setting aside enough time to meet with patients one-on-one.

- 1 = strongly disagree
- 2 = disagree
- 3 = neither disagree nor agree
- 4 = agree
- 5 = strongly agree

9. Considering the five core elements: medication therapy review, personal medication record, medication action plan, intervention and referral, and documentation and follow-up, patients would find medication therapy management services valuable.

- 1 = strongly disagree
- 2 = disagree
- 3 = neither disagree nor agree
- 4 = agree
- 5 = strongly agree

10. Patients will experience improved outcomes when medications are monitored by a pharmacist as compared to another health care professional.

- 1 = strongly disagree
- 2 = disagree
- 3 = neither disagree nor agree
- 4 = agree
- 5 = strongly agree

11. In 2006 did you participate in any Medicare Part D medication therapy management program?

_____ Yes _____ No

12. Next year, do you plan to participate or continue your participation in the 2007 Community Care Rx MTM program?

_____ Yes _____ No