Centers for Medicare & Medicaid Services
Center for Medicare and Medicaid Innovation

Medicare Part D Enhanced Medication Therapy Management (MTM) Model

Enhanced MTM Model Encounter Data Specification Plan

July 28, 2016 (version 1)

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CHAPTER 1. INTRODUCTION AND MODEL SUMMARY

The Enhanced Medication Therapy Management (MTM) model is an opportunity for Part D basic stand-alone prescription drug plans (PDPs) to offer innovative MTM programs aimed at improving quality of care while also reducing costs. The Enhanced MTM model seeks to determine whether providing Part D sponsors with additional payment incentives and MTM regulatory flexibilities achieves the key goals of MTM—optimized therapeutic outcomes through improved medication use, and reduced risk of adverse events (including adverse drug interactions)—while reducing net Medicare expenditures.

To accurately monitor sponsors' implementation of their approved enhanced MTM program and to evaluate the overall success of the Enhanced MTM model, CMS will collect enhanced MTM encounter data. Part D sponsors participating in this model must submit enhanced MTM encounter data on a quarterly basis, beginning in the spring of 2017. The quarterly enhanced MTM encounter data files will be due one month after the close of every quarter.[1] In this document, CMS detail a robust and comprehensive structure for Part D sponsors to report enhanced MTM encounters.

This new data collection consists of 17 unique data elements per enhanced MTM encounter record. **The Enhanced MTM Encounter Data Dictionary (Appendix)** includes full specifications for the enhanced MTM encounter data elements. The appendix also provides examples of enhanced MTM encounter data coding scenarios. For the purposes of this model, an enhanced MTM encounter should be submitted for any of the following categories:

- **Referral**—who notified and/or who referred the beneficiary to receive MTM
- **Procedure**—what service or intervention the beneficiary received
- **Issue**—the beneficiary's medication therapy issue
- **Outcome**—what happened following an MTM procedure, including recommendations made and assessment of the beneficiary's health status

In addition to enhanced MTM encounter data elements, this document presents three monitoring measures CMS will use to assess the Enhanced MTM model. Although monitoring measures will not be used to determine Part D sponsors' eligibility for performance-based payments under the model, CMS wishes to pilot monitoring measures that will be calculated uniformly for all model participants using sponsor-submitted enhanced MTM encounter and Medicare claims data.

Chapter 2 presents the enhanced MTM encounter data elements—including definitions for all data elements, examples of how to record enhanced MTM encounters, the format in which quarterly enhanced MTM encounter data must be submitted, and how to correct and update

[1] To ensure that Part D sponsors have sufficient time to establish systems and processes to capture and submit Enhanced MTM encounter data, the Q1 2017 encounter data file will be due four months after the close of the quarter, rather than one month. Refer to Section 2.6 for a 2017 data submission schedule.

enhanced MTM encounter data records. Chapter 3 presents measure specifications for the three monitoring measures.

1.1 Description of the Enhanced MTM Model

The Enhanced MTM model will help CMS identify and disseminate effective and innovative strategies to optimize MTM resources and outcomes. Once approved by CMS, Part D sponsors are permitted to use different enhanced MTM eligibility criteria based on cost thresholds, number of chronic conditions, number of current medications, optimal medication usage, patient safety, patient population, and other demographic and clinical factors. Subject to CMS approval, sponsors can also provide various incentives, based on each beneficiary's risk level and individual barriers, to ensure MTM participation.

Sponsors may implement a wide variety of intervention activities to achieve the goals of the model—including patient education, follow-up strategies with beneficiaries and providers, and other activities. Sponsors can also identify additional efforts to improve beneficiary awareness and coordination of care in their proposed plans, and can collaborate with other stakeholders, such as pharmacists and prescribers, to further align and detect medication-related risks and resolve medication therapy issues. For additional information, refer to the Enhanced MTM Request for Applications.[2]

In addition to regulatory flexibility, important aspects of the Enhanced MTM model include:

- prospective payments for approved enhanced MTM services
- performance-based payments for reductions in fee-for-service spending, as long as data reporting requirements and minimum quality performance standards are met

The model aims to align the incentives of sponsors and CMS so that resources support the most effective MTM practices. Ultimately, the model will be evaluated regarding its impact on beneficiary health outcomes and satisfaction, sponsor and Medicare expenditures, plan bids, and the market in general.

1.2 Purpose of This Specification Plan

The purpose of this specification plan is to present a standardized set of enhanced MTM encounter data elements and monitoring measures. The 17 unique encounter data elements and 3 monitoring measures will ensure that sponsors' enhanced MTM programs can be evaluated, monitored, and compared within a common framework.

Because targeted beneficiary populations and MTM approaches may vary significantly across sponsors, it is important that the enhanced MTM encounter data be both comprehensive and flexible. The standard template for data collection (described in Chapter 2) aims to streamline

[2] Centers for Medicare & Medicaid Services. 2015. Medicare Part D Enhanced Medication Therapy Management Model Request for Applications. https://innovation.cms.gov/initiatives/enhancedmtm/index.html

the process of evaluating and integrating new data elements. To a large extent, enhanced MTM encounter data elements have been designed to make use of existing code sets (primarily the Systematized Nomenclature of Medicine—Clinical Terms®, or SNOMED CT®)[3] and to align with existing CMS data collection efforts. This approach promotes interoperability and standardization for evaluative purposes and will ease sponsors' burden in preparing and submitting data.

[3] This material includes SNOMED Clinical Terms® (SNOMED CT®), which is used by permission of the International Health Terminology Standards Development Organisation (IHTSDO). All rights reserved. SNOMED CT was originally created by The College of American Pathologists. "SNOMED" and "SNOMED CT" are registered trademarks of the IHTSDO.

CHAPTER 2. ENCOUNTER DATA ELEMENTS

This chapter presents the enhanced MTM encounter data elements; provides several examples of how to report common MTM activities using these data elements; describes the metadata fields used to define each enhanced MTM encounter data element in the appendix data dictionary; briefly describes the format in which enhanced MTM encounter data must be submitted by sponsors; and discusses how to submit corrections to previously submitted enhanced MTM encounter data records.

2.1 Overview of Enhanced MTM Encounter Data Elements

The enhanced MTM encounter data are designed to capture the suite of MTM services provided to the beneficiary in an encounter-based manner, with sequencers to indicate the order of the services provided. These services include, but are not limited to, referrals, identification of medication therapy issues, procedures (services and interventions), and outcomes or recommendations.

Following the general structure of other encounter datasets, such as Medicaid encounter data, the enhanced MTM encounter data allow CMS to track enhanced MTM activities and services received by beneficiaries. The intent of this structure is to give the sponsors flexibility in how they structure their enhanced MTM programs and how they document their activities using the enhanced MTM encounter data. The structure is not prescriptive in the types of activities required, but CMS expects that sponsors will report on all applicable activities in their enhanced MTM programs, from referral to outcome.

Sponsors will be given adequate advance notice of changes to the enhanced MTM encounter data element specifications and required reports. Notices of major changes will be posted as memoranda via the Health Plan Messaging System (HPMS).

Detailed technical specifications for enhanced MTM encounter data elements, and examples of enhanced MTM encounter data records and values, are provided in the appendix data dictionary. **Exhibit 1** lists the data elements with general definitions. The first six (Record, Version, CMS Contract ID, Plan Benefit Package ID, Beneficiary HICN, and Beneficiary Sequence) present the record identifiers that allow for unique identification of services and MTM encounters. Each encounter record row is unique at the Record/Version level.

The next three data elements (Encounter Date, Encounter Code, and Encounter Code Description) present the elements that capture enhanced MTM services provided to beneficiaries. Enhanced MTM encounter records should document information about the following MTM components:

- Referral (i.e., who notified and/or who referred the beneficiary to receive MTM)
- Procedures provided to the beneficiary (i.e., what service or interventions the beneficiary received)
- The beneficiary's medication therapy issue

- What happened following an MTM service or intervention (e.g., recommendations made, assessment of beneficiary's health status)

To properly reflect all these components, multiple enhanced MTM encounter data record submissions may be required for the same beneficiary over time. These are tracked chronologically using Beneficiary Sequence.

The remaining eight data elements (Provider Identifier, Provider Type, Other Provider Type Description, Service Location, Drug Product Identifier, DMEPOS Service, Beneficiary Incentive, and Amount of Cost Sharing Reduction Provided) provide additional information about the encounter. Some of these data elements may be situational, depending on the nature of the service provided.

Using SNOMED CT and other codes, sponsors should report all enhanced MTM activities, such as:

- Conducting assessments with beneficiaries, their caregivers, or other health care providers
- Performing various MTM services or interventions
- Providing devices or non-clinical services
- Coordinating care among sponsors, MTM vendors, and physicians

Sponsors are required to use existing SNOMED CT codes to the extent possible. The forthcoming Enhanced MTM Model Encounter Data Companion Guide will contain instructions on how to access starter value sets with suggested SNOMED CT codes. These starter value sets are meant to provide codes that likely characterize many of the enhanced MTM services provided by participants in the first year of the model. Sponsors should review the starter value sets and assess whether they meet their enhanced MTM encounter data reporting needs. If sponsors identify an existing SNOMED CT code that is not included in the starter value sets, sponsors can use the code and request that the code be added to the value set.

Plan sponsors have two options for situations in which they cannot identify a SNOMED CT code in the forthcoming enhanced MTM value sets:

1. Search the SNOMED CT database of codes, and identify and use a SNOMED CT code that is not included in the enhanced MTM value set.
2. If a suitable code cannot be found after a reasonable search, plan sponsors should reach out to the help desk (see Chapter 2.6) to discuss the issue. In the meantime, they should enter the code ZZZZZ in the Encounter Code field and a text description of the activity in the Encounter Code Description field.

In order to request that a new SNOMED CT code be created, sponsors should complete the appropriate form on the Pharmacy Health Information Technology Collaborative's (Pharmacy HIT Collaborative) website.[4] While SNOMED CT codes are being considered for addition to the

[4] http://www.pharmacyhit.org/index.php/online-request-for-mtm-snomed-ct-code

Unified Medical Language System, sponsors must still submit quarterly encounter data files using the options listed above.

CMS understands that participating sponsors may not all be at the same levels of readiness regarding the use of health information technology in tracking medication usage and patient outcomes at the onset of the model.[5] The dataset specifications are highly flexible, and can accommodate as much detail about encounters as the participating sponsors are able to provide.

CMS appreciates efforts undertaken by external stakeholders to promote a standardized use of SNOMED CT codes. For example, the Pharmacy HIT Collaborative has produced several guidance documents that will help sponsors begin to map encounters into SNOMED CT codes. CMS expects that sponsors, government stakeholders, and industry/professional organizations will collaborate toward this goal over time, so that that best practices can be documented and shared to improve the experience. CMS anticipates that sponsors' ability to map current data and text fields to SNOMED CT codes will improve over time. Accordingly, while CMS will continue to work to improve the starter value sets and encourage third parties to develop consensus standards for using SNOMED CT codes, use of these value sets is optional at this stage.

Exhibit 1: Enhanced MTM Encounter Data Elements

Data Element Label	Data Element Definition
Record Identifiers (6)	
Record	Unique identifier for every enhanced MTM encounter. Beginning at "1," the Record increments by 1 for every encounter submitted by the Part D sponsor for the entirety of the sponsor's participation in the 5-year model.
Version	Unique identifier to distinguish original versus corrected encounter records. All enhanced MTM encounter records are version "1" when first submitted. To correct or update a previously submitted encounter Record, the Version is reported as "2," "3," etc. Only Record/Version combinations with the highest Version will be used for analytic/evaluative purposes. To flag a previously-accepted record for deletion, report version as "0."
CMS Contract ID	5-digit identifier of the CMS contract
Plan Benefit Package ID	3-digit identifier of the specific plan benefit package (PBP) in which the beneficiary is enrolled
Beneficiary HICN	Unique number the Social Security Administration assigns to each Medicare beneficiary, which is the health insurance claim number (HICN). For Railroad Retirement Board (RRB) beneficiaries, provide the RRB number in this field. If a HICN needs to be changed, the record can be updated by submitting a new Version, using the same Record.

[5] See CMS/PQA Webinar, "PQA Quality Forum: "The Changing Landscape of Pharmacy HIT", April 28, 2016. Available online at http://pqaalliance.org/images/uploads/files/Apr%202016%20Quality%20Forum_The%20Changing%20Landscape%20of%20Pharmacy%20HIT_Wilkins_Spiro_Owen.pdf.

Data Element Label	Data Element Definition
Beneficiary Sequence	Temporal order in which an enhanced MTM encounter for a beneficiary occurred. A beneficiary's first encounter is assigned a sequence number of "1," with subsequent encounters being assigned numbers "2," "3," and so on. If the beneficiary leaves the contract and then returns, the sequence resumes where it left off.
Service Identifiers (3)	
Encounter Date	Date the encounter occurs.
Encounter Code	SNOMED CT or other code identifying the service provided. This may include SNOMED CT codes for referrals, procedures, medication therapy issues, or outcomes. If there is no SNOMED CT code that describes the encounter, this field equals "ZZZZZ."
Encounter Code Description	Text description of the Encounter Code. If using a SNOMED CT code, the value equals the description from SNOMED CT, including the semantic tag (e.g., [finding] or [situation])—this helps to ensure valid coding, especially when there are more than one possible text descriptor for a SNOMED CT code, per the source code set. If not using a SNOMED CT code to describe the encounter, the value is entered as a text description.
Additional Identifiers (8)	
Provider Identifier	The NPI number that uniquely identifies an individual or organizational provider that initiated the enhanced MTM service. Use "NA" if no NPI is available.
Provider Type	Type of provider performing the MTM service (e.g., pharmacist, nurse practitioner). If not one of the Health Care Provider Taxonomy Codes, use "Other" and specify in the Other Provider Type Description field.
Other Provider Type Description	Text description of provider type if no Health Care Provider Taxonomy Code is available. Must be populated if Provider Type is "Other."
Service Location	Where the service was provided (e.g., pharmacy; home; physician's office; assisted living facility; remotely [(as in telehealth]); CMS Place of Service code. Can also use "remote" (for non-face-to-face encounters).
Drug Product Identifier [repeats 10 times]	RXCUI code(s) for the product(s) associated with the medication therapy issue. May not be applicable to all encounters if no specific drug is involved.[6]
DMEPOS Service	HCPCS Level II code that uniquely identifies products, supplies, and services such as ambulance services and durable medical equipment, prosthetics, orthotics, and supplies (DMEPOS) when used outside a physician's office.
Beneficiary Incentive	Text description of a CMS-approved service, product, or incentive, such as a gift card to encourage beneficiary participation in MTM, or medication reminder device.
Amount of Cost Sharing Reduction Provided	Amount of CMS-approved cost sharing reduction, if any, provided to the beneficiary for the service, item, or drug product (see Enhanced MTM RFA, p. 26).

[6] Although pharmacy claims typically include NDC codes, rather than RXCUIs, RXCUIs offer significant advantages over using NDCs alone. RXCUIs offer a standardized, normalized, and more-intuitive way to represent drugs. NDCs do have value, but the use of RXCUIs aligns more closely with other CMS functions such as formulary submissions. In addition, the list of RXCUIs is relatively efficient compared to NDCs, where several NDCs map to one RXCUI. Technical help and algorithms for associating NDCs to RXCUIs can be found here: https://www.nlm.nih.gov/research/umls/rxnorm/docs/2012/rxnorm_doco_full_2012-1.html.

2.2 Using Enhanced MTM Encounter Data to Record and Sequence MTM Services

Plan sponsors should report encounter data on all participating beneficiaries until the end of the model. However, plan sponsors are not asked to explicitly identify episodes of care, nor to provide groupings of encounters. In other words, plan sponsors do not need to specifically relate any given outcome encounter code, for example, with a given issue or procedure encounter code.

Ideally, participating sponsors can track beneficiaries long enough to observe outcomes. Because it is not necessary to "close out" any beneficiary sequence in the encounter data to make an episode, sponsors are not required to determine an encounter endpoint. CMS expects that plans will continue to monitor targeted patients throughout the year to determine their ongoing eligibility and need for MTM services.

How to Sequence Beneficiary Encounters

For each beneficiary receiving enhanced MTM services, sponsors have the opportunity to report (at a high level) the process by which a beneficiary is referred to the enhanced MTM program, and the actions or services that begin a sequence of MTM care.[7] Sponsors will use the "Encounter Code" data element to document this referral process.

For referrals, existing SNOMED CT codes account for referrals by providers (e.g., primary care physician, nurse practitioner, referral by self), but new codes can be identified to account for other referral pathways. Reporting enhanced MTM encounters for beneficiaries who meet auto-referral targeting criteria is optional, as the MARx system will be capturing beneficiaries targeted for enhanced MTM. However, a Part D sponsor may choose to include auto-referral as an enhanced MTM encounter record, to clearly demonstrate what initiated the sequence of enhanced MTM encounters for a particular beneficiary who received such services. Sponsors can work with the enhanced MTM encounter data value set steward to identify SNOMED CT codes as needed to accommodate a variety of enhanced MTM approaches.

There is considerable latitude in what services may begin a sequence related to a medication therapy issue. However, the general assumption is that sequences can begin with information about a referral (who notified and/or who referred the beneficiary to receive MTM). This can include a review of the beneficiary's medication records, an in-person review of the beneficiary's medications and goals, or other interventions. This first step may or may not identify one or more medication therapy issues to be resolved.

Follow-up evaluations for an already-identified medication therapy issue should be reported as additional sequential services. The enhanced MTM encounter data capture the recommendations, outcomes, and follow-ups to services for each medication therapy issue. These data show what action(s) was recommended to address an issue, whether a plan or similar

[7] Enrollment transactions and the beneficiary characteristics related to targeting and enrollment into the enhanced MTM program are captured by other CMS data systems (e.g., MARx). Thus, enrollment transactions will not be reported in the Enhanced MTM encounter data.

document was provided to the beneficiary or other caregivers, and whether a particular issue has been resolved.

Enhanced MTM Encounter Data Examples

As shown in the following five examples, the data structure allows for creativity in plan design, and does not necessarily require the strict framework of the traditional MTM model: a comprehensive medication review followed by one or more targeted medication review(s). Participating Part D sponsors should work with the enhanced MTM encounter data value set steward to identify SNOMED CT codes as necessary to reflect the "service" provided to the beneficiary, even if it does not reflect traditional MTM activities.

The following are examples explaining how to record enhanced MTM encounters. The beneficiary HICN field and some other fields are not shown here due to space constraints. All fields for these examples are included in the enhanced MTM encounter data examples worksheet in the appendix.

Example #1: Comprehensive Documentation of Services

Exhibit 2 presents an example of how a sponsor could document a full sequence of enhanced MTM activities. This example demonstrates a comprehensive submission of services provided to the same patient. All the major components were submitted by the sponsor—including referral source, notification to the beneficiary, medication therapy issue(s), interventions, and outcome. Other fields (such as provider identifier and location of service) should be reported as well, but are not shown here because of space constraints. These are displayed in the enhanced MTM encounter data examples worksheet in the appendix.

During the first group of encounters, which lasted from 1/10/2017 to 2/15/2017, the beneficiary was informed of his eligibility for MTM (sequence number 1). In this case, the plan began providing services to the beneficiary without needing a specific referral from the physician.

As a result of a consultation with the patient on 2/1/2017 (sequence number 2), the MTM provider identified two medication therapy issues: the patient was taking multiple medications for chronic diseases, and the patient had an adverse drug–drug interaction (sequence numbers 3 and 4). During this consultation, the provider also discussed compliance issues with the patient (sequence number 5).

On 2/10/2017, the MTM provider consulted with the patient's physician, and the recommendations were accepted (sequence numbers 6 and 7). As a result, one of the problematic medications was stopped (sequence number 8). Five days later, the MTM provider set up a medication reminder device (sequence number 9).

On 3/5/2017, the MTM provider had another consultation with the patient, made observations relating to compliance, and noted that the patient's condition was stable (sequence numbers 10–12).

Two months later, on 5/7/2017, the patient self-referred after a transition from acute care to home, and received a phone consultation the same day. A targeted medication review led to several condition-specific medication reviews, with the MTM provider giving the patient chronic disease education and recording a finding that the patient's condition was poor (sequence numbers 13–20).

Encounters are reported quarterly, and there is no need to wait for resolutions or outcome encounters to occur before submitting encounter records. In this case, the sponsor would have reported the first 12 encounters, which took place in January through March, during the first quarterly reporting period. The subsequent encounters, taking place in May, would be reported in the second quarter.

Exhibit 2: Comprehensive Documentation of Services (Example #1)

Beneficiary Sequence	Encounter Date	Encounter Code	Encounter Code Description
1	20170110	435411000124108	Patient notified of eligibility for medication therapy management service (situation)
2	20170117	448337001	Telemedicine consultation with patient (procedure)
3	20170201	432341000124108	Taking multiple medications for chronic diseases (finding)
4	20170201	448177004	Adverse drug interaction with drug (disorder)
5	20170201	408377007	Compliance issues discussed with patient (finding)
6	20170210	11429006	Consultation (procedure)
7	20170210	447871000124109	Medication therapy management recommendation accepted by prescriber (situation)
8	20170210	395006008	Medication stopped—interaction (situation)
9	20170215	435441000124107	Medication reminder device setup (procedure)
10	20170305	448337001	Telemedicine consultation with patient (procedure)
11	20170305	414059009	Drug therapy compliance observations (finding)
12	20170305	359746009	Patient's condition stable (finding)
13	20170507	1991000124105	Referred by self (finding)
14	20170507	448337001	Telemedicine consultation with patient (procedure)
15	20170507	448511000124101	Transition from acute care to self-care (finding)
16	20170507	6021000124103	Targeted medication therapy review (procedure)
17	20170507	473234001	Dyslipidemia medication review (procedure)
18	20170507	473226007	Heart failure medication review (procedure)
19	20170507	423167009	Chronic disease process education (procedure)
20	20170507	162667001	Patient's condition poor (finding)

Example #2: Beneficiary Self-Referral for Enhanced MTM Services

In the next example, shown in **Exhibit 3**, a beneficiary self-referred into the program on 9/9/2017.

The MTM provider determined that the beneficiary was receiving unnecessary drug therapy, and this was recorded using the appropriate SNOMED CT code (sequence number 2). The beneficiary

then received a number of services that same day, including a health literacy assessment, which found that the beneficiary had deficient knowledge of her medication (sequence numbers 3 and 4). The beneficiary received medication education (sequence number 5), a medication reminder chart (sequence number 6) and chronic disease education (sequence number 7). In this case, it could be inferred that the medication education and the chronic disease education were provided as a result of the finding of deficient knowledge. However, it is not necessary for the sponsor to indicate any cause-and-effect relationships between encounters in the data.

If there had been follow-up encounters at a later point, the sequence for that beneficiary would continue with sequence 8, then 9, and so on. Because enhanced MTM encounter data must be submitted quarterly according to the Encounter Date variable, all records in this example would be submitted with the sponsor's Q3 2017 file submission.

Although this is not displayed in Exhibit 3, the sponsor did report the drug product identifier for the drug identified as the unnecessary drug therapy, and the device or product identifier for which education was provided. These fields are shown in Example #2 in the appendix. Depending on the SNOMED CT codes entered by sponsors, enhanced MTM encounter data submissions require sponsors to enter accompanying information. Enhanced MTM encounter data files submitted without proper identifiers will be rejected according to the front-end logic checks. Sponsors will receive automated instructions to provide the appropriate identifiers.

Exhibit 3: Beneficiary Self-Referral for Enhanced MTM Services (Example #2)

Beneficiary Sequence	Encounter Date	Encounter Code	Encounter Code Description
1	20170909	1991000124105	Referred by self (finding)
2	20170909	429621000124102	Medication therapy unnecessary (finding)
3	20170909	431531000124101	Health literacy assessment (procedure)
4	20170909	129866007	Deficient knowledge of medication regimen (finding)
5	20170909	967006	Medication education (procedure)
6	20170909	412710004	Medication reminder chart given (situation)
7	20170909	423167009	Chronic disease process education (procedure)

Example #3: Multiple Encounter Sequences, Including Encounters with Cost Sharing Reduction

In this example, the plan sponsor offered CMS-approved cost sharing reductions as an MTM service, and reported each cost sharing reduction as an encounter. This format can also potentially be used when other free or discounted services (like devices or transportation) are provided.

Exhibit 4 demonstrates how this would be reported. The beneficiary's encounters begin on 7/3/2017 with a referral from a health care professional (sequence number 1). On the same day, the sponsor notes multiple chronic diseases and polypharmacy (sequence numbers 2 and 3).

Three days later, the MTM provider performs a comprehensive medication assessment and an adherence assessment, finding noncompliance (sequence numbers 4–6).[8]

The next day (7/7/2017), the sponsor records a referral by payer (the sponsor), because the beneficiary meets the sponsor's approved criteria to receive cost sharing reductions (sequences 7 and 8). Cost sharing reductions are provided, and reported in sequence 9. Note that, as there is no SNOMED CT code for providing cost sharing reductions, the Encounter Code is entered as "ZZZZZ" and an Encounter Code Description is provided. Assessment of eligibility for cost sharing reductions, and provision of this reduction, is carried out monthly from this point forward, such as in sequences 10 and 13. Drug and cost sharing reduction amount information can also be seen in this example in the Appendix.

The sponsor also performs recurring adherence assessments on a monthly basis. The results of these assessments are recorded as encounters as well (see, for example, sequence numbers 11 and 12. Because enhanced MTM encounter data must be submitted quarterly, all records in this example would be submitted with the sponsor's Q3 2017 file submission.

Exhibit 4: Multiple Encounter Sequences, Including Encounters with Cost Sharing Reduction (Example #3)

Beneficiary Sequence	Encounter Date	Encounter Code	Encounter Code Description
1	20170703	2011000124105	Referred by health care professional (finding)
2	20170703	2081000124103	Multiple chronic diseases (situation)
3	20170703	432341000124108	Taking multiple medications for chronic disease (finding)
4	20170706	428911000124108	Comprehensive medication assessment (procedure)
5	20170706	41022002	Assessment of compliance with medication regimen (procedure)
6	20170706	129834002	Noncompliance with medication regimen (finding)
7	20170707	2001000124107	Referred by payer (finding)
8	20170707	ZZZZZ	Met sponsor's approved criteria for cost sharing reductions
9	20170707	ZZZZZ	Provided medication at zero co-payment
10	20170809	ZZZZZ	Met sponsor's approved criteria for cost sharing reductions
11	20170809	41022002	Assessment of compliance with medication regimen (procedure)
12	20170809	182884001	Drug compliance good (finding)
13	20170809	ZZZZZ	Provided medication at zero copayment
14	20170814	ZZZZZ	Met sponsor's approved criteria for cost sharing reductions
15	20170814	41022002	Assessment of compliance with medication regimen (procedure)

[8] In some cases, "compliance" and "noncompliance" are used when discussing issues of adherence or usage. This is done to better align with the SNOMED CT code description.

Beneficiary Sequence	Encounter Date	Encounter Code	Encounter Code Description
16	20170814	182884001	Drug compliance good (finding)
17	20170814	ZZZZZ	Provided medication at zero copayment
18	20170907	ZZZZZ	Met sponsor's approved criteria for cost sharing reductions
19	20170907	41022002	Assessment of compliance with medication regimen (procedure)
20	20170907	182884001	Drug compliance good (finding)
21	20170907	ZZZZZ	Provided medication at zero copayment

Example #4: Beneficiary Experiences a Care Transition

In this example, shown in **Exhibit 5**, the beneficiary is initially targeted based on the sponsor's auto-targeting criteria. During the course of the enhanced MTM care process, the patient enters the hospital.

Initially, the beneficiary is targeted based on the sponsor's auto-targeting criteria (sequence numbers 1–3). During an initial medication review without the patient's direct involvement, the patient is noted to be taking multiple chronic disease medications and to be under the care of multiple providers (sequence numbers 4–6). The enhanced MTM provider recommends stopping one of the medications, but the prescriber refuses (sequence numbers 7, 8, and 9).

Two weeks later, on 1/27/2017, the patient experiences a transition from acute care to home (i.e., self-care), and a recommendation is made and accepted to stop one medication due to side effects and to change another medication. Another drug is also changed to a more cost-effective option, and the patient is noted to be in stable condition (sequence numbers 10–15).

Exhibit 5: Encounters Including a Care Transition (Example #4)

Beneficiary Sequence	Encounter Date	Encounter Code	Encounter Code Description
1	20170102	2001000124107	Referred by payer (finding)
2	20170102	ZZZZZ	Met sponsor's auto-referral targeting criteria
3	20170102	435411000124108	Patient notified of eligibility for medication therapy management service (situation)
4	20170102	391156007	Medication review without patient (procedure)
5	20170102	432341000124108	Taking multiple medications for chronic diseases (finding)
6	20170102	2091000124100	Under care of multiple providers (finding)
7	20170110	11429006	Consultation (procedure)
8	20170110	304540007	Recommendation to stop drug treatment (procedure)
9	20170110	6091000124101	Medication therapy management recommendation refused by prescriber (situation)
10	20170127	448511000124101	Transition from acute care to home health care (finding)

Beneficiary Sequence	Encounter Date	Encounter Code	Encounter Code Description
11	20170127	395009001	Medication stopped—side effect (situation)
12	20170130	428711000124105	Recommendation to change medication (procedure)
13	20170130	447871000124109	Medication therapy management recommendation accepted by prescriber (situation)
14	20170130	408374000	Drug changed to cost effective alternative (finding)
15	20170130	359746003	Patient condition stable (finding)

Example #5: Three Common Coding Scenarios

The following example records, shown in **Exhibit 6**, show encounter coding for three common coding scenarios: (a) medication safety issues/concerns; (b) measures of medication effectiveness evaluation (i.e., are patients at clinical goal); and (c) identification of gaps in therapy based on clinical conditions (i.e., medication is clinically indicated but not prescribed). The first record (sequence 1) is an example of a finding of adverse effects (a medication safety issue). The second record (sequence 2) is an example of a finding regarding medication effectiveness. The last record (sequence 3) is an example of an identification of gaps in therapy based on clinical conditions.

In the version of this example that appears in the appendix, other data elements are used to show the specific providers and drugs involved in each encounter. In a real encounter data submission, subsequent encounter records could indicate whether prescribers accepted, rejected, or otherwise acted on the issues identified in these three example scenarios.

Exhibit 6: Three Common Coding Scenarios (Example #5)

Beneficiary Sequence	Encounter Date	Encounter Code	Encounter Code Description
1	20170416	433231000124100	Non dose-related adverse reaction to medication (disorder)
2	20170711	431521000124104	More effective medication therapy available (finding)
3	20170802	435531000124103	Additional medication required for synergistic effect (finding)

2.3 Enhanced MTM Encounter Data: Metadata Fields

This section presents the enhanced MTM encounter data metadata fields presented in the appendix data dictionary. Standardized, comprehensive metadata fields, such as those presented in **Exhibit 7**, ensure that sponsors, CMS, and all other users of the enhanced MTM encounter data share the same understanding of each data element. These metadata fields will be used in the

event that new enhanced MTM data elements are added after model implementation (1/1/2017).

Exhibit 7: Metadata Fields

Metadata Field	Description	Example
Variable Name	Name of the data element; may be abbreviated	CNTRCT_ID
Label	Natural-language name	CMS Contract ID
Definition	Text that uniquely describes the data element	5-digit identifier of the CMS contract
Type	Data type of the element (e.g., character, date, number)	CHAR
Length	Number of storage units necessary to represent the data element value	12
Format	A description of the manner in which the data element is displayed	Up to 12 alphanumeric characters
Optionality	Whether the element is required in all cases or applies only based on a given situation. "Required" means that the element must not be blank, but values such as "n/a" may still be used.	Required
Allowable values	Types of values that may be entered for the element. If the element uses standard codes or other standard values, the code sets will be named here.	Valid CMS Contract ID
Source	Primary location form where the data element values come. The data source can be CMS, a database, a dataset, or the Part D Sponsor.	SNOMED CT

2.4 Enhanced MTM Encounter Data: File Format

Similar to several current Part D Reporting Requirements, Part D sponsors are required to submit enhanced MTM encounter data as a tab-delimited ASCII file. Sponsors must include a header record with variable names as specified in the appendix data dictionary. When submitting quarterly enhanced MTM encounter data files, sponsors must submit a ".TXT" file name extension and use the following file naming convention: MTMEncounter_[ContractID]_Q[1-4]_[YYYY].TXT. Additional details explaining the secure encounter data reporting interface, reporting schedules (i.e., encounter data due dates), automated front-end edits to check encounter data for completeness, and transmission of automated file acceptance results will be provided in the Enhanced MTM Model Encounter Data Companion Guide.

2.5 Correcting or Deleting Records

Sponsors are required to submit accurate and valid enhanced MTM encounter data. If CMS identifies a data accuracy or validity issue, sponsors may be asked to submit corrections to previous encounter records. As explained in Section 2.1, enhanced MTM encounter data elements Record and Version uniquely identify an encounter record. These two data elements are also used when sponsors wish to correct or delete a previously submitted record that has been accepted by the system.[9]

To correct an accepted record, Part D sponsors should submit a record that has the same Record, but the next highest Version. The values in the new record will supersede the old values, so any data elements that were correct in the original record should be copied into the new record.

Exhibit 8 provides two examples of record correction. In the Q1 2017 submission, the sponsor submitted an erroneous encounter date for Record 1. The sponsor also learned later that the beneficiary being referenced in Records 1 and 2 had a change to her HICN. In Q2 2017, the sponsor corrects and updates these records by submitting Record 1, Version 2, which updates the HICN and corrects Encounter Date. In this same submission window (Q2 2017), the sponsor submits Record 2, Version 2, which updates just the HICN.

Exhibit 8: Correcting Records

Record	Version	Beneficiary HICN	Encounter Date
Submission Q1 2017			
1	1	123456789A	20170108
2	1	123456789A	20170219
Submission Q2 2017			
1	2	111111111A	20170107
2	2	111111111A	20170219

To delete records, sponsors should resubmit the erroneous record(s) during the next quarterly file submission window, leaving all fields the same, but changing the version number to "0." This will flag to CMS that the previously-accepted erroneous record should be deleted in its entirety.

2.6 Data Submission Schedule

Exhibit 9 shows the enhanced MTM encounter data submission schedule for 2017. With the exception of the first quarter of 2017, submissions are due one month after the close of each quarter. A complete data submission schedule for all five years of the model will be included in the Enhanced MTM Model Encounter Data Companion Guide.

[9] Records that do not pass automated front-end edit checks during the encounter data file submission process must be corrected before the file is deemed accepted. Therefore, this record correction process is not used to correct for front-end edit check findings.

Exhibit 9: Enhanced MTM Encounter Data Submission Schedule (2017)

Quarter	Quarter Closing Date	Encounter Data Submission Due Date
Q1 2017	March 31, 2017	July 31, 2017
Q2 2017	June 30, 2017	July 31, 2017
Q3 2017	September 30, 2017	October 31, 2017
Q4 2017	December 31, 2017	January 31, 2018

For participating Part D sponsors needing assistance, a centralized help desk platform with multi-modal communication methods to field inquiries will be available to the Part D sponsors. The Help Desk uses a web-based Zendesk system to provide user-friendly help desk support. Part D sponsors can access the Enhanced MTM Help Desk to submit questions and inquires via two primary methods:

- E web-based Zendesk system (https://enhancedmtmhelp.zendesk.com/hc/en-us)
- Email submission (EnhancedMTMSupport@impaqint.com)

More information about the help desk is available in the Enhanced MTM Encounter Data Companion Guide.

CHAPTER 3. MONITORING MEASURES

This chapter presents three pilot monitoring measures to be calculated by CMS using sponsor-submitted enhanced MTM encounter data.

The purpose of the monitoring measures below are to monitor the participating Part D sponsors in their provision of MTM, and to be able to compare measures across sponsors and over time. Because the goals, enrollment criteria, and approaches of participating sponsors' enhanced MTM plans may vary significantly, CMS is not creating medication- or process-specific monitoring measures at this time.

This approach focuses on measuring the general delivery of services to various populations of beneficiaries. The purpose of these measures is to provide CMS and other stakeholders with a measure of the difference between the services provided to the "at risk" group—the population of beneficiaries targeted for the Enhanced MTM model—and the "treated" group, those who actually received enhanced MTM interventions.

Measures focusing on the "at-risk" group relate to the ability to reach beneficiaries for enhanced MTM; measures focusing on the "treated" group relate to outcomes. Using such measures helps provide a picture of the overall effectiveness of the program, and the measures can be further combined with other data for a formal evaluation further into the Enhanced MTM model's lifetime. Evaluation of health outcomes (e.g., mortality, preventable hospitalizations) and patient satisfaction will be reserved for the formal evaluation.

These measures are not tied to performance payments; they are for informational and monitoring purposes only.

Measures Focusing on the At-Risk Group

The first two pilot monitoring measures focus on the ability of the enhanced MTM programs to reach and provide services for the at-risk group—that is, the group defined by the targeted population. The results of these measures can be compared to similar (but not identical) measures for the beneficiary populations at large, and can show successes and challenges with reaching and providing services to these populations. Sponsors can review results to determine where they should allocate resources or adjust their approaches, leading to a better "right-sized" enhanced MTM program for each participant.

Sponsors are not required to design plans that will perform equally well on all measures. Measures will be applied as appropriate on a plan-by-plan basis, to help CMS and sponsors understand how well each plan is meeting its own approved goals and the goals of the Enhanced MTM model.

The first "at-risk population" measure, shown in **Exhibit 10**, addresses a common reason for MTM services: transition out of acute care, specifically a hospital discharge.

Exhibit 10: Percentage of Beneficiaries Discharged from the Hospital Who Received Enhanced Medication Therapy Management Services

Name	Percentage of beneficiaries discharged from the hospital who received enhanced MTM services
Description	Percentage of high-risk patients discharged from the hospital who received enhanced MTM services within 7 days
Measurement Period	January 1 through December 31; can be adjusted for model start date.
Steward	PQA; this measure is adapted to fit the Enhanced MTM model.
Developer	PQA
Scoring	Proportion
Type	Process
Definitions	Enhanced Medication Therapy Management is a comprehensive set of services that includes, but is not limited to, medication reconciliation, medication therapy review, personal medication record, medication related action plan, intervention and/or referral, and documentation and follow-up. For purposes of the Enhanced MTM model, enhanced MTM is understood to be any activities carried out under a CMS-approved Enhanced MTM model plan, including activities that are not traditional MTM services. High-risk patients are those who, participating sponsors and CMS believe, stand to benefit from an enhanced MTM service. In other words, the population of high-risk beneficiaries is the population that will be targeted by CMS-approved targeting criteria.
Guidance	Measure uses a one-year look-back period to identify beneficiaries who have been targeted for enrollment into participating enhanced MTM programs.
Eligible Population	All patients who meet the targeting criteria of approved enhanced MTM programs
Denominator	Number of patients who meet targeting criteria and are discharged alive from the hospital
Exclusions	Targeted patients discharged to hospice, acute rehabilitation, or skilled nursing facilities. Note that beneficiaries who could not be reached (due to incorrect contact information, death, or refusal) are not excluded; neither are those who opted out. These groups may point to specific challenges in reaching populations, which is why they are not excluded.
Numerator	Number of patients in the denominator who receive enhanced MTM services within seven days. To be included in the numerator, the patient must have received at least one service (as defined by having an encounter record) during the seven days after discharge. At this time, no restriction is made on the kind of service (e.g., referral, intervention, medication therapy issue identification).

The second "at-risk population" measure more broadly assesses the ability of sponsors to reach populations that would benefit from enhanced MTM services, regardless of the reason the beneficiaries are targeted, as shown in **Exhibit 11**.

Exhibit 11: Percentage of Targeted Beneficiaries with At Least One Medication Therapy Issue

Name	Percentage of targeted beneficiaries with at least one medication therapy issue
Description	Percentage of targeted beneficiaries for whom at least one medication therapy issue is identified
Measurement Period	January 1 through December 31; can be adjusted for model start date.
Steward	None
Developer	None
Scoring	Proportion
Type	Process
Definitions	Targeted beneficiaries are those who meet the CMS-approved targeting criteria. It is possible that not all targeted beneficiaries will benefit from being enrolled in an enhanced MTM program. One example is if the targeted beneficiary does not have a medication therapy issue. An "identified medication therapy issue" means any issue that can be resolved by enhanced MTM interventions. This can include drug–drug interactions, patient confusion, or affordability issues, among others.
Guidance	Measure uses a one-year look-back period to identify beneficiaries who have been targeted for enrollment into participating enhanced MTM programs. Enhanced MTM encounter data will be used to identify beneficiaries for whom a medication therapy issue was identified. Valid issues will be defined by a specific list of SNOMED CT codes, and a limited list of non-SNOMED CT codes that will be accepted on a case-by-case basis.
Eligible Population	All patients who meet the targeting criteria of approved enhanced MTM programs
Denominator	Number of patients who meet targeting criteria
Exclusions	None. Beneficiaries who could not be reached (due to incorrect contact information, death, or refusal) are not excluded. Neither are those who opted out. These groups may point to specific challenges in reaching populations, which is why they are not excluded.

Numerator	The number of patients in the denominator who either: a) Have at least one MTM encounter record with a medication therapy issue code used for the Encounter code; or b) Have at least one MTM encounter with an Intervention code (because it is assumed that these interventions are in response to an identified problem); or c) Have at least one of each kind of record. A patient who receives an assessment, but does not have any identified problems, is NOT counted in the numerator.

Measure Focusing on the Treated Group

The third pilot monitoring measure focuses on the treated group. By linking enhanced MTM encounter data to other datasets—for example, Part D claims data—CMS can evaluate the immediate treatment effect on the enrolled population. This draws a distinction between the population that the Enhanced MTM model is intended to treat, and the population that actually receives enhanced MTM services. This outcome measure reflects the success of participating sponsors in coordinating care among prescribers, pharmacists, and other participants. It also can help identify gaps between intent-to-treat and treated groups. CMS will initially focus on one overall measure that can be stratified according to specific types of recommended actions or subpopulations of interest, shown in **Exhibit 12**.

Exhibit 12: Percentage of Enhanced MTM Recommendations That Were Implemented

Name	Percentage of MTM recommendations that were implemented
Description	Percentage of encounter records for enhanced MTM recommendations that have a corresponding change in Part D claims
Measurement Period	January 1 through December 31 of the following year; can be adjusted for model start date.
Steward	None
Developer	None
Scoring	Proportion
Type	Process
Definitions	"Intervention Outcomes" refers primarily to recommended actions as represented by the SNOMED CT code category "Intervention (drug therapy outcome)," and more specifically to those referring to prescription medications. This includes actions such as start drug therapy, stop drug therapy, change medication dose, and others. "Implemented" means that there is a corresponding change in a patient's drug claims (or other supporting documentation) that relates to the intervention.

Guidance	The measure uses a two-year look-back period to identify encounters in which an applicable intervention occurred. The two-year period allows for a variety of expectations regarding the time it would take for "implementation" to be apparent. Enhanced MTM encounter data will be used to identify these eligible interventions. Part D claims data will be used to verify that the interventions were implemented successfully. For interventions that cannot be detected in Part D claims data, plan sponsors will be required to provide supporting documentation.
Eligible Population	All beneficiaries enrolled in a participating enhanced MTM program
Denominator	Number of beneficiaries with at least one encounter during the reporting period where the Encounter code is a SNOMED CT code for an eligible Intervention (e.g., drug therapy outcome).
Exclusions	Beneficiaries who opted out, died, or otherwise ended their participation in the MTM program between the service date of the eligible encounter and the end of the period when the intervention was expected to be implemented.
Numerator	Number of eligible encounters in the denominator for which a corresponding implementation is seen in the Part D claims data. These criteria will be defined separately for each eligible Encounter code.

APPENDIX. ENHANCED MTM ENCOUNTER DATA DICTIONARY

In the attached Enhanced MTM Encounter Data Dictionary, CMS provides a robust list of enhanced MTM encounter data elements. In developing this list, CMS worked to ensure that the data elements are both flexible and comprehensive enough to accurately monitor and report on all enhanced MTM activities. The goal was to avoid inclusion of any data element that might limit the creativity of Part D sponsors in designing their models. The elements are presented according to the metadata format described in Section 2.3.

The layout of the data is encounter-based, in which each encounter is described by a SNOMED CT code for the following components of MTM:

- **Referral**—who notified and/or who referred the beneficiary to receive MTM
- **Procedure**—what service or intervention the beneficiary received
- **Issue**—the beneficiary's medication therapy issue
- **Outcome**—what happened following an MTM procedure, including recommendations made and assessment of patient health status

The data element layout is designed to enable CMS to meet its goals for the Enhanced MTM model while limiting sponsors' administrative burden and providing maximum value for all participants.

Examples are provided to demonstrate the several ways sponsors can document their enhanced MTM activities.