



# Medication Therapy Management Services: A Critical Review

## Executive Summary Report

*Prepared For:*

**American Pharmacists Association**



**May 17, 2005**

# **Medication Therapy Management Services: A Critical Review**

**Final Report**

*Prepared for:*

**American Pharmacists Association**

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*May 17, 2005*

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## MEDICATION THERAPY MANAGEMENT SERVICES: A CRITICAL REVIEW FACT SHEET

It has been demonstrated that Medication Therapy Management Services (MTMS) currently being delivered at both local and regional levels can lead to a reduction in overall health care expenditures by optimizing therapeutic outcomes. The American Pharmacists Association (APhA) commissioned The Lewin Group to identify existing MTMS standards of practice and to develop an illustrative model for payers to consider in evaluating the compensation of pharmacists for MTMS. This report is intended to serve as a resource for individuals charged with designing and implementing a Medicare Medication Therapy Management (MTM) program under the Medicare Modernization Act of 2003 (MMA) as well as for those interested in expanding MTMS in both the public and private sectors.

In the final rule implementing the MMA, the Centers for Medicare and Medicaid Services (CMS) said that MTMS must “evolve and become a cornerstone of the Medicare Prescription Drug Benefit.”

The type of payment is a critical feature of the business model for MTMS in that different forms of compensation create varying incentives for providers. As Medicare Advantage-Prescription Drug Plan (MA-PD) and Prescription Drug Plan (PDP) sponsors contemplate developing MTM programs, including fee structures for MTMS under the MMA, they likely will find that a significant body of evidence in the literature exists as well as a number of different payment models currently in use.

Today, the majority of MTMS payment systems are variants of fee-for-service (FFS). Although we observed some variation in the unit of payment for MTMS, the majority of programs paid based on services provided (e.g., for an assessment or a visit). Most programs varied payments by type or intensity of service to reflect differences in the amount of resources required to deliver it.

### KEY FINDINGS:

- Interview findings and the literature review suggest that cost reduction and improved health outcomes can occur when MTMS are provided, especially to elderly patients.
- Adjustments will be needed regarding both the scope of services and provider incentives under Medicare if CMS is to achieve the legislation’s intended outcome of improving medication use and patient-care quality.
- The MMA might be too limited in its definition of the population required to receive MTMS under Medicare. Future amendments to the MMA might expand the MTMS-eligible population to test the hypothesis that **preventing** high-severity cases could be cost-effective.
- Important, practical differences exist between the dispensing and MTM roles of pharmacists. These differences are intrinsic to the economics of the pharmacy industry. MTMS unlikely will be provided if these differences are not recognized, encouraged, and ultimately rewarded financially.
- Interview respondents noted that patients are generally thought to be highly supportive of MTMS; the fact that MTMS are sometimes self-paid supports this contention. Many

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patients find that pharmacists are approachable and better prepared to spend time answering such basic questions as “How can I better manage my diabetes and the medications I am taking to control it?”

- Interview respondents reported that many physicians are realizing that MTMS can leverage them, in that pharmacists can field many patient questions in a timely fashion. Physicians also are learning that in the case of patient wellness, MTMS activities could improve patient health outcomes and perhaps lessen the need for additional medications, ensure that appropriate medications are taken correctly, or both. The acceptance of physicians’ use of “incident to” payment structures in some states is evidence that physicians are willing to view the pharmacist as a partner in patient care.
- MTMS can reduce the use of physician and hospital services by reducing adverse health events. MTMS might increase or decrease drug costs, but evidence suggests that MTMS can reduce per-member per-month (PMPM) total health costs.
- MA-PD plans can immediately benefit from MTMS if they can internalize resulting savings. Because PDPs presumably will attempt to minimize drug costs, however, it is difficult to see how MTM programs that might increase drug costs would be viewed by PDPs as beneficial or in their interest. Without incentives for PDPs, such as bonus payments for certain MTMS thought to decrease overall PMPM health expenditures, they will have little incentive to pay for MTMS that increase drug costs.
- To ensure beneficiary access to medically necessary, high-quality care while creating incentives for provider efficiency, payment system components should include unit of payment, patient or risk classification, relative value payment, payment adjustments, and a payment update factor.
- Although a full array of MTMS that could improve health and reduce total health care costs is available, the law requires services to be provided only to a select few Medicare beneficiaries. The incentive structure is likely to restrict 22 million beneficiaries from receiving comprehensive MTMS (especially those that might increase drug costs).
- A payment system must provide unit payments adequate to cover at least pharmacist labor costs (approximately \$1.00 to \$2.00 per minute, according to industry estimates) or, to be sustainable, total costs (approximately \$2.00 to \$3.00 per minute, according to industry estimates). The pricing system must also provide adequate aggregate payments to sustain and provide for growth in number of providers.
- Current fee schedules often fail to reflect the above-referenced unit payments. This omission likely is because MTMS concepts have been developed in public programs (which often fail to provide for adequate payments), and the private sector is just now beginning to explore MTMS. As new rates are introduced, they likely will be more sustainable, as both private- and public-sector programs utilizing rates that provide insufficient compensation will probably prove unsustainable in the marketplace over the long run.
- In an illustrative payment model developed by The Lewin Group, the PMPM provider fee was calculated to be \$1.56 for a hypothetical plan. This hypothetical plan would deliver Medication Therapy Review (MTR) to 10% of enrollees and MTM to the 3% of enrollees identified by the review as needing services.

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## EXECUTIVE SUMMARY

Pharmacists' value to the healthcare delivery team is evidenced throughout the literature by the wide variety of innovative Medication Therapy Management Services (MTMS) currently being delivered at both local and regional levels. It has been demonstrated that MTMS, appropriately employed, can lead to a reduction in overall health care expenditures through optimizing therapeutic outcomes, especially in elderly patients. Better health outcomes result in a reduction of adverse medication events along with their attendant emergency room visits and hospital stays. The current state of pharmacy practice is characterized by diverse MTMS offerings of varying levels of complexity and intensity. The American Pharmacists Association (APhA) commissioned The Lewin Group to develop a report presenting the range of current Medication Therapy Management (MTM) programs and practices and how they are paid. In addition, The Lewin Group was charged with developing a methodology for evaluating payments that could provide a sound economic base for the continued development of MTMS.

The purpose of this report is to identify existing MTMS standards of practice and compensation models and to develop from them a model for payers to use in compensating pharmacists for MTMS. This report is intended to serve as a resource for individuals charged with designing and implementing a Medicare MTM program under the Medicare Modernization Act of 2003 (MMA) as well as for those interested in expanding MTMS in both the public and private sectors.

In recognition of the potential value of MTMS for Medicare beneficiaries, the MMA opened the door for Medicare Advantage-Prescription Drug Plans (MA-PD) and Prescription Drug Plans (PDP) to work with existing prototypes and move MTMS to the next stage of their development. In the final rule implementing the MMA, the Centers for Medicare and Medicaid Services (CMS) said that MTMS must "evolve and become a cornerstone of the Medicare Prescription Drug Benefit." It is hoped that this report can serve as a starting point for identifying the best practices that might evolve into industry standards for both delivering MTMS and paying for them.

### Methods

We used a three-part research approach to collect, analyze, and synthesize a wide range of qualitative information. First, we reviewed the published literature on MTMS provided through public- and private-sector programs. Our review included systematic evaluations and peer reviewed journal articles describing the results programs were able to achieve. Concurrent with the literature review, we conducted a series of key opinion leader interviews to discuss additional programs for which few published studies exist, such as those currently being provided by independent, chain and supermarket pharmacies. A broad cross section of stakeholder groups was interviewed. Potential respondents were selected from a list of contacts provided by APhA. A total of thirty-two 45-minute interviews were conducted among representatives of six major groups. In addition, during the month of January after the release of the final rule implementing the new Medicare Part D (prescription drug benefit), we held informal discussions with potential PDP sponsors and health plans as well as with CMS officials regarding the content and intent of the MMA legislation.

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## Defining MTMS

The way in which PDPs implement MTMS is of paramount importance for Medicare beneficiaries. Neither the legislation nor the final rule provide MA-PDs or PDPs with guidance in designing or reimbursing MTMS except to say that programs will be “patient focused services aimed at improving therapeutic outcomes” that are developed in conjunction with practicing pharmacists and paid out of the plan’s administrative fee.

The MMA fails to explicitly define the services comprising MTMS, but it specifies that services are for Medicare beneficiaries with multiple chronic diseases, who are taking multiple medications and who are expected to incur prescription drug expenses of at least \$4,000.00 in 2006. Because these beneficiaries are at high risk for adverse medication events, they stand to gain the most when medications are used appropriately.

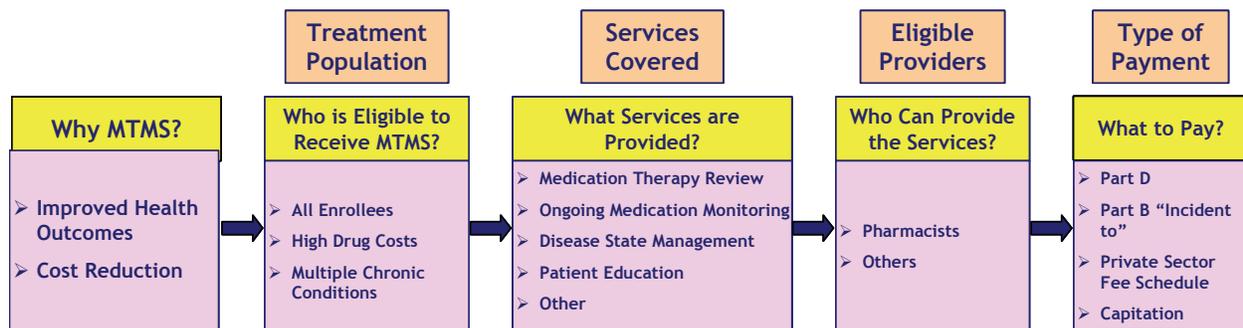
In 2004, APhA hosted the Pharmacy Stakeholders Conference on Medication Therapy Management Services, which included representatives from eleven different national pharmacy associations. Program criteria as well as a description of medication therapy management services were developed at the consensus-building conference. The new criteria define MTM as “a distinct service or group of services that optimizes therapeutic outcomes for individual patients. MTMS are independent of, but can occur in conjunction with, the provision of a medication product.”

Other criteria from the Pharmacy Stakeholders Conference on Medication Therapy Management Services are that services should be individualized and patient specific as well as be provided in face-to-face interaction with the patient as the preferred method of delivery (per the definition). Programs shall include structures supporting the establishment and maintenance of the patient-pharmacist-prescriber relationship. Pharmacists should be able to identify “targeted” beneficiaries who should receive MTMS and participate in processes to improve continuity of care and outcomes. Finally, payment should be consistent with current provider payment in that it is based on time, clinical intensity, and the resources required to provide services.

### MTMS Business Model: Essential Components

Our overall understanding of how MTM programs could be developed is embodied in the business model presented in *Figure ES-1*. The components included represent the essential elements comprising an MTM program. For example, in deciding who will be eligible for MTMS, the MA-PD/PDP might consider all enrollees to be eligible in an attempt to improve health outcomes and reduce per-member per-month (PMPM) costs for the enrollee population as a whole. On the other hand, the MA-PD/PDP might limit eligibility to only enrollees with high health care costs because these enrollees are the most vulnerable and the plan might achieve better return on investment by targeting eligibility in this way. The MA-PD/PDP might limit eligibility to only enrollees for whom the expected cost savings exceed the cost of the MTMS intervention.

**Figure ES-1  
Four Essential Components of an MTMS Business Model**



In terms of services covered, the MA-PD/PDP might offer MTMS of different intensities to different groups of enrollees, depending on enrollee need, expected uptake, and projected savings for the group. Pharmacist-provided services can include many different activities, ranging from a review of current medications to patient education on the appropriate use of medications to ongoing disease management.

Pharmacists are the only health care providers specifically mentioned in the MMA as being able to deliver MTMS. However, important differences exist between the dispensing function and the MTM function, and to truly “optimize therapeutic outcomes,” there must be pharmacists specifically dedicated to and compensated for providing direct patient care.

The type of payment is a critical feature of the business model for MTMS in that different forms of compensation create varying incentives for providers. As MA-PDs and PDPs contemplate developing MTM programs, including fee structures for MTMS under the MMA, they likely will find that a significant body of evidence in the literature exists as well as a number of different payment models currently in use. The majority of MTMS payment systems today are variants of fee-for-service (FFS). Although we observed some variation in the unit of payment for MTMS, the majority of programs paid based on services provided (e.g., for an assessment or a visit). Most programs varied payments by type or intensity of service to reflect differences in the amount of resources required to deliver it.

**Why MTMS?**

Both our interview findings and the results of our review of the literature suggest that improved health outcomes and cost reduction can occur when MTMS are provided, especially to elderly patients. Although a rigorous review of the evidence was out of the scope of this study, we did find support for both cost reduction and improved health outcomes in the literature we reviewed as well as in our interviews.

It is well known that pharmaceuticals are a leading driver of health care expenditures and inflation. For instance, between 1998 and 2002, pharmaceutical expenditures rose from \$86.73

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billion to \$179.18 billion, or by 106% over the 5-year period.<sup>1</sup> The literature suggests that for every dollar spent on pharmaceuticals, another dollar of spending results from “drug misadventures.”<sup>2,3</sup> The literature contains several studies in which the positive impact of pharmacists in improving medication adherence by patients and improving prescribing by physicians was examined.<sup>4,5</sup> A recent review of the literature using the Cochrane Database found that pharmacist intervention can change patient behavior and adherence to medication regimens.<sup>6</sup>

### ***Who is Eligible to Receive MTMS?***

The major program distinction in terms of eligible recipients of MTMS is whether the plan offers services to **all** of its enrollees or whether there are specific groups of targeted recipients, such as those having particular diseases or chronic conditions or those taking particular medications or having a minimum threshold level of spending for drugs. Health plans tend to focus on their enrollee population as a whole, while clinical programs tend to focus on individual patients.

The MMA requires Medicare MTMS to be provided to “targeted beneficiaries,” limiting the service requirement to patients who “(I) have multiple chronic diseases . . . (II) are taking multiple covered part D drugs; and (III) are identified as likely to incur annual costs that exceed \$4,000.” These individuals presumably require a different set of MTMS than those requiring wellness services to prevent them from falling into the targeted categories. Thus, of the full array of MTMS that might improve health and reduce total health care costs, only a selected few would be required of PDPs in the proposed Medicare Part D program. The MMA might be too limited in its definition of the population required to receive MTMS under Medicare. Perhaps future amendments to the MMA might expand the MTMS-eligible population to test the hypothesis that preventing high-severity cases could be highly cost-effective.

### ***What Services Are Provided?***

A key topic of the interviews was the types of MTMS that are currently being provided. We heard throughout our interviews that services are on a continuum, ranging from a 2-minute conversation with a patient at the counter to an hour-long consultation with a patient concerning his or her drug regimen held in a private area. At one end of the continuum is the drug use review (DUR) that accompanies dispensing a prescription and is mandated by the Omnibus Reconciliation Act of 1990 (OBRA-90). On the other end are intensive disease-specific direct patient care activities, often delivered in an outpatient clinic.

In the final rule implementing the MMA, CMS stated that insufficient standards and performance measures for MTMS exist at this time to support further government specification

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<sup>1</sup> The Lewin Group analysis using data from Centers for Medicare and Medicaid Services: Office of the Actuary.

<sup>2</sup> Manasse HR. (1989). Medication use in an imperfect world: Drug misadventuring as an issue of public policy. Part 1. *Am J Hosp Pharm*, 46: 929-944.

<sup>3</sup> Brooks JM, McDonough RP, Doucette W. (June 2000). Pharmacist reimbursement for pharmaceutical care services: Why insurers may flinch. *Drug Benefit Trends*, 45-62.

<sup>4</sup> Lipton HL, Byrns PJ, Soumerai SB et al. (1995). Pharmacists as agents of change for rational drug therapy. *Int J Technol Assess Health Care*, 11: 485-508.

<sup>5</sup> Indritz ME, Artz MB. (1999). Value added to health by pharmacists. *Soc Sci Med*, 48: 647-660.

<sup>6</sup> Beney J, Bero LA, Bond C. (2000). Expanding the roles of outpatient pharmacists: Effects on health services, utilization, costs, and outcomes. In: *The Cochrane Library*, issue 3. Oxford, UK.

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concerning MTMS and service-level requirements. MTM, as currently practiced, takes many forms and represents an evolving clinical discipline. We summarized the most prevalent MTM-related activities being provided by pharmacists into the following four main categories:

- Medication therapy management/polypharmacy
- Disease management
- Lab testing/screening
- Wellness programs/immunizations

Respondents generally indicated a distinction between MTM of high-risk, high-drug use individuals versus disease management, or more broadly managing all individuals in a group who have a specific disease. MTMS can be delivered at multiple levels of complexity, with licensed pharmacists delivering first-line medication management and more highly trained pharmacists, more highly credentialed pharmacists, or both delivering the more complex services (e.g., disease management). Additionally, pharmacists often collaborate with physicians to achieve the best therapeutic outcome for the patient by recommending alternative drugs or formulations or therapeutic substitution. Pharmacists work across a variety of settings including community, hospital, long term care, ambulatory care clinics, and physician practices to provide clinical services directly to patients.

### ***Who Can Provide Services?***

Three major questions are inherent in the issue of who can provide MTMS.

- *First, are the dispensing function and the MTM function totally separate, or can they be combined such that the same pharmacist can provide both?*

Important practical differences exist between pharmacists' dispensing and MTM roles. The dispensing function depends on the volume of prescriptions being filled, whereas the MTM function is patient focused, with the metric being improved health outcomes, avoidance of medication related problems for an individual patient, or both. Although in principle, any licensed pharmacist can perform MTMS, in practice, the dispensing and MTM roles are different. For MTMS, the focus is on the patient, while in dispensing, the pharmacist focuses on processing prescription orders. In interviews, we heard examples of pharmacists providing MTMS as part of dispensing as well as within specific patient care services. The level of MTMS provided was influenced by dispensing demands, staffing levels, and other administrative functions.

- *Second, can health care providers other than pharmacists provide MTMS?*

Pharmacists are the only health care providers specifically mentioned in the MMA. Although the proposed MMA rule indicated that pharmacists would be the primary providers of MTMS, in the final rule CMS indicated that MA-PD and PDP plans would have to decide who would provide MTMS within the overall context of their program design. CMS went on to say that face-to-face consultation was but one component of a successful MTM program. The accessibility of pharmacists to patients, and their in-depth training focused on MTM, support pharmacists being the primary provider of MTM services.

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- *Third, how well are pharmacists accepted as health care providers by patients, physicians, and health plans?*

### *Patients*

Interview respondents noted that patients are generally thought to be highly supportive of MTMS. The fact that MTMS are sometimes self-paid supports this contention. Many patients find that pharmacists are easy to approach and better prepared to spend the time answering questions related to medication therapy.<sup>7</sup> In addition, the increasing publicity about the dangers of certain medications might increase beneficiary acceptance of additional sources of independent information on appropriate medications and their use.

### *Physicians*

Interview respondents reported that physicians can be skeptical of MTMS at first. In the past, pharmacists represented a possible source of competition. In practice, however, many physicians have come to realize that MTMS can represent a source of leverage for them in that the pharmacist can field many patient questions in a timely fashion. Physicians also are learning that in the case of patient wellness, MTMS activities can improve patient health outcomes and, perhaps, lessen the need for additional medications, and ensure that the appropriate medications are taken correctly.

Physicians' use of "incident to" payment structures and collaborative practice arrangements in some states are evidence that physicians are willing to view the pharmacist as a partner in patient care. This fact is particularly true of clinics or closed settings like Kaiser Permanente. A beneficial relationship of FFS physicians to pharmacists is built and maintained with education and ongoing experience with MTMS.

### *Health Plans*

Fully capitated plans could be the natural beneficiary of MTMS. If MTMS reduce overall PMPM total healthcare expenditures, as is suggested in the literature and by interview respondents, they would be extremely valuable to MA-PD plans. The market experience seems to be that integrated plans (e.g., Kaiser Permanente) find MTMS to be highly advantageous.

Because PDPs will not be at risk for overall health costs, they might find MTMS less financially rewarding. PDPs will be paid risk-adjusted PMPM payments based on expected drug costs. MTMS are designed to ensure that medications are used appropriately and to optimize therapeutic outcomes. Because PDPs presumably will attempt to minimize drug costs, it is difficult to see how MTM programs that might increase drug costs would be viewed by PDPs as being in their interest. Any savings on PMPM total health care costs are external to PDPs under Part D. CMS could provide some explicit direction for PDPs in terms of taking into account the resources and time associated with pharmacists' provision of MTMS when developing payment. For instance, PDPs could be given bonus payments for certain MTMS services that

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<sup>7</sup> JAPhA (1999); 39:127-135.

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have demonstrated a relationship to improved health outcomes, decreased overall PMPM health care expenditures, or both.

The fact that MTMS must be paid out of administrative costs could work against this positive incentive though, even for MA-PDs, if adequate funds are unavailable. In practice, the application for MA-PDs requires plans to specify the number of targeted beneficiaries in their population, the number expected to take up services, and the fees that will be paid for the services. Section V on Worksheet 1 of the bid pricing tool that plans will use in developing their bids contains the PMPM non-pharmacy expenses, such as marketing and sales, crossover fees, uncollected beneficiary premiums, direct and indirect administrative expenses, and MTMS. Additionally, plans are required to report to CMS on their MTM programs, including about the fees that are paid.

### ***What Type of Payment?***

Successful payment systems offer incentives to providers to deliver high-quality care. Each existing payment model, however, has its strengths and weaknesses. The findings presented in this section offer the Medicare program and others a starting point for establishing standards for paying for MTMS. By developing a payment system or a set of “guiding principles,” CMS can help encourage MA-PDs and PDPs to ensure that Medicare beneficiaries get access to MTMS. Moreover, payment systems used by CMS frequently offer a model for private payers.

*Table ES-1* summarizes the payment methods we found in our review of current practices. In most cases, the organization or pharmacy is paid, as in the physician practice model, although we did find instances in which the individually employed pharmacist is paid directly. In cases of self-employed pharmacists, they are usually paid directly for professional services.

### ***Examining Payment for MTMS under MMA***

As payers contemplate setting prices for MTMS under MMA, they have a considerable body of evidence from which to draw. The majority of payment systems today are variants of FFS. In some settings, pharmacists are providing clinical services and billing “incident to” the physician.

*Table ES-1* provides a range of payment amounts provided by interview respondents. Many of these amounts do not amount to the \$2.00 to \$3.00 per minute “rule of thumb” suggested by several interview respondents likely because MTMS concepts have been developed in public programs (which often fail to provide for adequate payments).

### ***Crosswalking Payment Rates for MTMS to Existing Physician Fee Schedules***

Many payers use Current Procedural Terminology (CPT) evaluation and management (E&M) codes. At this time, the Pharmacist Services Technical Advisory Coalition (PSTAC) has submitted a Coding Change Request to the American Medical Association CPT Committee for MTMS codes for health professional reimbursement.

**Table ES-1**  
**Sample Payment Rates as Provided in the Interviews**

<b><u>1. Private MTMS Program Provider</u></b>
\$30.00 for Comprehensive Medication Review \$20.00 for prescriber consultation to resolve a drug therapy problem (\$20.00 per problem) \$15.00 for patient consultation to resolve a compliance-related drug therapy problem \$10.00 for patient E&M (per medication)
<b><u>2. Independent Pharmacy</u></b>
\$1.00 to \$2.00 per minute Initial visits - \$75.00 to \$120.00 Follow-up visits - \$35.00 to \$60.00
<b><u>3. Independent Retail Pharmacy Franchiser</u></b>
\$7.00 - lowest cost avoidance items \$30.00 for more complex reviews or \$100.00 per person per year offset by savings
<b><u>4. Supermarket Pharmacy</u></b>
\$40.00 for initial visit or consult \$20.00 for reviews \$10.00 per administration of immunizations
<b><u>5. Iowa Medicaid Program</u></b>
\$75.00 for initial assessment \$40.00 for new problem or problem follow-up assessment \$25.00 for preventive follow-up assessment
<b><u>6. Mississippi Medicaid</u></b>
Mississippi Medicaid: initial payment of \$20.00 per visit with a twelve-visits-per-year cap
<b><u>7. Pharmacy Benefit Manager</u></b>
Working on a payment system - \$125.00 for initial visit or \$25.00 per month for monitoring Attempted to pay \$20.00 per service to pharmacists who called physicians, but pharmacists did not accept this rate
<b><u>8. Independent Retail Pharmacy Franchiser</u></b>
Wisconsin Medicaid pays \$40.11 "per encounter" for monitoring patient compliance. Some HMOs pay per event (i.e., \$10.00 for detect and correct and \$20.00 for blood glucose education).
<b><u>9. Chain Pharmacy</u></b>
Charges - \$2.50 to \$3.00 per minute \$75.00 for limited assessment \$40.00 for follow-up \$40.00 for new problem \$20.00 for mandatory follow-up visit at 6 months
<b><u>10. Ambulatory Care Clinic</u></b>
Bill "incident to" for Level 4 E&M for established patients
<b><u>11. Otherwise Mentioned</u></b>
\$500.00 per year for four to five 30-minute appointments \$140.00 flat fee for three visits at 20 minutes each \$250.00 to enroll a patient with CHF in MTMS for 1 year with bonus for improved test scores \$7.00 for counseling claim (less than the cost of administration) Many private pay situations do not pay at all. Employers need to see value in MTMS

Using \$2.00 to \$3.00 per minute suggested by several interview respondents as an estimate of the average cost to pharmacies of providing MTMS, we test the feasibility of this approach.<sup>8</sup> *Table ES-2* presents sample CPT E&M codes for collaborative drug-therapy management services for established patients that reflect time in minutes and intensity of work effort

<sup>8</sup> Although several respondents mentioned this level of payment, none reported having conducted a full cost analysis.

comparable to MTMS.<sup>9</sup> The conversion factor (cf), or the dollar amount that converts relative values into payments for the 2005 Medicare Fee Schedule (MFS), is \$37.90. This amount tracks with the 2005 non-facility relative value (rv) amount to produce the following results. In *Table ES-2*, we take the 2005 MFS cf of \$37.90 and multiply it by the MFS 2005 non-facility relative value (rv) for each CPT code. For 99211, \$37.90 times 0.57 equals \$21.60. We then multiply this amount by 0.8, which is the factor often used to reduce MFS physician payment amounts to an amount appropriate for payment to non-physicians. The resultant amounts on the far right column of *Table ES-2* we then call “MFS MTMS Payment” (e.g., \$17.28 for code 99211). These payments are within the range of the values contained in *Table ES-1* for comparable services.

**Table ES-2**  
**Translation of the MFS CPT Codes into MTMS Payment Amounts**

CPT Code	2005 cf	2005 rv	Total Payment	Non-physician Share	MFS MTMS Payment
99211	\$37.90	.57	\$21.60	0.8	\$17.28
99212	\$37.90	1.02	\$38.66	0.8	\$30.92
99213	\$37.90	1.39	\$52.68	0.8	\$42.14
99214	\$37.90	2.18	\$82.62	0.8	\$66.09
99215	\$37.90	3.17	\$120.14	0.8	\$96.00

In *Table ES-3*, we show how this calculation was accomplished. We used the number of minutes reflected in the CPT code description and multiplied by \$2.00 and by \$3.00 to obtain a low and high expected payment. *Table ES-3* results indicate that in most cases, the MFS payment lies between the \$2.00-per-minute expected payment and the \$3.00-per-minute expected payment. As problem severity increases, however, the MFS payment is compressed, which is consistent with other prospective payment systems (e.g., Diagnostic Related Grouping [DRG] weights).

**Table ES-3**  
**Comparison of CPT Values of \$2.00 and \$3.00 per Minute to MFS**

CPT Code	Minutes	Problem Severity	Low per-Minute Payment	Expected Payment	High per-Minute Payment	Expected Payment	MFS Payment
99211	5	minimal	\$2.00	\$10.00	\$3.00	\$15.00	\$17.28
99212	10	minor to moderate	\$2.00	\$20.00	\$3.00	\$30.00	\$30.92
99213	15	minor to moderate	\$2.00	\$30.00	\$3.00	\$45.00	\$42.14
99214	25	moderate to high	\$2.00	\$50.00	\$3.00	\$75.00	\$66.09
99215	40	moderate to high	\$2.00	\$80.00	\$3.00	\$120.00	\$96.00

Although the MMA specified that the time and resources necessary to implement MTM programs must be taken into account when PDP sponsors establish fees, it failed to specify how

<sup>9</sup> Kuo GM, Buckley TE, Fitsimmons DS, Steinbauer JR. (2004). Collaborative drug therapy management services and reimbursement in a family medicine clinic. *Amer J Health Syst Pharm* 61(4), 2004.

these fees should be paid. CMS considers fees for MTM programs separate and distinct from dispensing fees, and fees for MTMS are to be included in a plan’s administrative costs. *Table ES-4* contains a hypothetical situation in which a plan develops an MTM program for its 1,000 covered lives, showing the calculation of the PMPM expense that would be included in the plan’s bid for provider services as a PDP.

**Table ES-4  
Illustrative PMPM Payment Calculation for a Sample MTMS Package <sup>a/</sup>**

	Description	Estimated Cost	Persons Eligible	Total Costs
Pharmacist-Provided Medication Review	One 15-minute visit @ \$42.14	\$42.14	293 <sup>b/</sup>	<b>\$12,347.02</b>
Comprehensive Medication Therapy Review and Follow-up	One 40-minute comprehensive medication therapy review @ \$96.00 Three 15-minute targeted follow-up visits @ \$42.14	\$222.42 <sup>c/</sup>	29 <sup>d/</sup>	<b>\$6,450.18</b>
<b>Total Annual Cost</b>				<b>\$18,797.20</b>
<b>Number of Enrollees</b>				<b>1,000</b>
<b>Cost per Enrollee</b>				<b>\$18.80</b>
<b>PMPM Provider Fee Cost</b>				<b>\$1.56</b>

- a/ Assumes the plan has 1,000 enrollees and offers two levels of MTMS. Illustrative eligibility requirements are as follows:  
 Pharmacist-provided Medication Review: Enrollees must have at least \$4,000.00 in drug costs for a given year;  
 Comprehensive Medication Therapy Review: Presence of several identified medical conditions and the taking of a specific number or type of medications each month.
- b/ Assumes 29.3% of the enrollee population (of 1,000) would be eligible for the basic Medication Review benefit per The Lewin Group actuarial estimate.
- c/ Assumes one comprehensive medication therapy review (MTR) and three targeted follow-up visits for each eligible enrollee.
- d/ Assumes about 10% of persons eligible for Medication Review (or 3% of all enrollees) would qualify for the Comprehensive Medication Therapy Review and targeted follow-up visits.

Source: The Lewin Group illustration.

In the example shown in *Table ES-4*, the plan has two potential levels of MTM service: a basic benefit which consists of a 15-minute Medication Review by a pharmacist, for which 29.3% of plan members are eligible.<sup>10</sup> The more complex benefit, the Comprehensive Medication Therapy Review (MTR), is restricted to the 3% of members who have several specifically identified medical conditions and who are taking a specified number or type of medications each month. (These individuals have been identified among the recipients of the plan’s basic Medication Review benefit and comprise about 10% of Medication Review recipients). The total annual cost for the service offerings is allocated across the entire membership.

The resultant PMPM provider fee amount of \$1.56 is considerably higher than the \$0.45 PMPM for MTMS provided as an example in Section V on Worksheet 1 of the bid pricing tool on the CMS Website. This variation poses a dilemma for plans in providing clinically meaningful MTMS, even for a small subset of enrollees as shown in the illustrative calculation above.

<sup>10</sup> The Lewin Group actuarial estimate found that 30.8% of all Medicare beneficiaries are expected to hit the \$4,000.00 threshold in drug spending in 2006. For the 65+ Medicare population, the proportion is 29.3%, adjusting for under-reporting of drug expenditures in the Medicare Expenditures Panel Survey (MEPS), induced use, netted against drug discounts and other cost management tools that Part D plans are expected to use, and predicted adverse selection.

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## Recommendations

The MMA represents an opportunity for providers of MTMS to demonstrate the value of these services for Medicare beneficiaries. Practicing pharmacists, physicians, and MA-PDs/PDPs will work together to determine the best service offerings for MTMS, such that meaningful therapies can be provided to targeted individuals within the MMA limits. Other payers can use the “lessons learned” from the Medicare MTMS implementation as well as documented experiences others have had in providing MTMS to develop a service package and business model that improve therapeutic outcomes for their enrollees. CMS must provide guidance on how best to fulfill the intent of Congress concerning MTMS. CMS also must realistically evaluate the relative value of mixes of MTMS to determine best value. We offer the following recommendations:

### Pharmacists:

- Standardize and package MTM service offerings of varying levels of intensity.
- Determine work values for MTMS CPT codes (eg, benchmark from existing E&M codes).
- Use standards for billing and service delivery as developed by the pharmacy profession.
- Build supply capacity to meet demand for MTMS from plans (e.g., possibly creating training modules or recognition programs). Practical differences exist between the dispensing and MTM roles of pharmacists. MTM unlikely will be provided if these differences are not recognized, encouraged, and ultimately rewarded financially.
- Cultivate widespread patient support of pharmacist-provided MTMS. Patients are generally thought to be highly supportive of MTMS; the fact that MTMS are often self paid supports this contention. Many patients find that pharmacists are more approachable and better prepared to spend time answering such basic questions as “How can I better manage my diabetes and the medications I am taking to control it?”
- Increase physician awareness that pharmacist-provided MTMS can help leverage their time to higher value/priority activities. The acceptance of physicians’ use of “incident to” payment structures in some states is evidence that physicians are willing to view the pharmacist as a partner in patient care.
- Conduct systematic evidence-based review of the literature concerning current MTMS practices and outcomes.

### Health Plans and PDP Sponsors:

- Determine target number of eligibles; determine likely MTMS take-up rate.
- Work with practicing pharmacists, both internally and externally, to develop MTM service offerings (e.g., balance between basic MTMS for many or all enrollees versus more complex MTMS for targeted ones).
- Price service offerings on PMPM basis for bid submission as “non-pharmacy expense” on Worksheet 1.

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- Develop mechanisms to measure the impact of MTMS on overall health costs. MTMS can reduce the use of physician and hospital services by improving health outcomes and reducing adverse health events. MTMS might increase or decrease drug costs; however, PMPM total health costs can be reduced by MTMS.
  - Develop payment systems that provide unit payments adequate to cover at least pharmacist labor costs (approximately \$1.00 to \$2.00 per minute according to industry estimates) or total costs (\$2.00 to \$3.00 per minute according to industry estimates). The pricing system must also provide adequate aggregate payments to sustain and provide for growth in number of providers.