Current Procedural Terminology Codes for Medication Therapy Management in Administrative Data

David R. Axon, PhD, MPharm, MS; Chanadda Chinthammit, BPharm, MS, PhD;
Jared Tate, PharmD; Ann M. Taylor, MPH, MCHES; Sandra Leal, PharmD, MPH, FAPhA;
Matthew Pickering, PharmD; Heather Black, PhD; Terri Warholak, PhD, RPh, FAPhA;
and Patrick J. Campbell, PhD, PharmD, RPh

ABSTRACT

BACKGROUND: Three pharmacist-specific Current Procedural Terminology (CPT) codes exist to facilitate medication therapy management (MTM) reimbursement (codes 99605, 99606, and 99607). However, no studies have used CPT codes in administrative claims databases to identify subjects who have received MTM services.

OBJECTIVE: To assess the prevalence of MTM services provided, using CPT codes identified in an administrative dataset.

METHODS: A retrospective cohort study was conducted using a subset of Medicare Part D individuals from the IBM MarketScan Medicare Supplemental Research Databases (2009-2015). Researchers identified beneficiaries who received MTM services using CPT codes 99605, 99606, and 99607.

RESULTS: Of the 16,483,709 individuals in the dataset, only 3,291 had CPT codes indicating that they received MTM services, representing an overall prevalence of 0.020%.

CONCLUSIONS: The use of CPT codes as an indicator of MTM service provision resulted in far lower MTM utilization rates than in published literature. Reliance on CPT codes to identify MTM services in administrative claims is not recommended, given that it limited the researchers' ability to properly identify patient receipt of such services. More accurate methodologies are warranted for identifying MTM use and its effects on patient outcomes.

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What this study adds

- This retrospective cohort study found only 3,291 of 16,483,709 (0.020%) Medicare Part D individuals in the IBM MarketScan Medicare Supplemental Research Databases (2009-2015) had CPT codes 99605, 99606, and 99607, indicating that they received MTM services.
- It was not possible to identify all patients in receipt of MTM services, thus, use of CPT codes to identify MTM services in administrative claims is not recommended.
- Identification and evaluation of more accurate methodologies representing MTM services are needed.

Chronic disease management, especially for those with numerous conditions taking multiple medications, presents an ongoing challenge for patients and health care providers. To address this challenge, the Medicare Modernization Act of 2003, overseen by the Centers for Medicare & Medicaid Services (CMS), introduced medication therapy management (MTM) and required its provision for all eligible Medicare Part D beneficiaries.¹ The American Pharmacists Association (APhA) defines MTM as “a service or group of services that optimize therapeutic outcomes for individual patients.”² Despite various delivery methods (i.e., telephonic, face-to-face, or both),³ APhA delineated 5 core elements to describe the services: (1) medication therapy review, commonly referred to as a comprehensive medication review (CMR); (2) personal medication record; (3) medication-related action plan; (4) intervention and/or referral; and (5) documentation and follow-up.²

CMS determines eligibility for MTM services using an opt-in approach, whereby beneficiaries who choose not to participate must verbally opt out. Eligible Medicare Part D beneficiaries must (a) have multiple chronic conditions (minimum of 2 or 3 at Medicare Part D sponsor's discretion); (b) take multiple chronic medications; and (c) have a projected drug spend above a predetermined annual cost threshold for Medicare Part D medications (\$3,919 in 2017)—this maximum is adjusted annually by CMS.³

What is already known about this subject

- Three pharmacist-specific Current Procedural Terminology (CPT) codes exist to facilitate medication therapy management (MTM) reimbursement (codes 99605, 99606, and 99607).
- Large databases that contain these codes provide an opportunity to assess the effectiveness of MTM services.
- However, no studies have used CPT codes in administrative claims databases to identify subjects who have received MTM services.

Since its inception, growing evidence supports MTM's positive clinical and economic benefits.⁴⁻⁹ Studies have also reported how virtual telehealth programs were able to provide MTM services to patients without in-person access to a pharmacist or other health care providers.¹⁰ In 1 study, MTM services resulted in over 200 medication-related interventions and over 1,100 health promotion interventions among 517 rural-dwelling patients with diabetes and/or hypertension.¹¹ In another example, over 300 recommendations were made by an MTM pharmacist to 86 people with epilepsy.¹² However, several challenges remain that limit the effectiveness of the respective interventions.¹³ For example, less than half (24%-50%) of eligible beneficiaries complete a CMR thus limiting the scope and ability to measure MTM's effectiveness in improving patient-related outcomes.¹⁴ To better evaluate rates, CMS adopted the performance measure for CMR completion rates endorsed by the Pharmacy Quality Alliance (PQA) as part of the Medicare Part D star ratings, which can be used to distinguish high- versus low-quality performing sponsors.¹⁵ The PQA CMR measure assesses the percentage of prescription drug plan members who are eligible for MTM and who received a CMR during the eligibility period.

This focused attention on MTM, coupled with the potential for improving clinical and economic outcomes via the star ratings (e.g., triple-weighted adherence measures) have prompted sponsors to improve, innovate, and evaluate the provision of their services. Specifically, MTM's effectiveness has been evaluated prospectively and retrospectively with demonstrated reductions in hemoglobin A1c; lipid levels and mean direct medical costs⁴; improved Healthcare Effectiveness Data and Information Set (HEDIS) measures⁶; and decreased health care expenditures.^{6,9} As such, some of the largest retrospective reviews have used data obtained directly from MTM vendors or health plans.

Administrative database studies, an approach absent in the MTM literature to date, has several potential advantages, including larger sample size; access to relevant costs information (e.g., related to medication, nonmedication, and total expenditures); health care utilization information (e.g., emergency department visits, hospitalization, and outpatient visits); and clinical information (e.g., measures of medication adherence via proportion of days covered data and laboratory values). Furthermore, pharmacists are the most frequent providers of MTM services³; therefore, CMS created 3 pharmacist-specific Current Procedural Terminology (CPT) codes to facilitate MTM reimbursement: code 99605—first-time MTM consultation (up to 15 minutes); code 99606—follow-up MTM consultation (up to 15 minutes); and code 99607—additional 15 minutes of an existing consultation for use in tandem with an initial (99605) or follow-up (99606) MTM consultation.

TABLE 1 Number of Individuals with CPT Codes by Year, 2009-2015 (N = 16,483,709)

Year	N (%)	
2009	73	(0.003)
2010	113	(0.005)
2011	233	(0.008)
2012	267	(0.010)
2013	304	(0.012)
2014	715	(0.034)
2015	1,586	(0.098)
Total	3,291	(0.020)

CPT = Current Procedural Terminology.

While code 99607 must be used with codes 99605 or 99606, it provides opportunities for further reimbursement because of the longer consultation times. Using large databases that contain these specific codes and the potential advantages of using them over other methods provides an excellent opportunity to conduct further research to assess the effectiveness of MTM services. However, it is critical to initially assess the validity of using CPT codes as a method to identify MTM services in administrative datasets. Furthermore, to date, no studies have used CPT codes in administrative claims to identify subjects that have received MTM services.

The objective of this study was to describe the feasibility of identifying MTM services via an administrative claims database, using pharmacist-specific CPT codes used for MTM billing.

Methods

This retrospective cohort study used a subset of the IBM MarketScan Medicare Supplemental Research Databases (2009-2015). The number of unique individuals in the dataset was calculated using data from the enrollment file. Subjects with any enrollment data were included. Researchers identified subjects with CPT codes 99605, 99606, and/or 99607 listed at any time between 2009 and 2015 from the inpatient and outpatient services files. The unique number of subjects with at least 1 MTM CPT code was calculated. The prevalence of individuals receiving MTM was estimated overall and by calendar year. The University of Arizona Institutional Review Board approved this study.

Results

A total of 16,483,709 individuals were identified in the dataset, with 3,291 of these having at least 1 of the 3 MTM CPT codes. From 2009 to 2015, the overall MTM prevalence estimate was 0.020%. The number and percentage of individuals with CPT codes for each year in the study is shown in Table 1. Annual MTM prevalence estimates ranged from 0.003% (n = 73) in 2009 and increased year after year to 0.098% (n = 1,586) in 2015.

Discussion

This is the first study to describe the feasibility of using CPT codes to identify MTM services in administrative claims. Interestingly, very few individuals were identified with MTM-related CPT codes in the Medicare supplemental dataset, contrary to actual MTM use among Medicare beneficiaries. For instance, 2017 CMS star measure data (based on plan performance reported for 2015) indicates a 40% national average CMR completion rate, based on a star measure and marker of MTM services,¹⁶ while the current findings (0.098%) represent an overall prevalence. However, this still represents a 400-fold difference between the 2 study findings, which strongly suggests that using MTM-related CPT codes may not be an appropriate method for tracking patient identification and MTM service use.

While other CPT codes for “Medication Reconciliation Post-Discharge” and “Non-Face-to-Face Non-physician Telephonic Services” (1111F and 98966, respectively) are used to identify service provision, it seemed reasonable to assume that selecting MTM-specific CPT codes for tracking receipt of services would net similar results. Yet, this approach had major limitations, as described below, and is not recommended.

Limitations

This study had limitations that need to be considered. First, a large proportion of MTM services are provided by covered entities. While CMS mandates provision of these services for eligible beneficiaries, it does not specifically delineate the actual process whereby the delivery occurs. Medicare Part D sponsors are afforded latitude in subcontracting these services to outside covered entities such as pharmacy benefit managers (PBMs), MTM vendors, community pharmacists, or long-term care pharmacists. Currently, 92.9% of programs contract out for these services via external entities that include PBMs (56.0%) and MTM vendors (84.7%).³ It is noteworthy that these are not mutually exclusive categories, given that PBMs often use an MTM vendor, separate from their relationship with the Medicare Part D sponsor. In this type of arrangement, contracting often uses payment structures that bill on a per-qualified-member or per-member per-month basis or a flat rate for services provided. Thus, a large proportion of MTM service provision would remain uncaptured if CPT codes were used as a marker of delivery. Furthermore, in the current study, CPT codes were identified from a Medicare supplemental dataset, so it is possible that these individuals received MTM services yet were billed elsewhere.

Second, while physicians and other nonpharmacist providers may perform MTM services, the available CPT codes are

currently exclusive for pharmacists and pharmacy services. Therefore, use of these codes would not capture the expanse of MTM services provided by other health care providers, who may use CPT codes that they are already familiar with, such as those for established (99201-99205) and newly established (99211-99215) patients. In addition, when these MTM codes were created, no associated fee schedule existed. In the interim, payers were required to establish their own fee schedules, yet many failed to embrace this and subsequently did not do so. As such, pharmacists continued to work within the established codes to generate revenue, although they were providing MTM services. Pharmacists also cannot bill using the usual codes that physicians and other nonphysician providers use, since they are not recognized as providers by CMS so must bill under a Medicare-credentialed provider, a common practice referred to as “incident-to” billing.¹⁷ Historically, pharmacists have used “incident-to” billing for provision of MTM services, which resulted in the inability to accurately track and report service provision, often resulting in devaluation of their services.

Finally, and most importantly, MTM codes were not exclusively used for Medicare Part D billing but were designed with the intent of using the respective codes (i.e., 99605, 99606, and 99607) in any situation where the services were provided. However, MTM in Medicare Part D has specific qualifying criteria, yet pharmacists using these codes in Medicare Part B, commercial, or Medicaid plans do not necessarily use those same criteria to provide the service.¹⁸

In the future, we suggest that researchers could consider using Systematized Nomenclature of Medicine-Clinical Terms (SNOMED CT) codes to identify MTM services provided. The new Enhanced MTM (EMTM) model requires the use of SNOMED CT codes to capture services provided, so they should become more prevalent in the future. For some organizations, SNOMED CT codes can be easily captured or mapped to existing data, yet for others, there may be financial or other barriers to implementing SNOMED CT codes that need to be resolved.¹⁹

Conclusions

This administrative database study, using CPT codes 99605, 99606, and 99607 as an indicator of MTM service provision, resulted in a far lower prevalence than in the published literature. Various factors may have influenced these, such as subcontracted service delivery, use of inappropriate billing codes, and variation in service provision. Thus, identification and evaluation of more accurate methodologies representing MTM service use are warranted.

Authors

DAVID R. AXON, PhD, MPharm, MS; CHANADDA CHINTHAMMIT, BPharm, MS, PhD; JARED TATE, PharmD; ANN M. TAYLOR, MPH, MCHES; TERRI WARHOLAK, PhD, RPh, FAPhA; and PATRICK J. CAMPBELL, PhD, PharmD, RPh, Department of Pharmacy Practice and Science, University of Arizona College of Pharmacy, Tucson. SANDRA LEAL, PharmD, MPH, FAPhA, Tabula Rasa HealthCare, Tucson, Arizona; MATTHEW PICKERING, PharmD, Quality Measurement Research & Quality Strategies, Pharmacy Quality Alliance, Alexandria, Virginia; and HEATHER BLACK, PhD, Outcomes Research, Merck & Co., Kenilworth, New Jersey.

AUTHOR CORRESPONDENCE: David R. Axon, PhD, MPharm, MS, Assistant Professor, University of Arizona College of Pharmacy, 1295 N. Martin Ave., PO Box 210202, Tucson, AZ, 85721. Tel.: 520.621.961; Email: axon@pharmacy.arizona.edu.

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