Evaluation of the Part D Enhanced Medication Therapy Management (MTM) Model: First Evaluation Report

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LIST OF ACRONYMS

Acronym	Definition
ADT	Admission, Discharge, and Transfer
BCBS FL	Blue Cross Blue Shield of Florida
BCBS NPA	Blue Cross Blue Shield Northern Plains Alliance
CHF	Congestive Heart Failure
CME	Common Medicare Environment
CMR	Comprehensive Medication Reviews
CMS	Centers for Medicare & Medicaid Services
COPD	Chronic Obstructive Pulmonary Disease
CWF	Common Working Files
DTP	Drug Therapy Problem
E&M	Evaluation and Management
EA	Enhanced Alternative
EDB	Enrollment Database
EGWP	Employer Group Waiver Plan
EHR	Electronic Health Record
Enhanced MTM	Enhanced Medication Therapy Management
ER	Emergency Room
ESRD	End-Stage Renal Disease
HCC	Hierarchical Condition Categories
HIE	Health Information Exchanges
HIT	Health Information Technology
IP	Inpatient
IVR	Interactive Voice Response
LIS	Low-Income Status
MA-PDP	Medicare Advantage Drug Plan
MARx	Medicare Advantage and Prescription Drug Plan System
MBSF	Master Beneficiary Summary File
MI	Motivational Interviewing
MMP	Medicare-Medicaid Plan
MTM	Medication Therapy Management
MY	Model Year
NQF	National Quality Forum
OTC	Over-the-counter
PBM	Pharmacy Benefit Managers
PDC	Proportion of Days Covered
PDE	Part D Drug Event File
PDP	Prescription Drug Plan
PHIT	Pharmacy Health Information Technology Collaborative
PMPM	Per-Member-Per-Month
PQA	Pharmacy Quality Alliance
RxCUI	RxNorm Concept Unique Identifier
SEAMS	Self-Efficacy for Appropriate Medication Use Scale
SilverScript/CVS	SilverScript/CVS Insurance Company
SNOMED CT	Systemized Nomenclature of Medicine Codes
TMR	Targeted Medication Reviews
ToC	Transitions of Care
UHG	UnitedHealth Group

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EXECUTIVE SUMMARY

Centers for Medicare & Medicaid Services (CMS) has launched a five-year demonstration of the Medicare Part D Enhanced Medication Therapy Management Model ("the Model"), which tests potential modifications to the traditional MTM program, with the aim to improve therapeutic outcomes and reduce Medicare expenditures. CMS contracted with Acumen, LLC and its partner Westat, Inc. ("the Acumen team") to conduct a mixed-methods evaluation of the Enhanced MTM Model. This First Evaluation Report for the Enhanced MTM Model, which covers the first 20 months (January 2017 – August 2018) of Model implementation, describes the Model, participating Part D sponsors, and beneficiaries eligible for services, and presents qualitative findings related to Model implementation, successes, and challenges from the early perspectives of participating sponsors and vendors, their workforce, and the beneficiaries enrolled in participating plans.

Medication Therapy Management (MTM) consists of a range of services, usually provided by pharmacists, intended to optimize medication use and to detect and prevent medication-related issues. These services may include medication reviews, the provision of related education and advice to patients, or collaboration with patients and their prescribers to develop a patient-centered plan that achieves optimal therapeutic outcomes. Medicare Part D Prescription Drug Plans (PDPs), Medicare Advantage Prescription Drug Plans (MA-PDPs) and Medicare-Medicaid Plans (MMPs) are required under the existing Medicare Part D program ("traditional MTM program") to provide MTM services to targeted beneficiaries who meet specific eligibility criteria related to chronic conditions, polypharmacy, and likelihood of incurring high drug expenditures. Traditional MTM also requires a uniform set of services to be provided to all targeted beneficiaries, limiting the ability of plans to tailor services to a beneficiary's specific needs. Additionally, because compensation for provided MTM services is included in plans' annual bid submitted to CMS, there are limited incentives for plans to provide MTM services beyond the level necessary to fulfill basic Part D compliance requirements, because any added costs of providing MTM are ultimately reflected in a plan's annual bid and resulting premium.

In this context, the Enhanced MTM Model tests whether providing Part D sponsors with additional payment incentives and regulatory flexibilities to redesign the MTM programs they offer in eligible standalone PDPs with basic prescription coverage[1] leads to improvements in

[1] Part D sponsors are organizations that contract with CMS to provide the Medicare Part D benefit through drug plans. The term "eligible stand-alone PDPs" refers to PDPs that offer basic prescription drug coverage in the form of the defined standard benefit, actuarially equivalent standard benefits, or basic alternative benefits. The term excludes PDPs that offer enhanced alternative coverage.

therapeutic outcomes while reducing net Medicare expenditures. The Enhanced MTM Model has four core features:

(i) **Flexibility:** Participating Part D sponsors have the flexibility to vary beneficiary targeting and services based on the characteristics of their Part D enrollees, so that both beneficiary eligibility for services and the type of MTM services provided by the sponsor reflect the risk pool of its enrollees. For example, sponsors may offer multiple MTM programs, each with its own set of targeting criteria and services, and these programs may vary in intensity, ranging from low-touch medication refill reminders to more intensive management of chronic conditions.

(ii) **Prospective payments**: Payments to implement Enhanced MTM interventions are awarded in a process separate from each plan's annual Part D bid to CMS, and are based on the total annual projected cost of implementing the Enhanced MTM programs that each sponsor offers. This equips plans with dedicated resources to implement the MTM services that they consider beneficial for their enrollee populations.

(iii) **Performance-based payments**: These are awarded based on 2% reductions in Medicare Parts A and B costs (relative to a benchmark) for beneficiaries enrolled in Model-participating plans, to encourage improved linkages across medical expenditures (Medicare Parts A and B) and pharmaceutical (Medicare Part D) insurance coverage, and provide Part D sponsors with incentives for system-wide cost savings.

(iv) **Reporting:** Participating Part D sponsors are required to submit monthly Enhanced MTM eligibility data via the Medicare Advantage Prescription Drug (MARx) system in Transaction Code (TC) 91 files. Additionally, sponsors are required to submit quarterly Encounter Data documenting the Enhanced MTM activities and services performed for eligible beneficiaries. These services are recorded using Systematized Nomenclature of Medicine – Clinical Terms (SNOMED CT). These new data reporting requirements provide enhanced opportunities for Model implementation monitoring and evaluation.

Who Are The Enhanced MTM Model Participants?

The Enhanced MTM Model launched in January 2017 across five Medicare Part D PDP regions: Arizona, Louisiana, Florida, the Upper Midwest and Northern Plains (Iowa, Minnesota, Montana, Nebraska, North Dakota, South Dakota, Wyoming), and Virginia. Six Part D sponsors were selected to participate in the Model, and were required to offer Enhanced MTM across all eligible standalone PDPs that they administer in the five Model test regions. In total, there are 22 PDPs that currently offer Enhanced MTM.

The Enhanced MTM sponsors, their participating plans, and the Enhanced MTM regions where they are active are listed in Executive Summary Table 1.

Executive Summary Table 1: Enhanced MTM Participating Sponsors

Sponsor	Name of Participating Prescription Drug Plans (PDP)*	Benefit Type Offered by PDP*	Participating PDP Region(s)
Blue Cross Blue Shield of Florida (BCBS FL)	BlueMedicare Rx-Option 1 Plan	Basic Alternative	Florida
Blue Cross Blue Shield North Plains Alliance (BCBS NPA)	MedicareBlue Rx Standard Plan	Basic Alternative	Upper Midwest and Northern Plains
Humana	Humana Preferred Rx Plan	Actuarially Equivalent Standard	All Participating Regions[a]
SilverScript Insurance Company/CVS (SilverScript/ CVS)	SilverScript Choice Plan	Basic Alternative	All Participating Regions[a]
UnitedHealth Group (UHG)	AARP MedicareRx Saver Plus Plan	Actuarially Equivalent Standard	All Participating Regions[a]
WellCare	WellCare Classic Plan	Basic Alternative	All Participating Regions[a]

* The PDP names and benefit types are presented as they appeared in 2017 at Model start. Some plan names and benefit types have changed over time.

[a] PDP regions covered in the Enhanced MTM Model include: Arizona (AZ), Louisiana (LA), Florida (FL), the Upper Midwest and Northern Plains (IA, MN, MT, NE, ND, SD, WY) and Virginia (VA).

Key Findings

This First Evaluation Report focuses on three key findings from the first 20 months of Model implementation:

(i) In response to Model provisions and financial incentives that allowed for flexibility in targeting criteria and services, participating sponsors modified both the conditions for eligibility for MTM under the Model, as well as the types of services available to eligible beneficiaries. Innovations in Enhanced MTM were concentrated in the targeting that sponsors applied to determine eligibility for Model services. Some sponsors incorporated innovative targeting elements such as predictive algorithms to identify beneficiaries likely to incur high medical expenditures or the presence of drug-therapy problems. Eligible beneficiaries are further stratified for tailored service offerings across multiple Enhanced MTM programs offered by each sponsor. The revised targeting criteria resulted in a larger pool of eligible beneficiaries relative to traditional MTM. From January 2017 to June 2018, over 1.6 million enrollees (73.5 percent of all enrollees) in 22 participating plans offered by six sponsors have been eligible for Enhanced MTM.

(ii) The Model's inherent flexibility resulted in significant cross-sponsor variation in the way Enhanced MTM eligibility and service provision are recorded, which complicates the interpretation of Model data. Data recording practices also evolved over time, as sponsors refined their approach to satisfying the new data reporting requirements of the Model.

(iii) Program implementation progressed largely as planned, and perspectives from both the workforce engaged in service provision and enrolled beneficiaries are largely positive. However, participating sponsors have reported challenges with engaging both beneficiaries and prescribers in their programs, identifying beneficiaries who are experiencing a transition of care in a timely way, and integrating community pharmacists for service provision. These findings indicate potential for improvement in effective data sharing and care coordination with other healthcare providers.

Future reports will examine additional evaluation dimensions, including a robust quantitative assessment of Model impacts on beneficiary outcomes and beneficiary engagement, implementation updates, and findings from future rounds of interviews and surveys.

What Are The Characteristics of Enhanced MTM Programs and How Did Model Implementation Progress?

Each Enhanced MTM program is composed of four main structural elements: beneficiary targeting and eligibility, beneficiary outreach and engagement, Enhanced MTM service provision, and prescriber engagement. Sponsors implemented innovative approaches in the design of their Enhanced MTM programs, particularly in beneficiary targeting, while also relying on traditional MTM strategies for outreach and services. All sponsors risk stratified their beneficiary populations to determine Enhanced MTM service eligibility. Targeting criteria for Enhanced MTM are less restrictive than for traditional MTM, resulting in a larger pool of eligible beneficiaries. The intensity and range of available Enhanced MTM services varies based on beneficiaries' characteristics and underlying health profiles.

Targeting: Under traditional MTM, sponsors are required to target beneficiaries who (i) have multiple chronic conditions, (ii) take multiple Part D drugs, and (iii) are likely to incur high Part D drug costs. Within these core eligibility criteria, sponsors have limited flexibility in their targeting. For example, sponsors can choose the type of chronic conditions that apply towards the multiple chronic conditions criterion. Most plans rely on Part D drug claims data to identify eligible beneficiaries for traditional MTM. Under Enhanced MTM, sponsors were encouraged to expand beyond these minimum requirements and adopt new targeting criteria to better identify beneficiaries who would benefit from MTM services.

Sponsors use a variety of targeting methods to determine beneficiary eligibility for Enhanced MTM services. Some Enhanced MTM programs rely on predictive algorithms to identify beneficiaries at risk of incurring high medical costs or drug therapy problems, such as drug-drug interactions. Other Enhanced MTM programs target beneficiaries based on criteria such as unsafe medication use and medication non-adherence. To identify eligible beneficiaries, sponsors relied on internal data sources as well as on Parts A and B claims data, which were made available to them by CMS.

Some sponsors also focus on identifying particular times when a beneficiary may be at greater risk of drug therapy problems or when an intervention may be the most beneficial. For example, some Enhanced MTM programs focus on transitions of care (i.e., discharge events from hospital to home), because drug therapy problems often arise during such transitions. Transitions of care programs, however, require new approaches to identify beneficiaries close to the time of discharge, and some programs rely on data feeds through state Health Information Exchanges (HIEs) to identify these eligible beneficiaries.

Sponsors reported that they were able to operationalize Enhanced MTM targeting without difficulty, except for transitions of care programs, which were hampered by data lags in Medicare Parts A and B claims making it difficult to identify beneficiaries in a timely manner. As a result, sponsors explored other targeting strategies, such as predictive algorithms using Medicare Part D data or, as stated above, HIE data feeds. Sponsors also noted that most beneficiaries enter the Enhanced MTM program by satisfying the targeting criteria outlined above; Enhanced MTM enrollment through beneficiary or healthcare provider referrals is rare.

Eligible Beneficiary Characteristics: The targeting criteria used by sponsors to identify beneficiaries eligible for Enhanced MTM services were broader than the minimum criteria implemented under traditional MTM. Almost all (91 percent) participating plan enrollees that were eligible for traditional MTM in 2016 were also eligible for Enhanced MTM in 2017, but plans typically target a much larger share of their enrollees for Enhanced MTM services. Newly eligible beneficiaries are, on average, healthier and have lower medical and drug expenditures compared to those eligible for traditional MTM. Enhanced MTM beneficiaries also differ from traditional MTM beneficiaries in socio-demographic composition. For example, Enhanced MTM-eligible beneficiaries are less likely to be eligible for low-income subsidy relative to MTM-eligible beneficiaries, though the program's broader reach means that more beneficiaries eligible for low-income subsidies are eligible for Enhanced MTM in participating plans.

Beneficiary and Prescriber Outreach: Most sponsors employed traditional MTM beneficiary and prescriber outreach strategies. For beneficiary outreach, these traditional strategies include a welcome letter or package with additional follow-up that takes place over the phone. Services are delivered either exclusively by telephone or in combination with face-to-face interactions using community pharmacies. Traditional MTM prescriber outreach strategies used for Enhanced MTM include communications sent over fax, including recommendations for potential medication changes after an intervention takes place, with telephonic outreach if urgent medication therapy issues arise. Some sponsors deployed new beneficiary outreach approaches to prioritize higher-risk beneficiaries. Sponsors also noted that they attempted to contact Enhanced MTM beneficiaries more quickly after they were identified as eligible, relative to

traditional MTM-eligible beneficiaries. The extent of community pharmacy involvement in outreach and engagement increased relative to traditional MTM.

Beneficiary and prescriber engagement has been a challenge for many sponsors as they attempted to reach out and engage with a broadened pool of eligible beneficiaries. Some sponsors reported that Comprehensive Medication Review (CMR) completion rates have not been as high as in traditional MTM programs, potentially because the newly targeted population has different characteristics from beneficiaries eligible for CMRs in traditional MTM. Sponsors deployed a number of strategies to improve beneficiary engagement rates, such as attempting to obtain accurate beneficiary contact information from physicians or community pharmacists, enabling the beneficiary to validate the authenticity of communication to alleviate concerns about "scams," and using non-clinical, specially-trained individuals to conduct initial beneficiary outreach and encourage receipt of Enhanced MTM services.

Some sponsors leveraged community pharmacies to conduct beneficiary outreach and service provision, particularly for beneficiaries that are hard to engage, but encountered challenges related to sponsor inability to conduct quality assurance reviews of interventions in community pharmacies, lack of timely interventions, and inconsistent documentation and billing of Enhanced MTM services. Additionally, in an effort to improve prescriber engagement, some sponsors indicated that having dedicated staff follow up with prescribers after a service may increase the likelihood that prescribers respond to and take action on recommendations derived from Enhanced MTM services.

Services: Comprehensive Medication Reviews and Targeted Medication Reviews (CMRs and TMRs), which are core components of traditional MTM, also form the backbone of Enhanced MTM services. However, the content, focus, and frequency of these services differ significantly for Enhanced MTM, and are tailored to beneficiary needs instead of being prescriptively applied as a formal review of medications for all eligible beneficiaries. Sponsors did not provide CMRs and TMRs uniformly to all eligible beneficiaries. All Enhanced MTM sponsors only offered CMRs to subsets of their eligible populations determined as high-risk, which is defined differently based on each sponsor's targeting criteria. Sponsors also offered TMRs on a tailored basis. Additionally, some sponsors incorporated optional services offered under traditional MTM (newsletters and online resources) and also introduced new elements such as refill reminders and cost-sharing assistance into their Enhanced MTM programs.

A few sponsors reported that the delivery of CMRs under Enhanced MTM took longer than expected, which they attributed to beneficiary needs that were more complex than projected. Sponsors dealt with these issues by adding new partnerships with external organizations who could provide these services (vendor organizations), and restructuring initial and follow-up calls to focus on targeted, high-priority issues.

Some sponsors initially proposed to set up cost-sharing programs to address the financial and social needs of beneficiaries as a part of their Enhanced MTM intervention. However, sponsors with proposed reduced cost-sharing programs reported difficulties in setting up the workflows necessary for implementation. Only one sponsor included a formal reduced cost-sharing component in Model Year 1, for beneficiaries that had trouble adhering to their medications due to financial constraints.

Model Year 2 Changes: All sponsors added new parameters to their targeting and services in Model Year 2 (2018), increasing paths for eligibility, expanding the programs and services available, and renewing efforts to improve beneficiary outreach and engagement. Prescriber engagement was identified as an area for improvement, and efforts to streamline communications and provide education to prescribers about the Enhanced MTM program continued.

The Model requires that all proposed changes to Enhanced MTM programs be formally proposed by sponsors and approved by CMS. Sponsors commented on the challenges of making informed Enhanced MTM program changes within the current Model application timeline, which is driven by the Medicare Part D bid cycle. Sponsors reported that the due dates for this process did not allow sufficient time to make data-driven decisions between Model Year 1 and Model Year 2.

Descriptive Trends in Medication Adherence, Drug Safety, Healthcare Utilization, and Expenditures: MTM services aim to optimize medication use, improve patient safety, and increase medication adherence. Among the goals of the Model and MTM services in general is a reduction in downstream use of health services and related expenditures. Acumen tracked select measures related to medication adherence and safety, health service utilization, and expenditures to get a preliminary understanding of how these measures differed across participating sponsors and over the time period before and after beneficiary eligibility for Enhanced MTM services. Acumen selected these measures in the context of sponsors' Enhanced MTM programs, since many of them are used in beneficiary targeting and would be expected to improve as a result of Enhanced MTM service provision.

Trends in measures of medication adherence and safety, health service utilization, and expenditures were mostly stable after beneficiaries became eligible for Enhanced MTM in Model Year 1, compared to the four quarters before becoming eligible, although these are descriptive trends that do not reflect the causal effects of the Model. Median medication adherence[2] for all drug classes assessed (statins, beta blockers, oral diabetes medications, and renin-angiotensin system [RAS] antagonists) remained high (over 90 percent) for all sponsors, both before and

[2] Measured using the proportion of days covered (PDC) metric.

after beneficiaries became eligible for Enhanced MTM. Drug safety measures (drug-drug interaction, use of high-risk medications, and multiple opioid utilization measures) also remained constant, though there was a decline in opioid use, which is consistent with larger secular trends in the wider Medicare population over the period of observation.[3] Measures of health service utilization (ER visits, IP admissions) and spending (Medicare parts A and B, Medicare Part D) were also generally stable across all sponsors before and after beneficiaries became eligible for Enhanced MTM.

Eligibility and Encounter Data Reporting

As part of the conditions of participation, the Enhanced MTM Model imposed new data reporting requirements on participating sponsors: the monthly submission of beneficiary eligibility data (including beneficiary opt-out information) via the Medicare Advantage Prescription Drug (MARx) system in Transaction Code (TC) 91 files, and the quarterly submission of Encounter Data that record Enhanced MTM-related activities using the SNOMED CT coding scheme. Documentation of Enhanced MTM eligibility and service provision provides both sponsors and CMS the opportunity to track program activities and evaluate the Model. These new data requirements replace the traditional MTM's requirement to submit annual beneficiary-level MTM files to CMS. Traditional MTM data files include eligibility/enrollment information, as well as data on service delivery and limited outcomes using a standardized set of data fields determined by CMS (e.g., CMR offer and receipt indicators and corresponding dates, number of recommendations to prescribers).

Sponsors interpreted initial CMS guidance on recording Enhanced MTM eligibility in MARx TC 91 files in varying ways, which has resulted in retroactive data corrections and adjustments to comply with Model requirements. Additionally, not all beneficiaries reported as Enhanced MTM-eligible in Model Year 1 actually received outreach for an Enhanced MTM service, as sponsors prioritized beneficiaries from among the population of Enhanced MTM-eligible enrollees for service provision. Enhanced MTM eligibility documentation practices have stabilized over time and MARx TC 91 files are the main source of information on both inflows and outflows of Enhanced MTM-eligible beneficiaries. However, there remains cross-sponsor variation in how these data should be interpreted, especially in the context of numerous Enhanced MTM programs that offer services of varying intensity.

The Enhanced MTM Model requires the use of SNOMED CT codes to document all encounters. Traditional MTM, on the contrary, does not require the use of SNOMED CT codes

[3] For recent trends in opioid utilization among Medicare Part D beneficiaries, see, for example: U.S. Department of Health & Human Services, "HHS OIG Data Brief: Opioid Use in Medicare Part D Remains Concerning" (June 2019), https://oig.hhs.gov/oei/reports/oei-02-18-00220.pdf

for documentation of service provision. SNOMED CT functions as a structured language and uses pre-defined codes to describe a broad range of healthcare-related activities. The use of SNOMED CT was expected to allow sponsors to describe their various Enhanced MTM activities in a comprehensive and flexible manner. As a result, the Encounter Data structure is not prescriptive in specifying the types of activities required, nor the codes used to document these activities. CMS allowed sponsors the flexibility to determine the SNOMED CT codes that they use and the degree of detail that they provide in Encounter data. Sponsors were also not asked to explicitly identify the collection of records representing Enhanced MTM activities associated with a discrete service delivery event (i.e., intervention),[4] nor to provide groupings of such records.[5]

The Enhanced MTM Model's inherent flexibility and the novelty of using the SNOMED CT coding scheme to record Enhanced MTM activities led to substantial variation in how sponsors documented their MTM encounters. Additionally, sponsors' use of SNOMED CT codes evolved over time, as sponsors continued to refine their approach. The types of Enhanced MTM activities reported and the approaches to documenting these in the Encounter Data varied widely among sponsors. Sponsors used between 27 and 889 distinct SNOMED CT codes to document Enhanced MTM activities in the first year of Model implementation. Half of the sponsors used a generic "not otherwise coded" ZZZZZ code (with an accompanying free-text description), in addition to existing SNOMED CT codes, to document Enhanced MTM activities.

The structure of the Encounter Data makes drawing comparisons with traditional MTM service provision difficult, and poses challenges for the interpretation of the data. For example, it is not straightforward to compute the total number of CMRs that have been provided under the Model.[6] In addition, CMR completion rates do not carry the same meaning as in the context of traditional MTM, because not all beneficiaries eligible for Enhanced MTM are eligible for CMRs. There is also cross-sponsor variation in capturing prescriber response to pharmacist recommendations via SNOMED CT codes. Some sponsors explicitly capture prescriber response information in Enhanced MTM Encounter Data, while others do not capture provider refusals or acceptance of recommendations. As a result, Encounter Data cannot be used to track responses from prescribers to recommendations made by Enhanced MTM service providers for all

[4] Records related to the same service delivery event (e.g. CMR) for a beneficiary may include reasons for offering the service (e.g. specific health characteristics), findings uncovered during the service (e.g. harmful drug-drug interactions), recommendations made during the service (e.g., medication changes), or the beneficiary's decline of the service.

[5] Sponsors typically submit multiple records to describe a single intervention.

[6] It is not sufficient to count the occurrences of CMR-related codes in the Encounter data, because some sponsors use CMR-related codes to document a failed contact attempt, so it is necessary to first group records that relate to a single service delivery event, and then remove events that include a code related to a failed contact attempt.

sponsors, which limits the ability to assess overall levels and trends in prescriber engagement over the course of Model implementation.

Sponsors used standardized documentation systems to integrate SNOMED CT coding in Encounter Data within existing processes. All sponsors used automated or standardized processes to map fields from internal documentation systems to pre-defined sponsor-specific SNOMED CT codes. Some sponsors used multiple documentation systems for Enhanced MTM activities, each of which was unique and had its own approach for linking SNOMED CT codes to these activities for Encounter Data reporting. As a result, there may be instances of cross-system coding differences among programs within the same sponsor.

Most sponsors did not have prior experience with the SNOMED CT coding scheme. Accordingly, sponsors had to invest substantial time and resources to satisfy the Model's new Encounter Data reporting requirements, and cited this as a challenge. Sponsors noted that they needed to create additional codes in instances where the current set of SNOMED CT codes was not sufficient for the full documentation of Enhanced MTM services, either due to lack of existing codes or inability of codes to distinguish nuances between services offered as part of the Model (e.g., CMRs for transitions of care vs. other types of CMRs). Sponsors also noted some implementation challenges associated with Encounter data completeness. Sponsors reported that some community pharmacies may not be fully documenting Enhanced MTM services, due to challenges related to busy pharmacy workflows and barriers in using existing systems for completing Enhanced MTM-specific documentation. Enhanced MTM Encounter Data is therefore likely to underestimate the volume of all Enhanced MTM services received by beneficiaries, especially for those sponsors with a substantial community pharmacy component.

Enhanced MTM Model Implementation: Workforce Perspectives

The Enhanced MTM workforce can provide a unique, on-the-ground viewpoint of implementation effectiveness and Model successes and challenges. Workforce perspectives on Model implementation were collected from sponsor and vendor administrative and service delivery staff, and some community pharmacies participating in Enhanced MTM, during the summer of 2018 (approximately half way through the second model year).

The workforce survey covered Enhanced MTM staff experiences with Model implementation, including impressions of the benefits for beneficiaries and the organization, role satisfaction, and intent to stay in the role. The survey also covered the program administration staff's assessment of difficulty in accomplishing core Enhanced MTM activities, and the member service staff's time commitment and patient service activities. Both administrators and service delivery staff working on the Enhanced MTM Model are generally very satisfied with their roles,

their organization's implementation of Enhanced MTM, and perceived benefits to patients. Most respondents rated implementing many of the core components of their organizations' approach (i.e., identifying drug therapy problems, targeting beneficiaries, and documenting encounters) as "not difficult at all," though program administration staff identified some challenges related to prescriber and beneficiary engagement. Community pharmacy staff provided less comprehensive services compared to sponsor and vendor call center staff, and were less positive about Enhanced MTM, assessing their role in the Model (e.g., in terms of whether their role adds value, increases enrollee satisfaction, or provides cost-effective care) less favorably than sponsor and vendor administrative and service delivery staff.

Enhanced MTM Model Implementation: Beneficiary Perspectives

Positive beneficiary experiences with Enhanced MTM services are important for the success of the Enhanced MTM Model. Beneficiaries who report positive experiences with receiving Enhanced MTM services may be more likely to actively engage in their health care and better able to manage their medications. The Acumen team conducted in-depth interviews between February and August of Model Year 2 with beneficiaries from all six participating sponsors to assess beneficiaries' experiences with sponsors' Enhanced MTM programs and the core services they offer.

In these in-depth interviews, beneficiaries who had recently received Enhanced MTM outreach reported two main motivations for participating in a CMR service: first, the desire to learn more about the safety and appropriateness of their medications, and, second, a sense of obligation because the outreach call was from their PDP. Beneficiaries targeted based on their condition, rather than medication-related issues, were not as motivated to participate in Enhanced MTM services. Those who had not received a CMR service before or had knowledge gaps about their medications reported that the CMR service was useful in helping them better understand their medications. CMRs that included discussions around lowering medication costs (e.g., co-pay waivers) were perceived as particularly valuable. Some beneficiaries reported bringing post-CMR materials with them to medical appointments or indicated that they had intentions to do so, and the CMR service motivated some beneficiaries to meet with their prescriber. Finally, beneficiaries who opted out of Enhanced MTM or declined a CMR generally reported that the service seemed unnecessary or useless, or were skeptical of reviewing medication lists over the phone, and preferred to discuss medication with their personal doctor or pharmacist.

Conclusions

The first 20 months of the Enhanced MTM Model saw a lot of work on the part of sponsors to implement the Model and comply with the new data reporting requirements. Participating sponsors took advantage of the Model's flexibility and financial incentives by modifying their targeting criteria to identify a larger pool of eligible beneficiaries relative to the traditional MTM program's eligibility rules. Enhanced MTM sponsors provide risk-stratified services of varied type and frequency to eligible beneficiaries, rather than offering a uniform set of services.

Additionally, the Model's inherent flexibility led to substantial cross-sponsor variation in both Enhanced MTM eligibility and Encounter Data recording practices. There were some data reporting irregularities during the first year of Model implementation, which is expected given that these data requirements are new to Enhanced MTM. Data collection practices are improving as Model implementation matures.

Overall, Model implementation progressed largely as planned. Early perspectives from Medicare beneficiaries in participating plans and the workforce delivering Enhanced MTM services have generally been positive, with some challenges reported on beneficiary and prescriber engagement. Sponsors are making ongoing efforts to address these challenges, and refine their Enhanced MTM programs to better respond to beneficiary needs.

To date, an examination of key measures of medication adherence and safety, health service utilization, and expenditures appear to be relatively stable in the period preceding and immediately following eligibility for Enhanced MTM services. Analyses in future evaluation reports will assess the causal effect of the Model on beneficiary outcomes and will explore the mechanisms associated with observed impacts.

1 WHAT IS THE ENHANCED MEDICATION THERAPY MANAGEMENT MODEL?

The Enhanced Medication Therapy Management (MTM) Model is a five-year demonstration launched by the Centers for Medicare and Medicaid Services (CMS) to test whether providing Medicare Part D plan sponsors with payment incentives and regulatory flexibilities in conducting medication therapy management leads to reductions in downstream Medicare expenditures, while also leading to improvements in therapeutic outcomes.

The term Medication Therapy Management (MTM) describes a range of services, usually provided by pharmacists, intended to optimize medication use and to detect and prevent medication-related issues. Medication Therapy Management services may include medication reviews, the provision of related education and advice to patients, or collaboration with patients and their prescribers to develop a patient-centered plan that achieves optimal therapeutic outcomes. Ample research suggests that MTM has the potential to positively influence adherence to prescribed medications and increase drug safety, improve health, reduce adverse events, and lower expenditures for chronically ill individuals.[7,8,9,10,11]

Medicare Part D Prescription Drug Plans (PDPs), Medicare Advantage Prescription Drug Plans (MA-PDPs) and Medicare-Medicaid Plans (MMPs) are required under the existing Medicare Part D program ("traditional MTM program") to provide MTM services to targeted beneficiaries who meet criteria related to chronic conditions, polypharmacy, and likelihood of incurring high drug expenditures. Traditional MTM program also requires a uniform set of services to be provided to all beneficiaries who meet plans' MTM eligibility criteria, limiting the ability of plans to tailor services to a beneficiary's specific needs. Compensation for providing MTM services is included as part of a plan's annual bid submitted to CMS. Reluctance to increase a plan's bid further limits incentives to invest in MTM program improvements beyond

[7] Barry A. Bunting, Benjamin H. Smith, and Susan E. Sutherland, "The Asheville Project: clinical and economic outcomes of a community-based long-term medication therapy management program for hypertension and dyslipidemia." *Journal of the American Pharmacists Association* 48, no. 1 (2008): 23-31, https://doi.org/10.1331/JAPhA.2008.07140.

[8] M. Christopher Roebuck, Joshua N. Liberman, Marin Gemmill-Toyama, and Troyen A. Brennan, "Medication adherence leads to lower health care use and costs despite increased drug spending." *Health Affairs* 30, no. 1 (2011): 91-99, http://www.doi.org/10.1377/hlthaff.2009.1087.

[9] Michael C. Sokol, Kimberly A. McGuigan, Robert R. Verbrugge, and Robert S. Epstein, "Impact of medication adherence on hospitalization risk and healthcare cost." *Medical Care* 43, no. 6 (2005): 521-530.

[10] Ashish K. Jha, Ronald E. Aubert, Jianying Yao, J. Russell Teagarden, and Robert S. Epstein, "Greater adherence to diabetes drugs is linked to less hospital use and could save nearly $5 billion annually." *Health Affairs* 31, no. 8 (2012):1836-1846, http://www.doi.org/10.1377/hlthaff.2011.1198.

[11] Saranrat Wittayanukorn, Salisa C. Westrick, Richard A. Hansen, Nedret Billor, Kimberly Braxton-Lloyd, Brent I. Fox, and Kimberly B. Garza, "Evaluation of medication therapy management services for patients with cardiovascular disease in a self-insured employer health plan." *Journal of Managed Care & Specialty Pharmacy* 19, no. 5 (2013): 385-395, http://www.doi.org/10.18553/jmcp.2013.19.5.385.

the required minimums. Specifically, sponsors are less likely to devote additional financial resources to their MTM programs beyond the level necessary to fulfill basic Part D compliance requirements if this increases the sponsors' overall annual Part D drug plan bid, because this would reduce their competitive edge in the market.

In this context, CMS launched a five-year demonstration of the Medicare Part D Enhanced Medication Therapy Management (MTM) Model ("the Model") in January 2017. The Enhanced MTM Model, implemented by six Medicare Part D sponsors operating eligible stand-alone PDPs offering basic prescription drug coverage,[12] tests whether providing Part D plan sponsors with additional payment incentives and regulatory flexibilities to redesign their MTM programs leads to improvements in therapeutic outcomes while reducing net Medicare expenditures. CMS contracted with Acumen, LLC and its partner Westat, Inc. ("the Acumen team") to conduct a multi-year, mixed-methods evaluation of the Enhanced MTM Model in the core areas of Model participation (participating sponsor/plan characteristics, and reasons for non-participation), implementation (targeting, services, partnering organizations, experiences), impacts (beneficiary health outcomes, resource use and expenditures), and Model scalability (generalizability of findings, replicability factors).

This First Evaluation Report for the Enhanced MTM Model focuses on the initial 20 months of Model implementation (January 1, 2017 through August 30, 2018). The report includes a presentation of the Model and its features, a description of participating sponsors' Enhanced MTM programs and eligible beneficiaries, and a discussion of qualitative findings related to Model implementation. The report is organized around three key findings:

(i) The Model's flexibility and financial incentives prompted participating sponsors to design Enhanced MTM programs with innovative targeting strategies for the selection of beneficiaries eligible to receive services. Relative to traditional MTM, the area with the most innovation within the context of Enhanced MTM was the targeting criteria that sponsors applied to determine eligibility for Model services. Sponsors offered medication management therapy services to a wider pool of beneficiaries, compared to the traditional MTM program, and tailored the intensity and frequency of services to beneficiaries' individual health profiles, risk, and specific needs.

(ii) There is substantial cross-sponsor variation in the documentation of beneficiary eligibility and Enhanced MTM activities, which complicates the interpretation of these Model data. The cross-sponsor variation in data reporting practices is reflective of the flexibility granted by the Model. Additionally, the reporting of Enhanced MTM activities in Encounter Data using the SNOMED CT coding scheme has been an innovative component of the Enhanced MTM Model, so data reporting practices have evolved over time as sponsors gained experience and refined their reporting practices.

[12] Eligible stand-alone PDPs refers to PDPs that offer basic prescription drug coverage in the form of the defined standard benefit, actuarially equivalent standard benefits, or basic alternative benefits. The term excludes PDPs that offer enhanced alternative coverage.

(iii) Enhanced MTM Model implementation is progressing as planned, with some challenges in the areas of beneficiary and prescriber engagement that are being actively addressed by sponsors.

The information included in this report is based on data collection and analyses conducted between November 2016 and August 2018. Data collection included five separate components. First, to assess industry-wide expectations regarding the Enhanced MTM Model's implementation, the Acumen team conducted interviews with pharmacy industry experts and stakeholders in March 2017, two months after Enhanced MTM implementation began. Second, to establish baseline beneficiary perceptions of their plans and the provision of MTM services at the onset of Enhanced MTM implementation, the Acumen team conducted the first of three planned rounds of a beneficiary survey shortly after Model launch. Third, the Acumen team reviewed Enhanced MTM program documents from participating sponsors and conducted in-depth interviews with leadership and key representatives from sponsors and vendors on a quarterly basis beginning in November 2016 to inform findings on Enhanced MTM program characteristics and sponsor perspectives on implementation. Fourth, in summer 2018, the Acumen team conducted a workforce survey of sponsor and vendor staff involved in Enhanced MTM to inform findings on staff perceptions of Model implementation and their role in Enhanced MTM service provision. Finally, to gather information on beneficiary satisfaction and perceptions of the Enhanced MTM Model, the Acumen team conducted interviews with participating plan beneficiaries in the second year of Model implementation.

Qualitative information from these five data collection activities was combined with Model-specific data sources and Medicare administrative data to describe the characteristics of beneficiaries enrolled in the Enhanced MTM Model and present descriptive trends in medication adherence, drug safety measures, and key indicators of healthcare utilization and expenditures over time. Future reports will employ a differences-in-differences analytic framework to assess program impacts on key beneficiary outcomes. All analyses presented in this report used the most current data available at the time this report was drafted.

The rest of this introductory section provides additional background information on the traditional MTM program and the motivation behind the Enhanced MTM Model (Section 1.1); an overview of Enhanced MTM Model participants and program enrollment (Section 1.2); stakeholder expectations of the Enhanced MTM Model (Section 1.4); and beneficiary experience prior to operationalization of the Enhanced MTM Model, based on findings of the baseline beneficiary survey (Section 1.5).

Following the introduction, Section 2 ("What Were the Characteristics of the Enhanced MTM Programs?") describes sponsors' Enhanced MTM programs and Model-eligible populations, and highlights differences from traditional MTM.

Section 3 ("How Do Sponsors Document Enhanced MTM Eligibility and Program Activities?") on eligibility and Encounter Data describes the sponsors' approaches to reporting Enhanced MTM eligibility data in MARx TC 91-files and documenting Enhanced MTM services and activities in the Encounter Data, using the SNOMED CT coding scheme, and the interpretation of these data for the evaluation.

Section 4 ("How Did Model Implementation Progress Across the First 20 Months?") discusses the implementation of the Enhanced MTM Model, including related successes and challenges, from the perspective of participating plan sponsors (Section 4.1), the workforce involved in Enhanced MTM program administration and service provision (Section 4.2), and the beneficiaries enrolled in participating plans (Section 4.3).

Finally, Section 5 ("Conclusions and Next Steps") summarizes the current assessment of the Enhanced MTM Model implementation relative to its intended goals, synthesizes findings from prior sections, and describes next steps for the evaluation.

Separate appendices (Appendix A - Appendix F) for each of the six participating sponsors provide more details on their Enhanced MTM programs, including partner organizations, targeting approach, provided services, and beneficiary and provider engagement strategies. The remaining appendices include additional details on methodologies, including interview protocol topics and survey methods.

1.1 Why Did CMS Launch the Enhanced MTM Model?

Traditional MTM provides limited flexibility and financial incentives to Part D plan sponsors to improve MTM services beyond minimal Part D MTM compliance standards. The Enhanced MTM Model offers participating sponsors the flexibility to design their own Enhanced MTM programs and provides them with additional payments (both prospective and performance-based) to incentivize MTM service innovation and enhancements. This section provides an overview of the traditional MTM program and describes the motivations for the Enhanced MTM Model in more detail.

1.1.1 Traditional Medication Therapy Management (MTM) Program

Traditional MTM services must be offered to beneficiaries with high drug expenditures, multiple chronic diseases, and multiple medications.

All Part D sponsors operating MA-PDPs, stand-alone PDPs, and MMPs are required to establish a traditional MTM program.[13] In 2017, a total of 592 Part D contracts implemented a traditional MTM program. CMS sets core targeting parameters that determine beneficiary eligibility for MTM services. In 2017, sponsors were required to target beneficiaries who (i) have multiple chronic conditions, (ii) take multiple Part D drugs, and (iii) are likely to incur high Part D drug costs.[14] Within these core eligibility criteria, sponsors have limited flexibility in their targeting. For example, sponsors can choose the type of chronic conditions that apply towards the multiple chronic conditions criterion, but sponsors cannot require that beneficiaries have more than three of these conditions.[15] Sponsors may also design expanded qualification criteria to offer MTM services to additional beneficiary populations, but no additional financial incentives are offered for such expansions of MTM eligibility. As a result, in 2017, only about a quarter of all Part D plans used expanded eligibility criteria in their MTM targeting. Plans must identify beneficiaries for MTM program enrollment at least quarterly. In 2017, almost all plans used Part D drug claims data to identify eligible beneficiaries. A few plans (5.1 percent of PDPs and 22.9 percent of MA-PDs) additionally used medical data and other sources of information (e.g., laboratory data, health assessments).[16]

For all eligible beneficiaries in the traditional MTM program, CMS requires that plans offer a minimum set of two core MTM services for beneficiaries and prescribers: (i) an annual comprehensive medication review (CMR), and (ii) a quarterly targeted medication review (TMR), with follow-up services as needed. The annual CMR is designed to improve

[13] The requirements to establish an MTM program do not apply to MA Private Fee for Service (MA-PFFS) organizations or PACE organizations, Employer Group Waiver Plans (EGWPs), and plan benefit packages (PBPs) approved to participate in the Enhanced MTM Model during the applicable year. Source: CMS, "Correction – CY 2017 Medication Therapy Management Program Guidance and Submission Instructions" (official memorandum, April 8, 2016), https://www.cms.gov/Medicare/Prescription-Drug-Coverage/PrescriptionDrugCovContra/Downloads/Memo-Contract-Year-2017-Medication-Therapy-Management-MTM-Program-Submission-v-040816.pdf

[14] In 2017, CMS set the annual Part D drug cost threshold for determining eligibility at $3,919. Source: CMS, "2017 Medicare Part D Medication Therapy Management (MTM) Programs Fact Sheet: Summary of 2017 MTM Programs" (August 16, 2017), https://www.cms.gov/Medicare/Prescription-Drug-Coverage/PrescriptionDrugCovContra/Downloads/CY2017-MTM-Fact-Sheet.pdf

[15] CMS, "CY 2018 Medication Therapy Management Program Guidance and Submission Instructions" (official memorandum, April 7, 2017), https://www.cms.gov/Medicare/Prescription-Drug-Coverage/PrescriptionDrugCovContra/Downloads/Memo-Contract-Year-2018-Medication-Therapy-Management-MTM-Program-Submission-v-041817.pdf

[16] CMS, "2017 Medicare Part D Medication Therapy Management (MTM) Programs Fact Sheet: Summary of 2017 MTM Programs"

beneficiaries' knowledge of their medications, identify issues, and address them. CMRs can be performed by a pharmacist or another qualified provider either in person or as a telehealth consultation. During a CMR, providers are required to review the beneficiary's medication list with the beneficiary, identify potential drug-related issues, develop a plan to resolve or mitigate any problems, summarize the interaction in CMS's standardized written format, and mail the CMR summary to the beneficiary.

The quarterly TMRs are short consultations designed to follow up on specific drug-related concerns, and may be conducted (i) with a prescriber only (prescriber-facing), (ii) with a beneficiary only (member-facing), or (iii) with a beneficiary and prescriber. In addition to providing services directly to beneficiaries, plans must also inform prescribers of beneficiaries' medication issues and offer solutions. Plans may offer additional services to MTM-eligible beneficiaries, including case or disease management, general education, or medication guides.

Outside of the Part D plan bid, CMS does not provide additional funds to Part D sponsors to implement the traditional MTM programs.

As part of their annual bid process, Part D applicants must submit MTM program data for every stand-alone Part D contract. Each submission must include a description of each plan's MTM eligibility criteria, including proposals to meet each of CMS's minimum targeting criteria and targeting frequency. Additionally, plans must describe their MTM program services, including information such as intervention timing and frequency. MTM program data must also report the type of qualified personnel that will deliver MTM services, and any fees associated with service delivery; proposed outcome measures and tracking methodology; and methods of enrollment and disenrollment. Annually, CMS reviews the submissions to ensure that each MTM program meets current minimum requirements.[17] Approved plans must also submit annual beneficiary-level MTM data files to CMS to report eligibility for the MTM program; receipt of MTM services; beneficiary opt-outs and reasoning; CMR performance documentation; and drug therapy problems.[18] Beneficiary-level MTM data allow CMS to monitor that minimum MTM service provision requirements are met.

[17] CMS, "CY 2018 Medication Therapy Management Program Guidance and Submission Instructions."
[18] CMS, "Submission of 2017 Beneficiary-Level Medication Therapy Management (MTM) Program Data" (official memorandum, December 22, 2017), https://www.cms.gov/Medicare/Prescription-Drug-Coverage/PrescriptionDrugCovContra/Downloads/2017-MTM-Submission-Instructions-Memo-12212017.pdf

1.1.2 Improvement Opportunities for Traditional MTM

Studies have suggested improvement opportunities for traditional MTM, including: (i) better identification of beneficiaries likely to benefit from MTM services, (ii) MTM services tailored to beneficiaries' health needs, and (iii) improved beneficiary engagement.

Studies of the traditional MTM program suggest that its effectiveness varies significantly based on a beneficiary's health characteristics, the service received, and level of engagement, indicating improvement opportunities in these areas. For example, in a retrospective study of the impact of the 2010 Medicare Part D MTM program on beneficiaries with Chronic Heart Failure (CHF), Chronic Obstructive Pulmonary Disease (COPD), and diabetes, Acumen found modest improvements in intermediate outcomes such as adherence to specific chronic medications, but did not find sustained effects on drug safety measures for program participants relative to controls.[19] The positive effects on medication adherence were greater for beneficiaries who received a CMR. The same study also found hospital cost savings only for beneficiaries with CHF and diabetes who received a CMR, suggesting that CMR receipt is a particularly important driver for cost reduction. However, CMR completion rates for the Part D MTM program have generally been low, in spite of the fact that CMRs must be offered to all eligible beneficiaries. For example, only 19.1 percent of MTM-eligible beneficiaries in PDPs completed a CMR in 2016.[20] This indicates a need to explore strategies to identify beneficiaries likely to benefit the most from MTM services, and to further tailor services and engagement efforts to meet beneficiaries' specific needs. From 2014 to 2016, Acumen conducted a CMS study to evaluate potential revisions to the Part D MTM eligibility criteria and identify effective outreach strategies ("Part D MTM Improvements project").[21] This study found wide cross-plan variation in MTM process metrics (e.g., CMR receipt rate, opt-out rates), as well as drug-related outcome metrics (medication adherence, drug safety measures); the substantial variation in MTM program performance across plans suggests opportunities to improve program-wide performance.

[19] Acumen, LLC, "Medication Therapy Management in Chronically Ill Populations: Final Report" (August 2013), https://innovation.cms.gov/files/reports/mtm_final_report.pdf.

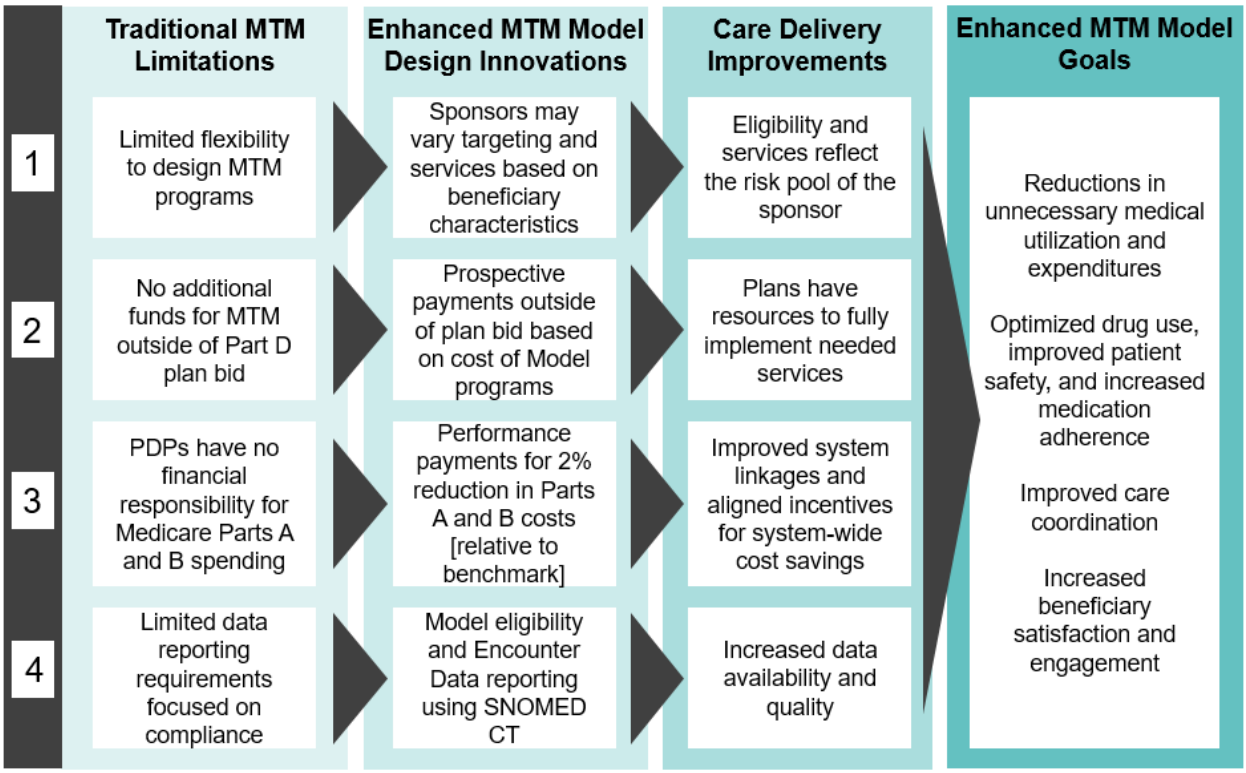
[20] CMS, "Analysis of Calendar Year 2016 Medicare Part D Reporting Requirements Data." (April 2018), https://www.cms.gov/Medicare/Prescription-Drug-Coverage/PrescriptionDrugCovContra/PartCDDataValidation.html

[21] Acumen, LLC, "Medication Therapy Management (MTM) Improvements: Evaluation to Consider Revision of MTM Eligibility Criteria and to Identify Effective Outreach Strategies: Final Report" (February 2016).

1.1.3 Enhanced MTM Model Goals, Features and Theory of Change

The Enhanced MTM Model aims to address the limitations of the traditional MTM program, outlined above, by allowing participating sponsors significant latitude in their MTM program design and by providing additional financial incentives to support enhancements to existing activities or additions of new services. The logic model in Figure 1.1 describes key features, goals, and expected outcomes of the model, followed by a more detailed description of its four core features.

Figure 1.1: Enhanced MTM Logic Model



The four key Enhanced MTM Model components that aim to address limitations of the traditional MTM program are detailed below:

(1) Flexibility: Sponsors have significant latitude in Enhanced MTM program design.

While CMS imposes specific requirements on the design and implementation of traditional MTM programs, the Enhanced MTM Model allows sponsors considerable latitude in the design of their Enhanced MTM programs, including targeting criteria and service provision. This flexibility allows sponsors to implement interventions tailored to their populations. Section 2 in this report discusses the variation in participating sponsors' Enhanced MTM program design in more detail.

The Model also offers participating PDPs an opportunity to receive Medicare Parts A and B claims data from CMS on their plan enrollees to obtain information on each enrollee's medical services use and health profiles that can be leveraged for targeting and service provision.

(2) Prospective payments: Plans receive prospective payments based on their Enhanced MTM program needs.

Currently, administrative costs for MTM services are included in annual Part D plan bids. Plans do not receive additional funds to implement traditional MTM services. This framework limits the extent to which plans choose to offer additional MTM services tailored to their Part D populations, beyond minimum requirements. In the Enhanced MTM Model, participating PDPs receive a supplemental prospective payment, determined separately from each sponsor's annual Part D bid, for the delivery of their Enhanced MTM programs. This provides additional funds for Enhanced MTM service delivery, without impacting the Part D premiums that sponsors charge. CMS determines the prospective payment amount based on the cost of each sponsor's proposed Enhanced MTM programs. The prospective payment provides participating PDPs with resources for Model implementation and administrative needs. Prospective payments ranged between two and eleven dollars (per beneficiary per month) in the first year of Model implementation.

(3) Performance-based payments: Plans receive performance-based payments based on reductions in medical costs.

Stand-alone PDPs in the traditional MTM program have no financial responsibility for medical costs incurred by their enrolled populations and thus have limited incentives and ability to curb medical (Parts A and B) expenditures. To increase standalone PDPs' incentives to improve overall beneficiary outcomes and reduce system-wide healthcare expenditures, CMS will grant additional performance-based payments to PDPs participating in Enhanced MTM beginning in 2019, contingent on a net reduction in medical expenditures (Medicare Parts A and B) of at least two percent for beneficiaries enrolled in participating plans, relative to a benchmark. The performance-based payment is set at a fixed two dollar per-member-per-month amount, and will take the form of an increase in Medicare's contribution to plans' Part D premium (i.e., it will be an increase in the direct subsidy component of Part D payment), thus decreasing the plan premium paid by beneficiaries, and improving PDPs' competitive market position.

(4) Reporting: Plans have additional data reporting requirements, including the documentation of Enhanced MTM encounters using Systematized Nomenclature of Medicine (SNOMED CT) codes.

For the traditional MTM program, stand-alone PDPs are required to report limited MTM beneficiary-level data focused on MTM eligibility and provision of required MTM services (CMR and TMR) on an annual basis to CMS.

As part of the Enhanced MTM Model, sponsors are required to submit both monthly beneficiary-level eligibility data (in the Medicare Advantage Prescription Drug [MARx] data transaction system[22]), which indicate beneficiaries eligible for Enhanced MTM, and quarterly encounter data, which document details of Enhanced MTM services provided to beneficiaries. Encounter Data are recorded using a coding scheme known as SNOMED CT. Performance-based payments are contingent on sponsors meeting eligibility and encounter data reporting requirements to incentivize submission of high-quality data.

Beneficiaries should be reported as Model-eligible in MARx if the beneficiary is targeted to receive services that are both "tailored" (the services should have targeting criteria based on a health risk) and "enrollee-specific" (beneficiary is targeted for the services based on their individual health status, medication use barriers, or when clinically necessary to ensure the safe and effective use of their medications).[23]

The encounter data set (Encounter Data) is a new requirement for the Model and uses SNOMED CT codes to capture information related to Enhanced MTM service provision. The submission of Enhanced MTM Encounter Data was designed to be open-ended and allow for differences across sponsors in Enhanced MTM programs and services, given the Model's inherent flexibility. CMS instructed sponsors to submit an Enhanced MTM encounter for any of the following categories of activities:

- a referral to receive Enhanced MTM
- the Enhanced MTM procedure or service performed
- the medication therapy issue that was addressed by the Enhanced MTM service
- the outcome following an Enhanced MTM procedure

[22] These eligibility data are stored in MARx Transaction Code (TC) 91 files.
[23] CMS, "Clarifying Guidance for Submitting Enhanced MTM Transaction Data in MARx" (November 21, 2016).

CMS provided sponsors with "starter value sets" of SNOMED CT codes, endorsed by the Pharmacy Health Information Technology (PHIT) Collaborative, to assist sponsors with the process of mapping Enhanced MTM services to SNOMED CT codes for the purposes of service documentation. CMS recommended the use of SNOMED CT codes from the starter value sets to document every encounter to the extent possible. Sponsors also have the flexibility to use SNOMED CT codes outside the starter value sets, or use a free-text ZZZZZ code option in cases where a suitable SNOMED CT code does not exist. For each ZZZZZ code entry, sponsors submit an accompanying free-text description of the encounter to describe the activity. The use of the SNOMED CT coding scheme in describing an Enhanced MTM encounter is new for both sponsors and CMS.

Because the flexibility in program design encouraged by the Model was expected to produce variation in Enhanced MTM activities across sponsors, sponsors were also given significant latitude in how Enhanced MTM activities should be documented and recorded in the Encounter Data. The collection of Encounter Data thus also presented an opportunity to learn how SNOMED CT would be used in the field. Intended uses of the Encounter Data included assessment of individual sponsors' performance with respect to their approved Model intervention plans, construction of quality indicators, and data analyses for Model evaluation.[24] Detailed and timely documentation of program activities and outcomes in the Enhanced MTM Encounter Data may also present a useful resource for participating plans to engage in self-monitoring and data-driven program improvements.

In summary, the goal of the Enhanced MTM model is to improve beneficiaries' therapeutic outcomes, and thus reduce adverse medical events such as emergency room (ER) visits and hospitalizations, and generate downstream reductions in total medical expenditures. To achieve these goals, the Enhanced MTM Model loosens traditional MTM program requirements and provides sponsors with additional payment incentives to enhance and redesign their MTM programs. These incentives are expected to result improved availability of MTM services relative to the traditional model, better targeting of beneficiaries, provision of services that are tailored to beneficiaries' needs, and greater beneficiary satisfaction.

[24] Centers for Medicare and Medicaid Services, "Medicare Part D Enhanced Medication TherapyManagement Model: Request for Applications" https://innovation.cms.gov/Files/x/mtm-rfa.pdf

1.2 Who Are the Enhanced MTM Model Participants?

Six Part D sponsors with 22 plans active in five PDP regions are participating. From January 2017 to June 2018, over 1.6 million beneficiaries were eligible for Enhanced MTM.

The Enhanced MTM Model launched in January 2017 in five of the 34 Medicare Part D PDP regions: Arizona (AZ), Louisiana (LA), Florida (FL), the Upper Midwest and Northern Plains (IA, MN, MT, NE, ND, SD, WY), and Virginia (VA). To participate in the Enhanced MTM Model, sponsors were required to offer Enhanced MTM in all participating regions where they administered plans eligible for participation in the Enhanced MTM Model.[25] Six Part D sponsors participate in the Model and offer 22 PDPs across these five PDP regions. Sponsors active in a single PDP region (Blue Cross Blue Shield Florida and Blue Cross Blue Shield Northern Plains Alliance) have one participating plan, and sponsors active in multiple PDP regions (Humana, SilverScript/CVS, UnitedHealth Group, WellCare) have five participating plans in the Model, one in each participating region.

Table 1.1 below describes the participating plans and regions covered by each of the Enhanced MTM sponsors ("sponsors"). Sponsors used the flexibility of the Model to provide multiple types of Enhanced MTM services and offerings ('Enhanced MTM programs') tailored to the needs of their specific beneficiary population. Most Enhanced MTM programs fit into four categories:

(i) drug therapy problem (DTP) programs, which targeted drug-related patient safety issues, non-adherence (or likelihood of future non-adherence) to specific drugs for new or existing users, high drug utilization, or opioid utilization;

(ii) chronic disease programs, which targeted beneficiaries managing specific chronic diseases or multiple chronic diseases;

(iii) high spend programs, which targeted beneficiaries with high medical and/or drug expenditures; and

(iv) transitions of care programs, which targeted beneficiaries with a recent inpatient discharge.

All sponsors offer the same Enhanced MTM programs across all participating plans. Sponsors used different sets of criteria to identify beneficiaries who may benefit from each type of Enhanced MTM program, and beneficiaries may be eligible to receive services from multiple Enhanced MTM programs. Section 2 (Program Characteristics) and Section 4 (Model Implementation) include additional details about Enhanced MTM programs. More details about

[25] Eligible plans include PDPs that offer basic prescription drug coverage in the form of the defined standard benefit, actuarially equivalent standard benefits, or basic alternative benefits. PDPs that offer enhanced alternative coverage are ineligible for participation in the Enhanced MTM Model.

each sponsor's Enhanced MTM programs are also provided in sponsor-specific appendices (Appendix A - Appendix F).

Table 1.1: Overview of PDP Sponsors Participating in the Enhanced MTM Model

Sponsor	Participating Prescription Drug Plan (PDP)[a]	Benefit Type Offered by PDP[a]	Number of Enhanced MTM Programs[b]	Participating PDP Region(s)
Blue Cross Blue Shield of Florida (BCBS FL)	BlueMedicare Rx-Option 1 Plan	Basic Alternative	12 Programs	Florida
Blue Cross Blue Shield North Plains Alliance (BCBS NPA)	MedicareBlue Rx Standard	Basic Alternative	3 Programs	Upper Midwest and Northern Plans
Humana	Humana Preferred Rx Plan	Actuarially Equivalent Standard	2 Programs	All Participating Regions[c]
SilverScript Insurance Company/CVS (SilverScript/CVS)	SilverScript Choice Plan	Basic Alternative	2 Programs	All Participating Regions[c]
UnitedHealth Group (UHG)	AARP MedicareRx Saver Plus Plan	Actuarially Equivalent Standard	3 Programs	All Participating Regions[c]
WellCare	WellCare Classic Plan	Basic Alternative	4 Programs	All Participating Regions[c]

[a] The PDP names and benefit types correspond to 2017, when Model implementation began. Some plan names and benefit types have changed over time.

[b] The number of Enhanced MTM programs correspond to the first 20 months of Model implementation. Some Enhanced MTM programs have changed over time.

[c] PDP regions covered in the Enhanced MTM Model include: Arizona (AZ), Louisiana (LA), Florida (FL), the Upper Midwest and Northern Plains (IA, MN, MT, NE, ND, SD, WY) and Virginia (VA).

Table 1.2 provides information on Part D enrollment and Enhanced MTM eligibility from January 2017 – June 2018. Approximately 1.6 million beneficiaries have been eligible for Enhanced MTM in that time period, accounting for 73.5 percent of enrollees in participating plans. About 73 percent of Enhanced MTM-eligible beneficiaries are enrolled in either SilverScript/CVS or Humana plans, and over 56 percent of all Model-eligible beneficiaries were in SilverScript/CVS plans. Enhanced MTM eligibility in Model Year (MY) 1 and MY 2 (partial year information) is presented in Sections 2.1.2 and 2.2.2 respectively.

Table 1.2: Enhanced MTM PDP Enrollment and Model Eligibility, January 2017- June 2018

Sponsor	Number of PDP Enrollees	Enhanced MTM-Eligible Beneficiaries	Enhanced MTM Proportion of Part D Enrollment[a]	Proportion of all Enhanced MTM Eligible Beneficiaries
BCBS FL	67,307	36,928	54.9%	2.3%
BCBS NPA[b]	257,721	169,451	65.7%	10.3%
Humana	492,490	269,510	54.7%	16.4%
SilverScript/CVS	1,057,779	927,811	87.7%	56.6%
UHG	180,811	107,351	59.4%	6.5%
WellCare	176,223	129,636	73.6%	7.9%
All Sponsors	***2,232,331***	***1,640,687***	***73.5%***	***100.0%***

Sources: Enhanced MTM eligibility data in the Medicare Advantage and Prescription Drug Plan system (MARx), and PDP enrollment data in the Common Medicare Environment (CME), accessed in June 2018.

Notes: PDP enrollment only includes Enhanced MTM-participating contract-plans. Enhanced MTM eligibility is conditional on enrollment in the participating PDP in the CME. This table includes all beneficiaries who were eligible for Enhanced MTM services from January 2017 – June 2018.

[a] Enhanced MTM-eligible beneficiaries as a proportion of Part D enrollment in Enhanced MTM-participating plans.

[b] As discussed in Section 3.1, due to irregular patterns in BCBS NPA's MARx data over the course of Model Year 1, BCBS NPA advised the evaluation team to alternatively use Encounter Data to define its Enhanced MTM-eligible population. According to Encounter Data, 62,021 BCBS NPA beneficiaries (or 24.1 percent of PDP enrollees) were Enhanced MTM-eligible from January 2017 – June 2018.

1.3 Enhanced MTM Model Year 1 Model Expenditures

CMS provides participating plans a monthly per-member-per-month (PMPM) prospective payment for Enhanced MTM program implementation activities based on the total cost of each sponsor's Enhanced MTM programs. The purpose of prospective payments is to provide sponsors with appropriate funds for Model implementation and related administrative needs. In Model Year 1, CMS prospectively paid sponsors about $59.8 million in total to cover anticipated costs associated with participation in the Model. Depending on the sponsor, the prospective payment ranged between two and eleven dollars per beneficiary per month. Sponsors are required to submit itemized reports with details of Enhanced MTM administrative expenditures to CMS. Sponsors spent about $47.1 million for Model Year 1 implementation, accounting for 78.8 percent of prospective payments received. Because 2017 was the first Model implementation year, it was expected that prospective payments may not be spent in full.[26] The evaluation team will continue to track prospective payments in future Evaluation Reports. Table 1.3 presents additional details on projected and actual spending in Model Year 1.

[26] Part D enrollment and spending figures (both projected and actual spending) were provided by CMS's Enhanced MTM Model's Implementation Contractor (IC).

Table 1.3: Enhanced MTM Model Year 1 Prospective Payments and Actual Model Implementation Expenditures by All Sponsors

	Number of PDP Enrollee-Months[b]	Total Spending[c]
Prospective Payments	18,316,104	$59,761,423
Actual Reported Expenditures	20,250,069	$47,083,658

Notes: Cost and enrollment data received from CMS in May 2018, based on calculations performed by the Enhanced MTM Model's Implementation Contractor.

[b] Number of PDP Enrollee-Months is the sum of monthly Part D enrollment from January – December 2017 across all participating sponsors.

[c] Total Spending is the product of each contract-plan's per member per month (PMPM) prospective payment and yearly PDP enrollee-months, aggregated across all participating sponsors.

1.4 What Were Industry Stakeholders' Expectations of the Enhanced MTM Model?

In an effort to understand industry stakeholders' expectations of the Model's implementation, the Acumen team conducted the first of several waves of interviews to be held over the course of the Model with pharmacy industry experts and stakeholder organizations in March 2017, two months after Model launch. These interviews allowed the Acumen team to probe into the broader external landscape and drivers that would influence Model implementation by collecting information beyond that gathered from Enhanced MTM participating sponsors and their partner organizations. The stakeholders included national associations representing the pharmaceutical industry, professional pharmacist associations, and measurement standards organizations. The interviews focused on stakeholders' perceptions and expectations of the Enhanced MTM Model, factors related to implementation, and any potential unintended consequences of the Model. The interviews also served to inform evaluation efforts and draw attention to real-world facilitators, barriers, and contextual factors that may influence Model implementation and delivery of Enhanced MTM services.

The interviews identified four key themes: (i) broad industry stakeholder support of the Model's flexibility, (ii) advocacy for a prominent role of community pharmacists, (iii) the need for better communication and coordination between pharmacists who provide Enhanced MTM services and prescribers, and (iv) keen interest in the implementation of SNOMED CT codes as part of the Model's documentation requirements. These themes are discussed in more detail below. The Acumen team will conduct an additional wave of interviews in 2019 to assess various factors affecting Model implementation, unintended consequences, and broader issues.

(1) There was broad industry stakeholder support of the Model's flexibility.

Stakeholders highlighted the Model's potential to identify which beneficiaries benefit the most from MTM services, as well as which services are most effective. Stakeholders cited targeting flexibility as an improvement over the traditional MTM program, since, in their opinion, the existing standardized targeting criteria can lead to both over- and under-utilization of MTM services. Stakeholders also suggested that having a multi-pronged beneficiary targeting approach including targeting algorithms, as well as alternative approaches, such as pharmacist or prescriber referrals, or information beyond claims data (e.g., EHR/clinical data/disease registries) would be ideal, since these sources provide a more complete picture of a beneficiary's need for MTM services.

Stakeholders cited Enhanced MTM's targeting flexibility as an improvement, and expected that Enhanced MTM would result in an expanded pool of eligible beneficiaries relative to traditional MTM.

Stakeholders expected that Enhanced MTM would cast a wider net than traditional MTM and noted that they support sponsors targeting certain beneficiaries who may benefit greatly from Enhanced MTM services, such as those taking high-risk medications, or beneficiaries with complex conditions that require close monitoring, who may not be targeted under traditional MTM since they may not meet the medication and chronic condition criteria thresholds, respectively. Also, multiple stakeholders mentioned the opportunity for Enhanced MTM programs to intervene with beneficiaries immediately after a care transition.

(2) Stakeholders advocated giving community pharmacies a prominent role in Enhanced MTM.

Stakeholder groups supported the Model's efforts to encourage integration of community-based pharmacists into Enhanced MTM services by setting community pharmacy involvement as an expectation of the Model, and they expressed interest in how/whether sponsors were able to achieve this. Though community pharmacies are used in traditional MTM, stakeholders viewed Enhanced MTM as an opportunity to more meaningfully engage community pharmacies and leverage their existing relationships with beneficiaries to provide Enhanced MTM services. Stakeholders, however, discussed potential barriers to community pharmacy

Stakeholders recognized community pharmacies' potential in Enhanced MTM service provision, but anticipated challenges in community pharmacy integration with Enhanced MTM programs.

involvement, including bandwidth or resource deficits under current reimbursement levels. Stakeholders thought that the Model may provide opportunities to redefine community pharmacy environments, so that community pharmacies can be fiscally solvent while adjusting workflows and investing resources to incorporate MTM into their practices. Stakeholders acknowledged that it might take sponsors multiple years to implement a community pharmacy component to Enhanced MTM programs.

(3) Stakeholders emphasized the need for better communication and coordination with prescribers.

Stakeholders asserted that it will be imperative to improve and enhance communication with other health care providers/prescribers as part of the Model. In particular, stakeholders emphasized the need for pharmacists who deliver Enhanced MTM services to understand any care plans that a beneficiary has with their physician(s), since dissonance between therapy goals could potentially create confusion and significant consequences. General physician awareness and engagement was another issue highlighted by stakeholders. The Enhanced MTM Model offers the opportunity to promulgate broader change about how physicians can better utilize pharmacists. Stakeholders noted that prescribers should not only be actively involved in MTM decisions, but also that sponsors should consider proactive outreach to prescribers before the MTM service or beneficiary outreach.

Stakeholders championed the use of health information technology (HIT) for better communication and coordination between pharmacists and other health care providers.

Stakeholders repeatedly cited the "siloed" nature of standalone Part D plans as an operational challenge for Part D MTM in general as well as the Model, referencing MTM providers' inability to access timely health service information other than prescription drug use data, and limited ability and incentives to coordinate with health care providers outside of Part D to improve outcomes. Stakeholders generally mentioned that MTM programs may be more successful in plans that assume financial risk for Medicare beneficiaries' care (e.g., Medicare Advantage plans). While the Model's performance-based payments provide incentives for standalone Part D plans to improve beneficiary outcomes outside of Part D, stakeholders' lack of familiarity with the Model's performance-based payments prevented them from commenting on how they might affect Model implementation.

Stakeholders highlighted the need for two-way communication channels that facilitate the exchange of information between pharmacists and prescribers, and thus allow pharmacists to become a more integral and collaborative part of the health care team

versus simply providing recommendations to prescribers via fax, which is the common approach under traditional MTM. Stakeholders also highlighted the potential to leverage Health Information Technology (HIT) for communications during care transitions, and expressed interest in seeing whether/how sponsors use health information exchanges (HIEs), both of which are not widely utilized for MTM services by standalone PDPs.

(4) Stakeholders showed keen interest in the implementation of SNOMED CT codes as part of the Model's documentation requirements.

All stakeholders discussed the potential for the Model's documentation requirements to contribute to broader industry standardization efforts. Stakeholders supported efforts to use SNOMED CT codes to document Enhanced MTM services, but noted the challenges of implementing the codes, including intra- and inter-sponsor consistency in interpreting and applying codes, and lack of complete definitions within the current SNOMED CT codes for some MTM services. According to stakeholders, the involvement of external organizations contracted to provide Enhanced MTM services could complicate standardization efforts, since each organization uses its own proprietary system to document Enhanced MTM services, and this could result in wide variation in SNOMED CT coding practices.

Stakeholders anticipated challenges with the use of SNOMED CT coding to document Enhanced MTM services, and will be monitoring the implementation of documentation standards for Enhanced MTM.

In summary, stakeholders had favorable views and expectations of the Enhanced MTM Model, particularly with regard to flexibility in the Model's targeting criteria and service provision, and the opportunity to intervene with complex beneficiaries who may not be targeted under traditional MTM or who experience a care transition. Stakeholders expect Model participants to utilize multiple data sources beyond Part D claims (medical claims, EHR/clinical data, etc.) for beneficiary targeting, emphasize community pharmacist involvement, and leverage HIT or other strategies to enable better coordination and communication with other health care providers. However, stakeholders recognized operational challenges – some of which are inherent to standalone Part D plans due to limited incentives for coordination with other health care providers and access to timely beneficiary health service information – associated with these expectations. Finally, stakeholders view the Enhanced MTM Model as an important platform to initially test the use of SNOMED CT codes for MTM service documentation and to uncover any challenges with SNOMED CT code implementation for this purpose.

1.5 What Were Beneficiaries' Experiences with MTM Early in the Model?

The Model Year 1 beneficiary survey found that most beneficiaries had previously received medication management services, though there was still opportunity to improve patient activation and self-efficacy for medication adherence, and care coordination between provider teams.

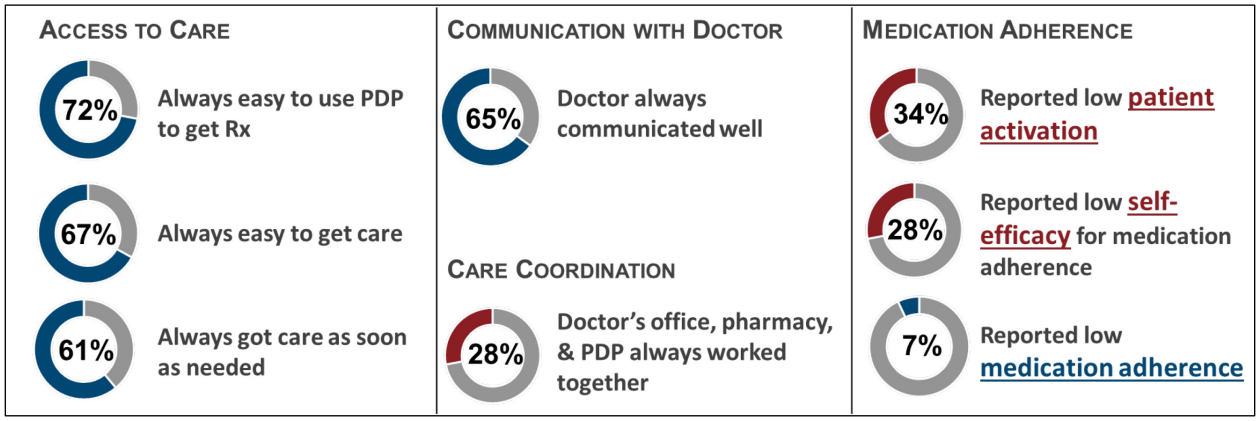
Success of the Enhanced MTM Model depends on beneficiaries' motivation to improve their health behaviors and the successful engagement of sponsors' Enhanced MTM programs with beneficiaries. To track beneficiaries' engagement and interest in Enhanced MTM throughout the life of the Model, the Acumen team designed and fielded a baseline beneficiary survey about beneficiaries' experience with healthcare, medication management services, adherence, and patient activation. Beneficiaries' perceptions throughout the lifespan of the Enhanced MTM Model can also help shape Model improvements and reveal which aspects of the Model beneficiaries found most useful.

This section presents baseline beneficiary experience survey findings collected during the beginning of Model Year from beneficiaries who would potentially receive Enhanced MTM services. A total of 4,574 surveys were completed with a final response rate of 38.8 percent.[27] Despite some cross-sponsor differences in population characteristics and demographics due to differences in sponsor targeting methodologies and existing differences between PDP regions and enrollee populations, overall, sponsors began the measurement period with relatively consistent scores on key measures of beneficiary experience.

Figure 1.2 presents a summary of patient experience and medication adherence findings across all respondents, and two key findings are further discussed below. Appendix G.2 provides details on the fielding methodology and sample performance.

[27] Response rate was calculated using the American Association for Public Opinion Research (AAPOR) Response Rate 4 definition, which estimates the number of eligible cases among those with unknown eligibility and considers partial completes as complete. Additional details about the survey sample performance are provided in Appendix H.

Figure 1.2: Baseline Patient Experience and Medication Adherence, All Respondents



Source: Baseline Beneficiary Survey. See Appendix H for additional information on the survey measures and scoring methods.

Notes: Missing data are not included in the percentages reported.

(1) Beneficiary responses pointed toward three major areas for improvement in medication therapy management programs: care coordination, patient activation, and self-efficacy

Beneficiaries' survey responses suggested that care coordination—one of the Model's core functions – patient activation, and self-efficacy for medication adherence were areas with room for improvement across all respondents (Figure 1.2). Perceptions of care coordination (between a beneficiary's doctor, their pharmacy, and their PDP) were less positive than perceptions of ease of access to care. Interestingly, 86.4 percent of respondents reported that they had received some type of medication management support in the previous six months,[28] highlighting that just receiving singular or disjointed MTM services may not be enough to make beneficiaries feel that their care was effectively coordinated. This may suggest the need for more targeted or different types of services to better communicate with prescribers and impact patient activation and self-efficacy.

Most baseline survey respondents reported medium or high medication adherence. The relatively small proportions of respondents reporting low medication adherence may be an artifact because self-reported measures are susceptible to responses that are perceived by the respondent as being more socially desirable than others.

[28] The baseline beneficiary survey asked respondents about the receipt of several common medication management services in the previous six months, including talking with a doctor's office, pharmacy, or PDP about how to take medications, the purpose of each medication, possible side effects; receiving reminders to fill or refill prescriptions; receiving feedback on how the patient is doing with their medications; etc.

(2) At baseline, patient experience measures (except care coordination) were quite positive

Respondents' baseline patient experiences measures of access to health care and quality of provider communication were fairly positive and consistent across sponsors (Figure 1.2). Beneficiaries who report positive health care experiences and have good communication with their providers are more likely to engage in their care, and may be better able to manage their medications. Additionally, beneficiaries' perceptions of the quality of care coordination among their doctor's office, community pharmacy, and PDP are important as team-based care helps prevent or quickly resolve drug therapy problems (DTPs). Our findings suggest that, across all sponsors, there is some margin for improvement in this area.

The Acumen team will assess in more detail whether these survey measures change over the course of the Enhanced MTM Model demonstration. Follow-up measurement via repeated cross-sectional survey data collection is planned for 2019 and 2021.

2 WHAT WERE THE CHARACTERISTICS OF THE ENHANCED MTM PROGRAMS?

Key Finding: Sponsors' innovative methods to identify beneficiaries eligible to receive Enhanced MTM services result in more Enhanced MTM-eligible beneficiaries compared to the traditional MTM program. Sponsors offer Enhanced MTM services tailored to beneficiary risk profiles.

Sponsors took advantage of the Model's flexibility and financial incentives by redesigning their approach to selecting beneficiaries for the provision of Enhanced MTM services ("targeting"). This resulted in a larger and generally healthier pool of beneficiaries eligible for Enhanced MTM services, relative to traditional MTM. Though more beneficiaries were eligible for Enhanced MTM, not all these beneficiaries received the same services, since sponsors often tailored their Enhanced MTM outreach and services based on risk. This is in contrast to traditional MTM, which provides a uniform set of services to all eligible beneficiaries. Sponsors continued to refine their Enhanced MTM programs between Model Years 1 and 2.

This section describes how participating Part D plan sponsors utilized program design flexibilities and incentives offered by the Enhanced MTM Model to design and implement their beneficiary targeting criteria, services, and beneficiary and prescriber outreach approaches. This section also discusses how these approaches have changed across Model Years 1 and 2 given sponsors' ability to make ongoing adjustments to their Enhanced MTM programs, as needed. Findings are presented as cross-sponsor summaries focusing on common themes and key takeaways. Section 2.1 focuses on Model Year 1 (January – December 2017) Enhanced MTM program characteristics in comparison with sponsors' traditional MTM programs, and Section 2.2 highlights any notable changes that sponsors made to their Enhanced MTM programs in the first 8 months of Model Year 2(January and August 2018) , unless noted otherwise.[29] Section 2.3 presents descriptive trends in key measures of interest, to provide a preliminary understanding of how Enhanced MTM-eligible beneficiaries' medication adherence, drug safety, health service use, and expenditures differed across sponsors and evolved over time.

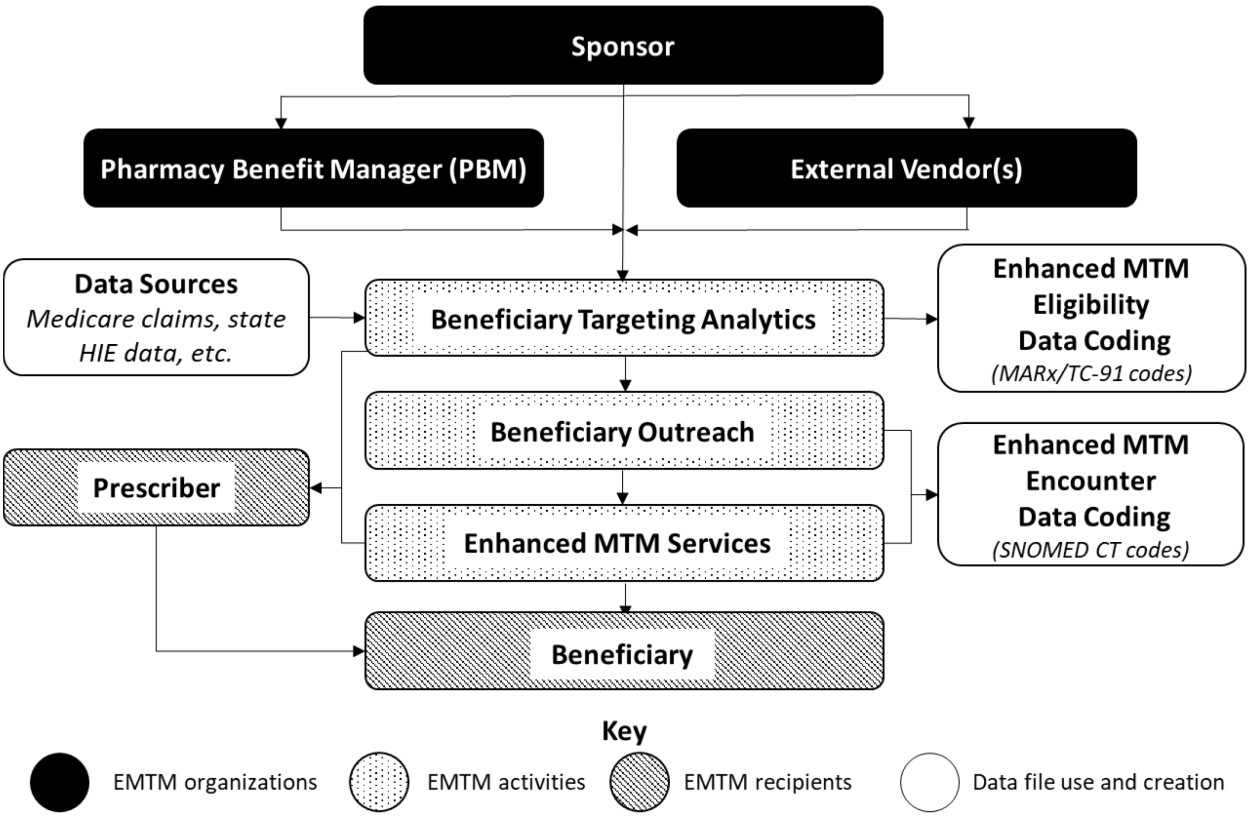
[29] Findings presented in this section are based on a review of sponsor applications, supplemental application materials, materials from CMS presentations, Internal Learning Systems records, and additional information provided by sponsors or vendors, as well as in-depth telephone or in-person interviews conducted between November 2016 and December 2017 for Model Year 1, and between January and August 2018 for Model Year 2.

2.1 How Did Sponsors' Model Year 1 Enhanced MTM Programs Differ from Their Traditional Part D MTM Programs?

A core tenet of the Model is allowing sponsors flexibility to design and customize their Enhanced MTM programs to better serve their beneficiary populations. This includes the targeting, outreach, and service delivery processes that define which beneficiaries receive services (and what services they receive). For Enhanced MTM, sponsors deployed new targeting methodologies to determine beneficiary eligibility for Enhanced MTM services, which resulted in cross-program variation in Enhanced MTM target population and scope. Sponsors' outreach approaches and services were broadly consistent with those already used in their traditional MTM programs with the exception of some additional program features (e.g., refill reminders, transitions of care services), though outreach and services differed depending on beneficiary risk level.

As with traditional MTM, sponsors partnered with external organizations such as pharmacy benefit managers (PBMs) and third-party MTM service or data analytics vendors to operationalize their Enhanced MTM programs. Collectively, sponsors and these organizations perform all core activities that constitute an Enhanced MTM program. These core activities include beneficiary targeting analytics, beneficiary outreach, Enhanced MTM services, and prescriber communication. Figure 2.1 depicts the general relationship and workflow of the participating organizations and core Enhanced MTM activities. The figure also denotes the steps during which Enhanced MTM eligibility (MARx/TC 91) data and Enhanced MTM Encounter Data are generated and coded. (The introduction, Section 1.1.3, describes Enhanced MTM data reporting requirements, and Section 3 describes sponsors' documentation approaches.)

Figure 2.1: General Enhanced MTM Program Structure and Workflows



The roles of sponsors and the PBM and vendor organizations with which sponsors partner vary significantly across Enhanced MTM programs and the approaches sponsors took in how and when they used these organizations differed, as indicated in Table 2.1 below. Half of the sponsors handled Enhanced MTM program oversight and administration internally, while the other half relied on PBMs for these responsibilities. Two sponsors used a combination of external vendor staff and internal staff to provide Enhanced MTM services, while the remaining four sponsors did not provide any Enhanced MTM services internally and instead relied entirely on external vendor staff to perform this function. Sponsors indicated that decisions about partnering organizations and their roles were strategic and were driven by internal resource availability, previous experience, and the goals of their Enhanced MTM programs. BCBS FL and BCBS NPA were the only two sponsors to partner with new organizations for Enhanced MTM Model implementation. The other four sponsors had existing relationships with the external organizations involved in their Enhanced MTM Model implementation. Additional information about sponsors' partners and partner roles in Enhanced MTM is available in Appendix A – Appendix F.

Table 2.1: Sponsor and Partner Roles for Enhanced MTM Program Implementation

Enhanced MTM Program Function	Enhanced MTM Programs by Sponsor					
	BCBS FL	BCBS NPA	Humana	SilverScript / CVS	UHG	WellCare
Oversight and Administration						
PBM		✓	✓	✓		
Internal	✓				✓	✓
Provision of Enhanced MTM Services						
External	✓	✓	✓		✓	
Internal and External				✓		✓

There are four main structural elements in each Enhanced MTM program: beneficiary targeting and eligibility, beneficiary outreach and engagement, service provision, and prescriber outreach and engagement with the recommendations of the service. This section highlights broad trends in structural elements across the sponsors' Model Year 1 Enhanced MTM programs and discusses core differences and similarities between sponsors' Enhanced MTM and traditional MTM programs, which are also summarized in Table 2.2.

Table 2.2: Comparing Elements of Participating Sponsors' Traditional MTM and Current Enhanced MTM Programs

Traditional MTM	Enhanced MTM
Targeting and Eligibility	
• Core mandated targeting criteria: ▪ Multiple chronic conditions ▪ Utilization of multiple drugs ▪ High annual drug expenditure	• Targeting criteria: ▪ Targeting not reliant on core targeting criteria mandated in traditional MTM ▪ Risk stratification algorithms ▪ Transitions of Care ▪ Drug therapy problems and/or gaps in care and medication adherence ▪ Different criteria used for different services or Enhanced MTM sub-programs ▪ Pharmacist and/or provider/prescriber referrals
• Targeting data source: ▪ Part D data	• Targeting data sources: ▪ Part D data ▪ Parts A and B data ▪ State Health Information Exchanges (HIEs)
• Targeting generally occurred quarterly	• Targeting generally occurs quarterly or more frequently
Beneficiary Outreach and Engagement	
• Initial outreach: welcome letter/package/postcard with additional telephone follow-up	• Initial outreach: similar to traditional MTM, but with higher-risk beneficiaries receiving outreach sooner than other beneficiaries
• Services delivered either exclusively by telephone or in combination with face-to-face interactions using community pharmacies	• Services continue to be delivered either exclusively by telephone or in combination with face-to-face interactions using community pharmacies
Services	
• Mandated core services for all MTM-eligible beneficiaries ▪ Annual Comprehensive Medication Review (CMR) ▪ Quarterly Targeted Medication Review (TMR)	• Core MTM services (CMR, TMR) are utilized, but with differences in structure and types of targeted beneficiaries: ▪ Services provided to only a subset of the Enhanced MTM-eligible population, typically those with identified risks ▪ CMRs tailored to beneficiary needs and occur with variable frequency ▪ Some sponsors offer CMRs only; others offer both CMRs and TMRs
• Optional Services: ▪ Newsletters ▪ Online Resources/Education	• Additional services featuring educational elements (e.g., newsletters, videos) and reminders (e.g., related to vaccines or medication adherence) have been incorporated by most sponsors
Prescriber Outreach	
• Post-beneficiary contact (especially post CMR) fax • Telephonic outreach if urgent issue arises	• Similar strategies to traditional MTM post-intervention outreach • Some proactive prescriber outreach and education to increase awareness of Enhanced MTM programs

The remainder of this section is organized by core thematic area, discussing each structural element of sponsors' Model Year 1 Enhanced MTM programs and drawing comparisons with traditional MTM. Beneficiary targeting and eligibility are discussed in Section 2.1.1 and Section 2.1.2. Beneficiary outreach and engagement, services, and prescriber outreach are then presented in the remaining sections, in turn.

- Section 2.1.1: How Did Enhanced MTM Beneficiary Targeting Differ from the Traditional MTM Program?
- Section 2.1.2: How Do Enhanced MTM-eligible Beneficiaries Differ from MTM-eligible Beneficiaries?
- Section 2.1.3: How Did Sponsors Engage Targeted Beneficiaries in Enhanced MTM?
- Section 2.1.4: What Services Did Enhanced MTM Programs Offer to Targeted Beneficiaries?
- Section 2.1.5: How Did Sponsors Engage Prescribers?

2.1.1 How Did Enhanced MTM Beneficiary Targeting Differ from the Traditional MTM Program?

All sponsors risk-stratified their beneficiary populations to determine Enhanced MTM service eligibility or to tailor the intensity and range of services offered to eligible beneficiaries.

Sponsors used the Model's flexibility to significantly change the processes used to determine which beneficiaries are targeted for their Enhanced MTM programs. As a result, beneficiary eligibility rates for Enhanced MTM were higher relative to traditional MTM, ranging from just over 50 percent to over 95 percent of plan enrollees for Enhanced MTM. Section 2.1.2 includes a detailed comparison of beneficiary eligibility between Enhanced MTM and traditional MTM. This pool of eligible beneficiaries includes beneficiaries at higher risk for medication issues or high medical costs who receive more substantial Enhanced MTM services, as well as lower-risk beneficiaries who may receive less intensive Enhanced MTM services, such as refill reminders or vaccine reminders.

Though there was significant variation in sponsors' targeting approaches for their Enhanced MTM programs, there were some commonalities in how sponsors identified higher-risk beneficiaries. All sponsors incorporated at least one of the three traditional Part D MTM targeting requirements into their Enhanced MTM programs (i.e., multiple chronic conditions, number of medications, and annual drug spend), but none of the sponsors incorporated all three. Sponsors used these traditional Part D targeting requirements indirectly (e.g., as one variable in a risk stratification algorithm), in addition to directly (e.g., as a program inclusion criterion). Beyond modifying traditional MTM targeting requirements, sponsors adopted a variety of new

targeting approaches that were significantly different from traditional MTM. All sponsors used risk stratification methods to determine Enhanced MTM eligibility or the intensity of Enhanced MTM services. Other new targeting approaches included predictive modeling; identification of beneficiaries undergoing transitions of care; and targeting based on unsafe drug use, such as drug therapy problems, gaps in care, medication non-adherence, or use of high-risk medications. In terms of data sources used for targeting purposes, sponsors leveraged alternative sources of information such as Medicare Parts A and B claims data, health information exchange (HIE) data, or referrals. These data sources supplemented Part D claims data, which were previously the only data source used by participating sponsors to target beneficiaries for their traditional MTM programs.

Common Enhanced MTM Model Year 1 targeting approaches for high-risk beneficiaries are summarized in Table 2.3, and four targeting approaches newly implemented by sponsors for Enhanced MTM are discussed in more detail below. Additional information about individual sponsors' targeting approaches, including those used to identify low-risk beneficiaries, is available in Appendix A – Appendix F.

Table 2.3: Model Year 1 Enhanced MTM Program Targeting

	Enhanced MTM Programs by Sponsor					
Targeting Approach	**BCBS FL**	**BCBS NPA**	**Humana**	**SilverScript / CVS**	**UHG**	**WellCare**
Traditional MTM Approach Also Implemented for Enhanced MTM						
Multiple Chronic Conditions	✓		✓	✓	✓	
Number of Medications		✓			✓	✓
Annual Drug Spend Exceeding Threshold	✓		✓	✓		
New Approach Implemented for Enhanced MTM						
Predictive Modeling*	✓	✓		✓	✓	✓
Transition of Care	✓		✓		✓	
Unsafe drug use	✓	✓	✓	✓	✓	✓
Use of alternative data sources	✓		✓	✓		✓

Note: ✓ denotes that the targeting approach is used by the sponsor for at least one of its Enhanced MTM programs.

* Predictive modeling targeted the likelihood of future drug-related problems, future high spending, or a recent hospital discharge.

(1) Almost all sponsors deployed predictive modeling to target beneficiaries for Enhanced MTM services.

Five sponsors (WellCare, SilverScript/CVS, UHG, BCBS FL, and BCBS NPA) used predictive modeling techniques to identify beneficiaries for Enhanced MTM services. Predictive modeling focused on identifying beneficiaries likely to have future drug-related problems (i.e., opioid misuse, non-adherence, multi-drug interactions), future high spending, or a recent hospital discharge.

(2) Half of the sponsors incorporated approaches to identify beneficiaries undergoing a transition of care and offer Enhanced MTM services close to the time of the transition.

Three sponsors (BCBS FL, Humana, and UHG) developed mechanisms to identify and offer Enhanced MTM services to beneficiaries following a hospital discharge, though their approaches for identifying when these discharges occurred differed. Humana relied on a network of community pharmacists to identify beneficiaries with a recent hospital discharge, based on indicators such as possession of discharge paperwork or a prescription from a hospital or emergency room. In an effort to increase completion of transition of care services, Humana implemented a new process mid-year that leveraged medical claims data to identify beneficiaries with a recent hospital discharge. BCBS FL identified such beneficiaries based on ongoing review of admission, discharge, and transfer (ADT) data feeds, through a connection to the state HIE. UHG used Part D claims data to identify beneficiaries with a high likelihood of hospital discharge, and then followed up by phone to confirm whether a transition of care had in fact occurred.

(3) All sponsors targeted beneficiaries based on unsafe medication use, including drug therapy problems, medication non-adherence, and high-risk medications.

Five sponsors (Humana, WellCare, UHG, BCBS NPA, and CVS/SilverScript) used drug therapy problem information as part of their Enhanced MTM targeting criteria, and three sponsors (WellCare, BCBS FL, and SilverScript/CVS) targeted beneficiaries specifically to improve the sponsors' Star Ratings for medication adherence for treatment of hypertension, hyperlipidemia, and diabetes. BCBS FL and WellCare both targeted beneficiaries based on high-risk medication use (anticoagulants and opioids, respectively), while BCBS NPA and UHG incorporated information about high-risk medications into their risk stratification algorithms.

(4) All sponsors used Medicare Part D data for targeting, but some sponsors also used additional data sources to target specific subgroups.

Two sponsors (BCBS NPA and UHG) used only Medicare Part D data for Enhanced MTM program targeting, whereas three sponsors (BCBS FL, WellCare, and SilverScript/CVS) used Parts A, B, and D data to target beneficiaries in certain risk tiers or programs with the goal of more accurately identifying beneficiaries with certain conditions or health care utilization patterns. Humana attempted to incorporate Parts A and B data to target beneficiaries for its Transitions of Care service; however, lags in data resulted in no beneficiaries receiving the service through this targeting mechanism in Model Year 1. BCBS FL was the only sponsor to use state HIE data in Model Year 1, in its Transitions of Care program. Four sponsors (WellCare, Humana, BCBS NPA, and BCBS FL) also used hotlines to enable beneficiaries to proactively contact pharmacists

with questions or concerns about their medications, or to request an Enhanced MTM intervention. Additionally, through one of its vendor's pharmacy networks, Humana allowed community pharmacists to identify beneficiaries who needed Enhanced MTM services, whether due to a transition of care or beneficiary-reported drug therapy problems (e.g., adverse events or side effects) uncovered during conversations with beneficiaries. BCBS FL and BCBS NPA allowed providers or prescribers to refer beneficiaries to their Enhanced MTM programs.

In summary, the Enhanced MTM Model allowed sponsors to create their own targeting criteria. Accordingly, sponsors made significant changes to their beneficiary targeting approaches relative to traditional MTM. Beneficiary targeting was the Model's most innovative structural element. Sponsors indicated that decisions about targeting changes were informed by MTM literature, characteristics of their beneficiary populations, and, in some cases, experiences from other lines of business (e.g., Medicare Advantage plans). Sponsors incorporated some elements from the three traditional MTM targeting requirements but also used risk identification, stratification, and predictive analytics for targeting, and, in some cases, also targeted beneficiaries based on unsafe medication use and transitions of care events. Though there were some commonalities in beneficiary targeting across sponsors, each sponsor's targeting methodology was unique. Sponsors used supplemental data sources for beneficiary targeting and conducted beneficiary targeting more frequently for Enhanced MTM than for traditional MTM. Sponsors targeted beneficiaries at least quarterly (the frequency that most sponsors used for their traditional MTM programs), and, in some cases, monthly, biweekly, or daily, especially in cases where beneficiaries are targeted to receive more time-sensitive services, such as those delivered as part of transitions of care or medication adherence programs.

2.1.2 How Do Enhanced MTM-eligible Beneficiaries Differ from MTM-eligible Beneficiaries?

With the new latitude to determine which beneficiaries would receive outreach for Enhanced MTM services, sponsors expanded their targeting criteria relative to traditional Part D MTM. The expanded targeting criteria resulted in significantly more beneficiaries eligible for Enhanced MTM than would have been the case under traditional MTM. [30] To illustrate the impact of these changes on the population served, this section makes two types of comparisons: first, Enhanced MTM eligibility in 2017 is compared to traditional MTM eligibility in 2016 among those plans that adopted the Enhanced MTM Model. Second, beneficiaries who became eligible for Enhanced MTM in 2017 are compared to the 2017 nationwide population of beneficiaries eligible for traditional MTM,[31] in terms of both the proportion of eligible beneficiaries among plan enrollees, and also their demographic and health characteristics.

Over 1.3 million beneficiaries across the 22 participating plans became eligible for Enhanced MTM in 2017. Across participating plans, the expanded targeting criteria led to an almost 10-fold increase in the number of beneficiaries eligible for MTM programs.

Across all participating plans, the expanded eligibility criteria of the Enhanced MTM Model led to an almost ten-fold increase in the number of beneficiaries eligible for medication therapy management programs. Table 2.4 compares the eligibility rate for traditional MTM in 2016 to the eligibility rate for Enhanced MTM in 2017 among plans that adopted Enhanced MTM in 2017.[32] Over 1.3 million beneficiaries across the 22 participating plans were eligible for Enhanced MTM in 2017. In 2016, only 7.9 percent of enrollees in Enhanced MTM plans were eligible for traditional MTM services, in contrast to the 71.7 percent of enrollees in participating plans who were eligible to receive Enhanced MTM services in 2017.

[30] Traditional MTM requires offering an annual comprehensive medication review (CMR) and quarterly targeted medication reviews (TMRs) (Section 1.1.1) to eligible beneficiaries. In contrast, Enhanced MTM-eligible beneficiaries may receive a wider variety of Enhanced MTM offerings, ranging from higher intensity services (e.g., rare chronic condition management) to lower intensity services (e.g., reminders for seasonal vaccinations) (Section 2.1.4).

[31] Beneficiaries eligible for traditional MTM among beneficiaries enrolled in Defined Standard, Basic Alternative and Actuarially Equivalent Standard PDPs, which are the plan types eligible for participation in the Enhanced MTM Model.

[32] Some Enhanced MTM plans under SilverScript/CVS and WellCare did not submit MTM data in 2016, so they are excluded from all 2016 calculations. BCBS NPA added and then retroactively removed buffer beneficiaries from the MARx data submission files over the course of Model Year 1, resulting in irregular eligibility data patterns. Enhanced MTM eligibility numbers for BCBS NPA in Table 2.3 are likely inflated due to these irregularities. Additionally, SilverScript/CVS's Enhanced MTM eligibility, also reported in Table 2.3, includes beneficiaries identified for the HealthTag program, who were only targeted to receive vaccination reminders. Without the inclusion of beneficiaries targeted only for the HealthTag program, SilverScript/CVS's Enhanced MTM eligibility in Model Year 1 was 529,087 beneficiaries, representing 66.5 percent of total Part D enrollment.

Table 2.4: Traditional MTM Eligibility in 2016 and Enhanced MTM Eligibility in 2017 among Enhanced MTM-participating Plans, by Sponsor

Sponsor	2016: Traditional MTM			2017: Enhanced MTM		
	PDP Enrollees	MTM-Eligible Beneficiaries	MTM Eligibility Rate[a]	PDP Enrollees	Enhanced MTM-Eligible Beneficiaries	Enhanced MTM Eligibility Rate[a]
BCBS FL	69,032	6,558	9.5%	64,636	35,022	54.2%
BCBS NPA[c]	243,208	16,599	6.8%	241,501	165,833	68.7%
Humana	423,451	58,242	13.8%	457,913	221,705	48.4%
SilverScript/ CVS	704,130	36,838	5.2%	795,154	727,437	91.5%
UHG	314,887	20,175	6.4%	176,123	95,508	54.2%
WellCare[b]	9,982	1,354	13.6%	155,251	110,335	71.1%
All Sponsors	***1,764,690***	***139,766***	***7.9%***	***1,890,578***	***1,355,840***	***71.7%***

Sources: Enhanced MTM eligibility data in the Medicare Advantage and Prescription Drug Plan system (MARx), and PDP enrollment data in the Common Medicare Environment (CME), accessed in June 2018. MTM eligibility in 2016 Part D Reporting Requirements Beneficiary-level MTM Data, accessed in April 2017.

[a] MTM eligibility rate is the proportion of 2016 MTM-eligible beneficiaries among PDP enrollees in Enhanced MTM-participating plans. Enhanced MTM eligibility rate is the proportion of 2017 Enhanced MTM-eligible beneficiaries among PDP enrollees in Enhanced MTM-participating plans.

[b] Some Enhanced MTM plans under SilverScript/CVS and WellCare did not submit MTM data in 2016, and they are excluded from all 2016 calculations.

[c] BCBS NPA added and then retroactively removed buffer beneficiaries from the MARx data submission files over the course of Model Year 1, resulting in irregular eligibility data patterns. BCBS NPA advised the evaluation team to alternatively use Encounter Data to define the Enhanced MTM-eligible population for BCBS NPA. In Model Year 1, 51,553 beneficiaries are Enhanced MTM-eligible (according to Encounter Data), accounting for 21.4 percent of Part D enrollment.

Almost all (91 percent) participating plan enrollees who were eligible for traditional MTM in 2016 were also eligible for Enhanced MTM in 2017.

Almost all beneficiaries eligible for traditional MTM were also eligible for Enhanced MTM under the Model's expanded targeting criteria. Table 2.5 uses a subset of the data presented in Table 2.4 to focus on beneficiaries enrolled in Enhanced MTM plans both in December 2016, the last month when traditional MTM was offered, and January 2017, when Enhanced MTM Model implementation began. Table 2.5 compares eligibility for traditional MTM (in 2016) and Enhanced MTM (in 2017) for this cohort, and presents the overlap between the two programs, defined as the proportion of beneficiaries eligible for traditional MTM in 2016 who were also eligible for Enhanced MTM anytime in 2017. Overall, 91 percent of sponsors' traditional MTM-eligible beneficiaries also qualify for Enhanced MTM services, and in a few cases this proportion approaches 100 percent. Most traditional MTM-eligible beneficiaries became eligible for Enhanced MTM soon after Model launch: the overlap between the two programs was already 73 percent in March 2017 and 84 percent in June 2017 (data not shown). This high degree of overlap shows that the new, less

restrictive eligibility requirements did not inadvertently exclude beneficiaries who were previously eligible for traditional MTM.

Table 2.5: Overlap between Traditional MTM (2016) and Enhanced MTM (2017) Eligibility among Enhanced MTM-participating Plans, by Sponsor

Sponsor	PDP Enrollees[a]	MTM Eligibility Rate in 2016[b]	Enhanced MTM Eligibility Rate in 2017[c]	MTM-Enhanced MTM Eligibility Overlap[d]
BCBS FL	59,908	9.0%	56.2%	93.8%
BCBS NPA[e]	218,503	6.4%	70.5%	94.0%
Humana	350,184	13.8%	51.2%	85.2%
SilverScript/CVS[f]	586,847	5.4%	95.7%	99.4%
UHG	156,812	5.5%	54.7%	84.7%
WellCare[f]	8,021	14.1%	70.6%	95.9%
All Sponsors	***1,380,275***	***7.9%***	***73.9%***	***90.9%***

Sources: Enhanced MTM eligibility data in the Medicare Advantage and Prescription Drug Plan system (MARx), and PDP eligibility data in the Common Medicare Environment (CME), accessed in June 2018. MTM eligibility in 2016 Part D Reporting Requirements Beneficiary-level MTM Data, accessed in April 2017.

[a] Part D beneficiaries continuously enrolled in a sponsor's participating PDPs from December 2016 to January 2017.

[b] Beneficiaries ever eligible for traditional MTM in 2016 as a proportion of PDP enrollees continuously enrolled in a sponsor's participating PDPs from December 2016 to January 2017.

[c] Beneficiaries ever eligible for Enhanced MTM in 2017 as a proportion of PDP enrollees continuously enrolled in a sponsor's participating PDPs from December 2016 to January 2017.

[d] Proportion of 2016 traditional MTM-eligible beneficiaries who were also eligible for Enhanced MTM in 2017.

[e] Enhanced MTM eligibility for BCBS NPA presented in the table is likely inflated due to irregular patterns in BCBS NPA's eligibility data (see discussion in Section 3.1).

[f] Some Enhanced MTM plans under SilverScript/CVS and WellCare did not submit MTM data in 2016, and are excluded from all calculations.

Beneficiaries eligible for Enhanced MTM are, on average, less likely to be disabled or LIS-eligible, and they are healthier relative to beneficiaries eligible for traditional MTM.

The incentives provided by the Enhanced MTM Model appear to have prompted the sponsors to expand their targeted pool of beneficiaries beyond the minimum eligibility requirements of traditional MTM. This expansion resulted in significant differences in the demographic and clinical characteristics of Enhanced MTM-eligible beneficiaries compared to those eligible for traditional MTM. Table 2.6 and Table 2.7 compare beneficiaries eligible for traditional MTM programs across 344 plans nationwide in 2017 to beneficiaries who became eligible for Enhanced MTM across the 22 participating plans in 2017,[33] and summarize key demographic and clinical differences across the two beneficiary groups over the 12-month period prior to their eligibility for medication therapy management. Enhanced MTM plans tend to be larger, on

[33] Traditional MTM-eligible beneficiaries among enrollees in Defined Standard, Basic Alternative, and Actuarially Equivalent Standard PDPs, that are the plan types eligible for participation in the Enhanced MTM Model.

average, than other PDPs (average plan enrollment is more than double for Enhanced MTM plans relative to other plans), and, as described above, they target larger proportions of their beneficiaries for medication therapy management.

On average, the Enhanced MTM-eligible population is similar in age, though slightly older, and has a smaller proportion of females compared to the MTM-eligible population. Rates of disability, dual eligibility, and LIS eligibility are significantly lower among Enhanced MTM-eligible beneficiaries relative to traditional MTM.[34] This does not mean, however, that the number of disabled, dual-eligible, or LIS-eligible beneficiaries are targeted declined under Enhanced MTM. As Table 2.6 shows, the expansion of eligibility criteria under Enhanced MTM creates a much larger base of eligible beneficiaries, and a larger count (but smaller proportion) of disabled, dual-eligible, and LIS-eligible beneficiaries within each plan's Enhanced MTM programs relative to plans with traditional MTM.

The expanded targeting criteria of Enhanced MTM also result in a pool of Enhanced MTM-eligible beneficiaries that is healthier, on average, than the population eligible for traditional MTM programs. Beneficiaries eligible for Enhanced MTM had significantly lower inpatient stays and ER visits prior to Enhanced MTM eligibility. They also had significantly lower average drug, medical, and inpatient costs compared to MTM-eligible beneficiaries, whose average expenditures were almost double those of Enhanced MTM-eligible beneficiaries. Beneficiaries eligible for Enhanced MTM also had lower average Hierarchical Condition Category (HCC) scores[35], which means that they had lower predicted medical costs. Moreover, the overall chronic disease burden is lower for Enhanced MTM- than for traditional MTM-eligible beneficiaries, with a greater proportion of Enhanced MTM-eligible beneficiaries having only one to two chronic conditions relative to MTM-eligible beneficiaries (21 percent vs. 4 percent), and a much smaller proportion having 6 or more chronic conditions (33 percent vs 67 percent). As discussed earlier, these differences in general health status measures are due to sponsors' changes in eligibility criteria. The Model's financial incentives made it more appealing for sponsors to target a larger proportion of their beneficiary populations for Enhanced MTM service provision.

There was variation across sponsors in targeting criteria, leading to variation in the clinical characteristics of Enhanced MTM-eligible beneficiaries across participating plans. For example, as shown in Table 2.7, Enhanced MTM-eligible beneficiaries enrolled in SilverScript/CVS and WellCare plans had lower healthcare costs, and fewer inpatient stays and ER visits compared to other Enhanced MTM-eligible beneficiaries. This reflects

[34] Medicare low-income subsidy (LIS), also called Extra Help, provides assistance to eligible beneficiaries in paying for their Part D monthly premium, annual deductible, coinsurance, and copayments.

[35] HCC scores predict a beneficiary's medical cost in the following year relative to the cost of the average Medicare beneficiary. A HCC risk score of 1 implies average medical costs.

SilverScript/CVS's inclusive targeting criteria, which capture a large number of beneficiaries without serious underlying health issues (e.g., Enhanced MTM eligibility based solely on prior vaccination status). In contrast, BCBS FL's Enhanced MTM-eligible beneficiaries are more likely to have a large number of concurrent chronic conditions compared to other sponsors, which is expected since BCBS FL targets beneficiaries for Enhanced MTM services specifically based on the presence of multiple chronic conditions. There was also cross-sponsor variation in demographic characteristics, which may reflect broader population differences across the geographic regions where the different sponsors operate (see Section 1.2, "Who Are the Enhanced MTM Model Participants?" for a list of regions where the sponsors operate).

All tables in this section (Table 2.4, Table 2.5, Table 2.6, and Table 2.7) include beneficiaries targeted for Enhanced MTM by their respective plans. However, sponsors prioritize subsets of higher-risk beneficiaries within the larger pool of Enhanced MTM-eligible beneficiaries for outreach as well as services. As a result, not all beneficiaries eligible for Enhanced MTM necessarily received outreach for Enhanced MTM services (see Section 3, "How Do Sponsors Document Enhanced MTM Eligibility and Program Activities?" for more details).

In summary, the incentives and the design of the Enhanced MTM Model resulted in bigger volumes of eligible beneficiaries relative to the traditional MTM Model. The overlap between the two programs is substantial, so that traditional MTM-eligible beneficiaries are very likely to also be eligible for Enhanced MTM. The targeting criteria redesigned by sponsors under the Enhanced MTM Model result in additional, newly eligible beneficiaries with different demographic and clinical characteristics compared to traditional MTM-eligible beneficiaries. Enhanced MTM-eligible beneficiaries are, on average, less likely to be disabled, dual-eligible, or LIS-eligible, and they are healthier, with lower levels of healthcare utilization and expenditures, and a lower chronic disease burden. Differences in targeting criteria across sponsors also result in cross-sponsor variation in the clinical characteristics of Enhanced MTM-eligible beneficiaries across participating plans.

Table 2.6: Pre-eligibility Demographic Characteristics of 2017 Nationwide MTM- and Enhanced MTM-eligible Beneficiaries

Characteristics (Four Pre-eligibility Quarters)	MTM Plans	Enhanced MTM Plans						
		Across Sponsors	BCBS FL	BCBS NPA	Humana	Silver-Script/ CVS	UHG	WellCare
Number of Plans	344	22	1	1	5	5	5	5
Part D Enrollment	8,708,032	1,422,473	59,196	175,501	357,933	571,748	147,340	110,755
Number of Eligible Beneficiaries	869,502	964,002	33,465	37,668	184,322	542,863	81,888	83,796

Characteristics (Four Pre-eligibility Quarters)	MTM Plans	Enhanced MTM Plans						
		Across Sponsors	BCBS FL	BCBS NPA	Humana	Silver-Script/ CVS	UHG	WellCare
Average Part D Enrollment per Plan	25,314	64,658	59,196	175,501	71,587	114,350	29,468	22,151
Average Number of Eligible Beneficiaries per Plan	2,528	43,818	33,465	37,668	36,864	108,573	16,378	16,759
Average Eligibility Rate per Plan	12%	67%	57%	21%	52%	95%	55%	75%
Among Eligible Beneficiaries:								
Average Age	67.9	68.8	75.6	77.7	68.2	67.4	71.7	69.6
% Female	63	59	56	64	61	58	59	59
Race								
% White	73	77	92	98	68	76	83	74
% Black	15	14	3	0	18	14	8	18
% Other	12	10	4	2	14	9	9	8
Other								
% Dual Eligible	75	50	5	10	70	53	26	48
% Urban	86	82	95	65	85	81	90	79
% Disabled	35	27	3	7	32	31	12	26
% with ESRD	4	2	1	1	4	2	2	3
% with LIS Status	82	56	6	12	75	59	30	56
Number of Medications	8.8	4.5	4.5	6.2	5.2	4.0	4.8	4.7

Sources: Enhanced MTM eligibility data in the Medicare Advantage and Prescription Drug Plan system (MARx), accessed in June 2018; Part D Reporting Requirements Beneficiary-level MTM Data, accessed in May 2018; PDP enrollment data in the Common Medicare Environment (CME; for age, sex, race, and LIS status), accessed in June 2018; Enrollment Database (EDB; for dual eligibility, urban/rural, disability, and ESRD status), accessed in June 2018; Part D Drug Event File (PDE; for number of medications accessed in July 2018.

Notes: MTM plans are restricted to Defined Standard, Basic Alternative and Actuarially Equivalent Standard PDPs, which are the plan types eligible for participation in the Enhanced MTM Model. Plan enrollees include beneficiaries enrolled in MTM/Enhanced MTM plans in 2017, with at least 12 months of continuous enrollment in Medicare Parts A, B, and D prior to the first month of plan enrollment. Enrollees in MTM plans who ever enrolled in an Enhanced MTM plan in 2017 were excluded. The populations of MTM/Enhanced MTM-eligible beneficiaries include beneficiaries ever eligible for traditional MTM/Enhanced MTM programs from January through December 2017, with at least 12 months of continuous Medicare Parts A, B, and D enrollment prior to their first MTM/Enhanced MTM program eligibility month. BCBS NPA eligibility is based on Encounter Data information due to irregularities in MARx/TC 91 file eligibility data patterns over the course of Model Year 1.

Table 2.7: Pre-eligibility Health Service Use, Expenditure, and Clinical Characteristics of 2017 Nationwide MTM- and Enhanced MTM-eligible Beneficiaries

Characteristics (Four Pre-eligibility Quarters)	MTM Plans	Enhanced MTM Plans						
		Across Sponsors	BCBS FL	BCBS NPA	Humana	Silver-Script/ CVS	UHG	WellCare
Evaluation and Management (E&M) Visits								
% 0 E&M Visits	4	7	2	3	7	9	3	4
% 1-10 E&M Visits	40	58	44	54	55	61	51	62
% 11+ E&M Visits	55	34	54	43	38	30	46	34
Inpatient (IP) Stays								
% 0 IP Stays	63	78	74	70	71	81	76	78
% 1 IP Stay	19	13	17	19	16	12	14	13
% 2+ IP Stays	18	9	9	11	13	7	10	9
Emergency Room (ER) Visits								
% 0 ER Visits	52	66	71	59	60	68	68	64
% 1 ER Visit	23	19	19	23	21	18	19	19
% 2+ ER Visits	26	15	10	18	20	14	13	16
Expenditures								
Total Parts A, B, and D Expenditures per Beneficiary	$36,684	$19,441	$23,057	$22,691	$24,336	$17,217	$21,259	$18,405
Total Part D Expenditures per Beneficiary	$12,318	$5,109	$5,208	$4,436	$6,076	$4,937	$5,033	$4,436
Total Parts A and B Expenditures per Beneficiary	$24,366	$14,332	$17,849	$18,255	$18,260	$12,279	$16,226	$13,969
Inpatient Expenditures per Beneficiary	$8,237	$4,267	$4,688	$5,288	$5,780	$3,597	$4,711	$4,224
Average HCC Risk Score	2.3	1.4	1.4	1.5	1.7	1.3	1.4	1.4
Chronic Conditions								
% 1-2 Chronic Conditions	4	21	10	15	17	24	17	20
% 3-5 Chronic Conditions	29	38	41	41	38	36	40	43
% 6+ Chronic Conditions	67	33	47	41	41	27	40	33

Sources: Enhanced MTM eligibility data in the Medicare Advantage and Prescription Drug Plan system (MARx), accessed in June 2018; Part D Reporting Requirements Beneficiary-level MTM Data, accessed in May 2018; Part D Drug Event File (PDE; for Part D expenditures), accessed in July 2018; Common Working File (CWF; for number of E&M visits, inpatient stays, ER visits; medical and inpatient expenditures), accessed in August 2018; Risk Adjustment System (RAS, for CMS Hierarchical Condition Categories [HCC] risk score), accessed in September 2018; and the 2016 cut of the Master Beneficiary Summary File (MBSF; for number of chronic conditions).

Notes: MTM plans are restricted to Defined Standard, Basic Alternative and Actuarially Equivalent Standard PDPs, which are the plan types eligible for participation in the Enhanced MTM Model. Plan enrollees include beneficiaries enrolled in MTM/Enhanced MTM plans in 2017, with at least 12 months of continuous enrollment in Medicare Parts A, B, and D prior to the first month of plan enrollment. Enrollees in MTM plans who ever enrolled in an Enhanced MTM plan in 2017 were excluded. The populations of MTM/Enhanced MTM-eligible beneficiaries include beneficiaries ever eligible for traditional MTM/Enhanced MTM programs from January through December 2017, with at least 12 months of continuous Medicare Parts A, B, and D enrollment prior to their first MTM/Enhanced MTM program eligibility month. BCBS NPA eligibility is based on Encounter Data information due to irregularities in MARx/TC 91 file eligibility data patterns over the course of Model Year 1.

2.1.3 How Did Sponsors Engage Targeted Beneficiaries in Enhanced MTM?

Sponsors prioritized beneficiary outreach based on individual risk, a method that was not employed in the traditional MTM program.

Though the processes that sponsors used to engage eligible beneficiaries in Enhanced MTM services in Model Year 1 were similar to traditional MTM (e.g., a mailed welcome notification followed by telephone follow-up), sponsors reported efforts to prioritize initial outreach to higher-risk beneficiaries and contact them more quickly than in traditional MTM. Some sponsors also deployed new outreach approaches to prioritize follow-up outreach to higher-risk beneficiaries. These included using interactive voice response (IVR) to follow up with higher-risk beneficiaries who did not complete a CMR (Humana) or leveraging retail pharmacies for more localized outreach towards high-risk beneficiaries who were either unresponsive or unreachable by call center staff (UHG). Some sponsors also supplemented initial beneficiary outreach with multi-modal approaches. Humana implemented web site alerts, and WellCare used email and text message outreach to provide medication adherence and refill reminders. All sponsors used a call center to conduct beneficiary outreach in both traditional MTM and Enhanced MTM. Key attributes of Enhanced MTM Model Year 1 beneficiary approaches are summarized in Table 2.8.

Table 2.8: Model Year 1 Enhanced MTM Beneficiary Outreach

Outreach Approach	Enhanced MTM Programs by Sponsor					
	BCBS FL	BCBS NPA	Humana	SilverScript/ CVS	UHG	WellCare
Traditional MTM Approach Also Implemented for Enhanced MTM						
Mailed welcome notification with telephone follow up	✓	✓	✓	✓	✓	✓
Use of call center	✓	✓	✓	✓	✓	✓
New Approach Implemented for Enhanced MTM						
Additional outreach to non-responsive beneficiaries			✓		✓	
Multimodal outreach*			✓			✓

Note: ✓ denotes that the outreach approach was used in at least one of the sponsor's Enhanced MTM programs.
*This included web alerts, email, and text.

Under the Enhanced MTM Model, more sponsors used community pharmacies for beneficiary outreach and Enhanced MTM service delivery, with the goal of leveraging the relationship between the community pharmacist and the beneficiary to promote beneficiary engagement in Enhanced MTM. As depicted in Table 2.9, two sponsors (UHG and SilverScript/CVS) added community pharmacy capabilities to their Enhanced MTM programs that were not present in their traditional MTM programs, and two sponsors (Humana and

WellCare) continued to use community pharmacies, as they did in traditional MTM. Among sponsors who conducted beneficiary outreach via community pharmacies, outreach occurred face-to-face and, in many cases, also by telephone.

Table 2.9: Model Year 1 Enhanced MTM Community Pharmacy Use by Sponsors vs. Traditional MTM

	Sponsors					
Community Pharmacy Involvement	**BCBS FL**	**BCBS NPA**	**Humana**	**SilverScript /CVS**	**UHG**	**WellCare**
Implemented for Traditional MTM and Enhanced MTM						
Community Pharmacy			✓			✓
Newly Implemented for Enhanced MTM						
Community Pharmacy				✓	✓	

Note: ✓ denotes presence of community pharmacy component

In summary, sponsors' beneficiary outreach approaches were relatively similar to those used under traditional Part D MTM, with higher-risk beneficiaries being prioritized for outreach, and more intensive outreach occurring to high-risk beneficiaries who were non-responsive to attempts to engage them in Enhanced MTM services. Some sponsors also deployed new multi-modal outreach approaches, including web alerts, text, and email, for Enhanced MTM. All sponsors used call centers to conduct beneficiary outreach and deliver Enhanced MTM services, and four sponsors also used community pharmacies to conduct beneficiary outreach and deliver Enhanced MTM services. Additionally, two sponsors have newly added the community pharmacy component for Enhanced MTM.

2.1.4 What Services Did Enhanced MTM Programs Offer to Targeted Beneficiaries?

Not all Enhanced MTM-eligible beneficiaries receive the same set of services. The frequency and type of service depends on beneficiary risk.

As noted, traditional MTM requires sponsors to offer two core services – comprehensive medication reviews (CMRs) and targeted medication reviews (TMRs) – to all eligible beneficiaries. Sponsors generally incorporated these two core services into their Model Year 1 Enhanced MTM programs, though unlike in traditional MTM, sponsors did not offer these services uniformly to all eligible beneficiaries. All Enhanced MTM participating sponsors only offered CMRs to subsets of their Enhanced MTM-eligible populations determined as high-risk, which is defined differently based on each sponsor's targeting criteria. These high-risk populations included, for example, beneficiaries with high drug or medical care utilization, beneficiaries at high risk for drug

interactions, and beneficiaries with a recent transition of care. Sponsors also discriminately offered TMRs. Additionally, some sponsors incorporated optional services offered under traditional MTM (newsletters and online resources) and also introduced new elements such as refill reminders, vaccine reminders, and formal cost-sharing into their Enhanced MTM programs.

Table 2.10 summarizes the core Enhanced MTM services across sponsors, and four key themes that highlight the tailoring of Enhanced MTM services to a beneficiary's risk profile are discussed below. Overall, sponsors' Enhanced MTM programs and services remained consistent during Model Year 1.

Table 2.10: Model Year 1 Enhanced MTM Core Services across Sponsors

Service	Sponsors					
	BCBS FL	BCBS NPA	Humana	SilverScript /CVS	UHG	WellCare
Traditional MTM Service Also Implemented for Enhanced MTM						
CMR-type Service	✓	✓	✓	✓	✓	✓
TMR-type Service	✓		✓	✓	✓	✓
Newsletter		✓		✓		✓
Online Resources	✓	✓	✓	✓	✓	✓
New Service Implemented for Enhanced MTM						
Transitions of Care Service	✓		✓		✓	
Vaccine Reminder				✓		
Refill Reminder				✓		✓
Cost-Sharing	✓					

Note: ✓ denotes presence of the indicated service in at least one of the sponsor's Enhanced MTM programs.

(1) Sponsors provided CMRs to only a subset of Enhanced MTM-eligible beneficiaries. In contrast to traditional MTM, where all eligible beneficiaries are offered a CMR, Enhanced MTM sponsors more selectively offered CMRs to some Enhanced MTM-eligible beneficiaries, but not others. In general, sponsors structured their Model Year 1 Enhanced MTM programs to offer CMRs to the highest-risk, highest-cost, and/or most complex enrollees (e.g., those with the most drug therapy problems, drug interactions, gaps in care; those who were recently hospitalized; and those with certain health conditions). Though sponsors offered CMRs more selectively, most sponsors noted that "a CMR is a CMR" and did not significantly redesign the content covered by the CMR or related services. However, sponsors increased the frequency of CMRs, offering the service multiple times per year (instead of only once per year as occurs in traditional MTM) or incorporated additional follow-up touch points with beneficiaries who had a CMR. In some cases, sponsors allowed their MTM service providers flexibility to determine if a beneficiary needed more than one CMR in a year.

(2) Sponsors provided TMRs to different beneficiary populations.

Most sponsors offered TMRs in their Enhanced MTM programs. UHG conducted TMRs with its entire Enhanced MTM-eligible population, while the other sponsors, except BCBS NPA, delivered TMRs only for subsets of Enhanced MTM-eligible beneficiaries. In some cases, sponsors introduced new types of TMRs specifically for Enhanced MTM (e.g., TMRs focused on medication adherence). BCBS NPA was the only sponsor that did not offer TMRs in Model Year 1, and only provided a CMR-type service with periodic follow-up.

(3) New services for Enhanced MTM included transitions of care services and refill and vaccine reminders.

Three sponsors (BCBS FL, Humana, and UHG) offered services to beneficiaries who experienced a transition of care, with the goal of detecting and correcting any medication issues that occur when medications are prescribed in the hospital and at discharge. Additionally, SilverScript/CVS and WellCare introduced services for lower-risk beneficiaries. Both sponsors added refill reminder services designed to promote medication adherence, and SilverScript/CVS began to offer a vaccine reminder service.

(4) BCBS FL was the only sponsor to include a formal cost-sharing component in Model Year 1, though some other sponsors are attempting to address the financial and social needs of beneficiaries through other support services.

BCBS FL was unique in providing financial incentives to Enhanced MTM-eligible beneficiaries who expressed that cost issues were a barrier to medication access by offering two forms of co-pay waivers: (i) a discount on covered Part D drugs for beneficiaries who initially declined to participate in Enhanced MTM services or were difficult to reach, and (ii) elimination of co-pays for select generic medications for beneficiaries who expressed that cost was a barrier to medication adherence during a pharmacist encounter. BCBS NPA had planned to create a similar cost-sharing mechanism to address economic or logistic challenges that may have prevented beneficiaries from accessing medications. However, this program did not come to fruition, because BCBS NPA encountered challenges establishing an internal financial tracking process. Instead, BCBS NPA established a program led by a social worker to connect beneficiaries to financial/social services outside of BCBS NPA's program. Similarly, WellCare used a program to help beneficiaries identify community resources to address their needs, and BCBS FL, beyond its formal cost-sharing program component, had additional support mechanisms in place to help beneficiaries (e.g., by helping to arrange transportation or identify resources for beneficiaries to get assistance with the costs of medications that were not covered by BCBS FL's co-pay waivers).

In summary, the main service additions for Enhanced MTM were transitions of care programs and refill reminders. Sponsors generally continued to use the "core" MTM services – CMRs and TMRs – however, there was a general trend toward providing CMRs more frequently and, in some cases, adding new types of TMRs. Sponsors also offered CMRs only to a subset of high-risk beneficiaries, instead of the entire Enhanced MTM-eligible population. Only one sponsor incorporated a cost-sharing program into its Enhanced MTM suite of services; however, two other sponsors reported efforts to address the financial and social needs of beneficiaries through their Enhanced MTM programs.

2.1.5 How Did Sponsors Engage Prescribers?

Any medication changes or recommendations derived from an Enhanced MTM service require prescriber review and acceptance. Accordingly, prescribers play a critical role in the Enhanced MTM process. Prescriber outreach processes used by sponsors for Model Year 1 Enhanced MTM were generally similar to traditional Part D MTM. For both traditional MTM and Enhanced MTM, communication with prescribers was primarily post-intervention by fax. If a pharmacist detected an urgent issue during an Enhanced MTM service, the pharmacist typically attempted to contact the prescriber by phone. Post-service prescriber communication usually consisted of a copy of the beneficiary's medication list, summary of the intervention, and/or recommendations for the prescriber to consider for optimizing a beneficiary's medication regimen.

For Enhanced MTM, both Humana and BCBS FL incorporated proactive prescriber outreach, with the goal of encouraging beneficiary participation and engagement in the Enhanced MTM program by educating providers about the Enhanced MTM Model or informing them of beneficiaries' eligibility for Enhanced MTM services. As noted, BCBS FL and BCBS NPA allowed providers or prescribers to refer beneficiaries to their Enhanced MTM programs, though this approach was not widely utilized. Overall, prescriber outreach was limited. Table 2.11 summarizes key attributes of Enhanced MTM Model Year 1 related to prescriber outreach.

Table 2.11: Model Year 1 Enhanced MTM Prescriber Outreach

Prescriber Outreach Approach	Enhanced MTM Programs by Sponsor					
	BCBS FL	BCBS NPA	Humana	SilverScript / CVS	UHG	WellCare
Previously Implemented for Traditional MTM						
Post-intervention faxed communication	✓	✓	✓	✓	✓	✓
Phone outreach in urgent situations	✓	✓	✓	✓	✓	✓
Newly Implemented for Enhanced MTM						
Proactive outreach	✓		✓			
Prescriber referrals of beneficiaries	✓	✓				

Note: ✓ denotes presence of the indicated prescriber outreach approach

2.2 How Did Sponsors' Enhanced MTM Programs Change between Model Year 1 and Model Year 2?

The Enhanced MTM Model's dynamic design allows ongoing changes to the Enhanced MTM programs. Sponsors continued to take advantage of this flexibility, with all sponsors making changes to their Enhanced MTM programs in Model Year 2. The extent of these changes varied by sponsor, with some sponsors (WellCare, SilverScript/CVS, and UHG) making more minor revisions and other sponsors (Humana, BCBS NPA, and BCBS FL) making more extensive changes. In general, these changes included adding new or refining existing targeting parameters; incorporating community pharmacies; engaging beneficiaries using multi-modal approaches (text or web-based in addition to phone and mail); adding or expanding Enhanced MTM services; and modifying prescriber communication to optimize prescriber engagement.

This section presents Enhanced MTM programmatic changes made during the first eight months (January 2018 through August 2018) of Model Year 2 for the participating sponsors, discussing key updates Enhanced MTM programs' structural elements relative to Model Year 1 Enhanced MTM, by thematic area. Section 2.2.1 and Section 2.2.2 describe updates to beneficiary targeting and eligibility, followed by discussions on changes to beneficiary outreach and engagement, services, and prescriber outreach and engagement (Section 2.2.3, Section 2.2.4, and Section 2.2.5).

- Section 2.2.1: How Did Beneficiary Targeting Evolve?
- Section 2.2.2: How Did Beneficiary Eligibility Evolve?
- Section 2.2.3: How Did Beneficiary Outreach and Engagement Strategies Evolve?
- Section 2.2.4: How Did Enhanced MTM Services Evolve?
- Section 2.2.5: How Did Prescriber Outreach and Engagement Strategies Evolve?

Additional details about sponsors Model Year 2 programs can be found in Appendix A – Appendix F.

2.2.1 How Did Beneficiary Targeting Evolve?

In Model Year 2, sponsors refined targeting approaches for Year 1 programs and added new Enhanced MTM programs with new targeting parameters.

In Model Year 2, all sponsors made targeting criteria changes. These changes included targeting criteria refinements to existing Enhanced MTM programs, such as using new data sources or parameters for transitions of care services and adjusting the variables/inputs used in risk-stratification methodology. Some sponsors also implemented new targeting parameters to reflect new Enhanced MTM programs, thus increasing the number of ways a beneficiary can become Enhanced MTM-eligible. These additions to targeting criteria are summarized in Table 2.12 and three key modifications are discussed in more detail below.

Table 2.12: Summary of Enhanced MTM Program Model Year 2 Targeting Additions, by Sponsor

New Targeting Additions for Model Year 2					
BCBS FL	**BCBS NPA**	**Humana**	**SilverScript / CVS**	**UHG**	**WellCare**
• Beneficiaries discharged from ER in Transitions of Care program • Beneficiaries with diabetes not prescribed a statin	• New input for predictive model • Targeting based on new medications or medication adherence • Targeting based on high Medicare Parts A and B expenditures	• HIE-based targeting for Transitions of Care program	• New chronic condition	• Targeting based on medication adherence	• Updated targeting input

(1) Two of three sponsors who offer transitions of care programs made changes to their targeting.

Both BCBS FL and Humana made changes to their targeting approaches for transitions of care services in Model Year 2. BCBS FL began targeting select beneficiaries with an ER discharge, in addition to targeting beneficiaries with a recent inpatient hospitalization. Humana completed a successful pilot in Florida to use ADT feeds to alert call-center pharmacists for provision of a transitions of care service to beneficiaries

discharged from the ER or hospital. Humana used this HIE-based approach in addition to continuing its Model Year 1 approaches of identifying beneficiaries using Medicare Parts A and B data or through pharmacist identification.

(2) Three sponsors began targeting new subpopulations.

BCBS FL, BCBS NPA, and UHG began targeting new subpopulations for their Model Year 2 Enhanced MTM programs. BCBS FL began targeting beneficiaries with diabetes who are not prescribed a statin. BCBS NPA began targeting beneficiaries via community pharmacies for "light-touch" Enhanced MTM services (new medication counseling and refill reminders). BCBS NPA also began to develop a new targeting approach to identify a subset of beneficiaries who, according to BCBS NPA's predictive algorithm, were low-risk, but who nevertheless had high medical costs. Finally, UHG began targeting beneficiaries who are late to refill their medications, focusing on medication classes associated with Part D Star Ratings.

(3) All sponsors made minor targeting adjustments.

All sponsors made minor targeting adjustments, such as increasing targeting frequency, including additional conditions, or identifying new risk factors. Humana changed the frequency of its risk-stratification process from quarterly to monthly and added new drug therapy problems to its Model Year 2 risk-stratification algorithm. SilverScript/CVS added another chronic condition as a qualifying criterion for one of its four Enhanced MTM sub-programs. WellCare modified the targeting parameters for one of its targeted drug therapy problems related to the use of antipsychotic medications. UHG and BCBS FL made minor adjustments to their risk category thresholds or targeting criteria, respectively, and BCBS NPA added another factor to its Enhanced MTM predictive risk-scoring algorithm.

Table 2.13 summarizes key targeting approaches across sponsors, highlighting new approaches in Model Year 2. In general, sponsors refined and expanded their targeting criteria, and, notably, all changes made in Model Year 2 expanded the targeting parameters.

Table 2.13: Model Year 1 and 2 Enhanced MTM Program Targeting Approaches across Sponsors

Targeting Approach	Enhanced MTM Programs by Sponsor and Model Year (MY)					
	BCBS FL	BCBS NPA	Humana	SilverScript / CVS	UHG	WellCare
Traditional MTM Approach Also Implemented for Enhanced MTM						
Multiple Chronic Conditions	MY1-2		MY1-2	MY1-2*	MY1-2	
Number of Medications		MY1-2			MY1-2	MY1-2
Drug Spend	MY1-2		MY1-2	MY1-2		
New Approach Implemented for Enhanced MTM						
Risk Stratification	MY1-2*	MY1-2*	MY1-2*	MY1-2	MY1-2*	MY1-2
Predictive Modeling	MY1-2	MY1-2*		MY1-2	MY1-2	MY1-2
Transitions of Care	MY1-2*		MY1-2*		MY1-2	
Unsafe drug use	MY1-2*	MY1-2*	MY1-2	MY1-2	MY1-2	MY1-2
Use of alternative data sources[a]	MY1-2	MY2	MY1-2*	MY1-2		MY1-2

MY1-2 = Implemented starting in Model Year 1 and continuing in Model Year 2
MY1-2* = Implemented in Model Year 1 and modified in Model Year 2
MY2 = Implemented in Model Year 2 only
[a] Includes Parts A and B claims data, HIE data, pharmacist identification, and referrals

2.2.2 How Did Beneficiary Eligibility Evolve?

This section provides Enhanced MTM eligibility information for each participating sponsor over the first six months of Model Year 2 (January 2018 through June 2018), as compared to Model Year 1 (January 2017 through June 2017). As summarized in Table 2.14, during the first six months of Model Year 2, over 1.1 million beneficiaries, or 63.2 percent of PDP enrollees in participating plans, were eligible for Enhanced MTM. SilverScript/CVS was the largest sponsor, with the largest Part D enrollment among participating contract-plans and the largest proportion of Part D enrollees who were eligible for Enhanced MTM (77.2 percent). Across participating contract-plans, BCBS FL was the smallest sponsor, in terms of both Part D enrollment and Enhanced MTM eligibility (19,040 Enhanced MTM-eligible beneficiaries), while BCBS NPA had the smallest proportion of Enhanced MTM-eligible beneficiaries among Part D enrollees (26.2 percent) across participating sponsors.[36]

[36] CVS/SilverScript's Enhanced MTM eligibility, also reported in Table 2.14, includes beneficiaries identified for the HealthTag program, who only received vaccination reminders.

Table 2.14: Enhanced MTM PDP Enrollment and Eligibility, Model Year 1 (January – June 2017) and Model Year 2 (January – June 2018), by Participating Sponsor

Sponsor	Model Year 1 (January – June 2017)		Model Year 2 (January – June 2018)			
	PDP Enrollees	Enhanced MTM-Eligible Beneficiaries	PDP Enrollees	Enhanced MTM-Eligible Beneficiaries	Enhanced MTM Eligibility Rate [a]	Percentage Point Change in Eligibility Rate From Model Year 1[b]
BCBS FL	63,212	27,797	59,472	19,040	32.0%	-12.0
BCBS NPA	234,795	143,406	233,724	61,298	26.2%	-34.9
Humana	434,199	165,113	275,875	165,093	59.8%	21.8
SilverScript/CVS	739,839	668,618	933,242	720,649	77.2%	-13.2
UHG	172,391	77,091	132,427	58,850	44.4%	-0.3
WellCare	141,567	100,821	140,948	97,018	68.8%	-2.4
All Sponsors	***1,786,003***	***1,182,846***	***1,775,688***	***1,121,948***	***63.2%***	***-3.0***

Sources: Enhanced MTM eligibility data in the Medicare Advantage and Prescription Drug Plan system (MARx), and PDP enrollment data in the Common Medicare Environment (CME), accessed in June 2018.

Notes: PDP enrollment only includes Enhanced MTM-participating contract-plans. Enhanced MTM eligibility is conditional on enrollment in the participating PDP in the CME. Enhanced MTM eligibility counts include beneficiaries who were eligible for Enhanced MTM at least once from January 2018 – June 2018.

[a] Enhanced MTM eligibility rate is the proportion of Enhanced MTM-eligible beneficiaries among PDP enrollees in Enhanced MTM-participating plans.

[b] Percentage point difference in Enhanced MTM eligibility rate between January – June 2017 and January – June 2018.

While there was little overall change (-3.0 percentage points) in the Enhanced MTM eligibility rate between Model Years 1 and 2 for the Model as a whole, as Table 2.13 shows, the number of eligible beneficiaries changed substantially for some sponsors for a variety of reasons. First, sponsors adjust the targeting criteria that determine eligibility for Enhanced MTM from year to year. For example, Humana included additional gaps in care in the list of drug therapy problems that qualify enrollees for Enhanced MTM, and this change contributed to the 21.8 percentage point increase in the eligibility rate from the previous Model Year. Second, there were changes in eligibility (MARx/TC 91 file) reporting practices between the two Model Years (Section 3 provides more detail about sponsors' data reporting practices), likely accounting for most of BCBS NPA's decrease in Enhanced MTM eligibility between Model Years 1 and 2. Third, a large stock of Enhanced MTM-eligible beneficiaries entered the Model in January 2017, when the Model first launched. As the Enhanced MTM Model progressed, beneficiaries received interventions in Model Year 1, and in some cases became ineligible for additional services in Model Year 2, depending on sponsor-specific targeting criteria. For example, SilverScript/CVS's Enhanced MTM eligibility rate decreased by 13.2 percentage points. Some SilverScript/CVS Enhanced MTM-eligible beneficiaries who qualified to receive vaccination reminders in Model Year 1 likely received the vaccines and did not qualify to receive those same vaccination

reminders in Model Year 2. The volume of Enhanced MTM-eligible beneficiaries may also decrease from year to year as beneficiaries receive Enhanced MTM services that lower their risk status (e.g., improve their medication adherence). Fourth, Enhanced MTM eligibility rates may change over time as beneficiaries decide to opt out of the Model, or disenroll from the participating plan. For example, one of Humana's participating Enhanced MTM plans lost its benchmark status in 2018, so there was a big outflow of LIS-eligible beneficiaries who were auto-enrolled in other plans in Model Year 2. As a result, the number of PDP enrollees in Humana plans decreased between Model Year 1 and Model Year 2.

2.2.3 How Did Beneficiary Outreach and Engagement Strategies Evolve?

Sponsors expanded their use of community pharmacies to provide Enhanced MTM services to eligible beneficiaries in Model Year 2.

Beneficiary engagement strategies remained relatively consistent in Model Year 2 compared to Model Year 1, though sponsors expanded their use of community and mail-order pharmacy services in an attempt to engage more beneficiaries in Enhanced MTM. Some sponsors also adjusted their use of beneficiary incentives and attempted to improve beneficiary engagement through additional outreach modes and improved messaging. Changes to beneficiary outreach and engagement strategies are summarized in Table 2.15 and three key changes highlighting sponsors' continued efforts to engage with beneficiaries are discussed in more detail below.

Table 2.15: Summary of Enhanced MTM Program Model Year 2 Changes to Beneficiary Outreach and Engagement Strategies, by Sponsor

New Targeting Additions for Model Year 2					
BCBS FL	**BCBS NPA**	**Humana**	**SilverScript/ CVS**	**UHG**	**WellCare**
• No changes	• Added community pharmacy component • Removed member incentive for service completion • Added text message outreach	• Added beneficiary incentive for service completion • Redesigned beneficiary outreach materials • Added web-based outreach	• No changes	• Added community pharmacy component	• Changed enrollment vendor

(1) Some sponsors added new community pharmacy capabilities to improve beneficiary engagement in Enhanced MTM services.

In an effort to leverage community pharmacy relationships with beneficiaries to increase beneficiary engagement in Enhanced MTM, both UHG and BCBS NPA began providing services via community pharmacies. UHG, which piloted community pharmacy Enhanced MTM services at the end of Model Year 1, expanded Enhanced MTM services to community pharmacies in all participating regions in early Model Year 2. BCBS NPA also incorporated community pharmacies for the provision of Enhanced MTM services, including both in-depth medication reviews and lighter touch interventions, as described previously.

(2) Two sponsors made changes to monetary incentives that promote beneficiary engagement.

Specifically, BCBS NPA discontinued providing a $10 incentive to beneficiaries who completed an initial in-depth medication review as a planned second stage of a study to assess the effect of the beneficiary incentive on service completion rates. Humana added a $10 incentive for beneficiaries who completed the transitions of care service within 30 days of hospital discharge to increase transitions of care service completion rates. In addition to beneficiary incentives, Humana also awarded monetary incentives to pharmacies if they met a certain threshold of successfully completed interventions as part of a pilot program. However, the pharmacy incentive program did not result in significant improvement in service completion rates, and Humana will retire the program at the end of Model Year 2.

(3) Some sponsors continued to refine their beneficiary engagement strategies.

Humana made multiple changes to its beneficiary outreach approaches, including redesigning beneficiary outreach materials, providing targeted messaging based on geographic location, and creating a new patient resource letter. At the start of Model Year 2, WellCare reallocated the task of enrolling Enhanced MTM-eligible beneficiaries to one of its Enhanced MTM service vendors in an effort to improve beneficiary enrollment. BCBS NPA began sending text messages to non-responsive beneficiaries and beneficiaries who completed an initial in-depth medication review.

Table 2.16 summarizes key beneficiary outreach approaches by sponsor, highlighting differences between Model Years 1 and 2. Overall, beneficiary engagement strategies were not significantly different from Model Year 1, aside from the addition of community pharmacy components for two sponsors. Two sponsors adjusted the use of beneficiary incentives, with one

adding these incentives and another removing them, and both sponsors reported future efforts to assess the impact of the incentive on service completion rates.

Table 2.16: Model Year 1 and 2 Enhanced MTM Beneficiary Outreach Approaches, by Sponsor

Outreach Approach	Enhanced MTM Programs by Sponsor					
	BCBS FL	BCBS NPA	Humana	SilverScript/ CVS	UHG	WellCare
Additional outreach to non-responsive beneficiaries		MY2	MY1-2		MY1-2	
Multi-modal outreach		MY2	MY1-2			MY1-2
Beneficiary incentives		MY1	MY2			
Call Center	MY1-2	MY1-2	MY1-2	MY1-2	MY1-2	MY1-2
Community Pharmacy		MY2	MY1-2	MY1-2	MY1-2*	MY1-2

MY1-2 = Implemented starting in Model Year 1 and continuing in Model Year 2.
MY1-2* = Implemented in Model Year 1 and modified in Model Year 2.
MY2 = Implemented in Model Year 2 only; MY1 = Implemented in Model Year 1 only.

2.2.4 How Did Enhanced MTM Services Evolve?

In Model Year 2, sponsors did not remove any services previously offered in Model Year 1, and added new types of services similar to a Targeted Medication Review (TMR-type services).

In Model Year 2, sponsors expanded the suite of Enhanced MTM services, with most sponsors adding new TMR-type services to their Enhanced MTM programs. Additionally, one sponsor extended existing Enhanced MTM services to lower-risk beneficiaries. Key service changes are summarized in Table 2.17 and discussed in more detail below.

Table 2.17: Summary of Enhanced MTM Program Model Year 2 Service Changes, by Sponsor

Service Changes					
BCBS FL	**BCBS NPA**	**Humana**	**SilverScript / CVS**	**UHG**	**WellCare**
• Added service for statin use in persons with diabetes • Added service for select beneficiaries who qualified for a CMR in Model Year 1 but not Model Year 2	• Added TMR services to address opioid risks and for non-responsive beneficiaries • Added light-touch services	• Added flu vaccine reminders • Added services to address opioid risks • Extended adherence monitoring to low risk group	• Added new service vendor	• Added automated adherence monitoring	• No changes

Most sponsors added or expanded Enhanced MTM services. Five sponsors (BCBS NPA, BCBS FL, Humana, UHG, and SilverScript/CVS) added new Enhanced MTM services in Model Year 2. Three sponsors (BCBS NPA, BCBS FL, and Humana) incorporated additional brief TMR-type services, generally focusing on opioid use and drug therapy problems. Additionally, BCBS NPA began conducting prescriber-facing TMR-type services for beneficiaries who are unresponsive to outreach or do not follow through with an initial in-depth medication review, and added light-touch interventions for adherence and new medication assessments.

Other Model Year 2 Enhanced MTM service changes included adding a one-time continuity service for beneficiaries who qualified for Enhanced MTM services in Model Year 1 but not Model Year 2 (BCBS FL), flu vaccine reminders (Humana), automated adherence monitoring (UHG), and a new vendor to provide additional CMRs (SilverScript/CVS). Finally, Humana expanded its adherence monitoring program to low-risk beneficiaries.

Table 2.18 summarizes core Enhanced MTM services across sponsors, highlighting differences between Model Years 1 and 2. As noted, sponsors generally expanded services; there were no Enhanced MTM services offered in Model Year 1 that were not also offered in Model Year 2. Sponsors continued to offer CMR services and online resources, and the Model Year 2 service additions were primarily TMR-type services.

Table 2.18: Model Year 1 and 2 Enhanced MTM Core Services Across Sponsors

Service	Sponsors					
	BCBS FL	BCBS NPA	Humana	SilverScript/ CVS	UHG	WellCare
Traditional MTM Approach Also Implemented for Enhanced MTM						
CMR-type Service	MY1-2	MY1-2	MY1-2	MY1-2	MY1-2	MY1-2
TMR-type Service	MY 1-2	MY2	MY1-2*	MY1-2	MY1-2	MY1-2
Newsletter		MY1-2		MY1-2		MY1-2
Online Resources	MY1-2	MY1-2	MY1-2	MY1-2	MY1-2	MY1-2
New Approach Implemented for Enhanced MTM						
Transition of Care Service	MY1-2		MY1-2		MY1-2	
Refill Reminder				MY1-2	MY2	MY1-2
Cost-Sharing	MY1-2					

MY1-2 = Implemented starting in Model Year 1 and continuing in Model Year 2.
MY1-2* = Implemented in Model Year 1 and modified in Model Year 2.
MY2 = Implemented in Model Year 2 only.

2.2.5 How Did Prescriber Outreach and Engagement Strategies Evolve?

In general, sponsors identified engagement with prescribers as an area with opportunity for improvement for Model Year 2. Three sponsors (Humana, BCBS NPA, and BCBS FL) reported changes designed to enhance collaboration with prescribers and improve their engagement. These changes included testing new ways to contact and convey messages to prescribers and educating providers about Enhanced MTM through in-person presentations. Table 2.19 summarizes sponsors' changes to prescriber outreach and engagement strategies in Model Year 2, which are discussed in more detail below in two key points that highlight sponsors' continued efforts to improve prescriber engagement.

Table 2.19: Summary of Enhanced MTM Program Model Year 2 Prescriber Outreach and Engagement Changes, by Sponsor

New Targeting Additions for Model Year 2					
BCBS FL	**BCBS NPA**	**Humana**	**SilverScript / CVS**	**UHG**	**WellCare**
• Additional outreach and education about Enhanced MTM	• Revamped prescriber communication materials • Conducted prescriber focus groups • Educated providers about opioid prescribing	• Streamlined fax communication • Increased engagement of clinic-based pharmacists	• No changes	• No changes	• No changes

(1) Two sponsors undertook additional efforts to engage prescribers in Enhanced MTM.

Both Humana and BCBS NPA implemented new prescriber engagement strategies. Humana streamlined its prescriber fax communication content and used pharmacy technicians to contact prescriber offices regarding Enhanced MTM service medication recommendations. Humana also worked with its vendor to engage pharmacists embedded in physician clinics to provide Enhanced MTM services to Humana beneficiaries. In addition to mailing the post-service summaries to prescribers in a rigid mailer (e.g., FedEx-type) envelopes,[37] BCBS NPA condensed its post-service prescriber letter to make it more readable and developed new outreach materials for high-volume prescribers.

(2) Two sponsors focused efforts on prescriber education about Enhanced MTM.

BCBS FL and BCBS NPA provided additional education about their Enhanced MTM programs to other health care providers to increase provider referrals and responsiveness to pharmacist recommendations. BCBS FL presented their Enhanced MTM program at a conference and to providers at health care facilities with a high number of Enhanced MTM beneficiaries. BCBS NPA launched a prescriber-based opioid program in 2018 that involved on-site education about minimizing opioid risks for patients to prescribers

[37] NPA implemented this approach at the end of 2017 after finding that FedEx-style rigid mailers have a greater chance of being opened and viewed by prescribers.

with high volumes of opioid prescriptions. BCBS NPA also held focus groups with prescribers to understand best practices for communicating with and educating prescribers.

In summary, in Model Year 2, half of the sponsors focused their efforts on educating prescribers and optimizing post-service communication with prescribers. Humana was the only sponsor to attempt integration of Enhanced MTM services into physician clinics. Three sponsors (SilverScript/CVS, UHG, and WellCare) did not make changes to their prescriber outreach strategies in Model Year 2.

2.3 Descriptive Trends in Medication Adherence, Drug Safety, Healthcare Utilization, and Expenditures

Preliminary trends show no notable change in key measures relevant to sponsors' innovative targeting approaches after beneficiaries became eligible for EMTM.

This section presents descriptive trends in key measures of interest to provide a preliminary understanding of how Enhanced MTM-eligible beneficiaries' medication adherence, drug safety, health service use, and expenditures differed across sponsors and evolved over time. Acumen selected these measures in the context of sponsors' innovative methods to identify beneficiaries eligible for Enhanced MTM services. In addition to averages and medians, the section presents trends at lower and upper points in the distribution for certain measures (e.g., medication adherence and expenditures), because these represent beneficiaries for whom the margin for change is the biggest, and where Enhanced MTM may have the most important downstream impact. Moreover, some sponsors' innovative Enhanced MTM targeting approaches identify beneficiaries with lower medication adherence or high medical spending to receive services and these beneficiaries are more likely to experience improvements in adherence or spending due to their participation in Enhanced MTM, relative to beneficiaries who are already highly adherent or have low levels of medical expenditures.

Overall, measures of medication adherence, healthcare utilization, and expenditures remained generally stable over the five quarters after beneficiaries became eligible for Enhanced MTM compared to the four quarters before becoming eligible. Median medication adherence among Enhanced MTM-eligible beneficiaries was high (PDC $\geq$ 0.80) throughout the observation period for all drug classes (beta blockers, oral diabetes medications, renin-angiotensin system [RAS] antagonists, and statins), but gradually decreased over time. This is consistent with

observed adherence patterns for chronic medications.[38,39] Drug safety measures related to drug-drug interactions, use of high-risk medications, and opioid utilization generally remained constant over time. Opioid utilization decreased over time, reflecting wider Medicare program efforts.[40] Measures of health service utilization (inpatient admissions, ER visits), and medical and drug expenditures were also generally stable. These findings are discussed in greater detail in the subsections that follow.

In this Evaluation Report, descriptive trends for key measures related to medication adherence, drug safety, health service use, and expenditures are presented for beneficiaries who were eligible for Enhanced MTM programs anytime in 2017, the first year of Model implementation ("MY 1"), and cover the time period spanning the four quarters before and the five quarters after they became Enhanced MTM-eligible. Trends are shown both for the Model as a whole and separately by participating sponsor, to highlight cross-sponsor differences. In the absence of a comparison group, descriptive trends in these measures do not reflect the causal impact of the Enhanced MTM Model on beneficiary outcomes. Future reports, which will assess the impact of Enhanced MTM eligibility on key measures using difference-in-differences estimation, will discuss the causal effect of the Model and build off of the context provided by the descriptive trends presented in this section.

Section 2.3.1 (Key Measures and Data Sources) describes the measures and data sources included in the descriptive analyses. These analyses are presented in Section 2.3.2 (Medication Adherence, Drug Safety, Health Service Utilization, and Expenditures).

2.3.1 Key Measures and Data Sources

Table 2.20 provides a list of measures presented in this report, along with their descriptions.[41]

[38] Marie T. Brown and Jennifer K. Bussell, "Medication Adherence: WHO Cares?" *Mayo Clinic Proceedings* 86, no. 4 (2011): 304-314, doi:10.4065/mcp.2010.0575

[39] David L. Sackett and J.C. Snow, "The magnitude of compliance and non compliance," in *Compliance in Health* Care, eds. R. Brian Haynes, D. Wayne Taylor, and David L. Sackett (Baltimore: John Hopkins University Press, 1979), 11-22.

[40] For recent trends in opioid utilization among Medicare Part D beneficiaries, see, for example: U.S. Department of Health & Human Services, "HHS OIG Data Brief: Opioid Use in Medicare Part D Remains Concerning" (June 2019), https://oig.hhs.gov/oei/reports/oei-02-18-00220.pdf

[41] Acumen examined additional measures including adherence to antiretroviral medications; number of physician office visits and physician office visit rate; and total Parts A, B, D expenditures, inpatient expenditures, outpatient expenditures, physician and ancillary expenditures, skilled nursing expenditures, hospice expenditures, durable medical equipment expenditures, and home health expenditures. Trends in these measures were similar to those for measures presented in this Evaluation Report, and are therefore not included here.

Table 2.20: Adherence, Drug Safety, Healthcare Utilization, and Expenditure Measures

Measure Domain	Measures	Definition
Medication Adherence	• Adherence to beta blockers • Adherence to oral diabetes medications • Adherence to RAS antagonists • Adherence to statins	The proportion of days covered by prescription claims for medications in each therapeutic category
Drug Safety	• Drug-drug interaction	Percentage of beneficiaries who were dispensed two or more prescriptions that should not be taken together, with at least one day overlap
Drug Safety	• Use of high-risk medications	Percentage of beneficiaries who received prescription fills for drugs with a high risk of serious side effects in the elderly
Drug Safety	• Concurrent use of opioids and benzodiazepines	Percentage of beneficiaries with concurrent use of prescription opioids and benzodiazepines
Drug Safety	• Use of opioids from multiple providers	Percentage of beneficiaries (without cancer) who received opioid prescriptions from four or more prescribers and four or more pharmacies
Drug Safety	• Use of opioids at high dosage	Percentage of beneficiaries (without cancer) who received opioid prescriptions with a daily morphine equivalent dose greater than 120 mg for 90 consecutive days or longer
Health Service Utilization	• Number of ER visits per 1,000 beneficiaries • Number of inpatient admissions per 1,000 beneficiaries	Average number of times an ER visit or inpatient admission occurred per 1,000 beneficiaries
Health Service Utilization	• ER visit rate • Inpatient admission rate	Proportion of beneficiaries who had an ER visit or inpatient admission
Expenditures	• Total Parts A and B expenditures per beneficiary • Total Part D expenditures per beneficiary	Total Parts A and B costs or Part D costs

Notes: Part D Drug Event File, accessed July 2018; Common Working File, accessed August 2018. Medication adherence measures are adapted from the Pharmacy Quality Alliance (PQA) proportion of days covered (PDC) metric.

As discussed in Section 2.1.1, an innovative strategy implemented by sponsors to target beneficiaries for Enhanced MTM includes the use of predictive modeling that focuses on future drug-related problems, such as non-adherence. Acumen assessed adherence to medications typically used by beneficiaries for four chronic conditions that are common in the Medicare population: high cholesterol (statins), diabetes, hypertension (RAS antagonists), and cardiovascular disease (beta blockers). These selected medication adherence measures are adapted from the Pharmacy Quality Alliance (PQA) proportion of days covered (PDC) metric, which assesses the proportion of days with prescription coverage. Three of these measures

(adherence to oral diabetes medications, RAS antagonists, and statins) are also used in CMS Star Ratings calculations.

All six participating sponsors targeted beneficiaries for the Enhanced MTM Model based on unsafe medication use (see Section 2.1.1). Moreover, medication safety promotion continues to be an area of interest for CMS, patients, providers, and other stakeholders, and is a main component of many sponsors' Enhanced MTM programs. Acumen examined multiple measures of drug safety (focusing on drug-drug interaction, high risk medications, and opioid utilization) to obtain an initial assessment of the rate of unsafe medication use among the Enhanced MTM-eligible Medicare population.

Optimized medication use may reduce unnecessary health service utilization, including high-cost ER visits and hospitalizations. In addition, beneficiaries who undergo a transition of care are more likely to experience adverse events and are a population that is targeted by half of the sponsors participating in the Enhanced MTM Model (see Section 2.1.1). ER visits and inpatient services are typically associated with high spending and high spending growth in Medicare,[42] so Acumen primarily focused on health service utilization in these settings.

This section also presents total Medicare Parts A and B expenditures and total Part D expenditures per beneficiary as another set of key measures. Reductions in Parts A and B expenditures are an important goal of the Enhanced MTM Model, and Part D expenditures are also of interest, as half of the sponsors participating in the Enhanced MTM Model incorporated drug spend as a criterion in their beneficiary targeting strategies (see Section 2.1.1).

Adherence, drug safety, healthcare utilization, and expenditure measures presented in this Evaluation Report used Medicare administrative data from January 2016 through April 2018, the latest month for which data were available. All measures are calculated relative to the first month of Enhanced MTM eligibility for each beneficiary, starting with the four quarters prior to Enhanced MTM eligibility and ending with the latest quarter following the month of eligibility for which there were available data. For example, a beneficiary who became eligible for Enhanced MTM in January 2017 is observed for five post-January quarters.[43] The TC 91 files in the Medicare Advantage Prescription Drug (MARx) data transaction system,[44] which provide monthly Enhanced MTM eligibility information, were used to identify participating plan

[42] MedPAC, "A Data Book: Health Care Spending and the Medicare Program" (June 2018), http://www.medpac.gov/docs/default-source/data-book/jun18_databookentirereport_sec.pdf?sfvrsn=0

[43] Similarly, beneficiaries who became eligible for Enhanced MTM in February-April and May-July are observed for four and three quarters following the month of eligibility, respectively. Beneficiaries who became eligible for Enhanced MTM in August-October are observed for two quarters following the month of eligibility. Beneficiaries who became eligible for Enhanced MTM in November and December are observed for a single quarter following the month of eligibility.

[44] Enhanced MTM eligibility data were accessed in June 2018.

beneficiaries who became eligible for Enhanced MTM in MY 1, and to identify beneficiaries' first month of eligibility.[45] To ensure complete claims histories for beneficiaries in the period before they became Enhanced MTM-eligible, the Enhanced MTM population was restricted to beneficiaries who had at least one year of continuous Medicare Parts A, B, and D enrollment prior to their first month of eligibility in the Enhanced MTM Model, as defined by Medicare enrollment information from the Common Medicare Environment (CME).[46] Measures related to adherence, health service utilization, and expenditures were calculated quarterly, while drug safety measures, which measure relatively rare events, were calculated on an annual basis. Enhanced MTM-eligible beneficiaries who were deceased (or switched to another plan) were excluded from analyses after their death (or switch).

2.3.2 Trends in Medication Adherence, Drug Safety, Health Service Utilization, and Expenditures

Overall, while there is some cross-sponsor variation in these key measures, there is no notable change in medication adherence, drug safety, health service utilization, or expenditures over the five quarters after beneficiaries became Enhanced MTM-eligible.[47] As mentioned above, future evaluation reports will assess the *relative* evolution in these measures for Enhanced MTM beneficiaries compared to similar beneficiaries who were not exposed to the Model, directly addressing causation using difference-in-differences analyses and a longer observation period (Section 5, "Conclusions and Next Steps", provides further details).

Medication Adherence

Median medication adherence was high (PDC ≥ 0.80) for all drug classes assessed (beta blockers, oral diabetes medications, RAS antagonists, and statins).

Median medication adherence among Enhanced MTM-eligible beneficiaries remained high throughout the observation period. This finding is consistent with the baseline beneficiary survey, in which only a small proportion of respondents reported low medication adherence (see Section 1.5, "What Were Beneficiaries' Experiences with MTM Early in the Model?"). Figure 2.2 plots Model-wide trends in adherence to statins for the 75th percentile, median, and 25th percentile, starting with the fourth quarter prior to Enhanced MTM eligibility. Figure 2.3 shows adherence to statins separately for

[45] The Enhanced MTM eligibility of BCBS NPA beneficiaries is defined based on the presence of beneficiary records in Enhanced MTM Encounter Data (2018 Q1 submission), due to irregularities in MARx data reporting practices for this sponsor during the first months of Model implementation.
[46] Beneficiaries who switched to an Enhanced MTM plan and became Enhanced MTM-eligible are included in the Enhanced MTM population.
[47] Drug safety measures are calculated on an annual, not a quarterly basis.

each Enhanced MTM sponsor. An adherence threshold of 80 percent is marked in these figures, because it is commonly used as a minimum PDC threshold for effective adherence (i.e., above the threshold, a medication has a reasonable likelihood of achieving the most clinical benefit). Median adherence to statins for the Model as a whole is over 90 percent throughout the observation period. Median adherence remains above the 80 percent threshold for all sponsors, though there are cross-sponsor differences, with BCBS NPA, SilverScript/CVS, and WellCare having higher median adherence than other sponsors throughout the observation period (see Figure 2.3).

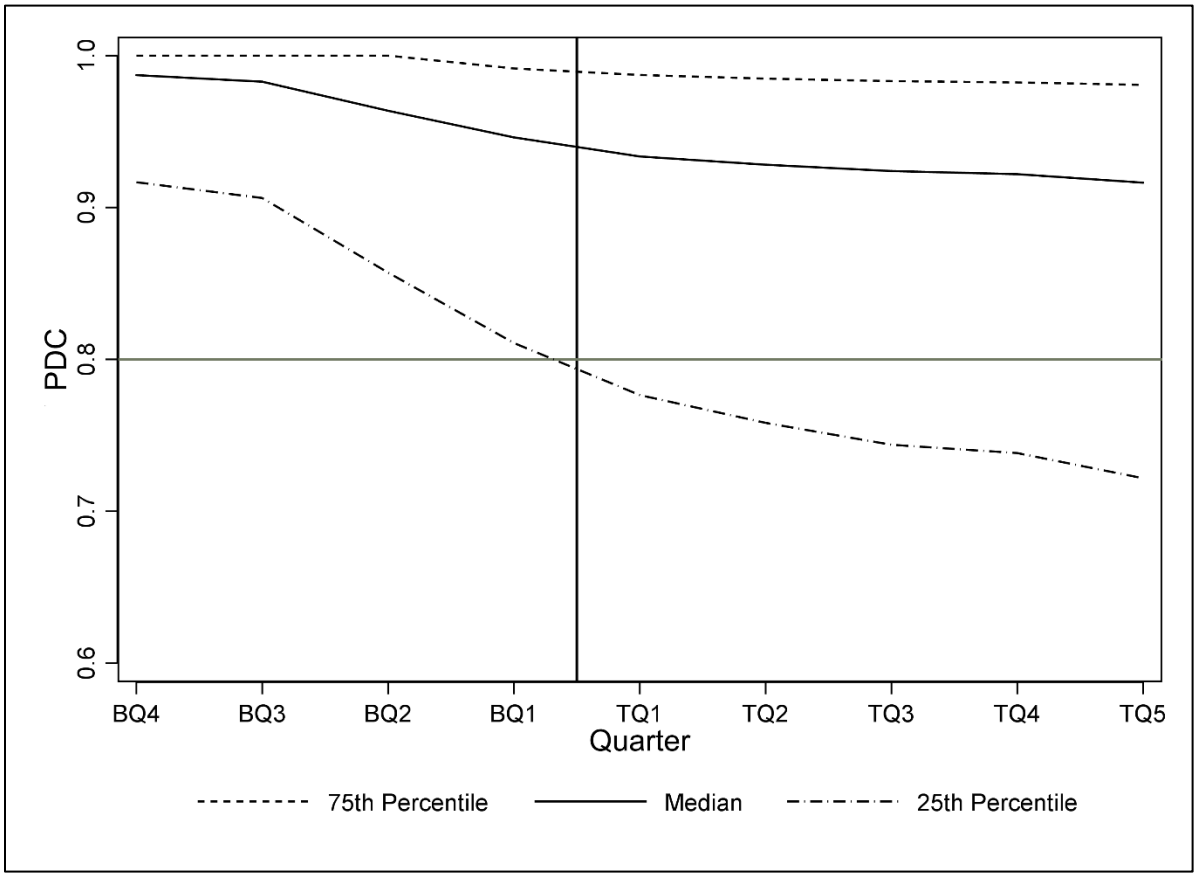
Medication adherence decreases over time, consistent with previously published studies that have also shown decreasing adherence to chronic medications.[48,49] A reduction in adherence over time is also an artifact of how the PDC metric is calculated: beneficiaries must have at least two fills of a given medication to enter the adherence calculation. This means that the initial period of time after the initiation of PDC calculation is more likely to be covered by these two fills, leading to higher levels of adherence (since a larger proportion of days will be covered by the fills). Because the medication adherence shown in Figure 2.2 and Figure 2.3 is calculated cumulatively for each beneficiary, it will be higher at the beginning of the observation period, when the elapsed time is shorter and there is less of a chance to become non-adherent.

As shown in Figure 2.2, even the 25th percentile of PDC remains over 70 percent for the Model as a whole. Though adherence drops over time across all sponsors, trends become less steep after Enhanced MTM eligibility. Other drug classes show similar trends and are presented in Appendix J.

[48] Marie T. Brown and Jennifer K. Bussell, "Medication Adherence: WHO Cares?" *Mayo Clinic Proceedings* 86, no. 4 (2011): 304-314, http://www.doi.org/10.4065/mcp.2010.0575.

[49] David L. Sackett and J.C. Snow, "The magnitude of compliance and non compliance," in *Compliance in Health* Care, eds. R. Brian Haynes, D. Wayne Taylor, and David L. Sackett (Baltimore: John Hopkins University Press, 1979), 11-22.

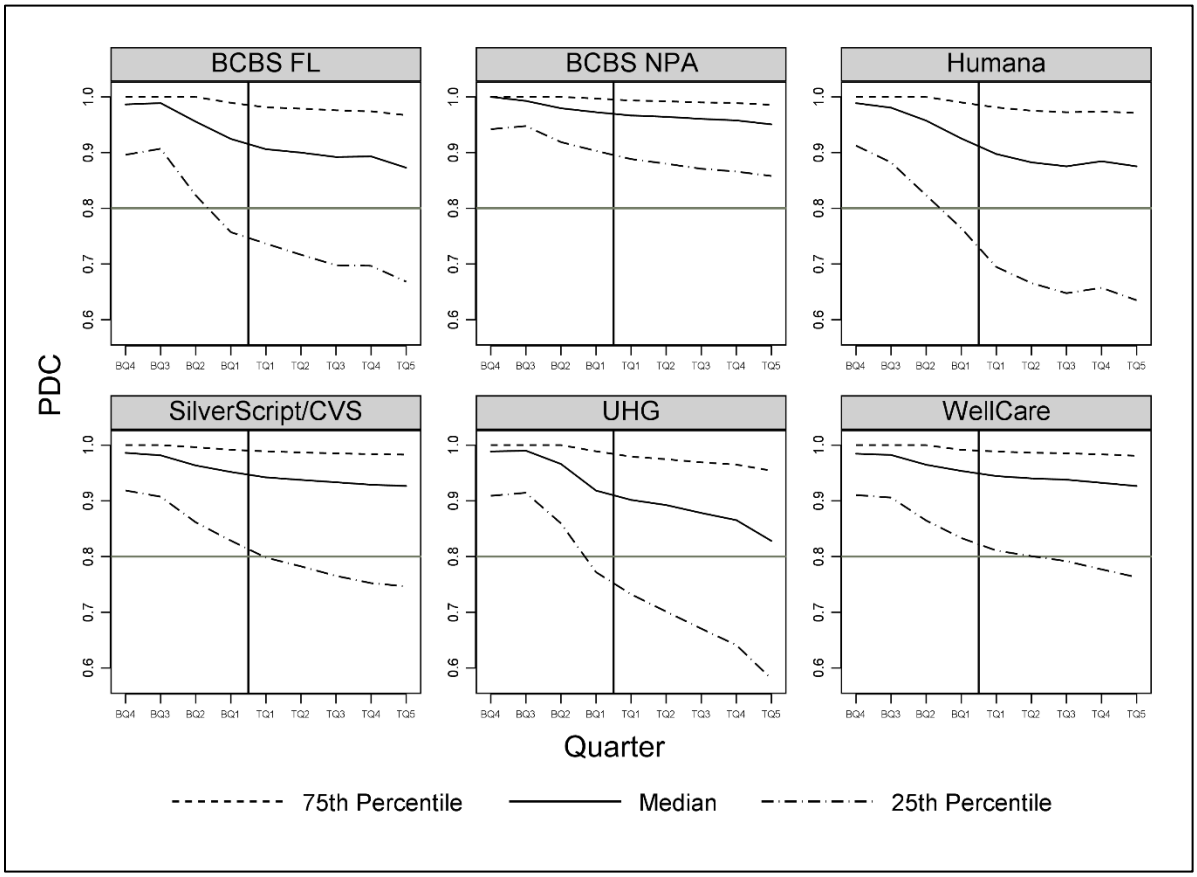
Figure 2.2: Medication Adherence to Statins (Proportion of Days Covered), Enhanced MTM-eligible Population, Model-level



Source: Part D Drug Event File (PDE), accessed July 2018

Note: PDC: Proportion of Days Covered; BQ: Pre-Enhanced MTM eligibility Quarter; TQ: Post-Enhanced MTM eligibility Quarter. Adherence is a cumulative measure; each quarterly observation incorporates information from the entire observation window, starting with the fourth pre-Enhanced MTM eligibility quarter. A PDC threshold of 0.8 is the level above which a given medication has a reasonable likelihood of achieving the most clinical benefit.

Figure 2.3: Medication Adherence to Statins (Proportion of Days Covered), Enhanced MTM-eligible Population, Sponsor-level



Source: Part D Drug Event File (PDE), accessed July 2018
Note: PDC: Proportion of Days Covered; BQ: Pre-Enhanced MTM eligibility Quarter; TQ: Post-Enhanced MTM eligibility Quarter. Adherence is a cumulative measure; each quarterly observation incorporates information from the entire observation window, starting with the fourth pre-Enhanced MTM eligibility quarter. A PDC threshold of 0.8 is the level above which a given medication has a reasonable likelihood of achieving the most clinical benefit.

Drug Safety

Drug safety indicators generally remain constant over the observation period. Table 2.20 presents Model-wide and sponsor-specific descriptive statistics on drug-drug interactions, use of high-risk medications, and three measures of risky opioid utilization (concurrent use of opioids and benzodiazepines, use of opioids from multiple providers, and use of opioids at high dosage) among Enhanced MTM-eligible beneficiaries. The proportion of beneficiaries with risky drug utilization

All drug safety measures assessed (drug-drug interactions, use of high-risk medications, and opioid utilization) remained fairly constant.

is shown for each measure, along with the denominator used for each measure's construction.[50] Each measure is constructed using indicators calculated over the 12-month period prior to a beneficiary's eligibility for Enhanced MTM, and over the 12-month period after they become eligible for Enhanced MTM. As shown in Table 2.21, the percentage of beneficiaries who use opioids from multiple providers decreased slightly after Enhanced MTM eligibility, both for the Model as a whole, and across sponsors. Conversely, the percentage of those who use opioids at a high dosage increased slightly. For the Model as a whole, there was a small decrease in the percentage of beneficiaries with concurrent use of opioids and benzodiazepines (see Table 2.21), with some cross-sponsor variation. The percentage of beneficiaries with drug-drug interactions (DDI) increased over time (see Table 2.21), but the denominators for both the opioid and DDI measures decreased across all sponsors. This decline in opioid use reflects wider trends in the Medicare population over the observation period.[51] The percentage of beneficiaries using high-risk medications remained stable for the Model as a whole, and decreased slightly for BCBS NPA.

[50] For example, the denominator for drug-drug interactions includes beneficiaries who received at least one fill of a prescription for a target medication, and the denominators for opioid utilization measures include beneficiaries who received two or more fills of opioid prescriptions.

[51] For recent trends in opioid utilization among Medicare Part D beneficiaries, see, for example: HHS OIG Data Brief, "Opioid Use in Medicare Part D Remains Concerning," June 2019, available here: https://oig.hhs.gov/oei/reports/oei-02-18-00220.pdf

Table 2.21: Drug Safety Measures, Enhanced MTM-eligible population, Model- and Sponsor-level, One Year Pre- and Post-eligibility for Enhanced MTM

Measures	All Participating Sponsors		BCBS FL		BCBS NPA		Humana		SilverScript/ CVS		UHG		WellCare	
	Pre-Enhanced MTM	Post-Enhanced MTM	Pre-Enhanced MTM	Post-Enhanced MTM	Pre-Enhanced MTM	Post-Enhanced MTM	Pre-Enhanced MTM	Post-Enhanced MTM	Pre-Enhanced MTM	Post-Enhanced MTM	Pre-Enhanced MTM	Post-Enhanced MTM	Pre-Enhanced MTM	Post-Enhanced MTM
Total Number of Beneficiaries	621,614	621,614	22,048	22,048	20,018	20,018	72,942	72,942	407,060	407,060	40,391	40,391	59,155	59,155
Drug-Drug Interaction														
Denominator	175,950	166,396	7,032	6,557	9,453	8,901	22,820	21,533	103,805	98,711	12,294	11,198	20,546	19,496
Percentage of Beneficiaries	2.7	2.9	2.4	3.0	5.7	6.4	3.7	4.1	2.2	2.4	3.0	3.4	2.1	2.4
Use of High-Risk Medications														
Denominator	428,444	428,444	20,613	20,613	17,644	17,644	48,638	48,638	265,666	265,666	34,338	34,338	41,545	41,545
Percentage of Beneficiaries	7.0	7.1	5.5	5.5	18.5	17.9	9.0	9.3	5.5	5.7	10.6	10.9	6.8	6.9
Concurrent Use of Opioids and Benzodiazepines														
Denominator	135,421	127,740	4,309	3,848	5,783	5,264	19,418	18,156	81,629	77,466	9,125	8,658	15,157	14,348
Percentage of Beneficiaries	23.0	22.8	11.0	19.3	16.4	17.2	23.9	23.6	23.0	22.5	27.9	26.8	24.6	23.5
Use of Opioids from Multiple Providers														
Denominator	135,458	127,644	4,310	3,858	5,790	5,263	19,432	18,134	81,638	77,383	9,135	8,655	15,153	14,351
Percentage of Beneficiaries	2.5	2.0	1.1	0.6	1.0	0.9	3.3	2.4	2.6	2.0	2.1	1.8	2.6	2.2
Use of Opioids at High Dosage														
Denominator	135,458	127,644	4,310	3,858	5,790	5,263	19,432	18,134	81,638	77,383	9,135	8,655	15,153	14,351
Percentage of Beneficiaries	1.9	2.2	1.7	1.9	1.7	2.2	1.8	2.1	2.0	2.2	2.0	2.1	1.9	2.2

Source: Part D Drug Event File (PDE), accessed July 2018. Common Working File (CWF), accessed August 2018.

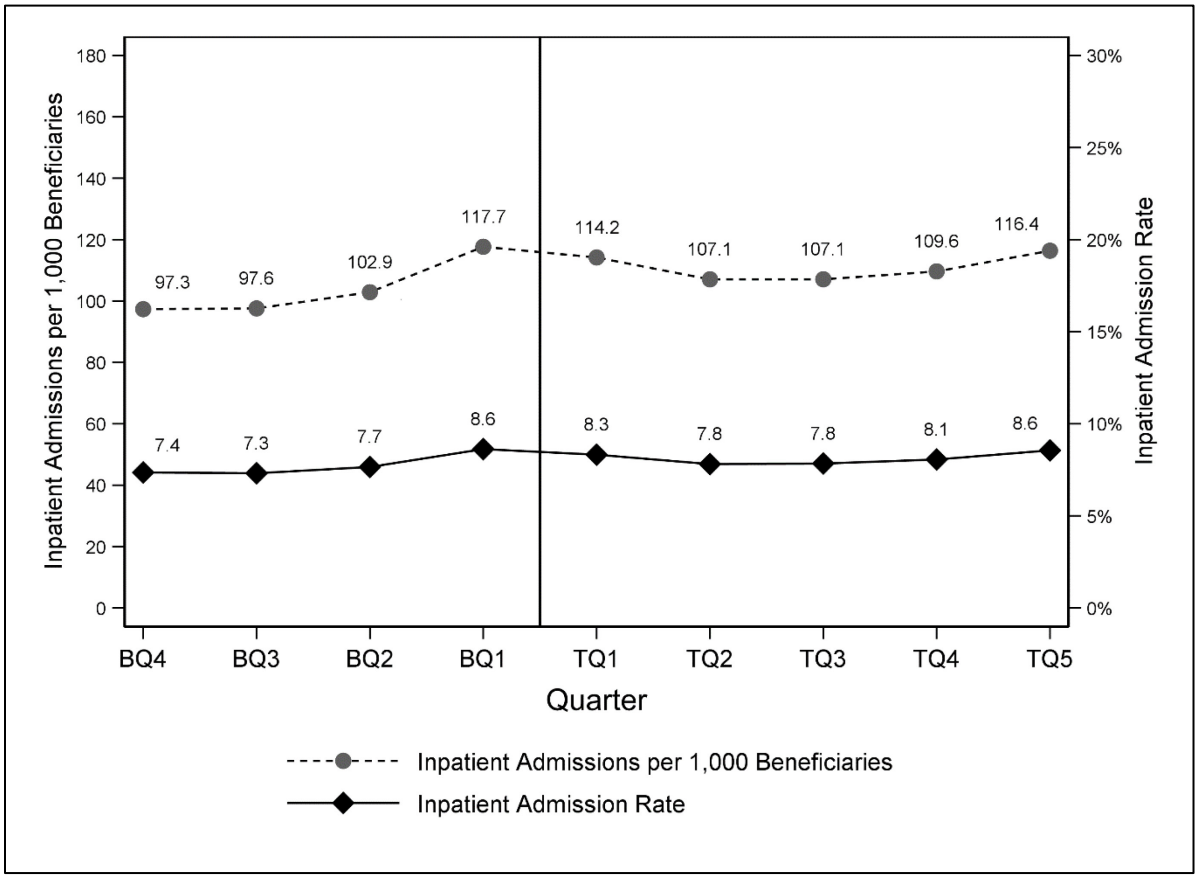
Health Service Utilization

Measures of inpatient admissions and ER visits were generally stable, with some cross-sponsor variation.

Health service utilization was generally consistent over the five quarters after beneficiaries became eligible for Enhanced MTM. Figure 2.4 and Figure 2.5 plot the number of inpatient admissions per 1,000 beneficiaries (average IP utilization) and the proportion of beneficiaries who had at least one inpatient admission (inpatient admission rate) by quarter, for the Model as a whole (Figure 2.4), and also separately by sponsor (Figure 2.5). Similarly, Figure 2.6 and Figure 2.7 plot the number of ER visits per 1,000 beneficiaries (average ER utilization) and the proportion of beneficiaries who had at least one ER visit (ER visit rate) by quarter, for the Model as a whole (Figure 2.6), and also by sponsor (Figure 2.7). SilverScript/CVS is by far the largest sponsor, so Model-wide plots closely follow the evolution in health utilization measures for that sponsor.

Utilization for both inpatient admissions and ER visits was stable across quarters for the Model as a whole, though there is some cross-sponsor variation. The quarterly inpatient admission rate is about eight percent across sponsors, and average IP utilization is around 107 admissions per 1,000 beneficiaries per quarter, with some cross-sponsor differences. ER visits are more variable. Model-wide, the quarterly ER visit rate is around 13 percent and average ER utilization is around 187 visits per 1,000 beneficiaries, but both measures are lower for BCBS FL and somewhat higher for BCBS NPA and Humana. For most sponsors there is a slight increase for both inpatient admissions and ER visits (reflected in both average utilization and service use rates) in the quarters around the start of Enhanced MTM eligibility. This trend may partly reflect eligibility triggered by transitions of care events (BCBS FL, Humana, and UHG), new diagnoses resulting in Enhanced MTM eligibility, or new prescriptions upon discharge leading to Enhanced MTM eligibility. In addition, for some sponsors there is a gradual fall and subsequent rise in health service use following eligibility for Enhanced MTM, especially for inpatient admissions, but also, to a smaller extent, for ER visits. This might reflect seasonality in health service utilization, as large numbers of beneficiaries became eligible for Enhanced MTM programs at the start of the Model, in the early months of 2017.

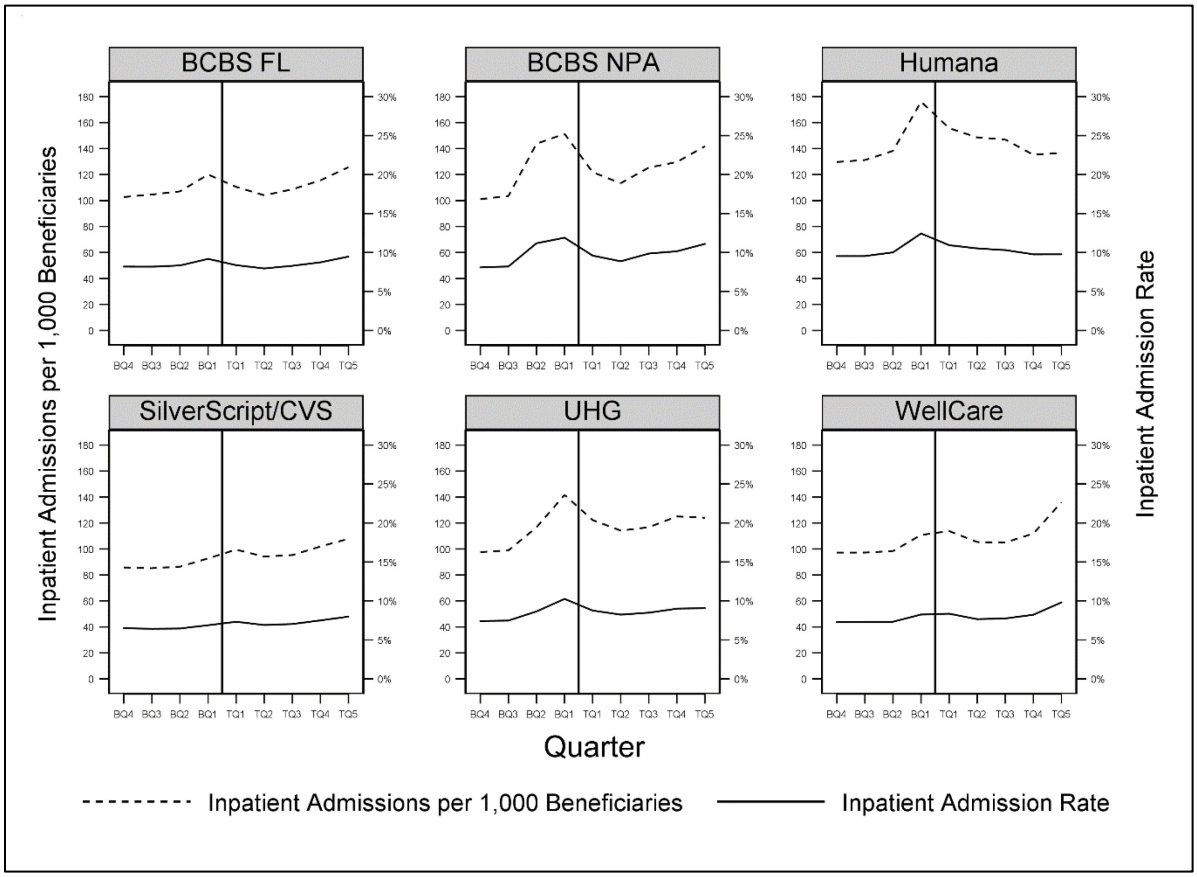
Figure 2.4: Inpatient Admissions, Enhanced MTM-eligible Population, Model-level, Pre- and Post-eligibility for Enhanced MTM



Source: Common Working File (CWF), accessed August 2018.

Note: BQ: Pre-Enhanced MTM eligibility Quarter; TQ: Post-Enhanced MTM eligibility Quarter. The first month of Enhanced MTM eligibility is not included in pre- or post-Enhanced MTM eligibility quarters.

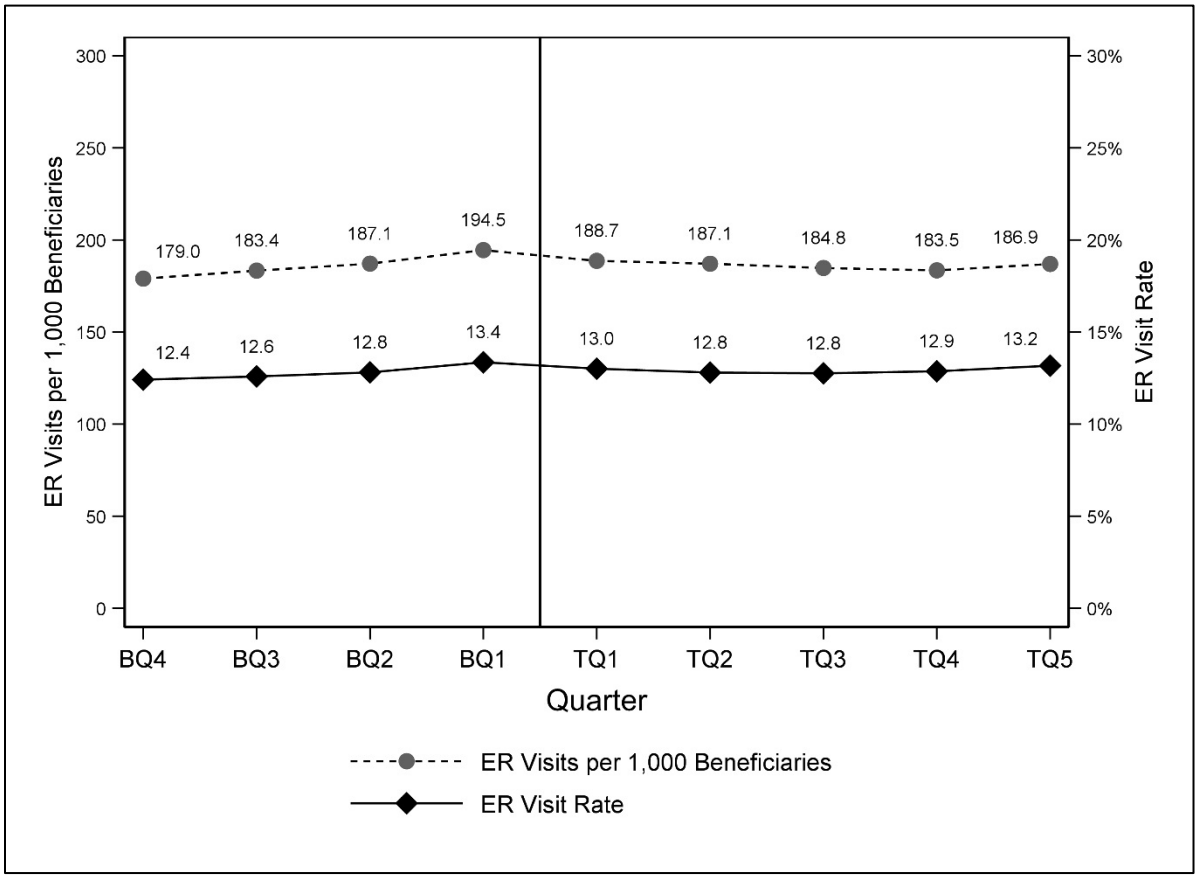
Figure 2.5: Inpatient Admissions, Enhanced MTM-eligible Population, Sponsor-level, Pre- and Post-Eligibility for Enhanced MTM



Source: Common Working File (CWF), accessed August 2018.

Note: BQ: Pre-Enhanced MTM eligibility Quarter; TQ: Post-Enhanced MTM eligibility Quarter. The first month of Enhanced MTM eligibility is not included in pre- or post-Enhanced MTM eligibility quarters.

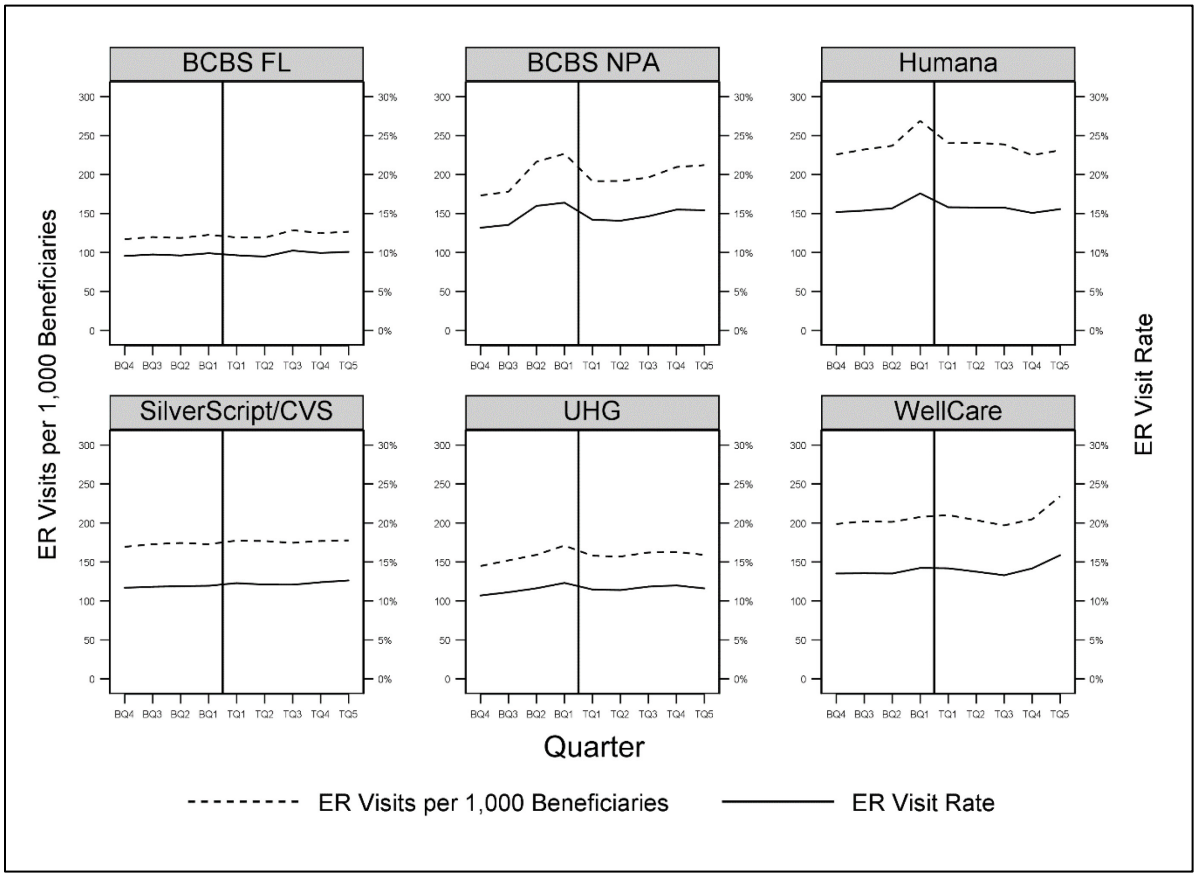
Figure 2.6: ER Visits, Enhanced MTM-eligible Population, Model-level, Pre- and Post-eligibility for Enhanced MTM



Source: Common Working File (CWF), accessed August 2018.

Note: BQ: Pre-Enhanced MTM eligibility Quarter; TQ: Post-Enhanced MTM eligibility Quarter. The first month of Enhanced MTM eligibility is not included in pre- or post-Enhanced MTM eligibility quarters.

Figure 2.7: ER Visits, Enhanced MTM-eligible Population, Sponsor-level, Pre- and Post-eligibility for Enhanced MTM



Source: Common Working File (CWF), accessed August 2018.
Note: BQ: Pre-Enhanced MTM eligibility Quarter; TQ: Post-Enhanced MTM eligibility Quarter. The first month of Enhanced MTM eligibility is not included in pre- or post-Enhanced MTM eligibility quarters.

Expenditures

Medical and drug expenditures were also generally stable.

Total Parts A and B (medical) expenditures and Total Part D (pharmaceutical) expenditures show a similar pattern to inpatient admissions and ER visits, as expected. Figure 2.8 and Figure 2.9 plot the mean and 90th percentile of total quarterly medical expenditures per beneficiary over time for the Model as a whole and by sponsor, starting from the fourth quarter prior to Enhanced MTM eligibility. Similarly, Figure 2.10 and Figure 2.11 plot the mean and 90th percentile of quarterly pharmaceutical expenditures per beneficiary for the Model as a whole and also by sponsor. The 90th percentiles reflect the costliest

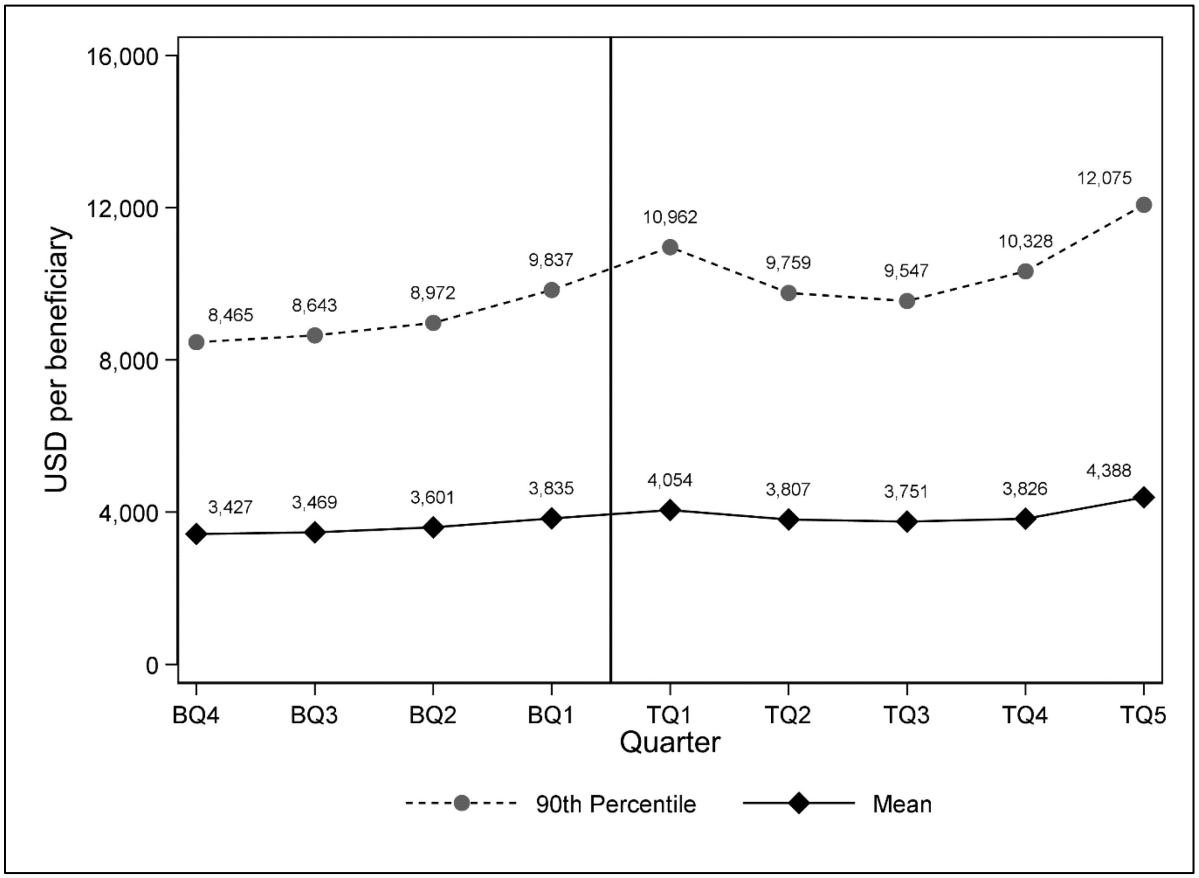
beneficiaries, who account for a large proportion of annual Medicare spending,[52] and are therefore a key population for potential Model impact. Acumen will assess these Model impacts in future evaluation reports.

As shown in Figure 2.9 and Figure 2.11, mean quarterly medical and pharmaceutical expenditures do not vary considerably across sponsors or over time (about $4,000 per beneficiary in Parts A and B expenditures and $1,300 per beneficiary in Part D expenditures). There is more cross-sponsor variation in the 90th percentile of expenditure, which is lower for SilverScript/CVS and WellCare relative to other sponsors for medical expenditures, and higher for Humana for pharmaceutical expenditures. There is an upward trend in expenditures around the start of Enhanced MTM eligibility, which is more pronounced for medical (Medicare Parts A and B) spending than for drug (Medicare Part D) spending, and more discernible in the 90th percentile. Reflecting the evolution in service use measures, described above, the 90th percentile of expenditures follows a U-curve pattern (gradual fall and subsequent rise) following Enhanced MTM eligibility across all sponsors. This likely reflects seasonality in health service utilization and accompanying expenditure, as discussed above.

The statistics presented in this section provide a description of cross-sponsor variation, as well as the evolution over time in key measures used by sponsors to determine beneficiary eligibility for Enhanced MTM services. As mentioned above, these statistics are descriptive and do not reflect the causal effect of the Model, since they do not compare the evolution in these key measures among Enhanced MTM beneficiaries with the evolution in the same measures among a comparison cohort not exposed to Enhanced MTM. Future reports will assess the impact of Enhanced MTM eligibility on Medicare expenditures using difference-in-differences estimation.

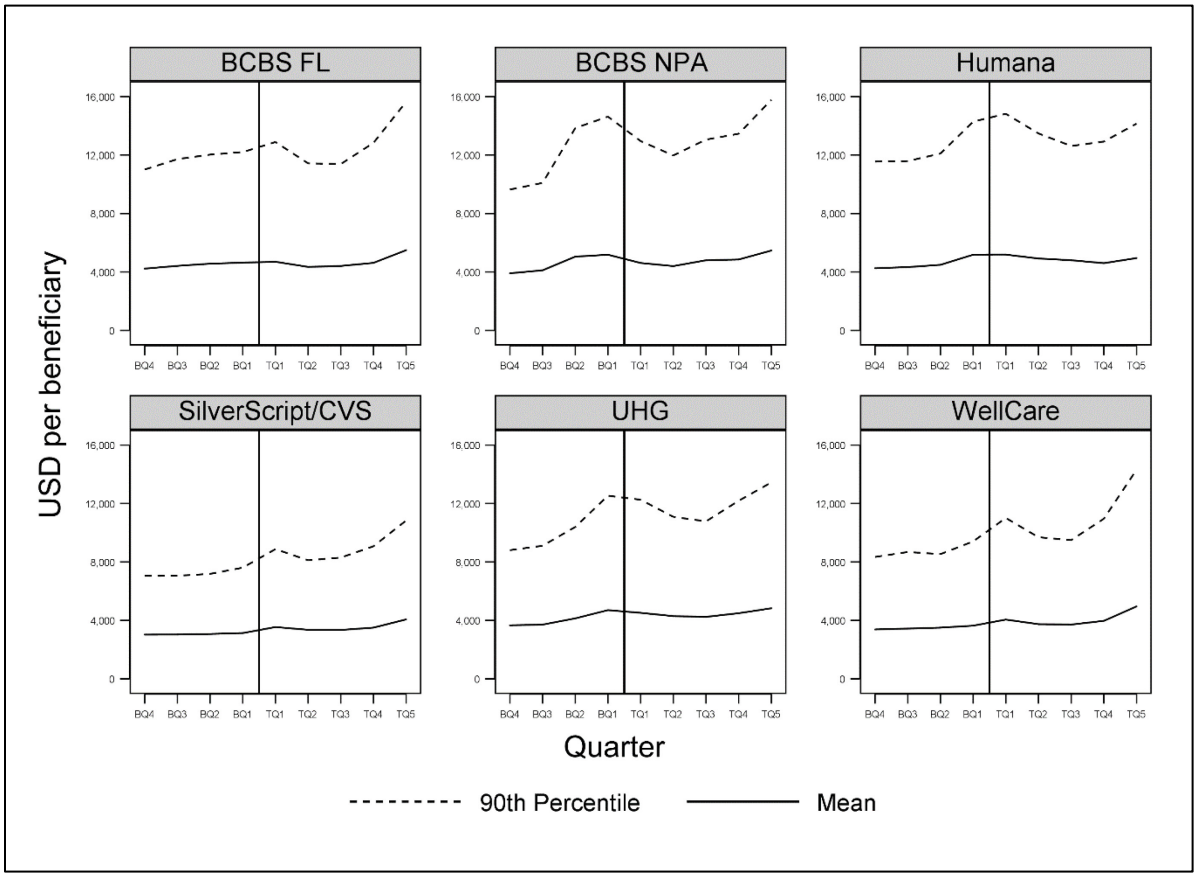
[52] "In 2013, the costliest 5 percent of beneficiaries accounted for 42 percent of annual Medicare FFS spending, and the costliest 25 percent accounted for 84 percent." Source: MedPAC, "A Data Book: Health Care Spending and the Medicare Program" (June 2018), http://www.medpac.gov/docs/default-source/data-book/jun18_databookentirereport_sec.pdf?sfvrsn=0

Figure 2.8: Total Parts A and B Expenditures per Beneficiary, Enhanced MTM-eligible Population, Model-level, Pre- and Post-eligibility for Enhanced MTM



Source: Common Working File (CWF), accessed August 2018.
Note: BQ: Pre-Enhanced MTM eligibility Quarter; TQ: Post-Enhanced MTM eligibility Quarter. The first month of Enhanced MTM eligibility is not included in pre- or post-Enhanced MTM eligibility quarters.

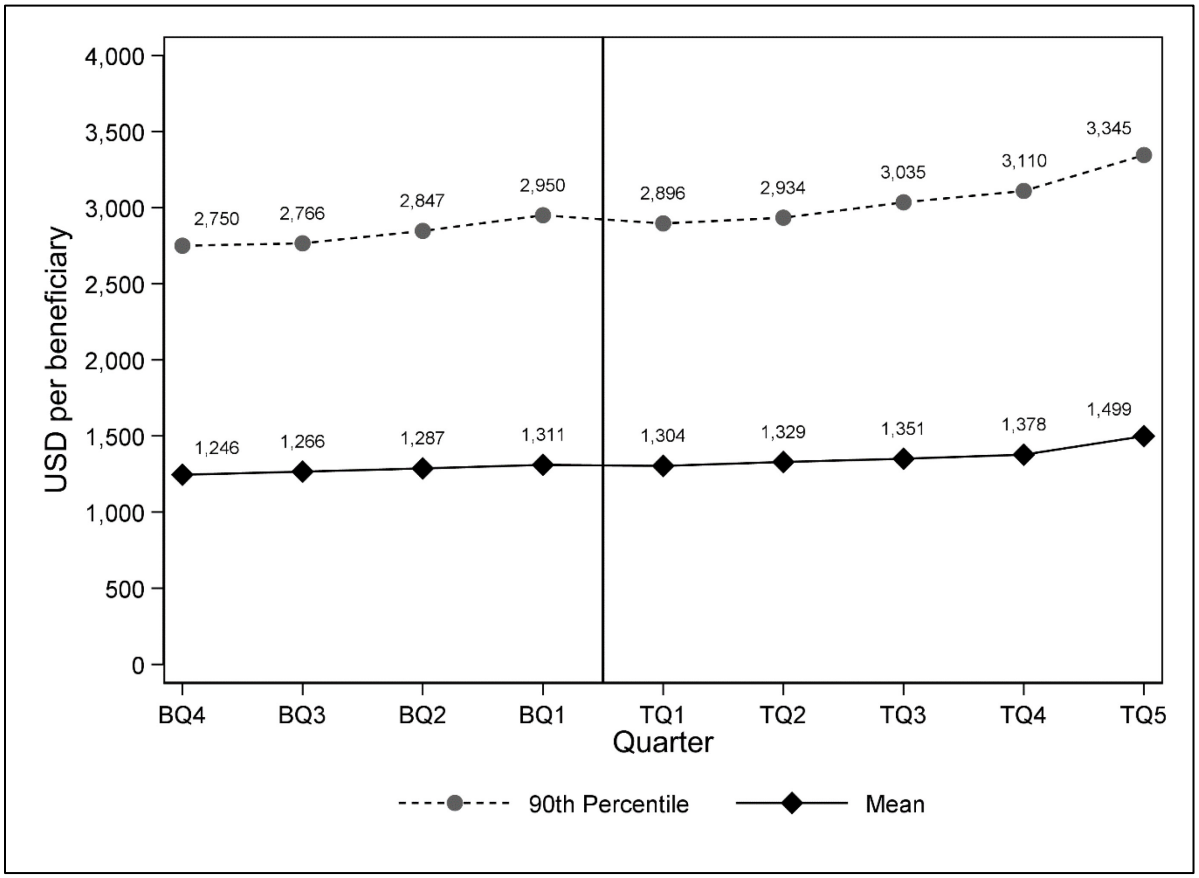
Figure 2.9: Total Parts A and B Expenditures per Beneficiary, Enhanced MTM-eligible Population, Sponsor-level, Pre- and Post-eligibility for Enhanced MTM



Source: Common Working File (CWF), accessed August 2018.

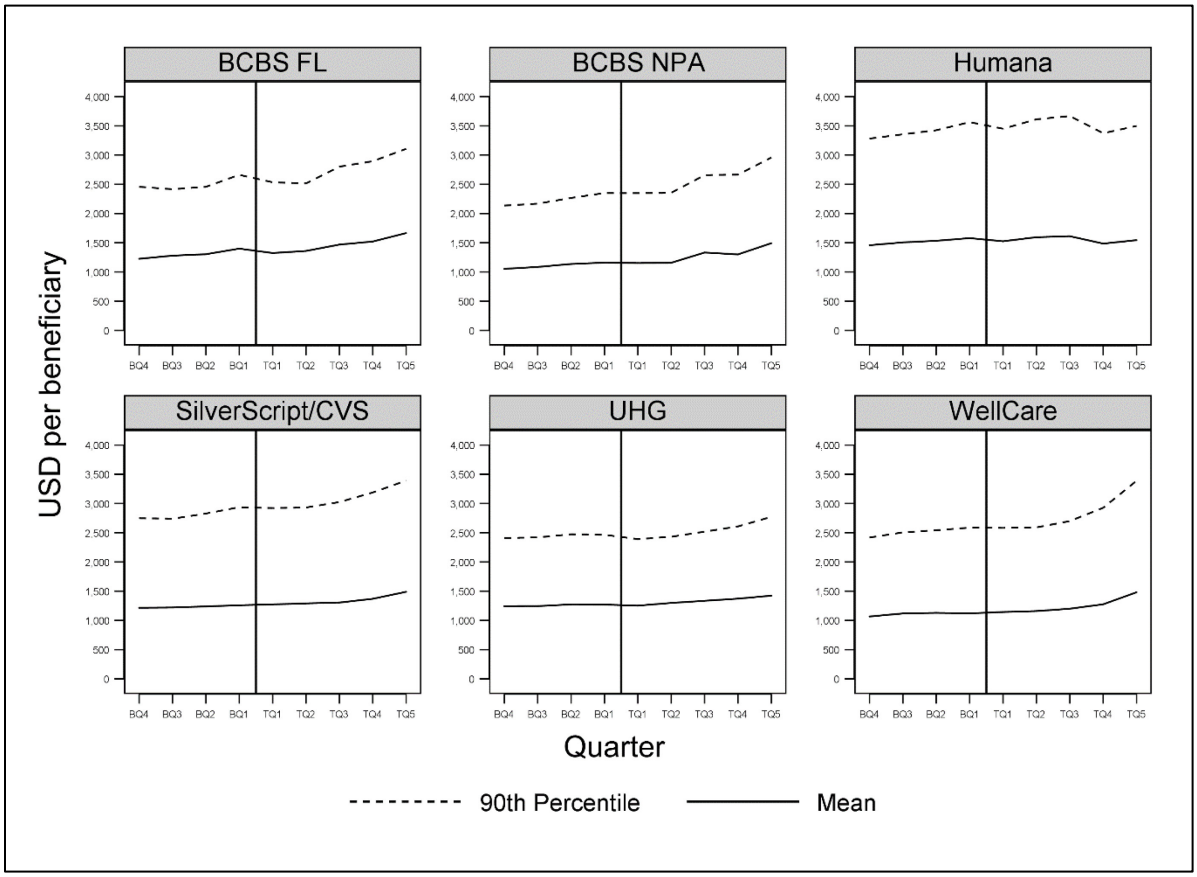
Note: BQ: Pre-Enhanced MTM eligibility Quarter; TQ: Post-Enhanced MTM eligibility Quarter. The first month of Enhanced MTM eligibility is not included in pre- or post-Enhanced MTM eligibility quarters.

Figure 2.10: Part D Expenditures per Beneficiary, Enhanced MTM-eligible Population, Model-level, Pre- and Post-eligibility for Enhanced MTM



Source: Part D Drug Event File (PDE), accessed July 2018.
Note: BQ: Pre-Enhanced MTM eligibility Quarter; TQ: Post-Enhanced MTM eligibility Quarter. The first month of Enhanced MTM eligibility is not included in pre- or post-Enhanced MTM eligibility quarters

Figure 2.11: Part D Expenditures per Beneficiary, Enhanced MTM-eligible Population, Sponsor-level, Pre- and Post-eligibility for Enhanced MTM



Source: Part D Drug Event File (PDE), accessed July 2018.

Note: BQ: Pre-Enhanced MTM eligibility Quarter; TQ: Post-Enhanced MTM eligibility Quarter. The first month of Enhanced MTM eligibility is not included in pre- or post-Enhanced MTM eligibility quarters

3 HOW DO SPONSORS DOCUMENT ENHANCED MTM ELIGIBILITY AND PROGRAM ACTIVITIES?

Key Finding: The flexibility of the Enhanced MTM Model, and participating sponsors' evolving experiences with new data reporting requirements, have driven substantial cross-sponsor variation in both the type of activities that are documented and the approach to documenting these activities.

The establishment and implementation of new Enhanced MTM data reporting requirements represents another area of innovation within the Enhanced MTM Model. Documentation of Enhanced MTM eligibility and service provision provides sponsors and CMS the opportunity to track program activities and evaluate the Model. The flexibility of the Model and sponsors' evolving experiences resulted in significant differences across sponsors' data reporting practices.

As noted in Section 1 ("What is the Enhanced MTM Model?"), Enhanced MTM sponsors have two data reporting requirements that are directly relevant for the evaluation. First, sponsors are required to submit monthly Enhanced MTM eligibility data (via the Medicare Advantage Prescription Drug [MARx] system in Transaction Code [TC] 91 files) indicating which beneficiaries in their participating plans were eligible for Enhanced MTM services. Second, sponsors are also required to submit quarterly Encounter Data documenting the Enhanced MTM activities and services performed for eligible beneficiaries. These services are recorded using the Systematized Nomenclature of Medicine – Clinical Terms (SNOMED CT) coding scheme.

Unlike traditional MTM, the Enhanced MTM Model does not require provision of a uniform set of services to all eligible beneficiaries, and instead encourages sponsors to explore and innovate their services, targeting criteria, and service delivery approaches to improve outcomes. In this context, the use of SNOMED CT is expected to allow sponsors to capture and describe their various Enhanced MTM activities in a more comprehensive and flexible manner. Traditional MTM, in comparison, requires sponsors to submit only one beneficiary-level MTM program dataset that includes eligibility/enrollment data as well as service delivery and limited outcomes information, on an annual basis, using a standardized set of data fields determined by CMS (e.g., eligibility and opt-out dates, CMR offer and receipt indicators and corresponding dates, number of recommendations to prescribers). Traditional MTM does not require the use of SNOMED CT codes for encounter data documentation.

This section describes key findings related to sponsors' approaches in the documentation of beneficiary Enhanced MTM eligibility information via MARx, the use of SNOMED CT codes to record Enhanced MTM services in Enhanced MTM Encounter Data files, and the

interpretation of these data for evaluation purposes. These findings are based on communications with sponsors between January 2017 and August 2018, a review of Enhanced MTM eligibility data through June 2018, and a review of Enhanced MTM Encounter Data through December 2017, the end of Model Year 1.

3.1 How Did Sponsors Report Beneficiary Eligibility for Enhanced MTM Services?

Enhanced MTM sponsors are required to report which beneficiaries in their participating plans were deemed eligible for Enhanced MTM services, their eligibility start and Model departure dates, and reasons for Model departure, via the MARx system on a monthly basis starting with January 2017. Some sponsors made adjustments to their definition of beneficiary eligibility over the course of Model Year 1 based on CMS's guidance for MARx data reporting, and in some cases, also included beneficiaries who are not prioritized for service provision. Three key notes about sponsors' varying Enhanced MTM eligibility reporting practices and the content of these data are expanded on below.

Sponsors are required to submit monthly eligibility data via the Medicare Advantage Prescription Drug (MARx) system to document which beneficiaries from participating plans are eligible for or disenrolled from the Model.

(1) Not all beneficiaries reported as Model-eligible in MARx TC 91 files received outreach for an Enhanced MTM service.

CMS provided guidance on the type of beneficiaries who should be included in the monthly beneficiary-level eligibility data, and sponsors interpreted this guidance within the specific context of their various Enhanced MTM programs. For example, both BCBS NPA and WellCare determine beneficiary eligibility for their Enhanced MTM programs based on their targeting criteria, and then prioritize subsets of these eligible beneficiaries reported in MARx to actually receive Enhanced MTM services.[53] Thus, for some sponsors, the eligible beneficiaries reported in MARx represent a broader group that includes those who did not receive outreach, while for other sponsors, the eligible population reported in MARx represents only those who were targeted to receive a service.

[53] WellCare enrollees who are eligible but not prioritized for Enhanced MTM services receive a welcome letter and a quarterly newsletter.

(2) Some sponsors made adjustments to their definition of eligibility over the course of Model Year 1 based on CMS's guidance for MARx data reporting.

In early 2017, BCBS NPA included "buffer" beneficiaries in MARx eligibility submissions based on discussions with CMS. "Buffer" beneficiaries were eligible but not prioritized for Enhanced MTM services, and served as a reserve pool of individuals who might be targeted to receive services, based on their risk scores, and depending on the sponsor's capacity constraints. After further guidance from CMS, BCBS NPA removed those beneficiaries from the Model in later MARx submissions. Due to these irregularities, BCBS NPA advised the evaluation team to use their Enhanced MTM Encounter Data submission to identify eligible beneficiaries instead of the MARx data, and confirmed that the Encounter Data included all beneficiaries BCBS NPA deems eligible. Other sponsors (Humana and WellCare) also made adjustments to their definition of Enhanced MTM eligibility for the purposes of MARx data reporting over the course of Model Year 1, based on feedback from CMS.

(3) Because Enhanced MTM eligibility data submitted by sponsors to CMS via MARx do not contain program-specific eligibility information, the evaluation team has been working directly with sponsors to obtain this information.

Although most sponsors implement multiple Enhanced MTM programs and apply different beneficiary eligibility criteria for each program, sponsors are not required to document for which specific Enhanced MTM programs a beneficiary is considered eligible in the MARx data. Enhanced MTM services vary in type and intensity across the multiple programs offered by each sponsor, so the lack of program-level eligibility in MARx TC 91 files precludes using these files to determine the specific services for which each beneficiary is eligible. The evaluation team created separate tailored data requests to directly obtain this information from each sponsor. The Acumen team is using this information to improve our understanding of program-specific Enhanced MTM implementation, and to identify appropriate comparison groups that take into account program-specific targeting criteria for the evaluation of program impacts.

In summary, some sponsors have had to make adjustments to the way they report beneficiary eligibility in MARx TC 91 files over the first year of Model implementation, but practices have stabilized over time and these data are the main source of information on both inflows and outflows of Enhanced MTM-eligible beneficiaries. However, there remains cross-sponsor variation in how these data should be interpreted, especially in the context of numerous Enhanced MTM programs that offer services of varying intensity.

3.2 How Did Sponsors Document Enhanced MTM Activities in Encounter Data?

Participating sponsors are required to document Enhanced MTM activities using SNOMED CT codes.

An innovative aspect of the Enhanced MTM Model was the use of SNOMED CT codes to document Enhanced MTM encounters. Most participating sponsors started using SNOMED CT codes and developing their own coding processes for the first time. The flexibility offered by the Model, alongside the ability of SNOMED CT codes to capture detailed clinical content, resulted in substantial cross-sponsor variation in the use of SNOMED CT codes to document Enhanced MTM activities.

SNOMED CT functions as a structured language, using a defined terminology designed to capture and represent detailed clinical content for the purposes describing a broad range of healthcare-related activities and supporting information exchange across multiple healthcare settings. In comparison, classification systems such as the International Statistical Classification of Diseases and Related Health Problems (ICD) were designed to have tighter categorizations for documenting similar activities across different providers to support statistical analysis or billing.

The full SNOMED CT code set uses over 300,000 concepts, 779,000 descriptions, and 1.5 million relationships to describe a broad range of healthcare-related activities.[54] Nineteen hierarchies categorize the codes into more manageable groups. Stakeholder groups use these hierarchies to create "value sets" identifying the most important, highly used, or preferred SNOMED CT codes for specific purposes. Academy of Managed Care Pharmacy [AMCP], Pharmacy Quality Alliance [PQA], and the Pharmacy Health Information Technology [PHIT] Collaborative worked with CMS to create starter value sets that can be used to capture different Enhanced MTM activities.

The Model's inherent flexibility has led to latitude in how sponsors report Enhanced MTM activities in the Encounter Data.

Given the Model's flexibility, Encounter Data reporting guidelines are specifically designed to accommodate differences across sponsors in Enhanced MTM programs and services. The ability of the SNOMED CT code structure to describe and capture very detailed clinical content in a variety of ways also results in significant variation in how these codes can be used to depict similar clinical events. As a result, the Encounter Data structure does not require a standardized method to record different Enhanced MTM activities, nor does it contain a fixed set of specific SNOMED CT codes used to document these activities. Sponsors are encouraged, but not required, to use the Enhanced MTM starter value sets. Sponsors also have

[54] SNOMED International, "SNOMED CT Starter Guide" (2017). https://confluence.ihtsdotools.org/download/attachments/28742871/doc_StarterGuide_Current-en-US_INT_20170728.pdf?version=3&modificationDate=1501254629000&api=v2

the flexibility to use other SNOMED CT codes, or use a non-standardized ZZZZZ code option with an accompanying free-text description in cases where a suitable SNOMED CT code does not exist. CMS specified that sponsors should submit records in the Enhanced MTM Encounter Data for any of the following four categories of activities:[55]

(i) **Referral**: Identifies who referred the beneficiary to receive Enhanced MTM services

(ii) **Procedure:** Identifies what Enhanced MTM service or intervention a beneficiary received

(iii) **Issue:** Identifies the beneficiary's medication therapy issue

(iv) **Outcome:** Outlines the result of the Enhanced MTM intervention

Participating sponsors were provided with Enhanced MTM starter value sets containing a selection of suggested SNOMED CT codes corresponding to each category of activities listed above. Sponsors were not asked to explicitly identify the collection of records they used to capture Enhanced MTM activities associated with a single service delivery event (i.e., intervention),[56] nor to provide groupings of such records.[57]

Sponsors had varied approaches to document Enhanced MTM activities using SNOMED CT codes in the quarterly Enhanced MTM Encounter Data. Table 3.1 provides a high-level summary of key characteristics of sponsors' approaches for the use of SNOMED CT codes to document Enhanced MTM activities in Encounter Data. Some key findings on Encounter Data documentation practices are discussed below in three thematic areas: (A) implementation experiences, (B) documentation practices, and (C) coding processes and workflow.

[55] IMPAQ, "Enhanced MTM Encounter Data Companion Guide" (2017).

[56] Records related to the same service delivery event (e.g. CMR) for a beneficiary may include reasons for offering the service (e.g. specific health characteristics), findings uncovered during the service (e.g. harmful drug-drug interactions), recommendations made during the service (e.g., medication changes), or the beneficiary's decline of the service.

[57] Sponsors typically submit multiple records to describe a single intervention.

Table 3.1: Summary of SNOMED CT Coding Characteristics by Sponsor

SNOMED CT Coding Characteristics	Sponsor					
	BCBS FL	BCBS NPA	Humana	SilverScript /CVS	UHG	WellCare
Experience Coding Prior to Enhanced MTM Launch						✓
Coding Process Entirely Automated	✓	✓	✓		✓	✓
Multiple Internal Documentation Systems Used to Generate SNOMED CT codes	✓	✓		✓		✓
Use of ZZZZZ[a] Code	✓	✓			✓	

Note: ✓ denotes presence of the indicated SNOMED CT coding characteristic

[a] The ZZZZZ code was recommended by CMS for use in cases where a suitable SNOMED CT code does not exist, and, for each ZZZZZ code entry, sponsors submit an accompanying free-text description of the Enhanced MTM activity.

A) Implementation Experiences

Sponsors reported initial challenges in implementing SNOMED CT coding processes for their Enhanced MTM programs. Two key findings on implementation experiences are detailed below.

(1) Most sponsors had no experience using SNOMED CT codes to document MTM services prior to Enhanced MTM, and all sponsors reported investing significant resources into implementing SNOMED CT codes to document Enhanced MTM services.

WellCare was the only sponsor with prior experience using SNOMED CT codes to document MTM services. WellCare indicated that it had mapped certain drug therapy problems to SNOMED CT codes prior to Enhanced MTM, though the level of detail was not as extensive as that required for the Enhanced MTM Model. The remaining sponsors and their associated vendors undertook efforts to use SNOMED CT codes specifically for the Enhanced MTM Model. Regardless of prior experience, sponsors reported that they have invested significant time and resources to develop and execute internal systems to document Enhanced MTM services using SNOMED CT codes. Some sponsors also stated that the time and resources they had to devote to these data reporting requirements was more than expected. Upfront investments necessitated by the reporting requirements (e.g., implementing logic within their workflow systems to capture RxNorm[58] concept unique identifiers [RxCUIs] for identifying relevant drugs in

[58] RxNorm is a drug database system that includes standard names given to clinical drugs and drug delivery devices, while RxCUI is an identifier number that RxNorm uses to identify them.

Encounter Data) were made, and significant resources continue to be dedicated to ongoing reporting activities.

(2) Sponsors indicated that, in some cases, SNOMED CT codes did not provide enough granular information to differentiate between different types of Enhanced MTM services.

Sponsors reported that they are not easily able to document some of their Enhanced MTM services using SNOMED CT codes in Enhanced MTM Encounter Data, due to lack of existing SNOMED CT codes (e.g., in the case of financial or social support services or potential medication safety events) or inability of codes to distinguish nuances between services offered as part of the Model (e.g., CMRs for transitions of care services vs. other CMRs). Additionally, sponsors reported not being able to document all drugs or drug changes in Encounter Data, particularly for over-the-counter (OTC) therapies.

B) Documentation Practices

The types of Enhanced MTM activities reported and the approaches to documenting these in the Encounter Data varied widely among sponsors. Five key findings on documentation practices are discussed below.

(1) The way SNOMED CT codes were used to document Enhanced MTM activities varied by sponsor and evolved over the first year of Model implementation.

Sponsors used between 27 to 889 distinct SNOMED CT codes to document Enhanced MTM activities.

Table 3.2 shows the number of distinct codes used by each sponsor for each quarter of Model Year 1, which reflects the variation in Encounter Data coding practices both across sponsors and over time. The total number of distinct codes used in Model Year 1 varied substantially across sponsors, ranging from 27 codes for SilverScript/CVS to 889 for BCBS FL, indicating that each sponsor used a very different approach and selection of codes to document its Enhanced MTM activities. Notably, BCBS FL used a substantially higher number of distinct codes in the first two quarters of 2017 than in the latter two quarters. Sponsors also reported plans to continuously review and update the SNOMED CT codes used to document current Enhanced MTM activities, and add/change codes as they modify or introduce new services.

Table 3.2: Number of All Distinct Codes used by Sponsors in 2017 Encounter Data

Sponsor	Count of Distinct Codes Used in 2017 Encounter Data				
	Q1	Q2	Q3	Q4	Q1-Q4 (Total)
BCBS FL	638	639	160	184	889
BCBS NPA	135	134	126	122	158
SilverScript/CVS	24	26	23	24	27
Humana	39	39	40	40	40
UHG	17	20	44	41	50
WellCare	222	259	256	244	283
All Sponsors	***949***	***977***	***500***	***509***	***1,268***

Source: Enhanced MTM Encounter Data through June 2018, received from the Implementation Contractor in October 2018.

(2) Half of the sponsors used the generic "not otherwise coded" ZZZZZ code (with an accompanying free-text description) in addition to existing SNOMED CT codes to document Enhanced MTM activities.

BCBS FL, UHG, and BCBS NPA used the ZZZZZ code with varying frequency. Table 3.3 shows the number and percentage of records appearing in 2017 Enhanced MTM Encounter Data with a ZZZZZ code for each sponsor. Notably, BCBS FL and BCBS NPA used the ZZZZZ code to document a substantial proportion of their Enhanced MTM activity records (24.9 and 21.3 percent, respectively, in 2017). Both BCBS FL and BCBS NPA reported using the ZZZZZ code to document services to address beneficiary financial and social support needs, respectively. Additionally, BCBS NPA and UHG used ZZZZZ codes to document situations where an intervention with a beneficiary addressed the *perceived* or *potential* risk of a medication safety event instead of an actual event (e.g., using a ZZZZZ code for a potential drug-drug interaction, and using the SNOMED CT code for an actual drug-drug interaction).

WellCare, Humana, and SilverScript/CVS indicated that their approach was to "fit" their Enhanced MTM activities into existing SNOMED CT codes, and that the starter value sets provided by CMS captured their Enhanced MTM activities. WellCare, however, used SNOMED CT codes outside of the starter value set recommended by CMS to capture information related to education and lifestyle factors (e.g., diet, exercise, tobacco use), which WellCare particularly emphasized as part of its CMR.

Table 3.3: Use of "Not Otherwise Coded" ZZZZZ Codes in Encounter Data by Sponsor, 2017

Sponsor	Number of Records with ZZZZZ Code	Proportion of Records with a ZZZZZ Code
BCBS FL	20,030	24.9%
BCBS NPA	214,966	21.3%
SilverScript/CVS	0	0.0%
Humana	0	0.0%
UHG	57,131	13.4%
WellCare	4	0.0%
All Sponsors	***292,131***	***5.3%***

Source: Enhanced MTM Encounter Data through June 2018, received from the Implementation Contractor in October 2018.

(3) There is significant cross-sponsor variation in defining and documenting the collection of SNOMED CT codes associated with a single service delivery event.

Most sponsors use multiple records in Encounter Data to capture Enhanced MTM activities related to a single service delivery event for a given beneficiary instead of a single record. For example, for the delivery of a CMR, related activities could include an offer of the CMR service (e.g. eligibility notification or referral), receipt or decline of the CMR service, reasons for the CMR service (e.g. specific health characteristics), and resulting outcomes or recommendations (e.g. recommendation to a prescriber to make medication changes), etc. The choice of related activities that are reported, and the codes and number of line records used to capture them varies significantly across sponsors. Humana, for example, uses two to four line records that can be reorganized to form a string of codes ordered from "reason" to "action" to "result" and capture each service delivery event. In Humana's 2017 data, service delivery events were characterized by 47 combinations of reasons/actions/results. In contrast, there are more than 12,000 combinations in WellCare's 2017 Encounter Data and more than 16,000 combinations in BCBS NPA's 2017 Encounter Data. Large numbers of combinations typically reflect a sponsor's attempt to code multiple reasons or problems associated with the beneficiary. These differences in coding and coding combinations affect the size and structure of the Encounter Data files submitted by each sponsor.

(4) For most sponsors, beneficiaries in the Model Year 1 Encounter Data represented a subset of their respective Enhanced MTM-eligible populations reported in MARx, and not all beneficiaries in the Encounter Data received a significant Enhanced MTM service.

Not all records in the Encounter Data correspond to a CMR or TMR-type service, or a new service (such as a medication refill reminder) offered by Enhanced MTM. There are also records that simply refer to eligibility notifications or outreach communications. For example, BCBS NPA, WellCare, SilverScript/CVS, and UHG document records of initial outreach activities (e.g., notification to beneficiaries of their program eligibility, MTM program information dissemination) in addition to records that reflect actual service completion. In contrast, Humana's Encounter Data only includes records for completed Enhanced MTM services, where each completed service has (i) an encounter date, (ii) reason for the service, (iii) action, and (iv) result.

The evaluation team defined "significant services" for a given sponsor as services other than outreach communications or eligibility notifications (e.g., CMR and TMR-type services, as well as additional services such as refill reminders and medication adherence education). To identify these significant services, the evaluation team selected codes appearing in each sponsor's Encounter Data that mapped to relevant descriptions.[59]

Across sponsors, the proportion of all Enhanced MTM-eligible beneficiaries with at least one record in the Encounter Data was 65.8 percent, whereas the proportion of eligible beneficiaries with at least one record indicating receipt of a significant service was 44.6 percent. Table 3.4 below shows that for SilverScript/CVS and WellCare, a much smaller share of beneficiaries in Encounter Data received a significant service, reflecting that a large share of records capture broader outreach activities or beneficiary eligibility notifications.

[59] Because each sponsor uses a unique set of codes to document their varied Enhanced MTM services and activities in the Encounter Data, the evaluation team separately reviewed the set of SNOMED codes used by each sponsor and the standardized text description to which it mapped. In cases where sponsors used the ZZZZZ code with non-standardized free-text description, the evaluation team reviewed the text descriptions to interpret what the encounter represented.

Table 3.4 also shows significant variation across sponsors in the proportion of Enhanced MTM-eligible beneficiaries who appeared in Encounter Data, ranging from 17.2 percent for Humana to 99.6 percent for WellCare. This variation likely reflects cross-sponsor differences in Encounter Data and MARx eligibility data reporting practices, and not necessarily variation in engagement rates, for three reasons. First, some sponsors only record successful engagements in Encounter Data while others also record both eligibility notifications and outreach. Second, some sponsors received guidance from CMS to record all targeted beneficiaries in MARx eligibility files even if sponsors later prioritized a subset of these beneficiaries for service provision (Section 3.1 provides details). Third, both MARx and Encounter Data reporting practices evolved over the course of Model Year 1 as sponsors adjusted to the Model's new data reporting requirements.

The share of Model-eligible beneficiaries reported in Encounter Data ranged from about 17 to close to 100 percent by sponsor, but this variation reflects differences in sponsors' data reporting practices rather than levels of beneficiary engagement.

Table 3.4: Enhanced MTM-Eligible Beneficiaries who had Any Record or at least one Significant Service Record in 2017 Encounter Data

Sponsor	Enhanced MTM-Eligible Beneficiaries in the Encounter Data with Any Record		Enhanced MTM-Eligible Beneficiaries with a Significant Service Record	
	Number of Beneficiaries	Proportion of Eligible Beneficiaries	Number of Beneficiaries	Proportion of Eligible Beneficiaries
BCBS FL	9,416	26.9%	8,606	24.6%
BCBS NPA[a]	51,743	100.0%	15,795	30.5%
SilverScript/CVS	523,812	72.0%	349,203	48.0%
Humana	38,066	17.2%	36,132	16.3%
UHG	83,707	87.6%	83,625	87.6%
WellCare	109,790	99.6%	58,869	53.4%
All Sponsors	***815,361***	***65.8%***	***551,851***	***44.6%***

Sources: Enhanced MTM eligibility data in the Medicare Advantage and Prescription Drug Plan system (MARx), accessed in June 2018. Enhanced MTM Encounter Data through June 2018, received from the Implementation Contractor in October 2018.

[a] For BCBS NPA, the proportion of Enhanced MTM-eligible beneficiaries listed as appearing in Encounter Data is 100 percent by construction. Because of the irregular MARx data submission patterns and addition of buffer beneficiaries in early Model Year 1, as discussed in Section 3.1, BCBS NPA advised the evaluation team to use Encounter Data to define the Enhanced MTM-eligible population.

(5) There is cross-sponsor variation in capturing prescriber response to pharmacist recommendations via SNOMED CT codes.

Some sponsors explicitly capture prescriber response information – both refusal and acceptance of recommendations – in their respective workflow systems and also map this information to SNOMED CT codes reported in Enhanced MTM Encounter Data, except when the prescriber cannot be reached or does not respond. Other sponsors (i) capture prescriber refusals of recommendations in their workflow systems and Encounter Data, (ii) capture prescribers' refusals in their workflow system but not in Encounter Data, or (iii) do not capture/track provider refusals/acceptance at all. As a result, Encounter Data cannot be used to track responses from prescribers to recommendations made by Enhanced MTM service providers for all sponsors, which limits the ability to assess overall levels and trends in prescriber engagement over the course of Model implementation.

C) Coding Processes and Workflow

Sponsors used internal documentation systems for the Enhanced MTM Model to integrate SNOMED CT coding in Encounter Data within existing workflows. Three key findings on coding processes and workflow are described below.

(1) All sponsors used automated or standardized processes to map fields from workflow and documentation systems to pre-determined sponsor-specific SNOMED CT codes.

In general, SNOMED CT codes were linked to certain aspects of the workflow steps associated with an Enhanced MTM service, as well as pharmacist findings or recommendations from a consultation or service. All sponsors, except SilverScript/CVS, used an automated approach where fields in the electronic system(s) that are used to conduct and document Enhanced MTM services map to pre-determined SNOMED CT codes. Though SilverScript/CVS's approach does not involve directly linking service workflow steps to SNOMED CT codes through an automated process, SilverScript/CVS uses a standardized mapping list to convert encounter descriptions that are exported from workflow systems to SNOMED CT codes. Sponsors reported implementing standardized or automated approaches in an effort to ensure consistent application of SNOMED CT codes across the Enhanced MTM program, and also to reduce burden and variation in coding among frontline staff.

(2) Some sponsors used multiple documentation systems for Enhanced MTM activities, each of which was unique and had its own approach for linking SNOMED CT codes to these activities for Encounter Data reporting, creating potential for cross-system coding differences across programs.

Humana and UHG each used one documentation system that generated SNOMED CT codes for Encounter Data in Model Year 1, with the goal of using a consistent approach to applying SNOMED CT codes for all beneficiaries who received services. BCBS NPA and BCBS FL also each used a single documentation system for all their Enhanced MTM services, except for financial and social support services. Finally, both WellCare and SilverScript/CVS had multiple documentation systems that fed SNOMED CT codes into their Enhanced MTM Encounter Data. WellCare implemented a centralized approach and undertook efforts to ensure alignment and consistency of SNOMED CT coding approaches across vendors, and SilverScript/CVS similarly performed its SNOMED mapping across its four separate systems through a centralized process. Each of these documentation systems was unique to each sponsor and vendor.

(3) Community pharmacies for some sponsors may not be fully documenting Enhanced MTM services in the Enhanced MTM Encounter Data.

During site visits, some community pharmacists indicated that they may not always document all the Enhanced MTM services they provide, particularly those that are in-person or require brief consultations, due to challenges related to busy pharmacy workflows and barriers in using existing pharmacy systems for completing Enhanced MTM-specific documentation. Enhanced MTM Encounter Data may therefore underestimate all Enhanced MTM services received by beneficiaries, especially for those sponsors with a substantial community pharmacy component.

In summary, most participating sponsors started using SNOMED CT codes and developing their own coding processes for the first time for the Model. Sponsors had flexibility in using the codes to document for Enhanced MTM services. While CMS encouraged sponsors to use a standardized starter SNOMED CT code set to document services, some sponsors used additional codes outside of this starter set as well as the free-text ZZZZZ code option to document a significant portion of their encounters. The ability of SNOMED CT codes to capture very detailed clinical content also results in variation in how they can be used to depict similar MTM events across sponsors. Thus, there is lack of uniformity in the approach to documenting Enhanced MTM activities in the Encounter Data across sponsors by design, which complicates cross-sponsor comparisons. Encounter Data analyses require careful review of the patterns in the

data combined with an understanding of the workflow and on-the-ground approach of how each sponsor applied the SNOMED codes. The structure of the Encounter Data also makes drawing comparisons with traditional MTM service provision difficult, and poses challenges for the interpretation of the data. For example, it is not straightforward to compute the total number of CMRs that have been provided under the Model.[60] In addition, CMR completion rates do not carry the same meaning as in the context of traditional MTM, because not all beneficiaries eligible for Enhanced MTM are eligible for CMRs.

A review of Encounter Data and MARx eligibility data submitted by sponsors in Model Year 1 shows that there is significant variation in the proportion of Enhanced MTM-eligible beneficiaries who appeared in Encounter Data. When aggregated across sponsors, less than two thirds of the overall Enhanced MTM-eligible population appeared in the Encounter Data. However, this likely reflects cross-sponsor differences in data reporting practices rather than variation in engagement rates, because (i) some sponsors only record successful engagements in Encounter Data; (ii) some sponsors received CMS guidance to record all targeted beneficiaries in MARx eligibility files even if sponsors later prioritized a subset of these beneficiaries for service provision; and (iii) data reporting practices evolved over the course of Model Year 1.

[60] It is not sufficient to count the occurrences of CMR-related codes in the Encounter data, because some sponsors use CMR-related codes to document a failed contact attempt, so it is necessary to first group records that relate to a single service delivery event, and then remove events that include a code related to a failed contact attempt.

4 HOW DID MODEL IMPLEMENTATION PROGRESS ACROSS THE FIRST 20 MONTHS?

Key Finding: The implementation of the Enhanced MTM Model progressed largely as planned, with some engagement-related challenges for sponsors. There is generally high satisfaction among the Enhanced MTM workforce, and beneficiaries have mostly positive perceptions of Enhanced MTM services.

Enhanced MTM Model implementation during the first 20 months has progressed largely as planned with a few limited exceptions, and both beneficiaries and the Enhanced MTM workforce have generally positive perceptions of Enhanced MTM. Challenges with the Model primarily related to engaging beneficiaries, prescribers, and community pharmacists in Enhanced MTM, and expeditiously identifying beneficiaries who experience a transition of care so these beneficiaries can receive an Enhanced MTM service in a timely manner. There is generally high satisfaction among the Enhanced MTM workforce, and beneficiaries have mostly positive perceptions of Enhanced MTM services.

This section describes cross-cutting themes regarding Enhanced MTM Model implementation during the first 20 months that span Model Years 1 and 2 (January 2017 – August 2018), including discussions of key successes and challenges with implementing Enhanced MTM programs from the perspective of three stakeholders:

- Section 4.1: What Were Sponsors' Perspectives about Enhanced MTM Model Implementation?
- Section 4.2: What Were the Perspectives of the Enhanced MTM Workforce about Model Implementation?
- Section 4.3: What Were the Perspectives of Beneficiaries about the Enhanced MTM Model?

4.1 What Were Sponsors' Perspectives about Enhanced MTM Model Implementation?

Collecting sponsor perspectives on Enhanced MTM Model implementation reveals cross-cutting themes related to the pragmatic experience of operationalizing the Model, highlighting success factors that may have implications for future improvements, or that represent common challenges in program operations. This section provides an overview of thematic findings across

sponsors related to Enhanced MTM program implementation, including key milestones, challenges, successes, and lessons learned across Model Years 1 and 2, based on a review of sponsors' Enhanced MTM program documents as well as in-depth interviews with sponsors.[61]

Enhanced MTM Model implementation proceeded largely as planned. For sponsors, key challenges centered on providing timely services to beneficiaries experiencing a transition of care; engaging beneficiaries; engaging prescribers; and leveraging community pharmacies for Enhanced MTM service delivery.

In general, sponsors operationalized their Enhanced MTM targeting without difficulty, except for transitions of care programs, which encountered issues related to the timely availability of discharge data. Sponsors experienced beneficiary engagement challenges and deployed a number of mitigation strategies. They also leveraged community pharmacies to conduct beneficiary outreach and service provision, particularly for beneficiaries that are hard to engage, and found that CMR service completion rates were lower than for traditional MTM.

These findings are discussed in more detail below, organized by the four thematic areas related to Enhanced MTM programs' main structural elements, as outlined by Table 2.2 (see Section 2, "What Were the Characteristics of the Enhanced MTM Programs?"):

- Section 4.1.1: Enrollment and Targeting
- Section 4.1.2: Beneficiary Outreach and Engagement
- Section 4.1.3: Services and Programs
- Section 4.1.4: Prescriber Outreach and Engagement

4.1.1 Enrollment and Targeting

Sponsors' thoughts about the implementation of Enhanced MTM enrollment and targeting are summarized in two main points.

(1) Overall, beneficiary targeting for the Enhanced MTM Model was implemented as planned.

Most sponsors conducted initial beneficiary targeting for Model Year 1 early in the year and continued routine targeting throughout Model Year 2. In Model Year 1, sponsors with new vendor partners generally experienced minor delays in setting up data-sharing

[61] Findings presented in this section are based on a review of sponsor applications, supplemental application materials, materials from CMS presentations, Internal Learning Systems records, and additional information provided by sponsors or vendors, as well as in-depth telephone or in-person interviews conducted between November 2016 and August 2018.

systems or processes. Similar delays did not occur in Model Year 2, since most sponsors did not significantly change their existing vendor relationships.

There were two instances where sponsors did not implement program targeting as planned. SilverScript/CVS was unable to operationalize its Readmission Prevention program targeting due to data access issues and inability to set up referral systems/data feeds with hospitals and health systems. Also, BCBS NPA postponed its plan to target low-risk beneficiaries with high medical costs, because it had not yet concluded its own internal analyses aiming to understand how best to serve this sub-population.

(2) Sponsors encountered challenges with providing timely Enhanced MTM services to beneficiaries experiencing a transition of care.

Three sponsors (UHG, Humana, BCBS FL) offering transitions of care programs attempt to identify and intervene with beneficiaries immediately after a discharge, to prevent adverse events that may result from medication management issues during transitions of care. Sponsors noted that the time lag associated with using medical claims data to trigger transitions of care interventions was too long to allow for a timely intervention, since they receive medical claims data from CMS on a monthly basis and well after the care transition happened. As a result, sponsors have explored other strategies. UHG uses a predictive algorithm based on Part D data to identify beneficiaries who are likely to have been discharged from the hospital, and BCBS FL uses ADT feeds from its state HIE to identify beneficiaries discharged from the hospital and the ER. Humana's pilot to use ADT feeds was its most successful approach to identifying and intervening with transitions of care beneficiaries in a timely manner compared to its past approaches (community pharmacies and CMS medical claims data). As a result, Humana is currently exploring mechanisms to scale this targeting approach.

4.1.2 Beneficiary Outreach and Engagement

Sponsors' perspectives about beneficiary outreach and engagement are summarized in four key points that highlight challenges in these areas and sponsor efforts to address them.

(1) Enhanced MTM targets more beneficiaries who are younger and eligible for low-income subsidy (LIS) relative to traditional MTM, and sponsors have found these beneficiaries more difficult to engage.

Some sponsors indicated that their Enhanced MTM programs serve larger volumes of auto-enrolled LIS beneficiaries, who have been more difficult to engage, beyond the challenges with contact information discussed below. Some sponsors indicated they are learning about the LIS beneficiary population and exploring strategies to engage LIS beneficiaries who have been difficult to reach or uninterested in Enhanced MTM

services.[62] Additionally, some sponsors reported that their new targeting parameters deployed for Enhanced MTM have resulted in a target population with a larger number of younger Medicare beneficiaries who may be less engaged in their health care and more skeptical about the benefits of Enhanced MTM, as opposed to traditional MTM enrollees.[63] Sponsors generally noted that engagement levels in Model Year 2 among beneficiaries who received services in Model Year 1 have been high since these beneficiaries are familiar with the program and understand the value of Enhanced MTM.

(2) Inaccurate or incomplete beneficiary contact information and beneficiary concerns about "scams" have been an outreach challenge.

Multiple sponsors noted that there were challenges with obtaining accurate beneficiary contact information. In more cases than expected, their internal beneficiary information is outdated or incorrect, which impeded efforts to reach and engage beneficiaries. Some sponsors attributed this to LIS beneficiaries auto-assigned to their PDPs, since these beneficiaries' contact information tends to change frequently and the sponsors do not necessarily receive updates. Though there has not been a significant influx of LIS beneficiaries into the participating plans after Enhanced MTM implementation began, some sponsors indicated that their Enhanced MTM targeting results in a larger number of LIS beneficiaries being eligible for Enhanced MTM relative to traditional MTM. Sponsors also reported engagement challenges related to beneficiary concerns about "scams" when they receive outreach from a sponsor or vendor. Sponsors have deployed strategies such as attempting to obtain accurate beneficiary contact information from physicians or community pharmacies, and incorporating text into outreach scripts about ways the beneficiary can validate the authenticity of communication, in an effort to address some of these challenges.

(3) Sponsors are deploying multiple strategies to improve beneficiary engagement.

In addition to the strategies noted above, sponsors are testing and using multiple approaches to address general beneficiary engagement challenges. These include using specially-trained staff, who are considered experts in beneficiary engagement, to conduct beneficiary outreach and encourage beneficiaries to accept Enhanced MTM services;

[62] Sponsors are referring to the number of eligible beneficiaries with LIS status being larger for Enhanced MTM than for their traditional MTM programs. While the proportion of eligible beneficiaries with LIS status is generally smaller for Enhanced MTM compared to traditional MTM (see Section 2.1.3 on Beneficiary Enrollment and Characteristics), the actual number of LIS beneficiaries in the Enhanced MTM-eligible population for a given sponsor tends to be larger than in their MTM-eligible population, because the overall Enhanced MTM-eligible population is significantly larger.

[63] Although the average age of eligible beneficiaries is generally similar to or higher for Enhanced MTM than for traditional MTM (see Section 2.1.3), the number of younger Medicare beneficiaries (e.g. under age 74) who are eligible for Enhanced MTM is larger for a given sponsor than its previous traditional MTM population.

providing services at the same time as the beneficiary outreach call; and training staff in Motivational Interviewing (MI).[64]

(4) Community pharmacies can be useful with beneficiary outreach, particularly for those beneficiaries who are hard to engage, but there are challenges associated with involving community pharmacies in Enhanced MTM.

Both UHG and BCBS NPA assign a beneficiary to community pharmacies for outreach if the beneficiary is either not responsive to call center outreach or unreachable due to inaccurate or missing contact information, based on the premise that community pharmacies are better able to leverage their relationships with these beneficiaries to promote beneficiary engagement.

Despite this premise, sponsors reported limitations with the community pharmacy model, which include the following:

(i) sponsors' inability to conduct reviews of beneficiary interventions to ensure that the delivery of interventions meets quality standards. These reviews are possible in call-center settings, where beneficiary interventions are recorded and periodically reviewed for quality. Moreover, sponsors are unable to impose strict oversight or rigorous training requirements on community pharmacies for practical reasons.

(ii) the lack of timely interventions, since community pharmacy staffing models and workflows do not typically incorporate time for Enhanced MTM service delivery activities.

(iii) the inconsistent documentation and billing of Enhanced MTM services, as community pharmacies may not reliably document services. Additionally, community pharmacies differ in their beneficiary outreach approaches, the staff involved in the Enhanced MTM service, and, in some cases, the content of the service.

4.1.3 Services and Programs

Three points below summarize sponsors' perspectives on Enhanced MTM services and programs, and highlight some implementation challenges and sponsors' efforts to address them.

(1) Sponsors with proposed cost-sharing assistance programs reported difficulties in setting up the workflows necessary for implementation.

Both BCBS FL and BCBS NPA included cost-sharing assistance in their planned Model Year 1 Enhanced MTM programs, but both reported challenges establishing the workflow structure to process and execute these programs. BCBS FL experienced

[64] Motivational Interviewing is a goal-oriented, person-centered counseling style for eliciting behavior change. Rollnick, S, Miller, WR. (1995). *What is Motivational Interviewing?* Behavioural and Cognitive Psychotherapy. 23: 325–334.

difficulty engaging eligible beneficiaries due to a narrow list of generic medications that qualify a beneficiary for co-pay waivers. BCBS NPA encountered challenges with time delays between identifying a beneficiary as a potential candidate for financial support and actually conducting outreach to the identified beneficiary to assess the specific support they should receive. BCBS NPA eventually decided to remove cost-sharing from its Model Year 2 Enhanced MTM program after being unable to operationalize the program in Model Year 1, due to challenges with establishing internal financial tracking processes.

(2) Some sponsors reported unexpected differences in Enhanced MTM service delivery length and completion rates relative to traditional MTM.

Some sponsors reported that CMR completion rates have not been as high as for traditional MTM, which sponsors indicated could be attributable to differences in targeting criteria.[65] A few sponsors also indicated that targeted beneficiaries were more medically complex than expected based on initial projections, resulting in a higher number of beneficiaries who qualified for more intensive Enhanced MTM services or services that took longer to complete than expected.[66] Sponsors dealt with these issues by adding new vendors and restructuring initial and follow-up calls to focus on targeted, high-priority issues.

(3) Sponsors commented on the challenges of making informed Enhanced MTM program changes within the current Model application timeline.

As part of Model requirements, all proposed changes to Enhanced MTM programs need to be formally proposed by sponsors and approved by CMS. Sponsors commented on the challenges of making informed Enhanced MTM program changes within the current Model application timeline, which is driven by the Medicare Part D bid cycle. Sponsors reported that the due dates for this process did not allow sufficient time to make data-driven decisions between Model Year 1 and Model Year 2. The current timeline requires sponsors to submit applications for future Model Years well in advance of knowing whether the current programs are producing positive results. As a result, some sponsors have utilized mid-year application changes. In addition, some sponsors expressed

[65] The evaluation team is examining the Encounter Data to quantify Enhanced MTM engagement levels, by incorporating information on the varied types of services and service coding approaches employed by sponsors. Some summary statistics on service receipt are presented in Section 3, and more information on this topic will be included in future reports.

[66] As noted in Table 2.5 in Section 2, Enhanced MTM beneficiaries in 2017 were on average healthier compared to traditional MTM beneficiaries in nationwide non-Enhanced MTM plans. Even for the same plan, if Enhanced MTM beneficiaries appear healthier than traditional MTM beneficiaries on average, that plan could still have a larger number of beneficiaries who are medically complex within their Enhanced MTM-eligible pools compared to their MTM-eligible pools. As Table 2.4 in Section 2 shows, Enhanced MTM-eligible populations can be about tenfold larger than their MTM-eligible populations for the same plan and this expanded pool could include both a larger number of medically complex beneficiaries and a larger number of healthier beneficiaries.

challenges with interpreting performance data provided by CMS, including difficulty understanding what program or beneficiary characteristics are driving performance data results.

4.1.4 Prescriber Outreach and Engagement

Sponsors' perspectives on prescriber outreach and engagement are summarized below in two key points that highlight the challenges that sponsors have encountered in this area.

(1) Some sponsors indicated that having dedicated staff to follow up with prescribers after an Enhanced MTM service may boost prescriber response rates.

Sponsors and vendors expressed challenges with prescribers reviewing and enacting recommendations derived from Enhanced MTM services. Though sponsors and vendors use different approaches to follow up with prescribers after an Enhanced MTM service, higher prescriber response rates were noted for sponsors/vendors who use a dedicated pharmacy technician or other staff member to fax information to the prescriber following a service and then follow up (by fax and/or phone) to ensure receipt of the information.

(2) There have been few beneficiary/provider referrals for beneficiary enrollment into Enhanced MTM programs.

Sponsors allowing beneficiary or physician referrals to their Enhanced MTM programs reported that volumes of these referrals have been low, indicating that this is not a primary source of beneficiary entry into an Enhanced MTM program.

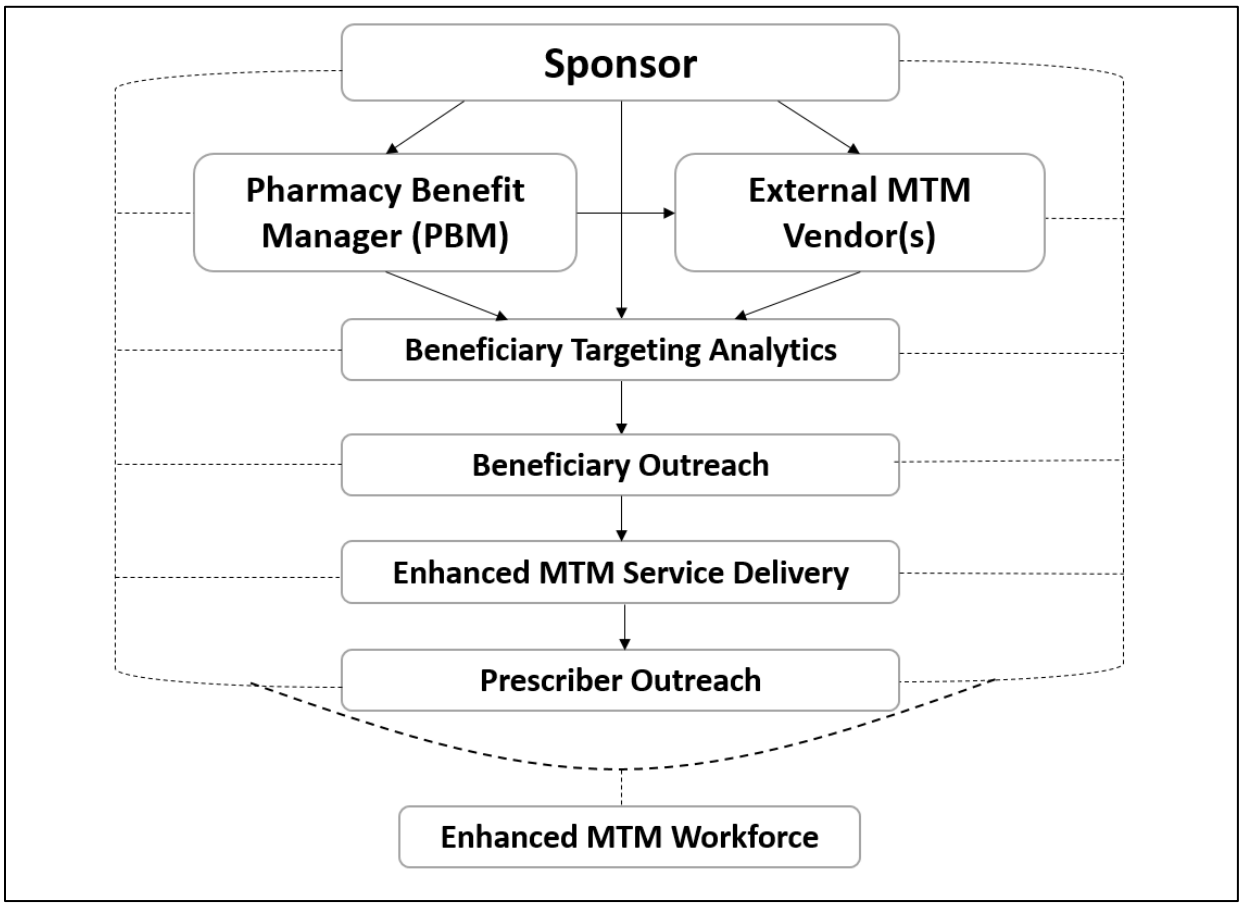
4.2 What Were the Perspectives of the Enhanced MTM Workforce about Model Implementation?

The Enhanced MTM workforce generally had high levels of satisfaction with their roles, though community pharmacy staff had less favorable views of Enhanced MTM implementation. The Enhanced MTM workforce also noted challenges with engaging prescribers.

The Enhanced MTM workforce, including management staff and Enhanced MTM service providers, supports all aspects of Enhanced MTM service provision (Figure 4.1). The workforce can provide a unique, on-the-ground viewpoint of implementation effectiveness and Model successes and challenges. The Acumen team designed and fielded a web-based workforce survey to assess the experiences and perspectives of sponsor and vendor administrative and service delivery staff, and community pharmacies participating in Enhanced MTM. The survey was conducted during the summer of 2018, approximately one and a half years after the launch of the Model, to collect

mid-implementation assessments of the Model and provide context for quantitative findings related to changes in utilization and costs.

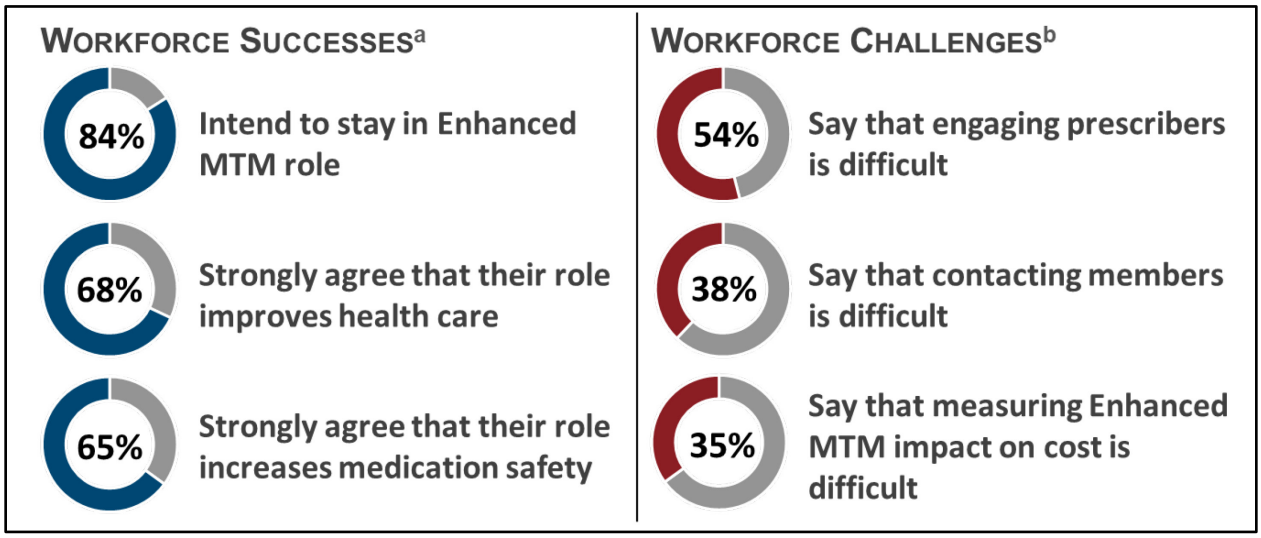
Figure 4.1: The Enhanced MTM Workforce Supports All Aspects of the Model



The workforce survey covered Enhanced MTM staff experiences with Model implementation, including impressions of the benefits for beneficiaries and the organization, role satisfaction, and intent to stay in the role. The survey also covered the program administration staff's assessment of difficulty in accomplishing core Enhanced MTM activities, and the member service staff's time commitment and patient service activities.

Generally, Enhanced MTM staff are very satisfied with their roles, their organization's implementation of Enhanced MTM, and perceived benefits to patients. Program administration staff also identified some challenges, particularly engaging prescribers, contacting members, and measuring Enhanced MTM's impact on costs (Figure 4.2). Community pharmacy staff were less positive about Enhanced MTM, spent less of their work time on the program, and provided less comprehensive services compared with sponsor and vendor call center staff.

Figure 4.2: Workforce Successes and Challenges



Source: 2018 Enhanced MTM Workforce Survey.

Notes: Missing data are not included in the percentages reported.

[a] Among all Enhanced MTM workforce survey respondents.
[b] Among Enhanced MTM program administration respondents.

The remainder of this section reviews the workforce survey methodology (Section 4.2.1), presents detailed findings (Section 4.2.2), and discusses implications for the evaluation (Section 4.2.3). Appendix H provides additional information about survey methods, including questionnaire content and sample disposition.

4.2.1 Methods and Population Characteristics

The workforce survey instrument was adapted from a similar instrument originally designed for a web-based survey of medication management interventions.[67] It contains core content designed for all recipients, as well as content specific to the two types of staff targeted: (i) Enhanced MTM program leadership and administrative staff, and (ii) frontline Enhanced MTM staff directly engaged in providing Enhanced MTM member services, which also includes community pharmacy staff.

A census of the Enhanced MTM workforce was conducted, targeting all staff rather than drawing a sample. A comprehensive list of staff, including vendor/partner staff, was assembled for each sponsor, along with contact information including email address and phone number.

[67] Acumen and Westat designed this survey in 2015 for the evaluation of the CMS Health Care Innovation Awards Medication Therapy Management portfolio. More information about the survey methods and findings can be found in the Third Annual Report for the evaluation of this portfolio: https://downloads.cms.gov/files/cmmi/hcia-medicationmanagement-thirdannualrpt.pdf.

Community pharmacy staff from WellCare and Humana's vendor network were also included in the survey.[68] The workforce survey achieved a high response rate (79 percent) among sponsor and vendor staff. Community pharmacy participation was less robust (26 percent in the portion of the sample that could be tracked for response rates).[69]

Table 4.1 shows the distribution of Enhanced MTM workforce survey respondents by sponsor and role (administration, member services, and community pharmacy). Because of the small staff sizes for some sponsors, the analysis focuses on comparisons across roles instead of sponsors. Findings for a total of 108 program administration staff, 308 member services staff, and 79 community pharmacy staff are discussed in Section 4.2.2. Tests of statistical significance, which guide the inference of results from a random sample to the full population, are not provided because the data come from a census of the workforce.

Table 4.1: Distribution of Enhanced MTM Workforce Survey Respondents by Sponsor and Role

	Role						All Roles	
	Program Administration		Member Services		Community Pharmacy			
Sponsor	N	Percent	N	Percent	N	Percent	N	Percent
BCBS FL	9	8.3	15	4.9	0	0.0	24	4.8
BCBS NPA	25	23.2	45	14.6	0	0.0	70	14.1
Humana	8	7.4	28	9.1	11	13.9	47	9.5
SilverScript/ CVS	20	18.5	109	35.4	0	0.0	129	26.1
UHG	25	23.2	17	5.5	0	0.0	42	8.5
WellCare	21	19.4	94	30.5	68	86.1	183	37.0
Total	*108*	*100.0*	*308*	*100.0*	*79*	*100.0*	*495*	*100.0*

Source: 2018 Enhanced MTM Workforce Survey.

Notes: Missing data are not included in the counts and percentages reported. A total of 30 respondents did not identify their role.

[68] WellCare and Humana community pharmacies were included because these sponsors had robust community pharmacy involvement in Model Year (MY) 1. SilverScript/CVS also involved community pharmacies in MY 1, but their programs were also offered to other, non-Enhanced MTM members. Moreover, these programs consisted of very brief services that may not be as memorable to SilverScript/CVS pharmacists, compared to the more intensive interventions undertaken by community pharmacists participating with the WellCare or Humana Enhanced MTM programs. Additionally, the BCBS NPA and UHG community pharmacy components were new in MY 2 and were excluded since staff had very limited Enhanced MTM experience at the time of the workforce survey.

[69] The majority of community pharmacies received the generic URL indirectly, from sponsors or vendors, as Enhanced MTM agreements between sponsors and pharmacies often specified that sponsors and vendors could not share community pharmacy contact information. Therefore, responses could not be attributed to specific sample members, and the sample size of pharmacies who received the generic URL could not be verified.

4.2.2 Findings

This section highlights cross-sponsor patterns in results by role, focusing on four major topics: roles and characteristics of the Enhanced MTM workforce, assessment of Enhanced MTM roles, program administration staff experience, and member service staff experience.

Roles and Characteristics of the Enhanced MTM Workforce

As shown in Table 4.2, information technologists and data analysts are most numerous among program administration staff (37 percent), followed by program directors and managers (30 percent). Among member services staff and community pharmacies, Enhanced MTM service providers are most common (69 and 89 percent, respectively). Not surprisingly, member services and community pharmacy respondents are more likely to be licensed health professionals. Most respondents are pharmacists, and about 40 percent have been in their health profession for more than 10 years. Most respondents reported having worked in an Enhanced MTM role for 13-24 months (consistent with the length of the program), but a substantial number are comparatively new to Enhanced MTM, reflecting program expansion and turnover.

Table 4.2: Roles and Characteristics of Enhanced MTM Workforce Survey Respondents

Survey Respondent Role	Role			% All Roles (N=495)
	% Program Administration (N=108)	% Member Services (N=308)	% Community Pharmacy (N=79)	
Detailed Role				
Program Director or Manager	29.6	0.0	7.6	7.7
Operations Manager	18.5	0.0	2.5	4.4
Information Technologist or Data Analyst	37.0	0.0	0.0	8.1
Compliance/Quality Assurance Specialist	14.8	0.0	0.0	3.2
Member Outreach/Engagement Specialist	0.0	29.9	0.0	18.6
Medication Therapy Management Service Provider	0.0	68.8	88.6	57.0
Prescriber Outreach/Engagement Specialist	0.0	1.3	0.0	0.8
Other Role	0.0	0.0	1.3	0.2
Health Profession				
I am not a health care professional	56.1	9.8	0.0	18.3
Physician	1.9	1.0	0.0	1.0
Pharmacist	32.7	52.4	94.9	55.0
Pharmacy Resident	0.0	1.3	2.5	1.2
Advanced Practice RN	0.0	0.3	0.0	0.2
RN	1.9	7.2	0.0	4.9
Pharmacy Technician or Assistant	4.7	25.4	1.3	17.0
Other health profession	2.8	2.6	1.3	2.4
Tenure in Health Profession				
% More than 10 years in profession	48.6	30.1	68.0	40.0
Tenure in Enhanced MTM				
Less than 3 months	2.8	4.2	2.5	3.6
3-6 months	4.6	15.0	5.1	11.1
7-12 months	14.8	23.5	21.5	21.3
13-24 months	77.8	57.3	70.9	64.0
Gender				
% Female	61.8	77.3	62.7	71.6
Age				
18-24	0.0	8.3	0.0	5.2
25-34	22.2	40.3	24.0	34.0
35-44	33.3	20.5	21.3	23.3
45-54	32.3	14.2	22.7	19.3
55-64	11.1	12.9	28.0	14.9
65 or older	1.0	4.0	4.0	3.4

Source: 2018 Enhanced MTM Workforce Survey.
Notes: Missing data not included in the percentages reported. 30 respondents did not identify their role.

Member service respondents tended to be younger, newer to Enhanced MTM and their health profession, and disproportionately female. In contrast, community pharmacy respondents tended to be older and have more experience in both Enhanced MTM and their health profession (97 percent are pharmacists or pharmacy residents).

Assessment of Enhanced MTM Role

All staff were asked a series of questions about the possible benefits of their Enhanced MTM roles, including benefits for plan members, other health professionals, and their employing organizations (Table 4.3). Respondents were generally very positive about their roles, with more than half strongly agreeing with all the statements provided. Respondents were most positive about their role in improving health care, adding value to the Enhanced MTM program, and increasing medication safety. They were least positive about the impact of their role on other health professionals, with less than one third strongly agreeing that other health professionals appreciate their roles. Community pharmacists were notably less positive than administrative or member services staff in call centers on most measures.

The Enhanced MTM workforce generally had high levels of satisfaction with their roles and reported positive impressions of their role's impact on beneficiaries and their organizations.

Table 4.3: Overall Assessment of Program by Role

Overall Assessment of Program by Role	Role			% All Roles (N=495)
	% Program Administration (N=108)	% Member Services (N=308)	% Community Pharmacy (N=79)	
% Strongly Agreeing that…				
Role improves health care	70.1	69.6	57.7	67.7
Role provides cost-effective care	64.8	56.1	42.3	55.4
Role increases member satisfaction	60.0	54.3	44.2	53.6
Other health profs appreciate my role	54.2	30.4	21.1	32.9
Role fits in context of member care	60.0	53.8	35.5	51.9
Role helps members make decisions	55.3	60.5	44.9	56.9
Role increases med safety	59.5	69.2	55.1	65.1
Received training I need	56.8	60.6	39.0	56.3
Role fully utilizes skills	58.4	58.2	46.2	56.1
Role adds value to Enhanced MTM program	68.0	69.8	48.7	66.0

Source: 2018 Enhanced MTM Workforce Survey.
Notes: Missing data not included in the percentages reported. 30 respondents did not identify their role.

Similarly, most respondents were satisfied with their Enhanced MTM role and did not expect to leave the role over the next year (Table 4.4). Program administration staff were most satisfied, with 50 percent reporting they were "extremely satisfied" with their roles. Only 17 percent of community pharmacy respondents were "extremely satisfied," but more than 90 percent reported that they are unlikely to leave their role over the next year.

Table 4.4: Role Satisfaction and Intent to Stay in Role

Role Satisfaction and Intent to Stay in Role	Role			% All Roles (N=495)
	% Program Administration (N=108)	% Member Services (N=308)	% Community Pharmacy (N=79)	
Role Satisfaction				
% Extremely Satisfied with Role	50.0	33.2	16.5	34.2
Intent to Stay in Role				
I definitely would leave this role.	0.9	1.6	1.3	1.4
I probably would leave this role.	3.7	3.3	0.0	2.8
I am uncertain.	6.5	15.0	6.3	11.7
I probably would not leave this role.	39.8	32.2	38.0	34.8
I definitely would not leave this role.	49.1	47.9	54.4	49.2

Source: 2018 Enhanced MTM Workforce Survey.
Notes: Missing data not included in the percentages reported. 30 respondents did not identify their role.

Program Administration Staff Experience

Program administration and management staff were asked about their experience working with CMS on the Enhanced MTM Model, as well as major challenges they have experienced in Model implementation. Staff were generally very positive about their experience with CMS, with more than 80 percent reporting that CMS did a "very good" or "good" job with most elements of the Model (Table 4.5). Respondents were most appreciative of CMS's communication around Enhanced MTM contract requirements and the flexibility provided for Enhanced MTM sponsors to make program modifications. Respondents were somewhat less positive about CMS's efforts in describing requirements for service documentation in the Encounter Data.

Table 4.5: Program Administration Experience with CMS (N=108)

	% Very Good	% Good	% Fair	% Poor	% Total
Assessment of CMS's job in…					
Communicating Enhanced MTM contractual requirements	45.8	45.8	6.3	2.1	100.0
Describing requirements for eligibility documentation	35.4	52.1	10.4	2.1	100.0
Describing requirements for service documentation	30.8	53.8	11.5	3.8	100.0
Providing technical assistance	32.7	58.2	5.5	3.6	100.0
Providing flexibility for modifying Enhanced MTM program	52.2	30.4	15.2	2.2	100.0

Source: 2018 Enhanced MTM Workforce Survey.
Notes: Missing data not included in the percentages reported.

Engaging prescribers was particularly challenging for Enhanced MTM programs, and some staff felt that other health professionals did not appreciate their Enhanced MTM roles.

In terms of challenges experienced in Model implementation, administration and management staff reported that engaging prescribers, contacting members, and measuring Enhanced MTM impact on cost were among the most difficult Enhanced MTM implementation tasks (Table 4.6). More than 50 percent of staff felt that engaging prescribers in the program was "somewhat" or "very difficult," while 38 percent said the same of contacting members and 35 percent said the same of measuring Enhanced MTM impact on cost. In contrast, majorities of respondents rated many of the core components of Enhanced MTM as "not difficult at all" (i.e., identifying drug therapy problems, identifying appropriate members to target for Enhanced MTM, and documenting encounters). Engaging members and improving medication adherence were of medium difficulty for respondents.

Table 4.6: Program Administration Experience with Enhanced MTM Model (N=108)

	% Not at all difficult	% Slightly difficult	% Somewhat difficult	% Very difficult	% Total
Assessment of difficulty in…					
Engaging prescribers	23.1	23.1	40.4	13.5	100.0
Measuring Enhanced MTM impact on cost	25.6	39.5	20.9	14.0	100.0
Coordinating community pharmacies	28.2	43.6	23.1	5.1	100.0
Contacting members	28.3	33.3	30.0	8.3	100.0
Engaging members	30.5	40.7	23.7	5.1	100.0
Improving medication adherence	33.3	49.1	15.8	1.8	100.0
Providing Enhanced MTM w/in cost constraints	39.6	35.8	15.1	9.4	100.0
Documenting encounters	55.0	28.3	11.7	5.0	100.0
Identifying members for Enhanced MTM	67.3	17.3	11.5	3.8	100.0
Identifying drug therapy problems	74.5	18.2	5.5	1.8	100.0

Source: 2018 Enhanced MTM Workforce Survey.
Notes: Missing data not included in the percentages reported.

Member Service Staff Experience

The portion of the workforce survey covering the details of service provision and assessment of their organizational performance was analyzed among respondents across all roles and settings. All respondents were asked how often they interact directly with members as part of their Enhanced MTM role (Table 4.7). About 70 percent of respondents reported that they "usually" or "always" interact with members during their Enhanced MTM work. Remaining results in this section are presented only for those respondents who "usually" or "always" interact with members.

Table 4.7: Extent of Member Interaction by Role

	Role			
	% Program Administration (N=108)	% Member Services (N=308)	% Community Pharmacy (N=79)	% All Roles (N=495)
Extent of Member Interaction in Enhanced MTM Role				
Never	74.3	7.2	0.0	20.4
Sometimes	21.0	5.6	10.1	9.6
Usually	1.0	12.1	30.4	12.7
Always	3.8	75.2	59.5	57.3

Source: 2018 Enhanced MTM Workforce Survey.
Notes: Missing data not included in the percentages reported. 30 respondents did not identify their role.

A majority of member service respondents reported that their organization is doing a very good job at the components of Enhanced MTM relevant to their roles, especially in member targeting and information sharing for service delivery (Table 4.8). Respondents from community pharmacies felt notably less positive about all organizational tasks relative to Enhanced MTM sponsor and vendor staff. The response patterns suggest that organizations would benefit most from improvements in the development of computer systems and workflows for services.

Table 4.8: Organizational Effectiveness Assessment by Member Service Staff

	Role		
	% Enhanced MTM Sponsors and Vendors (N=272)	% Community Pharmacies (N=71)	% All Settings (N=343)
Percent reporting that organization is doing a very good job…			
Identifying members for Enhanced MTM	66.7	58.6	65.1
Sharing changes in documentation	64.4	45.8	60.9
Sharing member info needed	62.7	52.5	60.8
Sharing info about changes in care delivery	63.7	45.0	60.2
Developing workflows for services	58.9	39.7	55.1
Developing computer systems	52.7	33.9	49.2

Source: 2018 Enhanced MTM Workforce Survey.
Notes: Missing data not included in the percentages reported. Percentages restricted to those who report interacting with members "usually" or "always."

Respondents reported which Enhanced MTM services they provided to most members (Table 4.9). Across settings, discussing medication adherence and side effects was the most common services, while communicating with prescribers and

Although community pharmacy staff spend less of their work time on Enhanced MTM, interactions are of similar length to the interactions that sponsor and vendor service delivery staff have with beneficiaries.

reviewing medications for potential cost savings were less common. Compared to Enhanced MTM programs and vendors, community pharmacists reported fewer of the services listed below as being provided to "nearly all members". In particular, disease management, performed for nearly all members by two-thirds of sponsor/vendor staff, was performed for all members by a little more than one quarter of community pharmacists.

Table 4.9: Services Offered to "Nearly All Members" by Member Service Staff Services

	Role		
	% Enhanced MTM Sponsors and Vendors (N=272)	% Community Pharmacies (N=71)	% All Settings (N=343)
Percent reporting that service is provided to "nearly all members"			
Discussing medication adherence	77.8	61.8	73.8
Discussing medication side effects	66.3	50.0	62.2
Providing disease management	66.1	26.9	55.7
Identifying and resolving drug therapy problems	63.3	30.9	54.7
Medication reconciliation	62.9	28.4	54.4
Identifying the need for preventive care	60.1	33.8	53.0
Reviewing medications for cost savings	47.3	27.9	42.4
Communicating with prescribers	43.1	20.9	37.8

Source: 2018 Enhanced MTM Workforce Survey.
Notes: Missing data not included in the percentages reported. Percentages restricted to those who report interacting with members "usually" or "always."

Most member service staff relied on multiple methods of communication with members, primarily telephone and mail (Table 4.10). However, community pharmacy respondents were much more likely to cite face-to-face communications with members (80.9 percent) and, overall, nearly one-fifth reported that it was the most used interaction modality. Among program and vendor staff, the vast majority (97 percent) reported that telephone was the most used communication modality.

Table 4.10: Member Service Staff's Patient Interaction Modalities

	Role		
	% Enhanced MTM Sponsors and Vendors (N=272)	% Community Pharmacies (N=71)	% All Settings (N=343)
Percentage using communication method for member services (check all that apply)			
Telephone	98.9	100.0	99.1
Face-to-Face	4.7	80.9	20.9
Videoconference	0.0	0.0	0.0
Email	7.9	10.5	8.4
Mail	59.1	47.5	56.9
Most Used Communication Method (check only one)			
Telephone	96.7	80.9	93.5
Face-to-face	2.6	19.1	5.9
Mail	0.7	0.0	0.6

Source: 2018 Enhanced MTM Workforce Survey.
Notes: Missing data not included in the percentages reported. Percentages restricted to those who report interacting with members "usually" or "always."

Anecdotal reports suggested that many Enhanced MTM staff are working in multiple medication therapy management programs. On average, sponsor and vendor staff report devoting nearly two-thirds of their work time to the Enhanced MTM program (Table 4.11). In contrast, community pharmacists are spending much less time on Enhanced MTM – about 15 percent. Both sponsor and vendor staff and community pharmacists reported repeated interaction with members for Enhanced MTM (Table 4.11). On average, staff reported interacting with members 8 times, spending about 25 minutes on the initial interaction and about 13 minutes for additional interactions. Results of interaction time commitments are remarkably similar across Enhanced MTM sponsor and vendor staff, and community pharmacy respondents. The reported number of interactions with each patient is higher than expected based on qualitative research and may reflect additional follow-up contact attempts due to unsuccessful initial outreach.

Table 4.11: Service Staff's Time Commitments to Enhanced MTM

	Role		
Time Commitments to Enhanced MTM	Enhanced MTM Sponsors and Vendors N=272	Community Pharmacies N=71	All Settings N=343
Average percentage work time on Enhanced MTM	68.0	15.0	56.9
Average times interacted w/ each Enhanced MTM member	8.4	8.4	8.4
Average initial interaction time spent (minutes)	24.0	28.5	24.9
Average follow up interaction time spent (minutes)	13.7	12.5	13.4

Source: 2018 Enhanced MTM Workforce Survey.
Notes: Missing data not included in the percentages reported. Averages restricted to those who report interacting with members "usually" or "always."

4.2.3 Discussion

Analysis of workforce survey data was structured around three very different staff experiences – those of sponsor and vendor program administration staff, followed by sponsor and vendor member services staff (primarily in call centers), and finally community pharmacy staff.

Administrative Enhanced MTM staff reported that engaging prescribers is a significant challenge that could limit the impact of their Enhanced MTM programs.

Respondents reported generally positive impressions of their roles in terms of patient impact and organizational/system impact. Administrators reported positive experiences with CMS in implementing the Enhanced MTM Model, and member service staff gave positive ratings of their organizational performance in most aspects of implementation. Similarly, respondents reported high levels of satisfaction with their roles and a low probability of leaving over the next year.

The biggest challenges faced by Enhanced MTM programs, according to administrative staff reports, are engaging prescribers, contacting members, and understanding Enhanced MTM impact on costs. The difficulty faced with engaging prescribers is an important limitation for Enhanced MTM programs, as their success in improving outcomes and reducing cost ultimately depends on prescriber reactions to their recommendations. Perhaps relatedly, staff reported comparatively less agreement with the statement that other health professionals appreciate their Enhanced MTM roles. The Acumen team is currently conducting a survey of prescribers designed to provide information on how prescribers view Enhanced MTM services.

About 70 percent of respondents regularly interact with members as part of their Enhanced MTM roles, and most address multiple topics with members, from medication adherence to disease management and preventive care. They use multiple modes of communication but rely heavily on telephone contact, and interact with members repeatedly. Most sponsor and vendor staff spend the majority of their work time on Enhanced MTM activities.

Community pharmacy staff experience the Enhanced MTM program very differently from other Enhanced MTM staff, beginning with their need to balance Enhanced MTM activities with their other job demands. They spend approximately 15 percent of their time on Enhanced MTM, which likely contributes to difficulty differentiating Enhanced MTM from the other MTM services they provide and may have contributed to the low response rate for this group. Among those who did respond, community pharmacy staff have less favorable impressions of their roles and organizational implementation of Enhanced MTM, and they provide less comprehensive

Enhanced MTM services than sponsor/vendor staff working primarily in call centers. This suggests that Enhanced MTM is not optimally integrated into community pharmacy workflows.

The themes emerging from this workforce survey in terms of Model implementation successes and challenges will be further explored through other data collection efforts, including quarterly calls with sponsors, the prescriber survey, and re-measurement of the workforce as the Enhanced MTM Model matures.

4.3 What Were the Perspectives of Beneficiaries about the Enhanced MTM Model?

Positive beneficiary experiences with Enhanced MTM services are important for the success of the Enhanced MTM Model. Beneficiaries who report positive experiences with receiving Enhanced MTM services may be more likely to actively engage in their health care and better able to manage their medications. To obtain detailed qualitative information on beneficiary experiences, the Acumen team conducted in-depth interviews between February and August of Model Year 2 with beneficiaries from all six participating sponsors. The goals of the interviews were to assess beneficiaries' experiences with sponsors' Enhanced MTM programs and the core services they offer. The subsections below describe the methods and sample characteristics for the beneficiary in-depth interviews, highlight common themes from interviews conducted with beneficiaries, and present a brief discussion of the findings and their limitations.

> Beneficiaries typically found CMRs useful, especially those without prior CMR experience and those who learned new information related to their medications. CMRs that resulted in beneficial changes to beneficiaries' medication regimens and/or included discussions about medication cost-savings opportunities were viewed favorably by beneficiaries.

4.3.1 Methods and Sample Characteristics

The Acumen team worked with each sponsor to obtain a sample frame of beneficiaries who had an interaction with Enhanced MTM program staff during the second quarter of Model Year 2. The interactions of interest included beneficiaries who (i) opted out of the Enhanced MTM program, (ii) declined an Enhanced MTM service, (iii) received a substantial service (e.g., CMR) for the first time as part of the Enhanced MTM program, or (iv) received an additional Enhanced MTM service or follow-up after a substantial Enhanced MTM service (e.g., follow-up CMR).

The Acumen team identified beneficiaries included in the sample frame for telephonic outreach by prioritizing beneficiaries with the most recent interactions of interest with the

Enhanced MTM program.[70] Although a non-random (convenience) sample was used, it included participants of both genders, a range of ages, and a mix of service delivery modes (e.g., services delivered by phone versus face-to-face, services delivered by a vendor call center versus a community pharmacy). Interview topics included the beneficiary's understanding of services offered, reasons why the beneficiary engaged in (or opted out of/declined) Enhanced MTM services, and experiences with and perceptions of Enhanced MTM.

Across all participating Part D sponsors, the Acumen team conducted 166 beneficiary interviews in March-August 2018.[71] 43 participants had opted out of Enhanced MTM or declined a substantial Enhanced MTM service (26 percent), and 123 participants had completed at least one substantial Enhanced MTM service (74 percent). Among the 123 participants who completed a recent Enhanced MTM service of interest, the service was delivered by a community pharmacy for fewer than 15 beneficiaries (less than 12 percent). Ninety-eight interview participants were female (59 percent), and beneficiary ages ranged from 43 to 98 years old. Eight of the interviews were conducted with the targeted beneficiaries' spouse or caregiver. Roughly 34 percent of participants resided in a rural area.[72] Appendix G.2 provides details on the interview methods and protocol. The section below provides a high-level summary of findings across sponsors. Results are summarized and not quantified in a table to maintain participant anonymity and preserve privacy assurances given the relatively small number of participants per sponsor.

4.3.2 Findings

Among the 166 interviews conducted, five common themes emerged concerning beneficiaries' decision to participate or not in Enhanced MTM services, and their overall experiences and perspectives of the services received. The five themes are described below.

[70] "Higher-risk" beneficiaries were selected for in-depth interviews across all sponsors as this subset of beneficiaries is eligible to receive substantive Enhanced MTM services. "Higher-risk" is defined by each sponsor and varies across sponsors. Not all Enhanced MTM-eligible beneficiaries are higher-risk beneficiaries.

[71] Among the 166 interviews completed, the Acumen team conducted interviews with: 20 BCBS FL beneficiaries, 29 BCBS NPA beneficiaries, 26 Humana beneficiaries, 28 SilverScript/CVS beneficiaries, 24 UHG beneficiaries, and 39 WellCare beneficiaries. The Acumen team aimed to complete 20-30 interviews per sponsor or until themes were considered sufficiently explored by the interviewer team. An additional set of interviews were conducted with WellCare beneficiaries as a proportion of participants were unable to recall the interaction of interest.

[72] All but one sponsor provided zip codes in the beneficiary data files used for sampling. For this sponsor, available demographic data was linked with December 2017 Medicare enrollment data to determine zip code. The Acumen team ascertained rural/urban location using beneficiary zip codes.

(1) Beneficiaries generally participated in a CMR service because they felt it was important, while those who opted out or declined services reported that the service seemed unnecessary or useless, or were skeptical of reviewing medication lists over the phone.

Many beneficiaries reported that, after speaking with Enhanced MTM delivery staff, they perceived the CMR would be worthwhile and were interested in learning what the pharmacist would say—especially in regards to the safety and appropriateness of their medications. Others reported participating in the CMR out of a sense of obligation because the call was from their PDP. However, some beneficiaries reported that they declined the service or opted out of the Enhanced MTM program because they believed their medications were already well managed (by themselves and/or their care team), with some of these beneficiaries reporting that they only take a few medications or have been taking the same medication for several years. In addition, some beneficiaries expressed concern with reviewing their medications over the phone (e.g., because of fear of being scammed or preference for having medication conversations with their personal doctor or pharmacist).

(2) CMRs were especially useful for beneficiaries who reported that the service was their first comprehensive discussion with a pharmacist, and for those who learned new information related to their medications.

Across all sponsors, beneficiaries generally reported that the CMR service was useful in helping them better understand their medications. This was particularly pronounced among beneficiaries who (i) reported never having received a CMR, (ii) reported knowledge gaps related to their medications, or (iii) learned about better medication alternatives or how to avoid side effects. Beneficiaries who reported post-CMR changes to their medications because of the CMR service (e.g., to reduce medication-related risks, side effects, or medication costs) were especially positive about the service. Conversely, beneficiaries who reported being knowledgeable of their medications or who reported having regular interactions or medication reviews with their prescriber or other members of their care team typically did not find the CMR as useful.

(3) CMR services that included discussions about medication costs and savings opportunities, and speaking to Enhanced MTM service providers who were compassionate during the interaction, contributed to a positive beneficiary experience.

Beneficiaries who reported talking about costs during the CMR were satisfied and appreciative of the cost-related assistance. Information on where to obtain lower-cost medications or receive co-pay waivers was noted as particularly valuable. Among the

beneficiaries who reported positive experiences with Enhanced MTM services, many commented that the service provider was personable, kind, and understanding during the telephonic interaction.

(4) Post-CMR materials were not uniformly endorsed as useful aspects of the CMR service.

While some beneficiaries who received materials after the CMR found them to be useful, others reported that they did not find them valuable (e.g., because they were aware of the medications they were taking, only had a few medications, or their prescriber maintained a list). Among those who found the post-CMR materials valuable, beneficiaries typically noted the user-friendliness of the design and information. Many beneficiaries, however, did not recall receiving any post-CMR materials.

(5) The CMR service motivated some beneficiaries to meet with their prescriber.

Some beneficiaries reported meeting with their prescriber after the CMR to discuss medication recommendations. Beneficiaries who reported learning about safer/better drug alternatives, drug interactions, or side effects during the CMR more often reported following up with their prescriber.

4.3.3 Discussion of Beneficiary Interview Findings

Findings from the beneficiary in-depth interviews highlight characteristics and components of the Enhanced MTM Model that may contribute to an improved beneficiary experience. Based on the findings from the 166 interviews conducted with beneficiaries, promising aspects of Enhanced MTM delivery include:

i. medication reviews that result in beneficial changes that address identified drug therapy problems (DTPs);
ii. service delivery providers who are cordial and compassionate;
iii. clarity on the purpose and goals of the CMR to set expectations; and
iv. discussions around medication costs and cost-savings opportunities.

Additionally, sponsors may find it more valuable to target members who have had limited experience with CMRs, including those who seldom have their medications reviewed or have an incomplete understanding of their medications. Providing a means for beneficiaries to verify the Enhanced MTM service provider making the phone call (e.g., a pre-notification letter) may also enhance CMR uptake among those who have reservations or concerns about participating.

While in-depth interviewing can provide rich data on the beneficiary experience, these findings should be interpreted in light of the small sample sizes of beneficiaries. We conducted interviews with only a small number of non-randomly selected beneficiaries from each sponsor, and thus findings may not be generalizable across each sponsor's higher-risk Enhanced MTM populations. Additional limitations on the selection of beneficiaries include beneficiary telephone call screening behaviors or filters (e.g., blocking or not answering calls from unknown numbers), and general difficulty with reaching members who opted out of Enhanced MTM or declined a substantive Enhanced MTM experience.

Although the Acumen team aimed to conduct interviews with beneficiaries soon after the Enhanced MTM interaction of interest, some interviews were conducted up to 2.5 months after the Enhanced MTM interaction of interest due to time lags in the receipt of beneficiary data, and led to general challenges with engaging beneficiaries in the interviews. Given this time lag, beneficiaries may have had difficulty recalling the Enhanced MTM service or may have been responding with another health care interaction in mind. The Acumen team attempted to focus the discussions with beneficiaries to the recent Enhanced MTM interaction; however, there is no way to be certain that beneficiaries were indeed reporting about the Enhanced MTM interaction of interest. Additionally, as with all interviews, social desirability may influence findings as beneficiaries tend to provide responses they believe to be socially acceptable.

A second round of beneficiary interviews will provide an opportunity to gain insight into the beneficiary experience with sponsors' evolving Enhanced MTM implementation and overall Model progression. The Acumen team will conduct another round of interviews (approximately 20-30 beneficiary interviews per sponsor) in Model Year 4.

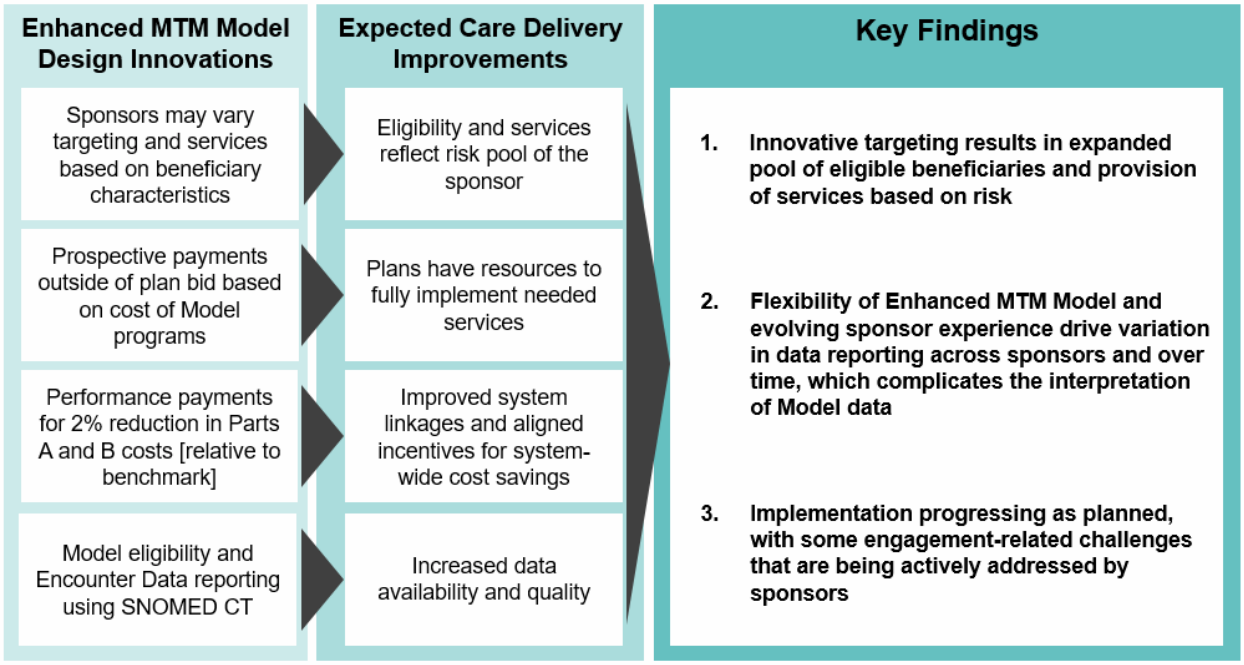
5 CONCLUSIONS AND NEXT STEPS

This section synthesizes key findings included in this report to provide an assessment of the Enhanced MTM Model's successes and challenges during its first 20 months of implementation (January 2017- August 2018). This section also describes future steps in the multi-year evaluation that will provide insights regarding additional Model aspects, update current findings as implementation progresses, and estimate the causal effect of the Enhanced MTM Model on beneficiaries' therapeutic outcomes, health service utilization, and expenditures.

5.1 Current Assessment of the Model

The Enhanced MTM Model aims to enhance therapeutic outcomes and optimize medication therapy to reduce downstream Medicare costs. To this end, the Model provides participating Part D plan sponsors with Enhanced MTM program design flexibility and financial incentives to implement innovative strategies that engage beneficiaries in appropriate services, improve care coordination, and strengthen linkages among sponsors, pharmacies, and prescribers. Figure 5.1 provides a high-level overview of this report's key findings in relation to the theoretical framework of the Enhanced MTM Model and its core design components (also discussed in Section 1, "What is the Enhanced Medication Therapy Management Model?").

Figure 5.1: Snapshot of Current Findings Relative to the Enhanced MTM Model Framework



Based on the Enhanced MTM Model's design innovations and expected care delivery improvements, the evaluation team identified the following three key takeaways in the first 20 months of Model implementation.

First, participating sponsors have taken advantage of the Model's flexibility and financial incentives by modifying their targeting criteria to identify a larger pool of eligible beneficiaries than the traditional MTM program's eligibility rules. Enhanced MTM sponsors also provide risk-stratified services of varied types and intensity to eligible beneficiaries, rather than offering a uniform set of services.

Second, there is substantial cross-sponsor variation in Enhanced MTM eligibility and Encounter Data recording practices, and there were some data reporting irregularities during the first year of Model implementation. This is expected given that these data requirements are new to Enhanced MTM. The Model's new data requirements provide an opportunity to test the adoption of SNOMED CT codes in the context of medication therapy management provision, and to provide insights on optimal data recording practices, which is also of interest to stakeholders. Although data collection practices present some challenges for interpretation of these Model data and their use in the evaluation, they are improving as Model implementation matures.

Finally, implementation has progressed largely as planned. Early perspectives on the Model from Medicare beneficiaries in participating plans and the workforce delivering Enhanced MTM services have generally been positive, with some challenges reported on beneficiary engagement, which is key to the success of Enhanced MTM. Sponsors are making ongoing efforts to address these challenges.

The key findings on Model successes and challenges are discussed in more detail below:

Key Finding: Innovative targeting results in an expanded pool of eligible beneficiaries and allows for EnhancedMTM services to be tailored to beneficiaries' risk characteristics

Most of the Model's innovation is observed in sponsors' approaches to targeting beneficiaries eligible for Enhanced MTM services. Beneficiary targeting in the context of Enhanced MTM is notably different than that of traditional MTM. Sponsors are adopting innovative approaches such as predictive modeling and targeting based on drug therapy problems, gaps in care, medication adherence, high-risk medication use, or new medication use, instead of the three traditional MTM targeting parameters (i.e., number of chronic conditions, medications, and drug spending). Sponsors are also using alternative data sources, such as

Medicare Parts A and B data and state Health Information Exchanges (HIE), and, in some cases, are allowing beneficiary or prescriber referrals, or pharmacists to identify beneficiaries for services.

As detailed in Section 2 ("What Were the Characteristics of the Enhanced MTM Programs?"), the expanded targeting criteria for Enhanced MTM allow sponsors to cast a much wider net and identify bigger volumes of eligible beneficiaries relative to the traditional MTM program. This aligns with the expectations of stakeholders interviewed at the beginning of the Model, who had recognized the potential of Enhanced MTM to identify and intervene with beneficiaries who could benefit from MTM but who were not targeted under the narrower requirements of traditional Part D MTM (see Section 1.4, "What Were Industry Stakeholders' Expectations of the Enhanced MTM Model?"). As a result of the expanded targeting criteria, the overall Enhanced MTM-eligible population tends to be younger and have fewer chronic conditions, hospitalizations, and ER visits in the year prior to eligibility. Most beneficiaries who are eligible for traditional MTM remain eligible for Enhanced MTM, but there are many additional beneficiaries who become newly eligible under Enhanced MTM. By expanding targeting, and by employing predictive analytics, Enhanced MTM sponsors are trying to prevent medication-related problems, in addition to resolving them.

Although the Enhanced MTM Model does not offer a significantly different set of services relative to traditional MTM, the type of services provided to each eligible beneficiary depends on individual characteristics and risk levels. In contrast to traditional MTM, Enhanced MTM sponsors do not automatically offer CMRs and TMRs to all eligible beneficiaries. Some sponsors also incorporated lighter-touch interventions such as refill reminders and newsletters, as well as new types of services such as formal cost-sharing programs, or referral mechanisms to address financial and social needs of beneficiaries in their Enhanced MTM programs. Most sponsors have launched multiple Enhanced MTM programs, each with its own set of targeting criteria, and the range and intensity of offered services vary significantly across Enhanced MTM programs offered by the same sponsor. In addition, many sponsors prioritize beneficiary outreach to eligible beneficiaries based on, for example, a beneficiary's health profile, and the expected value of resolving their health problems. Enhanced MTM-eligible beneficiaries are offered tailored services, with the goal of providing complex, high-risk beneficiaries with more intensive support for medication and disease management. For example, sponsors are providing CMRs to beneficiaries who experience transitions of care (e.g., hospital discharges), because these are often associated with medication-related adverse events. Since improved coordination of care between prescribers, pharmacists and a beneficiary's plan is a core function of the Model and also indicated by the results of the beneficiary survey as an area for improvement, the explicit addition of services that intervene specifically with beneficiaries in care transitions is a significant and welcome departure from standard practice.

Key Finding: Flexibility of the Enhanced MTM Model along with evolving sponsor experience drives variation in data reporting

The requirement to use SNOMED CT codes to document MTM activities in Encounter Data was an innovative component of the Enhanced MTM Model. Most sponsors had no prior experience with this coding scheme and, accordingly, data reporting practices have evolved over time, particularly during the first half of Model Year 1, as sponsors refined their reporting practices. Sponsors had limited experience using SNOMED CT coding and invested significant time and resources into developing and executing SNOMED CT documentation for Enhanced MTM. Sponsors generally use an automated approach where fields in their (or their vendors') Enhanced MTM documentation systems map on the "back end" to SNOMED CT codes. These codes are linked to certain aspects of the workflow steps associated with an Enhanced MTM service, as well as pharmacist findings or recommendations from a consultation or service.

As described in Section 3 ("How Do Sponsors Document Enhanced MTM Eligibility and Program Activities?"), SNOMED CT is designed to offer flexibility in describing the nature of an encounter rather than to provide a direct one-to-one mapping of an action to a single code. The ability of the SNOMED CT code structure to capture very detailed clinical content also results in significant variation in how codes are used to depict similar events. As a result, the Encounter Data structure is not prescriptive in specifying the types of activities required, nor the codes used to document these activities. Since workflows differ across sponsors and selection of SNOMED CT codes to document similar activities may differ as well, there is significant cross-sponsor variation in the way SNOMED CT codes are used to document Enhanced MTM services.

For example, the share of Enhanced MTM-eligible beneficiaries (as reported in MARx data) who also appeared in Encounter Data in Model Year 1 ranged from about 17 percent to close to 100 percent across sponsors. A smaller proportion (about 16 to 88 percent) received a significant service, broadly defined as an Enhanced MTM service (e.g., CMR and TMR-type services, refill reminders, medication adherence education) that goes beyond initial outreach or eligibility notification (as documented in Encounter Data). This variation reflects differences in data reporting practices, both in terms of documenting beneficiary eligibility in MARx TC 91 files, as well as documenting Model encounters, rather than actual differences in levels of beneficiary engagement. For example, some sponsors only record successful engagements in Encounter Data, and some sponsors prioritized only a subset of beneficiaries among those reported as eligible for outreach and service provision. The Acumen team is examining cross-

sponsor differences in these practices and their evolution over time to optimize the use of Encounter Data for evaluation analyses in future reports.

Key Finding: Enhanced MTM Model implementation is progressing as planned, with some engagement-related challenges that are being actively addressed by sponsors

As discussed in Section 4 ("How Did Model Implementation Progress Across the First 20 Months?"), the Enhanced MTM targeting efforts across both Model Years have progressed as planned, with generally high satisfaction among the Enhanced MTM workforce and fairly positive feedback from beneficiaries. Sponsors have invested resources in establishing new partnerships, data sharing systems, and reporting processes towards the goal of providing Enhanced MTM services to targeted beneficiaries. There were, however, some challenges primarily related to data availability for beneficiary targeting during transitions of care, beneficiary engagement, integration of community pharmacies for Enhanced MTM service provision, and prescriber engagement and acceptance of pharmacist recommendations.

Current findings suggest that sponsors implementing transition of care services would benefit from support to more accurately and quickly identify beneficiaries experiencing a discharge event, and additional effort is needed to overcome this challenge. Given the data lag inherent in medical claims, it has been difficult for sponsors to rely on medical claims data received from CMS to identify beneficiaries close to the time of a care transition. As a result, sponsors have explored other strategies (e.g., algorithms predicting a recent hospital discharge based on Part D data, leveraging community pharmacists, using ADT data feeds from state HIE) to identify beneficiaries discharged from the hospital and the ER. Medical data availability was an issue also raised early on by stakeholders, who expressed concern that the "siloed" nature of standalone Part D plans typically results in delayed access to health service information other than prescription drug use data for MTM providers.

Sponsors also reported challenges with outdated or incorrect contact information, which has created difficulties in reaching and engaging beneficiaries. Sponsors noted that the expanded pool of Enhanced MTM-eligible beneficiaries includes many beneficiaries eligible for low-income subsidy (LIS), who were auto-assigned to their PDPs and have generally less reliable information. They also reported that the new targeting approach for Enhanced MTM identifies larger numbers of younger Medicare beneficiaries, who may be less engaged in their health care. Concern about "scams" are yet another barrier to effective call center beneficiary outreach.

Findings from the workforce survey corroborate the feedback from sponsors, indicating that contacting beneficiaries is one of the primary challenges for the Model.

Results from beneficiary interviews across sponsors also highlight beneficiary engagement challenges, indicating that beneficiaries are less likely to engage in Enhanced MTM or find Enhanced MTM services useful if they (i) regularly review their medications with prescribers or others, (ii) have been taking the same medications for some time, or (iii) are not taking as many medications. These interviews also suggest that providing a means for beneficiaries to verify the service provider making the phone call (e.g., a pre-notification letter) may also enhance Enhanced MTM service uptake among those who have reservations or concerns about participating.

Sponsors are leveraging community pharmacies to engage beneficiaries and deliver Enhanced MTM services, but there have been some difficulties with incorporating Enhanced MTM services into community pharmacies' existing workflows. Early interviews with stakeholders, including pharmacist associations, also identified this challenge. These interviews highlighted the importance of community pharmacists in leveraging their existing relationships with beneficiaries for Enhanced MTM service provision, but also anticipated challenges such as limited bandwidth and resources under current reimbursement levels for community pharmacists. Over the course of implementation, sponsors cited challenges associated with integrating community pharmacies in Enhanced MTM service provision, including inability to conduct quality assurance reviews; lack of timely interventions due to community pharmacy staffing models and workflows; and inconsistent documentation and billing of Enhanced MTM services. Findings from the workforce survey also highlighted these challenges. In addition, community pharmacy staff have less favorable impressions of their roles and organizational implementation of Enhanced MTM, and they provide less comprehensive Enhanced MTM services than sponsor/vendor staff working primarily in call centers. Though leveraging relationships between community pharmacists and beneficiaries for Enhanced MTM has potential, our findings suggest that sponsors and vendors may need to undertake additional efforts to assist with this integration and consider strategies to optimize community pharmacy involvement.

In the workforce survey, challenges with prescriber engagement were reported as the most difficult aspect of Enhanced MTM program operations. Prescriber engagement is an important aspect of Enhanced MTM, as Model success in improving outcomes and reducing costs largely depends on the extent of care coordination and on prescriber acceptance of pharmacist recommendations. Findings from beneficiary interviews suggest that beneficiaries may play a role in prompting prescriber communication. Specifically, some beneficiaries who received a CMR reported that the service prompted them to meet with their prescriber to discuss medication recommendations, particularly related to safer/better drug alternatives, drug

interactions, or side effects. Though encouraging discussion of pharmacist recommendations with prescribers is typically part of sponsors' CMR workflows, this highlights an opportunity for sponsors to more emphatically urge beneficiaries to follow up with prescribers about recommendations generated from Enhanced MTM services. Many beneficiaries interviewed by the Acumen team reported not receiving Enhanced MTM follow-up materials by mail; however, providing user-friendly post-Enhanced MTM service materials may be a useful tool for beneficiaries to follow up with prescribers.

Sponsors are exploring varying approaches to address the challenges in prescriber engagement. They continue to contact prescribers primarily by fax (the approach used for traditional MTM) and by phone if urgent issues arise, but are generally adopting additional strategies to engage prescribers. For example, some sponsors use dedicated staff to follow up with prescribers following an Enhanced MTM service to ensure receipt of information. Some sponsors incorporated proactive prescriber outreach and education, refined sponsor communication materials in an attempt to make them more digestible to busy prescribers, and allowed prescribers to refer beneficiaries for Enhanced MTM services. Stakeholders interviewed at the beginning of the Model had also recommended proactive prescriber outreach, in addition to effective post-intervention communication, for prescriber engagement improvements. The effect of these innovative implementation strategies in reducing system-wide spending and improving health outcomes will be examined and analyzed in future evaluation reports.

5.2 Conclusion

The flexibility and financial incentives of the Enhanced MTM Model allow participating plans to diverge from the traditional MTM program by modifying their targeting to reach a larger pool of eligible beneficiaries and tailoring their services based on beneficiaries' risk profiles. Model requirements have also led to innovative data reporting practices for the detailed documentation of Enhanced MTM activities using the SNOMED CT coding scheme. Consistent with the Model's flexibility, there is substantial cross-sponsor variation in both the programs that are offered by the Enhanced MTM sponsors in participating plans, and the way that Enhanced MTM activities associated with these programs are documented. Perspectives from sponsors, the Enhanced MTM workforce, and beneficiaries are positive, and Model implementation has progressed largely as planned, with some engagement-related challenges. More specifically, participating plans are putting additional effort into engaging with beneficiaries, integrating community pharmacies for service provision, and promoting better communication with prescribers.

This First Evaluation Report focused on findings related to Model implementation during the first 20 months after Model launch in January 2017. Section 5.3, below, discusses next steps for the evaluation.

5.3 Evaluation Next Steps

The goal of the multi-year Enhanced MTM Model evaluation is to produce actionable findings for CMS in the core areas of Model participation (participating sponsor/plan characteristics, and reasons for non-participation), implementation (targeting, services, partnering organizations, experiences), impacts (beneficiary health outcomes, resource use and expenditures), and Model scalability (generalizability of findings, replicability factors). This First Evaluation Report presents (i) qualitative findings on Model implementation, with descriptions of emerging themes from key Model aspects (including program design, targeting, outreach, services), (ii) descriptive statistics on beneficiaries eligible for Enhanced MTM programs and their characteristics, and (iii) Model implementation successes and challenges from the early perspectives of participating sponsors and vendors, their workforce, and the beneficiaries enrolled in participating plans. Future evaluation reports will include:

- **Model Impacts on Beneficiary Outcomes:**

  Analyses of the Model's impacts on therapeutic outcomes of interest (e.g., medication adherence, drug safety, health service use and medical and drug expenditures) will employ Enhanced MTM eligibility and Encounter Data as well as Medicare enrollment files and Parts A, B and D claims. While this First Evaluation Report presented descriptive statistics on select measures (e.g., adherence, ER visits) for Enhanced MTM-eligible beneficiaries to provide a sense of how these measures evolve over time and differ across sponsors, assessments of the Model's impacts require more robust methods. The Acumen team is conducting difference-in-difference (DiD) analyses comparing changes in the outcomes of Enhanced MTM-eligible beneficiaries after their exposure to Enhanced MTM programs, relative to changes in comparators with similar demographic and health characteristics, who were not exposed to the Model.

- **Model Impact on Beneficiary Engagement:**

  The evaluation team plans to use Enhanced MTM eligibility and Encounter Data to provide further detail on the extent to which participating sponsors have been able to engage targeted beneficiaries in their Enhanced MTM programs. While the sponsors' tailored service offerings have potential to boost beneficiary engagement, sponsors have also reported some challenges in engaging Enhanced MTM beneficiaries. Future

reports will examine Enhanced MTM program impacts on beneficiary engagement indicators, including receipt rates of key services offered by sponsors, built on a detailed understanding of variation in Encounter Data documentation across sponsors and changes in SNOMED CT coding practices over time.

- **Evolution in Program Characteristics and Implementation:**

  The evaluation team will also continue regular communications with all six participating sponsors to maintain an up-to-date understanding of mid-year and year-to-year changes made to their programs. Topics include program components, targeting criteria details, and eligibility and Encounter Data documentation practices. The information collected will serve to contextualize and interpret findings from the quantitative analysis of program effects, and track changes in implementation challenges and successes over time.

- **Prescriber Experience:**

  The evaluation team is currently conducting surveys with prescribers of beneficiaries who interacted with the Enhanced MTM program, and will present findings on prescribers' level of awareness, engagement and experiences with the Enhanced MTM program in future reports to CMS.

- **Reasons for Plan Non-Participation:**

  The evaluation team is conducting interviews with sponsors of PDPs that met Model eligibility criteria but decided not to participate in the Enhanced MTM Model, to understand reasons and potential barriers to participation. Findings from these interviews will also inform future assessments of Model scalability. Descriptive statistics comparing the characteristics of eligible Part D plans that decided not to participate in the Model and those that did will be assessed using plan-level and beneficiary-level CMS data sources.

- **Evolution in Beneficiary and Workforce Perspectives:**

  The evaluation team also plans to conduct follow-up surveys and interviews with beneficiaries enrolled in participating plans, and surveys of administrative and frontline staff implementing the Enhanced MTM program to gain additional insights on beneficiary and workforce perspectives on the Model as implementation progresses further. The baseline beneficiary survey findings presented in this report (Section 1.5, "What Were Beneficiaries' Experiences with MTM Early in the Model?") suggested that there was opportunity for participating plans to improve care coordination, patient activation, and self-efficacy for medication adherence. The

Acumen team will examine any changes in these dimensions through the two planned rounds of follow-up surveys. Similarly, the follow-up beneficiary interviews may provide additional insights on Model implementation successes and challenges, including on beneficiary and community pharmacist engagement. The second and third rounds of beneficiary surveys will take place in Winter 2019 (Model Year 3) and Winter 2021 (Model Year 5), respectively. The second round of the workforce survey is planned for Spring 2020 (Model Year 4), and beneficiary in-depth interviews are planned for Summer-Fall 2020 (Model Year 4).

APPENDIX A BLUE CROSS BLUE SHIELD OF FLORIDA

Summary: The Blue Cross Blue Shield of Florida (BCBS FL) Enhanced MTM program uses a combination of data from Medicare Parts A, B, and D claims and the Florida state Health Information Exchange (HIE) to target beneficiaries to receive Enhanced MTM services. BCBS FL offers multiple Enhanced MTM programs with program-specific targeting criteria. While the types of services offered across the different programs are similar, the focus areas of the interventions vary. Information contained in this appendix reflects BCBS FL's Enhanced MTM program as of August 2018, unless noted otherwise.

A.1 Sponsor Overview

Region(s): 11 (FL)
PBP(s): S5904-001
Number of PDP Enrollees: 67,307
Number of Enhanced MTM-eligible Beneficiaries: 36,928

Sources: Enhanced MTM eligibility data in the Medicare Advantage and Prescription Drug Plan system (MARx), and PDP enrollment data in the Common Medicare Environment (CME), accessed in June 2018.

Notes: PDP enrollment only includes Enhanced MTM-participating contract-plans. Enhanced MTM eligibility is conditional on enrollment in the participating PDP in the CME. This text box includes all beneficiaries who were eligible for Enhanced MTM services from January 2017 – June 2018.

A.2 Participating Organizations

Appendix Table A.1 presents BCBS FL's partners and their role in the Enhanced MTM program.

Appendix Table A.1: BCBS FL Enhanced MTM Partnerships

Organization	Role in BCBS FL's Enhanced MTM Program
BCBS FL	• Enhanced MTM sponsor organization • Oversees Enhanced MTM program
Genoa Medication Management Systems (GMMS)	• Conducts Enhanced MTM program targeting • Provides Enhanced MTM clinical services and outreach
RxAnte[a]	• Provides predictive analytics for medication adherence targeting
Availity	• A real time information network connected to the state Health Information Exchange (HIE) • Used by BCBS FL and GMMS to support targeting efforts and services and facilitate provider referrals to the Enhanced MTM program
Prime Therapeutics	• Serves as BCBS FL's pharmacy benefits manager (PBM) • Manages the co-pay waivers for the Enhanced MTM program

[a]Added in late Model Year 1.

A.3 Program Targeting and Services

Appendix Table A.2 provides a brief overview of BCBS FL's targeting process and Enhanced MTM services.

Appendix Table A.2: BCBS FL Enhanced MTM Program Overview

Enhanced MTM Program	Targeting Process	Enhanced MTM Services

Hospital Prevention Program	Includes beneficiaries who have a serious chronic condition and high expenditures.	Beneficiaries in different programs receive similar services. The focus of comprehensive medication reviews (labeled as Annual Medication Review or AMR by BCBS FL), follow-up medication reviews, and adherence barrier assessments is tailored to the program. Additionally, the number and length of these services varies by program and is based on pharmacists' clinical discretion.
		• **Annual Medication Review (AMR):** a pharmacist reviews each medication to determine that it is appropriate for the beneficiary, effective for the medical condition, safe given co-morbidities and other medications being taken, and can be taken as intended. After an AMR, pharmacists fax medication recommendations to providers. Patients are mailed a Medication Action Plan which includes the pharmacist recommendations and Personal Medication List.
		• **Follow-up medication reviews (FMRs):** brief follow-up evaluation with a pharmacist.
		• **Adherence barrier assessment**: investigates and addresses the reasons why a beneficiary is non-adherent to medications related to the diabetes, hypertension, and cholesterol-related Medicare Star rating medication adherence measures.
		• **Co-pay waivers**:
		  ○ **Beneficiary Incentives:** a discount for beneficiary copays, offered to eligible beneficiaries who initially decline to participate in Enhanced MTM services or are difficult to reach.
		  ○ **Cost-share reductions:** no copay for certain generic medications, offered to beneficiaries who state during a pharmacist encounter that cost is a barrier to medication adherence.
		• **Ask a Pharmacist**: a hotline for medication-related questions.
		• **Adherence barrier assessment and prevention**
		  ○ Predictive – Pharmacists focus on patient education and self-efficacy for medication adherence
		  ○ Retrospective – Pharmacists investigate and address why patients became non-adherent (e.g., offer co-pay waivers, suggest home delivery)
		• **Co-pay waivers** (described above)
		• **Ask a Pharmacist** (described above)

Enhanced MTM Program	Targeting Process	Enhanced MTM Services
Diabetes Plus 3 Program	Includes diabetic beneficiaries who also have at least three other chronic conditions.	• Same as Hospital Prevention Program
Anticoagulant Program	Includes beneficiaries who have a new anticoagulant prescription.	• Same as Hospital Prevention Program
Specialty Drug Program	Includes beneficiaries who have specialty drug prescriptions for selected chronic conditions.[a]	• Same as Hospital Prevention Program
Transitions of Care Program	Includes any beneficiaries contacted within seven days of a recent emergency room (ER) visit for a chronic condition or recent inpatient hospitalization.[b]	• Same as Hospital Prevention Program
Transitions of Care Expansion Program[c]	Includes beneficiaries contacted between eight and 30 days after an inpatient hospitalization or ER visit for a chronic condition.[b]	• Same as Hospital Prevention Program
Referrals	Provider referral or self-referral to Enhanced MTM program	• Same as Hospital Prevention Program
Medication Adherence Program	Identifies beneficiaries who are likely to become non-adherent to drugs included in Medicare Star Ratings adherence measures.[d]	• Same as Hospital Prevention Program
Ask a Pharmacist	Inbound pharmacist call center available to all enrolled BCBS FL beneficiaries.	• **Ask a Pharmacist** (described above)
Continuity of Care[c]	Includes beneficiaries who were targeted to receive an AMR in the previous Model Year, but no longer qualify in the current Model Year.	• **Follow-up medication reviews (FMRs)** (described above) • **Co-pay waivers** (described above)
Medication Review On Demand Program[c]	Includes beneficiaries who make an inbound call to the pharmacist call center, are prescribed multiple medications, and have more than one chronic condition.	• **Medication Action Plan (MAP):** If one or more drug therapy problems (DTPs) are identified, a MAP outlining recommended medication changes is sent to the beneficiary and/or prescriber.
Statin Use in Persons with Diabetes (SUPD)[c]	Includes beneficiaries who qualify for the CMS Star Ratings Statin Use in Person with Diabetes measure.	• If a targeted medication review identifies that statin is not already prescribed, pharmacist sends a letter to beneficiary's provider to recommend prescribing a statin.

[a] In Model Year 1, the Specialty Drug program targeted beneficiaries who had any new specialty drug prescriptions. In Model Year 2, BCBS FL limited the targeting criteria to beneficiaries who took specialty drugs for certain chronic conditions.

[b] In Model Year 1, the Transitions of Care program targeted beneficiaries with a recent inpatient hospitalization. In Model Year 2, BCBS FL also included beneficiaries who had a recent ER visit.

[c] Implemented in Model Year 2.

[d] Targeting criteria updated in Model Year 2.

A.4 Engagement Strategy

Appendix Table A.3 describes BCBS FL's approach to beneficiary and prescriber outreach.

Appendix Table A.3: BCBS FL Outreach Strategy Overview

Outreach Categories	BCBS FL Approach
Beneficiary Engagement	• All beneficiaries are mailed an initial informational welcome packet with program specific information and a call-in number. • All beneficiaries, except those who only qualify for the Ask a Pharmacist program, also receive telephonic outreach.
Prescriber Engagement	• Prescriber communication occurs primarily through a provider portal and by fax. Pharmacists may call prescribers, if necessary, during Enhanced MTM service delivery. • When pharmacists recommend medication changes as a result of very high risk or high risk beneficiaries' Enhanced MTM service, their prescribers receive Provider Medication Action Plans (PMAPs), which list the recommended medication changes. Prescribers also receive instructions for responding to the PMAP and for Enhanced MTM service referral. • If a moderate risk beneficiary declines an Enhanced MTM service, the prescriber is sent any proof of medication non-adherence and Enhanced MTM service referral instructions. • BCBS FL encourages prescribers to participate in the Enhanced MTM Model through presentations at Florida healthcare organizations and relevant conferences.

APPENDIX B BLUE CROSS BLUE SHIELD NORTHERN PLAINS ALLIANCE

Summary: The Blue Cross Blue Shield Northern Plains Alliance (BCBS NPA) Enhanced Medication Therapy Management (Enhanced MTM) program targets a subset of participating plan beneficiaries to receive Enhanced MTM services based on a risk scoring algorithm that uses Part D claims data and incorporates multi-drug interaction analysis that identifies risk of Adverse Drug Events (ADEs). Beneficiaries are eligible to receive Enhanced MTM services based on their respective medication risk score. A CMR-type service known as the Medication Safety Review (MSR) is BCBS NPA's core Enhanced MTM service. BCBS NPA also uses Part D claims data to identify beneficiaries to receive "light touch" services. Information contained in this appendix reflects BCBS NPA's Enhanced MTM program as of August 2018, unless noted otherwise.

B.1 Sponsor Overview

Region(s): 25 (IA, MN, MT, NE, ND, SD, WY)
PBP(s): S5743-001
Number of PDP Enrollees: 257,721
Number of Enhanced MTM-eligible Beneficiaries: 169,451

Sources: Enhanced MTM eligibility data in the Medicare Advantage and Prescription Drug Plan system (MARx), and PDP enrollment data in the Common Medicare Environment (CME), accessed in June 2018.

Notes: PDP enrollment only includes Enhanced MTM-participating contract-plans. Enhanced MTM eligibility is conditional on enrollment in the participating PDP in the CME. This text box includes all beneficiaries who were eligible for Enhanced MTM services from January 2017 – June 2018.

B.2 Participating Organizations

Appendix Table B.1 presents BCBS NPA's partners and their role in the Enhanced MTM program.

Appendix Table B.1 BCBS NPA Enhanced MTM Partnerships

Organization	Role in BCBS NPA's Enhanced MTM Program
Blue Cross Blue Shield Northern Plains Alliance (BCBS NPA)	• Enhanced MTM sponsor organization
ClearStone Solutions, Inc. (ClearStone)	• Affiliate of Blue Cross Blue Shield of Minnesota • Administers BCBS NPA's Part D Plan • Provides oversight and manages Enhanced MTM program
Tabula Rasa HealthCare (TRHC)	• External MTM vendor that works with ClearStone for BCBS NPA's Enhanced MTM program • Performs beneficiary targeting, prioritization, outreach, Enhanced MTM service delivery, provider communication • Provides proprietary web platform for documentation of medication risk stratification, medication risk scores, and Enhanced MTM services • Contracts with community pharmacies to provide Enhanced MTM services using TRHC's proprietary web platform and provides reimbursement to these pharmacies for completing services
DocStation[a]	• External vendor that provides a separate clinical platform to community pharmacies; this platform is used for other services in addition to Enhanced MTM • Provides pharmacists with clinical recommendations based on disease state, medications, and other clinical factors to personalize interventions to beneficiaries for "light-touch" interventions while in the pharmacy

[a] Added in Model Year 2.

B.3 Program Targeting and Services

Appendix Table B.2 provides a brief overview of BCBS NPA's targeting process and Enhanced MTM services.

Appendix Table B.2: BCBS NPA Enhanced MTM Program Overview

Enhanced MTM Program	Targeting Process	Enhanced MTM Services
Core Enhanced MTM Program	Identifies subset of beneficiaries who are at high risk for potential multi-drug interactions and side effects based on types of medications.[a]	• **Medication Reconciliation:** A board-certified clinical call center pharmacist or community pharmacist works with the beneficiary to update information about current medications; which include over-the-counter medications, vitamins, supplements, and herbals. The beneficiary then consults with a pharmacist to complete the Medication Safety Review. • **Medication Safety Review (MSR):** Within 72 hours of the medication reconciliation service, a call center pharmacist or community pharmacist conducts a detailed review of the targeted beneficiary's medications and addresses potential medication safety risks identified through the targeting process. The pharmacist and beneficiary develop a collaborative action plan which is mailed to the beneficiary and their preferred prescriber, along with any medication recommendations. • **Medication Safety Review Lite (MSR-Lite**): For targeted beneficiaries who have completed the medication reconciliation service only, a pharmacist reviews the beneficiary's reconciled list of medications and follows up with the preferred prescriber if risks are identified and provides recommendations to remediate adverse drug event risk that would have been discussed with the beneficiary during a consultation. • **Medication Safety Alert (MSA):** For targeted beneficiaries who have not completed any Enhanced MTM service, a pharmacist reviews the beneficiary's medication claims information and follows up with the preferred prescriber if risks are identified. • **Beneficiary Education:** During an Enhanced MTM service, a pharmacist may identify that a beneficiary has specific educational needs related to their condition, medications, or disease management. Pharmacists may provide education or coaching as part of the MSR service, and may provide additional educational resources (e.g., written materials, instructional videos) at the time of the service or subsequently. • **Member Needs:** Beneficiaries identified as having possible socioeconomic challenges may be contacted telephonically to assess the issue and inform the beneficiary of existing external programs that may help the beneficiary.

Enhanced MTM Program	Targeting Process	Enhanced MTM Services
Community Pharmacy Light Touch Interventions[b]	Includes all plan beneficiaries and identifies those who have begun new medications or have challenges with medication adherence.	A small subset of community pharmacies use a separate clinical platform to deliver light touch interventions including counseling following the start of a new medication and medication adherence monitoring.
Opioid Program (short-term initiative)[c]	Identified high-volume opioid prescribers for education about opioid prescribing and specific beneficiaries with identified opioid medication risks.	The Opioid Program was a short-term initiative designed to increase prescribers' awareness about opioid medication risks and to help mitigate risks for patients. Targeted prescribers received on-site (i.e., in-office) education about opioid prescribing, and call center pharmacists completed non-beneficiary-facing targeted medication safety reviews for a subset of beneficiaries with identified risks.

[a] In Model Year 2, BCBS NPA included additional medication risk factors to the algorithm used to identify at-risk beneficiaries.
[b] Implemented in Model Year 2.
[c] Implemented and completed in Model Year 2.

B.4 Engagement Strategy

Appendix Table B.3 describes BCBS NPA's approach to beneficiary and prescriber outreach.

Appendix Table B.3: BCBS NPA Outreach Strategy Overview

Outreach Categories	BCBS NPA Approach

Beneficiary Engagement	• **Core Enhanced MTM Program**
	  ○ Targeted beneficiaries receive an initial mailed brochure describing the Enhanced MTM program and its potential benefits and informing them of an upcoming call from either a partner call center or a local pharmacy.
	  ○ Additional outreach strategies are used in cases where beneficiaries are unresponsive or unreceptive to engagement attempts, including mailing letters, assigning beneficiaries to the community pharmacy network, and leveraging SMS text messaging.[a]
	  ○ Quarterly newsletters are sent to all Enhanced MTM targeted beneficiaries, containing general information about Enhanced MTM services in addition to relevant seasonal content.
	• **Community Pharmacy Light Touch Interventions**
	  ○ Pharmacists engage beneficiaries via multiple touch points including inbound/outbound phone calls, appointment-based visits, and at each prescription pick-up.

Prescriber Engagement	• Prescribers receive faxed and mailed communications from the BCBS NPA Enhanced MTM program, and telephone outreach as needed to address medication recommendations.
	  ○ Focus groups with prescribers were used to enhance prescriber communication strategies.[c]
	• Proactive fax outreach is used to inform prescribers about beneficiary Enhanced MTM eligibility.[b]
	• Over 4,000 high-volume opioid prescribers were targeted based on identification of beneficiaries with opioid medication-related risks to receive education about opioid prescribing through a short-term Opioid Program.
	  ○ All targeted prescribers received mailed educational materials.
	  ○ In addition, a small subset of targeted prescribers (~50) received in-office educational visits.
	• Prescribers were offered educational materials and continuing education training events.[d]

[a] Text messaging campaign was launched in Model Year 2.
[b] Implemented in Model Year 2.
[c] Focus groups were conducted in Model Year 1.
[d] Initiated in Model Year 2.

APPENDIX C HUMANA

Summary: Humana's Enhanced MTM program uses Part D claims data to stratify plan beneficiaries into four risk groups based on the presence of select chronic conditions, gaps in care, and drug expenditures. Beneficiaries receive outreach for services based on their risk category and identified drug therapy problems (DTPs). All plan beneficiaries who experience a transition of care from a hospital are eligible to receive a Transition of Care medication reconciliation. Information contained in this appendix reflects Humana's Enhanced MTM program as of August 2018, unless noted otherwise.

C.1 Sponsor Overview

Region(s): 7 (VA); 11 (FL); 21 (LA); 25 (IA, MN, MT, NE, ND, SD, WY); 28 (AZ)
PBP(s): S5884-132, -105, -108, -145, -146
Number of PDP Enrollees: 492,490
Number of Enhanced MTM-eligible Beneficiaries: 269,510

Sources: Enhanced MTM eligibility data in the Medicare Advantage and Prescription Drug Plan system (MARx), and PDP enrollment data in the Common Medicare Environment (CME), accessed in June 2018.

Notes: PDP enrollment only includes Enhanced MTM-participating contract-plans. Enhanced MTM eligibility is conditional on enrollment in the participating PDP in the CME. This text box includes all beneficiaries who were eligible for Enhanced MTM services from January 2017 – June 2018.

C.2 Participating Organizations

Appendix Table C.1 presents Humana's partners and their role in the Enhanced MTM program.

Appendix Table C.1 Humana Enhanced MTM Partnerships

Organization	Role in Humana's Enhanced MTM Program
Humana Insurance Company	• Enhanced MTM sponsor organization
Humana Pharmacy Solutions	• Administers Enhanced MTM program for Humana Insurance Company • Performs beneficiary targeting and outreach for Enhanced MTM • Manages and handles payment for Enhanced MTM services
OutcomesMTM	• External MTM vendor that administers Enhanced MTM program • Provides technology platform for documentation and billing of Enhanced MTM services • Provides telephonic Enhanced MTM services • Leverages extensive network of community pharmacies for Enhanced MTM service delivery
Telephonic MTM Vendor[a]	• External MTM vendor that provides telephonic Enhanced MTM services
Admission, Discharge, and Transfer (ADT) Data Vendor[b]	• External vendor that provides state Health Information Exchange (HIE) data support to help identify beneficiaries with a recent hospital discharge for the Transitions of Care medication reconciliation service

[a] Added midway through Model Year 1.
[b] Added in Model Year 2.

C.3 Program Targeting and Services

Appendix Table C.2 provides a brief overview of Humana's targeting process and Enhanced MTM services.

Appendix Table C.2: Humana Enhanced MTM Program Overview

Enhanced MTM Program	Targeting Process	Enhanced MTM Services
Core Enhanced MTM Program	Uses pharmacy claims data to stratify beneficiaries into four risk groups-- high-risk, medium-risk, low-risk, and monitoring[a]-- incorporating information about chronic conditions, gaps in care, and drug expenditures. Enhanced MTM service opportunities can also be identified by community pharmacists.	• **Comprehensive Medication Review (CMR):** For high-risk beneficiaries, a pharmacist reviews all medications with the beneficiary with a focus on potential DTPs such as drug interactions, adherence issues, education for high-risk medications, etc. CMRs may be completed either telephonically or face-to-face by a community pharmacy, or telephonically by a call center pharmacist. Beneficiaries receive a customized patient takeaway after the CMR service that includes medications reviewed, issues discussed, and recommendations if applicable. • **Targeted Medication Reviews (TMRs):** For high-, medium-, and low-risk beneficiaries, TMR services include adherence monitoring, over-the-counter medication consultations, medication assessments for high-risk medications, and patient education. These service opportunities may be completed with the beneficiary or prescriber either telephonically or face-to-face by a community pharmacy, or telephonically by a call center pharmacist. • **Flu Immunization Reminders:** High- and medium-risk beneficiaries who have not yet received a flu shot during the flu season are encouraged by pharmacists to receive the vaccine. If a beneficiary has not received a flu shot, the pharmacist may provide the vaccine or refer the beneficiary for vaccine administration by their prescriber's office.
Transitions of Care Medication Reconciliation	Identifies beneficiaries in all risk groups with a recent hospital discharge as eligible to receive the Transitions of Care medication reconciliation service. Beneficiaries may be identified by community pharmacies, through medical claims data, or through Admission, Discharge, and Transfer (ADT) data leveraged from a state HIE.[b]	• **Transitions of Care Medication Reconciliation:** A pharmacist compares pre-admission medications with post-discharge medications to identify potential drug therapy problems (DTPs). This service may be provided either telephonically or face-to-face by a community pharmacy, or telephonically by a call center pharmacist. After the service, the beneficiary and the beneficiary's primary care provider receive a reconciled medication list. Beneficiaries who complete this service within 30 days of hospital discharge receive a monetary incentive.[c]

[a] Beneficiaries in the monitoring group are not targeted for core Enhanced MTM services.
[b] This approach was piloted in Model Year 2 and will be scaled in Model Year 3.
[c] Implemented in Model Year 2.

C.4 Engagement Strategy

Appendix Table C.3 describes Humana's approach to beneficiary and prescriber outreach.

Appendix Table C.3: Humana Outreach Strategy Overview

Outreach Categories	Humana Approach
Beneficiary Engagement	• An initial postcard invitation to join the program is mailed to all high-, medium-, and low-risk beneficiaries. • In-person or telephonic outreach is conducted for high-risk beneficiaries, beneficiaries identified for a Transitions of Care medication reconciliation service[b], and beneficiaries identified for a TMR to engage them in specific services for which they are eligible. • Additional Enhanced MTM engagement methods include emails and web alerts[a] to provide beneficiaries with general information about the Enhanced MTM program and encourage them to schedule an appointment. • CMR reminders occur by interactive voice response (IVR) and target beneficiaries who are eligible but have not yet received a CMR.[c]
Prescriber Engagement	• Fax communication occurs to inform prescribers about beneficiary Enhanced MTM eligibility and to provide prescribers with patient summaries and recommendations for changes in therapy after the completion of CMRs, Transitions of Care medication reconciliations, and TMRs. • Telephone outreach is used as needed to address urgent medication recommendations with the prescriber. • A small number of physician clinics with embedded pharmacists, are leveraged to allow for the delivery of Enhanced MTM services in the clinics, helping to engage prescribers in Enhanced MTM.

[a] These additional web-based outreach methods were launched toward the end of Model Year 1 and the start of Model Year 2.

[b] Telephonic outreach for Transitions of Care medication reconciliation was not fully operationalized until Model Year 2, when Humana's ADT data identification approach was piloted.

[c] Implemented midway through Model Year 1.

APPENDIX D SILVERSCRIPT/CVS INSURANCE COMPANY

Summary. SilverScript/CVS Insurance Company's Enhanced MTM services are structured into four distinct programs. All programs use Part D claims, one also uses Parts A and B claims, and another also uses Part B claims for targeting. Beneficiaries may qualify for one or more programs if they meet program-specific targeting criteria. Each program consists of different services, which range in intensity from a Comprehensive Medication Review (CMR) or in-depth risk assessment to refill reminders. Information contained in this appendix reflects SilverScript/CVS's Enhanced MTM program as of August 2018, unless noted otherwise.

D.1 Sponsor Overview

Region(s): 7 (VA); 11 (FL); 21 (LA); 25 (IA, MN, MT, NE, ND, SD, WY); 28 (AZ)
PBP(s): S5601-014, -022, -042, -050, -056
Number of PDP Enrollees: 1,057,779
Number of Enhanced MTM-eligible Beneficiaries: 927,811

Sources: Enhanced MTM eligibility data in the Medicare Advantage and Prescription Drug Plan system (MARx), and PDP enrollment data in the Common Medicare Environment (CME), accessed in June 2018.

Notes: PDP enrollment only includes Enhanced MTM-participating contract-plans. Enhanced MTM eligibility is conditional on enrollment in the participating PDP in the CME. This text box includes all beneficiaries who were eligible for Enhanced MTM services from January 2017 – June 2018.

D.2 Participating Organizations

SilverScript/CVS's Enhanced MTM program is overseen by its PBM, CVS Caremark, and its PBM's parent company, CVS Health (collectively referred to hereafter as "CVS"). Appendix Table D.1 summarizes the roles of these organizations in SilverScript/CVS's Enhanced MTM program.

Appendix Table D.1: SilverScript/CVS Enhanced MTM Partnerships

Organization	Role in SilverScript/CVS's Enhanced MTM
SilverScript Insurance Company (SSI)	• Enhanced MTM sponsor organization
CVS	• Handles oversight of entire Enhanced MTM program • For Pharmacy Advisor Counseling, Medication Therapy Counseling, and HealthTag programs: o Conducts beneficiary targeting and outreach o Delivers Enhanced MTM services o Handles prescriber communication o Documents and reports Enhanced MTM services
Accordant (CVS Subsidiary)	• For Specialty Pharmacy Care Management program: o Conducts beneficiary targeting and outreach o Delivers Enhanced MTM services o Handles prescriber communication o Documents and reports Enhanced MTM services
OutcomesMTM[a]	• External MTM vendor that delivers Enhanced MTM services for Medication Therapy Counseling program only • Leverages extensive network of retail and community pharmacies for Enhanced MTM program implementation

[a] Added in August 2018 (Model Year 2)

D.3 Program Targeting and Services

Appendix Table D.2 provides a brief overview of SilverScript/CVS's targeting process and Enhanced MTM services.

Appendix Table D.2: SilverScript/CVS Enhanced MTM Program Overview

Enhanced MTM Program	Targeting Process	Enhanced MTM Services
Medication Therapy Counseling (MTC)	Includes beneficiaries who are predicted to be at high risk for high health care costs based on an algorithm using Part D claims.	• **Comprehensive Medication Review (CMR):** o Conducted telephonically by a call center or in-person by a community pharmacist.[a] o Focuses on the identification of medication-related problems (MRPs), broadly related to indication, safety, effectiveness, and adherence. • **Follow-up calls** for CMR recipients: o Focus on any changes to medications, as well as the status of any previously identified MRPs, new MRPs, or disease states not covered during previous phone calls. o Frequency generally driven by the number of disease states and pharmacist discretion.
Specialty Pharmacy Care Management (SPCM)	Identifies beneficiaries with rare conditions through (i) disease-specific algorithms that use medical and pharmacy claims or (ii) referrals from the beneficiary, health care providers, or CVS specialty pharmacy after verifying beneficiary meets program targeting criteria.	• **Initial assessment call**: o Conducted telephonically by a primary nurse assigned to the beneficiary. o Focuses on completion of disease-specific beneficiary risk assessment. o Assigns the beneficiary a risk level that relates to the level of care management received. o Produces a collaboratively-developed care plan that directs focus of future follow-up. • **Follow-up calls** directed by risk level, which focus on care optimization, symptom management, self-care, co-morbidities, and medication optimization. • **Referrals** to additional services designed to help beneficiaries identify appropriate community resources (e.g., financial assistance, support with activities of daily living, long-term planning, etc.), support beneficiaries with acute needs (e.g., hospitalization/discharge, scheduled surgery), and activate beneficiaries in their care. • **Educational resources** include targeted articles, access to online education, and a monthly newsletter.

Enhanced MTM Program	Targeting Process	Enhanced MTM Services
Pharmacy Advisor Counseling (PAC)	Identifies beneficiaries for brief counseling interventions pertaining to new medications or medication refills using pharmacy claims.	• **Targeted pharmacist interventions** that consist of brief clinical conversations by phone or in person and may: ▪ Explain the importance of a new medication and addresses cost barriers, as needed; ▪ Reinforce the importance of continuing medication therapy, providing medication-specific information, and addressing any patient-specific issues; ▪ Provide reminders about upcoming refills; ▪ Provide information about a medication and health condition associated with the medication; ▪ Reinforce importance of medication to health outcomes, encourage refill, and address barriers; or ▪ Discuss gaps in care with beneficiary and prescriber. • **Education materials** include condition-specific educational brochures and possible referrals to disease management programs and/or other health care providers.
HealthTag (HT)	Identifies beneficiaries based on Parts B and D data to receive vaccine reminders or reminders about eligibility for other SilverScript/CVS Enhanced MTM programs.	• There are no services beyond vaccination reminders provided to HT-targeted beneficiaries.

[a] Community pharmacy and additional call center capabilities added in Model Year 2.

D.4 Engagement Strategy

Appendix Table D.3 describes SilverScript/CVS's approach to beneficiary and prescriber outreach.

Appendix Table D.3: SilverScript/CVS Outreach Strategy Overview

Outreach Categories	SilverScript/CVS Approach
Beneficiary Engagement	• Beneficiary outreach varies for each of the four Enhanced MTM programs. • Initial mailed introductory letter for MTC, PAC, and SPCM programs notifying the beneficiary of their eligibility for Enhanced MTM services and describing the types of services and their benefits followed by: o Initial call or outreach to engage the beneficiary in Enhanced MTM services, which occurs by phone or in-person for the PAC and MTC programs, or by phone only for the SPCM program. • Beneficiary outreach (i.e., vaccination reminder) for HT occurs only in the CVS retail pharmacy setting when an eligible beneficiary visits the pharmacy to fill a prescription.
Prescriber Engagement	• Prescriber outreach is limited to post-intervention, and the nature of the communication varies across the Enhanced MTM programs: o Following all MTC interventions, prescribers receive a list of medication-related problems and recommendations for addressing these problems for the MTC program. o For the SPCM program, prescriber communication is ongoing and may include updates about a beneficiary's risk status, care coordination needs, vaccination status, etc. o Prescriber communication for the PAC program is primarily focused on gaps in care. o The HT program does not involve any direct prescriber communication or outreach. • Outreach occurs by phone, fax, or mail for MTC, PAC, and SPCM programs.

APPENDIX E UNITEDHEALTH GROUP

Summary: The UnitedHealth Group (UHG) Enhanced MTM program categorizes beneficiaries as high- or low-risk based on a risk scoring algorithm using beneficiary characteristics and drug therapy problems (DTPs) identified through Part D claims. Beneficiaries receive a different suite and intensity of services based on their risk category. Beneficiaries may also receive additional services if they are recently discharged from the hospital or are late to refill their medications, as identified by Part D claims. Information contained in this appendix reflects UHG's Enhanced MTM program as of August 2018.

E.1 Sponsor Overview

Region(s): 7 (VA); 11 (FL); 21 (LA); 25 (IA, MN, MT, NE, ND, SD, WY); 28 (AZ)
PBP(s): S5921-352, -356, -366, -370, -380
Number of PDP Enrollees: 180,811
Number of Enhanced MTM-eligible Beneficiaries: 107,351

Sources: Enhanced MTM eligibility data in the Medicare Advantage and Prescription Drug Plan system (MARx), and PDP enrollment data in the Common Medicare Environment (CME), accessed in June 2018.

Notes: PDP enrollment only includes Enhanced MTM-participating contract-plans. Enhanced MTM eligibility is conditional on enrollment in the participating PDP in the CME. This text box includes all beneficiaries who were eligible for Enhanced MTM services from January 2017 – June 2018.

E.2 Participating Organizations

Appendix Table E.1 presents UHG's partners and their role in the Enhanced MTM program.

Appendix Table E.1: UHG Enhanced MTM Partnerships

Organization	Role in UHG's Enhanced MTM Program
UHG	• Enhanced MTM sponsor organization • Oversees Enhanced MTM program
OptumRx	• Conducts Enhanced MTM program targeting • Provides Enhanced MTM services and beneficiary outreach • Leverages retail pharmacy network for Enhanced MTM program implementation • Conducts prescriber engagement • Generates and provides Enhanced MTM reporting (MARx TC 91, Encounter Data, Monitoring Measures)
Eliza Corporation[a]	• Provides interactive voice response (IVR) telephone support for the Adherence Monitoring Program automated refill reminders

[a] Added in Model Year 2.

E.3 Program Targeting and Services

Appendix Table E.2 provides a brief overview of UHG's targeting process and Enhanced MTM services.

Appendix Table E.2: UHG Enhanced MTM Program Overview

Enhanced MTM Program	Targeting Process	Enhanced MTM Services
Core Enhanced MTM Program	Assigns a risk score based on beneficiaries' characteristics and drug therapy problems (DTPs). The risk score is used to assign beneficiaries to high or low risk categories.	**High Risk Group** • **"Lean" Comprehensive Medication Review (CMR)**: Medication review focusing on DTPs, which results in portable medication list and education materials related to the DTPs and/or disease states sent to beneficiary via mail. This service is conducted via telephone, or by a community pharmacist if the beneficiary is hard to reach by telephone.[a] • **Pharmacists Referrals to Other Services:** Beneficiaries are directed to existing services based on pharmacists' clinical judgment and beneficiary needs identified during Lean CMR. • **Targeted Medication Review (TMR):** If new DTPs are identified by the next 90-day follow up, a pharmacist reviews the DTPs to decide if high-risk beneficiaries will receive an additional Lean CMR. **Low Risk Group** • **TMR**: If DTPs are identified during an automated TMR, the prescriber is contacted. There is no beneficiary-facing outreach unless the beneficiary is identified as part of the Transition of Care program.
Transition of Care Program	Uses predictive screening algorithm to identify beneficiaries (regardless of risk level) recently discharged from hospital. Discharge status is confirmed by a phone call to the beneficiary.	• **Lean CMR:** Similar to Lean CMR provided to high-risk beneficiaries but focuses on newly prescribed medications, review of discharge notes (if available), and how to avoid future hospital admissions. This results in similar post-Lean CMR materials as high risk group, plus medication action plan. • **Follow-up Consultations:** Occurs 10 days after initial Lean CMR. Beneficiary also continues to receive interventions associated with their risk group.
Adherence Monitoring Program[b]	Identifies beneficiaries who have filled a medication within classes used for CMS Star rating adherence measures and are overdue for a refill.	• **Automated refill reminder**: IVR telephone calls, which provide beneficiaries the option to transfer to dispensing pharmacy to refill medications

[a] The community pharmacist component was piloted in Model Year 1 and fully implemented in Model Year 2. Beneficiaries were considered hard-to-reach if the telephone number on file was invalid or if the beneficiary could not be reached after three telephonic outreach attempts.

[b] Implemented in Model Year 2.

E.4 Engagement Strategy

Appendix Table E.3 describes UHG's approach to beneficiary and prescriber outreach.

Appendix Table E.3: UHG Outreach Strategy Overview

Outreach Categories	UHG Approach
Beneficiary Engagement	• High Risk beneficiaries are mailed an initial informational welcome packet with program-specific information and a call-in number. • High Risk and Transition of Care beneficiaries receive outbound telephonic outreach. If the beneficiary is amenable to completing the service, the beneficiary will be connected to a pharmacist for an immediate CMR, or if it is not a convenient time, the beneficiary will be scheduled for a CMR at a later date. After three unsuccessful attempts to reach high risk beneficiaries by telephone, the case will be transferred to a retail pharmacy.
Prescriber Engagement	• Prescriber communication occurs primarily through fax. Pharmacists completing Enhanced MTM services contact prescribers by telephone only if severe drug therapy problems (DTPs) are detected after a Lean CMR with a high risk or Transitions of Care beneficiary. • When a DTP is identified during an automated TMR, prescribers receive Enhanced MTM recommendations via fax or mail.

APPENDIX F WELLCARE

Summary: WellCare's Enhanced MTM program is structured into four sub-programs, each with a distinct focus. Targeting for each program relies on Part D claims. Two programs also use Parts A and B claims for chronic condition identification. All programs involve a first phase of targeting to determine beneficiary eligibility and a second phase to determine which beneficiaries are offered services. Beneficiaries may qualify for one or more programs. Although the core components of the Enhanced MTM services are similar across programs, the combination and content of these services vary. Information contained in this appendix reflects WellCare's Enhanced MTM program as of August 2018, unless noted otherwise.

F.1 Sponsor Overview

Region(s): 7 (VA); 11 (FL); 21 (LA); 25 (IA, MN, MT, NE, ND, SD, WY); 28 (AZ)
PBP(s): S4802-069, -083, -012, -089, -092
Number of PDP Enrollees: 176,223
Number of Enhanced MTM-eligible Beneficiaries: 129,636

Sources: Enhanced MTM eligibility data in the Medicare Advantage and Prescription Drug Plan system (MARx), and PDP enrollment data in the Common Medicare Environment (CME), accessed in June 2018.

Notes: PDP enrollment only includes Enhanced MTM-participating contract-plans. Enhanced MTM eligibility is conditional on enrollment in the participating PDP in the CME. This text box includes all beneficiaries who were eligible for Enhanced MTM services from January 2017 – June 2018.

F.2 Participating Organizations

Appendix Table F.1 presents WellCare's current partners and their role in the Enhanced MTM program.

Appendix Table F.1: WellCare Enhanced MTM Partnerships

Organization	Role in WellCare's Enhanced MTM Program
WellCare	• Enhanced MTM sponsor organization • Oversees Enhanced MTM program delivery • Provides outreach, Enhanced MTM service delivery, provider communication • Documents and reports Enhanced MTM services
RxAnte	• Conducts beneficiary targeting • Assigns targeted beneficiaries to MTM vendors • Provides operational and outcomes reporting support for the ongoing management of the Enhanced MTM program
University of Florida Center for Quality Medication Management	• Notifies beneficiaries who are eligible for Enhanced MTM about the Enhanced MTM program • Provides outreach, Enhanced MTM service delivery, provider communication • Documents and reports Enhanced MTM services
Mirixa Corporation	• Provides outreach, Enhanced MTM service delivery, provider communication • Documents and reports Enhanced MTM services
Eliza Corporation	• Uses interactive voice response (IVR), email, and text to send medication adherence reminders to beneficiaries
Staywell	• Develops and distributes a quarterly education newsletter to Enhanced MTM eligible beneficiaries
Healthwise	• Provides clinical content for WellCare website
Medkeeper	• Maintains the MTMExchange, a documentation system used for Enhanced MTM services by WellCare and University of Florida

F.3 Program Targeting and Services

Appendix Table F.2 provides a brief overview of WellCare's targeting process and Enhanced MTM services.

Appendix Table F.2: WellCare Enhanced MTM Program Overview

Enhanced MTM Program	Targeting Process	Enhanced MTM Services
Medication Adherence	Identifies beneficiaries who are or who are likely to become non-adherent to medication classes used for CMS Star measures or anti-retroviral medications.	• **Comprehensive Medication Review (CMR):** Collects beneficiary-specific health and medication information, including lifestyle/behavioral factors; assesses medication therapies to identify medication-related problems (MRPs); and develops a prioritized list of MRPs and creates a plan to resolve MRPs with the beneficiary, caregiver, and/or prescriber. The length varies depending on the reasons why the beneficiary qualified for the CMR. Beneficiaries who continue to meet targeting criteria six months after a CMR may receive another CMR. CMRs are offered only to a subset of beneficiaries eligible for the Medication Adherence program. • **Targeted Medication Review (TMR):** Includes Quarterly Reviews (for beneficiaries who received a CMR), Targeted System-Generated Reviews, and Prescriber or Beneficiary-Initiated Reviews. The focus of the TMR depends on the type of review and reason for targeting. Quarterly reviews and system-generated reviews involve a phone call with the beneficiary. • **Interactive Voice Response (IVR):** Uses automated calls, text, or email to provide refill reminders or other medication adherence interventions for select Medication Adherence program-targeted beneficiaries. • **Educational Material:** Includes a quarterly newsletter and online material (online health and medication resources center on the MTM program website). • **HealthLine Hotline:** Promoted in beneficiary outreach and education materials. Allows beneficiaries to initiate contact regarding medication questions or concerns.
Opioid Utilization	Identifies beneficiaries who are or are potentially at risk for opioid abuse and/or overdose.	• **TMR**: Includes Targeted System-Generated Reviews and involves a phone call with the beneficiary. • **Educational Material** (described above) • **HealthLine Hotline** (described above)
Select Drug Therapy Problems	Identifies beneficiaries who have one or more select drug therapy problems.	• **TMR**: Includes Targeted System-Generated Reviews and involves prescriber-facing communication unless beneficiary contact is needed. • **Educational Material** (described above) • **HealthLine Hotline** (described above)
High Utilizer	Identifies beneficiaries who are taking multiple medications and who have certain chronic conditions.	• **CMR** (described above): Offered to all beneficiaries eligible for the High Utilizer program. • **TMR**: Includes Quarterly Reviews and involves a phone call or in-person contact with the beneficiary. • **Educational Material** (described above) • **HealthLine Hotline** (described above)

F.4 Engagement Strategy

Appendix Table F.3 describes WellCare's approach to beneficiary and prescriber outreach.

Appendix Table F.3: WellCare Outreach Strategy Overview

Outreach Categories	WellCare Approach
Beneficiary Engagement	• All eligible beneficiaries receive telephone outreach notifying them that they may be contacted to receive Enhanced MTM services, followed by a mailed welcome letter to explain the Enhanced MTM program and introduce the vendors that may be contacting them. o Eligible beneficiaries who are targeted to receive Enhanced MTM services may receive additional outreach by phone, in-person, or via interactive voice response (IVR), depending on the program and services for which they are targeted. • Outreach is coordinated for beneficiaries who are targeted for multiple programs to not overburden beneficiaries with multiple, overlapping contact attempts. • Quarterly educational newsletters containing general medication, health, and lifestyle information are sent to all Enhanced MTM eligible beneficiaries.
Prescriber Engagement	• Prescriber outreach is post-intervention. • After a CMR intervention, prescribers receive a copy of the beneficiary's personalized medication list by fax.to ensure the prescriber is aware of the beneficiary's current medication regimen • Recommendations for medication changes to the prescriber are prioritized based on the severity of the issue the recommendation addresses. • Pharmacists also consider the severity of the drug therapy problem when deciding how to contact the prescriber to address the drug therapy problem (i.e., by fax, mail, or phone).

APPENDIX G QUALITATIVE METHODS

This section presents the qualitative methods used for analysis in this report. Section G.1 presents the qualitative methods used in sponsor interviews and document review. Section G.2 presents the qualitative methods used in beneficiary in-depth interviews.

G.1 Sponsor Interviews and Document Review

This appendix provides an overview of the qualitative data collection methods used to gather information for this First Evaluation Report from (i) industry stakeholders and experts and (ii) the six participating Part D sponsors and their vendors. The qualitative information included in this report is based on analysis conducted between November 2016 and August 2018.

G.1.1 Industry Expert and Stakeholder Interviews

The Acumen team conducted interviews with an initial set of industry stakeholders in March 2017, two months after Enhanced MTM Model start-up. Representatives consisted of stakeholders from professional pharmacist associations, standards organizations, and national associations representing the pharmaceutical industry. The interviews focused on the stakeholders' perceptions and expectations of the Enhanced MTM Model, factors related to Model implementation, and any potential unintended consequences of the Model.

The Acumen team identified potential stakeholder organizations and industry experts based on multiple inputs including literature review, existing relationships, and recommendations from pharmacist consultants. The Acumen team worked with its pharmacy consultants and CMS to determine which stakeholder groups to prioritize for the first set of interviews. Next, the Acumen team worked with its pharmacist consultants to identify specific points-of-contact at prioritized organizations. The Acumen team reached out to the points-of-contact by email and then followed up with a phone call to introduce the evaluation, explain the objectives of the interview, confirm that the contact is the appropriate person to interview for the evaluation, and identify a replacement contact or supplemental contacts. Each interview lasted approximately one hour and was guided by a semi-structured interview protocol. Prior to each interview, the Acumen team conducted targeted environmental scans to identify publicly available materials related to the stakeholder group and Part D MTM/Enhanced MTM.

G.1.2 Sponsor and Vendor Interviews and Review of Secondary Information

The Acumen team conducted in-depth telephone or in-person interviews with leadership and key representatives from both participating sponsors and their respective vendors on a quarterly basis beginning in November 2016. In addition, our group reviewed a number of secondary materials, including the sponsors' Model Years 1 and 2 applications (including any mid-year application changes), supplemental application materials, and materials from CMS presentations and Internal Learning Systems records. The team also reviewed additional information provided by sponsors or vendors (e.g., PowerPoint presentations describing Enhanced MTM programs, beneficiary recruitment and educational material examples, Enhanced MTM program policy documents, targeting specifications, etc.). Our group conducted all interviews using sponsor-tailored interview protocols that were designed to capture information consistently across sponsors. Our group also conducted in-person interviews during site visits to sponsor and/or vendor headquarters between October 2017 and April 2018. The Acumen team conducted one "virtual" site visit with a sponsor during March and April 2018 via WebEx. The Acumen team conducted at least one phone call with each of the sponsors every quarter. In several cases, multiple phone calls were conducted each quarter.

Interview topics varied across the Model Years. Initial calls during the first year focused on sponsors' overall Enhanced MTM programs and structure. Subsequent calls in Model Year 1 focused primarily on obtaining in-depth information about and documentation of the targeting specifications that sponsors or vendors used to determine which beneficiaries will receive Enhanced MTM-related outreach. In some cases, interviews occurred later in the year due to the time required to execute non-disclosure agreements (NDAs) between the sponsor/vendor and the Acumen/Westat team prior to detailed conversations about targeting approaches. Subsequent Model Year 1 calls also covered high-level differences between the sponsors' traditional Part D and Model Year 1 Enhanced MTM programs; key implementation milestones and processes; Enhanced MTM program modifications; implementation lessons learned, challenges, and/or successes; and workforce structure and training. Calls conducted during the second year focused on Model Year 2 implementation; the sponsors' approaches for using SNOMED CT codes to document Enhanced MTM services and constructing their MARx (TC 91) data sets; processes related to prescriber outreach and documentation of prescriber-related interactions; and ongoing implementation lessons learned, challenges, and/or successes.

For each interview and site visit, the Acumen team collaborated with its point of contact for each sponsor to determine which internal or vendor staff representatives should participate in the interview. Respondents included Enhanced MTM program leads/managers, overall Part D MTM directors, account managers or directors, pharmacists, clinical systems and reporting

representatives, analytics representatives, legal and regulatory affairs representatives, and program consultants.

G.1.3 Qualitative Data Analysis

Analysis of all stakeholder- and sponsor-related qualitative data followed a similar process. All interviews were audio recorded and detailed notes were generated for analysis purposes. The qualitative lead at Westat, along with other Westat and Acumen researchers who participated in the interviews, reviewed the interviews and supporting materials for common themes and key points of interest. This group of individuals met regularly to discuss key outputs from interviews across all participating sponsors/vendors and stakeholders, reached consensus on the interpretation of the data, and identified themes/patterns, which were reported to CMS on a quarterly basis and are summarized and presented in this First Evaluation Report.

G.2 Beneficiary In-Depth Interviews

To enhance an understanding of beneficiaries' experiences with Part D plans participating in the Enhanced MTM Model and the Enhanced MTM services they offer, the Acumen/Westat team conducted interviews with a sample of beneficiaries from each participating Part D sponsor. The brief interviews focused on: (i) beneficiary awareness of Enhanced MTM services, (ii) beneficiary participation (or non-participation) in eligible Enhanced MTM services, and (iii) experiences with received Enhanced MTM services.

This appendix provides methodological details of the beneficiary in-depth interviews, including the sampling approach and a description of the interview protocol.

G.2.1 Overview of Sampling Approach

A goal of the in-depth interviews was to reach beneficiaries shortly after an interaction of interest (i.e., opting out of Enhanced MTM, declining an Enhanced MTM service, receiving a substantial service [e.g., a CMR] for the first time as part of the Enhanced MTM program, or receiving an additional Enhanced MTM service or follow-up after a substantial Enhanced MTM service). This approach was selected to increase the ease in which respondents are able to recall the experience and, in turn, improve quality of the information collected through the interviews.

To obtain an appropriate sample frame of beneficiaries eligible for in-depth interviews, the Acumen team collaborated with each sponsor to obtain lists of "higher-risk" beneficiaries

who recently had an Enhanced MTM interaction of interest.[73] Higher-risk beneficiaries were selected across all sponsors as the target population for the in-depth interviews as they are eligible to receive substantive Enhanced MTM services, and thus likely to have more memorable Enhanced MTM experiences than lower-risk beneficiaries. Data requests were tailored to each sponsor's Enhanced MTM program, but generally included contact and demographic information about the beneficiary (e.g., the Medicare beneficiary identification number, date of birth, gender, phone number, risk level or Enhanced MTM program for which the beneficiary was eligible). Additionally, to ensure interviewers were provided sufficient context to successfully conduct the interviews, data files included descriptive information about the substantial service received (e.g., date, organization that delivered the service, mode of service delivery) and Enhanced MTM history (i.e., types of Enhanced MTM services the beneficiary received prior to the most recent experience and the associated date(s) of service receipt, if applicable).

Using the beneficiary data files provided by sponsors, Westat relied on convenience sampling to select beneficiaries for outreach. Beneficiaries were prioritized for outreach based on the date of most recent Enhanced MTM interaction, while ensuring participants for each sponsor reflected both genders, a range of ages, and a mix of service delivery modes (e.g., services delivered by a vendor call center versus a community pharmacy).[74] It should be noted, however, that very few beneficiaries interviewed had received the CMR by a retail pharmacy. This is in part due to some sponsors not leveraging a retail network and the few others beginning to ramp up their retail pharmacy component at the time of the interviews. Furthermore, because of WellCare's data capture systems, it was not possible to discern whether CMRs delivered via retail pharmacies for WellCare beneficiaries occurred telephonically or face-to-face. In total, Westat conducted 166 beneficiary interviews across all sponsors.

G.2.2 Interview Protocol

Westat developed a semi-structured interview protocol to allow the collection of rich data on beneficiary experience, including decisions to participate in Enhanced MTM services (or decline offered services) and contextual factors affecting decisions and experience with the intervention. For each sponsor, protocols were tailored to reference substantial Enhanced MTM

[73] "Higher-risk" is defined by each sponsor and varies across sponsors. Not all Enhanced MTM-eligible beneficiaries are higher-risk beneficiaries. Although sponsors may have provided data for beneficiaries who had an Enhanced MTM interaction up to several months prior to the data request, interviewers prioritized outreach to beneficiaries who had an Enhanced MTM interaction of interest within the prior twelve weeks.

[74] Although the goal was to contact beneficiaries soon after the Enhanced MTM interaction of interest to improve recall, interviewers waited at least 7-10 days post-service receipt to contact beneficiaries to ensure enough time for receipt of any post-service mailings.

services and use language consistent with sponsors' communications to their plan members about their respective Enhanced MTM services. Appendix Table G.1 provides an overview of interview topics by type of Enhanced MTM interaction.

Appendix Table G.1: Beneficiary In-depth Interview Topics

Enhanced MTM Interaction Type	Beneficiary Interview Topics
Enhanced MTM Opt Out/Decline Enhanced MTM Service	• Beneficiary understanding of services offered • Reasons why the targeted beneficiary chose to opt out of the Enhanced MTM program or decline Enhanced MTM services • Prior experience with Enhanced MTM/MTM services, if any
Receipt of First Substantial Enhanced MTM Service/Receipt of Substantial Enhanced MTM Service Plus Additional Service or Follow-up[a]	• Beneficiary understanding of services offered • Reasons why the targeted beneficiary chose to engage in Enhanced MTM services • Experience with and perceptions of Enhanced MTM service • Prior experience with Enhanced MTM/MTM services, if any

[a]For all sponsors, we defined the CMR as the substantial service of interest. When appropriate, we also spoke with beneficiaries who received other core services considered significant member-facing interactions.

Westat's qualitative research staff conducted beneficiary interviews over the telephone between February-August 2018. A team of 2-3 interviewers familiar with the sponsor's Enhanced MTM interventions was assigned to each sponsor, and led the outreach and data collection. Each interview lasted approximately 5-10 minutes. With beneficiary consent, interviewers audio-recorded the calls for notetaking and quality assurance purposes.

Westat reviewed the interview responses from each round of beneficiary interviews to identify patterns and common themes. High-level findings across sponsors are summarized and presented in Section 1.5.

APPENDIX H BENEFICIARY SURVEY METHODS

The Enhanced MTM beneficiary survey is a repeated cross-sectional survey, relying on new samples of beneficiaries at successive time points. This approach will provide an opportunity to assess changes in measures over time. The baseline survey was conducted in early 2017, and follow-up measurements will be conducted in 2019 and 2021. The baseline beneficiary survey findings are reported in Section 1.5. Appendix H provides technical details of the baseline beneficiary survey methodology, including sampling and survey operations, questionnaire development, and sample performance. Section H.1 provides an overview of the sampling approach. Section H.2 describes questionnaire development. Section H.3 presents the performance of the survey sample.

H.1 Overview of Sampling Approach and Survey Operations

The purpose of the baseline beneficiary survey was to provide baseline information on the medication management experiences of beneficiaries who met sponsor targeting criteria in 2016, before the launch of the Enhanced MTM Model. Approximately 2,000 beneficiaries were randomly sampled from the higher-risk beneficiaries targeted by each sponsor. The total sample for the baseline beneficiary survey was 11,998. Although the sponsors' targeting criteria and program offerings varied, all sponsors planned to stratify enrollees so that beneficiaries at higher risk for high spending or medication- or condition-related problems were prioritized and received more comprehensive MTM services. Using sponsor applications and supplementing with information obtained through sponsor phone calls and email correspondence, the Acumen team developed specifications to replicate each of the sponsors' beneficiary targeting methodologies using Medicare claims data. Humana, UHG, and WellCare provided a sampling frame directly. For BCBS FL, BCBS NPA, and SilverScript/CVS, the Acumen team drew upon the high-level targeting criteria outlined by each sponsor to identify high-risk beneficiaries who were likely to be targeted by the sponsors. These criteria incorporated elements such as high expenditures (medical and prescription), presence of chronic conditions, and medication therapy problems.

Acumen drew samples between January and March of 2017. Whether drawn by the Acumen team or provided by the sponsor, sampling frames were linked with Medicare data and processed to exclude beneficiaries without six months of continuous plan or Part A and B enrollment, institutionalized beneficiaries, and those without a valid U.S. mailing address. Additional details regarding sponsor-specific sample inclusions and the steps taken to prepare the samples are included in Appendix Table H.1.

Surveys were fielded by mail from February 24 through June 7, 2017—during the early phase of sponsors' Enhanced MTM program startup and implementation.[75] Each survey included a cover letter and postage-paid return envelope. A reminder letter was mailed to all beneficiaries about 1.5 weeks after the initial survey. Approximately four weeks after the initial survey mail-out, a final survey was mailed to non-respondents. Throughout the survey fielding period, the Acumen team corrected invalid mailing addresses, where possible, and re-mailed surveys. The survey design targeted a 40 percent response rate to ensure sufficient analytic power. Across all sponsors, the final response rate was 38.8 percent.[76] Response rates by sponsor varied from 57 percent (BCBS NPA) to 28 percent (Humana). Appendix Table H.1 provides more information on sample performance by sponsor.

Appendix Table H.1: General Baseline Beneficiary Survey Sampling Approach by Sponsor

	Sponsors that Did Not Provide a Sampling Frame (BCBS FL, BCBS NPA, SilverScript/CVS)	Sponsors that Provided a Sampling Frame (Humana, UHG, WellCare)
Data Sources	Medicare Part D enrollment file; Medicare Part D claims; Medicare Part A and B claims	Sponsor-provided sampling frame
Step 1	Identify enrollees in participating plans from June-November 2016 using in-house Medicare data.	Identify members who were targeted for Enhanced MTM programs.
Step 2	Subset to individuals eligible for sponsor-specific Enhanced MTM programs.	Link members to Acumen's in-house Medicare enrollment and demographics data.
Step 3	Concatenate selected individuals across Enhanced MTM programs and de-duplicate where necessary.	Exclude beneficiaries who are institutionalized, under age 18, without continuous Medicare Parts A, B, and D enrollment from Jun-Nov 2016, residing outside the 50 U.S. states, or whose address is unknown or missing essential elements.
Step 4	Exclude individuals who are institutionalized, under age 18, without continuous Medicare Parts A, B, and D enrollment from June-November 2016, residing outside the 50 U.S. states, or whose address is unknown or missing essential elements.	No additional steps.

[75] Although Enhanced MTM implementation began in early 2017, the Acumen team assessed that Enhanced MTM was scarcely, or not at all, perceptible to beneficiaries during the field period for the baseline beneficiary survey.

[76] Response rate was calculated using the American Association for Public Opinion Research (AAPOR) Response Rate 4 definition, which estimates the number of eligible cases among those with unknown eligibility and considers partial completes as complete. Sixty-eight beneficiaries were identified to be ineligible for the survey, including: (i) beneficiaries reported to be deceased or in hospice care; (ii) beneficiaries reported to be unable to complete the survey because of mental or cognitive impairment; (iii) beneficiaries reported to be living in a nursing home or group care facility; and (iv) beneficiaries who indicated having a prescription coverage plan that is not the one for which they were sampled.

H.2 Questionnaire Development

The Acumen team developed and tested a questionnaire for use as the baseline beneficiary survey. The questionnaire focused on health care experiences and personal health management during the previous six months. The survey included questions covering the following topics: medication management services, self-reported medication adherence, self-efficacy for medication adherence, patient activation, patient experience of care, respondent demographics, and self-reported health status.

These topics were selected because they may be areas influenced by the delivery of patient-centered care and medication management support, and relate to key research questions of the evaluation. The baseline survey derived content from several well-known and validated instruments, including the Consumer Assessment of Healthcare Providers and Systems (CAHPS) surveys, the Self-Efficacy for Appropriate Medication Use Scale (SEAMS), the Medicare Current Beneficiary Survey (MCBS) patient activation scales, and other items developed for measurement of CMS programs and initiatives. Patient activation refers to beneficiaries' ability, confidence, and readiness to manage their own care. The patient activation measure was adapted from the MCBS and captures two domains: (i) confidence and (ii) information seeking. To measure self-efficacy for medication adherence, or beneficiaries' beliefs in their ability to adhere to their medications, the survey used an adapted SEAMS measure. The measure covers two domains: (i) self-efficacy for taking medications under difficult circumstances, and (ii) self-efficacy for continuing to take medications when circumstances are uncertain. Appendix Table H.2 lists the key survey domains reported in Section 1.5, the sources from which they were derived, and index construction specifications.

The survey was cognitively pre-tested with a convenience sample of Medicare beneficiaries; the final instrument contained 59 questions presented in an 8-page booklet.

Appendix Table H.2: Baseline Beneficiary Survey Composite Measures, Sources, and Index Construction Specifications

Measure	Source	Index Construction
Communication with Doctor	Derived from CAHPS Clinician & Group Survey, U.S. Agency for Healthcare Research and Quality, Rockville, MD. https://www.ahrq.gov/cahps/index.html.	Always= 1, Usually= 0, Sometimes= 0, Never=0 Items are summed to give individual scores of 0-4, where 0= Providers never communicated well and 4= Providers always communicated well.
Access to Care	Derived from CAHPS Clinician & Group Survey, U.S. Agency for Healthcare Research and Quality, Rockville, MD. https://www.ahrq.gov/cahps/index.html.	Always= 1, Usually= 0, Sometimes= 0, Never=0 Items are summed to give individual scores of 0-2, where 0= Never got care as soon as needed and 2= Always got care as soon as needed.
Medication Adherence	Adapted from Shelly A. Vik, Collen J. Maxwell, David B. Hogan, et al., "Assessing medication adherence among older persons in community settings," Canadian Journal of Clinical Pharmacology 12, no. 1 (2005): E152-E164.	Yes= 0 and No=1 Items were summed to give individual scores of 0-4, where 0-1=Low medication adherence, 2-3= Medium medication adherence, and 4= High medication adherence.
Self-Efficacy for Medication Adherence	Self-Efficacy for Appropriate Medication Use Scale (SEAMS). See Jessica Risser, Terry Jacobson, and Sunil Kripalani, "Development and psychometric evaluation of the Self-efficacy for Appropriate Medication Use Scale (SEAMS) in low-literacy patients with chronic disease," Journal of Nursing Measurement 15, no. 3 (February 2007): 203-219, http://dx.doi.org/10.1891/106137407783095757.	Not at all confident=1, Somewhat confident=2, Confident=3, Very confident=4, Inapplicable= Missing Items were summed to give individual scores of 13-52. Low self-efficacy for medication adherence= Scores less than or equal to 38; Moderate self-efficacy= 39-47; High self-efficacy for medication adherence= Scores greater than 47.
Patient Activation	Adapted from the Medicare Current Beneficiary Survey. See Jessie L. Parker, Joseph F. Regan, and Jason Petroski, "Beneficiary Activation in the Medicare Population," Medicare & Medicaid Research Review 4, no. 4 (2014): E1-E14, http://dx.doi.org/10.5600/mmrr.004.04.b02.	Always= 1, Usually= 0, Sometimes= 0, Never=0, Inapplicable= Missing Not at all confident=1, Somewhat confident=2, Confident=3, Very confident=4 Items were summed to give individual scores of 10-40. Low patient activation= Scores less than or equal to 29; Moderate patient activation= 30-34; High patient activation= Scores greater than 34.

H.3 Survey Sample Performance

Appendix Table H.3 shows completion and response rates for each of the six sponsors and for the sample overall. From a starting sample of 11,998, a total of 4,574 completed surveys were returned for a completion rate of 38 percent.[77] There were 68 beneficiaries identified to be ineligible for the survey, including: (i) beneficiaries reported to be deceased or in hospice care; (ii) beneficiaries reported to be unable to complete the survey because of mental or cognitive impairment; (iii) beneficiaries reported to be living in a nursing home or group care facility; and (iv) beneficiaries who indicated having a prescription coverage plan that is not the one for which they were sampled. When adjusted for estimated ineligible non-respondents, the response rate was 39 percent.[78] Response rates varied substantially across sponsors, from a high of 57 percent for BCBS NPA to a low of 28 percent for Humana. This variation may be the result of demographic differences of the populations served by sponsors, as well as sponsor-specific Enhanced MTM targeting criteria. Response rates to mail surveys are likely lower for subgroups facing housing insecurity, and this effect may be magnified for some sponsors, including Humana, whose Part D plan includes a high proportion of individuals eligible to receive low income subsidy.

Appendix Table H.3: Baseline Beneficiary Survey Completion and Response Rate

Sponsor	Sample	Completes	Completion Rate[a]	Response Rate[b]
BCBS FL	2,000	833	41.7%	42.5%
BCBS NPA	2,000	1,121	56.1%	57.0%
Humana	1,998	561	28.1%	28.4%
SilverScript/CVS	2,000	703	35.2%	35.7%
UHG	2,000	717	35.9%	36.5%
WellCare	2,000	639	32.0%	32.4%
Total	*11,998*	*4,574*	*38.1%*	*38.8%*

[a] The completion rate is the number of completes divided by the starting sample

[b] The response rate takes into account ineligibility due to death and other causes. American Association for Public Opinion Research (AAPOR) response rate #4 was used.

To assess whether survey response varied systematically by respondent characteristic, a bias analysis was conducted using demographic and geographic information from the Medicare enrollment file. Consistent with general patterns observed in survey research, our team found that older, non-Hispanic, and rural beneficiaries were more likely to respond than other groups.[79]

[77] Surveys with at least one question answered, but fewer than 29 answered questions, were considered partial completes.

[78] Response rates were calculated using the American Association for Public Opinion Research (AAPOR) Response Rate 4 definition.

[79] Don A. Dillman, Jolene D. Smyth, and Leah Melani Christian. Internet, Phone, Mail, and Mixed-Mode Surveys: The Tailored Design Method, 4th ed. (Hoboken, NJ: John Wiley and Sons, 2014).

These patterns may partially explain variation in response rates across sponsors. However, the size of differences in response rates across these characteristics was typically small and does not suggest general concern regarding bias in the responses to the baseline beneficiary survey.

APPENDIX I WORKFORCE SURVEY METHODS

Appendix I provides technical details of the workforce survey methodology, including sampling and survey operations, questionnaire development process and final instrument, and sample performance. This appendix provides an overview of the sampling approach (Section I.1); describes questionnaire development (Section I.2); presents the performance of the survey sample (Section I.3); and provides the workforce survey instrument (Section I.4). Findings from the Workforce survey are presented in Section 4.2.

I.1 Overview of Sampling Approach and Survey Operations

For workforce survey planning purposes, staff size was assessed for each sponsor using a template that was emailed to each participating Part D plan sponsor's Enhanced MTM program point of contact in Fall 2017. Sponsors tallied a total of nearly 200 management/administrative staff and nearly 500 call center service delivery staff at the time of data collection (counts included both full and part-time staff).

The number of Enhanced MTM-related staff employed directly by the sponsors and their vendors is relatively small, with each sponsor employing less than 50 administrative staff and less than 200 front line staff. A census of the workforce was conducted, including all staff in the survey, rather than drawing a sample. The Westat site liaisons worked with our point of contact at each site to assemble a comprehensive list of staff, including vendor/partner staff, along with contact information including email address and phone number, if available.

Three sponsors – CVS, WellCare, and Humana – also worked with community pharmacies to provide Enhanced MTM services in Model Year 1.[80] WellCare and Humana both reported that more than 7,000 community pharmacists were providing Enhanced MTM services for their members through their vendors' networks. CVS reported that about 10,000 CVS pharmacies and more than 50,000 of its vendor's network pharmacies could provide Enhanced MTM services as part of the Pharmacy Advisor Counseling (PAC) or HealthTag (HT) programs.

WellCare and Humana assisted in designing solutions to include their vendor network community pharmacy staff. The number of community pharmacy respondents receiving the survey was restricted to the 300 pharmacies in each program providing the highest volume of Enhanced MTM services. Limiting to high-volume pharmacies yielded a sample that is likely to

[80] These sponsors continue to work with community pharmacies in Model Year 2 (MY2). Additionally, NPA and UHG have added community pharmacy components in MY2, but these programs are so new that the staff have very limited Enhanced MTM experience at this time. We excluded them from Round 1 of the workforce survey and add them for Round 2 if feasible.

be more familiar with Enhanced MTM. WellCare provided email addresses for some community pharmacy staff. For other WellCare community pharmacy staff, and for all sampled Humana program pharmacies, email addresses of individual community pharmacy staff could not be obtained. Instead, sponsors pushed out a link to the survey through listservs and other communication channels they use with community pharmacies.

CVS community pharmacists were excluded from the workforce survey because it may be difficult for CVS community pharmacists providing PAC or HealthTag Enhanced MTM services to respond to Enhanced MTM-specific survey questions. Though the PAC and HealthTag programs are part of CVS's Enhanced MTM portfolio, both programs are also offered to other, non-Enhanced MTM members. Moreover, these programs consist of very brief services that may not be as memorable to CVS pharmacists as the more intensive interventions undertaken by community pharmacists participating with the WellCare or Humana Enhanced MTM programs. For these reasons, it was likely to be very difficult for individual CVS pharmacists to distinguish Enhanced MTM services from non-Enhanced MTM services, rendering their information less appropriate for the Enhanced MTM evaluation.

The workforce survey launched on June 4, 2018 and was sent to a cross-sponsor total of 743 staff for whom email addresses were available. The Acumen/Westat team imported staff contact information into the web-based system, which generated customized emails including respondents' names, associated sponsor/vendor names, and the unique URL for delivery of customized content and non-response tracking. Generic URLs were distributed to sponsors for use with community pharmacies that did not provide individual pharmacist contact information. The team sent three reminder emails to non-respondents for the workforce survey, spaced approximately one week apart. WellCare and Humana community pharmacy Enhanced MTM participants were asked to publicize the survey through multiple messages to high-volume pharmacies. After three email follow-up attempts, Westat staff completed telephone follow-up for sponsors with a response rate less than 50 percent (as phone numbers were available).

I.2 Questionnaire Development

The workforce survey instrument was adapted from a similar instrument originally designed for a web-based survey of medication management interventions.[81] It contains core content designed for all recipients, as well as module content specific to the two types of staff targeted: Enhanced MTM program leadership/management, and front line Enhanced MTM staff

[81] Acumen and Westat designed this survey in 2015 for the evaluation of the CMS Health Care Innovation Awards Medication Therapy Management portfolio. More information about the survey methods and findings can be found in the Third Annual Report for the evaluation of this portfolio: https://downloads.cms.gov/files/cmmi/hcia-medicationmanagement-thirdannualrpt.pdf.

directly engaged in providing Enhanced MTM services. Core questions capture demographics, program training and information received, and perceived success of the intervention. The program leadership/ management module focuses on program-level assessments of implementation challenges and planned changes for future years. The front line Enhanced MTM staff module focuses on Enhanced MTM service providers' experiences delivering and documenting Enhanced MTM services.

Following CMS approval of the survey instrument, the questionnaire was cognitively pre-tested with eight staff members representing a range of positions and including leadership and frontline staff. Multiple program points of contact assisted in recruiting staff for this process. The cognitive testing protocol was designed to identify problems with question wording and ordering and ensured that the final instrument is interpreted as intended. The sessions lasted approximately 45 minutes and were conducted via WebEx. During the sessions, experienced Westat methodologists guided respondents through completion of the surveys, asking them for details on how they interpreted the questions and arrived at their answers. The methodologists took notes and audio-recorded the sessions with participant consent. Findings from the cognitive testing sessions were used to refine the questionnaires before fielding began.

I.3 Survey Sample Performance

The workforce survey achieved an overall response rate of 79 percent among sponsor/vendor staff with a total of 438 completes and 8 partial completes (Appendix Table I.1). Response rates were above 50 percent for all sponsors and ranged from 57 percent among Humana sponsor and vendor staff to 88 percent among WellCare sponsor and vendor staff. Partial completes were defined as answering at least half of a set of core survey items; partial complete status was determined during analysis of survey responses among respondents who had not fully submitted their surveys.

Appendix Table I.1: Sponsor/Vendor Workforce Survey Completion and Response Rate

Sponsor	Sample	Completes	Partial Completes	Completion Rate[a]	Response Rate[b]
BCBS FL	32	26	0	83.9%	83.9%
BCBS NPA	93	78	0	83.9%	83.9%
Humana	64	33	3	52.4%	57.1%
SilverScript/CVS	193	138	3	75.0%	76.6%
UHG	56	43	1	76.8%	78.6%
WellCare	147	120	1	87.0%	87.7%
Total	*585*	*438*	*8*	*77.5%*	*78.9%*

[a] The completion rate is the number of completes and partial completes divided by the starting sample
[b] The response rate takes into account ineligibility due to leaving the organization. American Association for Public Opinion Research response rate #2 was used.

Most community pharmacy respondents, targeted only for WellCare and Humana, could not be tracked for response rate calculations. Among the subset of WellCare vendor network pharmacies using the unique URL version of the survey, 41 completes and partial completes resulted in a response rate of 26 percent (Appendix Table I.2). As expected, given the smaller role of Enhanced MTM and existing non-Enhanced MTM workload of community pharmacists, the community pharmacy sample performed much less strongly than the sponsor/vendor staff survey.

Appendix Table I.2: Community Pharmacy Workforce Survey Completion and Response Rate

Sponsor/Vendor	Sample	Completes	Partial Completes	Completion Rate[a]	Response Rate[b]
WellCare - Unique URL	158	39	2	24.68%	25.95%
WellCare - Generic link	N/A	26	1	N/A	N/A
Humana - Generic link	N/A	10	1	N/A	N/A
Total		*75*	*4*		

[a] The completion rate is the number of completes and partial completes divided by the starting sample
[b] The response rate takes into account ineligibility due to leaving the organization. American Association for Public Opinion Research response rate #2 was used.

I.4 Workforce Survey Instrument

This section presents the workforce survey instrument.

Thank you for participating in the Enhanced Medication Therapy Management Workforce Survey! This survey is being distributed to individuals {at [VENDOR[82]]}* who are supporting [SPONSOR[83]]'s implementation and delivery of the Centers for Medicare & Medicaid Services (CMS) Enhanced Medication Therapy Management (Enhanced MTM) Model for basic, standalone Medicare Part D beneficiaries. Your responses are crucial for evaluating and improving this new model, which will guide the direction of medication management approaches for Medicare beneficiaries in the U.S. Your answers will be kept private and will not be linked with your identity or shared with your employer {or with [SPONSOR]}. The survey will take about 10 minutes to complete.

*Programming note: Throughout, curly brackets enclose text that displays only when a staff member is from a vendor.

1. In what role do you work as part of the [SPONSOR] Enhanced MTM program? If more than one category applies to you, please select your primary role.
    - ▫ Program Director or Manager
    - ▫ Operations Manager
    - ▫ Information Technologist or Data Analyst
    - ▫ Compliance/Quality Assurance Specialist
    - ▫ Member Outreach/Engagement Specialist
    - ▫ Medication Therapy Management Service Provider
    - ▫ Prescriber Outreach/Engagement Specialist
    - ▫ Other (please specify): _____

[82] VENDOR:
Accordant [for CVS]
MMS [for BCBS FL]
OutcomesMTM or EMS[for Humana]
Tabula Rasa Health Care [for Blue Cross Blue Shield Norther Plains Alliance]
OptumRx [for UnitedHealthcare Group]
Mirixa or University of Florida Center for Quality Medication Management [for WellCare]

[83] SPONSOR:
CVS/SilverScript International
Blue Cross Blue Shield of Florida
Humana
Blue Cross Blue Shield Northern Plains Alliance
UnitedHealthcare Group
WellCare

2. If you are a health care professional, please tell us what type. If more than one category applies to you, please select the category that best applies to your primary role.
    - ▫ I am not a health care professional.
    - ▫ Physician
    - ▫ Pharmacist
    - ▫ Pharmacy Resident
    - ▫ Physician Assistant
    - ▫ Advanced Practice RN
    - ▫ RN
    - ▫ LPN
    - ▫ Pharmacy Technician or Assistant
    - ▫ Social Worker
    - ▫ Other (please specify): _____

The remaining questions are targeted toward **your role {at [VENDOR]} as part of the [SPONSOR] Enhanced MTM program**. Please consider your role as part of the [SPONSOR] Enhanced MTM program only.

3. How long have you been working in this role as part of the [SPONSOR] Enhanced MTM program?
    - ▫ Less than 3 months
    - ▫ 3-6 months
    - ▫ 7-12 months
    - ▫ 13-24 months

4. Thinking about **your role** as part of the [SPONSOR] Enhanced MTM program over the last 12 months, to what extent do you agree or disagree with the following statements?

	Strongly Agree	Agree	Disagree	Strongly Disagree	Not Applicable
4a. My role is helping to improve the health care of members.	▫	▫	▫	▫	▫
4b. My role is helping to provide cost-effective health care.	▫	▫	▫	▫	▫
4c. My role is increasing member satisfaction.	▫	▫	▫	▫	▫
4d. Other health professionals seem to appreciate the services provided in my role.	▫	▫	▫	▫	▫
4e. My role fits well within the broader context of member health care activities.	▫	▫	▫	▫	▫
4f. My role is helping members make more informed decisions about their health care.	▫	▫	▫	▫	▫
4g. My role is increasing medication safety.	▫	▫	▫	▫	▫
4h. I received the training I need to function effectively in my Enhanced MTM program role.	▫	▫	▫	▫	▫
4i. My role fully utilizes my knowledge and skills as a health professional.	▫	▫	▫	▫	▫
4j. My role adds value to the Enhanced MTM program.	▫	▫	▫	▫	▫

5. Taking everything into consideration, how do you feel about your [SPONSOR] Enhanced MTM role as a whole?
   - ▫ 1 = Extremely dissatisfied
   - ▫ 2
   - ▫ 3
   - ▫ 4
   - ▫ 5
   - ▫ 6
   - ▫ 7 = Extremely satisfied

6. Which of the following statements best reflects your intentions about your future in this role over the next year?
   - ▫ I definitely would leave this role.
   - ▫ I probably would leave this role.
   - ▫ I am uncertain.
   - ▫ I probably would not leave this role.
   - ▫ I definitely would not leave this role.

Program Administration Module (Display only if Q1 = 1-4)

7. Overall, how would you describe the job CMS has done over the past 12 months on the following components of administering the Enhanced MTM Model?

	Poor	Fair	Good	Very Good	Not Applicable or Don't Know
7a. Communicating about Enhanced MTM Model contractual requirements	▫	▫	▫	▫	▫
7b. Providing technical assistance	▫	▫	▫	▫	▫
7c. Describing requirements for documentation of eligible beneficiaries	▫	▫	▫	▫	▫
7d. Describing requirements for documentation of Enhanced MTM service provision	▫	▫	▫	▫	▫
7e. Providing flexibility for sponsors to modify Enhanced MTM programs	▫	▫	▫	▫	▫

8. Based on your organization's experience, how would you describe the difficulty of the following Enhanced MTM program tasks over the past 12 months?

	Very difficult	Somewhat difficult	Slightly difficult	Not at all difficult	Don't know/Not performed by my organization
8a. Identifying appropriate members for Enhanced MTM	▫	▫	▫	▫	▫
8b. Identifying drug therapy problems	▫	▫	▫	▫	▫
8c. Coordinating the work of community pharmacies	▫	▫	▫	▫	▫
8d. Contacting members	▫	▫	▫	▫	▫
8e. Engaging members in Enhanced MTM	▫	▫	▫	▫	▫
8f. Improving member medication adherence	▫	▫	▫	▫	▫
8g. Engaging prescribers	▫	▫	▫	▫	▫
8h. Providing Enhanced MTM services within program cost constraints	▫	▫	▫	▫	▫
8i. Documenting Enhanced MTM encounters	▫	▫	▫	▫	▫
8j. Measuring Enhanced MTM impact on sponsor costs	▫	▫	▫	▫	▫

9. Do you anticipate making any of the following changes to your Enhanced MTM program over the next year?

	Yes	No	Not Applicable or Don't Know
9a. Adding additional administrative staff	▫	▫	▫
9b. Adding additional clinical staff	▫	▫	▫
9c. Changing targeting criteria	▫	▫	▫
9d. Increasing the total number of eligible beneficiaries	▫	▫	▫
9e. Modifying workflow for existing services	▫	▫	▫
9f. Adding new services	▫	▫	▫
9g. Stopping an existing service	▫	▫	▫

Member Service Module (Display for All, 10 serves as a screener)

10. How often do you interact directly with members as part of your role {at [VENDOR]} in the [SPONSOR] Enhanced MTM program?
    - ▫ Never
    - ▫ Sometimes
    - ▫ Usually
    - ▫ Always

[If Q10 is Never, skip to Q19.]

11. Overall, how would you describe the job **your organization** is doing with the following aspects of the [SPONSOR] Enhanced MTM program over the past 12 months?

	Poor	**Fair**	**Good**	**Very Good**	**Don't know/Not performed by my organization**
11a. Identifying appropriate members for Enhanced MTM services	▫	▫	▫	▫	▫
11b. Sharing member information you need for Enhanced MTM service provision	▫	▫	▫	▫	▫
11c. Sharing information with you about changes to protocol for delivering Enhanced MTM services	▫	▫	▫	▫	▫
11d. Sharing information with you about changes to protocol for documenting Enhanced MTM services	▫	▫	▫	▫	▫
11e. Developing workflows for Enhanced MTM service delivery	▫	▫	▫	▫	▫
11f. Developing computer systems for Enhanced MTM documentation	▫	▫	▫	▫	▫

12. For how many of your members did you provide the following services over the past 12 months? Please consider ONLY those members who received the following services as part of the [SPONSOR] Enhanced MTM program.

	Nearly All Members	Some Members	Few Members	No Members	Don't Know/Not in my role
12a. Medication reconciliation	▫	▫	▫	▫	▫
12b. Discussing medication side-effects with members	▫	▫	▫	▫	▫
12c. Discussing medication adherence with members	▫	▫	▫	▫	▫
12d. Identifying and resolving drug therapy problems	▫	▫	▫	▫	▫
12e. Communicating with physicians or other prescribers	▫	▫	▫	▫	▫
12f. Reviewing medications for cost-saving opportunities	▫	▫	▫	▫	▫
12g. Providing disease management	▫	▫	▫	▫	▫
12h. Providing or identifying the need for preventive care services	▫	▫	▫	▫	▫

13. Over the past 12 months, about what percentage of your work time was spent providing services for the [SPONSOR] Enhanced MTM program, including time spent preparing for and documenting services?

____ (please enter the approximate percentage of time)

[If greater than 50, ask R to validate entry. Valid range 0-100.]

14. Over the past 12 months, through what methods did you communicate with members as part of the [SPONSOR] Enhanced MTM program?

	Yes	No
14a. Telephone	▫	▫
14b. Face-to-face	▫	▫
14c. Videoconference	▫	▫
14d. Email/electronic communication	▫	▫
14e. Mail	▫	▫

15. Which method did you use MOST to communicate with members as part of the [SPONSOR] Enhanced MTM program over the past 12 months?
    - ▫ Telephone
    - ▫ Face-to-face
    - ▫ Email/electronic communication
    - ▫ Mail

16. About how many times did you interact with each member as part of the [SPONSOR] Enhanced MTM program over the past 12 months, on average?

    ____ (please enter a whole number)

    [Range = 1-50 with validation and error message if out of range]

17. About how much time did you spend with members during your initial interaction for the [SPONSOR] Enhanced MTM program over the past 12 months, on average?

    ____ (please enter the average number of minutes)

    [Range = 1-120 with validation and error message if out of range]

18. About how much time did you spend with members during any follow-up interactions, on average?

    ____ (please enter the average number of minutes)

    [Range = 1-120 with validation and error message if out of range]

Background Questions (Display for All)

19. Are you male or female?
    - Male
    - Female

20. What is your age?
    - 18-24
    - 25-34
    - 35-44
    - 45-54
    - 55-64
    - 65 or older

21. How long have you been working in your current health profession?
    - I am not a health care professional.
    - Less than 1 year
    - 1-5 years
    - 6-10 years
    - 11-20 years
    - More than 20 years

Thanks very much for your participation!

[text]

APPENDIX J DESCRIPTIVE TRENDS SUPPLEMENTAL DATA

This appendix presents supplemental material to findings presented in Descriptive Trends (Section 2.3).

J.1 Sample Sizes

Appendix Table J.1 presents the total number of beneficiaries that were included in the beneficiary outcomes analysis detailed in Section 2.3.

Appendix Table J.1: Beneficiary Sample Sizes for Beneficiary Outcomes, Model-wide

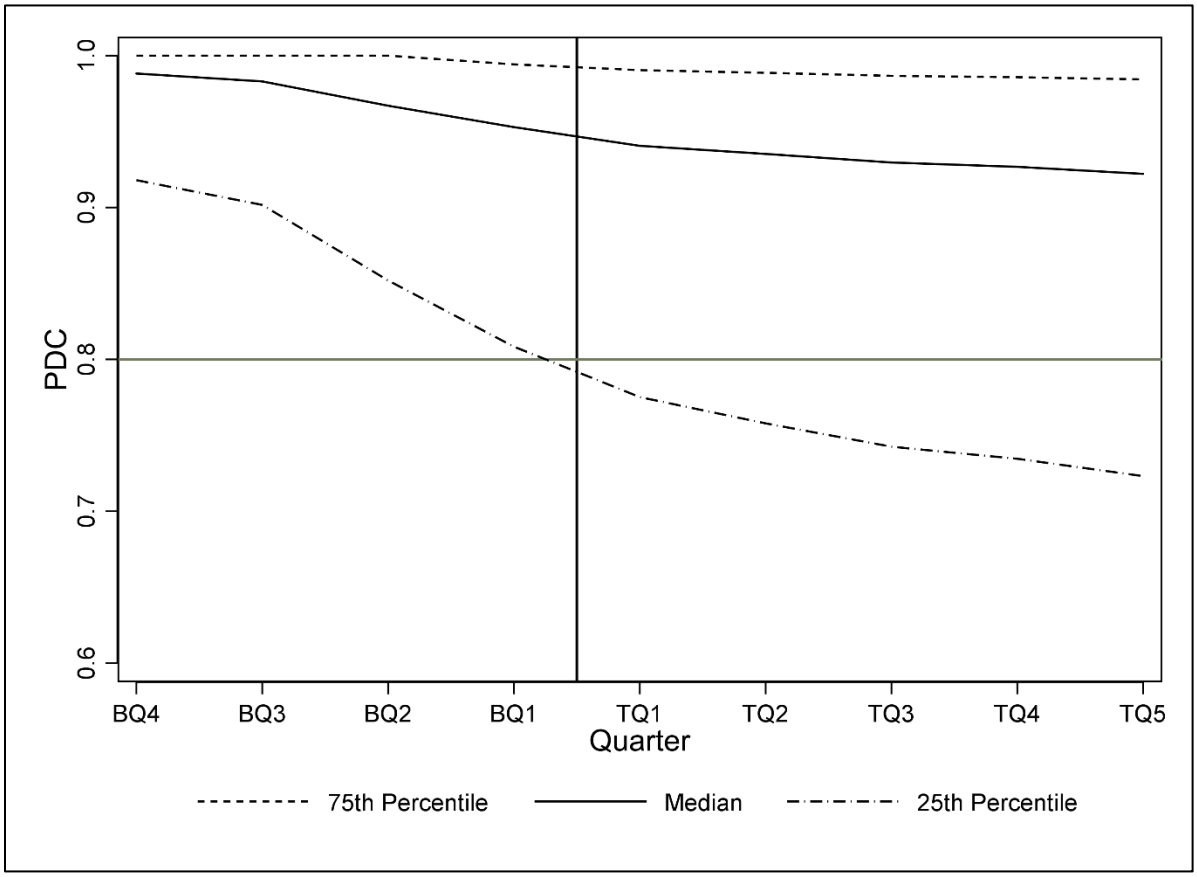
Outcomes	BQ 4	BQ 3	BQ 2	BQ 1	TQ1	TQ2	TQ3	TQ4	TQ5
Adherence Outcomes									
Statins	147,861	349,144	402,571	426,086	432,584	419,422	391,668	334,423	254,409
Beta Blockers	146,300	295,206	331,232	349,917	348,945	333,998	304,680	251,494	180,448
Oral Diabetes Medications	75,434	122,800	134,603	140,523	140,530	135,560	126,015	106,404	82,452
RAS Antagonists	158,985	355,729	398,663	417,881	419,612	404,999	376,669	319,159	243,574
Utilization Outcomes									
Emergency Room (ER) Visits	964,002	964,002	964,002	964,002	920,454	865,884	773,869	621,614	393,557
Inpatient (IP) Stays	964,002	964,002	964,002	964,002	920,454	865,884	773,869	621,614	393,557
Expenditure Outcomes									
Total Parts A and B Costs	964,002	964,002	964,002	964,002	920,454	865,884	773,869	621,614	393,557
Total Part D Costs	964,002	964,002	964,002	964,002	920,454	865,884	773,869	621,614	393,557

Sources: Part D Drug Event File, accessed July 2018; Common Working File, accessed August 2018.
Note: BQ: Pre-Enhanced MTM eligibility Quarter; TQ: Post-Enhanced MTM eligibility Quarter.

J.2 Additional Medication Adherence Summary Statistics

Appendix Figure J.1 - Appendix Figure J.6 present additional model-level medication adherence results.

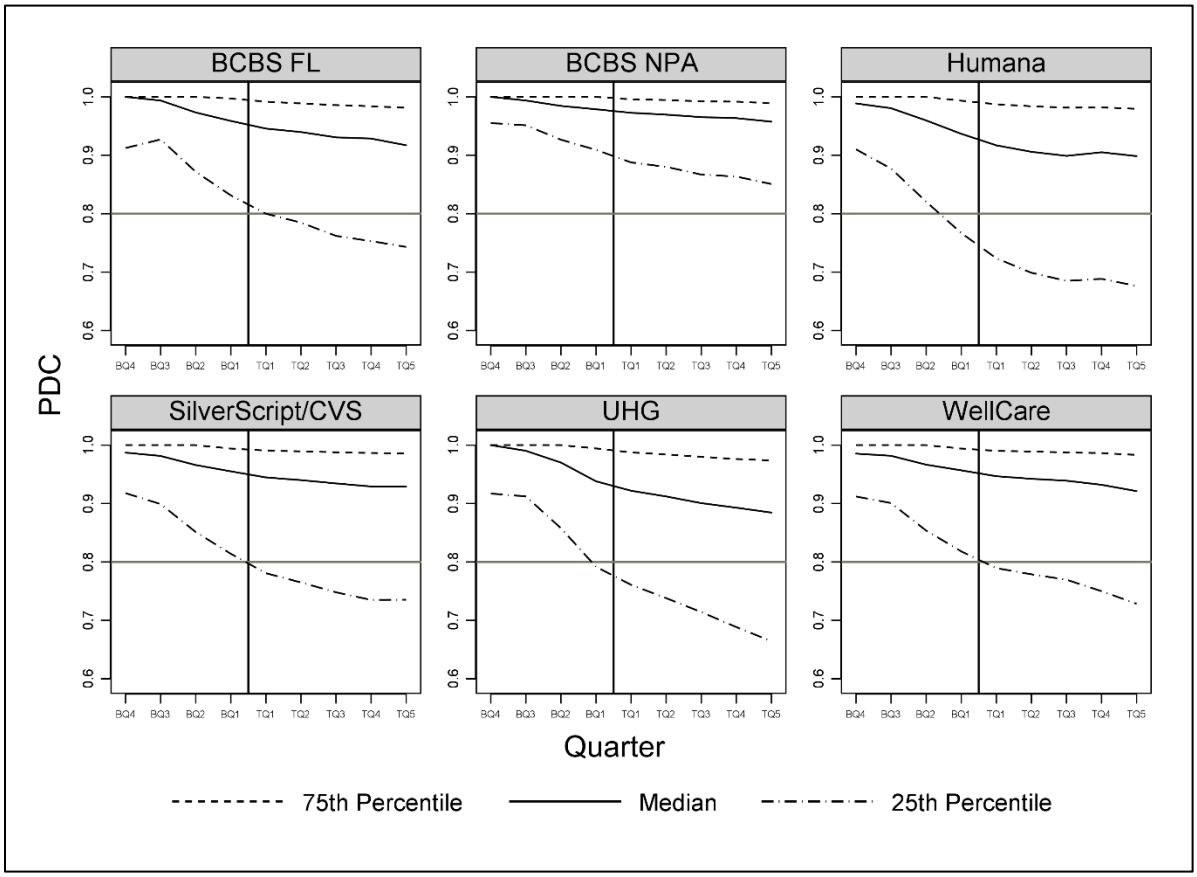
Appendix Figure J.1: Medication Adherence to Beta Blockers (Proportion of Days Covered), Enhanced MTM-eligible Population, Model-level



Source: Part D Drug Event File (PDE), accessed July 2018

Note: PDC: Proportion of Days Covered; BQ: Pre-Enhanced MTM eligibility Quarter; TQ: Post-Enhanced MTM eligibility Quarter. Adherence is a cumulative measure; each quarterly observation incorporates information from the entire observation window, starting with the fourth pre-Enhanced MTM eligibility quarter. A PDC threshold of 0.8 is the level above which a given medication has a reasonable likelihood of achieving the most clinical benefit.

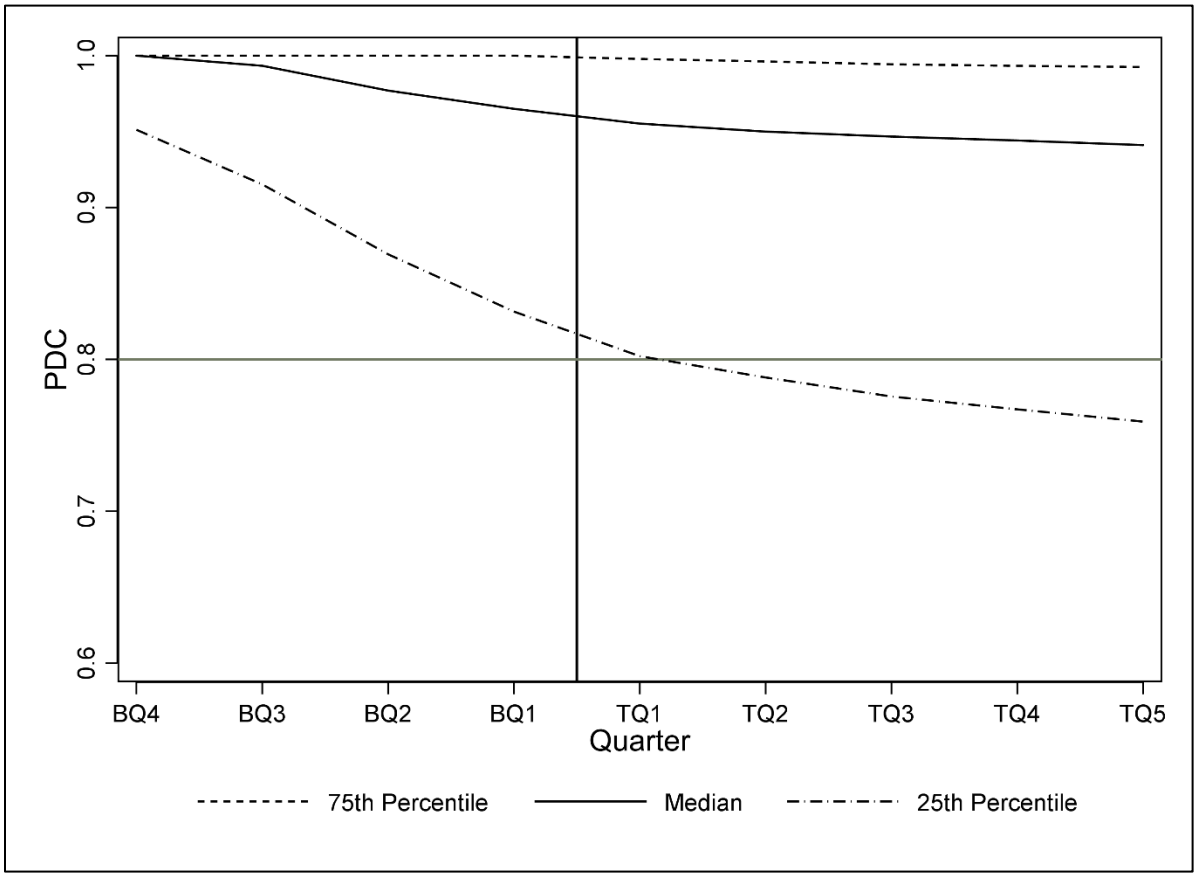
Appendix Figure J.2: Medication Adherence to Beta Blockers (Proportion of Days Covered), Enhanced MTM-eligible Population, Sponsor-level



Source: Part D Drug Event File (PDE), accessed July 2018

Note: PDC: Proportion of Days Covered; BQ: Pre-Enhanced MTM eligibility Quarter; TQ: Post-Enhanced MTM eligibility Quarter. Adherence is a cumulative measure; each quarterly observation incorporates information from the entire observation window, starting with the fourth pre-Enhanced MTM eligibility quarter. A PDC threshold of 0.8 is the level above which a given medication has a reasonable likelihood of achieving the most clinical benefit.

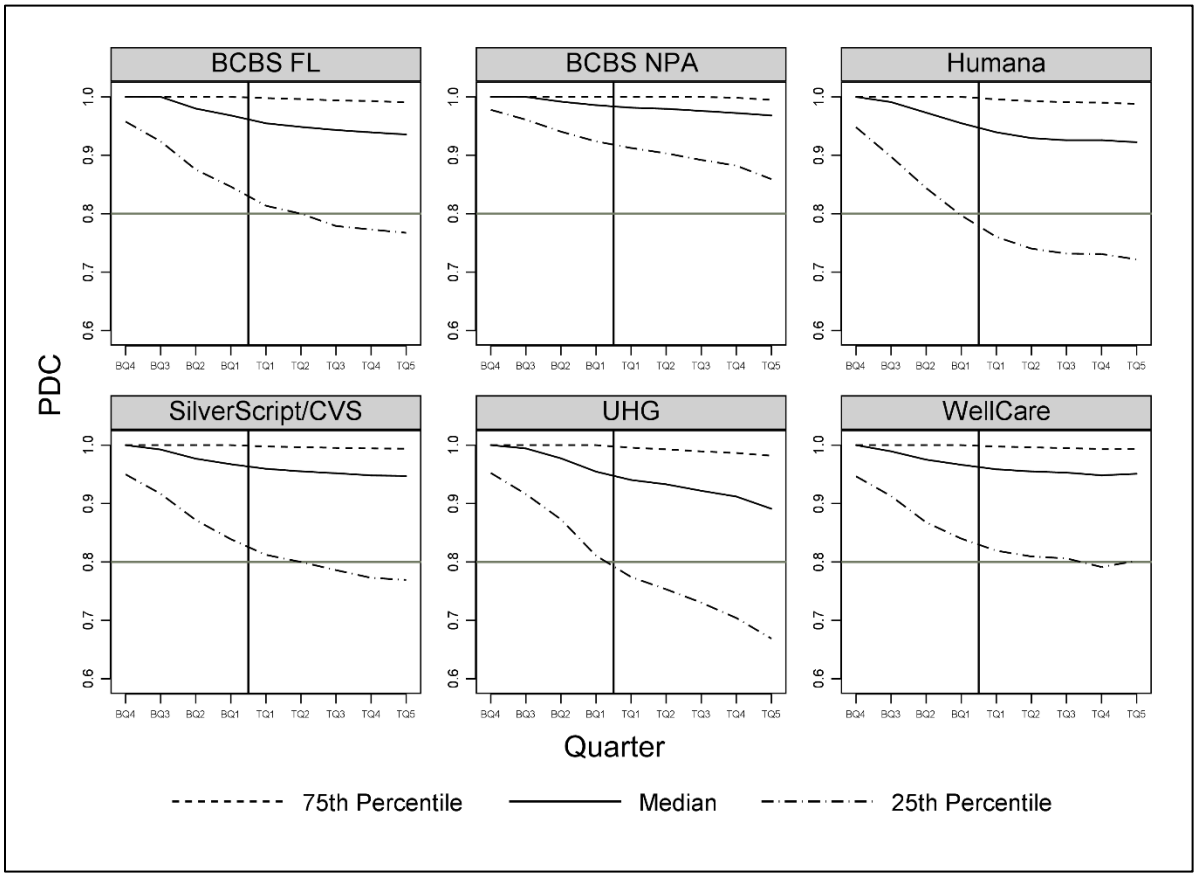
Appendix Figure J.3: Medication Adherence to Oral Diabetes Medications (Proportion of Days Covered), Enhanced MTM-eligible Population, Model-level



Source: Part D Drug Event File (PDE), accessed July 2018

Note: PDC: Proportion of Days Covered; BQ: Pre-Enhanced MTM eligibility Quarter; TQ: Post-Enhanced MTM eligibility Quarter. Adherence is a cumulative measure; each quarterly observation incorporates information from the entire observation window, starting with the fourth pre-Enhanced MTM eligibility quarter. A PDC threshold of 0.8 is the level above which a given medication has a reasonable likelihood of achieving the most clinical benefit.

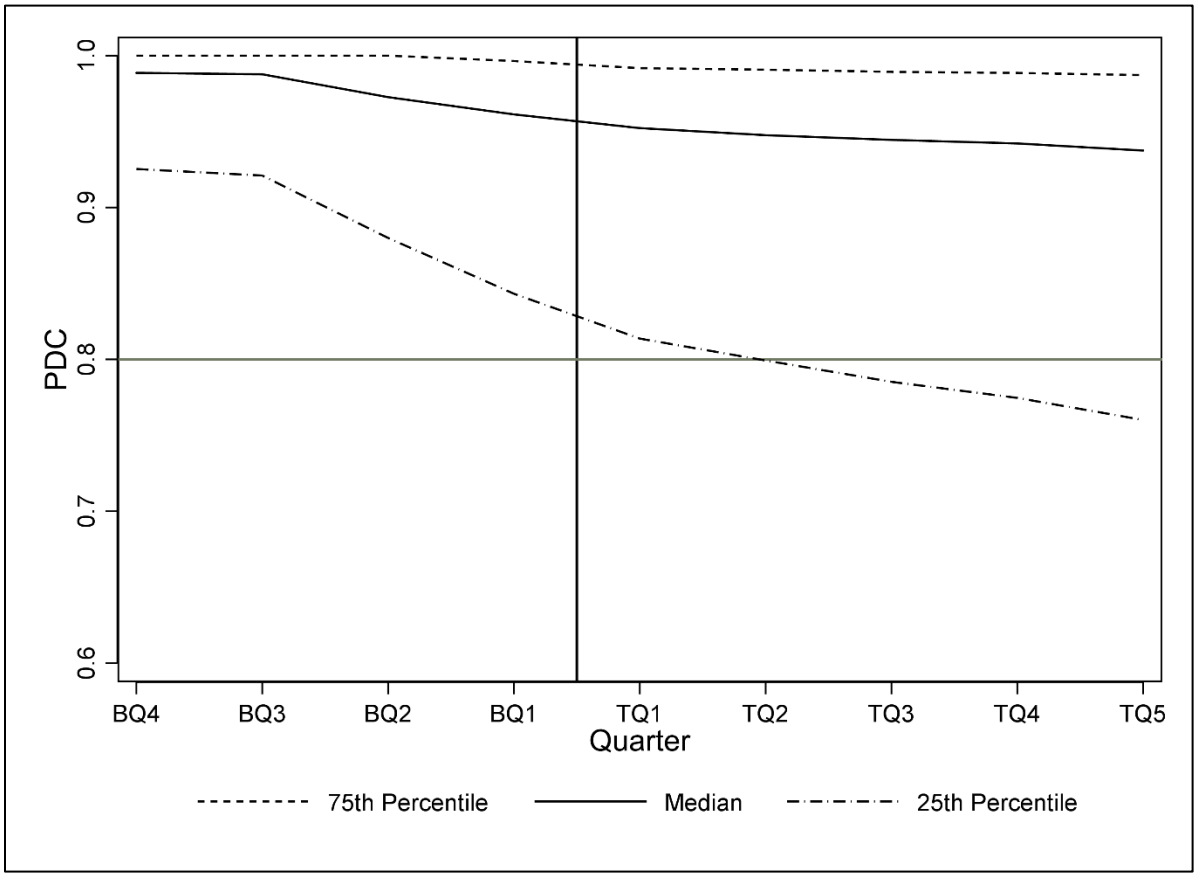
Appendix Figure J.4: Medication Adherence to Oral Diabetes Medications (Proportion of Days Covered), Enhanced MTM-eligible Population, Sponsor-level



Source: Part D Drug Event File (PDE), accessed July 2018

Note: PDC: Proportion of Days Covered; BQ: Pre-Enhanced MTM eligibility Quarter; TQ: Post-Enhanced MTM eligibility Quarter. Adherence is a cumulative measure; each quarterly observation incorporates information from the entire observation window, starting with the fourth pre-Enhanced MTM eligibility quarter. A PDC threshold of 0.8 is the level above which a given medication has a reasonable likelihood of achieving the most clinical benefit.

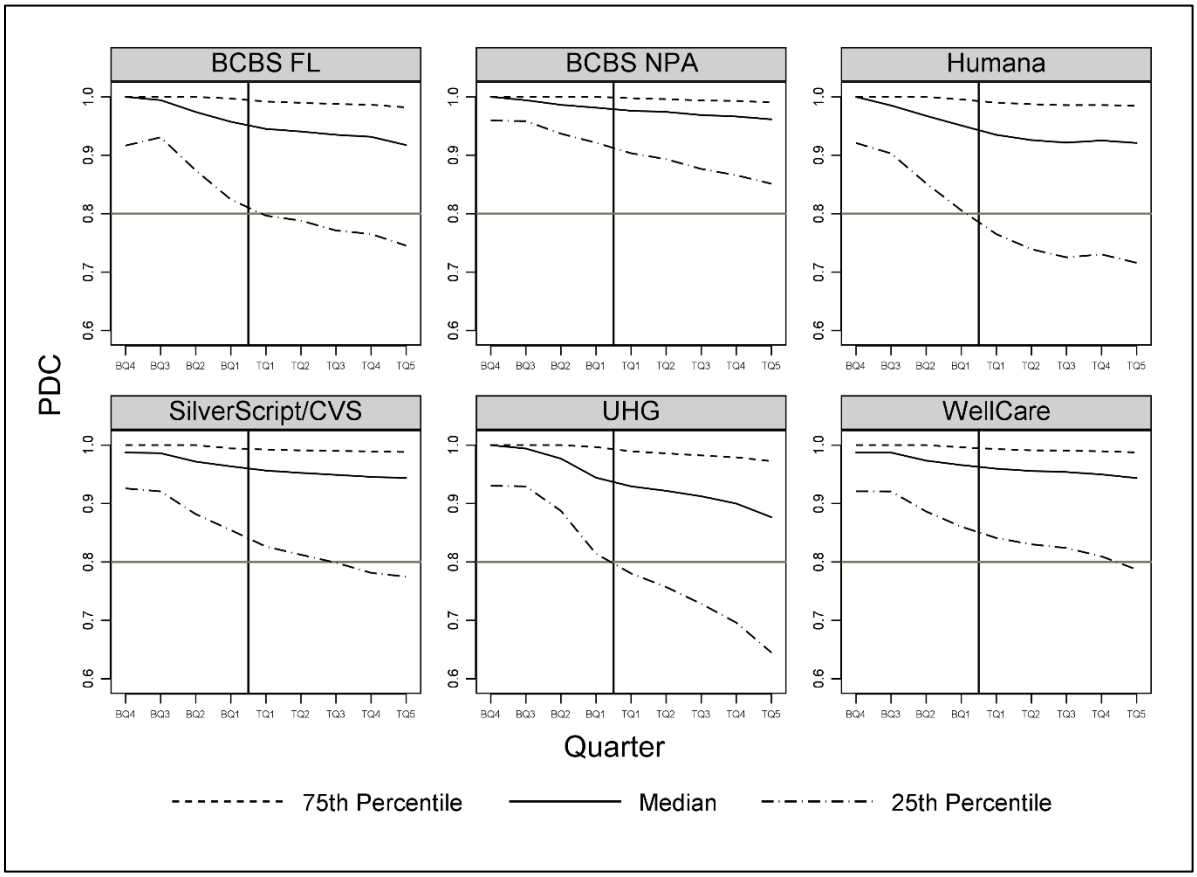
Appendix Figure J.5: Medication Adherence to RAS Antagonists (Proportion of Days Covered), Enhanced MTM-eligible Population, Model-level



Source: Part D Drug Event File (PDE), accessed July 2018

Note: PDC: Proportion of Days Covered; BQ: Pre-Enhanced MTM eligibility Quarter; TQ: Post-Enhanced MTM eligibility Quarter. Adherence is a cumulative measure; each quarterly observation incorporates information from the entire observation window, starting with the fourth pre-Enhanced MTM eligibility quarter. A PDC threshold of 0.8 is the level above which a given medication has a reasonable likelihood of achieving the most clinical benefit.

Appendix Figure J.6: Medication Adherence to RAS Antagonists (Proportion of Days Covered), Enhanced MTM-eligible Population, Sponsor-level



Source: Part D Drug Event File (PDE), accessed July 2018

Note: PDC: Proportion of Days Covered; BQ: Pre-Enhanced MTM eligibility Quarter; TQ: Post-Enhanced MTM eligibility Quarter. Adherence is a cumulative measure; each quarterly observation incorporates information from the entire observation window, starting with the fourth pre-Enhanced MTM eligibility quarter. A PDC threshold of 0.8 is the level above which a given medication has a reasonable likelihood of achieving the most clinical benefit.