Evaluation of the Maternal Opioid Misuse (MOM) Model Fourth Annual Report (Implementation Year 3)

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Contents

Acknowledgments vii

Executive Summary 1

A. MOM Model Design 1

B. Overview of the MOM Model Evaluation 3

C. Looking Ahead 9

Chapter 1. Overview of the MOM Model and the Evaluation 10

A. The MOM Model 10

B. Organization of the Report 12

Chapter 2. MOM Model Awardee Profiles 13

A. Qualitative Data Collection 13

B. Beneficiary-Level Process Data 14

Colorado MOM Model: Awardee Profile 15

Indiana MOM Model: Awardee Profile 20

Maine MOM Model: Awardee Profile 25

New Hampshire MOM Model: Awardee Profile 30

Tennessee MOM Model: Awardee Profile 34

Texas MOM Model: Awardee Profile 39

West Virginia MOM Model: Awardee Profile 43

Chapter 3. Strengthening and Sustaining the MOM Model: Cross-Cutting Challenges and Opportunities 47

A. Responding to a Changing Substance Use Landscape 47

B. Meeting the Needs of a Complex Beneficiary Population 50

C. Responding to Stigma and Child Welfare Concerns 55

D. Integrating Peer Recovery Support Services 56

E. Laying the Groundwork for Long-Term Sustainability 60

Conclusion 63

Chapter 4. Conclusion 65

A. Recognizing and Removing Barriers to Care 65

B. Care Utilization Trends Among MOM Model Beneficiaries 65

C. Sustaining Services 66

D. Scaling Up MOM Models to Expand Service Populations 66

E. Looking Forward 66

Works Cited 67

Appendixes

A Implementation Period Research Questions A-1

B Evaluation Data Components and Methods B-1

C Implementation Period Qualitative Themes and Key Findings C-1

D MOM Model Evaluation Beneficiary-level Process Data D-1

E MOM Model Evaluation T-MSIS Data E-1

F MOM Model Evaluation: Exploratory Analyses of MOM Model Beneficiary Depression Screenings and Results F-1

Tables

1.1 Model Timeline 11

2.1 Type of Data Collection Activity per MOM Model Awardee, 2024 14

3.1 We All Count Scores for Select Indicators by Number of Reported Unmet HRSNs (Needs) at MOM Model Enrollment 53

B.1 Type of Data Collection Activity per MOM Model Awardee B-2

B.2 Qualitative Case Study Topics Explored by Key Informant Type B-3

B.3 Evaluation-Specific Data Elements B-7

B.4 Process Evaluation Constructs and RE-AIM Domains, Data Elements and Research Questions B-8

B.5 Core Outcome Measures for MOM Model Descriptive Outcome Analyses B-11

E.1 Variables Used to Match Comparison Non-Enrolled Beneficiaries (Bold Indicates Exact Matching) E-1

E.2 Core Outcome Measures for MOM Model Descriptive Outcome Analyses E-2

E.3 Subgroups for MOM Model Descriptive Outcome Analyses E-3

E.4 Maternal Opioid Misuse (MOM) Model Analytic Sample Characteristics E-3

E.5 Maternal Outcomes by Maternal Opioid Misuse (MOM) Model Enrollment E-5

E.6 Maternal Outcomes by Maternal Opioid Misuse (MOM) Model Enrollment, by State, Prenatal Enrolled Beneficiaries E-7

E.7 Maternal Outcomes by Maternal Opioid Misuse (MOM) Model Enrollment, by State E-9

E.8 Maternal Outcomes by Maternal Opioid Misuse (MOM) Model Enrollment, by MOUD History, Prenatal Enrollees E-11

E.9 Maternal Outcomes by Maternal Opioid Misuse (MOM) Model Enrollment, by Medication for Opioid Use Disorder (MOUD) History E-13

E.10 Maternal Outcomes by Maternal Opioid Misuse (MOM) Model Enrollment, by Mental Health History, Prenatal Enrollees E-15

E.11 Maternal Outcomes by Maternal Opioid Misuse (MOM) Model Enrollment, by Mental Health History E-17

E.12 Maternal Outcomes by Maternal Opioid Misuse (MOM) Model Enrollment, by Enrollment Timing E-19
E.13 Maternal Outcomes by Maternal Opioid Misuse (MOM) Model Enrollment, by Care Integration Approach, Prenatal Enrolled Beneficiaries E-21
E.14 Maternal Outcomes by Maternal Opioid Misuse (MOM) Model Enrollment, by Care Integration Approach E-23
E.15 Maternal Outcomes by Maternal Opioid Misuse (MOM) Model Enrollment, by Peer Recovery Specialist Focus, Prenatal Enrolled Beneficiaries E-25
E.16 Maternal Outcomes by Maternal Opioid Misuse (MOM) Model Enrollment, by Peer Recovery Specialist Focus E-27
E.17 Maternal Outcomes by Maternal Opioid Misuse (MOM) Model Enrollment, by Multicomponent Maternal Care Transformation, Prenatal Enrolled Beneficiaries E-29
E.18 Maternal Outcomes by Maternal Opioid Misuse (MOM) Model Enrollment, by Multicomponent Maternal Care Transformation E-31
E.19 Outcomes for Maternal Opioid Misuse (MOM) Model Infant Analytic Sample E-33
F.1 Number and Timing of Depression Screenings by Enrollment Timing among MOM Model Beneficiaries with Two or More Screenings F-1
F.2 Demographic Characteristics of MOM Model Beneficiaries by Enrollment Timing and First Depression Screening Result Among Beneficiaries with Two or More Depression Screenings F-2
F.3 Health Characteristics of MOM Model Beneficiaries by Enrollment Timing and First Depression Screening Result Among Beneficiaries with Two or More Depression Screenings F-3
F.4 Depression Follow-Up Received by Enrollment Timing Among Beneficiaries with At Least One Positive Screening for Depression F-4
F.5 Positive Result of Last Depression Screening by Enrollment Timing for MOM Model Beneficiaries with Two or More Depression Screenings F-5
F.6 Demographic Characteristics by Enrollment Timing of MOM Model Beneficiaries with a Positive First Depression Screening F-6
F.7 Health Characteristics by Enrollment Timing Among MOM Model Beneficiaries with a Positive First Screening F-7
F.8 Demographic Characteristics of MOM Model Beneficiaries with Two or More Depression Screenings and a Negative Last Depression Screening Result F-8
F.9 Health Characteristics by Enrollment Timing and First Depression Screening Result among MOM Model Beneficiaries with Two or More Depression Screenings F-9

Figures

ES-1 MOM Model Design: Integrating Care 1
ES-2 MOM Model States 2

ES-3 MOM Model Modified RE-AIM Framework....3
ES-4 Overview of Evaluation Findings: Awardee Adaptations to Support MOM Model Goals....4
ES-5 MOM Model Intervention Approaches, Partnerships and Service Areas....5
ES-6 Awardees Are Using Various Strategies to Improve Enrollment and Engagement in Care....6
ES-7 Overview of Peer Recovery Services (PRS) by Awardee....7
3.1 Overview of HRSNs Affecting MOM Model Beneficiaries (number screened varies by area of need)....51
3.2 MOM Model Approaches to Incorporating Peer Recovery Support Services....57
3.3 MOM Model Awardees' Approaches to Funding....61

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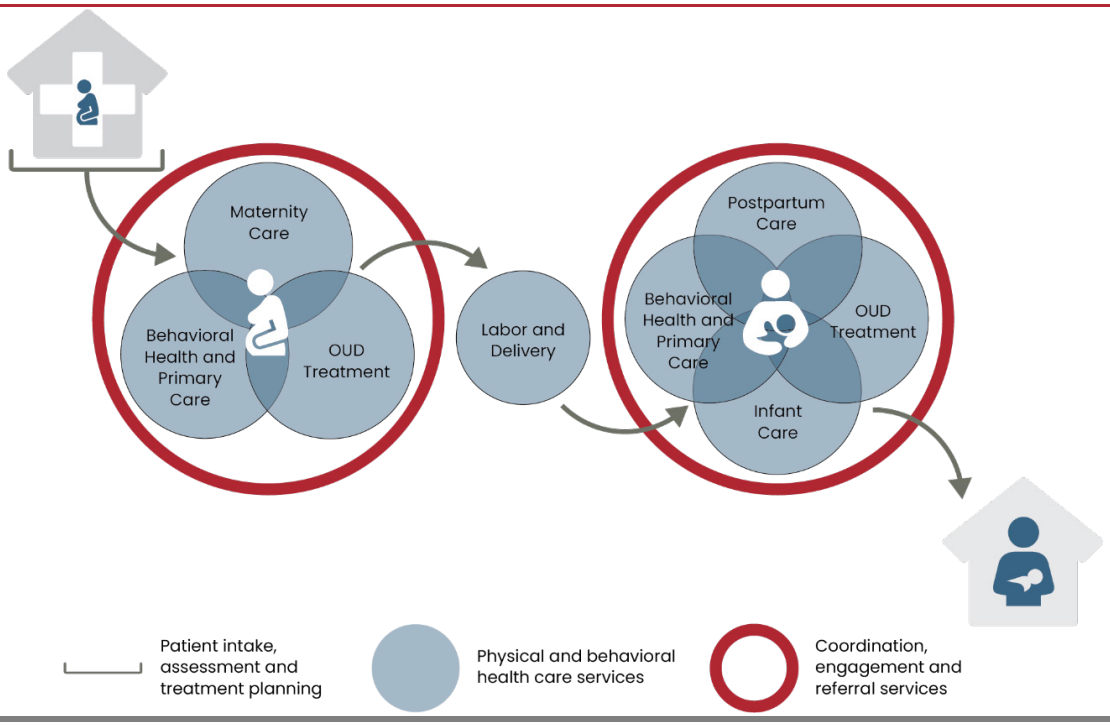
Executive Summary

In 2018, the Centers for Medicare & Medicaid Services (CMS) Center for Medicare & Medicaid Innovation introduced the Maternal Opioid Misuse (MOM) Model to address the opioid epidemic and improve maternal and infant health. State Medicaid agencies, as the primary payer for births in the United States, play a critical role in this effort. The MOM Model aims to transform care delivery for pregnant and postpartum individuals with opioid use disorder (OUD) enrolled in Medicaid. The MOM Model's primary goals are to (1) improve quality of care and reduce costs for pregnant and postpartum individuals with OUD as well as their infants; (2) expand access, service delivery capacity and infrastructure based on state-specific needs; and (3) create sustainable coverage and payment strategies to support ongoing model services and integration of care. To achieve these goals, the model emphasizes access to evidence-based treatment, integrated care delivery supported by CMS Innovation Center authorities and state financing flexibilities, and strengthened provider capacity and infrastructure (CMS, 2023).

A. MOM Model Design

State Medicaid agencies designed their models with the goal of addressing care fragmentation in the delivery systems serving pregnant individuals with OUD by integrating clinical care with other services critical for health, well-being and recovery. The MOM Model requires that enrolled beneficiaries can access comprehensive physical and behavioral health services and that providers have capacity to share relevant information with one another. Awardees are also required to provide referrals for health-related social services, engage MOM Model beneficiaries and retain them in care, and build community partnerships to meet the model population's comprehensive needs (see Figure ES-1).

Figure ES-1. MOM Model Design: Integrating Care



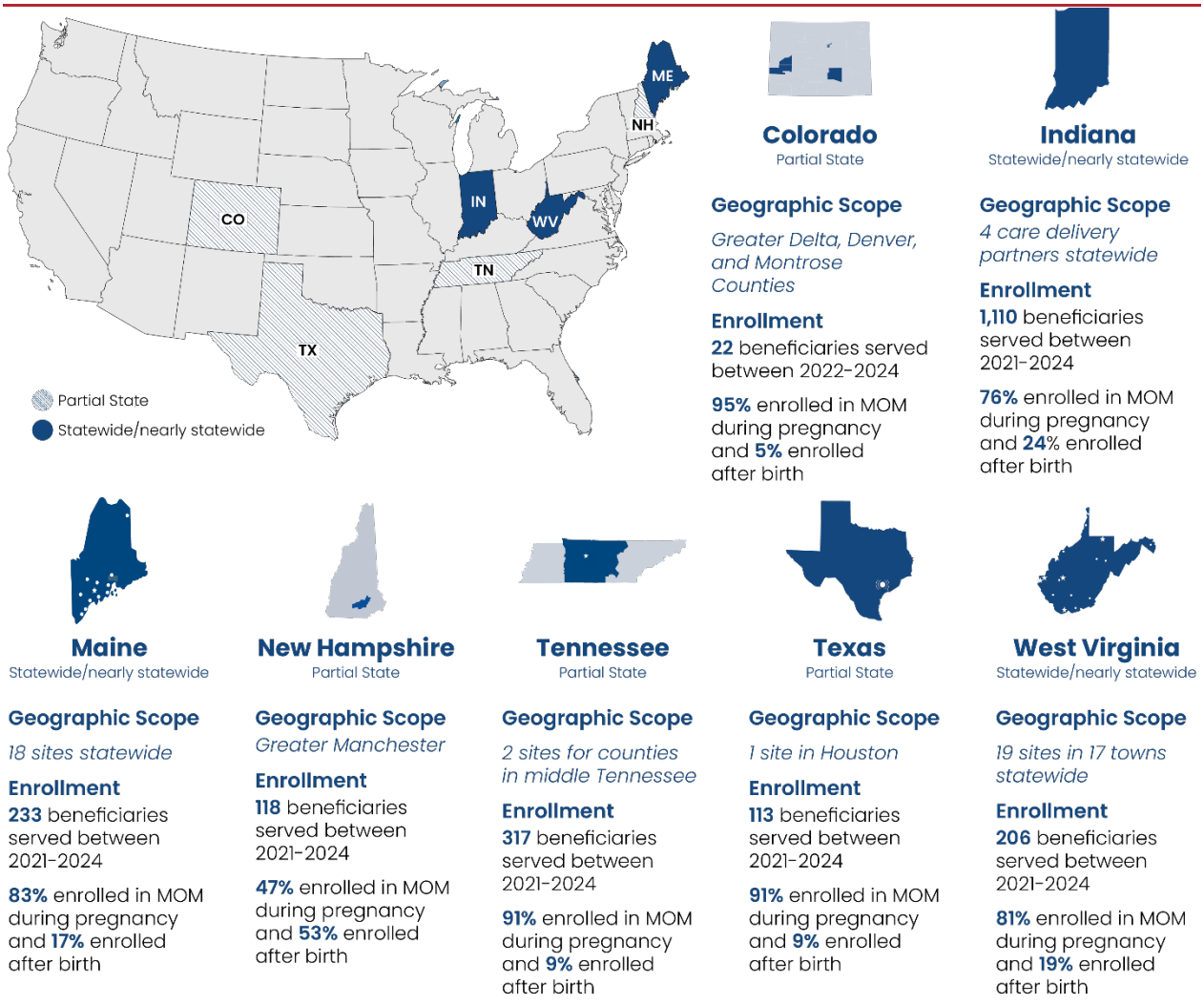
OUD = opioid use disorder; source: CMS, 2019

a. Awardees and Care Delivery Partners

The CMS Innovation Center provides different types of funding during the MOM Model period of performance. State Medicaid agencies serve as MOM Model awardees, and each agency is collaborating with care delivery partners to build service delivery capacity, integrate health information systems and launch enhanced care coordination approaches. Care delivery partners may be local providers, health systems or payers (for example, hospital-based health clinics, health homes, Medicaid managed care organizations [MCOs]). Awardees may work with more than one care delivery partner in a local area, multiple regions or counties, or their entire state.

State models varied in their approaches to adopting the MOM Model; this report provides an overview of model activities in the seven states that implemented the model starting in July 2021. The seven state Medicaid agencies implementing the MOM Model were Colorado, Indiana, Maine, New Hampshire, Tennessee, Texas and West Virginia (see Figure ES-2).

Figure ES-2. MOM Model States

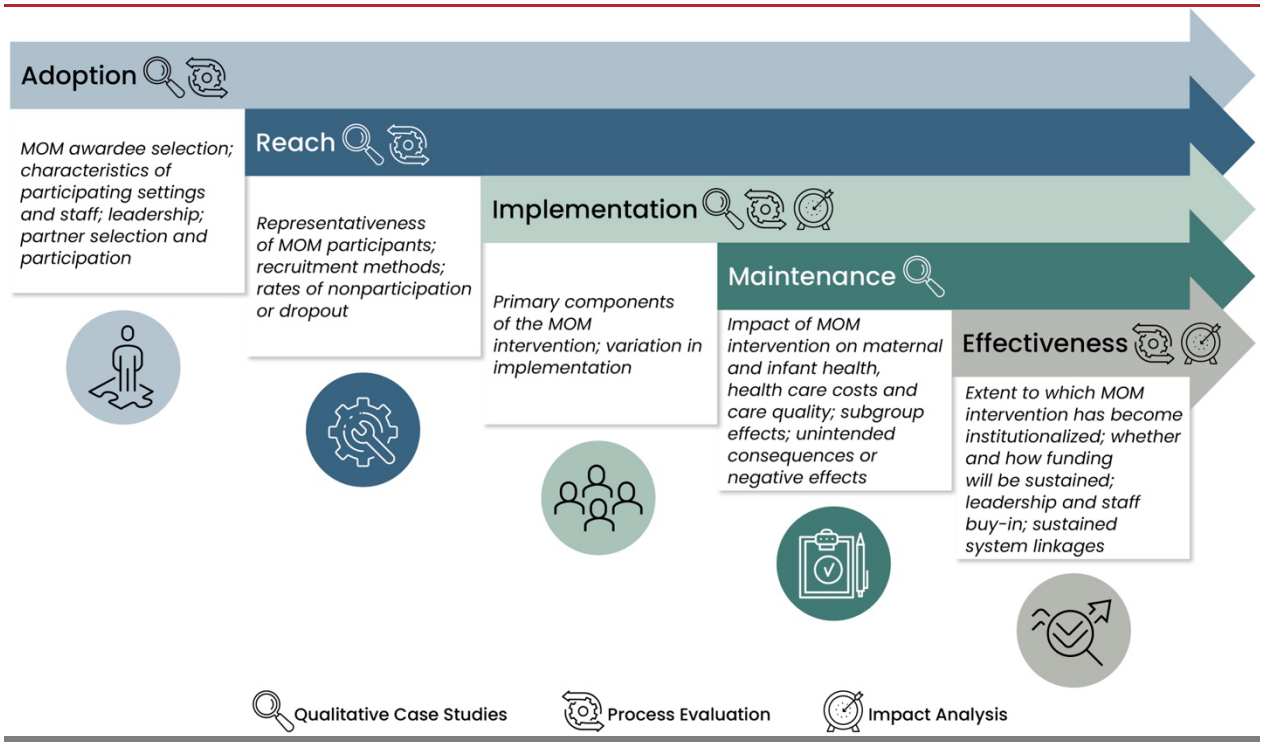


B. Overview of the MOM Model Evaluation

The CMS Innovation Center contracted with Westat (formerly Insight Policy Research, which was acquired by Westat in 2022), along with subcontracted partners Urban Institute and Abt Global, to independently evaluate the MOM Model. Using a flexible, mixed-methods approach, the evaluation examines how implementing an integrated care model for pregnant and postpartum individuals with OUD improves quality and health outcomes while reducing Medicaid costs. The evaluation methods include qualitative case studies to explore implementation experiences and challenges and quantitative descriptive analyses of awardee-reported data, Transformed Medicaid Statistical Information System (T-MSIS) Analytic Files (TAF) and vital records. Tables containing these descriptive data are in Appendix E.

We present seven state profiles that describe how state Medicaid agencies and their model partners addressed model adoption, reach, implementation and sustainability based on a modified RE-AIM (Reach, Effectiveness, Adoption, Implementation, Maintenance) evaluation framework (Glasgow et al., 1999; Kwan et al., 2019). The evaluation team adapted RE-AIM to meet the MOM Model's evaluation needs by reorganizing and reframing domain descriptions. Figure ES-3 illustrates the modified MOM Model RE-AIM framework, including the types of data used to examine each domain.

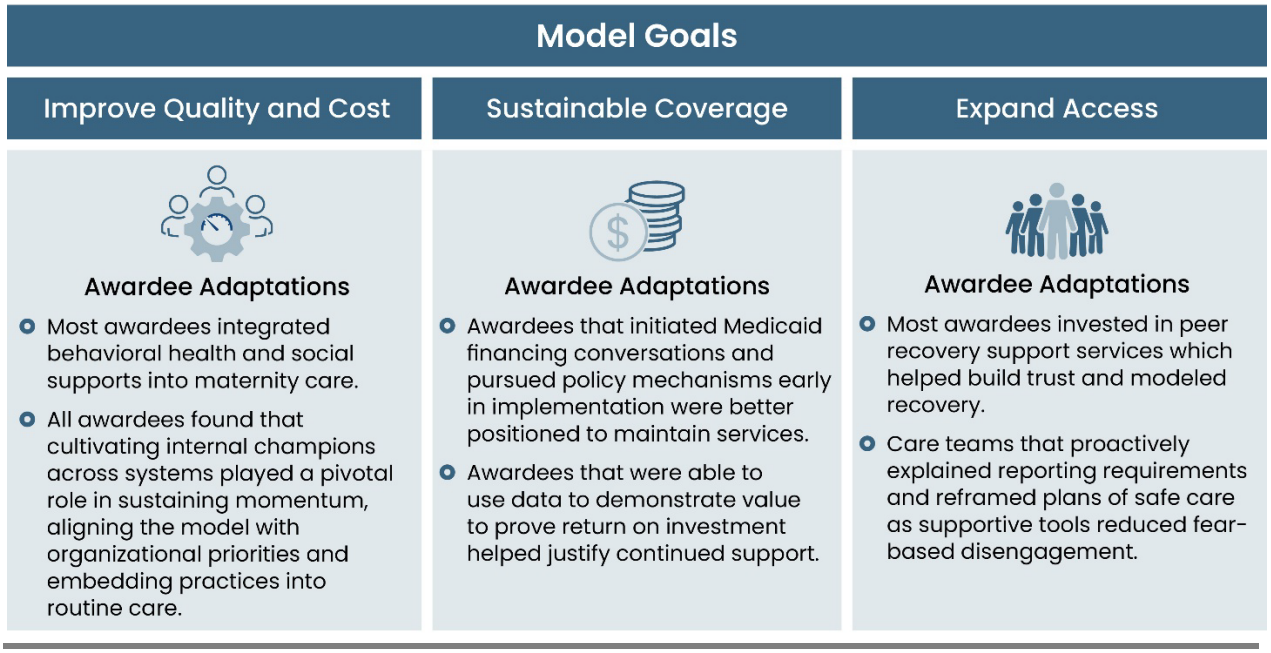
Figure ES-3. MOM Model Modified RE-AIM Framework



Source: Westat modification of RE-AIM framework (Estabrooks et al., 2021)

The MOM Model demonstrates how states can advance integrated care for pregnant and postpartum individuals with OUD in Medicaid by aligning services with patients' full range of medical, behavioral and social needs. In keeping with the MOM Model goals, awardees developed practical, patient-centered strategies to support engagement—embedding behavioral health and peer support into maternity care, using data and policy mechanisms to support sustainability goals, and addressing fear of child welfare involvement (Figure ES-4).

Figure ES-4. Overview of Evaluation Findings: Awardee Adaptations to Support MOM Model Goals

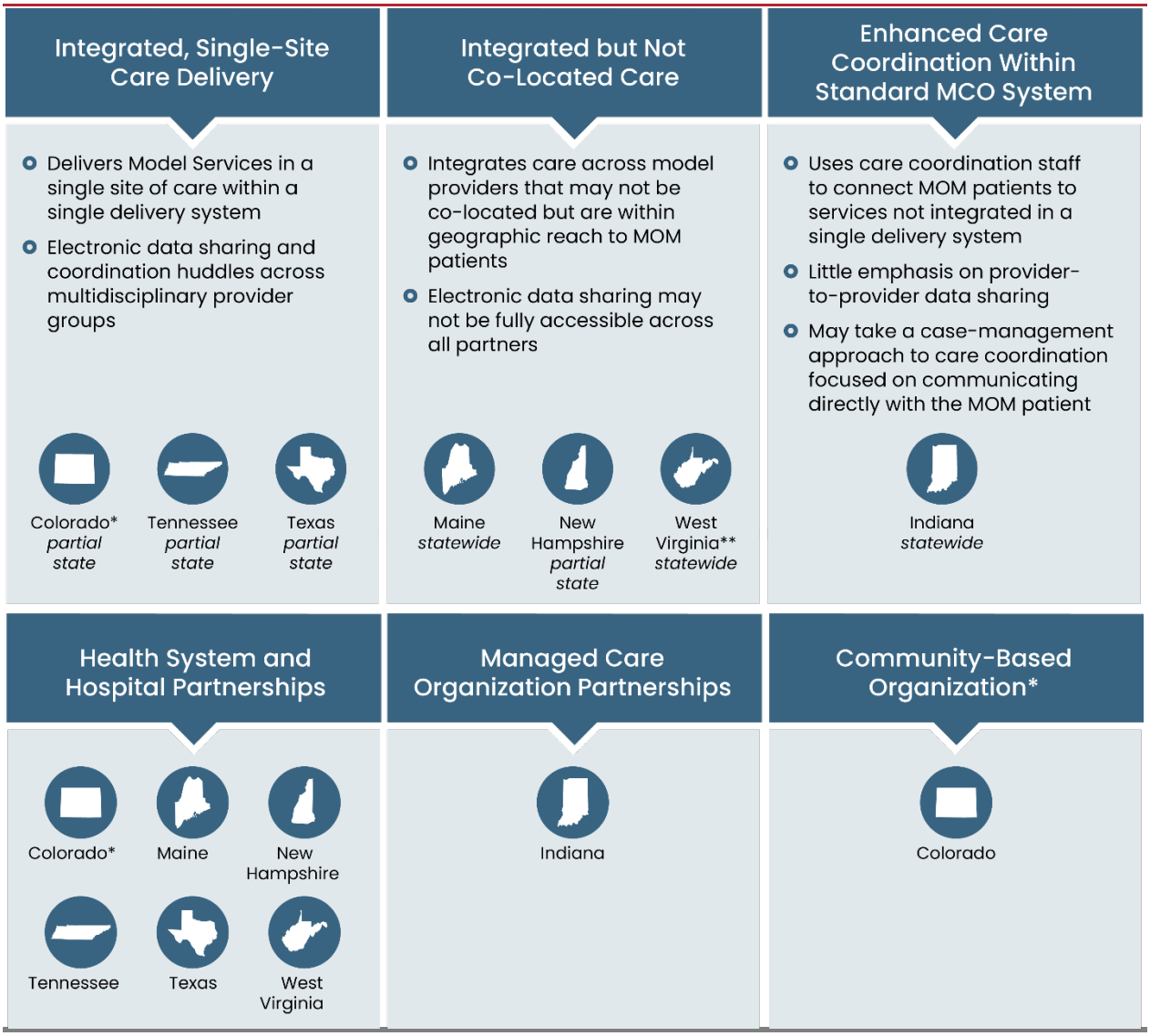


These adaptations underscore the importance of flexible, provider-driven approaches that strengthen continuity and foster patient trust. At the same time, the experiences of MOM Model states show that sustaining integrated care requires early attention to sustainability, managed care engagement and policy alignment. For states working to design and scale maternal health programs, the MOM Model offers lessons for building care systems that are clinically responsive, fiscally grounded and able to adapt as needs evolve.

a. Model Adoption Across States

The Adoption domain of the RE-AIM framework considers the characteristics of each awardee's unique MOM Model, the establishment and maintenance of partnerships and the setting in which models are implemented. MOM Model characteristics vary by state Medicaid agency approach (see Figure ES-5). All MOM Model programs maintained key model partners throughout the implementation period[1] and all MOM Model awardees extended Medicaid postpartum coverage to 12 months during the MOM Model implementation period.

Figure ES-5. MOM Model Intervention Approaches, Partnerships and Service Areas



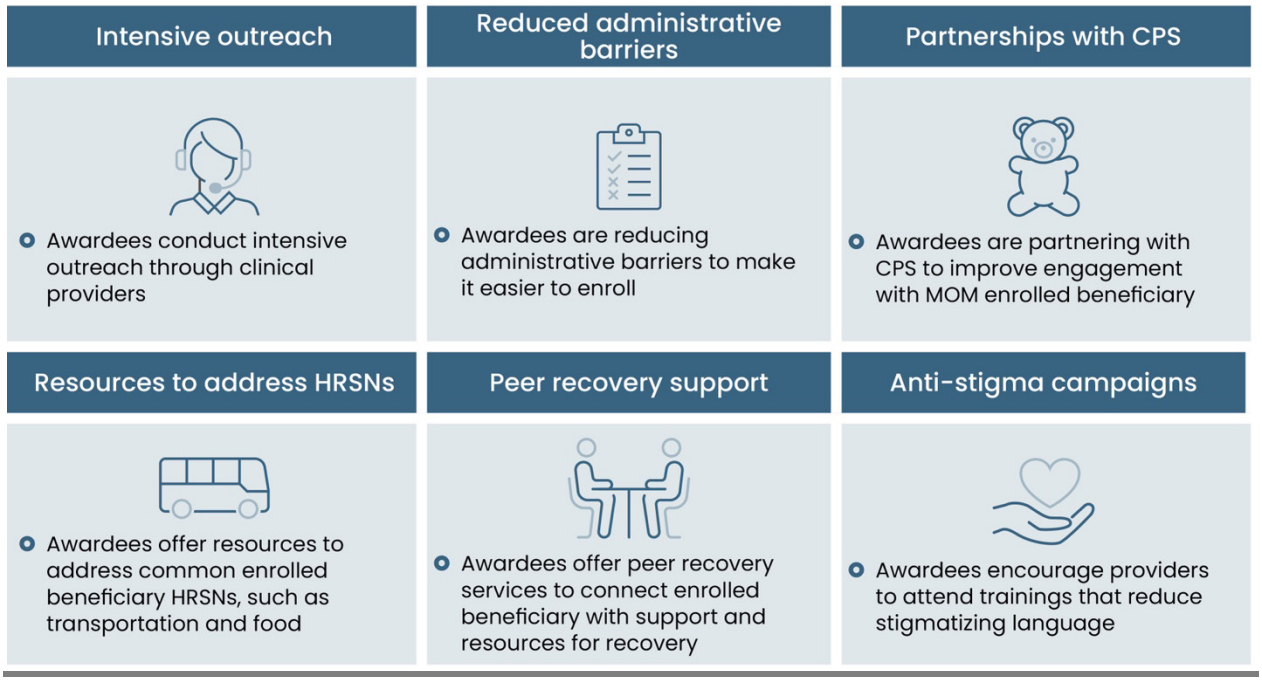
*Colorado has two partners: a single-site, fully integrated hospital and a separate partner in a different part of the state that is a community-based organization. Most Colorado MOM Model enrollees receive services at the hospital.
**Some but not all of West Virginia's care delivery sites provide co-located services.

[1] One rural clinical partner left Colorado's MOM Model program due to low enrollment.

b. Model Reach Across States

The Reach domain of the RE-AIM framework considers recruitment methods and the representativeness of MOM Model beneficiaries. MOM Model enrollment steadily increased to 2,125 ever-enrolled beneficiaries by December 31, 2024. Awardees' and care delivery sites' intensive outreach efforts, along with word-of-mouth referrals, drove enrollment. As the model progressed, awardees and care partners addressed enrollment barriers, and awardees also reduced administrative burdens in the enrollment process. Figure ES-6 presents strategies awardees were using to improve enrollment and engagement in care. Despite these efforts, enrollment numbers fell short of original expectations across all awardees. Low enrollment reflects barriers such as fear of CPS involvement, staffing shortages, capacity constraints at service sites and beneficiaries' unmet health-related social needs (HRSNs).

Figure ES-6. Awardees Are Using Various Strategies to Improve Enrollment and Engagement in Care



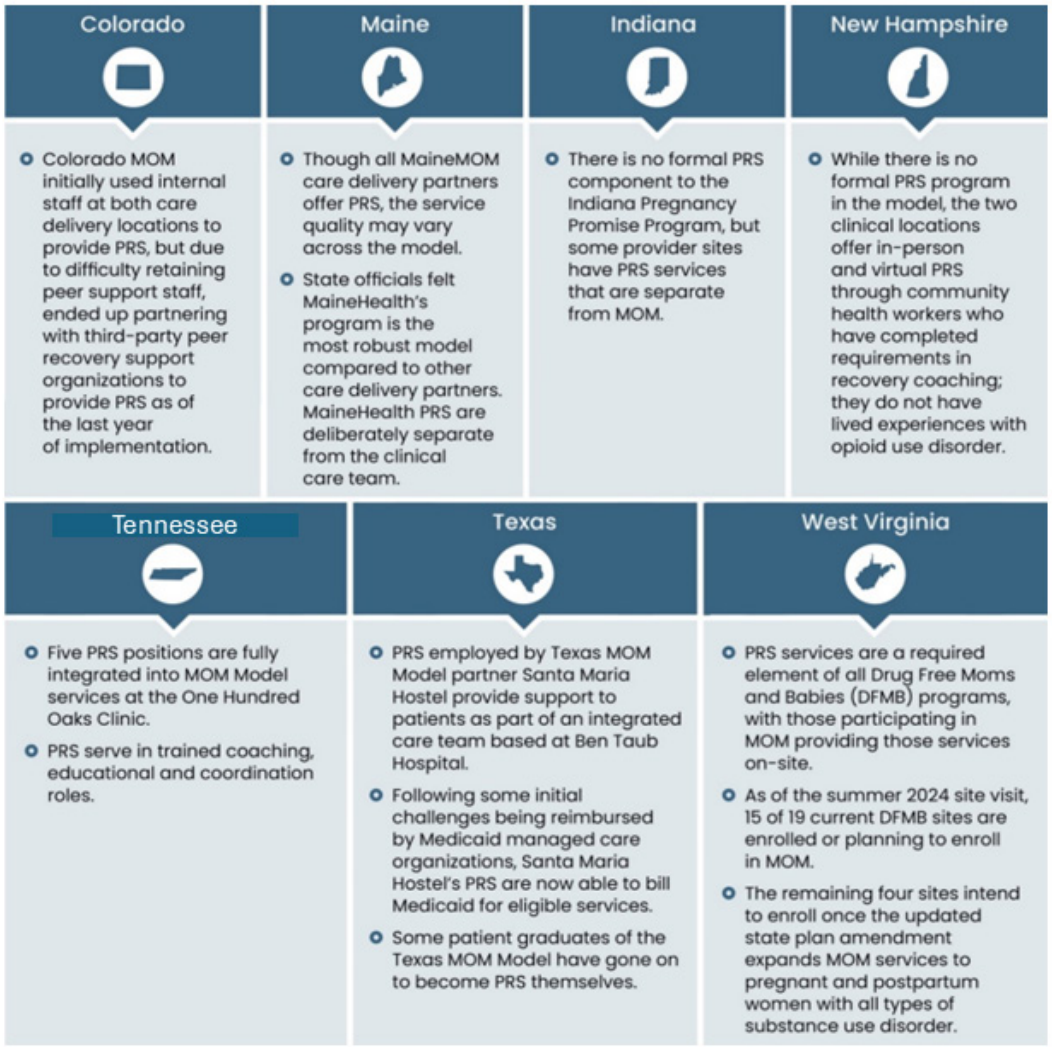
Source: Westat analysis of qualitative data from MOM Model evaluation May 2024–July 2024 and beneficiary-level process data through June 30, 2024

c. Model Implementation Across States

A central goal of the MOM Model is to improve access to integrated care for pregnant and postpartum individuals with OUD. Integrated care is an approach that streamlines health care services to better address an individual's physical, mental, behavioral and social needs through a single delivery system. An integrated care approach is more intensive than traditional care coordination, which involves organizing a patient's care across many health care providers. In integrated care, coordination occurs at a systemic level through a unified delivery model, ensuring different care providers effectively communicate and stay informed about all aspects of a patient's complex health care needs (CMS, 2023).

Peer recovery support services (PRSS) are a common addition to care models and interventions serving people with OUD. Most MOM Model programs have formal PRS components, though implementation varies (Figure ES-7). Providers and beneficiaries indicated that peer recovery services were an important element of care—possibly the most important—due to the significance of integrating the support of a person with shared living experience into a recovery model. Peer recovery specialists provide emotional support, a sounding board for discussion and encouragement, and a nonjudgmental voice in helping people remain in recovery.

Figure ES-7. Overview of Peer Recovery Services (PRS) by Awardee



d. Model Sustainability

Awardees are developing financial strategies to support and sustain MOM Model services

Most awardees express confidence in their programs' financial viability and met self-funding requirements by leveraging state plan amendments (SPAs), managed care contracts or both. Some awardees are integrating MOM Model services with established opioid-related initiatives, such as opioid health homes,[2] within their health care systems.

Despite progress toward sustainability, some awardees face funding uncertainties. As the demonstration period nears its end, several awardees continue to rely on MOM Model funding while working to secure long-term funding solutions. These challenges highlight the critical need for early sustainability planning, including diversifying funding streams, leveraging existing infrastructure and engaging interested parties to address potential barriers.

Some awardees are scaling MOM Model services

Several awardees continue to expand MOM Model services to increase their reach and address gaps in access to care. In response to the changing substance use landscape, including the rise of fentanyl and widespread polysubstance use, some awardees are broadening eligibility criteria to serve pregnant and postpartum individuals with a wider range of substance use disorders (SUDs). Others are opening satellite clinics that bring care closer to where beneficiaries live. These clinics help to improve access in high-need and underserved areas and support more timely treatment, which is critical given the complexity associated with evolving substance use patterns. A few awardees are pursuing both strategies to maximize their impact and provide more comprehensive care.

To achieve expansion, awardees have strengthened operational capacity, increased program visibility and secured buy-in from Medicaid leadership and clinical staff to embed the MOM Model within state health care systems. They have also leveraged funding sources, such as federal grants and opioid-related legal settlements, to support these efforts. Although not all awardees are expanding in the same way or at the same pace, those pursuing growth are working to balance increased reach with the need to maintain care quality and secure sustainable funding to support long-term implementation.

[2] An opioid health home is a program that offers integrated office-based medication-assisted treatment (MAT), opioid dependency counseling and comprehensive care management for individuals with OUD.

C. Looking Ahead

The MOM Model evaluation is the largest study to date to examine care integration for pregnant and postpartum individuals with OUD enrolled in Medicaid. As the model period nears its end, awardees have achieved significant progress by expanding services, building partnerships and developing strategies to sustain integrated care. However, challenges such as low enrollment, staffing shortages and funding uncertainties persist. To ensure the program's long-term impact, awardees must continue balancing implementation and expansion with ensuring care quality, maintaining strong collaborations with key partners and securing varied funding sources. Through their work on the MOM Model, awardees have created a valuable foundation for addressing maternal health gaps in care and OUD-related stigma, and guiding future efforts to improve care for pregnant and postpartum individuals with OUD enrolled in Medicaid.

Chapter 1. Overview of the MOM Model and the Evaluation

The Centers for Medicare & Medicaid Services' (CMS') Center for Medicare & Medicaid Innovation contracted with Westat and our partners, Urban Institute and Abt Global, to conduct an independent evaluation of the Maternal Opioid Misuse (MOM) Model. The annual evaluation focuses on identifying and reporting qualitative and beneficiary-level process data findings (detailed in Chapter 2) by MOM Model awardee and a cross-cutting examination and overarching narrative (detailed in Chapter 3) for Implementation Year 3 (July 2023 through June 2024). Additional aggregate findings from qualitative data collection, beneficiary-level data and Transformed Medicaid Statistical Information System (T-MSIS) analysis are reported in Appendixes C, D and E, respectively.

A. The MOM Model

The MOM Model is a patient-centered service delivery model that aims to improve the quality of care for pregnant and postpartum individuals who have an opioid use disorder (OUD) and are enrolled in Medicaid. The CMS Innovation Center supported state Medicaid agencies over 5 years to launch a MOM Model program with one or more care delivery partners in their communities. The model supports state interventions focused on coordinating clinical maternity and behavioral health care and engaging, referring to and integrating other services critical for the health, well-being and recovery of pregnant and postpartum individuals with OUD.

The goals of the MOM Model are to:

1. Improve quality of care and reduce costs for pregnant and postpartum individuals with OUD and their infants.
2. Expand access, service delivery capacity and infrastructure based on state-specific needs.
3. Create sustainable coverage and payment strategies that support ongoing coordination and integration of care.

Additional aspects of the MOM Model include:

1. **Design requirements:** MOM Model programs must provide beneficiaries access to comprehensive and integrated physical and behavioral health services during pregnancy and postpartum. Programs must also offer critical wraparound services, including support for addressing health-related social needs (HRSNs),[3] and work toward sustaining the models in their communities.
2. **Awardees:** Ten state Medicaid agencies—Colorado, Indiana, Louisiana, Maine, Maryland, Missouri, New Hampshire, Tennessee, Texas and West Virginia—were awarded MOM Model funding. However, Louisiana, Maryland and Missouri withdrew from the model before 2023.
3. **Care provision partners:** State Medicaid agencies teamed with care delivery partners, sometimes more than one per state, to provide MOM Model services, integrate health information systems and provide care coordination. Care delivery partners are usually

[3] HRSNs screened were food, transportation, housing, utilities, family support and safety.

local provider organizations, health systems or payers, such as managed care organizations (MCOs).

4. **Implementation timeline:** Table 1.1 describes the purpose of the four implementation periods.

Table 1.1. Model Timeline

	Pre-Implementation	Transition Period	Full Implementation	Extension Period
Timeframe	January 1, 2020–June 30, 2021	July 1, 2022–June 30, 2022*	July 1, 2022–December 31, 2024	January 1, 2025–December 31, 2025**
Description	Awardees designed their MOM Model interventions and strengthened relationships with MOM Model partners	Awardees began delivering care using MOM funding; Medicaid programs finalized coverage and payment strategies to fully fund programs through the state	Awardees implemented model	Awardees were eligible to extend the program up to 12 months beyond the end of the period of performance (December 31, 2024) due to the 6-month delay at the start of the model and to allow awardees additional time to complete MOM Model activities and requirements. West Virginia requested to extend the program up to 6 months through June 30, 2025.

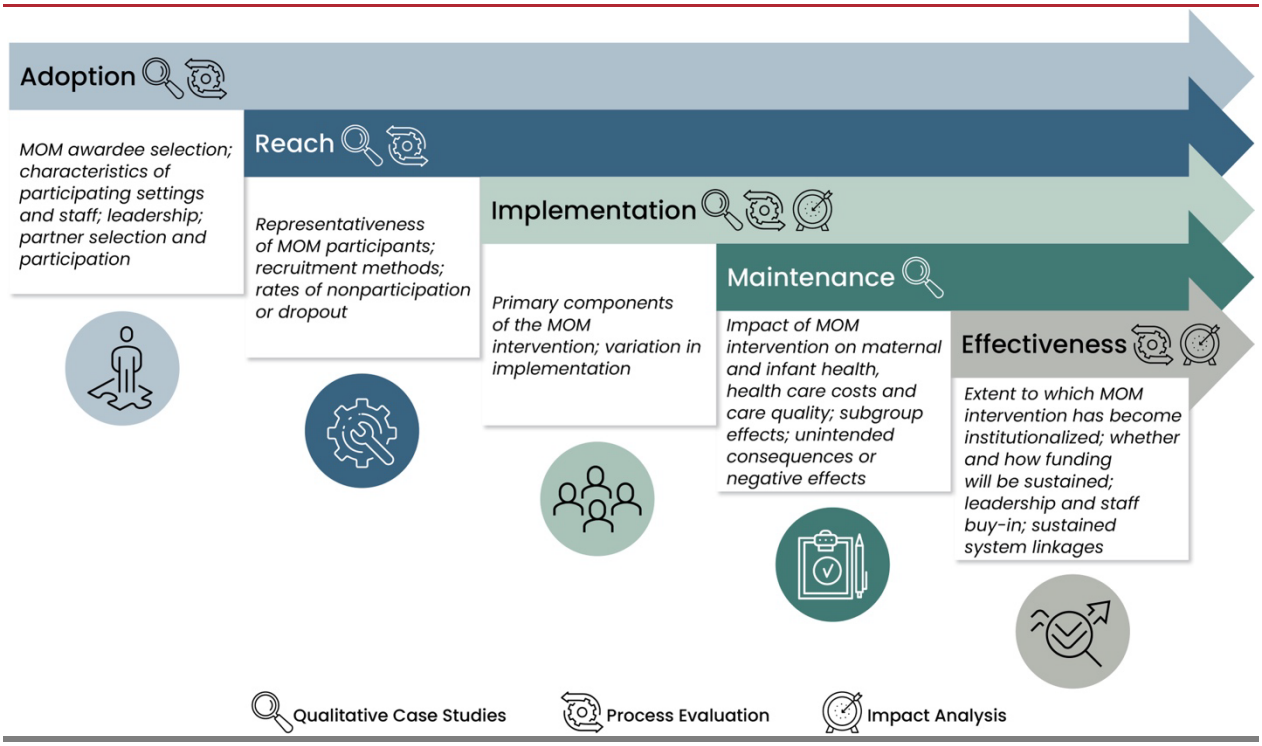
*Timeframe for most awardees. West Virginia and Colorado received extensions to address state-specific implementation challenges, allowing them to begin implementation in January 2022 and September 2022, respectively.

**Due to a 6-month delay at the start of the model caused by the COVID-19 public health emergency, six awardees were eligible to extend their participation in the model, allowing them to continue model implementation for up to 12 months beyond the original performance period end date (December 31, 2024). West Virginia extended its program through June 30, 2025, while the remaining five awardees extended through December 31, 2025.

Evaluation Design

The MOM Model evaluation uses a flexible, iterative, mixed-methods design through three primary data collection methods: qualitative case studies, beneficiary-level process data, and evaluation of program impacts using Medicaid claims from the T-MSIS linked with state vital records. The evaluation is based on a modification of the RE-AIM framework (Glasgow et al., 1999; Kwan et al., 2019), selected because it provides a practical, multidimensional approach to evaluating interventions in real-world settings and emphasizes implementation fidelity and long-term sustainability. The evaluation team adapted RE-AIM to meet the MOM Model's evaluation needs by reorganizing and reframing the domain descriptions. Data sources and methods are described in more detail in Appendix B. Figure 1.1 depicts the modified MOM Model RE-AIM framework, including the types of data used to examine each domain.

Figure 1.1. MOM Model Modified RE-AIM Framework



Source: Westat modification of RE-AIM framework (Estabrooks et al., 2021)

B. Organization of the Report

Chapter 2 of this annual evaluation report summarizes qualitative and beneficiary-level process data findings by state awardee. Findings for each awardee are reported in alignment with the modified RE-AIM framework (see Figure 1.2; Esposito et al., 2021) to assess progress along the MOM Model program implementation trajectory. Chapter 3 of this annual evaluation report builds on the awardee profile findings by providing a cross-cutting examination of how findings from individual states relate and tells a more overarching narrative of MOM Model implementation. Appendix A lists the evaluation research questions. Appendix B provides an overview of evaluation data components and methods. Appendix C provides tables of qualitative themes and key findings from across the MOM Model implementation period. Appendix D contains the MOM Model Evaluation beneficiary-level process data covering July 1, 2021, through December 31, 2024. Finally, Appendix E provides descriptive findings from T-MSIS level data.

Chapter 2. MOM Model Awardee Profiles

Each of the Maternal Opioid Misuse (MOM) Model awardee profiles described in this chapter are informed by qualitative data collected during Implementation Year 3 site visits and beneficiary-level process data up to December 31, 2024. Brief notes about the methods used to collect and report qualitative data and beneficiary-level process data are described in the following sections, while more expansive methods and considerations are described in Appendix B.

A. Qualitative Data Collection

The qualitative component of the evaluation examines how MOM Model states designed and implemented their models of care. Qualitative data collection has documented best practices and lessons learned during spring 2024, the end of Implementation Year 3, including MOM Model beneficiaries' experiences. Qualitative data collection has also examined how each MOM Model awardee's program evolved from the pre-implementation period through 3 years of implementation. The awardee profiles in this section report data in alignment with the modified RE-AIM framework, including:

1. **Model reach**: recruitment methods, MOM Model enrollment and the representativeness of model beneficiaries
2. **Model implementation:** primary components of the model and variation in model implementation
3. **Model sustainability:** the extent to which the model has become institutionalized and whether or how funding will be sustained

a. Data Collection Sample

The evaluation team collected data through virtual focus groups and Photovoice sessions with MOM Model beneficiaries and virtual key informant interviews between April and July 2024 with the following stakeholders:

1. **MOM Model awardees**
2. **Care delivery partner staff**, including program managers, care coordinators, peer recovery coaches and clinical staff
3. **Clinical partner staff**, including maternity care and substance use disorder (SUD) treatment providers
4. **Community partner organizations**
5. **Beneficiary perspectives:** beneficiaries' experiences in the model with clinical staff and/or peer staff and how beneficiary experiences with care were different compared to previous care experiences to report on effectiveness

Table 2.1 lists the type and number of data collection activities that occurred per awardee during site visits at the end of Implementation Year 3, spring 2024.

Table 2.1. Type of Data Collection Activity per MOM Model Awardee, 2024

Data Collection Activity	Colorado	Indiana	Maine	New Hampshire	Tennessee	Texas	West Virginia
Key informants interviewed	8	22	19	16	13	24	28
Beneficiary focus group participants	-	5	3	7	4	8	4
Photovoice participants	-	-	1	-	-	-	-

Source: Westat analysis of MOM Model site visit data, April–July 2024

B. Beneficiary-Level Process Data

Awardee-reported beneficiary-level process data provide information on the characteristics of MOM Model beneficiaries and the services they received during Implementation Year 3. These data describe the population served. The evaluation team reports the following data elements informed by beneficiary-level process data updated through December 31, 2024, in the awardee profiles in this section:

- Beneficiaries served through Implementation Year 3 (including one pre-implementation year for four years of total data)
- Cumulative beneficiary enrollment by implementation year
- Percentage of beneficiaries enrolled during pregnancy and after giving birth
- Percentage of beneficiaries who received Medicaid benefits prior to pregnancy
- Percentage of beneficiaries who screened positive for at least one social need at model enrollment
- Average number of social needs identified per beneficiary, among beneficiaries with at least one positive screening
- The top three social needs identified (among the six needs screened, shown in the following graphic)

					
Food	Transportation	Housing	Utilities	Family Support	Safety

Colorado MOM Model: Awardee Profile

Geographic Scope

Greater Delta, Denver and Montrose Counties

Enrollment

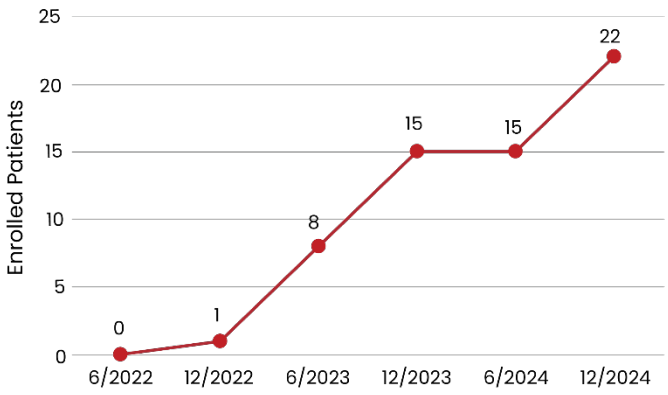
22 patients served from Fall 2022 to December 2024

95% enrolled in MOM during pregnancy and **5%** enrolled after birth

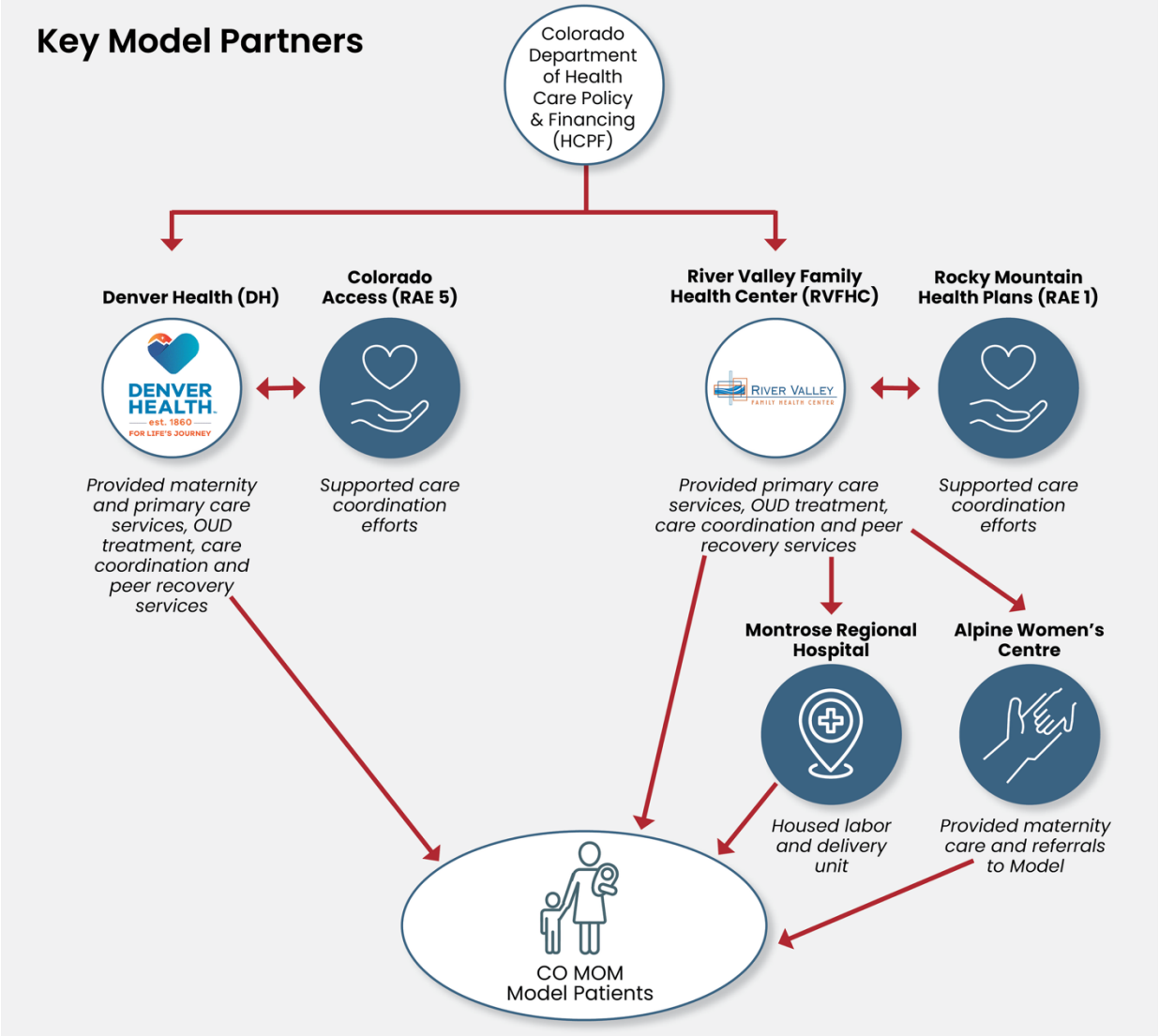
2024 Data Collection

8 key informants interviewed

Enrollment Over Time



Key Model Partners



Model Summary

The Colorado Department of Health Care Policy & Financing (HCPF) directs their MOM Model. This model launched with three subgrantees serving as care delivery partners in summer 2022, but as of the final year of implementation, only two subgrantees remained: Denver Health and River Valley Family Health Center (RVFHC). Both care delivery partners designed their own unique MOM Model interventions aligned within specific guidelines provided by HCPF. The Colorado MOM Model program enrolled 22 beneficiaries across its two care delivery partners as of December 31, 2024.

Reach

Successes. Colorado's care delivery partners' efforts to increase enrollment included expanding initiatives aimed at promoting respectful, non-stigmatizing care among providers. Denver Health staff reported leveraging its "Words Matter" campaign throughout the organization, which involved examining data from their electronic health system to identify stigmatizing terms that providers used in records for beneficiaries with SUD and reduce the use of this language. Denver Health reported creating and maintaining a "Words Matter" guide to identify stigmatizing language and recommended non-stigmatizing alternatives, both as part of the MOM Model and within programs and care settings outside of the MOM Model at Denver Health. Although RVFHC did not enroll enough beneficiaries to determine the success of their anti-stigma activities, such as trainings for providers, RVFHC staff reported that being able to highlight pregnant individuals who were successful in the model would have helped reduce fear of the medical system in their service area.

Challenges. Colorado's enrollment remained low, with only 18 beneficiaries enrolled between March 2023 and December 2024, for a total enrollment of 22 beneficiaries. Staff at both care delivery partners attributed low enrollment to high levels of acute and chronic health-related social needs (HRSNs) among potential enrolled beneficiaries, which made it difficult to maintain consistent outreach and engagement. This challenge is compounded by resource constraints, service fragmentation and eligibility barriers that limit access to essential services such as housing and transportation. Denver Health and HCPF staff reported that recruitment efforts at Denver Health were further hindered by high staff turnover and the administrative burden associated with data collection and reporting. At RVFHC, staff emphasized that stimulant use was more prevalent than opioid use in their community, limiting the number of beneficiaries eligible for enrollment under the MOM Model. Staff from both sites identified stigma and fear of the health care and child welfare systems as major barriers to enrollment. They also cited competition from other state programs, such as the Integrating Care for Women and Babies (ICWB) initiative, which had broader eligibility criteria and fewer funding restrictions. Unlike the MOM Model, ICWB did not require a primary diagnosis of opioid use disorder (OUD), allowing it to serve a wider population with SUDs.

Implementation

MOM Model service updates. Colorado's MOM Model program evolved in 2024, using lessons learned from the prior implementation period to improve service access and consistency. MOM Model staff highlighted the following changes that were made to MOM Model services in Implementation Year 3: (1) the limited implementation of contingency management or incentives for MOM Model beneficiaries participating in model activities; (2) the expansion of Denver Health's integrated hub-and-spoke "Perinatal, Addiction, and Recovery Clinic" services to

satellite clinics; and (3) adjustments to the peer recovery services provision from direct provision at Denver Health to partnership with an external peer support organization, HardBeauty.

Successes. Colorado MOM Model staff believed their model's primary success during Year 3 was its influence on beneficiaries' lives and providers' capacity to care for pregnant and postpartum beneficiaries with OUD. Especially at Denver Health, staff reported that these impacts included building trust between beneficiaries, providers and the overarching medical system; helping beneficiaries navigate the health care system; expanding the capacity and willingness of obstetricians to provide high-risk pregnancy and addiction medicine services; establishing sustainable care transformation for pregnant individuals with OUD; and advocating with the child welfare system to help keep children with their birth parent. Respondents from both Denver Health and RVFHC reported that the uptake and continued use of best clinical and screening practices remained consistent through Implementation Year 3, with the MOM Model serving "as a catalyst" for best-practices implementation and "bring[ing] people together more broadly."

Challenges. Colorado MOM Model staff reported that the greatest challenge Colorado faced implementing the MOM Model at the time of the 2024 site visit was staff turnover. For example, Denver Health lost their program manager, perinatal navigator, social work intern and clinical lead in 2024. However, they were able to rehire their clinical lead through a subcontract to continue serving as the program director. RVFHC staff reported losing their care coordinator, who was involved in MOM Model operations and peer recovery services but noted that this turnover had little impact on operations due to low enrollment and the ability of the program manager and peer recovery coach to fill her responsibilities.

Sustainability Lessons Learned

Sustainability plans. Colorado MOM Model staff have consistently reported that Colorado's MOM Model is designed to be sustained by the state's Regional Accountable Entities (RAEs) through existing per member per month (PMPM) payments without requiring new Medicaid authorities. HCPF staff reported being confident that RVFHC could sustain MOM Model services with support from Rocky Mountain Health Plan, their regional RAE, which provides care navigation services to pregnant and postpartum individuals with OUD. HCPF and Denver Health staff described the financial sustainability of the MOM Model at Denver Health as less clear, with the hospital experiencing ongoing, system-wide financial challenges because of the rising number of uninsured patients, inadequate Medicaid and Medicare reimbursement rates, and increasing health care costs.

Institutionalization and care transformation. Respondents from RVFHC and Denver Health expressed that they had their leadership's support to institutionalize MOM Model services and transform care for pregnant individuals with OUD at their organizations, along with strong partnerships to ensure community awareness of these services. Specifically, RVFHC staff reported plans to maintain robust partnerships with its provider organizations, Alpine Women's Centre and Montrose Regional Health Hospital, and planned to continue engaging with and providing trainings to community organizations on OUD treatment for pregnant individuals. Additionally, Denver Health staff reported having strong leadership support from their Center of Addiction Medicine but faced issues of buy-in from some obstetricians who viewed providing care for OUD as outside of their scope of practice. Nonetheless, Denver Health staff reported partnering with two obstetricians and other providers involved with a separate maternal opioid overdose prevention program, Maternal Overdose Matters Plus (MOMS+), to successfully advocate for the expansion of perinatal SUD services to satellite clinics.

Medicaid and other state context. Current contracts between HCPF and the RAEs ended on June 30, 2025, with the state moving to the third phase of their Accountable Care Collaborative (ACC) on July 1, 2025.[4] As part of this transition, HCPF will reduce the number of RAE-covered regions from seven to four, merging rural areas into larger regions anchored by an urban center. By consolidating regions, HCPF aims to ensure that each RAE has access to the infrastructure, workforce and services typically concentrated in city hubs. For RVFHC and other clinics serving rural populations, this change has potential to expand resources for pregnant and postpartum individuals with OUD over time by making it easier to connect beneficiaries to services, such as transportation, that were previously limited due to the geographic isolation of care delivery sites. It may also strengthen partnerships with hospitals, specialists and social service providers in the region, fostering more coordinated and comprehensive care across systems.

Successes. Colorado MOM Model staff described two primary sustainability successes in 2024. First, Denver Health staff described being able to build provider capacity to care for pregnant individuals with OUD. Specifically, Denver Health staff indicated that policies, procedures and electronic health system updates implemented under the MOM Model have helped expand the knowledge and willingness of their obstetric providers to care for pregnant individuals with OUD. Prior to MOM Model implementation, only one provider on the Denver Health hospital campus provided specialty perinatal SUD services, but now many of Denver Health's satellite clinics include obstetric staff with these capabilities.

Another success is that HCPF reported being able to establish a foothold in the perinatal SUD work being conducted across Colorado through the MOM Model. For example, HCPF staff explained that the model partially covered the salaries of HCPF's program lead and coordinator, which allowed for, among other things, opportunities for these staff to engage with organizations, stakeholders and initiatives in the perinatal SUD space across Colorado. HCPF MOM Model staff run a perinatal SUD RAE work group and participated in a Colorado Hospital Substance Exposed Newborns (CHoSEN) Collaborative work group on the development of toxicology testing guidelines. Staff likely could not have engaged in the work group without the MOM Model's salary support.

Challenges. Denver Health and RVFHC staff reported facing several different types of sustainability challenges in 2024. RVFHC staff expressed concerns about the adequacy of care coordination services from their RAE, Rocky Mountain Health Plan, due to the high levels of HRSNs among patients eligible for the MOM Model in Montrose and Delta Counties. Unlike Denver, rural areas like Montrose and Delta Counties lack many support services needed to address these challenges, posing an ongoing barrier to providing care for beneficiaries. Alternatively, Denver Health staff reported continuing to face challenges sustaining peer recovery services, an issue first reported in its first year implementing their MOM Model program. Colorado Medicaid's billing structure only allows behavioral health providers and recovery support organizations to bill for peer recovery services, meaning the Obstetrics and Gynecology Clinic at Denver Health Medical Center was unable to bill for these services. Denver Health's partnership with HardBeauty seeks to address this challenge, as HardBeauty is a peer recovery support services Medicaid provider.

[4] The ACC is the primary delivery system for Health First Colorado (Colorado's Medicaid program) and was established in 2011 to improve health care access and outcomes for Health First Colorado members. ACC Phase III will focus on enhancing the integration and coordination of care, improving health outcomes and managing costs effectively (HCPF, 2023).

Conclusion

Colorado continued to struggle to recruit and enroll beneficiaries during their second implementation year, 2024, due to a variety of factors. However, respondents from HCPF and the care delivery partners believed they accomplished meaningful, positive change in Colorado. For example, HCPF expanded its participation and influence in areas of perinatal substance use work conducted in Colorado through partnerships with new organizations and participation in many cross-organizational activities. Additionally, key staff at both Denver Health and RVFHC employed strategies throughout the MOM Model implementation period to expand the capacity and willingness of obstetricians to treat pregnant and postpartum beneficiaries with OUD, potentially making a sustainable impact on perinatal SUD care in these regions of Colorado. However, given the low enrollment in the Colorado MOM Model and activities accomplished outside of the MOM Model intervention, it is difficult to assess the true influence of the Colorado MOM Model.

Indiana MOM Model: Awardee Profile

Geographic Scope

4 care delivery partners enrolling beneficiaries statewide

Enrollment

1,110 patients served in Years 1–4 of implementation

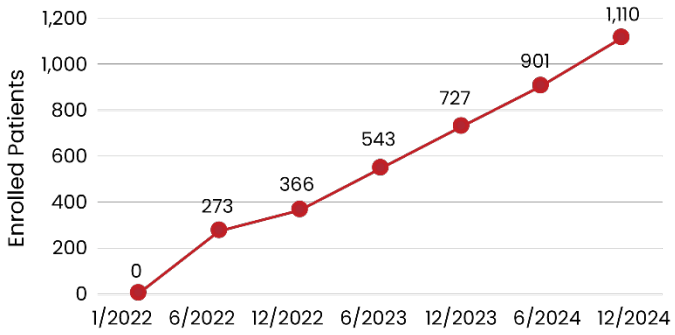
76% enrolled in MOM during pregnancy and **24%** enrolled after birth

87% received Medicaid benefits prior to pregnancy

2024 Data Collection

22 key informants interviewed

5 patients participated in focus groups



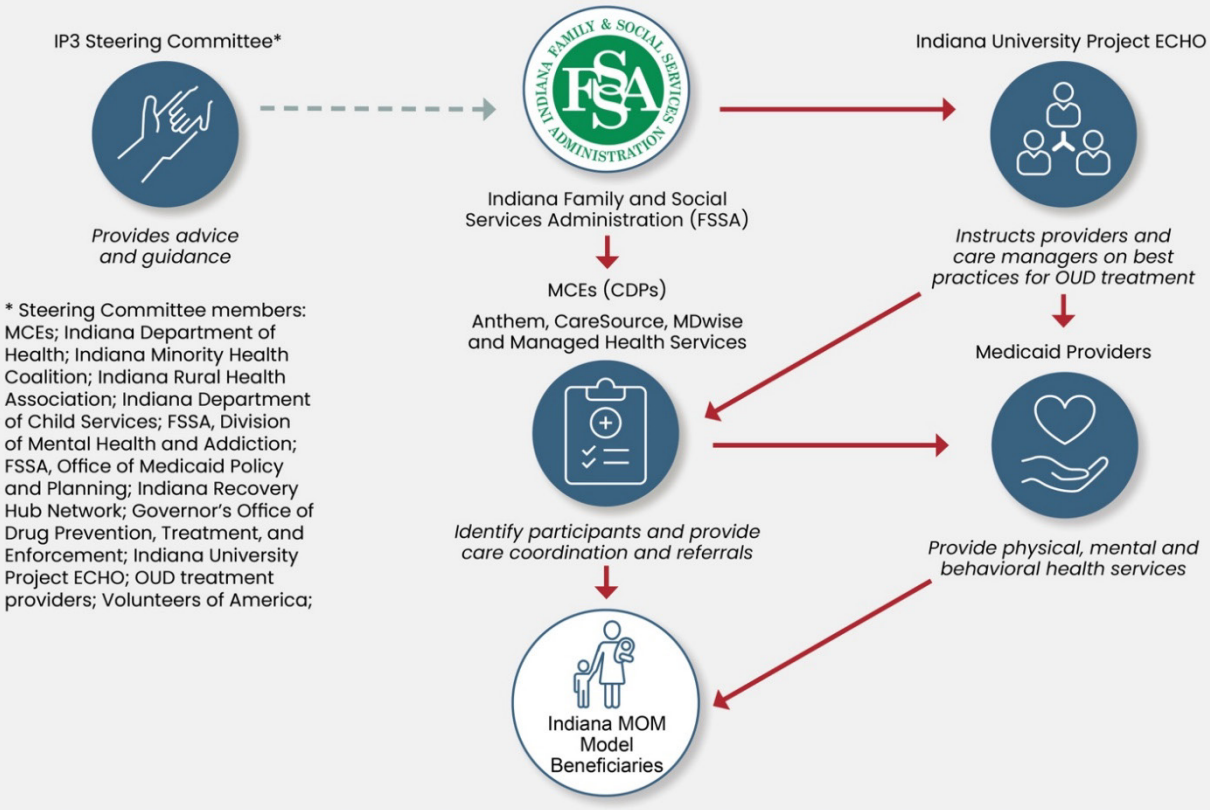
Patient Health-Related Social Needs

59% of patients screened positive for at least one social need at model enrollment

2.3 social needs were identified on average

Food, housing and **transportation** were the top three social needs identified

Key Model Partners



Model Summary

The Pregnancy Promise Program enrolled 1,110 beneficiaries as of the end of December 2024. Indiana Family and Social Services Administration (FSSA), together with their care delivery partners at four Medicaid managed care entities (MCEs), launched the MOM Model in Indiana and reported maintaining high fidelity to their initially planned approach. FSSA and MCE staff reported that, as designed and carried out, the Pregnancy Promise Program provides enhanced case management to pregnant individuals with OUD, as enrolled beneficiaries receive regular phone calls from an MCE case manager (and can contact the case manager as needed), and case managers can make referrals as needed to health care and social services providers throughout the beneficiary's pregnancy and up to 12 months postpartum. FSSA and MCE staff highlighted making only minor modifications to the Pregnancy Promise Program in the last year, but FSSA and MCE staff reported currently discussing modifications to the Pregnancy Promise Program to facilitate sustainability beyond the MOM Model funding period. Pregnancy Promise Program staff described sustainability options including reducing the administrative reporting burden and leveraging MCE contracts and capitation rates.

Reach

Successes. The Pregnancy Promise Program continues to have strong enrollment. Pregnancy Promise Program staff outlined that dedicated nurse and social work case managers employed by the state's four Medicaid MCEs, all of which operate statewide, conduct outreach to eligible pregnant and postpartum Medicaid members to offer enrollment in the program. FSSA requires each MCE to conduct tiered outreach approaches, including weekly outreach to potentially eligible beneficiaries for 1 month, followed by monthly outreach thereafter through 90 days postpartum or until a beneficiary is contacted and either accepts or declines services. FSSA staff noted that about 17% of beneficiaries contacted by MCEs choose to participate in the Pregnancy Promise Program. While low, at least one representative from FSSA stated that this compares favorably with other Indiana Medicaid MCE-run high-risk obstetric case management programs that see beneficiary participation rates of 5–10%.

Challenges. The greatest challenge faced by MCE case managers conducing outreach to potentially eligible beneficiaries is out-of-date contact information from administrative systems and publicly available data systems. Even with this challenge, MCE case managers reported frequently reaching their caseload limit of 35 beneficiaries. FSSA requires MCEs to hire additional case managers once caseloads reach 75% so that they always have capacity to enroll new beneficiaries (FSSA, 2022). Representatives from some of the MCEs advocated for transitioning some activities, such as data documentation and attempts to initially contact beneficiaries after the first month, to non-case manager staff, potentially allowing case managers to increase their caseloads and focus on beneficiary care.[5] Despite frequently reaching their FSSA-specified caseload limit, Pregnancy Promise Program case managers did not report feeling overburdened.

[5] In contrast to the Pregnancy Promise Program, which caps caseloads at 35 patients per case manager, caseloads for other high-risk pregnancy case management programs offered by the MCEs are 50 patients per case manager.

Implementation

MOM Model service updates. FSSA and MCE staff reported making the following minor modifications to the Pregnancy Promise Program during Implementation Year 3:

- Case managers began conducting in-person meetings and video visits with beneficiaries. In-person visits were part of the original plan for the Pregnancy Promise Program, but telephone meetings were substituted during the COVID-19 public health emergency.
- Some MCE staff reported engaging with community health workers (CHWs) to assist case managers with conducting in-person meetings. CHWs occasionally visit beneficiaries in their homes or communities to provide face-to-face interaction and hands-on connections to resources. MCE staff reported dispatching CHWs in limited situations—for example, to connect a beneficiary with local resources needed to address an HRSN or reengage a beneficiary whom case managers were unable to contact by phone. The MCEs employ CHWs to support many different case management programs, so they are not exclusively dedicated to the Pregnancy Promise Program.

Successes. FSSA and MCE staff uniformly cited collaboration across MCEs as a major success of the Pregnancy Promise Program, describing a "culture of collaboration across MCEs where they're all … one unified team." MCE staff reported sharing information about resources to address HRSNs, and FSSA staff reported helping MCEs identify and connect with these resources. For example, when case managers expressed a desire to better understand Department of Child Services (DCS) processes, FSSA leadership invited DCS representatives to a meeting with the case managers. An FSSA respondent reported that relationship building between the Pregnancy Promise Program and DCS "has gone really well in terms of … helping achieve [parent-child] reunification." MCE case managers also reported contributing to Plans of Safe Care and noted that they may join beneficiaries' Child and Family Team meetings with DCS to provide additional support and coordination. MCE case managers also reported referring Pregnancy Promise Program beneficiaries with an open DCS case to the DCS Birth Parent Advisory Board for peer support and mentoring.

Challenges. Respondents identified three major challenges in implementing the Pregnancy Promise Program. First, provider shortages throughout Indiana limit the availability of obstetricians and OUD treatment providers, especially in rural areas. For example, MCE case managers said that most inpatient detox units are in Indianapolis. Second, MCE staff noted a dearth of clinicians with the skills and competencies to effectively care for pregnant individuals with OUD. While voluntary training on best practices for treating pregnant individuals and infants affected by OUD is available to clinicians through Project Extension for Community Healthcare Outcomes (ECHO), clinical providers do not all consistently follow best practices in caring for pregnant individuals with OUD and their infants. Pregnancy Promise Program staff participate in several statewide initiatives alongside maternity care providers, including the Indiana Perinatal Quality Improvement Collaborative, the Maternal Mortality Review Committee and the Infant Mortality Review Committee, giving them the opportunity to educate providers on best practices. However, the Pregnancy Promise Program did not involve inpatient or outpatient providers as model partners and has no direct control over birthing hospitals' standard operating procedures, such as adoption of the Eat, Sleep, Console care approach. Finally, the Pregnancy Promise Program offers case management services that help beneficiaries organize their perinatal care and OUD treatment services but does not directly support coordination among the clinicians caring for Pregnancy Promise Program beneficiaries. Case managers' ability to discuss beneficiary care with clinicians is hampered when beneficiaries do not consent, and the

Pregnancy Promise Program does not offer any venue for clinicians to collaborate directly. Despite the efforts of case managers to coordinate care for Pregnancy Promise Program beneficiaries, care delivery remains fragmented.

Sustainability Lessons Learned

Sustainability plans. At the time of our site visit, FSSA and MCE staff were considering how to modify the Pregnancy Promise Program and its associated payments to continue the program's specialized case management for pregnant individuals with OUD. Currently, MOM Model funds offset MCEs' program staffing and data reporting costs for the Pregnancy Promise Program. An FSSA staff member reported that "contract language will be consistent across MCEs, and all will be held to the same requirements," which would go into effect in 2025.[6] While remaining committed to enhanced case management for up to a full year postpartum, staff from all the MCEs stated that they will need to modify the current Pregnancy Promise Program in order to deliver case management services while containing costs. Common modifications recommended by MCE staff included:

- Reducing or eliminating the requirements for data collection, documentation and reporting beyond what is noted in beneficiaries' electronic health records to reduce administrative burden.
- Hiring ancillary staff to conduct initial outreach to establish contact with eligible beneficiaries and to collect and enter data, thus reducing the burden on nurse case managers.
- Increasing the case manager caseload to be comparable to other MCE case management programs.

These changes would also allow the Pregnancy Promise Program to expand to other SUDs that FSSA and MCE staff described as prevalent in Indiana, such as methamphetamines, marijuana, tobacco or benzodiazepines. In addition, FSSA staff reported applying for other grant funds, and the state received state opioid settlement funds and a Substance Abuse and Mental Health Services Administration (SAMHSA) grant[7] to help cover costs of administering the Pregnancy Promise Program at the state level.

Institutionalization and care transformation. Pregnancy Promise Program staff reported that the program's manual furthers institutionalization of the program by outlining policies and procedures for outreach, consent and enrollment, screenings and assessments, care plan development and monitoring, referrals for HRSNs and data collection and reporting. All MCE case managers follow the protocols outlined in the manual.

FSSA and MCE staff indicated that the Pregnancy Promise Program's design limits its ability to affect clinical care transformation directly. For example, the Pregnancy Promise Program stipulates requirements for MCE case managers but not for physicians, nurses or other clinicians providing perinatal or SUD treatment services directly to beneficiaries. FSSA staff indicated that the MOM Model-funded Project ECHO series is Indiana's main venue for disseminating best practices in caring for pregnant and postpartum individuals with OUD and their infants. This voluntary, virtual, case-based training series provides Continuing Medical Education credits and is available for free to any clinical provider in Indiana. At the time of our

[6] Indiana's decisions regarding a MOM Model extended implementation period may impact this timeline.
[7] On August 9, 2024, Indiana announced an award of $2.7 million will be used to expand Pregnancy Promise Program services to 300 uninsured and underinsured individuals over the next 3 years.

case study, FSSA had documented attendance from 850 unique registrants at Project ECHO trainings, with an average of 55–70 participants at each session. Registrants self-identified as psychiatrists, behavioral and mental health providers, therapists, pharmacists, nurses, medical assistants, social workers, community health workers, doulas and home visitors, among others.

Successes. Respondents in three of the four interviews with MCE staff expressed a strong commitment to sustaining the Pregnancy Promise Program, albeit in modified form (see Sustainability plans in this section), following the end of federal funding. Alternatively, respondents from the MCE staff interviews suggested folding the Pregnancy Promise Program into another existing pregnancy case management program. An FSSA respondent stated they are continuing to discuss sustainability plans internally and with MCEs.

Challenges. MCE staff indicated that the biggest challenge to sustaining the Pregnancy Promise Program is difficulty demonstrating a return on investment (ROI) from the program. An FSSA staff member pointed out that the Pregnancy Promise Program lacks a comparison group, and MCE staff leadership noted the technical difficulty in calculating cost decreases due to program implementation. One staff member from a larger MCE noted, "There didn't appear to be a medical expense decrease in those that were engaged in the [Pregnancy Promise] Program." In contrast, another MCE staff member thought that they may find a positive ROI but that the administrative data collection and reporting burdens associated with the Pregnancy Promise Program are so high as to outweigh those gains. Staff members from smaller MCEs noted anecdotal successes, such as "lower neonatal intensive care unit (NICU) stays" or decreases in low birthweight infants but are relying on FSSA to analyze data to help them calculate ROI. As described previously, MCE staff reported that their organizations are considering modifications to the Pregnancy Promise Program (such as decreased administrative data collection, higher caseload, use of ancillary staff) to improve sustainability.

Conclusion

Respondents from FSSA, MCEs and other organizations indicated that Indiana faces limited availability of both maternity care and SUD providers, with consequences for both beneficiaries and the Medicaid agency. Especially in rural areas, pregnant individuals must either rely on the few maternity care or SUD providers available locally or travel long distances for care. Most Pregnancy Promise Program beneficiaries thus receive care from available providers regardless of those providers' fluency with best practices in treating pregnant individuals with OUD. The overall lack of providers also decreases FSSA's and MCEs' ability to impose training requirements for the Pregnancy Promise Program beyond those required for credentialing. Training requirements could further limit the number of providers available to serve the Pregnancy Promise Program population. The Pregnancy Promise Program's lack of participation requirements for Medicaid providers may limit the program's impact on the use of best practices in caring for pregnant individuals with OUD and on measurable health care utilization outcomes, such as NICU use.

Statewide programs, such as the Pregnancy Promise Program, have the potential to reach large numbers of beneficiaries. Statewide models also face challenges in ensuring clinical providers follow best practices in caring for pregnant individuals with OUD. By necessity, statewide models rely on the existing fragmented health care delivery system to provide care. The population of pregnant individuals with OUD at any outpatient provider site or hospital is likely small, making it difficult to draw attention to their specific needs.

Maine MOM Model: Awardee Profile

Geographic Scope

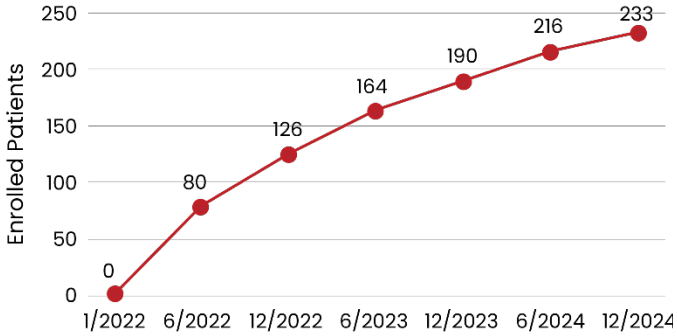
18 sites statewide

Enrollment

233 patients served in Years 1–4 of implementation

83% enrolled in MOM during pregnancy and **17%** enrolled after birth

56% received Medicaid benefits prior to pregnancy



2024 Data Collection

19 key informants interviewed

3 patients participated in focus groups

1 patient participated in a Photovoice activity

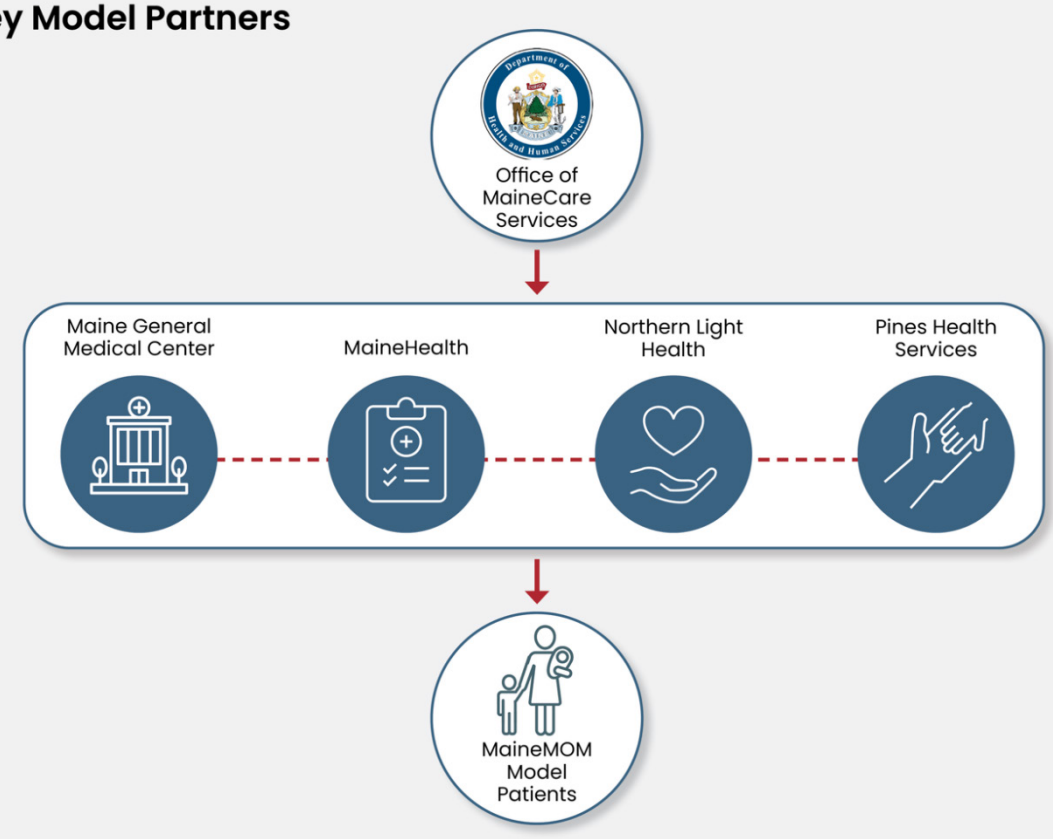
Patient Health-Related Social Needs

67% of patients screened positive for at leas 1 social need

2.2 social needs were identified on average

Transportation, food and **housing** were th top three social needs identified

Key Model Partners



Model Summary

The Office of MaineCare Services (MaineCare) began implementing their MOM Model program, MaineMOM, on July 1, 2021, with 233 beneficiaries enrolled as of December 31, 2024. In 2024, MaineMOM continued its marketing communications campaign to increase awareness of the program and combat stigma. The marketing communications campaign and the model's collaboration with Maine's statewide referral form for childbearing families drove an increase in eligible referrals. MaineMOM worked to address challenges with the availability of peer recovery coaches while establishing a dedicated child services liaison role to improve management of MaineMOM beneficiaries' cases. Maine's adoption of a Medicaid state plan amendment (SPA) covering maternity opioid health home services shows great promise for the sustainability of MaineMOM services.

Reach

Successes. MaineMOM staff discussed major successes in statewide communications and outreach partnership development during Implementation Year 3. MaineMOM staff confirmed that their communications campaign continued to distribute high-quality, accessible and relevant materials aimed at raising awareness about MaineMOM and highlighting the experiences of real providers and beneficiaries to reduce public stigma around pregnant and postpartum individuals with OUD. Staff reported that the campaign has generated millions of digital impressions and thousands of website visits to date. Additionally, MaineMOM staff reported updating the MaineMOM referral option on the statewide CradleME referral system for birthing families during this implementation year to explicitly state that MaineMOM is for people with OUD. MaineCare staff believe this clearer description is resulting in more appropriate referrals to MaineMOM, and CradleME self-referrals are increasing.

MaineMOM staff reported that outreach liaisons continue to engage new provider partners, such as Planned Parenthood, and nontraditional partners, like corrections officers, to increase new beneficiary referrals to MaineMOM. Meanwhile, MaineMOM's clinical lead began accompanying fire department officials in the field as they respond to emergencies in order to engage with MaineMOM-eligible people in the community.

Challenges. Enrollment continues to lag behind initial projections, with only 233 beneficiaries enrolled as of December 31, 2024. MaineMOM staff reported that potential barriers to enrollment throughout the implementation period have included beneficiaries' apprehension about participating in a government program and its potential association with the Maine Office of Child and Family Services (OCFS, the state's child protective agency). Specifically, multiple MaineMOM staff reported that pregnant and postpartum individuals with OUD fear losing custody of their children if OCFS is involved in their pregnancy, and previous experiences of stigmatizing care make them reluctant to engage in care.

Implementation

MOM Model service updates. The MaineMOM Model did not add new Medicaid services during Implementation Year 3. MaineMOM staff confirmed that the model's package of services was built on the architecture of Maine's Opioid Health Home initiative with the addition of three eligible service provider roles: beneficiary navigators, peer recovery coaches (PRCs) and doulas. MaineMOM's primary model components continue to include same-day access to medication-first care, care coordination with referrals, home visiting when appropriate, increased focus on pain management during delivery, adherence to Eat, Sleep, Console methods to

enhance mother-infant bonding post-delivery, ongoing group and individual therapy through 12 months postpartum and peer recovery support.

Successes. MaineMOM staff reported successfully educating providers on best practices for caring for pregnant and postpartum individuals with OUD through its Project ECHO learning series. Each Project ECHO learning series focused on a specific clinical topic related to caring for this population and a case review. Additionally, MaineMOM staff reported that scaling up accessible clinical support and continuing to integrate PRC services supported the education of providers. These services are a critical element of MaineMOM's capacity to address beneficiary HRSNs, and staff from a MaineMOM provider reported greater success with directly hired or contracted peer coaches as compared to peers incorporated through external referral partners.

MaineMOM's efforts to build relationships between health care providers and staff from Maine's OCFS also saw major successes in Implementation Year 3. MaineMOM staff indicated that model program leaders now meet once a month with the medical director and child health officer of OCFS, and since mid-2023, an OCFS manager has served as a MaineMOM liaison working directly with care delivery partners and MaineMOM provider teams to address issues with OCFS cases. MaineMOM staff confirmed that model staff have collaborated on OCFS caseworker training materials and helped identify and replace stigmatizing terms and concepts.

Challenges. MaineMOM care delivery staff shared that MaineCare's restrictions related to duplicative services, which stipulate that MaineCare beneficiaries already receiving a service considered duplicative with MaineMOM (for example, Targeted Case Management) cannot be simultaneously enrolled in MaineMOM, continued to hamper providers' attempts to engage beneficiaries with complex needs. To address this challenge, state officials have created a back-end process to help providers understand these restrictions, but providers continue to report challenges with navigating this rule.

> *"When we have a client who is [enrolled in] MaineMOM, [but] that client is not able to engage in Behavioral Health Homes. It's considered a duplicative service and they can't do both. We have a [mom] right now, she is 20 weeks in and very high risk. She could really benefit from a case manager. It's important to note this has come up a couple of times, [where] we want to refer someone to the Behavioral Health Home model but haven't been able to unless we remove them from MaineMOM. For us, it's not difficult because we could easily move them to Healthy Generations [where they would] benefit from the same services, but for other sites, they might not be able to benefit from other services."*

Despite the success of MaineMOM's PRCs, care delivery partners have had varying success in making their services available and driving engagement. MaineMOM care delivery partner staff reported that PRC offerings vary from robust and well-staffed in-house PRC teams with high beneficiary interest to understaffed external referral partners that frequently lack the staffing to meet beneficiary needs. MaineCare has demonstrated strong support for PRCs by investing in infrastructure and training of PRCs, but key informants explained that stigma around SUD and low PRC wages continue to make it difficult to solicit buy-in and recruit and retain staff.

Sustainability Lessons Learned

Sustainability plans. Maine chose to sustain MaineMOM by adopting a Medicaid SPA that added coverage of maternal opioid health home (MOHH) services for any eligible Medicaid beneficiary. This SPA was fully implemented in December 2023, and the state codified MOHH into MaineCare through rulemaking. Qualified MOHH providers can seek Medicaid reimbursement via three tiers, each with its own PMPM reimbursement.

The awardee described the MOHH program to the CMS Innovation Center Project Officer as consisting of several payment components designed to serve "the model as a long-term approach to help moms, rather than a limited-time-period funding program." These include a value-based payment component focused on hepatitis C screening and postpartum visit rates, and the MaineMOM team continues to work to establish the postpartum visit measure. Maternity care providers have options for how they get reimbursed for maternity services through MaineCare. Providers may bill per service for maternity services or bill global maternity care codes when the provider performs each of the components of maternity care.

MaineMOM care delivery partners stated they are still working to "figure out how this [new payment model] fits into the complicated reimbursement structures we [already] have for everyone," establishing billing codes and workflows, and modeling revenue and costs under the finalized MOHH payment approach.

Institutionalization and care transformation. In 2024, MaineMOM staff continued efforts to spread best practices across care delivery partners and sites and, to a more limited degree, providers not participating in the model. These efforts included the ECHO learning series, regular office hours with the program's clinical lead and around-the-clock consultation available from the same clinical lead. MaineMOM staff reported that ECHO sessions spurred honest discussions among providers about addressing their own stigmatizing behaviors, especially related to language.

Indicating the spread of best practices in Maine, key informants reported that obstetric providers have significantly increased SUD screening using the Parents, Partners, Past, and Pregnancy tool focused on detecting drug, alcohol and tobacco use among pregnant individuals, as well as depression and domestic violence. At least one partner staff member reported that screening rates improved as providers began implementing the Alliance for Innovation on Maternal Health beneficiary safety bundle for the care of pregnant and postpartum individuals with SUD, which includes universal screening for SUD using a validated tool.

MaineMOM staff also began collaborating with a MaineCare targeted case manager and a family practice doctor to offer beneficiaries more continuous and whole-person care. Despite successful collaboration and relationship building between MaineMOM, MaineCare and OCFS, health care system leaders are, in some cases, still slow to embrace and establish peer recovery services.

Medicaid and other state context. The Office of MaineCare Services introduced a new Maternal and Infant Health coordinator position in 2024, which was filled by a former MaineMOM nurse care manager. The new state-level coordinator could help build relationships between MaineCare, health systems and other community partners, ultimately spreading the MaineMOM model and best practices to more providers through her institutional knowledge of best practices and lessons learned.

Successes. Though some demonstration-funded activities (such as the marketing campaign) will not continue after the model implementation period ends, Maine is set to sustain all MaineMOM services. Leaders within MaineCare, the Department of Health and Human Services and the care delivery partners continue to show strong support for MaineMOM services. Launching MaineMOM through a demonstration structure facilitated buy-in from these stakeholders, since care delivery partners were active partners in developing the model.

Although some work remains to be done to execute the new funding structure, key informants explained that Maine's SPA ensures MaineMOM services will be permanently covered and billable under Medicaid. MaineMOM respondents suggested that the rulemaking process to add MOHH services to MaineCare went smoothly because of the hard work of the state team, and because MOHH was modeled after the state's opioid health home benefit.

Challenges. After the slow start on direct billing using the MaineMOM/MOHH reimbursement model, most respondents' sustainability concerns related to whether PMPM payments would be adequate. One clinical provider, along with four health system administrators representing three of MaineMOM's care delivery partners, shared that they were stymied by the impression that they would lose money under a bundled payment approach. Others raised concerns that the PMPM payment may not sufficiently reimburse for PRC services or allow smaller hospitals and health systems (who do not benefit from economies of scale) to hire dedicated staff to run MaineMOM or provide care coordination services. The highest PMPM tier may be out of reach for some sites that do not meet the criteria for that tier.

MaineMOM staff reported being thoughtful about potential barriers to sustained provider participation in MaineMOM. Although the MaineMOM model was developed and tested with health and hospital systems, individual providers can theoretically apply to participate in MOHH, but some program requirements could be very hard for individual providers to meet. Balancing the work on expanding the model while maintaining its high standards of care and model fidelity could prove to be quite difficult.

Conclusion

During its third year of implementation, MaineMOM continued to provide its bundle of peer support, medication-assisted therapy and beneficiary navigation services, all while expanding beneficiary outreach pathways and solidifying its SPA to sustain services beyond the end of the MOM Model implementation period. As the end of the MOM Model implementation period neared, MaineMOM staff cited the importance of flexibly structured care teams, wide-reaching staff engagement and education, trauma-informed support for providers and a local and direct approach to outreach as keys to successful implementation. Providers, beneficiaries and leadership spoke highly of the destigmatizing care, provider education on best practices and their role in driving health system-level change fostered through MaineMOM.

New Hampshire MOM Model: Awardee Profile

Geographic Scope

Greater Manchester

Enrollment

118 patients served in Years 1–4 of implementation

47% enrolled in MOM during pregnancy and **53%** enrolled after birth

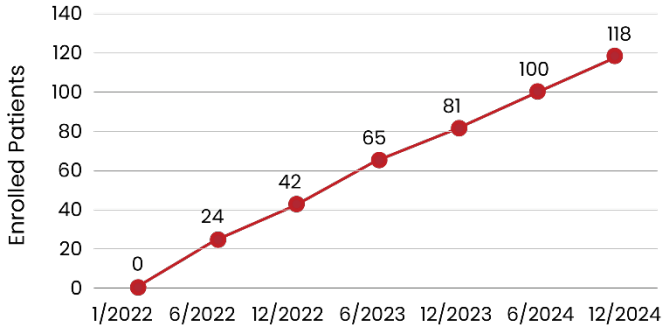
85% received Medicaid benefits prior to pregnancy

2024 Data Collection

16 key informants interviewed

7 patients participated

Enrollment Over Time



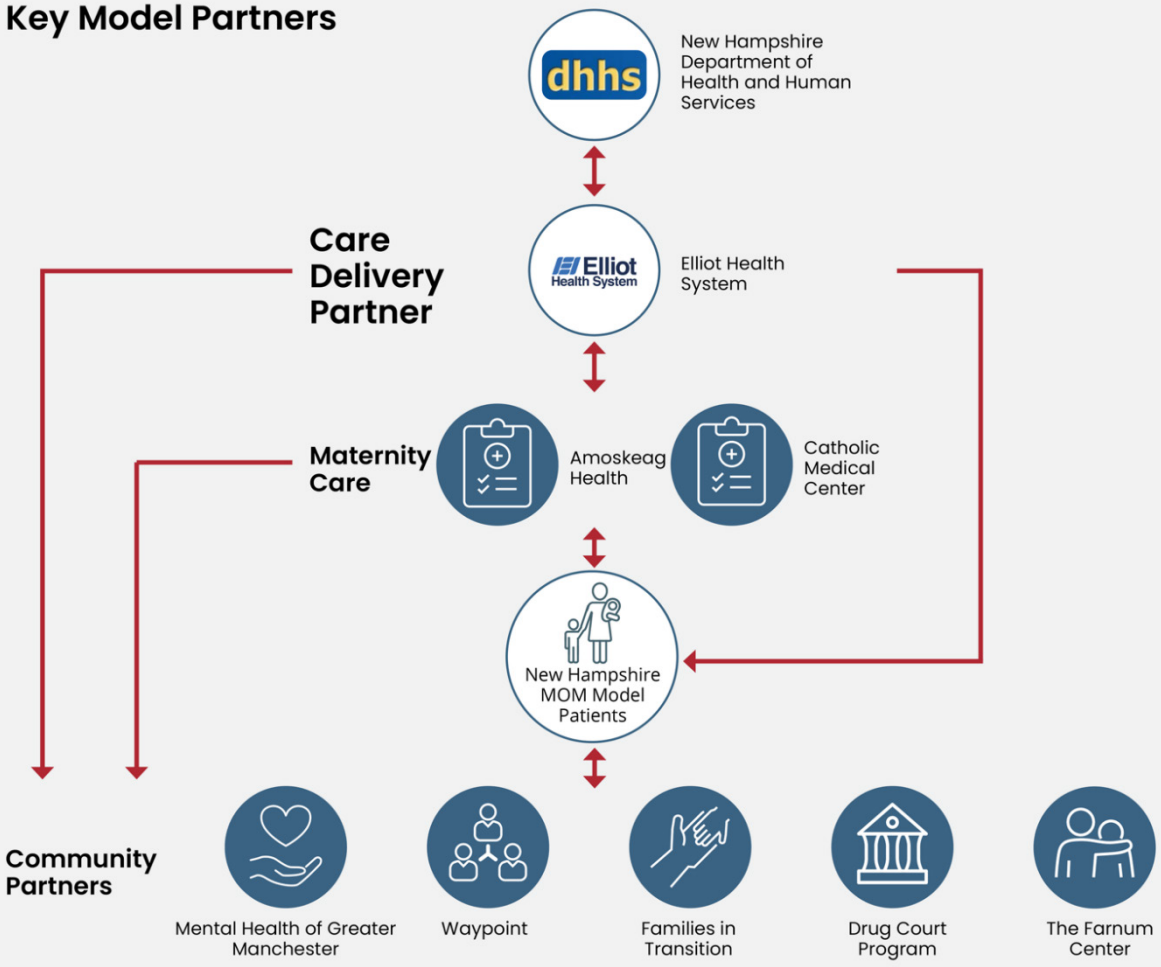
Patient Health-Related Social Needs

94% of patients screened positive for at least one social need

3.0 social needs were identified on average

Transportation, housing and **food** were the top three social needs identified

Key Model Partners



Model Summary

New Hampshire implemented its MOM Model as planned on July 1, 2021. The model has enrolled 118 beneficiaries since its inception in July 2021 through December 2024. Enrollment into the MOM Model steadily increased in Implementation Year 3, though enrollment numbers still lag behind the original proposed enrollment target of 250–300 beneficiaries. MOM Model services did not change during this implementation year, and stakeholders emphasized that peer recovery services provided by the CHW are the crux of the program. Beneficiaries praised the MOM Model team but reported mixed experiences with prenatal care and OUD treatment. The New Hampshire MOM team aims to finalize their plans for sustainability of MOM Model services, specifically funding for the CHW position at Elliot Health System during the MOM Model's extended implementation period.

Reach

Successes. New Hampshire MOM Model staff reported that evidence-based contingency management programs helped keep enrolled beneficiaries engaged in the model. Through model funding, New Hampshire provided beneficiaries with hygiene and infant care items as motivation for meeting treatment goals and for enrolling and remaining engaged in the program. The Elliot Health System (The Elliot) staff indicated that referrals and intakes increased, and they believe enrollment trends are "heading toward the right direction."

Challenges. New Hampshire Department of Health and Human Services (DHHS) and The Elliot staff acknowledged that current enrollment remains far below New Hampshire's original annual enrollment target of 250 to 300 beneficiaries, a disparity that they explained may have arisen from original enrollment estimates being calculated based on statewide eligibility criteria for Medicaid, not OUD. Additionally, respondents noted that just one individual, a CHW with lived experience with OUD, is responsible for conducting both direct outreach and peer recovery support to beneficiaries. One respondent suggested hiring a second CHW and dividing focus between community outreach and peer support to improve the program's reach.

The Elliot staff also noted that the restriction of MOM Model eligibility to only beneficiaries with OUD had an impact on the model's reach, adding that a more expansive program that included beneficiaries using other (non-opioid) substances may allow a larger population to receive services.

Implementation

MOM Model service updates. There were no changes in services provided by the New Hampshire MOM Model from prior years. The Elliot staff noted that because The Elliot does not offer prenatal care, some beneficiaries receive prenatal care outside of the model's formal obstetric partners. OUD treatment is available at Amoskeag Health, Roots for Recovery at Catholic Medical Center and The Elliot. The Elliot offers methadone treatment services; however, some beneficiaries do go elsewhere for medication-assisted treatment (MAT) services.

The Elliot MOM Model staff reported that they focus on providing beneficiary intake, care coordination, referrals and peer recovery support services to beneficiaries. The Elliot staff also make referrals to community partners for direct services, including behavioral health, housing, transportation, recovery support and other services. Because beneficiaries often struggle to navigate services or feel overwhelmed, the MOM Model CHW provides support and a warm handoff, often allowing the beneficiary to connect with services faster.

Successes. The Elliot staff reported that hiring the CHW to provide peer recovery services was one of the biggest successes of New Hampshire's MOM Model. The Elliot staff explained that the CHW works with three different groups of beneficiaries: (1) beneficiaries still using [opioids] or at risk of using; (2) beneficiaries doing well in their recovery but still needing assistance; and (3) beneficiaries adhering to treatment and considered to be doing well in their recovery. The Elliot staff also reported strong collaboration between partners, as seen through the various meetings the Elliot team organizes. The Elliot team organizes and holds monthly steering committee and care coordination meetings with partners, as well as quarterly meetings with the three MCOs.

The Elliot staff reported that the completed IT system continues to run smoothly in most aspects of its operations, improving communication between the Elliot Health System, the Southern New Hampshire Health System, adjacent primary care and specialty offices within that network, and the defined community partners, such as Mental Health of Greater Manchester and Waypoint.

Challenges. The Elliot and provider site staff reported that sharing, reviewing and updating Plans of Safe Care with maternity care provider sites remains a challenge for the New Hampshire MOM Model. MOM Model staff took responsibility for establishing Plans of Safe Care after learning that prenatal care providers rarely did so. The Elliot team creates Plans of Safe Care for each beneficiary within its electronic medical record, but community partners lack access to the Elliot's IT network and cannot view these plans. The Elliot team also shares these Plans of Safe Care with each individual's MCO nurse care manager. It is uncertain if these plans are routinely reviewed on the delivery floor, even within the Elliot Health System. It may be difficult to sustain the creation and sharing of these plans if the state cannot maintain the CHW position after MOM Model funding ends.

New Hampshire MOM staff also faced challenges with launching a beneficiary incentive for childcare that has been in development since 2023. Elliot MOM Model staff noted that it has been difficult to identify providers with capacity to provide flexible and consistent support for this program.

Sustainability Lessons Learned

Sustainability plans. Sustaining the New Hampshire MOM Model services depends on three components: (1) funding the Elliot CHW's salary; (2) supporting the contingency management program; and (3) maintaining community and provider partnerships. MOM Model staff expressed confidence in finalizing sustainability plans during their extended implementation period. The New Hampshire MOM Model is exploring two potential mechanisms to continue funding the CHW position after MOM funding ends: leveraging a rate increase negotiated in July 2023 that raised reimbursement for primary care prevention and care coordination or establishing alternative payment models with contracted MCOs.

Institutionalization and care transformation. New Hampshire MOM Model staff reported that they have institutionalized data sharing within the Elliot Health System to facilitate care coordination and continuity. However, this data-sharing strategy does not extend outside of the health system. The Elliot MOM Model staff reported that this limit to data sharing presents challenges when serving beneficiaries with Medicaid coverage who deliver at the Elliot but receive prenatal care from community providers whose electronic medical records do not communicate with the Elliot's. There are no plans to improve data sharing between prenatal care clinics and the Elliot.

Successes. Partnerships between the Elliot, community providers and MCOs have the potential to be sustained because they depend primarily on partner commitment rather than funding or

data sharing. The Elliot MOM Model staff reported that these partnerships have been fruitful, and there may be opportunities to sustain regular meetings and engage new community providers, though the partners involved in the committee meetings will meet less frequently following the end of the MOM implementation period.

Challenges. Ancillary activities, such as the contingency management program, are more difficult to maintain without funding and may not be sustained beyond the MOM Model funding period. Yet, leadership remains optimistic about continuing to reimburse current MOM services.

Conclusion

During its third year of implementation, the New Hampshire MOM Model continued to conduct outreach, intake, care coordination and referral services utilizing the procedures implemented in prior years. The peer support and outreach work conducted by the model's CHW drove improvements in beneficiary engagement, and staff and beneficiaries spoke highly of the impact of New Hampshire MOM's contingency management program. Though the New Hampshire MOM team continues to explore options for sustaining the provision of model services beyond the MOM funding period, the strong community partnerships and improvements in IT infrastructure developed over the past 4 years have fostered optimism around service sustainability.

Tennessee MOM Model: Awardee Profile

Geographic Scope

2 sites for counties directly surrounding Vanderbilt University Medical Center (VUMC)

Enrollment

317 patients served in Years 1–4 of implementation

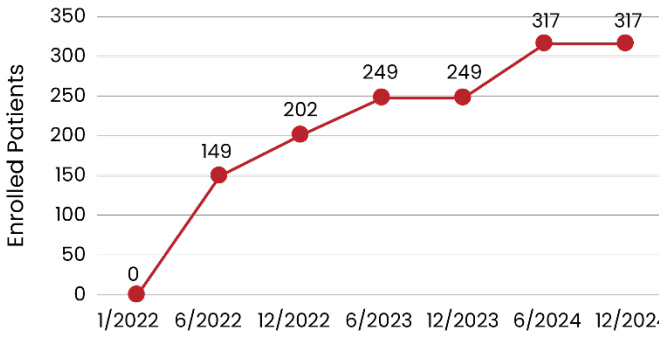
91% enrolled in MOM during pregnancy and **9%** enrolled after birth

61% received Medicaid benefits prior to pregnancy

2024 Data Collection

13 key informants interviewed

4 patients participated in focus groups

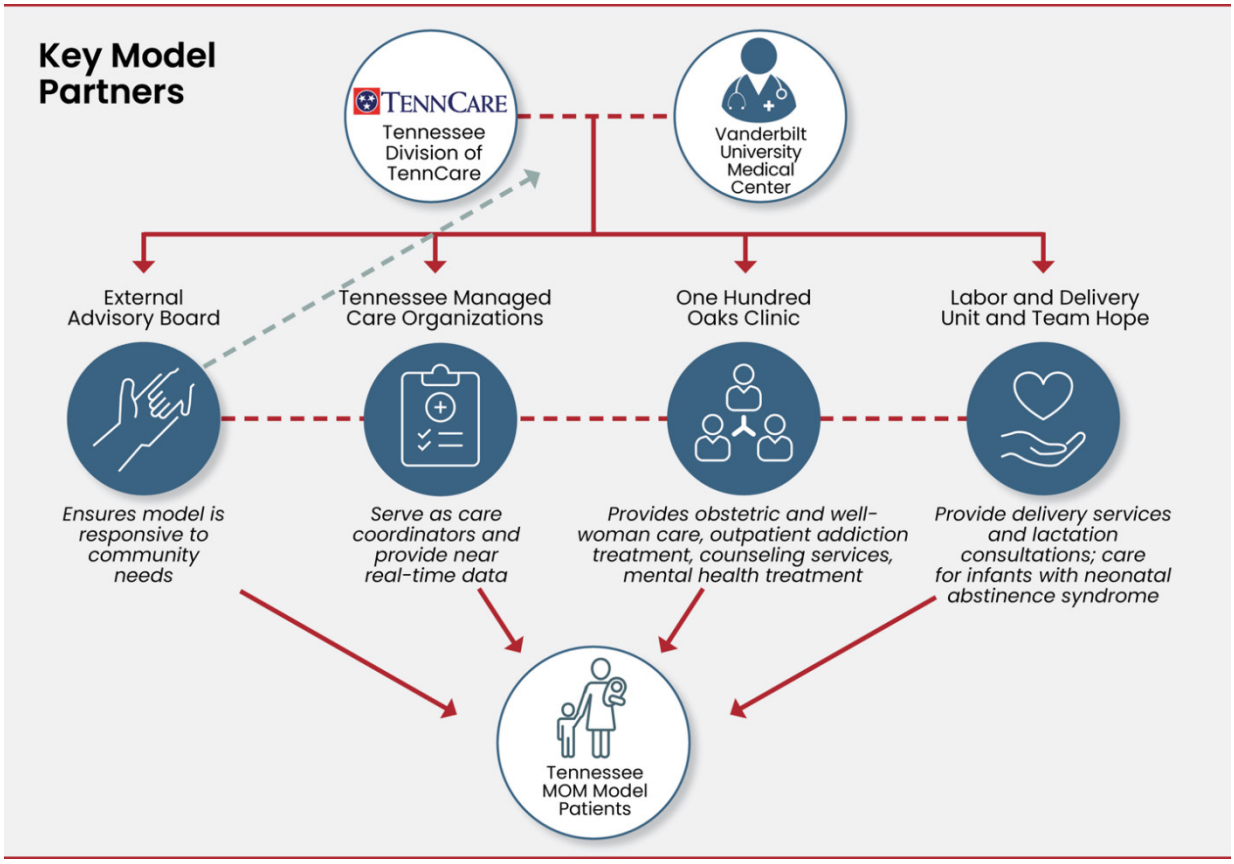


Patient Health-Related Social Needs

64% of patients screened positive for at leas one social need

2.4 social needs were identified on average

Transportation, food and **utilities** were the top three social needs identified



Model Summary

Firefly, Tennessee's MOM Model, has enrolled 289 beneficiaries since its inception in July 2021. The model continues to operate as a system of integrated clinical and behavioral care services for pregnant individuals with OUD at two Vanderbilt University Medical Center (VUMC) locations around Nashville. Firefly has sustained funding and will likely expand to new locations in the Harris County region. A negotiated and approved reimbursement bundle through TennCare's Buprenorphine Enhanced Medication Assisted Recovery and Treatment (BESMART) program will sustain clinical services. The state-funded $5.7 million grant, which began in July 2024 with a $1.7 million award and increases annually for 3 years, will sustain nonclinical staff salaries and some of the contingency management program elements.

Reach

Successes. Firefly staff reported several successes in intake, workflow and beneficiary engagement. In 2024, administrative Firefly staff at the One Hundred Oaks (OHO) Clinic significantly reduced the length of the beneficiary waiting list and the amount of time beneficiaries needed to wait for initial assessment and care. According to the OHO staff interviewed, a reduction in staff turnover permitted relationship continuity and effective outreach workflows to develop among staff and with beneficiaries. Increasing the number of staff allowed for more manageable caseloads among the Firefly peer recovery specialists and social workers, so those staff could devote time to beneficiary follow-up activities and retention efforts. Staff also reinforced the popularity of the contingency management program, a point system that rewards program engagement with the ability to redeem points for in-demand items like diapers, car seats and portable cribs, in driving beneficiary retention and engagement.

Challenges. Firefly staff reported various provider-based challenges that influenced the reach of Firefly, including limited physical space and staff turnover. Additionally, the OHO Clinic experienced turnover within its administrative, social work and peer recovery teams in 2023 before filling all but one peer recovery specialist position and nearly reaching full staffing capacity. Firefly officially transitioned to the Department of Obstetrics and Gynecology on May 1, 2024, for administrative, clinical, and financial oversight. The VUMC team worked through various administrative activities to prepare for the transition, and the additional oversight of the financials resulted in additional time to get approvals for new positions.

Program staff noted that stigma also continued to affect program reach. Staff confirmed that community stigma around OUD and fear of DCS involvement, especially after the Tennessee DCS recently shortened its timeline for establishing and executing a safety plan after an opioid-positive birth, continued to stymie recruitment. In addition to the challenge of community stigma, several long-term recovery care facilities do not accept beneficiaries who are engaged in MAT care, limiting the capacity for those programs to provide referrals to Firefly if their residents become pregnant. Firefly staff noted that unmet transportation needs continue to be a challenge for beneficiaries. However, TennCare recently implemented a nonemergency medical transportation strategic plan to address known challenges.

Implementation

MOM Model service updates. TennCare and Firefly staff reported that Firefly made substantial progress on two implementation initiatives during Implementation Year 3: non-medication support for recovery and childcare vouchers. Non-medication support, including meditation, yoga and AcuDetox, an acupuncture treatment, has been shown to improve symptoms of

withdrawal and general recovery support (Baker & Chang, 2016; Juntereal & Spatz, 2021; Sommers et al., 2021; Stuyt & Voyles, 2016) and is being made available to Firefly beneficiaries. Additionally, the program will soon be able to offer vouchers that beneficiaries can use for childcare in their own home, paid for through clinic fundraising. This voucher-supported childcare approach is considered the solution by staff to a challenge Firefly faced since the inception of the model, signifying a successful remedy to multiple financial and policy-based roadblocks toward addressing this pervasive barrier to care access.

Successes. Firefly staff noted services provided by the registered nurse–lactation consultant were crucial in empowering beneficiaries to advocate for quality care in the hospital, including but not limited to breastfeeding coaching; rich anticipatory guidance about the delivery hospitalization; pre-delivery education and coaching about Eat, Sleep, Console; pre- and post-delivery hospital check-ins; and helping beneficiaries collect their colostrum in the days before delivery to feed their infants in the event they are unable to immediately breastfeed. Staff and beneficiaries also highlighted the contingency management (beneficiary financial incentives) program as "really great" in helping "establish trust" and encouraging regular care, as the rewards for appointment attendance proved to beneficiaries that the clinic could provide meaningful support. Finally, model leads expect that the Firefly team's solution to the long-anticipated clinic-based support for childcare will eliminate a major barrier to beneficiaries' ability to attend their scheduled appointments and fully engage with program services.

Challenges. The most pressing implementation challenge for the Firefly program is the ability to recruit and retain staff. Firefly team members noted peer recovery specialist salaries are not high enough to make the position viable for people to live near the clinic and stay in the position long-term without working a second job. The peer recovery specialist position often includes heavy caseloads and may lead to emotional burnout. Peer recovery specialists and other clinic staff indicated that growth opportunities for peer recovery specialists are limited, and the program finds it difficult to create a career ladder within the constraints of Vanderbilt's HR parameters. Vanderbilt's pay-grade restrictions for the peer recovery specialist job description create a ceiling for pay and organizational advancement. Lengthy hiring processes, including extensive background checks, make it difficult and time-intensive to hire new peer recovery specialists, creating gaps in peer recovery services when there is unexpected turnover. Firefly staff noted that salary constraints also affect the program's social workers, making it difficult to launch programs like the intensive outpatient program, which must be led by a licensed clinical social worker.

Sustainability Lessons Learned

Sustainability plans. TennCare's BESMART reimbursement bundle will sustain clinical services. The state-funded $5.7 million grant, which began in July 2024 with a $1.7 million award and increases annually for 3 years, will sustain nonclinical staff salaries and some of the contingency management program elements. Existing staff expressed that they were "happy and excited to stay with the program." Model leads plan to earmark some of the Opioid Abatement Council (OAC) funds for a new expansion manager position, a staff member whose full effort can go toward expanding the program into rural communities and overseeing staff at external locations in the Vanderbilt health care system—building relationships, executing necessary agreements, working through the logistics of telehealth and ultimately leading a statewide coalition to work toward federal-level changes. Finally, key informants confirmed that fundraising efforts continue at the rate of approximately $100,000 annually, which the model administration team designates for any gaps in program funding and as an emergency discretionary fund.

Institutionalization and care transformation. Staff explained that in spring 2024, leadership for the Firefly program transferred from the department of pediatrics to the department of obstetrics and gynecology with the departure of the program director and cofounder. Though Firefly is the first integrative behavioral health team to be housed in a subspecialty clinic at Vanderbilt, most model services are already provided through the Center for Women's Health, making this a welcome transition. Staff believe this transition may enhance institutional leadership support overall, as all Firefly providers (medical, behavioral, recovery-centered) are committed to transforming care by developing and strengthening relationships using warm handoffs to other non-obstetric providers throughout and beyond the health system.

Model staff and providers uniformly described strong support from the chiefs of both the obstetrics and pediatric departments at Vanderbilt University Medical Center, as well as receiving Vanderbilt-wide recognition that the program is more valuable for the impact it has than for the revenue it generates. Vanderbilt leadership is pleased that Firefly brings beneficiaries to the health system who would not otherwise use Vanderbilt for their care, especially beneficiaries from outlying areas where there are no obstetricians who prescribe MAT.

Medicaid and other state context. Vanderbilt's MCO contracting team successfully negotiated a 20–25% increase in reimbursements under TennCare's BESMART initiative, retroactive to January 1, 2024. If at least one BESMART-credentialed provider remains at the Center for Women's Health, this reimbursement stream will endure.

Successes. Staff identified securing OAC funding as the year's most important financial success. However, both leadership and support staff emphasized that the cohesive team they have assembled, after a long period of trial and error, will be the cornerstone of the model's sustainability. Current providers and staff work well together and share a "continuous desire to improve" based on a common vision of how safe, non-stigmatizing care for pregnant individuals with OUD should look. They are committed to championing, delivering and expanding that care through and beyond the Vanderbilt system. The MOM Model grew the Firefly program's visibility, clout and momentum such that staff and providers hope it will influence widespread growth and development of coordinated obstetric and OUD care. Staff anticipate that the planned expansion into outlying clinics in six rural counties outside of Nashville will facilitate recruiting and retaining staff, particularly staff who do not live or cannot afford to live in the city, and alleviate transportation and childcare barriers for beneficiaries who live there.

Challenges. Staff and providers recognize the work that lies ahead with having to expand into new communities to serve more beneficiaries. Staff are committed to intentionally and effectively identifying new providers who embrace Firefly's harm reduction approach and commitment to non-stigmatizing care. After years of establishing a reputation in the Nashville community as a trusted, non-stigmatizing care community, the Firefly program is now institutionalized into Vanderbilt's maternal health care system. Replicating this institutionalization at other sites will involve replicating provider education and finding staff champions who mirror Firefly values.

Conclusion

Staff identified two key elements of Firefly's implementation that may guide future MOM Model expansion or the development of similar models that serve the Medicaid population. First, Firefly has multiple staff champions who secured institutional support, encouraged partner referrals and built beneficiary trust by presenting the program as a safe, supportive place to receive care for both parent and baby. Second, Firefly leadership strengthened team dynamics by listening to

staff and responding with trauma-informed practices in supervision, training and staffing, fostering a strong sense of commitment and cohesion.

Texas MOM Model: Awardee Profile

Geographic Scope

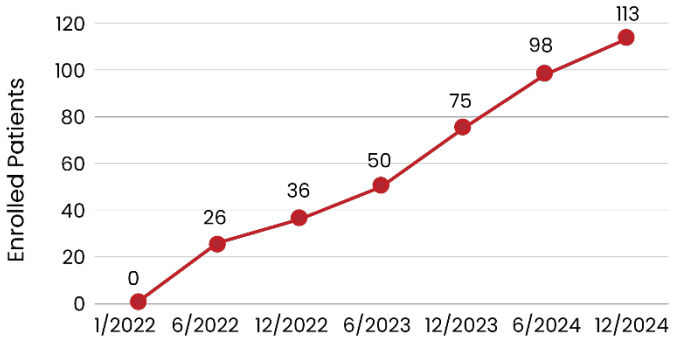
One site in Houston

Enrollment

113 patients served in Years 1–4 of implementation

91% enrolled in MOM during pregnancy and **9%** enrolled at or after birth

39% received Medicaid benefits prior to pregnancy



2024 Data Collection

24 key informants interviewed

8 patients participated in focus groups

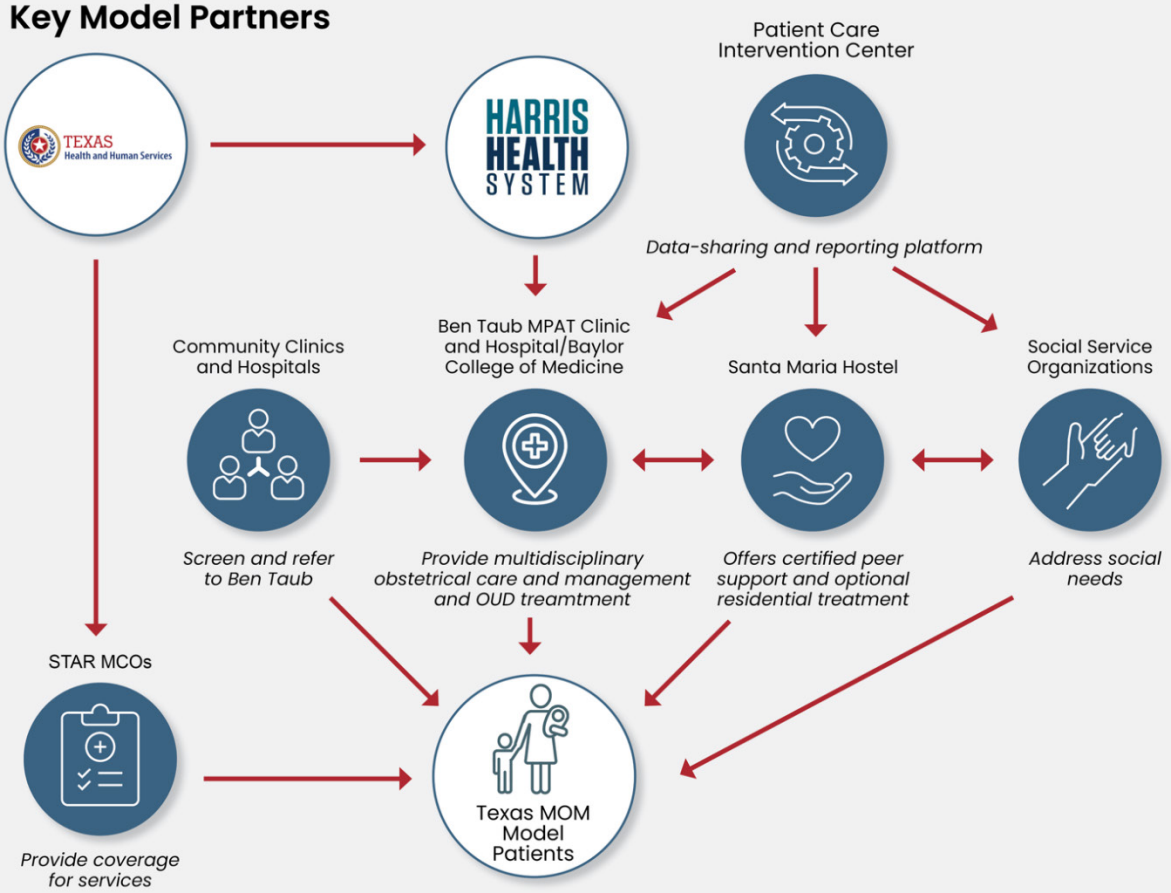
Patient Health-Related Social Needs

86% of patients screened positive for at leas one social need

2.7 social needs were identified on average

Transportation, family support and **food** were the top three social needs identified

Key Model Partners



Model Summary

The Texas MOM Model provides services at a single care delivery site. Ben Taub Hospital provides prenatal care, mental health and MAT services. A community partner, Santa Maria Hostel, provides residential substance use treatment and recovery support services, peer counseling and connections to social services. At the time of the 2024 evaluation site visit, the Texas Health and Human Services Commission (HHSC) and Harris Health had not identified a payment strategy to sustain the care coordination services provided by the Texas MOM Model following the end of the model cooperative agreement funding. State model leads are exploring alternative payment methods that they could use to pay for the care coordination services provided by the Texas MOM Model.

Reach

Successes. HHSC and Harris Health staff described implementing a robust and flexible outreach system, with plans to grow the model's reach even further following the end of federal funding. Provider staff reported that the Maternal Perinatal Addiction Treatment (MPAT) Clinic at Ben Taub Hospital establishes a well-coordinated system of outreach within Harris Health and in the community, conducts enrollment of eligible beneficiaries and uses defined screening tools to assess and address the needs of Texas MOM Model beneficiaries. There are multiple entry points for beneficiary referrals to Texas MOM Model. Within Ben Taub, the outpatient obstetrics clinics, detoxification unit and emergency rooms identify potential Texas MOM Model pregnant beneficiaries with OUD. In 2024, the Texas MOM Model experienced an increase in referrals for the model, which led to its care site expanding its clinic hours. Harris Health staff noted that referral sources outside of Ben Taub include Santa Maria Hostel, opioid treatment programs in Houston and most recently, several obstetrical practices that operate outside Harris Health, and the justice system. For example, Harris Health established a partnership with a local drug court program to increase referrals for potential MOM enrollees within the criminal justice system. The Texas MOM Model is planning to further expand outreach with their partner Legacy Community Health, a federally qualified health center that provides prenatal care and care for beneficiaries living with HIV and SUD.

Challenges. HHSC, Harris Health and provider staff described four primary barriers to enrollment in the Texas MOM Model. First, some pregnant individuals with OUD are ineligible for Medicaid coverage due to income level, citizenship and/or incarceration status. Second, pregnant individuals who use substances other than opioids cannot enroll in the Texas MOM Model. Third, some pregnant individuals fear that Texas MOM Model enrollment could trigger Department of Family and Protective Services (DFPS) involvement in their pregnancy and the possibility that their child could be removed from their custody after birth. That said, the recent addition of the DFPS Hospital Liaison position may assuage beneficiary hesitancy to enroll. Finally, the Texas MOM Model leaders reported that there continues to be a stigma associated with receiving care at a safety-net hospital, or "county" hospital, as Ben Taub is known in the community. Ben Taub strives to overcome this stigma by providing high-quality care and tapping into community word-of-mouth.

Implementation

MOM Model service updates. The Texas MOM Model serves beneficiaries at the Ben Taub MPAT Clinic and provides integrated and co-located prenatal care, labor and delivery and postnatal services to pregnant and postpartum beneficiaries with OUD. The clinical services of the Texas MOM Model include obstetrics (OB), psychiatry and psychology, and Texas MOM

Model clinical staff include a neonatologist, a lactation consultant, a specialized anesthesiologist who develops a pain management plan with beneficiaries before delivery, a social worker and a care coordinator.

Successes. MOM Model staff reported that the Texas MOM Model made three revisions to its processes during Implementation Year 3. First, in April 2024, Texas Health and Human Services hired a child protective services (CPS) liaison to improve coordination between DFPS and Harris Health. The CPS liaison facilitates communication and information sharing among CPS and hospital staff to promote collaboration and greater understanding of each entity's role, provide support for enrollees (including a Plan of Safe Care) and encourage referrals to the MOM Model. Second, after the previous program manager's departure in December 2023, the OB nurse navigator and CHW took on a larger share of the care coordination work. Third, HHSC reported that Ben Taub was trying to begin home visiting for enrolled beneficiaries on the anniversary of a death of a loved one (for example, a child, family member or friend) as a relapse prevention strategy. Beneficiaries may benefit from additional touchpoints during particularly challenging times such as these anniversaries, which may influence relapses. The Texas MOM Model team is still determining whether the MPAT clinic OB nurse navigator and CHW will lead home visiting or whether they will utilize a home visiting vendor.[8]

Challenges. Despite improvements to its staffing approach, MOM Model staff reported that burnout, staff turnover and a shortage of providers interested in serving pregnant individuals with OUD persist as the primary implementation challenges at Texas MOM's clinical site. Ben Taub staff reported engaging in discussions with HHSC and Harris Health on how to address burnout and the implications it has on beneficiary care. Further, staff turnover led to restructuring and redefining roles over the past year, which also led to changes in team dynamics. Because of this staff turnover, Texas focused on cross-training new staff on addressing complex enrollee needs. Model leads reported that the model will need to increase the number of CHWs, SUD, OB and behavioral health providers to best support beneficiary needs. These interviewees also acknowledge that there is a shortage of providers in these specialty areas who are interested in working with pregnant individuals with OUD.

Sustainability Lessons Learned

Sustainability plans. At the time of the evaluation site visit in June 2024, HHSC and Harris Health had not identified a payment strategy to sustain the care coordination services provided by the Texas MOM Model following the end of the model cooperative agreement funding. HHSC leadership noted that Medicaid MCOs have access to alternative payment methods that they could use to pay for the care coordination services provided by the Texas MOM Model, but HHSC has not discussed the Texas MOM Model with Medicaid MCOs. In 2025, Texas anticipates holding one-on-one meetings with the MCOs to discuss the potential to sustain and expand model services through managed care contracts (for example, implementing an alternative payment model) after the model ends. One of Texas' MOM Model providers applied lessons learned from the MOM Model to support the Texas Alliance for Innovation on Maternal Health.

[8] There were two items that delayed the implementation of the planned home visit program, which will be conducted by the OB nurse navigator and CHW. First, Harris Health System changed vendors for the employee security device used for home visits to improve the service for employees. There was a gap during which additional licenses for the retiring system could not be procured, but the upgraded system is in place as of February 2025. Second, there was a vacancy in the MOM CHW position after the previous employee transferred roles, citing concerns over uncertainty with funding and the extended implementation period. The CHW is now working on the completion of employee training, and Harris Health System looks forward to implementation of the home visit program in Q2 2025.

Harris Health staff reported plans to ask the Harris Health System leadership to fund three care coordination positions currently funded with MOM Model cooperative agreement funding: a program manager, OB nurse navigator and a CHW. Harris Health staff estimate only a 10% chance that the positions will be funded. One other position, the DFPS liaison, is currently supported by cooperative agreement funding. It is unclear whether this position can be sustained.

Institutionalization and care transformation. Ben Taub staff confirmed that the MPAT clinic at Ben Taub Hospital will continue operations regardless of MOM Model cooperative agreement funding. Innovations such as the Care by Parent Suite, which allows parents to room with hospitalized infants beyond the birth parent's discharge date, are now the standard of care.

Medicaid and other state context. Two recent policy changes positively alter the state's health care and human services context for the Texas MOM Model beneficiaries. In June 2023, the Texas legislature enacted House Bill (HB) 730, which includes several provisions intended to further family preservation, including those that strengthen parents' rights during an investigation. For example, HB 730 requires DFPS to advise parents of their legal right to refuse investigations without a court order, record interactions with a DFPS investigator and consult with a lawyer before agreeing to any proposed voluntary safety plan. Additionally, in January 2024, Texas received approval from the Centers for Medicare and Medicaid Services to extend postpartum Medicaid coverage to 12 months. This allows the Texas MOM Model to serve beneficiaries longer than the 60 days that had initially been anticipated.[9]

Successes. Following some initial challenges being reimbursed by Medicaid MCOs, Santa Maria Hostel's peer recovery support specialists are now able to bill Medicaid for eligible services. Texas MOM staff reported that "a substantial portion of peer recovery specialist salaries" are not funded by Texas MOM.

Challenges. Ancillary activities, such as the contingency management program, are more difficult to maintain without funding and may not be sustained beyond the MOM Model funding period, but leadership remains optimistic about continuing to reimburse current MOM services.

Conclusion

Texas MOM continues to deliver high-quality care coordination services and a broad spectrum of co-located care to beneficiaries at the Ben Taub MPAT Clinic. While the scale of implementation remains restricted by limited clinic space and provider availability, the Texas MOM team continues to maintain multiple streams of outreach efforts and made several hires to improve partner relationships and beneficiary experiences. HHSC designed the model to be sustained without an SPA but faces several hurdles to secure coverage for the full range of model services.

[9] The Medicaid continuous eligibility provision in effect during the federal public health emergency (PHE) effectively extended Texas MOM eligibility beginning March 18, 2020; Medicaid eligibility was not redetermined during the PHE.

West Virginia MOM Model: Awardee Profile

Geographic Scope

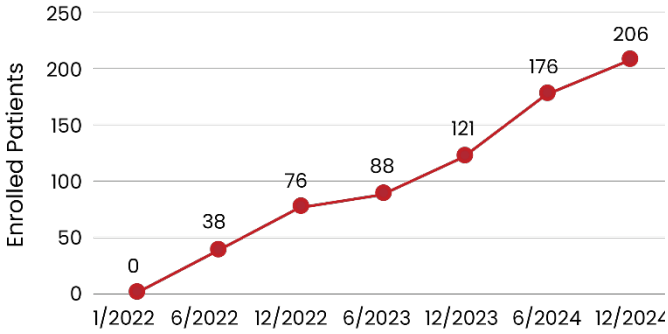
19 sites in 17 towns statewide

Enrollment

206 patients served in Years 1–4 of implementation

81% enrolled in MOM during pregnancy and **19%** enrolled at or after birth

100% received Medicaid benefits prior to pregnancy



2024 Data Collection

28 key informants interviewed

4 patients participated in focus groups

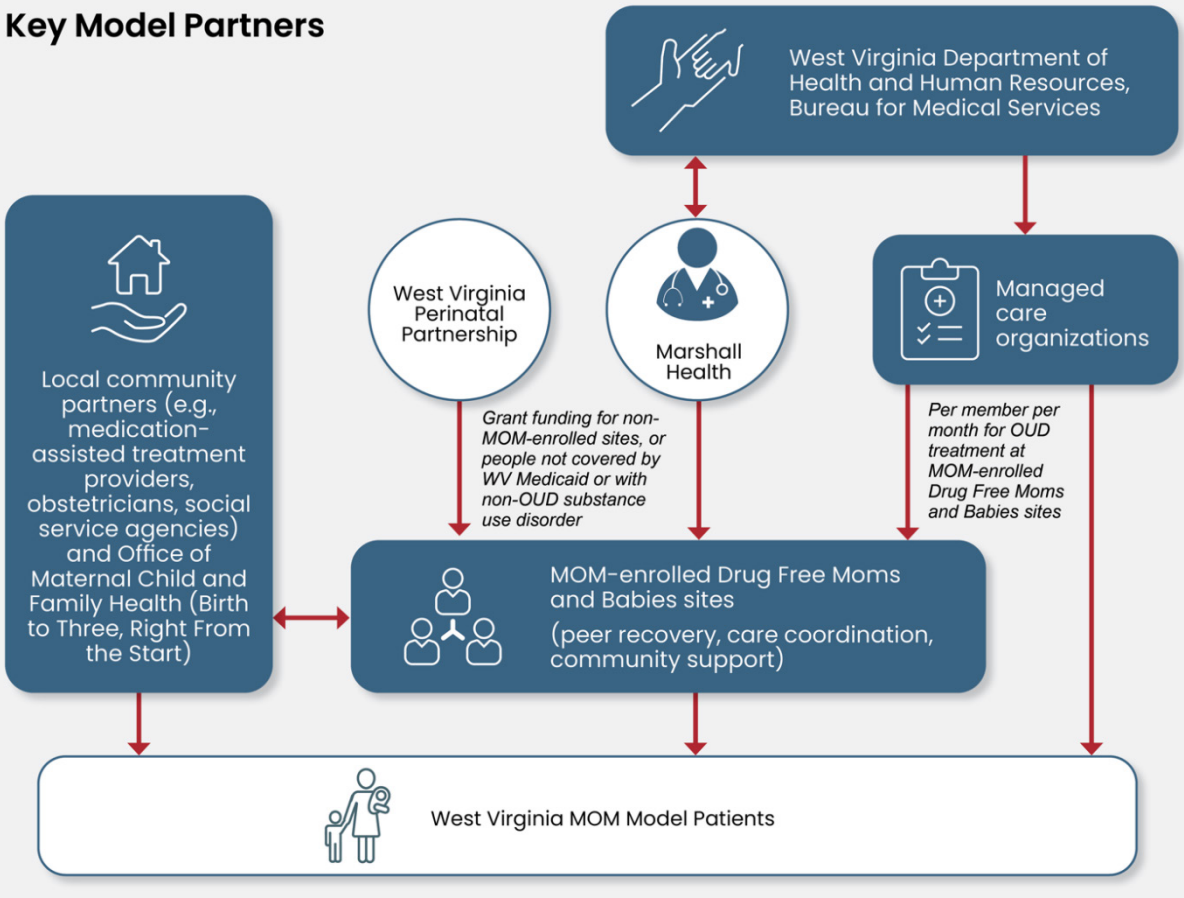
Patient Health-Related Social Needs

37% of patients screened positive for at leas one social need

2.3 social needs were identified on average

Transportation, housing and **food** were th top three social needs identified

Key Model Partners



Model Summary

In 2011, the West Virginia Perinatal Partnership implemented Drug Free Moms and Babies (DFMB), a care coordination model that incorporates wraparound recovery support services and social services for pregnant and postpartum individuals with SUD inclusive of OUD. West Virginia's MOM Model aims to transition the existing DFMB program from grant funding to more sustainable Medicaid funding. To launch Medicaid coverage for MOM Model services in 2022, the Bureau of Medical Services (BMS) finalized updates to their Medicaid Provider Manual that specified a new Medicaid provider type (DFMB provider) and a new Medicaid-covered service (DFMB services), both of which support Medicaid reimbursement for DFMB services.

Reach

Successes. At the time of the Implementation Year 3 evaluation site visit (spring 2024), 15 of 19 current DFMB sites were enrolled or planning to enroll in Medicaid as a DFMB provider and able to receive the DFMB PMPM payment. MOM Model staff explained that DFMB sites enrolled in Medicaid will have their Medicaid beneficiaries with OUD enrolled in the MOM Model. BMS staff believe the remaining four sites intend to enroll once the updated SPA expands Medicaid coverage of DFMB services to pregnant and postpartum individuals with all types of SUD. This enrollment is consistent with West Virginia's BMS initial MOM Model goal of providing all DFMB sites a means of Medicaid reimbursement for DFMB services. Additionally, over the course of MOM Model implementation, BMS expanded the total number of DFMB sites from 16 to 19. Care delivery partners reported that Medicaid's involvement in the model and related provider education about the model has increased provider awareness of and referrals to the model.

The West Virginia MOM Model began internal efforts to update its state Medicaid Provider Manual to allow DFMB programs to offer enhanced case management services, introduced through the MOM Model, to individuals with any SUD. The West Virginia MOM Model anticipates this change will broaden the service population and expand enhanced case management services to additional providers across the state.

Challenges. Various key informants reported that West Virginia's primary challenge to enrollment was a smaller number of pregnant beneficiaries with OUD than anticipated**.** Providers reported that, in West Virginia, drug use is cyclical, and providers are currently seeing increasing stimulant and marijuana use without accompanying opioid use. Additionally, beneficiaries may not report opioid use when testing positive for opioids, but these cases may not be coded as an OUD diagnosis based on Centers for Disease Control and Prevention (CDC) guidance that a positive opioid test alone is insufficient for an OUD diagnosis (CDC, 2024). Some respondents noted that beneficiaries were less likely to report opioid use than use of other substances because of the stigma associated specifically with opioids.

Implementation

MOM Model service updates. West Virginia's DFMB program continues to provide recovery support services, care coordination and CHW support to pregnant and postpartum beneficiaries with SUD, while the MOM Model continues to provide Medicaid reimbursement for Medicaid beneficiaries with OUD. BMS staff reported that all DFMB sites provide the same set of services but also noted that the ways and environments in which DFMB programs provide these services vary across sites. MOM Model DFMB site staff confirmed that referrals continue to be from maternity care providers who identify SUD or OUD during a prenatal care visit while completing the state-required Prenatal Risk Screening Instrument. To bill Medicaid for DFMB services, sites

need to obtain a multispecialty National Provider Identifier (NPI) that designates them as a DFMB provider. The sites use this NPI exclusively for DFMB-related claims submissions.

Successes. West Virginia has expanded the number of DFMB program sites from 16 to 19, improving access to DFMB services. BMS staff reported that they anticipate all DFMB sites to be formally enrolled as Medicaid DFMB providers by the end of 2024. MOM Model staff highlighted three influential changes to DFMB programs that enrolled as Medicaid providers: (1) services and documentation became more standardized across sites; (2) inclusion of CHW services; and (3) required coordination with MCO case managers.[10] Staff confirmed that, thanks to DFMB, providers are now "a lot more collaborative" and that inter-team communication has become "really excellent." DFMB site staff believe the consistent tracking and service documentation required for Medicaid claims increased site accountability, with one staff member noting that the system requires adherence (submitting a claim appropriately) and has repercussions (failure to pay a claim if documentation is insufficient). Additionally, BMS required DFMB sites to provide CHW, which the initial DFMB program did not. Many sites achieved this by also providing peer recovery support specialists with CHW training. Several respondents noted that the inclusion of CHW services was the MOM Model's most meaningful change to the DFMB program. Finally, BMS specified that DFMB sites must coordinate with MCO case managers, though this requirement was less successful, as described in the Challenges section.

Challenges. According to MCO case managers and DFMB staff, the Medicaid-required coordination between DFMB care coordinators and MCO case managers remains ambiguous (BMS, 2022). While some MCOs reported good relationships with some sites, other case managers felt that at times, the services they offer are considered redundant, such as identifying beneficiary social needs. MCO case managers felt that DFMB staff can more effectively engage with beneficiaries than MCO case managers because DFMB staff meet with beneficiaries face-to-face, though some MCO case managers felt the model could have better clarified the role each was to play in the beneficiary's care. Additionally, West Virginia's sites experienced staffing turnover and shortages, which led some to pause enrollment until they were able to backfill staff vacancies.

Sustainability Lessons Learned

Sustainability plans. West Virginia's DFMB SPA has been in place since 2022, allowing eligible sites to receive a PMPM payment for DFMB-related wraparound services (peer recovery support, CHW support, and care coordination) for their pregnant and postpartum beneficiaries with OUD. BMS has been working with the CMS Center for Medicaid & CHIP Services to expand the SPA to those with SUD more broadly by the end of 2024 to increase the reach of the program. The current PMPM payment remains $257.18, which is comparable to the state's other PMPM payments for care coordination services. The PMPM amount is not expected to change after the SPA expansion.

Institutionalization and care transformation. West Virginia started the MOM Model with DFMB services well-established in sites across the state and aimed to institutionalize the DFMB program by securing Medicaid funding, with both the state and care delivery sites adapting to the new payment methods. BMS engaged all their MCOs, established a PMPM for DFMB services and developed a Medicaid Provider Manual Appendix delineating the providers and services eligible to receive payment. Medicaid reimbursement for DFMB services required sites to better document care services they provided, as more detailed information is required for

[10] MCO case management is available to all members with a high-risk pregnancy, regardless of their participation in DFMB.

Medicaid claims than for grant funding. Some sites' administrators reported restructuring their staff to ensure they are consistently billing Medicaid for services that can be billed outside of the PMPM, where previously they may have defaulted to grant funding. Overall, larger sites with more resources seem better able to successfully bill for DFMB services.

Medicaid and other state context. Changes in billing guidelines for peer recovery support specialists may impact the DFMB PMPM. BMS staff reported that the organization is currently negotiating an 1115 waiver to expand the settings in which peer recovery support specialists can directly bill Medicaid. Currently, only licensed behavioral health clinics can bill peer recovery support specialists as service providers. The waiver would enable emergency departments, federally qualified health centers and DFMBs to bill directly for peer recovery support specialist services. BMS staff acknowledged that they may need to renegotiate DFMB PMPM amounts with the MCOs to reflect this additional reimbursement for peer recovery support specialists, though BMS did not expect any changes in the near term. BMS anticipates waiver approval in October 2024.

Successes. There are currently 19 DFMB sites. Consistent with the initial MOM Model goals, BMS has effectively enrolled 15 DFMB sites as Medicaid DFMB providers, enabling them to bill Medicaid for DFMB services. The remaining four DFMB sites are currently in the process of enrolling or intending to enroll after the SPA expansion. As one BMS interviewee noted, "when you have a SPA, you know that's forever."

Challenges. Though several DFMB sites can bill Medicaid for DFMB services, few have been successfully reimbursed. Respondents reported various challenges, such as difficulty having multispecialty NPIs approved. Respondents at another site described difficulty understanding how to properly submit a claim for DFMB services—a challenge compounded by different payers having different claims submission requirements. Other interviewees felt that sites were disincentivized to submit DFMB bills to Medicaid because they were still receiving grant funding, and therefore did not want to go through the more onerous process of Medicaid billing. Similarly for sites with few DFMB beneficiaries who are both Medicaid eligible and have OUD, there is limited incentive to become a Medicaid-enrolled DFMB provider. Most respondents agreed that once the SPA expands Medicaid coverage of DFMB services to pregnant and postpartum individuals with SUD, the increased volume of PMPM-eligible beneficiaries may increase the financial incentives to overcome these challenges.

Conclusion

During the pre-implementation period, West Virginia planned to eventually enroll all its DFMB sites in the MOM Model. Through Implementation Year 3, West Virginia has enrolled 15 of 19 sites, with plans in place to enroll the other four sites in the future. However, changing substance use trends in West Virginia limited the MOM Model's capacity to enroll beneficiaries, as the state has seen increased stimulant and marijuana use in recent years without increases in opioid use. Overarchingly, the West Virginia MOM Model expanded access to integrated, high-quality perinatal OUD care for pregnant and postpartum Medicaid beneficiaries in the state, but opportunities remain to improve access through better coordination between MCO case managers and DFMB staff and by alleviating DFMB billing and reimbursement challenges for DFMB sites.

Chapter 3. Strengthening and Sustaining the MOM Model: Cross-Cutting Challenges and Opportunities

Between July 2021 and June 2024, seven Maternal Opioid Misuse (MOM) Model awardees—Colorado, Indiana, Maine, New Hampshire, Tennessee, Texas, and West Virginia—enrolled a total of 1,823 beneficiaries. As detailed in the previous chapter's profiles, awardees and care delivery partner sites worked intensively to build outreach networks, strengthen engagement strategies and reduce barriers to participation. However, persistent challenges limited the model's overall reach and shaped the pace and scope of implementation. Enrollment fell short of awardees' original projections, constraining the evaluation team's ability to conduct planned impact analyses on maternal and infant health outcomes (Tucker et al, 2024). In response, evaluation activities shifted to focus on documenting implementation processes, identifying promising practices and capturing lessons learned within each awardee site. This chapter builds on those findings by examining cross-cutting patterns across awardees. It highlights shared challenges, innovative adaptations and emerging opportunities to strengthen the sustainability of integrated care models for pregnant and postpartum individuals with opioid use disorder (OUD) in Medicaid.

A. Responding to a Changing Substance Use Landscape

Key Findings Up Front

- The landscape of opioid use changed in recent years, with an increase in the use of synthetic fentanyl, which makes pharmacological treatment for OUD harder to treat.
- Integrated care approaches like the MOM Model may facilitate the treatment of OUD for pregnant and postpartum beneficiaries in this changing landscape.
- State models like MOM can provide clinicians with access to education on treatment options for synthetic opioids, and integrated care models provide additional treatment options to complement medication treatment for OUD.

The opioid landscape changed dramatically after MOM Model awardees developed their approaches in 2019, creating unanticipated challenges for reach and implementation. At the time the model launched, many regions still faced high rates of heroin and prescription opioid misuse. Fentanyl has since displaced heroin as the dominant opioid, and methamphetamine use has surged. Fentanyl's potency and its growing presence in counterfeit pills and non-opioid substances have made opioid use more dangerous and unpredictable. At the same time, polysubstance use, particularly combinations involving fentanyl, methamphetamine, benzodiazepines and other illicit substances, has become more common, making it harder to engage and retain beneficiaries in care.

These national trends have been reflected in what MOM Model providers see on the ground. Across all awardees, providers reported a marked rise in fentanyl use among their beneficiaries, along with growing use of substances outside the model's eligibility criteria. Many beneficiaries no longer presented with opioid use alone; instead, they had complex patterns of polysubstance use or primarily used stimulants, which excluded them from enrollment under the model's OUD-specific focus. As one provider explained:

> *"We're seeing beneficiaries who don't fit cleanly into an 'opioid use disorder' box anymore. It's fentanyl plus meth, or benzodiazepines or something else—and it changes how we have to think about care."*

One major challenge for MOM Model providers in the fentanyl era is that beneficiaries often cannot accurately report which substances they have used. As the drug supply has become increasingly adulterated, many beneficiaries unknowingly consume fentanyl, even when they believe they are using other substances like heroin or marijuana. A care team member explained:

> *"A lot of beneficiaries will say, 'I just smoked marijuana,' or 'I thought I was using heroin,' and then they're stunned to learn what was actually in their system. These days, they really don't know what they're taking, and that uncertainty makes everything more complicated."*

Most providers must rely on off-site laboratories for fentanyl testing, with results often returning days later—sometimes after critical care decisions have already been made. As one clinician noted:

> *"We're not going to get those results back for a week sometimes. We don't always realize a person has relapsed until we get that fentanyl result back."*

These delays increase the risk of complications such as precipitated withdrawal or missed opportunities for timely intervention. Although rapid, point-of-care drug testing could help providers respond more effectively, such tools remain limited in availability and reliability.

Adapting MOUD for Pregnant Beneficiaries in the Fentanyl Era

As fentanyl use becomes more common, providers are adjusting how they deliver medication for opioid use disorder (MOUD) during pregnancy. Buprenorphine and methadone remain the primary treatments, with strong evidence showing they improve outcomes for both parent and baby (SAMHSA, 2023). However, fentanyl's potency and rapid clearance make it harder to stabilize beneficiaries during induction, and providers often must navigate these challenges without clear evidence-based guidance, since existing protocols were developed before fentanyl became widespread. One clinician described the challenge:

> *"The buprenorphine induction process is a lot harder when fentanyl is in the picture, so the time of using drugs is prolonged. It's harder to do outpatient induction—getting the right dose of buprenorphine while they are still using, titrating up and down."*

If started too early, buprenorphine can trigger severe withdrawal, prompting some providers to adopt microdosing protocols that ease the transition. Others opt for methadone, which offers steadier symptom control, though fentanyl-exposed beneficiaries often require higher doses to stabilize. Titrating too quickly, however, can increase the risk of oversedation, so providers have begun using more cautious dose adjustment strategies.

Even with adaptations, keeping beneficiaries engaged in treatment remains challenging. Pregnant individuals who use fentanyl often experience more severe withdrawal and are more likely to disengage from care (Ganetsky et al., 2025). In response, some providers have increased buprenorphine maintenance doses to better manage cravings and support retention. As one clinician noted:

> *"We used to say our average dose was 8–12 milligrams. Now it's more like 16, 24, 30 milligrams because the lower doses just aren't covering it."*

Adjusting dosing strategies to address fentanyl's potency has become critical to sustaining engagement during pregnancy and postpartum.

The MOM Model's Role in Adapting to the Changing Substance Use Landscape

Many providers, especially those without training in perinatal substance use, report feeling uncertain about how to interpret withdrawal symptoms and safely initiate or adjust MOUD. As one provider explained:

> *"Providers who don't usually see beneficiaries with OUD, they're just scared. They don't know what to do with fentanyl."*

Compounding these challenges, providers must also manage the realities of widespread polysubstance use. As one clinician described:

> *"Typically, beneficiaries who have a substance use disorder have tried multiple different substances in different manners in different ways, and it's very, very, very rarely that it's just…'I only use opioids.'"*

Without adequate training or support, some providers hesitate to initiate treatment, which can lead to delays or missed opportunities to engage beneficiaries in care. Addressing these gaps will require expanded clinical education, decision support tools and integrated care models that build provider confidence and improve continuity of care for pregnant beneficiaries with OUD.

In this context, the MOM Model plays a critical role in equipping providers to meet the needs of beneficiaries exposed to fentanyl. State administrators and frontline staff emphasized that the model's structure and partnerships—particularly through Medicaid and national learning collaboratives—have improved their capacity to respond to emerging drug trends and use evidence-informed practices. As one administrator explained:

> *"We're constantly sending out the [Providers Clinical Support System] webinar information to our MCEs [managed care entities] and partners. … They're free, they're informative and they've got access to national experts."*

By providing real-time clinical knowledge, peer learning opportunities and a stronger infrastructure for harm reduction, the MOM Model helps providers adapt to a substance use landscape that is increasingly shaped by fentanyl and polysubstance risks. Supporting providers through these shifts remains critical to sustaining engagement in care and improving maternal and infant outcomes.

B. Meeting the Needs of a Complex Beneficiary Population

Key Findings Up Front

- MOM Model beneficiaries face complex and overlapping health, behavioral and social challenges that demanded flexible, trauma-informed care.
- Awardees expanded support beyond clinical services, embedding mental health care into maternity services and helping beneficiaries navigate critical social needs like transportation, childcare, housing and food access.
- Persistent barriers—especially unreliable transportation, childcare shortages and housing instability—continued to undermine engagement, highlighting the need for broader, multisector solutions.

Beneficiaries enrolled in the MOM Model brought extraordinary resilience to their recovery journeys. Many had already overcome significant personal, medical and social obstacles before entering care. At the same time, their needs often extended far beyond what traditional obstetric or substance use treatment models were designed to address, requiring more intensive, flexible and trauma-informed support to sustain engagement.

Beneficiary enrollment patterns help illustrate the challenges and opportunities awardees faced in reaching this high-need population. Across awardees, most beneficiaries were individuals who had completed high school or some college.[11] Compared to other Medicaid-eligible individuals in their communities, MOM Model beneficiaries tended to be older, maintained continuous Medicaid coverage prior to pregnancy and had established connections to health care systems. These patterns suggest that early outreach efforts were most successful among individuals already somewhat familiar with navigating coverage and services, although broader factors such as Medicaid eligibility and local access to care likely shaped who was ultimately reached.

Photovoice entry from MOM beneficiary

These are my feet with my daughter on my feet. If I wasn't sober, I wouldn't be a good role model for her to follow in my footsteps. Because I want to be there for her forever, [it] has been enough to keep me on the straight and narrow.

Pregnancy emerged as a pivotal entry point for care. Roughly 80% of beneficiaries enrolled in the MOM Model during pregnancy—a time when many reassessed their health needs and became more open to seeking support for themselves and their infants. As one beneficiary shared:

"When I found out I was pregnant, I wanted to do whatever I could to make sure that this baby was okay. … And that helped me get help, finally."

Several Photovoice participants throughout the model reinforced this theme, sharing images of their babies and describing how the realization that their recovery would shape their children's futures gave them new courage and determination. These experiences reflect a broader pattern seen in other studies, where pregnancy often serves as a powerful catalyst for engagement in care (Goodman et al., 2020).

[11] For further information about the demographic profile of MOM Model beneficiaries, please refer to prior MOM Model evaluation reports (e.g., Tucker et al., 2024).

Yet while pregnancy offered a strong initial motivator, sustaining participation proved challenging. Beneficiaries' complex health needs, persistent social barriers and caregiving demands often intensified during pregnancy, postpartum recovery and early parenting—reinforcing the need for care models that integrated behavioral health and social support as essential components of recovery.

Photovoice entry from MOM provider

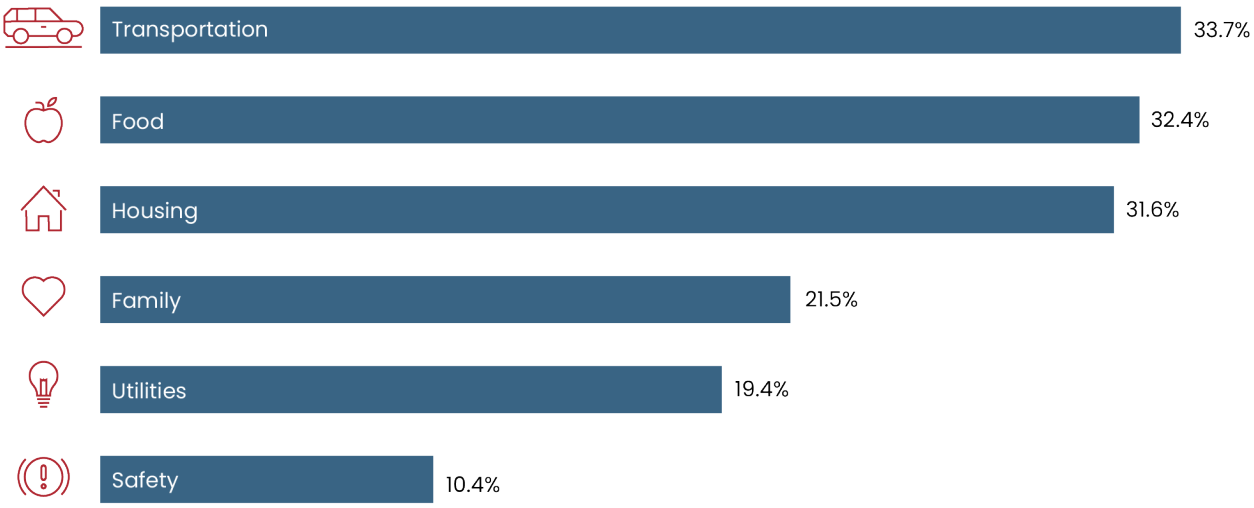
Geography is a challenge to patients receiving medical care, consumer services, educational opportunities, social services and getting to work. Miles of mountainous roads are difficult to traverse by foot if transportation is not available.

The Impact of Health-Related Social Needs

Unmet needs related to housing, transportation, food security and social support directly shaped beneficiaries' ability to engage with MOM Model services. Many MOM Model beneficiaries entered care with multiple unmet health-related social needs (HRSNs) that compounded the challenges of recovery, pregnancy and postpartum care: at enrollment, 60% of those screened for HRSNs reported at least one basic need, and two-thirds of the 60% reported multiple overlapping challenges.

Transportation barriers were particularly widespread, affecting more than one-third of enrolled beneficiaries (Figure 3.1).

Figure 3.1. Overview of HRSNs Affecting MOM Model Beneficiaries (number screened varies by area of need)



Note: Food, *n* = 1,635; transportation, *n* = 1,630; utilities, *n* = 1,620; housing, *n* = 1,630; family, *n* = 1,603; safety, *n* = 1,623. "Family" refers to family and community support.

Transportation challenges were especially severe in rural areas and maternity care deserts, where beneficiaries often traveled long distances to access basic services. Public transportation was limited and, when available, frequently operated on restricted schedules. Rideshare options like Lyft or Uber were rare in remote areas. Even Medicaid transportation services posed

obstacles, often requiring advance scheduling, limiting caregivers' ability to bring children, or failing to arrive reliably. As one provider noted bluntly:

> *"Medicaid transportation services are completely unreliable and hard to navigate. Our beneficiaries give up and they might use again."*

Childcare needs often complicated beneficiaries' ability to stay engaged in care. About three-quarters of beneficiaries had a prior birth, meaning many balanced recovery, maternity care and raising young children. Long waiting lists for childcare assistance limited beneficiaries' ability to attend appointments, return to work or pursue education. One beneficiary noted how difficult it is to "move forward" without childcare.

Family safety and trauma further shaped beneficiaries' experiences. Many faced unsafe or unstable household environments, including intimate partner violence. Efforts to leave violent partners were often complicated by housing instability, income eligibility rules and limited access to public benefits. As one provider explained:

> *"She's doing everything she can, but now she has to look at housing on her own and getting signed up for things like food stamps, which, if he signed the birth certificate, his income counts because they are living in the same household."*

Understanding Links Between Unmet HRSNs and Key Outcomes

Multiple intersecting HRSNs not only affect beneficiaries' ability to engage with services but also have broader implications for maternal and infant health outcomes. To better understand these connections, the evaluation team analyzed how the number of unmet HRSNs at enrollment corresponded with differences in care engagement, infant outcomes and system involvement.

The evaluation team calculated We All Count (WAC) scores to explore how unmet HRSNs correspond with differences in maternal and infant health and system outcomes (Table 3.1). In this example, WAC scores quantify variation between subgroups of beneficiaries based on the number of unmet needs reported at enrollment: no unmet needs, 1–3 unmet needs and 4–6 unmet needs. WAC scores close to 1.0 suggest that beneficiaries experienced similar outcomes regardless of the number of unmet needs, whereas higher scores indicate that beneficiaries with greater unmet needs had worse outcomes compared to those with fewer or no unmet needs. The analysis showed that beneficiaries with more unmet HRSNs more often experienced challenges related to care engagement and parenting outcomes. For example, beneficiaries with four to six unmet needs missed postpartum visits at a rate nearly three times higher than those with no reported needs (17.6% vs. 6.3%; WAC score: 2.79). They also had higher rates of out-of-home infant placement (22.7% vs. 8.8%; WAC score: 2.58) and pharmacologic treatment for neonatal opioid withdrawal syndrome (NOWS; 21.5% vs. 9.9%; WAC score: 2.17).

These descriptive findings do not establish causality. However, they show that multiple unmet needs coincide with differences in service utilization patterns and child welfare involvement. MOM Model staff and beneficiaries emphasized that instability tied to unmet needs often made it harder to engage consistently with care. As one beneficiary shared:

> *"When you don't have a place to live or you're worried about how you're going to eat, making it to an appointment doesn't always feel like the first priority."*

Table 3.1. We All Count Scores for Select Indicators by Number of Reported Unmet HRSNs (Needs) at MOM Model Enrollment

Indicator (*n*)	Among MOM Model beneficiaries	Among beneficiaries reporting 0 needs	Among beneficiaries reporting 1–3 needs	Among beneficiaries reporting 4–6 needs	WAC score
Formula feeding only, infant receives no human milk (*n* = 1,132)	47.2%	44.9%	47.0%	**55.0%**	1.22†
NICU stay of ≥ 5 days (*n* = 1,305)	26.5%	21.2%	**30.5%**	30.2%	1.42†
NICU, any stay (*n* = 1,305)	36.6%	30.0%	**41.9%**	40.1%	1.40†
Experienced a return to substance use (*n* = 1,207)	29.6%	24.7%	31.1%	**42.3%**	1.71‡
Pharmacologic treatment for NOWS (*n* = 1,305)	14.8%	9.9%	17.5%	**21.5%**	2.17‡
OOH placement of the infant (*n* = 1,305)	12.6%	8.8%	13.3%	**22.7%**	2.58‡
No postpartum encounter (*n* = 768)	11.5%	6.3%	14.3%	**17.6%**	2.79‡

NICU = neonatal intensive care unit; OOH = out-of-home; Green (†) indicates there is little difference; transition to red (‡) means higher difference between the two groups.

Mental Health Needs Among MOM Model Beneficiaries

Mental health challenges were widespread among MOM Model beneficiaries and closely intertwined with substance use and recovery. Screening data and Medicaid claims analyses show that enrolled beneficiaries faced greater behavioral health challenges than comparable Medicaid-eligible beneficiaries. For example, half of enrolled beneficiaries screened positive for depression, and about one-fourth had a depression-related diagnosis or prescription compared to just 18% among eligible non-enrolled beneficiaries.

At the same time, providers noted that the mental health needs of MOM Model beneficiaries often differed in complexity and intensity from typical behavioral health presentations. As one clinician described:

> *"Sometimes when I'm even just asking questions I normally ask, the responses are just quite, quite different. When I ask, 'Where were you living before this?' a lot of times it's kind of tragic and really high-stress situations that these women explain to me."*

Many beneficiaries carry histories of trauma, unstable housing, intimate partner violence and persistent social stressors that compound traditional mental health symptoms and intensify the need for trauma-informed care. Without timely, tailored support, these intersecting pressures placed beneficiaries at heightened risk of disengaging from both treatment and maternity care.

The MOM Model's Role in Supporting Complex Beneficiary Needs

The MOM Model aimed to address the full context of beneficiaries' lives, not just their clinical needs. Awardees implemented flexible, trauma-informed approaches that recognized the deep health, behavioral and social challenges beneficiaries faced. As one care team member explained:

> *"We don't just treat the addiction. We help people rebuild their lives—from getting them to appointments to making sure they have diapers, food, a safe place to stay."*

Care teams helped beneficiaries secure housing, transportation, childcare and food assistance to reduce barriers to care. To address transportation issues, for example, awardees recruited volunteers, provided gas cards, adjusted appointment times and sometimes drove beneficiaries themselves. Beneficiaries consistently emphasized how much they valued this broader support. As one shared:

> *"They helped me with everything… housing applications, TANF [Temporary Assistance for Needy Families], food stamps, everything I needed to get stable."*

Others reflected on the emotional impact of feeling seen beyond medical needs:

> *"It wasn't just about my appointments. They wanted to know how I was doing, what I needed to keep going."*

Photovoice entry from MOM provider

Mothers who have struggled with a SUD in the community feel so alone and on the edge at times. If a mother who has struggled with a SUD feels so judged in her own home, she fears the judgment from others in the world that are providing services.

Meeting mental health needs was equally critical. Many sites embedded licensed therapists within maternity care teams and strengthened mental health screening with tools like the Edinburgh Postnatal Depression Scale and Generalized Anxiety Disorder-7 to enable early identification and outreach. Awardees also expanded partnerships with community-based providers specializing in perinatal mood and anxiety disorders, trauma-informed care and support for survivors of intimate partner violence. As one provider reflected:

> *"I've seen true healing happen from a mental health perspective—with relationships restored, shame stories pushed away and people moving toward their goals."*

Not every challenge could be resolved, and beneficiaries often showed creativity to stay connected to care—one even arriving at an appointment on a riding lawnmower when no other transportation was available. Still, by embedding behavioral health services, addressing basic needs and adopting trauma-responsive practices, MOM Model awardees built stronger, more patient-centered pathways to recovery and family stability. These efforts, combined with beneficiaries' resilience, have led to meaningful progress, even as the complexity of beneficiaries' lives continues to call for flexible, multisector support beyond any single program.

C. Responding to Stigma and Child Welfare Concerns

Key Findings Up Front

- Stigma and fear of child welfare involvement created significant barriers to care.
- MOM Model care teams built trust through early transparency, nonjudgmental communication and consistent support throughout the care journey.
- Some awardees sought to improve relationships with child welfare agencies through training and collaboration, but variation in child protective services responses continued to undermine beneficiary trust.

Stigma and fear of child welfare involvement created major barriers to enrollment in the MOM Model. Substance use disorders (SUDs) are often viewed as personal or moral failings, fueling stigma against individuals with OUD—stigma that intensifies during pregnancy due to societal expectations that individuals avoid any risk to fetal health (Franco-Rowe et al., 2025; Weber et al., 2021; Wolfson et al., 2021). These attitudes often extend into health care settings, where many providers continue to view beneficiaries seeking MOUD negatively, despite strong evidence supporting its use during pregnancy and the treatability of NOWS (Burduli et al., 2025; St. Louis et al., 2022; Tsuda-McCaie et al., 2022).

Direct experiences of stigma and mistreatment in health care led many beneficiaries to expect judgment or punishment when seeking help. As one beneficiary shared:

> *"The last thing I want to do is tell people I'm using, or I did use and here I am, 6 months pregnant."*

A peer recovery coach echoed this, noting:

> *"The first barrier I usually have to approach [with beneficiaries] is that the behavioral health care they've already received has traumatized and stigmatized them. It was shame-based and punitive."*

Fear of child welfare involvement also created a major barrier to care. Federal law requires providers to notify child protective services (CPS) when infants are exposed to substances, and some states treat these notifications as abuse reports. Even without open cases, families often see them as the start of surveillance, deterring many from seeking care or disclosing substance use (Angelotta et al., 2016; Leiner et al., 2021; Peltier et al., 2025). Among beneficiaries who reported a prior birth, more than half (53.2%) had previously had a child placed out of the home—an experience that heightened their fear that seeking care could lead to another separation.

Variation in how states and counties report and respond to prenatal substance exposure further deepened this mistrust (McCourt et al., 2022). One provider reflected:

> *"There's no predictability with DCS [Department of Child Services]. There's no algorithm where I can tell a mom, 'You are safe. You are not safe.' I don't know."*

Even committed care teams struggled to build trust in a fragmented system where child welfare responses are inconsistent and beyond their ability to influence.

> *"They may not even know my name yet, and they will be asking me whether or not I think they're going to get their baby taken away."*

The MOM Model's Role in Addressing Stigma and Child Welfare Involvement

MOM Model awardees recognized that stigma and fear of child welfare involvement could deter care engagement well before beneficiaries entered the clinic. To build trust and encourage participation, care teams prioritized consistent, nonjudgmental communication and relationship building. One provider explained that for many beneficiaries, trust must be earned. Another added:

> *"It's putting that power and control back in their hands… letting them know we're there for them and they have a team."*

Some care teams attempted to address CPS-related fears early by explaining mandatory reporting requirements and clarifying that a report did not automatically trigger child separation. They reframed the Plan of Safe Care (POSC)—a federal requirement for infants born affected by substance use—as a means of connecting families with supportive services rather than initiating punitive action. In several sites, care teams integrated POSC planning into prenatal care workflows and coordinated closely with hospitals and community partners to prepare beneficiaries and ensure follow-through.

Awardees also used system-level strategies to improve collaboration and reduce mistrust. These included embedding child welfare liaisons in care teams and offering joint training sessions focused on harm reduction, trauma-informed care and reducing stigma. Despite these efforts, beneficiaries' fear and uncertainty often persisted, especially in jurisdictions where child welfare responses were unpredictable or driven by local discretion.

Throughout care, teams reinforced trust-building through emotional safety, continuity and peer support. As described in the next section, peer staff—drawing on their own lived experience—played a critical role in normalizing help-seeking and helping beneficiaries remain engaged, even in the face of deeply rooted fear and mistrust.

D. Integrating Peer Recovery Support Services

Key Findings Up Front

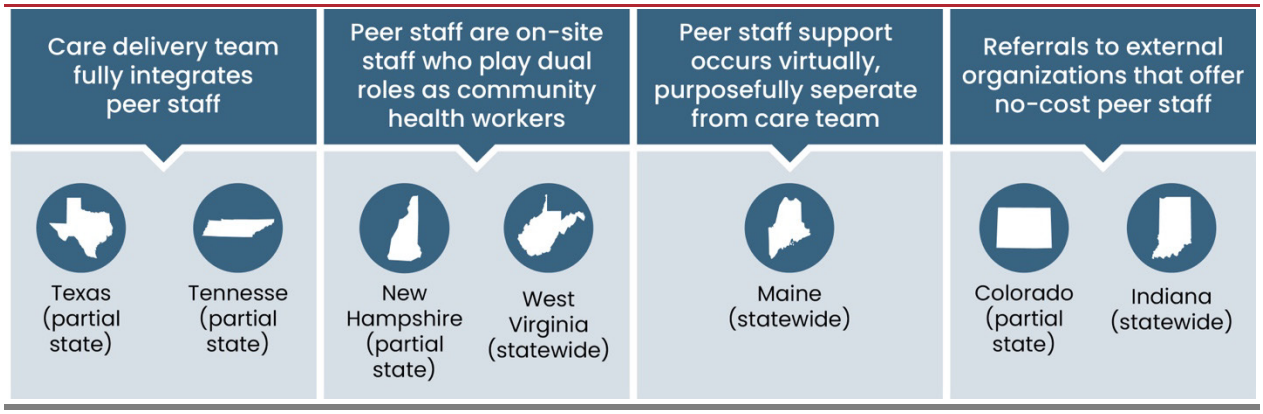
- Peer staff strengthened beneficiary empowerment and recovery by building trust, modeling successful recovery, promoting self-advocacy and bridging communication between beneficiaries and providers.
- Sustaining PRSS remains challenging, with awardees addressing Medicaid reimbursement barriers, role clarity, emotional support needs and professional development pathways to strengthen peer retention and integration.

One of the MOM Model's successes was integrating peer recovery support services (PRSS) staff into care for pregnant and postpartum Medicaid beneficiaries with OUD. MOM Model awardees helped demonstrate that peer staff—individuals with lived experience of substance use—can play a vital role in improving beneficiary engagement and support (Wouk et al., 2024). Drawing from their own experiences, peer staff offer care coordination, resource navigation, emotional support and beneficiary advocacy. Evaluation findings suggest PRSS are an emerging best practice for supporting pregnant and postpartum individuals with OUD in Medicaid.

Awardees varied in how they incorporated PRSS into care (Figure 3.2). Some integrated peer staff directly into clinical teams, involving them in daily huddles, case conferences and onboarding meetings. Others assigned peer staff dual roles as community health workers

(CHWs) or maintained separation from clinical teams to protect confidentiality and strengthen trust. A few awardees partnered with external organizations to deliver peer services.

Figure 3.2. MOM Model Approaches to Incorporating Peer Recovery Support Services



Peer staff qualifications also differed across states. Most programs required lived experience with OUD; some also required professional certification. A few models hired CHWs without lived experience but with strong ties to communities affected by the opioid crisis. These variations reflect awardees' efforts to adapt PRSS implementation to local needs, workforce capacity and care settings.

How PRSS support beneficiary engagement and recovery. Interviews with beneficiaries, providers and peer staff across MOM Model states consistently highlighted the critical role peers played in supporting beneficiary engagement and recovery. Their impact came not just from the services they provided but from the unique trust they built through shared lived experience.

Building trust and reducing stigma. As discussed previously, many MOM Model beneficiaries had past health care experiences marked by judgment and surveillance, making it hard to trust providers or feel deserving of care. Peer staff helped rebuild trust by sharing their own experiences and offering consistent, nonjudgmental support. As one beneficiary shared, "With my peer, I didn't have to pretend. I could be honest without feeling ashamed." Another beneficiary noted awareness that her peer recovery specialist had experienced several of the same challenges she had, giving the sense that she was not alone in her struggles. By providing regular outreach grounded in shared experience, peer staff helped reduce the stigma and isolation that often keep beneficiaries from fully engaging in care, creating a more supportive path to recovery.

Positive role models for recovery. Peer recovery coaches served as powerful role models by demonstrating that recovery is possible and sustainable. Many MOM Model beneficiaries had few examples of individuals who had successfully navigated both substance use and pregnancy. Peers filled this gap by modeling resilience, sobriety and personal growth. As one beneficiary noted, "Knowing she made it through made me think maybe I could too." In addition to offering hope, peer staff provided practical support, helping beneficiaries manage triggers, maintain support networks and build structured routines. As one peer explained:

> *"I let them know, I've done the work too. I still go to meetings. I still talk to my sponsor."*

By sharing their experience and strategies, peer staff helped make recovery feel attainable.

Promoting self-advocacy. Peer staff offered more than direct support; they empowered beneficiaries to advocate for themselves. By reinforcing dignity and agency, they encouraged individuals to voice their needs, set their own goals and take an active role in recovery. As one beneficiary shared, "It wasn't about telling me what to do. It was about helping me figure out what I wanted and how to get there." Another reflected:

> *"Having someone say, 'You can ask questions. You can say no. You can decide what's right for you,' made a huge difference."*

Peer staff supported beneficiaries' choices and autonomy, helping them build confidence and take ownership of their recovery.

Bridging communication between beneficiaries and providers. Peer staff helped close communication gaps between beneficiaries and providers by making it safer for beneficiaries to raise sensitive issues. As discussed previously, many beneficiaries hesitated to disclose substance use or parenting concerns out of fear of punitive consequences. As one peer explained:

> *"Sometimes beneficiaries shut down with the doctor, but they'll open up to me first. Then I can help them find the words or even be there when they talk to the provider."*

Providers also emphasized the value of peer input in care planning, noting that peers helped surface beneficiary needs that might otherwise go unheard. As one team member shared:

> *"Their unique insights really level things out. … They fight for their beneficiaries. They hold nothing back."*

By helping beneficiaries communicate more openly, peer staff strengthened relationships and supported more responsive, patient-centered care.

The MOM Model's Role in Supporting PRSS

The MOM Model has created important opportunities to expand PRSS in Medicaid care for pregnant and postpartum individuals with OUD. However, integrating and sustaining peer staff has proven complex. Awardees continue to refine strategies to integrate and sustain peer staff, focusing on strengthening reimbursement pathways, clarifying roles, supporting emotional well-being and creating opportunities for professional growth.

Navigating Medicaid reimbursement barriers. Sustaining PRSS under current Medicaid reimbursement structures remains difficult. Low rates, billing restrictions and limited coverage often leave programs absorbing significant unfunded costs. In some states, hospitals and other providers cannot bill Medicaid directly for peer services, forcing programs to route services through third-party organizations. Many states also restrict reimbursement to in-person visits, excluding follow-up calls, virtual support and help with service applications. Although MOM Model awardees are exploring ways to maintain peer services beyond the cooperative agreement period, financing remains a major obstacle to long-term integration.

Strengthening reimbursement pathways. Low reimbursement rates, billing restrictions and limited coverage have made it difficult for some programs to fully fund peer services through Medicaid. In some states, providers could not bill Medicaid directly for peer services, requiring programs to work through third-party organizations. Others faced restrictions that limited reimbursement to in-person visits, excluding critical activities like virtual outreach, follow-up calls and service navigation. To address these challenges, awardees adapted by braiding funding

from multiple sources, partnering with external organizations and aligning peer activities with available billing pathways wherever possible. As one administrator explained:

> *"You have to be scrappy about it. Medicaid doesn't always cover what peers actually do, so we have to find ways to keep them because they're essential."*

Financing remains a major barrier to fully integrating peer support into care models for pregnant and postpartum individuals with OUD in Medicaid.

Clarifying roles and promoting team integration. Integrating peers into multidisciplinary care teams required intentional effort. Early challenges included unclear role expectations and informal clinical norms that marginalized peer voices. To address this, several awardees developed peer-specific supervisory roles, peer-to-peer learning collaboratives and onboarding programs tailored to the unique strengths peers bring. One program leader noted:

> *"Peers aren't just add-ons—they're critical members of the team. We had to make sure they weren't sidelined."*

Another clinician observed the cultural shift needed:

> *"It's a big management challenge bringing people without a professional background into fast-paced clinical settings with unspoken rules."*

Awardees that invested in team education, role clarity and dedicated mentorship reported stronger peer integration and more cohesive care delivery.

Supporting Emotional Well-Being and Reducing Burnout

Supporting beneficiaries with complex trauma histories placed emotional demands on peer staff, who are also managing their own recovery journeys. One peer staff member shared:

> *"It's hard not to take it home with you. You listen to people tell you their pain, and sometimes it's like reliving your own."*

In response, MOM Model programs introduced process groups, flexible scheduling and opportunities for reflective debriefing within clinical teams. Awardees also emphasized the importance of manageable workloads and strong leadership support to create a safe, supportive environment and sustain peer engagement over time.

Building Professional Growth Pathways

Recognizing that career advancement is critical to long-term retention, awardees have increasingly focused on creating professional development opportunities for peer staff. Some developed career ladders leading to supervisory or training roles, while others provided access to continuing education, certification support or leadership workshops. As one peer staff member explained:

> *"You give everything to the job, but it's hard to see a future unless someone's helping you grow."*

By investing in peer advancement, MOM Model teams aim to build sustainable pathways for peers to move into leadership positions within behavioral health and recovery support systems.

E. Laying the Groundwork for Long-Term Sustainability

Key Findings Up Front

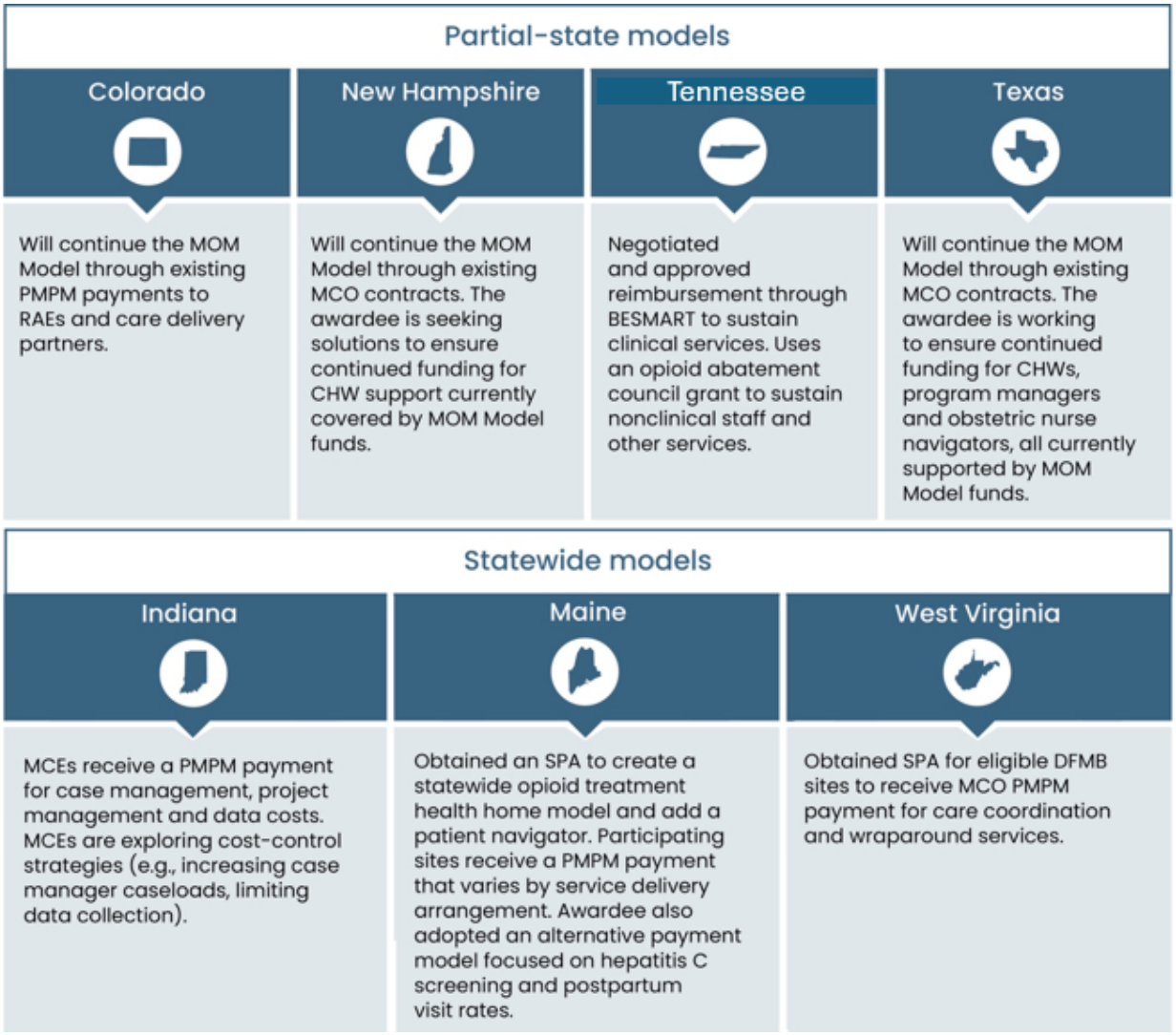
- Some MOM Model awardees established sustainable Medicaid funding streams, while others had not yet finalized long-term financing plans by mid-2024.
- Strong leadership and internal champions helped embed the model into existing systems, while weak institutional backing limited visibility, staffing and sustainability.
- Awardees extended the model's reach by training new providers, sharing effective practices and adapting services to reflect shifting substance use patterns in their communities.

Sustainability efforts took shape across three reinforcing domains: securing long-term funding, strengthening leadership and institutional support, and extending the model's reach through workforce development and the spread of effective practices.

MOM Model awardees had flexibility to design funding strategies that aligned with Medicaid requirements and local needs. They billed required clinical services directly to Medicaid, including MOUD, obstetric care, primary care and behavioral health services. By the end of the demonstration, they were expected to secure sustainable funding for nonclinical components such as care coordination, beneficiary engagement and referrals. By June 2024, awardees had made varying progress toward full financial sustainability. Figure 3.3 summarizes their approaches.

Securing Long-Term Funding

Figure 3.3. MOM Model Awardees' Approaches to Funding



Some awardees, like Maine and West Virginia, used state plan amendments (SPAs) to embed MOM services into existing Medicaid maternal and substance use programs. Others, such as Tennessee and Colorado, relied on managed care contracts, integrating services into existing per member per month (PMPM) structures without pursuing new Medicaid authorities.

Other awardees still face major questions about long-term funding. For example, Texas and New Hampshire continued to rely on MOM Model funds in Implementation Year 3 to support CHWs and other services not currently reimbursed by their state Medicaid programs. Texas and Indiana have encountered pressure to prove the cost-effectiveness of their programs. In Texas, delivering the model through a specialized addiction clinic at a safety-net hospital made it difficult to persuade managed care organizations (MCOs) to scale services more broadly across the Medicaid population. In Indiana, managed care entities (MCEs) pushed for greater efficiency—such as increasing case manager caseloads—amid ongoing uncertainty about the

model's return on investment, signaling caution about expanding support without clear evidence of financial benefit. As one administrator noted:

> *"There's a lot of programs fighting for the same pot of money, and [MCEs] need to know they're getting value."*

The experiences of MOM Model awardees show that states can make progress toward sustainable funding by actively leveraging existing Medicaid mechanisms, such as SPAs or managed care contracts, and embedding MOM Model services into existing programs. However, some awardees struggled to secure long-term support—especially when Medicaid did not reimburse for services that support care integration. Programs with smaller reach found it harder to demonstrate value in ways that persuaded MCOs to invest. These patterns underscore the importance of designing Medicaid strategies that not only align with administrative structures but also respond to fiscal concerns and clearly show impact. Engaging managed care partners early, building in mechanisms to measure value over time and remaining flexible as they navigate local financing constraints could help states support sustainability. Ultimately, the MOM Model provided evidence that pairing strategic planning with integrated care can improve outcomes and use Medicaid resources efficiently.

Leveraging Leadership and Institutional Support

Sustaining the MOM Model requires more than funding—it depends on buy-in from leadership and internal champions who embed integrated care into health care systems. Medicaid agencies played a key role in legitimizing the model, integrating it into broader maternal health strategies and raising its profile through statewide promotion, branding and MCO engagement. In one state, Medicaid established a perinatal health team that now leads system-wide SUD efforts.

Institutional support often grew when programs aligned with organizational goals. As one respondent noted:

> *"We're getting patients into the Vanderbilt system that would not come into the system otherwise, which is a metric that the VUMC cares a lot about."*

These alignments helped position the MOM Model as part of core service delivery rather than a stand-alone initiative.

Champions within health care systems—particularly clinical leads—played a central role in advancing care transformation. They energized teams, connected daily work to long-term goals and fostered sustained engagement. One provider shared:

> *"Having someone who's an internal health system champion driving the work and being the ever-ready champion and cheerleader makes a huge difference."*

Another staff member added that champions succeed by "painting a picture for folks where they want to be a part of this, even if it's not their day jobs."

Clinical champions also helped elevate the model's relevance by participating in initiatives such as the Health Resources and Services Administration's Alliance for Innovation on Maternal Health (AIM), aligning MOM with broader system reforms. Their leadership in these forums reinforced the model's legitimacy and encouraged providers and stakeholders to support its sustainability and scale.

In the absence of strong leadership or institutional buy-in, MOM Model programs struggled to gain visibility or scale services. Some faced staffing restrictions or resource constraints that limited reach. As one awardee reflected:

> *"If there were real buy-in, we would have a bigger program and could serve more patients."*

These experiences underscore that leadership alignment and internal champions are essential to embedding the model into routine care and sustaining its impact over time.

Strengthening leadership engagement at all levels, cultivating internal champions and clearly articulating how the model supports system goals are key strategies for embedding MOM services into routine care and ensuring their reach extends to more beneficiaries over time.

Extending Model Reach

Awardees are advancing the MOM Model's reach by training future providers, sharing effective strategies and expanding services to new populations and settings. These efforts promote the spread of best practices both within their organizations and across systems, supporting sustainability and broader maternal health transformation.

Several awardees have built lasting capacity by integrating MOM-aligned practices into provider training and clinical infrastructure. One incorporated addiction medicine into OB-GYN residency training to normalize SUD care within obstetrics. Another credited MOM-driven policy changes and electronic health record updates with expanding the number of obstetric (OB) providers willing to care for beneficiaries with OUD—growing from a single specialist to a network of trained clinicians across multiple clinics. As one provider explained:

> *"We now have an entire system of OB providers within our community-based clinics and family health care centers that are willing to do this specialty work. Previously, it was just one specialty treatment provider on our hospital campus."*

Some awardees are building infrastructure to deliver training and technical assistance more broadly, using MOM Model lessons to guide sustainable care delivery improvements within and beyond their own systems. As one leader explained, "We're trying to take all of the learnings and best practices and provide training and technical assistance around the region."

At the same time, awardees are exploring opportunities to scale the model geographically and across populations. One is expanding into six rural counties using their state's Opioid Abatement Council funding to address transportation and childcare barriers. Others are broadening their focus to include pregnant and postpartum individuals with a range of SUDs, supported by grants and managed care contracts. This shift reflects the evolving substance use landscape described earlier: in many communities, non-opioid substances—such as methamphetamines and alcohol—and polysubstance use now account for a growing share of maternal SUD cases. To remain relevant and effective, awardees are adapting the MOM Model to reflect local patterns of use and need. As they expand, awardees emphasize the importance of maintaining core care principles and infrastructure to ensure that growth does not come at the expense of care quality.

Conclusion

The MOM Model demonstrates how states can advance integrated care for pregnant and postpartum individuals with OUD in Medicaid by aligning services with beneficiaries' full range of medical, behavioral and social needs. Across implementation sites, awardees developed

practical, patient-centered strategies to support engagement—embedding behavioral health and peer support into maternity care, tailoring treatment protocols in response to emerging drug trends and addressing stigma and fear of child welfare involvement. These adaptations underscore the importance of flexible, provider-driven approaches that strengthen continuity and foster beneficiary trust. At the same time, the experiences of MOM Model states show that sustaining integrated care requires early attention to sustainability, managed care engagement and policy alignment. For states working to design and scale maternal health programs, the MOM Model offers lessons for building care systems that are clinically responsive, fiscally grounded and able to adapt as needs evolve.

1. **Tailor care delivery to reflect the changing substance use landscape.**

   As fentanyl and polysubstance use became more common, successful sites adapted MOUD protocols (for example, microdosing, higher maintenance doses) and expanded provider training to ensure safe, responsive care.

2. **Integrate behavioral health and social supports into maternity care.**

   Embedding therapists, peer recovery coaches and care coordinators into perinatal teams helped address co-occurring mental health conditions and reduce barriers to engagement.

3. **Build trust by addressing stigma and child welfare fears directly.**

   Care teams that proactively explain reporting requirements and reframed POSC as supportive tools may see stronger beneficiary retention and reduced fear-based disengagement.

4. **Invest in peer recovery support services.**

   Peer staff play a critical role in building trust and modeling recovery, but sustainability required clear roles, emotional support and appropriate funding strategies to overcome Medicaid reimbursement gaps.

5. **Start sustainability planning early.**

   Awardees that initiated Medicaid financing conversations and pursued policy mechanisms (for example, SPAs or managed care contracts) early in implementation were better positioned to maintain services beyond the demonstration period.

6. **Cultivate internal champions across systems.**

   Leaders at multiple levels—including clinical, administrative and Medicaid agency staff—played a pivotal role in sustaining momentum, aligning the model with organizational priorities and embedding practices into routine care.

7. **Use data to demonstrate value.**

   Especially in states facing MCO pressure to prove return on investment, having mechanisms in place to track outcomes, engagement and cost offsets helped justify continued support.

These findings illustrate the complexity of treating OUD during and after pregnancy, especially as the care landscape continues to evolve. The evidence presented from this evaluation provides insight on how state awardees not only responded to the challenges presented in treating a highly complex population, but how similar models might maintain flexibility and incorporate lessons learned throughout the model implementation process and better set the stage for sustainable programming.

Chapter 4. Conclusion

As the evaluation period for the Maternal Opioid Misuse (MOM) Model ends, evaluation findings fall into four thematic areas: recognizing and removing barriers to care; care utilization trends among MOM Model beneficiaries; sustaining services; and scaling MOM Models up to expand the service population.

A. Recognizing and Removing Barriers to Care

System-level barriers to care, including fears of child protective services (CPS) and mistrust of the health care system, hinder enrollment. Despite focused outreach efforts, which have been somewhat effective, enrollment remains well below initial awardee projections. To address system-level barriers, awardees are strengthening relationships with CPS through two efforts: liaisons between MOM Model programs and CPS, and training for CPS workers that focuses on harm reduction, reducing stigma and encouraging compassionate practices. These efforts advance interagency collaboration and trauma-informed approaches to build trust and improve outcomes for MOM Model beneficiaries.

While flexibly structured care teams, wide-reaching staff engagement and education, trauma-informed support for providers and a local and direct approach to outreach have been effective in partial-state models, such efforts may be difficult or impossible to use among a fragmented system of individual providers. State Medicaid agencies and managed care plans may need to consider which incentives or policy levers are appropriate for transforming care in statewide models.

The MOM Model continues to serve a population with complex needs. More than half of MOM Model beneficiaries report at least one unmet need, such as for transportation, housing or food security, and many also have co-occurring behavioral health conditions like depression or anxiety. These factors influence beneficiaries' ability to utilize both prenatal care and medication for opioid use disorder care.

B. Care Utilization Trends Among MOM Model Beneficiaries

Beneficiaries report positive experiences with model services and value the MOM Model's comprehensive approach. Peer recovery specialists, care managers and community health workers help address medical, legal and social needs while fostering hope and self-belief. This holistic approach builds trust and ensures beneficiaries feel genuinely supported in their recovery.

Peer recovery coaches play a vital role in supporting pregnant and postpartum individuals with opioid use disorder (OUD). They provide socioemotional support and promote self-advocacy, enhancing care. Integration into clinical teams can be challenging because of role misunderstandings and high turnover, which some models address with training and peer-focused counseling. However, areas for improvement remain. Expanding and diversifying postpartum support services remains essential to reducing beneficiary disengagement after birth and promoting long-term recovery and well-being. Continued research is also needed to better understand the experiences and outcomes of non-enrolled beneficiaries and to identify best practices that can be applied across all care settings, ensuring access to high-quality maternal health care for all pregnant and postpartum individuals with OUD.

C. Sustaining Services

As MOM Model awardees focus on sustaining their programs, they must ensure long-term impact and effective growth. Maintaining strong partnerships with Medicaid agencies, managed care organizations and other health care providers is essential for building credibility, securing resources and integrating the model into existing systems. Awardees must also strengthen data-sharing capabilities to support coordinated, high-quality care and meet reporting requirements, particularly as they address interoperability issues across different electronic health record systems.

Awardees are working to sustain the MOM Model financially. They are using state plan amendments, managed care contracts and other funding sources, such as grants, to sustain MOM Model services, align with state priorities and secure reliable financial backing, especially as temporary grants phase out. One awardee is using their state's Opioid Abatement Council grants to expand into six rural counties, addressing transportation and childcare barriers for both new and existing beneficiaries. Three other awardees are using grants and managed care contracts to broaden their focus to serve pregnant and postpartum individuals with various substance use disorders (SUDs), not just OUD, to meet the primary SUD needs in their areas.

Awardees are adapting to an evolving SUD landscape. Beneficiaries present with substance use profiles that differ significantly from when the model began. Synthetic narcotics mixed with opioids increase overdose risks and complicate OUD treatment, especially with undetected fentanyl exposure. The MOM Model is educating clinicians on treating synthetic narcotics.

Awardees have made progress toward sustainability, but funding uncertainties and difficulty demonstrating return on investment persist.

D. Scaling Up MOM Models to Expand Service Populations

Awardees are expanding MOM Models to increase access to important services for the pregnant and postpartum population with OUD. This is a particularly pressing need in rural areas, where pregnant individuals must either rely on the few maternity care or SUD providers available locally or travel long distances. Expansion efforts include opening new clinics,

broadening populations served and securing funding to support growth. However, scaling efforts can raise some concerns about maintaining care quality because awardees attribute much of the MOM Model's success to having the right staff and providers in place. Striking the right balance between expanding reach and preserving quality will determine the model's long-term impact and sustainability.

E. Looking Forward

As of the end of 2024, the MOM Model has met most model goals. The MOM Model improved quality of care by overcoming barriers for enrollment and awardees complex needs through care integration, improved communication, decreasing fear and stigma, and building trust. Awardees worked to expand access by broadening populations served, opening new clinics, and training additional providers in best care practices. Unfortunately, the MOM Model has not met enrollment goals, due to the previously discussed barriers, which made cost savings analyses infeasible. Most awardees made progress in designing sustainable funding strategies that aligned with Medicaid requirements and local needs through SPAs, managed care contracts, alternative payment models, reimbursement strategies, and grants. Most awardee models have or will transition into fully sustained programs offering a greater integration of care to pregnant individuals with OUD.

Works Cited

American College of Obstetricians and Gynecologists (ACOG). (2017). Committee opinion no. 711: Opioid use and opioid use disorder in pregnancy. *Obstetrics and Gynecology*, *130*(2), e81–e94. https://doi.org/10.1097/AOG.0000000000002235

Angelotta, C., Weiss, C. J., Angelotta, J. W., & Friedman, R. A. (2016). A moral or medical problem? The relationship between legal penalties and treatment practices for opioid use disorders in pregnant women. *Women's Health Issues, 26*(6), 595–601. https://doi.org/10.1016/j.whi.2016.09.002

Baker, T. E., & Chang, G. (2016). The use of auricular acupuncture in opioid use disorder: A systematic literature review. *The American Journal on Addictions, 25*(8), 592–602. https://doi.org/10.1111/ajad.12453

Burduli, E., Landis, T., Brumley, C., Kenefick, L., Paulsgrove, K., Jones, H. E., Barbosa-Leiker, C., Brooks, O., Gartstein, M. A., & Saldana, L. (2025). Systemic barriers and stigma: Healthcare provider perspectives on perinatal and neonatal care in the fentanyl crisis. *Journal of Substance Use and Addiction Treatment, 172*. https://doi.org/10.1016/j.josat.2025.209644

Bureau for Medical Services (BMS). (2022). *Case management and care coordination roles and responsibilities* (BMS Provider Manual 521B.8). Bureau for Medical Services, West Virginia Department of Health and Human Resources. https://dhhr.wv.gov/bms/Provider/Documents/Manuals/Appendixes/Policy_Chapter%20521B.pdf

Centers for Disease Control and Prevention (CDC). (2024, April 16). *Opioid use disorder: Diagnosis*. Centers for Disease Control and Prevention. Retrieved on May 7, 2025, from https://www.cdc.gov/overdose-prevention/hcp/clinical-care/opioid-use-disorder-diagnosis.html

Centers for Medicare & Medicaid Services (CMS). (2019). *Maternal Opioid Misuse (MOM) Model* [Updated fact sheet]. Centers for Medicare & Medicaid Services. https://innovation.cms.gov/files/fact-sheet/mom-model-fs.pdf

Centers for Medicare & Medicaid Services (CMS). (2020). Medicaid and CHIP beneficiary profile: Maternal and infant health, December 2020. Center for Medicaid and CHIP, Centers for Medicare & Medicaid Services. https://www.medicaid.gov/medicaid/quality-of-care/downloads/mih-beneficiary-profile.pdf

Centers for Medicare & Medicaid Services (CMS). (2023). *Integrating care* [archived]. Retrieved on May 7, 2025, from https://web.archive.org/web/20241225234937/https://www.medicaid.gov/medicaid/long-term-services-supports/integrating-care/index.html

Colorado Department of Health Care Policy and Financing (HCPF). (2023). *Accountable Care Collaborative phase III concept paper*. https://hcpf.colorado.gov/sites/hcpf/files/2023%20ACC%20Phase%20III%20Concept%20Paper%209-7-23.pdf

Esposito, D., Simon, L., Tucker, M., Stangle, J., Moore, T., Hill, I., Courtot, B., Burroughs, E., & Witgert, K. (2021). *Maternal Opioid Misuse (MOM) Model: Pre-implementation design report*. Centers for Medicare & Medicaid Services.

Estabrooks, P. A., Gaglio, B., Glasgow, R. E., Harden, S. M., Ory, M. G., Rabin, B. A., & Smith, M. L. (2021). Use of the RE-AIM framework: Translating research to practice with novel applications and emerging directions. *Frontiers in Public Health*, *9*, 691526. https://doi.org/10.3389/fpubh.2021.691526

Franco-Rowe, C. Y., Lee-Winn, A. E., Williams, V. N., Lopez, C., Tung, G. J., & Allison, M. A. (2025). Perinatal healthcare experiences of pregnant and parenting people with a history of substance use disorder: A qualitative study. *BMC Pregnancy and Childbirth, 25*, 369. https://doi.org/10.1186/s12884-025-07473-8

Ganetsky, V. S., Krawczyk, N., & Kennedy-Hendricks, A. (2025). Medication for opioid use disorder and treatment retention among pregnant individuals. *JAMA Network Open, 8*(4), e256069. https://doi.org/10.1001/jamanetworkopen.2025.6069

Glasgow, R. E., Vogt, T. M., & Boles, S. M. (1999). Evaluating the public health impact of health promotion interventions: The RE-AIM framework. *American Journal of Public Health, 89*(9), 1322–1327. https://doi.org/10.2105/ajph.89.9.1322

Goodman, D. C., Ganduglia-Cazaban, C., Franzini, L., Stukel, T. A., Wasserman, J. R., Murphy, M. A., Kim, Y., Mowitz, M. E., Tyson, J. E., Doherty, J. R., & Little, G. A. (2019). Neonatal intensive care variation in Medicaid-insured newborns: A population-based study. *The Journal of Pediatrics*, 209, 44–51.e2. https://doi.org/10.1016/j.jpeds.2019.02.014

Goodman, D. J., Saunders, E. C., & Wolff, K. B. (2020). In their own words: A qualitative study of factors promoting resilience and recovery among postpartum women with opioid use disorders. *BMC Pregnancy and Childbirth, 20*, 178. https://doi.org/10.1186/s12884-020-02872-5

Juntereal, N. A., & Spatz, D. L. (2021). Integrative review of antenatal milk expression and mother–infant outcomes during the first 2 weeks after birth. *Journal of Obstetric, Gynecologic & Neonatal Nursing, 50*(6), 659–668. https://doi.org/10.1016/j.jogn.2021.07.003

Kwan, B. M., McGinnes, H. L., Ory, M. G., Estabrooks, P. A., Waxmonsky, J. A., & Glasgow, R. E. (2019). RE-AIM in the real world: Use of the RE-AIM framework for program planning and evaluation in clinical and community settings. *Frontiers in Public Health, 7*, 492438. https://doi.org/10.3389/fpubh.2019.00345

Leiner, C., Cody, T., Mullins, N., Ramage, M., & Ostrach, B. M. M. (2021). “The elephant in the room;” A qualitative study of perinatal fears in opioid use disorder treatment in Southern Appalachia. *BMC Pregnancy and Childbirth, 21*, 143. https://doi.org/10.1186/s12884-021-03596-w

Leonard, S. A., Kennedy, C. J., Carmichael, S. L., Lyell, D. J., & Main, E. K. (2020). An expanded obstetric comorbidity scoring system for predicting severe maternal morbidity. *Obstetrics and Gynecology*, *136*(3), 440–449. https://doi.org/10.1097/aog.0000000000004022

McCourt, A. D., White, S. A., Bandara, S., Schall, T., Goodman, D. J., Patel, E., & McGinty, E. E. (2022). Development and implementation of state and federal child welfare laws related to drug use in pregnancy. *The Milbank Quarterly, 100*(4), 1076–1120. https://doi.org/10.1111/1468-0009.12591

Peltier, M. R., Pegram, D. D., Chander, G., Weisner, C. M., McKee, S. A., Jones, H. E., & Chang, G. (2025). State policy variation in implementation of federal drug and child abuse laws and stigmatization of pregnant and postpartum individuals with opioid use disorder. *Journal of Women's Health, 34*(5), 613–621. https://doi.org/10.1089/jwh.2024.0638

Sommers, E., Vinjamury, S. P., & Noborikawa, J. (2021). Pain and opioid use: Evidence for integrating acupuncture into treatment planning. *Global Advances in Health and Medicine, 10*. https://doi.org/10.1177/21649561211042571

St. Louis, J., Barreto, T., Taylor, M., Kane, C., Worringer, E., & Eden, A. R. (2022). Barriers to care for perinatal patients with opioid use disorder: Family physician perspectives. *Family Practice, 39*(2), 249–256. https://doi.org/10.1093/fampra/cmab154

Stuyt, E. B., & Voyles, C. A. (2016). The National Acupuncture Detoxification Association protocol, auricular acupuncture to support patients with substance abuse and behavioral health disorders: Current perspectives. *Substance Abuse and Rehabilitation, 2016*(7), 169–180. https://doi.org/10.2147/sar.s99161

Substance Abuse and Mental Health Services Administration (SAMHSA). (2023). *Evidence-based, whole-person care for pregnant people who have opioid use disorder* (PEP23-02-01-002). https://archive.org/details/adv-whole-pregnant

Tsuda-McCaie, F., & Kotera, Y. (2022). A qualitative meta-synthesis of pregnant women's experiences of accessing and receiving treatment for opioid use disorder. *Drug and Alcohol Review, 41*(4), 851–862. https://doi.org/10.1111/dar.13421

Tucker, M., Harlaar, N., Stangle, J., Cassar-Uhl, D., Reischmann, P., Nelson, L., Esposito, D., Hill, I., Clemans-Cope, L., Courtot, B., Benatar, S., Johnston, E., Witgert, K., Hersey, C., & Pollack, S. (2024). *Evaluation of the Maternal Opioid Misuse (MOM) Model: Third Annual Report (Implementation Year 2)*. Centers for Medicare & Medicaid Services.

Weber, A., Miskle, B., Lynch, A., Arndt, S., & Acion, L. (2021). Substance use in pregnancy: Identifying stigma and improving care. *Substance Abuse and Rehabilitation, 12*, 105–121. https://doi.org/10.2147/SAR.S319180

Wolfson, L., Schmidt, R. A., Stinson, J., & Poole, N. (2021). Examining barriers to harm reduction and child welfare services for pregnant women and mothers who use substances using a stigma action framework. *Health and Social Care in the Community, 29*(3), 589–601. https://doi.org/10.1111/hsc.13335

Wouk, K., Caton, L., Bass, R., Ali, B., Cody, T., Jones, E. P., Caron, O., Luseno, W., & Ramage, M. (2024). Patient navigation for perinatal substance use disorder treatment: A systematic review. *Drug and Alcohol Dependence*, *260*. https://doi.org/10.1016/j.drugalcdep.2024.111324

Appendixes

Appendix A. Implementation Period Research Questions

The evaluation team pursued a variety of implementation-related research questions during Year 3 of implementation, including the following:

- Did MOM Model awardees and providers incorporate best practices and guidelines in their care for pregnant and parenting mothers with OUD and their infants?
- Were maternal outcomes improved (e.g., retention in treatment, lower emergency department use, reduced birth complications)?
    a. Were improvements experienced differently across subgroups of the population served?
- Were infant outcomes during birth hospitalization improved (e.g., shorter length at birth hospital; lower neonatal intensive care unit [NICU] admission; reduced rates of preterm birth, low birth weight, fetal or neonatal death; reduction of pharmacological treatment for neonatal opioid withdrawal syndrome)?
- Did maternal and infant health care costs decrease or remain stable (e.g., maternal ambulatory-sensitive inpatient, emergency department and residential care use; NICU admission/use)?
- Did MOM Model awardees adopt care coordination and care integration best practices (e.g., Substance Abuse and Mental Health Services Administration's "Collaborative Approach" framework)?
- Did pregnant/postpartum individuals with OUD receive a full array of medical, behavioral and mental health services and opioid agonist treatment as needed?
    a. Was there an adequate supply of providers to serve beneficiaries?
    b. Were all beneficiaries served impartially?
- Were referrals to needed social supports and services (e.g., housing, nutrition, intimate partner violence counseling/shelter) successfully achieved?
    a. Was there an adequate supply of social supports and services to serve beneficiaries?
    b. Were all beneficiaries served impartially?
- Were family outcomes improved (e.g., fewer infants placed in State custody)?
- Did States meet their program goals for self-funding their program moving forward?
    a. If not, what were the barriers to achieving milestones?
- Did states establish sustainable coverage/funding via Section 1115 waivers, state plan amendments and/or other mechanisms?

Appendix B. Evaluation Data Components and Methods

The MOM Model evaluation relies on a flexible, mixed-methods design that integrates multiple data sources, including qualitative case studies, beneficiary-level process data and program impact data. This appendix provides details on these activities.

A. Qualitative Case Studies

The qualitative component of the evaluation examines how MOM Model states designed and implemented their models of care. Qualitative data collection has documented best practices and lessons learned during the third year of model implementation, including, where possible, MOM Model beneficiaries' experiences. Qualitative case studies have also examined how each MOM Model awardee's program evolved from the pre-implementation period through 3 years of the implementation period. The case studies organize data collection and analysis to align with the following themes:

- **Model reach:** recruitment methods, MOM Model enrollment and the representativeness of model beneficiaries
- **Model implementation:** primary components of the model and variation in model implementation
- **Model sustainability:** the extent to which the model has become institutionalized and whether or how funding will be sustained
- **Beneficiary perspectives:** beneficiaries' experiences in the model with clinical staff and peer staff and how beneficiary experiences with care were different compared to previous care experiences
- **Lessons learned:** lessons learned from each of the previous themes, including possible lessons learned for future Innovation Center models

Data Collection

Qualitative data collection activities consisted of:

- Key informant interviews with the following stakeholders:
  a. MOM Model awardees
  b. Care delivery partner staff, including program managers, care coordinators, PRS and clinical staff
  c. Clinical partner staff, including maternity care and SUD treatment providers
  d. Community partner organizations
- Focus groups and Photovoice sessions with MOM Model beneficiaries[12]

[12] Due to the sensitive nature of data collection with people who have lived experience with OUD and our sensitivity to the use of potentially stigmatizing or triggering language, our team received trainings from health disparity experts and use previous knowledge gained from beneficiaries, providers and PRCs to design beneficiary data collection instruments using non-stigmatizing language.

The evaluation team developed all qualitative data collection instruments. Data collection activities occurred between April and July 2024. All site visits took place virtually using the teleconferencing platform Zoom. Facilitators obtained participants' informed consent and permission to audio record data collection activities before starting the discussion or observation. Table B.1 lists the type and number of data collection activities that occurred per awardee.

Table B.1. Type of Data Collection Activity per MOM Model Awardee

Data Collection Activity	Colorado	Indiana	Maine	New Hampshire	Tennessee	Texas	West Virginia
Key informants interviewed	8	22	19	16	13	24	28
Beneficiary focus group participants	-	5	3	7	4	8	4
Photovoice participants	-	-	1	-	-	-	-

Source: Westat analysis of MOM Model site visit data, April–July 2024

Key informant interviews provided detailed information on the implementation status to date and how beneficiaries experienced the model in Year 3 of implementation. MOM Model awardee staff assisted the evaluation team in recruiting key informants involved in implementing the MOM Model by sharing their contact information with the team. Interviews ranged from 60 to 90 minutes, and topics discussed are listed by key informant type in Table B.2.

Focus groups and one-on-one interviews were held with beneficiaries to understand how they learned about the program and how they experienced the services and care they received through the MOM Model. All focus groups lasted approximately 90 minutes. The team discussed a range of topics with beneficiaries, such as a normal day in their life, including positive and negative issues that can affect their day; their impressions of the MOM Model; experience receiving opioid use treatment during pregnancy and/or postpartum; and interactions with MOM Model providers.

Photovoice, a community-based participatory research method, supplemented information gathered through focus groups and interviews with beneficiaries. Because of privacy concerns with low enrollment numbers in some states, the evaluation team only conducted Photovoice in one state with one beneficiary. Two Photovoice activities took place over 2 weeks through the Zoom platform. A 30-minute virtual training preceded a 60-minute Photovoice session. The beneficiary shared pictures they took that represent what makes it easier or more difficult for them to receive care for themselves and their infant.

For the three patient-focused data collection activities (i.e., focus groups, interviews, Photovoice), the evaluation team shared recruitment materials, such as site-specific flyers and recruitment scripts, with provider staff to highlight the purpose of the activity. These materials also noted that participation was voluntary and discussions with the evaluation team were confidential.

Provider staff obtained beneficiaries' consent to share their contact information with the evaluation team. Once the team received beneficiary consent to contact, team members contacted beneficiaries, screened them for eligibility and shared meeting days and times with eligible and interested beneficiaries. As a thank-you to beneficiaries for their participation in focus groups, interviews and Photovoice sessions, each received a gift card for $50.

Table B.2. Qualitative Case Study Topics Explored by Key Informant Type

Project Officer	Awardee	Care Delivery Partner	Care Coordinator	Peer Recovery Coach	Program Manager	Maternity Care Provider	SUD Provider	Community Partner
▪ Status of Model implementation activities ▪ Ongoing efforts to establish sustainable funding ▪ Lessons learned	▪ Anticipated program outcomes ▪ Sustainability: MOM Reimbursement and Institutionalization ▪ MOM Model structure and partnerships ▪ Outreach, enrollment, screening ▪ Model interventions and service delivery ▪ Lessons learned	▪ Anticipated program outcomes ▪ Sustainability: MOM Reimbursement and Institutionalization ▪ MOM Model structure and partnerships ▪ Outreach, enrollment, screening ▪ Model interventions and service delivery ▪ Lessons learned	▪ Model intervention and service delivery ▪ Relationship with Child Protective Services ▪ Approach ▪ Lessons learned	▪ Model intervention and service delivery ▪ Relationship with Child Protective Services ▪ Anticipated program outcomes ▪ Lessons learned	▪ Enrollment, intake and assessments ▪ Retention ▪ Changes to Model intervention ▪ Services provided to beneficiaries ▪ Care coordination ▪ Peer recovery services ▪ Relationship with Child Protective Services ▪ Anticipated program outcomes ▪ Lessons learned	▪ Service delivery and clinical best practices ▪ Sustainability	▪ Service delivery and clinical best practices ▪ Sustainability	▪ Awardee and partner relationship ▪ Enrollment, intake and assessment ▪ Model intervention and service delivery ▪ Beneficiary characteristics ▪ Relationship with Child Protective Services ▪ Anticipated program outcomes ▪ Lessons learned

Source: Westat MOM Model evaluation data collection protocols, February 2024

Data Analysis

Prior to data collection, the team updated a standard outline and template for the case study report to be used by all qualitative team members. This outline ensured reporting was consistent and comprehensive across awardees by outlining specific topics that should be addressed.

Throughout data collection, members from each case study team reported findings biweekly at all-team meetings. These conversations helped teams identify potential challenges and gaps in data collection and analysis while site visits were still ongoing. During data collection, case study teams cleaned all notes in preparation for analysis. The analysis was an iterative process of reviewing notes from discussions with key informants and beneficiaries to identify key themes that emerged based on data collected. Analysts involved in data collection coded notes in Dedoose qualitative coding software following a flexible coding scheme that aligns with the RE-AIM framework and domains that crosswalk with the evaluation research questions. The team used Dedoose to query the coded qualitative data in the database for similar types of information based on key research questions and sources of data (e.g., key informant types, focus groups, Photovoice).

Westat trained all coders on the study coding scheme and reviewed double-coded sets of samples of notes with each coding team (one per organizational partner) to resolve any discrepancies. The coding scheme enabled the team to incorporate emergent themes during data collection and analysis. During analysis, the team noted consistency and divergence in those themes and used them to build detailed sub-outlines for each section of the case study report template.

B. Beneficiary-level Process Data Evaluation

Awardee-reported process data provide information on the characteristics of MOM Model beneficiaries and the services they receive. These data describe the population and are integrated with findings from the qualitative and impact components of the evaluation. In addition to providing timely information for semiannual reports, these data were used to refine impact analysis design, contextualize findings and assist in the development of qualitative protocols.

Data Collection

MOM Model awardees have flexibility in how they collect beneficiary-level data. For example, guidance documents indicate they may use any data source that contains the necessary information for a process data element and is available for the reporting deadline. Awardees are permitted to add or revise process data for up to 1 year after submission. Awardees are expected to use the same data collection method among all care delivery partners and providers within the state to ensure consistency in reporting. Once collected, awardee staff and/or care delivery partner staff are responsible for preparing and submitting data files. The MOM Model Implementation & Monitoring (I&M) and Learning System contractors have developed training materials and webinars to provide technical assistance and support to awardees as they undertake the data collection and reporting process. The evaluation team supports these efforts in coordination with the other contractors by contributing to training materials and guidance documents and participating in webinars and one-on-one technical assistance calls with awardees.

Data Components

The beneficiary-level process data include two types of data elements collected by awardees: reporting requirement data elements and evaluation data elements. Awardees collect and submit data to meet MOM Model reporting requirements as specified in the original funding opportunity announcement and as a condition of the contract award. These data address MOM Model requirements, support monitoring of the intervention, enable calculation of performance milestones and payments, and are included in the MOM Model evaluation. Importantly, awardees are required to report these data elements for all MOM Model beneficiaries for successful data submission. Required data elements cover topics such as:

- Enrolled beneficiary participation dates, demographic characteristics, pregnancy characteristics and OUD and pharmacotherapy history
- Encounter-level services provided as part of the MOM Model
- HRSNs screening categories assessed and results
- Depression screening records
- Tobacco screening records
- Pregnancy outcomes, including birth outcomes, length of hospitalization for mother and infant, infant opioid screening and nonmedical out-of-home placements

Awardees also collect data elements to support the MOM Model evaluation. These evaluation-specific data elements are critical to the model's evaluation, but they are not required to be reported by awardees for successful data submission. The distinction between reporting requirement data elements and evaluation data elements has implications for data quality, as discussed in the section that follows. The evaluation team analyzed both types of data elements as part of the process evaluation.

Data Quality

The process data included in this annual report are limited in depth and scope by the amount and quality of data the evaluation team receives. The data MOM Model awardees are required to submit to meet the MOM Model milestones are complete. However, awardees continue to encounter challenges with their data collection efforts and, as a result, some measures have high rates of missing data. Several elements designed to support a robust evaluation are missing for at least one-quarter of enrolled beneficiaries. For instance, anxiety screening data are missing for 38% of beneficiaries, and data on current alcohol use are missing for 36% of beneficiaries. Human immunodeficiency virus (HIV) and hepatitis C screening data are missing for 43% and 42% of beneficiaries, respectively. Percentages reported in the text of this report are among beneficiaries with nonmissing data for a given measure; appendix tables and footnotes provide details about the universe and the quality of the data presented, including rates of missing data for each element.

To protect the confidentiality of MOM Model beneficiaries, particularly among awardees with few beneficiaries enrolled, the data in the body of this report are presented in aggregate across the seven reporting awardees.

The evaluation team developed protocols to assess the quality of process data for each awardee submission, which are described in detail in Appendix D.2. These protocols go beyond the initial quality checks built into the data collection process, such as file failures if required

information is missing, and are distinct from the data quality check protocols developed and used by the I&M contractor, which the evaluation team reviewed during the development of data quality protocols. Broadly, most data quality checks are designed to identify illogical or improbable data values. Illogical data values are most likely to occur in multiselection categorical variables (e.g., when a beneficiary has multiple selections for types of care coordination received, but one selection was "None of the above"). Improbable data values are most likely to occur when dates are out of range. For instance, if a beneficiary has an encounter measure listed on a date prior to their enrollment in the program, it would be an improbable value. In addition to the data quality checks, rates of item nonresponse are reported for each data element. Item nonresponse occurs when beneficiary information is available for some but not all data elements.

Data Analysis

The evaluation team conducted several steps to analyze process data. First, process data elements were mapped to RE-AIM domains and MOM Model research questions, as described in Table B.4. Second, after assessing data quality, the evaluation team produced awardee-level estimates for each data element. For some elements, this process required defining the universe for the analysis. For example, the analysis of prior birth experiences is limited to beneficiaries who report a prior birth. The team reported most estimates as categorical percentages that sum to 100%. For data elements that allowed for more than one response per beneficiary, categorical percentages sum to more than 100%. Mean, median, minimum and maximum values are reported for noncategorical data elements, such as the number of cigarettes smoked and number of encounters. To protect confidentiality of MOM Model beneficiaries, the team suppressed estimates based on fewer than 11 beneficiaries in the numerator.

The body of the report includes selected estimates that were highlighted based on data quality, relevance to the implementation of the MOM Model, and contribution of new information. For example, much of the process data in this annual report describe the characteristics of MOM Model beneficiaries because this high-quality information is not available elsewhere and provides important insight into the unique needs of MOM Model beneficiaries. Process data are also used to assess awardees' fidelity to best practices.

The process data evaluation also leveraged beneficiary-reported data to highlight differences among certain data elements. The first step toward addressing the differential impacts of beneficiary experiences is to identify where those differential impacts exist. We All Count (WAC) scores, developed by We All Count[13] is a tool to examine data differences in data science, and offers an opportunity to disaggregate data and generate a scale of differential impact for a particular indicator with a factor of difference between the highest and lowest subgroup rates for that indicator. A score of or near 1.0 implies that few differential impacts are apparent in the data, while higher scores indicate differences in experiences among groups in the population of interest.

WAC scores are not hypothesis-driven, statistical estimates or inferential; they are descriptive representations of experiences for subgroups of a population, illustrating the degree to which experiences differ between subgroups. With the information the WAC scores provide, programs can observe and track the extent to which experiences are similar and different for varied subgroups. They are calculated by the following process: (1) to show the overall rate of an indicator, it is calculated for the entire population; (2) the rates are calculated for that indicator for each subgroup of interest; and (3) the highest rate is divided by the lowest rate, yielding the WAC score.

[13] See https://weallcount.com/2019/10/22/supercharge-your-averages-with-an-equity-gap-score/

Table B.3. Evaluation-Specific Data Elements

Data Element Name	Description
HEALTH_INS_PREPREG	Health care coverage before beneficiary became pregnant
ABUSE_EXPERIENCE	Types of abuse ever experienced by beneficiary (sexual abuse, physical abuse, emotional abuse, transactional sex)
PRIOR_CHILD_PLACED	Indicator for whether beneficiary's prior children have ever been placed outside of home
RELATIONSHIP_STATUS	Beneficiary's current relationship status
HIGH_SCHOOL_OR_GED	Indicator for whether beneficiary obtained high school diploma or General Education Development (GED) test
SUBSTANCE_USE_RECENT	Indicator for whether beneficiary used following substances in last year: alcohol, cigarettes or other tobacco, vaping, cannabis, amphetamines or benzodiazepine
YOUNG_ONSET_SUBSTANCE_USE	Indicator for whether beneficiary first used following substances before age 18: alcohol, cigarettes or other tobacco, vaping, cannabis, opioids, amphetamines or benzodiazepine
PRIOR_BIRTH_DATE	Date of most recent prior birth
PRIOR_BIRTH_EXPERIENCE	Outcomes from prior pregnancies (premature birth, low birth weight, stillbirth, neonatal opioid withdrawal syndrome [NOWS], other)
PRIOR_PREG_RISK	Pregnancy risk factors during prior pregnancies (e.g., preeclampsia, gestational diabetes, gestational hypertension, HELLP syndrome, hemorrhage)
OUDTREATMENT_TYPE_POSTPARTUM	Pharmacotherapy type during beneficiary's postpartum period (none, buprenorphine, naltrexone, methadone, other)
LABOR_PAIN_MANAGEMENT	Pain management during labor (epidural, intravenous narcotics, other, none)
DELIVERY_METHOD	Beneficiary's delivery method (vaginal, induced, augmented, vaginal birth after cesarean [VBAC], emergency C-section, planned C-section)
POSTPARTUM_CONTRACEPTION	Contraception plan during postpartum period (none, natural family planning, pullout method, barrier or spermicide, hormonal, injectable, long-acting reversible contraception [LARC], tubal ligation, other)
PRIOR_BIRTH	Indicator for whether beneficiary had prior birth
INFANT_PHARMA_TREATMENT	Infant pharmacotherapy treatment (for NOWS)
INFANT_FEEDING	Infant feeding method postpartum (breastfeeding, pumping, both breastfeeding and pumping, supplementing with formula, formula only)
ALCOHOL_USE	Number of alcoholic drinks beneficiary consumed in average week during last month (14+, 8–13, 4–7, 1–3, < 1, did not drink)
CIGARETTES_NUM	Number of cigarettes beneficiary smoked per day (0–180)
ANXIETY	Anxiety screening result (none, mild, moderate, severe)
DEPRESSION_SCREENER_USED	Depression screener used (at each screening)
DEPRESSION_SCREENER_SCORE	Depression screening result (score of screener)

Note: HELLP = hemolysis, elevated liver enzymes, low platelet count
Source: Westat MOM Model evaluation required data elements, 2022

Table B.4. Process Evaluation Constructs and RE-AIM Domains, Data Elements and Research Questions

Construct and RE-AIM Domain	Data Elements	Research Question
Demographics/ Reach	▪ Age ▪ Relationship status ▪ Educational attainment ▪ Health care coverage before pregnancy	▪ What are the characteristics of MOM Model beneficiaries?
Mental Health/ Reach	▪ Depression screening result ▪ Depression screen follow-up plan ▪ Anxiety screening result ▪ Other mental or behavioral health diagnoses ▪ Beneficiary history of abuse and transactional sex ▪ Dementia or cognitive impairment	▪ Did pregnant/postpartum individuals with OUD receive a full array of medical, behavioral and mental health services and opioid agonist treatment as needed? Was there an adequate supply of providers to serve beneficiaries? ▪ Were beneficiaries from different subgroups screened for needs and/or conditions equally? Were the full array of medical, behavioral and mental health services and opioid agonist treatment services provided to all subgroups equally? Did beneficiaries from all subgroups receive needed care and support services equally?
Physical Health/ Reach	▪ Chronic conditions ▪ HIV indicator ▪ Hepatitis C indicator	▪ Did pregnant/postpartum individuals with OUD receive a full array of medical, behavioral and mental health services and opioid agonist treatment as needed? Was there an adequate supply of providers to serve beneficiaries? ▪ Were beneficiaries from different subgroups screened for needs and/or conditions equally? Were the full array of medical, behavioral and mental health services and opioid agonist treatment services provided to all subgroups equally?
Substance Use/ Reach, Adoption, Implementation	▪ Tobacco use ▪ Tobacco intervention ▪ Number of cigarettes ▪ Change in number of cigarettes ▪ Alcohol use ▪ Substance use past year ▪ Substance use prior to age 18	▪ What are the characteristics of MOM Model beneficiaries? ▪ Did pregnant/postpartum individuals with OUD receive a full array of medical, behavioral and mental health services and opioid agonist treatment as needed? Was there an adequate supply of providers to serve beneficiaries? ▪ Were beneficiaries of different subgroups groups screened for needs and/or conditions equally? Were the full array of medical, behavioral and mental health services and opioid agonist treatment services provided equally? Did beneficiaries from different subgroups receive needed care and support services equally?

Construct and RE-AIM Domain	Data Elements	Research Question
Social Determinants of Health/Reach	▪ Housing needs ▪ Food security ▪ Transportation needs ▪ Utilities ▪ Family ▪ Safety	▪ Were referrals to needed social supports and services (e.g., housing, nutrition, intimate partner violence counseling/shelter) successfully achieved? Was there an adequate supply of social supports and services to serve beneficiaries? ▪ Were beneficiaries in different subgroups screened for needs equally? Were the full array of medical, behavioral and mental health services and opioid agonist treatment services provided equally? Did beneficiaries of different subgroups receive needed care and support services equally?
Service Use/ Adoption, Implementation	▪ Prenatal encounters ▪ Postpartum encounters ▪ Prenatal hospital admissions ▪ Postpartum hospital admissions ▪ OUD encounters ▪ Prenatal provider type ▪ Postpartum visit indicator ▪ Postpartum visit practitioner type ▪ Visits with other providers ▪ Referral receipt ▪ Referral status ▪ Referral type ▪ Referral completed ▪ Referral completed type ▪ Receipt of care coordination activities ▪ Frequency of care coordination activities ▪ Beneficiary Activation Measure score ▪ Family planning indicator ▪ Postpartum contraception ▪ Engagement outreach (for lost to follow-up)	▪ Were referrals to needed social supports and services (e.g., housing, nutrition, intimate partner violence counseling/shelter) successfully achieved? Was there an adequate supply of social supports and services to serve beneficiaries? ▪ Did MOM Model awardees adopt care coordination and care integration best practices (e.g., Substance Abuse and Mental Health Services Administration's "Collaborative Approach" framework)? ▪ Did pregnant/postpartum individuals with OUD receive a full array of medical, behavioral and mental health services and opioid agonist treatment as needed? Was there an adequate supply of providers to serve beneficiaries? ▪ Were beneficiaries of different subgroups screened for needs and/or conditions equally? Were the full array of medical, behavioral and mental health services and opioid agonist treatment services provided equally? Did beneficiaries of different subgroups receive needed care and support services equally?
OUD Treatment/ Adoption, Implementation	▪ Prior OUD treatment during current pregnancy ▪ Prior inpatient OUD treatment (ever) ▪ Pharmacotherapy initiation ▪ Pharmacotherapy type at initiation ▪ Pharmacotherapy type at delivery ▪ Pharmacotherapy type postpartum ▪ Relapse indicator ▪ OUD encounter types received ▪ OUD treatment service types received ▪ Treatment plan at Model exit	▪ Did pregnant/postpartum individuals with OUD receive a full array of medical, behavioral and mental health services and opioid agonist treatment as needed? Was there an adequate supply of providers to serve beneficiaries? ▪ Were beneficiaries s of different subgroups screened for needs and/or conditions equally? Were the full array of medical, behavioral and mental health services and opioid agonist treatment services provided equally? Did beneficiaries of different subgroups groups receive needed care and support services equally?

Construct and RE-AIM Domain	Data Elements	Research Question
Pregnancy Conditions/ Reach	▪ Prior birth ▪ Prior birth experiences ▪ Prior pregnancy health risk factors ▪ Prior out-of-home placement ▪ Multifetal gestation ▪ Prenatal condition types	▪ Were maternal outcomes improved (e.g., retention in treatment, lower emergency department use, reduced birth complications)? ▪ Did beneficiaries of different subgroups experience different rates of pregnancy conditions?
Maternal Outcomes/ Effectiveness	▪ Pregnancy outcome ▪ MOM Model beneficiary death ▪ Maternal length of stay (LOS) (delivery) ▪ Labor pain management ▪ Delivery method	▪ Were maternal outcomes improved (e.g., retention in treatment, lower emergency department use, reduced birth complications)? ▪ Were family outcomes improved (e.g., fewer infants placed in State custody)? ▪ Did maternal outcomes vary across beneficiaries of different subgroups? Were observed changes in outcomes experienced equally across all subgroups?
Infant Outcomes/ Effectiveness	▪ Hospital LOS (delivery) ▪ NICU at delivery ▪ NICU LOS at delivery ▪ Estimated gestational age ▪ Birth weight ▪ Positive opioid screen ▪ NOWS indicator ▪ Infant pharmacotherapy treatment for NOWS ▪ Out-of-home placement ▪ Infant feeding	▪ Were infant outcomes during birth hospitalization improved (e.g., shorter length of birth hospital stay; lower NICU admission; reduced rates of preterm birth, low birth weight, fetal or neonatal death)? ▪ Were family outcomes improved (e.g., fewer infants placed in State custody)? ▪ Did infant and family outcomes vary across beneficiaries of different subgroups? Were observed changes in outcomes equal across groups?

Source: Westat MOM Model evaluation design, October 2021

A. Impact Evaluation

The goal of the impact evaluation is to develop and provide descriptive outcomes data that can help build a narrative around the successes, challenges and lessons learned from the MOM Model. These analyses use two primary administrative data sources in the assessment of MOM Model population characteristics and analyses of outcomes: the CMS T-MSIS and state vital records.

Measures

Study sample characteristics are created from T-MSIS and, when available, vital records data. Variables describing sample characteristics will be used for a variety of purposes, including descriptive analyses and as characteristics for matching MOM Model enrolled beneficiaries to non-enrolled beneficiaries. These variables include demographic characteristics, maternal health characteristics and Medicaid enrollment information. The study team has also collected information from awardees on county-level opioid use treatment provider availability over time, which is used in matching.

For some demographic characteristics, such as age, both T-MSIS and vital records offer information, but vital records data are known to be of higher quality on overlapping variables. Therefore, the team will use vital records when available to assess T-MSIS data quality for

MOM Model awardee states and fill in missing T-MSIS data when available. Vital records data have been obtained thus far for four awardees: Colorado, Maine, New Hampshire and Texas. Preliminary analysis of consistency between these data and the matched T-MSIS claims for MOM Model eligible beneficiaries suggests reasonable agreement. As further vital records data become available, the evaluation team will continue to assess the extent to which missing T-MSIS data can be supplemented by vital records. The team will also assess the consistency of values on common variables between the two data sources.

Core outcome measures of health outcomes are obtained from state Medicaid program data reported in T-MSIS data (Table B.5). Some outcomes (e.g., number of prenatal care visits) will use vital records data when available, and T-MSIS data otherwise. As subgroup sample sizes permit, the team can also assess differences in outcomes across certain subgroups of interest; these are described later in this Appendix.

Table B.5. Core Outcome Measures for MOM Model Descriptive Outcome Analyses

Outcome	Prenatal	Birth	Postpartum	Description and Notes
Prenatal care visits[a]	●			Average monthly number of visits during the prenatal period; requires vital records data
Medication use for OUD	●	●	●	Proportion of individuals with any use of methadone, buprenorphine or naltrexone; will examine descriptive data for any use of methadone or buprenorphine alone
MOUD 3-month continuity[b]	●		●	Proportion of individuals with at least 3 consecutive months of MOUD prescriptions filled
Maternal ED visits	●		●	Proportion of individuals with two or more emergency department (ED) visits
C-section		●		Proportion of individuals that had a C-section
Postpartum care visits			●	Proportion of beneficiaries with at two or more visits in the 11 months after birth
Severe maternal morbidity		●	●	Average score on the Obstetric Comorbidity Scoring System (excluding blood transfusions)[c]

[a] This outcome is created from vital records data where available and otherwise from T-MSIS data.

[b] While 6-month continuity is more commonly used for maternal populations without OUD, we prefer a 3-month continuity measure for the MOM Model impact analysis because continuity rates are low among MOM Model enrolled beneficiaries and comparison group members.

[c] Source: Leonard et al., 2020.

Appendix C. Implementation Period Qualitative Themes and Key Findings

The evaluation team categorized high level findings from qualitative activities that occurred between 2021 and 2024. These findings are summarized in the following tables by key theme.

Theme	Key Findings
Topic: Peer recovery coaches	
Overview of Peer Recovery Support Services in the MOM Model	▪ All MOM Models incorporate peer recovery support services into its care integration approach by incorporating peer staff directly into models of care or referring beneficiaries to peer services at partner organizations. ▪ The MOM Model is one of the first large-scale interventions to incorporate peer staff to support pregnant and postpartum individuals with OUD. ▪ Most MOM Model peer staff identified as individuals in recovery for OUD or another SUD. ▪ Requirements to be hired as a peer recovery coach varied by model, with most models requiring the peer staff have lived experience with SUDs and some requiring processional certification. ▪ Peer recovery support services were similar across models, with peer staff normally assisting with care coordination, advocacy for beneficiaries and connecting beneficiaries with community-based support resources to address HRSNs.
Beneficiary and Provider Perspectives on Peer Staff in the MOM Model	▪ Interview respondents highlighted several key benefits associated with incorporating peer staff into MOM Model interventions, including: - Peer staff acted as beneficiary advocates, champions and role models - Peer staff offered continuous, reliable and consistent touchpoints with beneficiaries - Peer staff helped to support other MOM Model providers - Peer staff helped to improve overall care delivery - Peer staff significantly helped to reduce stigma beneficiaries faced while receiving integrated care for their OUD ▪ Peer staff helped build rapport and foster supportive environments with beneficiaries to ensure beneficiaries were comfortable sharing information about their needs, were able to advocate for themselves, were able to share their treatment preferences, and experienced less stigmatizing care. ▪ Peer staff are seen as an emerging best practice as part of integrated care approaches for pregnant and postpartum individuals with OUD. ▪ Peer staff leveraged lived experience to provide empathetic socioemotional support, reinforce self-advocacy and complement clinical care through recovery counseling.
Challenges to Integrating Peer Staff into MOM Models	▪ Many MOM Models experienced significant challenges billing Medicaid for peer recovery support services, although Medicaid regulations on peer recovery support service reimbursements varies by State. ▪ Peer recovery staff had a significant turnover rate for various reasons, including difficulty integrating into a clinical setting, low pay, unpredictable working hours and burnout. ▪ Peer staff in many models were misunderstood and undervalued by clinical providers, making them feel uncomfortable and confused about their role and responsibilities. ▪ Peer staff in most models lack support to continue and advance in their careers, including appropriate supervision, support for emotional stress and opportunities to develop professionally.

Theme	Key Findings
Topic: Beneficiary voices	
Perspectives on MOM Model Outreach and Enrollment	▪ The seven MOM Model awardees adopted different approaches to model outreach and enrollment. Most states created mechanisms for beneficiaries to "self-refer" to their MOM programs by calling a dedicated phone number advertised on flyers or social media, for example. - The enrollment process for all states involved at least one discussion between beneficiaries and MOM Model staff, where the MOM representative described the program and its benefits, answered beneficiary questions and obtained consent for enrollment. - Most of the beneficiaries the evaluation team spoke with enrolled in the model while pregnant, though some did not enroll until after they had given birth. ▪ MOM Model beneficiaries described first learning about the program from various sources such as obstetric and behavioral health providers, case managers, CHWs, PRSs, social service agencies or enrolled friends. - When beneficiaries were asked about their initial impressions of the MOM program and what influenced their decisions to enroll, most described positive impressions; some beneficiaries said they chose to enroll because they thought the MOM program would provide opportunities for a healthier pregnancy and better start for their newborn. ▪ A smaller number of beneficiaries were apprehensive about participating in the program, expressing concern that MOM enrollment could lead to child welfare agency involvement and a risk of losing custody of their child(ren). - The evaluation only included interviews with enrolled beneficiaries, it is unknown the degree to which fear and stigma-related concerns may have influenced peoples' decisions not to enroll in the MOM Model. - Beneficiaries who said they were unsure about enrolling in MOM also shared concerns related to past stigmatizing experiences and mistrust of the health care system more generally. - Among those enrolled beneficiaries interviewed, they universally said that they were glad they had joined the program. ▪ MOM beneficiaries consistently described program enrollment as smooth and easy. Initial enrollment discussions often involved a screening component after the beneficiary consented to enroll, whereby MOM Model staff used a validated screening tool (such as the 4Ps[14]) to assess beneficiary health and HRSNs, a model screening requirement. - Some beneficiaries felt that taking similar screenings multiple times across different providers felt traumatic because they had to revisit and discuss prior negative experiences with substance use disorder. - In contrast, other beneficiaries acknowledged the redundancy of MOM program screenings and discussions but felt comfortable discussing these topics again with MOM Model staff because it showed the staff cared about their needs and could help address them.

[14] The 4Ps is a five-question screen specifically designed to quickly identify obstetrical patients in need of in-depth assessment or follow up monitoring (ACOG, 2017).

Theme	Key Findings
Perspectives on MOM Model services	▪ Most beneficiaries said they especially benefited from support provided by MOM Model care managers or coordinators, peer recovery specialists and CHWs. - They shared many specific positive experiences of how care managers and CHWs connected them with dental and mental health care providers or helped secure housing, Special Supplemental Nutrition Program for Women, Infants and Children and Supplemental Nutrition Assistance Program benefits, transportation and baby supplies. - Beneficiaries appreciated the model's holistic focus, describing how it addressed needs well beyond maternity care and OUD treatment such as how MOM Model staff helped them pay utility bills and fill out job applications, reminded them about appointments, explained insurance benefits, visited them in the hospital after birth and attended court hearings on their behalf. - When they discussed interactions with MOM Model peer recovery specialists, beneficiaries emphasized the importance of receiving support from someone with a shared lived experience who understood their recovery journey. ▪ Some beneficiaries spoke positively about elements of their maternity and OUD treatment that are associated with evidence-based best practices. The experiences they shared, for instance, suggest that their providers worked closely as an interdisciplinary team to care for them, used a multimodal pain management approach during labor and delivery, applied Eat, Sleep, Console care and encouraged rooming-in, skin-to-skin contact and breastfeeding with their newborn. ▪ Others described feeling stigmatized by their maternity care providers, reporting that clinicians and front office staff treated them poorly because they had OUD and were receiving MAT. Most commonly, they shared experiences of stigmatizing behavior at hospitals, including during labor, birth and their postpartum hospital stay. ▪ For beneficiaries with previous non-MOM enrolled pregnancies, nearly all believed their care under MOM was superior to that received during previous pregnancies. Compared with care not affiliated with the MOM Model, beneficiaries described the MOM Model care as more patient-centered, less stigmatizing and more focused on coordinated care and psychosocial support.
Barriers to OUD Recovery	▪ MOM Model beneficiaries identified stigma as one of the most persistent and significant barriers to recovery from OUD. They shared how health care and other service providers, family, friends and others with substance use disorder treat them in a judgmental and stigmatizing manner. Such stigma can influence beneficiaries' access to and experiences with care, complicating the journey to recovery. ▪ Beneficiaries spoke about how constantly facing temptation and interacting with family and friends who had active substance use disorders made recovery more challenging. ▪ Photovoice participants also described interactions with law enforcement that treat substance use disorder as a crime rather than an illness, sharing stories of how this approach hindered recovery.
Facilitators of OUD Recovery	▪ When discussing aspects of their lives that facilitated recovery, beneficiaries shared how pregnancy and parenting motivated them to seek or continue OUD treatment. Some said that their decision to enroll in the MOM Model was based on a desire to provide a good life for their children. ▪ Several Photovoice participants shared images of their babies and described the courage born from realizing their baby's well-being depended on the success of their recovery. ▪ Beneficiaries also expressed that believing in themselves and having hope for the future were critical to their recovery journey. Some tied this self-confidence to the support of peers (e.g., peer recovery specialist services, peer support group) who had lived experience with substance use disorder and had faced similar struggles on the journey to recovery.

Theme	Key Findings
Implications for Medicaid and Health Care Delivery Partners	▪ Programs and providers serving pregnant and parenting people with OUD highlighted a few best practices discovered related to verbal intake and service delivery screening tools: - Whenever possible (and with beneficiary consent) programs can securely share screening results with each other, to prevent beneficiaries from undergoing redundant screenings. - Providers and program staff responsible for the screenings can also consider using trauma-informed approaches when conducting the screenings and educate beneficiaries on why and how they are a part of beneficiary care. ▪ Care coordination is a critical component of an integrated approach to serving pregnant and parenting people with OUD. Many beneficiaries identified care coordination as the MOM Model service they benefited from the most. This was true across awardees and among programs that adopted different approaches to implementing the service, suggesting there is no one "right way" to deliver this type of care; beneficiaries felt especially supported when the service involved a consistent staff person to build a trusting relationship with and when the service focused on the whole person, addressing both health and psychosocial needs. ▪ Beneficiaries identified stigma as a major factor discouraging them from accessing care and making their recovery from OUD more difficult. Successfully addressing this barrier requires a multipronged approach, combining (for instance), anti-stigma provider training, peer-to-peer knowledge sharing and public outreach and information campaigns. Anti-stigma efforts focused on health systems and providers could include clinical and administrative staff that engage with beneficiaries throughout the care continuum.
Topic: Changing opioid landscape	
Substance use trends	▪ Providers in all MOM Model states reported a rise in fentanyl exposure among their pregnant and postpartum beneficiaries. However, providers in most States also reported that the majority of their beneficiaries are exposed to fentanyl unknowingly through other laced-substances.
The impact of fentanyl on OUD treatment	▪ Some providers shifted their OUD treatment strategies to address increased exposure to fentanyl among MOM Model beneficiaries. However, providers reported that clinicians who are not used to treating pregnant beneficiaries with OUD are likely to face even greater challenges than clinicians with this experience when treating fentanyl-exposed beneficiaries. ▪ Providers from some MOM Model states reported having to send lab tests off-site to test for fentanyl. This resulted in varying delays in receiving lab results, making developing timely treatment plans for beneficiaries exposed to fentanyl difficult for providers. - A few providers indicated that the MOM Model's integrated care approach, including combinations of services such as MAT, counseling and peer services, helped alleviate delays in treatment planning associated with off-site fentanyl lab results by supporting beneficiaries in ways other than MAT. ▪ Administrators and providers from many MOM Model states shared that, although the changing opioid landscape complicates treatment planning for beneficiaries, many MOM Models featured specialized providers, resources, or organizational partnerships that helped providers become better informed on how to treat pregnant individuals who test positive for fentanyl.

Appendix D. MOM Model Evaluation Beneficiary-level Process Data

July 1, 2021 – December 31, 2024

This document presents a full set of tables based on the beneficiary-level process evaluation data submitted by eight MOM Model awardees (Colorado, Indiana, Maine, Maryland, New Hampshire, Tennessee, Texas, West Virginia) during the first four years of implementation. Data reflect the period from July 1, 2021, through December 31, 2024, with the exceptions of those from Maryland, which submitted data through December of 2022; West Virginia, which collected data beginning on January 1, 2022, because of a 6-month delay in MOM Model implementation; and Colorado, which began enrolling beneficiaries in its MOM Model in September of 2022.

We report percentages among beneficiaries with nonmissing data for a given measure and the rate of missing data for each measure. Table titles and notes provide details about the universe we used to calculate these descriptive findings and other methodological decisions that may be relevant for interpretation. Awardees may add to and revise data for 1 year following initial submission, so while these tables represent data submitted through December 31, 2024, they are subject to change.

Where categories sum to values greater than the nonmissing population or greater than 100%, please assume that those categories are not mutually exclusive. We censored yellow-shaded table cells to hide values representing fewer than 11 beneficiaries for beneficiary confidentiality.

Table 1. MOM Model Beneficiary Enrollment

Table 1a. Total MOM Model Enrollment

Data Elements	Total
Cumulative count by awardee	2,125

Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 1b. Beneficiary Enrollment Timing

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	–
Beneficiaries with nonmissing data	100.0 (2,125)
Prenatal	79.1 (1,681)
Postpartum	20.7 (439)
Enrolled on end of pregnancy date	

Note: Totals are impacted by enrolled beneficiaries from Maryland and Colorado awardees.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 1c. Timing of Pregnancy

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	–
Beneficiaries with nonmissing data	100.0 (2,125)
Pregnancy ended before model enrollment	20.7 (439)
Pregnancy ended on enrollment date	
Pregnancy ended 30 or fewer days after model enrollment	8.8 (188)
Pregnancy ended 31 to 60 days after model enrollment	7.8 (165)
Pregnancy ended 61 to 90 days after model enrollment	7.4 (158)
Pregnancy ended 91 to 120 days after model enrollment	7.5 (160)
Pregnancy ended more than 120 days after model enrollment	23.6 (501)
Pregnancy ongoing	24.0 (509)

Note: Totals are impacted by enrolled beneficiaries from Maryland and Colorado awardees.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 2. Demographics of MOM Model Beneficiaries

Table 2a. Beneficiary's Age

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	–
Beneficiaries with nonmissing data	100.0 (2,125)
Younger than 18	
18–19	1.2 (25)
20–24	12.5 (265)
25–29	30.7 (653)
30–34	36.2 (770)
Older than 35	19.0 (404)

Note: Totals are impacted by enrolled beneficiaries from Maryland and Colorado awardees.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 2b. Beneficiary's Relationship Status

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	9.6 (203)
Beneficiaries with nonmissing data	90.4 (1922)
Married, living with spouse	12.0 (231)
Married, not living with spouse	3.0 (58)
Living with a partner	35.6 (684)
In a relationship, not living together	21.0 (404)
Not in a relationship right now	28.4 (545)

Note: This item does not include a "none of the above" response.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 2c. Beneficiary's Educational Attainment

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	13.6 (290)
Beneficiaries with nonmissing data	86.4 (1,835)
High school diploma or GED	74.3 (1,363)
No high school diploma or GED	25.7 (472)

Note: This item does not include a "none of the above" response.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 2d. Beneficiary Health Care Coverage Before Pregnancy

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	4.3 (91)
Beneficiaries with nonmissing data	95.7 (2034)
Medicaid	78.8 (1,603)
Private insurance	2.1 (42)
Other insurance	0.6 (12)
Uninsured	7.3 (149)
Unknown	11.2 (228)

Note: This item does not include a "none of the above" response.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 3. Mental Health of MOM Beneficiaries

Table 3a. Other Mental or Behavioral Health Diagnoses

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data[a]	19.8 (420)
Beneficiaries with nonmissing data	80.2 (1,705)
Anxiety- and fear-related disorders	69.6 (1,187)
Bipolar and related disorders	24.7 (421)
Depressive disorders	64.0 (1,092)
Personality disorders	7.4 (127)
Schizophrenia spectrum and other psychotic disorders	4.1 (70)
Trauma- and stress-related disorders	33.5 (572)
Other mood disorders	14.0 (238)
Other mental and behavioral disorders/conditions	19.7 (336)
Alcohol-related disorders	9.6 (164)
Tobacco-related disorders	45.7 (780)
Other substance-related disorders	55.0 (938)

[a] This question has no "none of the above" response option; missing data may represent either no other behavioral health diagnoses or item nonresponse. Beneficiaries can report more than one other mental or behavioral health diagnosis.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 3b. Depression Screening Result

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	6.4 (136)
Beneficiaries with nonmissing data	93.6 (1989)
Positive[a]	49.8 (991)
Exclusion/beneficiary refused	1.7 (34)
Negative	48.5 (964)

Note: This data element is linked to a performance milestone measure.
[a] Some beneficiaries had multiple depression screen results reported. If a beneficiary ever screened positive for depression, they are represented here, with priority given to any positive screen result over the other response options.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 3c. Depression Screen Follow-Up Plan Among Beneficiaries with a Positive Depression Screening

Data Elements	Total (All Awardees)
Data type	**% (#)**
Not in universe	– (1,134)
Missing data	0.8 (8)
Beneficiaries with nonmissing data	99.2 (983)
Additional evaluation for depression	39.4 (387)
Suicide risk assessment	15.4 (151)
Referral to a practitioner who is qualified to diagnose and treat depression	45.3 (445)
Pharmacological interventions	18.8 (185)
Other interventions or follow-up for the diagnosis or treatment of depression	35.6 (350)
No follow-up plan at this time[a]	19.5 (192)

Note: This data element is linked to a performance milestone measure.
Note: Totals are impacted by enrolled beneficiaries from Maryland and Colorado awardees.
Beneficiaries can receive more than one follow-up plan at a single encounter and beneficiaries may have received different follow-up plans (or no follow-up plan) at each encounter. These tables reflect the receipt of each listed follow-up plan at least one time during the reporting period.
[a] If "no follow-up plan at this time" was the only response ever reported for a beneficiary (the beneficiary never received a depression follow-up plan), that is indicated here.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 3d. Anxiety Screening Result

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	35.1 (745)
Beneficiaries with nonmissing data	64.9 (1,380)
No anxiety	12.8 (177)
Mild anxiety	30.7 (424)
Moderate anxiety	26.7 (369)
Severe anxiety	20.8 (287)
Unknown	8.9 (123)

Note: Beneficiaries may receive multiple anxiety screening results. This table displays the most severe result for each awardee.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 3e. Beneficiary History of Abuse and Transactional Sex

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	16.4 (349)
Beneficiaries with nonmissing data	83.6 (1,776)
Sexual abuse	32.3 (573)
Physical abuse	47.3 (840)
Emotional abuse	46.8 (831)
Transactional sex	5.6 (100)
None of the above	40.1 (713)

Note: Beneficiaries can report more than one type of abuse or transactional sex.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 4. Physical Health of MOM Model Beneficiaries

Table 4a. Chronic Conditions

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data[a]	75.6 (1,607)
Beneficiaries with nonmissing data	24.4 (518)
Diabetes	7.3 (38)
Hypertension	29.0 (150)
Heart disease	4.6 (24)
Class 3 obesity (BMI > 40)	4.8 (25)
Other	69.1 (358)

BMI = body mass index

[a] This question has no "none of the above" response option; missing data may represent either no chronic conditions or item nonresponse. Beneficiaries can report more than one chronic condition.

Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 4b. HIV Indicator

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	40.6 (863)
Beneficiaries with nonmissing data	59.4 (1,262)
Positive	1.0 (13)
Negative	78.1 (985)
Beneficiary declined	0.9 (11)
Not assessed	20.0 (253)

HIV = human immunodeficiency virus

Note: Totals are impacted by enrolled beneficiaries from Maryland and Colorado awardees.

Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 4c. Hepatitis C Indicator

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	40.0 (851)
Beneficiaries with nonmissing data	60.0 (1,274)
Positive	31.0 (395)
Negative	50.5 (644)
Beneficiary declined	1.2 (15)
Not assessed	17.3 (220)

Note: Totals are impacted by enrolled beneficiaries from Maryland and Colorado awardees.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 5. Substance Use Among MOM Model Beneficiaries

Table 5a. Tobacco Screening Result

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	8.6 (183)
Beneficiaries with nonmissing data	91.4 (1942)
Positive	70.8 (1,374)
Negative	28.9 (562)
Exclusion criteria met[a]	

[a] Beneficiaries who declined to be screened for tobacco use or were not screened because of medical reasons meet exclusion criteria.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 5b. Tobacco Intervention Among Beneficiaries with a Positive Tobacco Screen

Data Elements	Total (All Awardees)
Data type	**% (#)**
Not in universe	– (751)
Missing data	–
Beneficiaries with nonmissing data	100.0 (1,374)
Brief counseling provided	69.4 (953)
Medication offered and refused	10.6 (146)
Medication offered and accepted	7.6 (105)
Referred to tobacco cessation program	41.3 (568)
Other intervention provided	5.9 (81)
No intervention provided during this visit[a]	16.2 (222)

Note: Beneficiaries can receive more than one intervention at a single encounter and beneficiaries may have received different interventions (or no intervention) at each encounter. These tables reflect the receipt of each listed intervention at least one time during the reporting period.
[a] If "no intervention provided during this visit" was the only response ever reported for a beneficiary (the beneficiary never received a tobacco intervention), that is indicated here.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 5c. Average Number of Cigarettes Smoked per Day Among Tobacco Users Who Smoke Cigarettes

Data Elements	Total (All Awardees)
Beneficiaries with nonmissing data[a]	802
Mean	10.7
Median	10
Minimum	1
Maximum	99

[a] Among tobacco users who smoke cigarettes and reported at least one cigarette count; if multiple cigarette counts were reported for a beneficiary the single largest or smallest value was used to determine the maximum and minimum statistic and an average value was computed for each beneficiary's contribution to the mean and median statistics.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 5d. Alcohol Use

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	32.9 (700)
Beneficiaries with nonmissing data	67.1 (1,425)
14 drinks or more a week	
8–13 drinks per week	
4–7 drinks per week	
1–3 drinks per week	1.1 (16)
Less than 1 drink per week	1.8 (25)
I didn't drink in the last month	92.0 (1,311)
Did not answer/unknown	4.1 (59)

Note: One beneficiary may give multiple responses on separate screenings. This table displays the highest consumption value for each beneficiary.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 5e. Substance Use in Past Year

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	15.1 (321)
Beneficiaries with nonmissing data	84.9 (1,804)
Alcohol	17.7 (319)
Cigarettes/other tobacco	67.8 (1,223)
Vaping/electronic nicotine delivery system	28.0 (505)
Cannabis	38.1 (687)
Amphetamines	30.0 (541)
Benzodiazepine	10.5 (190)
None	10.5 (189)

Note: Beneficiaries can report more than one type of substance use in the past year.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 5f. Substance Use Before Age 18

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	19.0 (404)
Beneficiaries with nonmissing data	81.0 (1,721)
Alcohol	47.0 (809)
Cigarettes/other tobacco	63.2 (1,088)
Vaping/electronic nicotine delivery system	10.3 (178)
Cannabis	57.1 (983)
Opioids	47.6 (820)
Amphetamines	23.2 (400)
Benzodiazepine	13.1 (226)
None	13.6 (234)

Note: Beneficiaries can report more than one type of substance use before the age of 18.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 6. Social Determinants of Health Among MOM Model Beneficiaries

Table 6a. HRSN Screening Result

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	7.5 (160)
Beneficiaries with nonmissing data	92.5 (1965)
Yes[a]	62.1 (1,221)
No	37.9 (744)

Note: Social determinants of health are measured using a health-related social needs (HRSN) screening tool that considers difficulty accessing up to six dimensions (food, transportation, utilities, safety, housing, family support).
Note: This data element is linked to a performance milestone measure.
[a] This measure indicates screening positive for any of the six dimensions of health-related social needs. Positive screens are indexed at the beneficiary level, so beneficiaries with any number of positive screens are only counted once.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 6b. Experiences Food Insecurity

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	7.8 (165)
Beneficiaries with nonmissing data	92.2 (1960)
Yes	35.9 (704)
No	64.1 (1,256)

Note: This data element is linked to a performance milestone measure.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 6c. Has Difficulty Accessing Transportation

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	8.2 (174)
Beneficiaries with nonmissing data	91.8 (1951)
Yes	35.1 (685)
No	64.9 (1,266)

Note: This data element is linked to a performance milestone measure.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 6d. Needs Assistance Affording Utilities (Electricity, Water, Heating)

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	8.6 (183)
Beneficiaries with nonmissing data	91.4 (1942)
Yes	19.6 (381)
No	80.4 (1,561)

Note: This data element is linked to a performance milestone measure.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 6e. Feels Unsafe at Home or in Community

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	8.4 (179)
Beneficiaries with nonmissing data	91.6 (1946)
Yes	11.4 (221)
No	88.6 (1,725)

Note: This data element is linked to a performance milestone measure.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 6f. Experiences Housing Insecurity

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	8.0 (169)
Beneficiaries with nonmissing data	92.0 (1956)
Yes	33.7 (660)
No	66.3 (1,296)

Note: This data element is linked to a performance milestone measure.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 6g. Lacks Family Support

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	9.2 (195)
Beneficiaries with nonmissing data	90.8 (1930)
Yes	23.0 (443)
No	77.0 (1,487)

Note: This data element is linked to a performance milestone measure.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 7. Service Use Among MOM Model Beneficiaries

Table 7a. Number of Prenatal Encounters

Data Elements	Total (All Awardees)
Missing data[a]	895
Beneficiaries with nonmissing data	1,230
Mean	6.6
Median	5
Minimum	1
Maximum	65

[a] We count prenatal encounters among all beneficiaries who received at least one prenatal encounter, regardless of when in their pregnancies they enrolled in the MOM Model. The number of prenatal encounters may not reflect the true number of encounters beneficiaries received, only those that were received during enrollment in the MOM Model and reported by the awardee.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 7b. Number of Postpartum Encounters

Data Elements	Total (All Awardees)
Missing data[a]	1,214
Beneficiaries with nonmissing data	911
Mean	4.5
Median	2
Minimum	1
Maximum	117

[a] We count postpartum encounters among all beneficiaries who received at least one postpartum encounter, regardless of how much time elapsed since the beneficiaries end of pregnancy date and the end of the reporting period. The number of postpartum encounters may not reflect the true number of postpartum encounters beneficiaries received, only those that were received during enrollment in the MOM Model and reported by the awardee.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 7c. Number of OUD Encounters

Data Elements	Total (All Awardees)
Missing data[a]	482
Beneficiaries with nonmissing data	1,643
Mean	26.9
Median	12
Minimum	1
Maximum	533

OUD = opioid use disorder

[a] We count OUD encounters among all beneficiaries who received at least one OUD encounter during the reporting period. The number of OUD encounters may not reflect the true intensity of OUD care received, only encounters that were received during enrollment in the MOM Model and reported by the awardee.

Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 7d. Prenatal Care Provider Type Among Beneficiaries with at Least One Prenatal Visit

Data Elements	Total (All Awardees)
Data type	**% (#)**
Not in universe[a]	– (895)
Missing data	1.1 (14)
Beneficiaries with nonmissing data	98.9 (1,216)
Physician	86.2 (1,048)
Physician assistant	
Nurse	23.0 (280)
Nurse practitioner	12.3 (150)
Midwife	11.3 (137)
Other	27.9 (339)

[a] We show prenatal care provider types for beneficiaries who received at least one prenatal care encounter. A beneficiary could have received prenatal care from more than one provider type.

Note: Totals are impacted by enrolled beneficiaries from Maryland and Colorado awardees.

Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 7e. Postpartum Visit Practitioner Type Among Beneficiaries with at Least One Postpartum Visit

Data Elements	Total (All Awardees)
Data type	**% (#)**
Not in universe[a]	– (1,214)
Beneficiaries with nonmissing data	100.0 (911)
OB/GYN practitioner	69.8 (636)
Midwife	9.3 (85)
Family practitioner	14.7 (134)
Other primary care provider	22.8 (208)
None of the above	15.6 (142)

Note: This data element is linked to a performance milestone measure.
[a] We show postpartum visit practitioner types for beneficiaries who received at least one postpartum encounter. A beneficiary could have received postpartum care from more than one provider type.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 7f. Visits with Other Providers

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	42.8 (910)
Beneficiaries with nonmissing data	57.2 (1,215)
Care coordination specialist	19.4 (236)
OUD treatment specialist	2.7 (33)
Lactation consultant	1.0 (12)
Psychologist	
Social worker	9.1 (110)
Other	76.9 (934)

OUD = opioid use disorder
Note: A beneficiary could have had a visit with more than one provider type.
Note: Totals are impacted by enrolled beneficiaries from Maryland and Colorado awardees.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 7g. Beneficiary Received Referral

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	26.8 (570)
Beneficiaries with nonmissing data	73.2 (1,555)
Yes	76.8 (1,194)
No	23.2 (361)

Note: Only one referral value is included for each beneficiary. If a beneficiary received a referral during one encounter and no referral during another, the positive result is listed here.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 7h. Referral Type Among Beneficiaries Who Received at Least One Referral

Data Elements	Total (All Awardees)
Data type	**% (#)**
Not in universe	– (931)
Missing data	–
Beneficiaries with nonmissing data	100.0 (1,194)
Opioid treatment	18.8 (224)
Housing/living situation	37.1 (443)
Food/nutrition	27.6 (329)
Transportation	28.8 (344)
Utilities	10.9 (130)
Safety	10.1 (120)
Family and community support	33.1 (395)
Behavioral health, non-OUD	31.9 (381)
Other medical	36.4 (435)
Other	33.8 (403)

OUD = opioid use disorder
Note: Beneficiaries can receive more than one referral type at a single encounter and beneficiaries may have received different referral types at each encounter. These tables reflect the receipt of each listed referral type at least one time during the reporting period.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 7i. Referral Completed Among Beneficiaries Who Received at Least One Referral

Data Elements	Total (All Awardees)
Data type	**% (#)**
Not in universe	– (931)
Beneficiaries with nonmissing data	100.0 (1,194)
Yes	48.7 (582)
No	51.3 (612)

Note: All beneficiaries who completed at least one referral are assigned "yes" values in this table, regardless of their total number of referrals.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 7j. Referral Completed Type Among Beneficiaries Who Received at Least One Referral

Data Elements	Total (All Awardees)
Data type	**% (#)**
Not in universe	– (931)
Missing data	51.3 (612)
Beneficiaries with nonmissing data	48.7 (582)
Opioid treatment	30.4 (177)
Housing/living situation	50.3 (293)
Food/Nutrition	40.5 (236)
Transportation	32.6 (190)
Utilities	16.2 (94)
Safety	15.8 (92)
Family and community support	47.9 (279)
Behavioral health, non-OUD	29.7 (173)
Other medical	41.6 (242)
Other	30.8 (179)

OUD = opioid use disorder
Note: Beneficiaries can complete more than one referral type at a single encounter and beneficiaries may have received different completed referral types at each encounter. These tables reflect the completion of each listed referral type at least one time during the reporting period.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 7k. Receipt of Care Coordination Activities

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	2.1 (44)
Beneficiaries with nonmissing data	97.9 (2,081)
Shared relevant information with at least one other provider involved in the beneficiary's care	45.7 (950)
Assessed beneficiary needs and goals	98.2 (2044)
Discussed self-management goals with beneficiary	90.8 (1,890)
Reviewed beneficiary's medications	78.9 (1,641)
Consulted other providers involved in the beneficiary's care	33.6 (699)
Other care coordination activity	40.8 (850)
None of the above[a]	0.8 (17)

Note: Beneficiaries can receive more than one care coordination activity at a single encounter and beneficiaries may have received different care coordination activities (or no care coordination activity) at each encounter. These tables reflect the receipt of each listed care coordination activity at least one time during the reporting period.
Note: Totals are impacted by enrolled beneficiaries from Maryland and Colorado awardees.
[a] If "none of the above" was the only response ever reported for a beneficiary (the beneficiary never received a care coordination activity), that is indicated here.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 7l. Average Number of Care Coordination Activities Received per Beneficiary Among Beneficiaries Who Received Them at Least Once

Data Elements	Total (All Awardees)
Data type	
Not in universe	44
Beneficiaries with nonmissing data	1,081
Shared relevant information with at least one other provider involved in the beneficiary's care (Mean)	8.9
Assessed beneficiary needs and goals (Mean)	16.4
Discussed self-management goals with beneficiary (Mean)	15.0
Reviewed beneficiary's medications (Mean)	16.1
Consulted other providers involved in the beneficiary's care (Mean)	5.5
Other care coordination activity (Mean)	5.6
None of the above (Mean)	1

Note: This table presents mean frequencies of each care coordination activity among those who received it at least one time.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 7m. Qualifying Postpartum Encounter Indicator Among Beneficiaries Who Are at Least 6 Weeks Postpartum

Data Elements	Total (All Awardees)
Data type	**% (#)**
Not in universe[a]	– (534)
Missing data	42.8 (681)
Beneficiaries with nonmissing data	57.2 (910)
Yes	88.2 (803)
No	11.8 (107)

Note: This data element is linked to a performance milestone measure.
[a] The universe for qualifying postpartum care is limited to beneficiaries who gave birth at least 6 weeks before the end of the reporting period.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 7n. Family Planning Indicator Among Beneficiaries Who Are at Least 6 Weeks Postpartum

Data Elements	Total (All Awardees)
Data type	**% (#)**
Not in universe[a]	– (534)
Missing data	18.6 (296)
Beneficiaries with nonmissing data	81.4 (1,295)
Current method of contraception	65.2 (844)
Discussion of contraceptive options	60.1 (778)
Provision of contraception	21.1 (273)
Pregnancy testing and counseling	12.7 (165)
Discussion of reproductive goals with life planning	39.4 (510)
None[b]	6.6 (85)

Note: This data element is linked to a performance milestone measure.
Note: Beneficiaries can receive more than one family planning activity at a single encounter and beneficiaries may have received different family planning activities (or no family planning activity) at each encounter. These tables reflect the receipt of each listed family planning activity at least one time during the reporting period.
[a] The universe for family planning is limited to beneficiaries who gave birth at least 6 weeks before the end of the reporting period.
[b] If "none" was the only response ever reported for a beneficiary (the beneficiary never received a family planning activity), that is indicated here.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 7o. Postpartum Contraception Among Beneficiaries Who Are at Least 6 Weeks Postpartum

Data Elements	Total (All Awardees)
Data type	**% (#)**
Not in universe[a]	– (534)
Missing data	18.7 (297)
Beneficiaries with nonmissing data	81.3 (1,294)
None	21.4 (277)
Natural family planning	2.6 (33)
Pullout method	
Barrier or spermicide	1.9 (25)
Hormonal[b]	17.1 (221)
Injectable	8.2 (106)
LARC	16.5 (213)
Tubal ligation	18.6 (241)
Other	3.4 (44)
Unknown	11.6 (150)

LARC = long-acting reversible contraceptives
[a] The universe for postpartum contraception is limited to beneficiaries who gave birth at least 6 weeks before the end of the reporting period.
[b] Refers to non-LARC hormonal methods.
Note: Totals are impacted by enrolled beneficiaries from Maryland and Colorado awardees.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 7p. Receipt of Engagement and Outreach Activities

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	0.0 (0)
Beneficiaries with nonmissing data	100.0 (2,125)
Any engagement outreach attempts	26.6 (565)
No engagement outreach attempts	73.4 (1,560)

Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 8. OUD Treatment Among MOM Beneficiaries

Table 8a. Prior OUD Treatment During Model-Associated Pregnancy

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	12.0 (254)
Beneficiaries with nonmissing data	88.0 (1,871)
Yes	76.3 (1,428)
No	23.7 (443)

OUD = opioid use disorder
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 8b. Any Prior OUD Inpatient Treatment

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	15.4 (327)
Beneficiaries with nonmissing data	84.6 (1,798)
Yes	56.2 (1,011)
No	43.8 (787)

OUD = opioid use disorder
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 8c. Timing of Pharmacotherapy Initiation

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	–
Beneficiaries with nonmissing data	100.0 (2,125)
Postpartum, after enrollment	7.7 (164)
Prenatal, after enrollment	14.4 (306)
Postpartum and before/at enrollment	10.2 (217)
Prenatal and before/at enrollment	39.1 (831)
Never	28.6 (607)

Note: "At model enrollment" includes beneficiaries who initiated pharmacotherapy before enrolling in the model.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 8d. Pharmacotherapy Type at Initiation Among Beneficiaries Who Received Pharmacotherapy

Data Elements	Total (All Awardees)
Data type	**% (#)**
Not in universe	– (607)
Missing data	–
Beneficiaries with nonmissing data	100.0 (1,518)
Buprenorphine	76.2 (1,156)
Methadone	20.4 (310)
Naltrexone	
None	
Other	2.4 (36)

Note: This data element is linked to a performance milestone measure.
Note: Totals are impacted by enrolled beneficiaries from Maryland and Colorado awardees.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 8e. Pharmacotherapy Type at Delivery

Data Elements	Total (All Awardees)
Data type	**% (#)**
Not in universe	– (509)
Missing data[a]	30.3 (489)
Beneficiaries with nonmissing data	69.7 (1,127)
Buprenorphine	73.7 (831)
Methadone	21.8 (246)
Naltrexone	
Other	3.9 (44)

[a] This question has no "none" response option; missing data may represent either no receipt of pharmacotherapy at delivery or item nonresponse.
Note: Totals are impacted by enrolled beneficiaries from Maryland and Colorado awardees.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 8f. Pharmacotherapy Type Postpartum Among Beneficiaries with an End of Pregnancy Date

Data Elements	Total (All Awardees)
Data type	**% (#)**
Not in universe	– (509)
Missing data	21.3 (344)
Beneficiaries with nonmissing data	78.7 (1,272)
Buprenorphine	48.6 (618)
Methadone	16.4 (208)
Naltrexone	
Other	2.1 (27)
None	32.2 (410)

Note: Totals are impacted by enrolled beneficiaries from Maryland and Colorado awardees.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 8g. Experienced Relapse During MOM Model Participation

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	33.9 (720)
Beneficiaries with nonmissing data	66.1 (1,405)
Yes	27.5 (387)
No	72.5 (1,018)

Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 8h. OUD Encounter Types Received Among Beneficiaries Who Received an OUD Encounter

Data Elements	Total (All Awardees)
Data type	**% (#)**
Not in universe[a]	– (482)
Missing data	–
Beneficiaries with nonmissing data	100.0 (1,643)
Inpatient	4.4 (73)
Outpatient encounter	98.7 (1,622)
Intensive outpatient encounter	2.6 (42)
Partial hospitalization	
Telehealth encounter	14.9 (244)
Residential treatment service	3.8 (63)

OUD = opioid use disorder
Note: This data element is linked to a performance milestone measure.
[a] Beneficiaries with no OUD encounters in the data are excluded from the universe for this data element.
Note: Beneficiaries can receive more than one OUD encounter type. These tables reflect the receipt of each listed OUD encounter type at least one time during the reporting period.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 8i. OUD Treatment Service Types Received Among Beneficiaries Who Received an OUD Encounter

Data Elements	Total (All Awardees)
Data type	**% (#)**
Not in universe	– (482)
Missing data	–
Beneficiaries with nonmissing data	100.0 (1,643)
Pharmacotherapy	82.2 (1,350)
Behavioral health counseling or therapy	59.5 (978)
Health and behavior interventions for OUD	72.0 (1,183)
Psychotherapy: Individual and group	47.3 (777)
Social work services related to OUD treatment	34.3 (563)
Community support services related to OUD	39.2 (644)
Training, educational services and skills development related to OUD treatment	29.0 (477)
Crisis intervention	5.1 (83)
Recreational therapy related to OUD	6.6 (109)
Psychosocial rehabilitation services	4.2 (69)
Community psychiatric supportive treatment	5.9 (97)

OUD = opioid use disorder
Note: This data element is linked to a performance milestone measure.
Note: Beneficiaries can receive more than one OUD treatment service type at a single encounter and beneficiaries may have received different OUD treatment service types (or no OUD treatment service type) at each encounter. These tables reflect the receipt of each listed OUD treatment service type at least one time during the reporting period.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 8j. Treatment Plan at Model Exit Among Beneficiaries with a Model Exit Date

Data Elements	Total (All Awardees)
Data type	**% (#)**
Not in universe[a]	– (861)
Missing data	7.3 (92)
Beneficiaries with nonmissing data	92.7 (1,172)
Pharmacotherapy	49.1 (575)
Behavioral health counseling or therapy	30.4 (356)
Health and behavior interventions for OUD	26.8 (314)
Psychotherapy: Individual and group	14.7 (172)
Social work services related to OUD treatment	8.4 (99)
Community support services related to OUD	13.9 (163)
Training, educational services and skills development related to OUD treatment	5.5 (64)
Crisis intervention	
Recreational therapy related to OUD	
Psychosocial rehabilitation services	1.7 (20)
Community psychiatric supportive treatment	1.3 (15)
None	34.7 (407)

OUD = opioid use disorder
[a] This universe is limited to beneficiaries who have exited the model.
Note: Beneficiaries can report more than one treatment plan.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 9. Prior and Model-Associated Pregnancy Conditions and Risk Factors Among MOM Model Beneficiaries

Table 9a. Prior Birth

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	11.7 (248)
Beneficiaries with nonmissing data	88.3 (1,877)
Yes	75.9 (1,424)
No	24.1 (453)

Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 9b. Prior Infant Outcomes Among Beneficiaries with a Prior Birth

Data Elements	Total (All Awardees)
Data type	**% (#)**
Not in universe	– (701)
Missing data	7.0 (100)
Beneficiaries with nonmissing data	93.0 (1,324)
Premature (< 37 weeks)	23.8 (315)
Low birthweight (< 2,500 g)	9.4 (125)
Stillborn infant	5.0 (66)
Infant diagnosed with NAS	9.1 (121)
Unknown	15.4 (204)
None	47.1 (623)
Not applicable	1.4 (19)

NAS = neonatal abstinence syndrome
Note: Beneficiaries can report more than one prior infant outcome.
Note: Totals are impacted by enrolled beneficiaries from Maryland and Colorado awardees.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 9c. Prior Pregnancy Maternal Outcomes and Health Risk Factors Among Beneficiaries with a Prior Pregnancy

Data Elements	Total (All Awardees)
Data type	**% (#)**
Not in universe	– (701)
Missing data	9.9 (141)
Beneficiaries with nonmissing data	90.1 (1,283)
Preeclampsia or pregnancy-induced hypertension	10.8 (138)
Gestational diabetes	4.6 (59)
Gestational hypertension	5.6 (72)
HELLP syndrome	
Hemorrhage	4.4 (56)
Other	6.2 (79)
Unknown	17.9 (230)
None	54.6 (701)
Not applicable	1.9 (25)

HELLP = hemolysis, elevated liver enzymes and low platelets
Note: Beneficiaries can report more than one prior maternal outcome.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 9d. Prior Child Out-of-Home Placement Among Beneficiaries with a Prior Birth

Data Elements	Total (All Awardees)
Data type	**% (#)**
Not in universe	– (701)
Missing data	3.9 (55)
Beneficiaries with nonmissing data	96.1 (1,369)
Yes	54.0 (739)
No	39.4 (540)
Not known	4.7 (64)
Not applicable	1.9 (26)

Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 9e. Multifetal Gestation

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	2.0 (43)
Beneficiaries with nonmissing data	98.0 (2,082)
Yes	2.3 (47)
No	95.0 (1978)
Unknown	2.7 (57)

Note: This data element is linked to a performance milestone measure.
Note: Totals are impacted by enrolled beneficiaries from Maryland and Colorado awardees.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 9f. Prenatal Condition Types

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	80.2 (1,704)
Beneficiaries with nonmissing data	19.8 (421)
Preeclampsia	36.6 (154)
Gestational diabetes	17.1 (72)
Gestational hypertension	33.0 (139)
HELLP syndrome	
Hemorrhage	9.7 (41)
Other	27.8 (117)

Note: This question has "none of the above" response option; missing data may represent either no prenatal conditions or item nonresponse.
HELLP = hemolysis, elevated liver enzymes and low platelets
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 10. Maternal Outcomes Among MOM Model Beneficiaries

Table 10a. Pregnancy Outcomes Among Beneficiaries with an End of Pregnancy Date

Data Elements	Total (All Awardees)
Data type	**% (#)**
Not in universe	– (509)
Missing data	0.1 (1)
Beneficiaries with nonmissing data	99.9 (1,615)
Spontaneous abortion (before 20 weeks) (miscarriage)	2.9 (47)
Fetal death at 20 weeks and onward	0.9 (15)
Therapeutic abortion	
Live birth	96.0 (1,550)
Multiple non-live birth outcomes	0.0 (0)

Note: This data element is linked to a performance milestone measure.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 10b. Maternal Hospital Length of Stay for Delivery Among Beneficiaries with a Live Birth

Data Elements	Total (All Awardees)
Data type	**% (#)**
Not in universe	– (575)
Missing data	56.1 (870)
Beneficiaries with nonmissing data	43.9 (680)
1 day	3.2 (22)
2 days	39.7 (270)
3 days	31.5 (214)
4 days	13.2 (90)
5 or more days	12.5 (85)
No hospitalization for delivery	

Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 10c. Labor Pain Management Among Beneficiaries with a Live Birth

Data Elements	Total (All Awardees)
Data type	**% (#)**
Not in universe	– (575)
Missing data	15.4 (239)
Beneficiaries with nonmissing data	84.6 (1,311)
Epidural	78.8 (1,033)
Intravenous narcotics	7.3 (96)
Other	13.6 (178)
No/None	8.3 (109)

Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 10d. Delivery Method Among Beneficiaries with a Live Birth

Data Elements	Total (All Awardees)
Data type	**% (#)**
Not in universe	– (575)
Missing data	10.2 (158)
Beneficiaries with nonmissing data	89.8 (1,392)
Vaginal	37.6 (523)
Vaginal, induced or augmented	22.7 (316)
Vaginal, VBAC	1.0 (14)
Emergency C-section	15.9 (221)
Planned C-section	22.8 (318)

VBAC = vaginal birth after cesarean
Note: Totals are impacted by enrolled beneficiaries from Maryland and Colorado awardees.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 11. Outcomes Among Infants Born to MOM Model Beneficiaries

Table 11a. Infant Hospital Length of Stay at Delivery

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	–
Beneficiaries with nonmissing data	100.0 (1,574)
1 day	2.5 (39)
2 days	17.7 (278)
3 days	9.5 (149)
4 days	11.2 (177)
5 or more days	54.3 (854)
No hospitalization for delivery	4.9 (77)

Note: For all elements presented in Table 11, the total population = 832 infants (including 12 sets of twins) born to 820 beneficiaries during the reporting period.
Infant hospital length of stay includes non-NICU and NICU stays.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 11b. NICU at Delivery

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	–
Beneficiaries with nonmissing data	100.0 (1,574)
Yes	36.3 (572)
No	63.7 (1,002)

Note: For all elements presented in Table 11, the total population = 832 infants (including 12 sets of twins) born to 820 beneficiaries during the reporting period.
Note: NICU classification, such as the classification of extended hospital stays in mother-baby suites, may vary by awardee.
NICU = neonatal intensive care unit
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 11c. NICU Length of Stay at Delivery

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	–
Beneficiaries with nonmissing data	100.0 (1,574)
1 day	3.4 (53)
2 days	2.9 (46)
3 days	2.3 (36)
4 days	1.7 (27)
5 or more days	26.0 (410)
No NICU stay	63.7 (1,002)

Note: For all elements presented in Table 11, the total population = 832 infants (including 12 sets of twins) born to 820 beneficiaries during the reporting period.
Note: NICU stay definition, such as the classification of extended hospital stays in mother-baby suites, may vary by awardee.
NICU = neonatal intensive care unit
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 11d. Estimated Gestational Age

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	0.4 (6)
Beneficiaries with nonmissing data	99.6 (1,568)
Very preterm (20 < = EGA < = 34)	4.5 (71)
Preterm (34 < = EGA < 37)	13.7 (215)
Term (37 < = EGA < 42)	81.4 (1,276)
Postterm (> = 42)	

Note: For all elements presented in Table 11, the total population = 832 infants (including 12 sets of twins) born to 820 beneficiaries during the reporting period.
EGA = estimated gestational age
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 11e. Birth Weight

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	1.3 (21)
Beneficiaries with nonmissing data	98.7 (1,553)
Very low birthweight (< 1,500 g)	1.9 (30)
Low birthweight (> = 1,500 g < 2,500 g)	15.8 (245)
Normal birthweight (> = 2,500 g < 4,000 g)	78.3 (1,216)
Macrosomic birthweight (> = 4,000 g)	4.0 (62)

Note: For all elements presented in Table 11, the total population = 832 infants (including 12 sets of twins) born to 820 beneficiaries during the reporting period.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 11f. Positive Opioid Screen

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	–
Beneficiaries with nonmissing data	100.0 (1,574)
Yes	42.2 (665)
No	57.8 (909)

Note: For all elements presented in Table 11, the total population = 832 infants (including 12 sets of twins) born to 820 beneficiaries during the reporting period.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 11g. Neonatal Abstinence Syndrome Indicator

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	–
Beneficiaries with nonmissing data	100.0 (1,574)
Positive	27.9 (439)
Negative	72.1 (1,135)

Note: For all elements presented in Table 11, the total population = 832 infants (including 12 sets of twins) born to 820 beneficiaries during the reporting period.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 11h. Infant Pharmacotherapy Treatment for Neonatal Abstinence Syndrome

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	11.7 (184)
Beneficiaries with nonmissing data	88.3 (1,390)
Yes	16.1 (224)
No	75.6 (1,051)
Not known	8.3 (115)

Note: For all elements presented in Table 11, the total population = 832 infants (including 12 sets of twins) born to 820 beneficiaries during the reporting period.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 11i. Out-of-Home Placement

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	–
Beneficiaries with nonmissing data	100.0 (1,574)
Yes	12.6 (199)
No	87.4 (1,375)

Note: For all elements presented in Table 11, the total population = 832 infants (including 12 sets of twins) born to 820 beneficiaries during the reporting period.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Table 11j. Infant Feeding

Data Elements	Total (All Awardees)
Data type	**% (#)**
Missing data	5.7 (89)
Beneficiaries with nonmissing data	94.3 (1,485)
Breastfeeding	18.0 (267)
Pumping breastmilk for bottle or catheter feeding	3.9 (58)
Both breastfeeding and pumping breastmilk for bottle or catheter feeding	6.3 (94)
Breastfeeding or pumping and supplementing breastmilk with formula	19.4 (288)
Formula feeding only	44.4 (659)
Unknown	8.0 (119)

Note: For all elements presented in Table 11, the total population = 832 infants (including 12 sets of twins) born to 820 beneficiaries during the reporting period.
Source: Westat analysis of beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, February 2025

Appendix E. MOM Model Evaluation T-MSIS Data

This Appendix includes results from the MOM Model descriptive outcome analyses. These analyses use data from T-MSIS and state vital records to compare Medicaid beneficiaries enrolled in the MOM Model to a comparison group of beneficiaries not enrolled on select maternal health outcomes. The evaluation team selected this comparison group of non-enrolled beneficiaries based on select characteristics in a process described here.

First, we created an unmatched non-enrolled beneficiary sample of Medicaid beneficiaries satisfying the following eligibility criteria (*n* = 9,062): lived in a MOM county; was pregnant during the study timeframe; female; aged 10 to 50; received an OUD or MOUD diagnosis or treatment in the 12 months before the end of pregnancy, in the month pregnancy ended, or in the 11 months after pregnancy ended. Second, this sample was limited to beneficiaries with Medicaid data before the start of pregnancy (*n* = 7,947). It was critical to use data prior to the start of pregnancy when matching enrolled beneficiaries and non-enrolled beneficiaries matching on post-pregnancy information may lead to biased comparisons. Finally, each MOM enrollee with Medicaid data prior to the start of pregnancy (*n* = 1,050) was matched to one non-enrolled beneficiary using pre-pregnancy information, resulting in a final non-enrolled matched sample of 1,050 beneficiaries. As shown in Table E.1, enrolled beneficiaries and non-enrolled beneficiaries were matched exactly on eight characteristics of particular importance either for reducing bias or for use in stratified outcome analyses, and approximately matched on 15 characteristics, which were included in a propensity score model that was then used for optimal minimum distance matching.

Table E.1. Variables Used to Match Comparison Non-Enrolled Beneficiaries (Bold Indicates Exact Matching)

- Months from first Medicaid enrollment to pregnancy start date
- **State**
- **County classification (metropolitan, non-metropolitan urban, non-metropolitan rural)[a]**
- **County has buprenorphine provider with waivers to serve 100 or 275 beneficiaries**
- County has buprenorphine provider with waiver to serve 30 beneficiaries
- County has buprenorphine provider with waiver to serve 100 beneficiaries
- County has buprenorphine provider with waiver to serve 275 beneficiaries
- **County has opioid treatment program provider**
- **Year pregnancy began (2020, 2021, 2022 or 2023)**
- **Any mental health diagnosis before pregnancy MOUD before pregnancy**
- First-time mother[b]
- Hypertension[c]
- Diabetes[c]
- Disability[c]
- Alcohol use disorder diagnosis before pregnancy
- Opioid use disorder diagnosis before pregnancy
- Psychostimulant diagnosis before pregnancy
- Specified substance use disorder diagnosis before pregnancy
- Substance use disorder procedure before pregnancy
- Unspecified substance use diagnosis before pregnancy
- Probability of postpartum enrollment[d]

Notes:

[a] The 9-valued urban-rural classification code (see https://seer.cancer.gov/seerstat/variables/countyattribs/ruralurban.html) was collapsed, with categories 1-3 coded as metropolitan, categories 4-7 coded as non-metropolitan urban, and categories 8-9 coded as rural; due to issues finding exact matches within certain state-classification strata.

[b] This variable is derived from vital records and has three categories: 0 (no prior births indicated on vital record), 1 (at least one prior birth indicated on vital record), and 99 (vital record not available).
[c] These variables indicate the presence of this physical health condition at any point during the study.
[d] This variable was created by fitting a logistic regression model for predicting the probability of postpartum versus prenatal enrollment among MOM enrollees only, and then using the predictions from this model (on both enrolled and non-enrolled beneficiaries) to create this variable. The variables used in the logistic regression are those included in this table.

After matching, the evaluation team compared the outcomes in Table E.2 between enrolled and matched non-enrolled beneficiaries. Due to small samples, the team avoided performing statistical significance tests and calculating *p* values and confidence intervals. The team also investigated stratifying comparisons based on certain characteristics, motivated by relevance to the MOM Model and sample sizes. Table E.3 lists these stratification variables.

Table E.2. Core Outcome Measures for MOM Model Descriptive Outcome Analyses

Outcome	Prenatal	Birth	Postpartum	Description and Notes
Prenatal care visits[a]	●			Average monthly number of visits during the prenatal period; requires vital records data
Medication use for OUD (MOUD)	●	●	●	Proportion of individuals with any use of methadone, buprenorphine or naltrexone; will examine descriptive data for any use of methadone or buprenorphine alone
MOUD three-month continuity[b]	●		●	Proportion of individuals with at least three consecutive months of MOUD prescriptions filled
Maternal ED visits	●		●	Proportion of individuals with ED visits
C-section		●		Proportion of individuals that had a C-section
Postpartum care visits			●	Proportion of beneficiaries with at 2 or more visits in the 11 months after birth
Severe maternal morbidity		●	●	Average score on the Obstetric Comorbidity Scoring System (excluding blood transfusions)[c]
Maternal inpatient stays	●	●	●	Proportion of individuals with inpatient stays
Gestational age at birth		●		Gestational age at birth of the child

Notes: ED = emergency department; MOUD = medication of opioid use disorder; OUD = opioid use disorder
[a] This outcome is created from vital records data where available and otherwise from T-MSIS data.
[b] While six-month continuity is more commonly used for maternal populations without OUD, we prefer a three-month continuity measure for the MOM Model impact analysis because continuity rates are low among MOM Model enrolled beneficiaries and comparison group members.
[c] Source: Leonard et al., 2020.

Table E.3. Subgroups for MOM Model Descriptive Outcome Analyses

Subgroup	Strata
Awardee	Three awardees with the largest sample sizes: Indiana, Tennessee, Maine
MOUD history	Evidence of MOUD before pregnancy; no evidence of MOUD before pregnancy
Mental health history	Evidence of mental health diagnosis before pregnancy; no evidence of mental health diagnosis before pregnancy
Timing of enrollment in MOM	Prenatal enrolled beneficiary; postpartum enrolled beneficiary
Care transformation lens	Integrated single site (Colorado, Tennessee, Texas); integrated without colocation (Maine, New Hampshire, West Virginia); enhanced care coordination (Indiana)
Peer recovery specialist focus	Primary focus (Maine, New Hampshire, Tennessee, Texas); secondary focus (Indiana, West Virginia)
Multicomponent maternal care transformation lens	One component (Indiana); two components (Maine, West Virginia); three to four components (New Hampshire, Tennessee, Texas)

Table E.4. Maternal Opioid Misuse (MOM) Model Analytic Sample Characteristics

Outcome	Enrolled beneficiary	Non-enrolled beneficiary	Matched non-enrolled beneficiary
Maternal age at pregnancy start (SD)	30.1 (4.8)	29.4 (5.1)	29.9 (5.1)
Maternal age category (%)			
Less than 30	45.5	50.5	45.5
30 to 35	36.2	33.2	36.2
More than 35	18.3	16.3	18.3
MOUD treatment before pregnancy (%)[a]	42.3	34.5	42.3
Has buprenorphine provider in county with…(%)[b]			
30-waiver	94.7	94.7	94.1
100-waiver	90.0	87.3	89.7
275-waiver	86.0	82.7	87.0
Has Opioid Treatment Program provider in county (%)	59.1	51.8	60.3
Year of pregnancy start			
2020	10.0	28.8	11.0
2021	36.2	34.9	41.3
2022	42.5	30.5	39.1
2023	11.3	5.9	8.7

Outcome	Enrolled beneficiary	Non-enrolled beneficiary	Matched non-enrolled beneficiary
First-time mother (%)			
Yes	2.5	2.2	2.0
No	8.7	10.1	11.8
No vital records data available	88.9	87.7	86.2
Diagnoses and procedures prior to pregnancy (%)			
Mental health disorder	62.3	48.6	62.3
Alcohol use disorder	7.4	5.1	6.5
Opioid use disorder	58.0	49.2	58.6
Psychostimulant use disorder	17.1	12.4	15.1
Specified substance use disorder	31.4	25.8	27.9
Unspecified substance use disorder	18.1	14.0	15.9
Hypertension (%)	14.0	13.7	12.6
Diabetes (%)	2.1	3.1	1.5
Disability (%)	3.2	4.8	3.1
County urban-rural classification (%)[c]			
Metropolitan, 1 million or more	41.0	32.7	37.9
Metropolitan, 250,000 to 1 million	19.2	15.5	17.7
Metropolitan, less than 250,000	15.9	23.0	16.7
Non-metropolitan, urban, 20,000 or more, adjacent to a metropolitan area	5.8	6.6	6.6
Non-metropolitan, urban, 20,000 or more, not adjacent to a metropolitan area	2.2	2.5	2.5
Non-metropolitan, urban, 2,500 to 19,999, adjacent to a metropolitan area	12.0	14.1	15.1
Non-metropolitan, urban, 2,500 to 19,999, not adjacent to a metropolitan area	2.2	3.3	1.6
Completely rural or less than 2,500 population	1.7	2.2	2.0
Sample size	1,050	7,947	1,050

Notes: Data sources include Transformed Medicaid Statistical Information System (T-MSIS) data from 2020 to 2023 and state vital records data. Enrollees are Medicaid beneficiaries enrolled in the Maternal Opioid Misuse (MOM) Model, non-enrollees are Medicaid beneficiaries who meet eligibility criteria for enrollment in MOM Model areas, and matched non-enrollees are members of the non-enrollee sample propensity score-matched to the enrollee sample. SD = standard deviation.

[a] MOUD = medication for opioid use disorder.

[b] Waivers indicate whether prescribers are approved by the Drug Enforcement Administration to treat a certain number of beneficiaries.

[c] Based on the 2013 National Center for Health Statistics Urban-Rural Classification Scheme for Counties. Categories 8 (Completely rural or less than 2,500 population, adjacent to a metropolitan area) and 9 (Completely rural or less than 2,500 population, not adjacent to a metropolitan area) are collapsed due to small cell sizes.

Table E.5. Maternal Outcomes by Maternal Opioid Misuse (MOM) Model Enrollment

Description of key findings: As shown in the highlighted rows, the largest differences in outcomes between enrollees and matched non-enrollees are for outcomes related to prenatal care and medication for opioid use disorder (MOUD).

Outcome (%)	Enrolled beneficiary	Matched non-enrolled beneficiary
Prenatal care visit count[a]		
None	3.5	6.9
1 to 2	8.5	12.6
3 to 9	38.7	40.9
10 or more	49.3	39.7
Any MOUD in 12 months before birth	60.3	52.3
Any MOUD in birth month	47.3	38.6
MOUD three-month continuity[b]	47.4	41.3
Any MOUD in 11 months after birth	54.1	51.7
Total ED visits 12 months before birth		
None	27.0	33.0
1 to 2	39.0	40.6
3 to 9	30.5	23.3
10 or more	3.5	3.1
Total ED visits 11 months after birth		
None	58.9	57.5
1 to 2	29.9	30.3
3 or more	11.3	12.2
C-section delivery	37.9	35.8
Had postpartum care[c]	62.8	64.1
Severe maternal morbidity[d]		
0 to 9	9.8	12.0
10 to 17	31.5	30.4
18 or more	58.7	57.6
Any inpatient stays in 12 months before birth	22.1	15.4
Any inpatient stays in the birth month	87.5	89.3
Any inpatient stays in 11 months after birth	10.2	10.3

Outcome (%)	Enrolled beneficiary	Matched non-enrolled beneficiary
Gestational age at end of pregnancy		
Less than 37 weeks	21.2	18.4
37 to 38 weeks	49.4	51.9
More than 38 weeks	17.1	17.0
Insufficient information	12.2	12.8
Sample size	1,050	1,050

Notes: Data sources include Transformed Medicaid Statistical Information System (T-MSIS) data from 2020 to 2023 and state vital records data. Enrollees are Medicaid beneficiaries enrolled in the Maternal Opioid Misuse (MOM) Model, non-enrollees are Medicaid beneficiaries who meet eligibility criteria for enrollment in MOM Model areas, and matched non-enrollees are members of the non-enrollee sample propensity score-matched to the enrollee sample. ED = emergency department.

[a] Prenatal care visit counts were constructed from vital records data where available. Otherwise, they were identified using Current Procedural Terminology, Healthcare Common Procedure Coding System, and International Classification of Diseases, 10th revision codes for prenatal care services received between 270 days before the child's birth date and the child's birth date.

[b] An individual is considered as having MOUD continuity during pregnancy if there was a period during pregnancy with MOUD prescriptions or procedures with a combined duration of at least 90 days. Discontinuities of up to 7 days were allowed.

[c] Postpartum care was identified using Current Procedural Terminology and International Classification of Diseases, 10th revision codes for postpartum care 90 days before the child's birth date and 140 days after the child's birth date.

[d] Defined using the California Maternal Quality Care Collaborative obstetric comorbidity scoring system.

Table E.6. Maternal Outcomes by Maternal Opioid Misuse (MOM) Model Enrollment, by State, Prenatal Enrolled Beneficiaries

Description of key findings: As shown in the highlighted rows, the largest differences in outcomes between enrolled beneficiaries and matched non-enrolled beneficiaries across Indiana, Tennessee, and Maine are for outcomes related to medication for opioid use disorder (MOUD). Indiana and Tennessee show positive differences for prenatal care visit counts, and enrolled beneficiaries in all three states had more emergency department (ED) visits before birth compared to their matches. Enrolled beneficiaries in Tennessee were more likely to have had an inpatient say before birth compared to their matches. These differences are similar in magnitude to those for the full sample.

Outcome (%)	Indiana		Tennessee		Maine	
	Enrolled beneficiaries	Matched non-enrolled beneficiaries	Enrolled beneficiaries	Matched non-enrolled beneficiaries	Enrolled beneficiaries	Matched non-enrolled beneficiaries
Prenatal care visit count[a]						
0 to 2	6.5	16.4	15.4	33.1	10.1	17.6
3 to 9	30.0	37.3	53.8	51.5	43.7	38.7
10 or more	63.5	46.3	30.8	15.4	46.2	43.7
Any MOUD in 12 months before birth	59.4	55.4	70.8	54.6	68.1	52.9
Any MOUD in birth month	46.3	41.3	58.5	42.3	55.5	36.1
MOUD three-month continuity[b]	44.8	43.8	51.5	36.9	53.8	47.9
Any MOUD in 11 months after birth	50.6	55.4	60.0	55.4	62.2	44.5
Total ED visits 12 months before birth						
None	25.9	30.7	19.2	23.1	31.9	42.9
1 to 2	38.8	43.8	35.4	39.2	33.6	37.8
3 or more	35.3	25.4	45.4	37.7	34.5	19.3
Total ED visits 11 months after birth						
None	61.0	57.9	58.5	54.6	55.5	55.5
1 to 2	29.0	32.2	29.2	24.6	29.4	32.8
3 or more	10.1	9.8	12.3	20.8	15.1	11.8
C-section delivery	33.8	33.8	47.7	34.6	35.3	40.3
Had postpartum care[c]	56.4	54.9	90.8	87.7	73.9	76.5
Severe maternal morbidity[d]						
0 to 17	50.1	48.1	33.8	43.8	32.8	32.8
18 or more	49.9	51.9	66.2	56.2	67.2	67.2

Outcome (%)	Indiana		Tennessee		Maine	
	Enrolled beneficiaries	Matched non-enrolled beneficiaries	Enrolled beneficiaries	Matched non-enrolled beneficiaries	Enrolled beneficiaries	Matched non-enrolled beneficiaries
Any inpatient stays in 12 months before birth	16.1	12.8	47.7	21.5	18.5	17.6
Any inpatient stays in the birth month	84.6	81.9	90.8	97.7	98.3	98.3
Any inpatient stays in 11 months after birth	12.6	9.3	10.0	13.8	10.1	7.6
Gestational age at end of pregnancy						
Less than 37 weeks	14.9	14.6	33.8	23.8	31.1	33.6
37 to 38 weeks	56.7	50.4	41.5	55.4	47.1	42.0
More than 38 weeks	12.3	15.1	22.3	19.2	16.8	18.5
Insufficient information	16.1	19.9	2.3	1.5	5.0	5.9
Sample size	397	397	130	130	119	119

Notes: Data sources include Transformed Medicaid Statistical Information System (T-MSIS) data from 2020 to 2023 and state vital records data. Enrollees are Medicaid beneficiaries enrolled in the Maternal Opioid Misuse (MOM) Model, non-enrollees are Medicaid beneficiaries who meet eligibility criteria for enrollment in MOM Model areas, and matched non-enrollees are members of the non-enrollee sample propensity score-matched to the enrollee sample. Prenatal enrollment indicates enrollment in the MOM Model during pregnancy. ED = emergency department.

[a] Prenatal care visit counts were constructed from vital records data where available. Otherwise, they were identified using Current Procedural Terminology, Healthcare Common Procedure Coding System, and International Classification of Diseases, 10th revision codes for prenatal care services received between 270 days before the child's birth date and the child's birth date.

[b] An individual is considered as having MOUD continuity during pregnancy if there was a period during pregnancy with MOUD prescriptions or procedures with a combined duration of at least 90 days. Discontinuities of up to 7 days were allowed.

[c] Postpartum care was identified using Current Procedural Terminology and International Classification of Diseases, 10th revision codes for postpartum care 90 days before the child's birth date and 140 days after the child's birth date.

[d] Defined using the California Maternal Quality Care Collaborative obstetric comorbidity scoring system.

Table E.7. Maternal Outcomes by Maternal Opioid Misuse (MOM) Model Enrollment, by State

Description of key findings: As shown in the highlighted rows, the largest differences in outcomes between enrollees and matched non-enrolled beneficiaries across Indiana, Tennessee, and Maine are for outcomes related to medication for opioid use disorder (MOUD). Indiana and Tennessee show positive differences for prenatal care visit counts, and enrollees in all three states had more emergency department (ED) visits before birth compared to their matches. Enrolled beneficiaries in Tennessee were more likely to have had an inpatient say before birth compared to their matches.

Outcome (%)	Indiana		Tennessee		Maine	
	Enrolled beneficiaries	Matched non-enrolled beneficiaries	Enrolled beneficiaries	Matched non-enrolled beneficiaries	Enrolled beneficiaries	Matched non-enrolled beneficiaries
Prenatal care visit count[a]						
0 to 2	9.1	15.1	16.3	32.0	12.6	16.8
3 to 9	30.6	37.8	54.4	53.1	44.1	39.2
10 or more	60.2	47.1	29.3	15.0	43.4	44.1
Any MOUD in 12 months before birth	60.8	56.2	70.1	51.7	65.7	53.1
Any MOUD in birth month	48.0	43.1	58.5	40.1	53.1	37.1
MOUD three-month continuity[b]	47.3	44.5	53.1	34.0	55.9	48.3
Any MOUD in 11 months after birth	53.8	57.4	63.3	53.7	60.8	44.1
Total ED visits 12 months before birth						
None	27.0	31.2	18.4	22.4	32.2	44.1
1 to 2	39.8	42.9	38.8	40.1	35.0	37.1
3 or more	33.3	25.9	42.9	37.4	32.9	18.9
Total ED visits 11 months after birth						
None	60.8	56.9	57.8	54.4	54.5	57.3
1 to 2	29.2	32.0	29.3	25.2	30.8	32.2
3 or more	10.0	11.0	12.9	20.4	14.7	10.5
C-section delivery	33.8	34.9	47.6	34.7	37.8	40.6
Had postpartum care[c]	55.3	56.0	90.5	85.0	74.1	77.6
Severe maternal morbidity[d]						
0 to 17	49.4	49.4	34.0	42.9	32.9	31.5
18 or more	50.6	50.6	66.0	57.1	67.1	68.5

Outcome (%)	Indiana		Tennessee		Maine	
	Enrolled beneficiaries	Matched non-enrolled beneficiaries	Enrolled beneficiaries	Matched non-enrolled beneficiaries	Enrolled beneficiaries	Matched non-enrolled beneficiaries
Any inpatient stays in 12 months before birth	15.4	11.9	48.3	23.8	19.6	17.5
Any inpatient stays in the birth month	83.9	82.5	90.5	98.0	96.5	98.6
Any inpatient stays in 11 months after birth	11.2	10.7	8.8	15.0	11.2	7.0
Gestational age at end of pregnancy						
Less than 37 weeks	14.7	14.2	32.0	23.8	30.1	32.9
37 to 38 weeks	54.3	51.8	40.8	53.1	46.2	44.1
More than 38 weeks	12.8	13.5	25.2	21.1	18.2	18.2
Insufficient information	18.2	20.5	2.0	2.0	5.6	4.9
Sample size	571	571	147	147	143	143

Notes: Data sources include Transformed Medicaid Statistical Information System (T-MSIS) data from 2020 to 2023 and state vital records data. Enrollees are Medicaid beneficiaries enrolled in the Maternal Opioid Misuse (MOM) Model, non-enrollees are Medicaid beneficiaries who meet eligibility criteria for enrollment in MOM Model areas, and matched non-enrollees are members of the non-enrollee sample propensity score-matched to the enrollee sample.

[a] Prenatal care visit counts were constructed from vital records data where available. Otherwise, they were identified using Current Procedural Terminology, Healthcare Common Procedure Coding System, and International Classification of Diseases, 10th revision codes for prenatal care services received between 270 days before the child's birth date and the child's birth date.

[b] An individual is considered as having MOUD continuity during pregnancy if there was a period during pregnancy with MOUD prescriptions or procedures with a combined duration of at least 90 days. Discontinuities of up to 7 days were allowed.

[c] Postpartum care was identified using Current Procedural Terminology and International Classification of Diseases, 10th revision codes for postpartum care 90 days before the child's birth date and 140 days after the child's birth date.

[d] Defined using the California Maternal Quality Care Collaborative obstetric comorbidity scoring system.

Table E.8. Maternal Outcomes by Maternal Opioid Misuse (MOM) Model Enrollment, by MOUD History, Prenatal Enrollees

Description of key findings: As shown in the highlighted rows, positive differences in medication for opioid use disorder (MOUD) outcomes between enrollees and matched non-enrollees are larger in magnitude for the sample without evidence of MOUD prior to pregnancy compared to the sample with evidence of MOUD prior to pregnancy. Additionally, enrollees with no MOUD before pregnancy had more emergency department (ED) visits before birth compared to their matches. These differences are similar in magnitude to those for the full sample.

Outcome (%)	MOUD before pregnancy		No MOUD before pregnancy	
	Enrolled beneficiaries	Matched non-enrolled beneficiaries	Enrolled beneficiaries	Matched non-enrolled beneficiaries
Prenatal care visit count[a]				
0 to 2	7.5	14.1	10.0	25.9
3 to 9	34.2	43.2	42.4	37.5
10 or more	58.3	42.6	47.6	36.6
Any MOUD in 12 months before birth	91.9	90.1	37.5	23.5
Any MOUD in birth month	73.6	65.5	28.4	17.2
MOUD three-month continuity[b]	66.4	62.2	28.7	25.2
Any MOUD in 11 months after birth	74.2	70.6	34.7	36.1
Total ED visits 12 months before birth				
None	28.2	33.6	24.5	30.1
1 to 2	38.1	43.8	37.1	39.2
3 or more	33.6	22.5	38.5	30.8
Total ED visits 11 months after birth				
None	61.3	63.1	57.6	52.7
1 to 2	28.2	27.9	31.0	32.6
3 or more	10.5	9.0	11.4	14.7
C-section delivery	37.2	36.9	38.5	34.5
Had postpartum care[c]	64.6	66.1	64.6	63.2
Severe maternal morbidity[d]				
0 to 9	6.0	10.8	11.2	13.5
10 to 17	37.5	33.9	29.1	27.3
18 or more	56.5	55.3	59.7	59.2

Outcome (%)	MOUD before pregnancy		No MOUD before pregnancy	
	Enrolled beneficiaries	Matched non-enrolled beneficiaries	Enrolled beneficiaries	Matched non-enrolled beneficiaries
Any inpatient stays in 12 months before birth	23.1	11.7	22.6	18.9
Any inpatient stays in the birth month	89.8	88.9	87.2	89.5
Any inpatient stays in 11 months after birth	14.4	6.6	8.2	12.1
Gestational age at end of pregnancy				
Less than 37 weeks	18.6	20.4	24.7	18.4
37 to 38 weeks	55.3	55.3	46.9	48.3
More than 38 weeks	15.3	13.5	17.9	20.0
Insufficient information	10.8	10.8	10.5	13.3
Sample size	333	333	429	429

Notes: Data sources include Transformed Medicaid Statistical Information System (T-MSIS) data from 2020 to 2023 and state vital records data. Enrollees are Medicaid beneficiaries enrolled in the Maternal Opioid Misuse (MOM) Model, non-enrollees are Medicaid beneficiaries who meet eligibility criteria for enrollment in MOM Model areas, and matched non-enrollees are members of the non-enrollee sample propensity score-matched to the enrollee sample. Prenatal enrollment indicates enrollment in the MOM Model during pregnancy. ED = emergency department.

MOUD before pregnancy indicates the presence of one or more MOUD prescriptions or procedures before the start of pregnancy.

[a] Prenatal care visit counts were constructed from vital records data where available. Otherwise, they were identified using Current Procedural Terminology, Healthcare Common Procedure Coding System, and International Classification of Diseases, 10th revision codes for prenatal care services received between 270 days before the child's birth date and the child's birth date.

[b] An individual is considered as having MOUD continuity during pregnancy if there was a period during pregnancy with MOUD prescriptions or procedures with a combined duration of at least 90 days. Discontinuities of up to 7 days were allowed.

[c] Postpartum care was identified using Current Procedural Terminology and International Classification of Diseases, 10th revision codes for postpartum care 90 days before the child's birth date and 140 days after the child's birth date.

[d] Defined using the California Maternal Quality Care Collaborative obstetric comorbidity scoring system.

Table E.9. Maternal Outcomes by Maternal Opioid Misuse (MOM) Model Enrollment, by Medication for Opioid Use Disorder (MOUD) History

Description of key findings: As shown in the highlighted rows, positive differences in medication for opioid use disorder (MOUD) outcomes between enrolled beneficiaries and matched non-enrolled beneficiaries are larger in magnitude for the sample without evidence of MOUD prior to pregnancy compared to the sample with evidence of MOUD prior to pregnancy.

Outcome (%)	MOUD before pregnancy		No MOUD before pregnancy	
	Enrolled beneficiaries	Matched non-enrolled beneficiaries	Enrolled beneficiaries	Matched non-enrolled beneficiaries
Prenatal care visit count[a]				
None	2.5	3.8	4.3	9.1
1 to 2	8.1	9.5	8.7	14.9
3 to 9	34.0	43.5	42.1	38.9
10 or more	55.4	43.2	44.9	37.1
Any MOUD in 12 months before birth	91.9	90.8	37.1	24.1
Any MOUD in birth month	72.7	67.1	28.7	17.7
MOUD three-month continuity[b]	68.0	64.2	32.3	24.6
Any MOUD in 11 months after birth	75.2	71.6	38.6	37.1
Total ED visits 12 months before birth				
None	30.4	35.8	24.6	30.9
1 to 2	37.6	41.9	39.9	39.6
3 or more	32.0	22.3	35.5	29.5
Total ED visits 11 months after birth				
None	61.7	62.8	56.8	53.6
1 to 2	28.4	28.4	31.0	31.7
3 or more	9.9	8.8	12.2	14.7
C-section delivery	37.2	37.8	38.4	34.3
Had postpartum care[c]	61.7	66.7	63.5	62.2
Severe maternal morbidity[d]				
0 to 9	7.7	10.6	11.4	13.0
10 to 17	35.4	33.8	28.7	27.9
18 or more	57.0	55.6	59.9	59.1

Outcome (%)	MOUD before pregnancy		No MOUD before pregnancy	
	Enrolled beneficiaries	Matched non-enrolled beneficiaries	Enrolled beneficiaries	Matched non-enrolled beneficiaries
Any inpatient stays in 12 months before birth	22.3	11.0	21.9	18.6
Any inpatient stays in the birth month	87.4	88.1	87.6	90.3
Any inpatient stays in 11 months after birth	12.6	7.0	8.4	12.7
Gestational age at end of pregnancy				
Less than 37 weeks	17.1	19.8	24.3	17.3
37 to 38 weeks	53.8	54.1	46.2	50.3
More than 38 weeks	15.8	13.1	18.2	19.8
Insufficient information	13.3	13.1	11.4	12.5
Sample size	444	444	606	606

Notes: Data sources include Transformed Medicaid Statistical Information System (T-MSIS) data from 2020 to 2023 and state vital records data. Enrollees are Medicaid beneficiaries enrolled in the Maternal Opioid Misuse (MOM) Model, non-enrollees are Medicaid beneficiaries who meet eligibility criteria for enrollment in MOM Model areas, and matched non-enrollees are members of the non-enrollee sample propensity score-matched to the enrollee sample.

MOUD before pregnancy indicates the presence of one or more MOUD prescriptions or procedures before the start of pregnancy.

[a] Prenatal care visit counts were constructed from vital records data where available. Otherwise, they were identified using Current Procedural Terminology, Healthcare Common Procedure Coding System, and International Classification of Diseases, 10th revision codes for prenatal care services received between 270 days before the child's birth date and the child's birth date.

[b] An individual is considered as having MOUD continuity during pregnancy if there was a period during pregnancy with MOUD prescriptions or procedures with a combined duration of at least 90 days. Discontinuities of up to 7 days were allowed.

[c] Postpartum care was identified using Current Procedural Terminology and International Classification of Diseases, 10th revision codes for postpartum care 90 days before the child's birth date and 140 days after the child's birth date.

[d] Defined using the California Maternal Quality Care Collaborative obstetric comorbidity scoring system.

Table E.10. Maternal Outcomes by Maternal Opioid Misuse (MOM) Model Enrollment, by Mental Health History, Prenatal Enrollees

Description of key findings: As shown in the highlighted rows, prenatal enrolled beneficiaries with no mental health diagnosis before pregnancy showed positive differences in three-month continuity of medication for opioid use disorder (MOUD). Additionally, enrolled beneficiaries with a mental health diagnosis before pregnancy were more likely to have had inpatient stays before birth compared to their matches, while enrolled beneficiaries without a mental health diagnosis before pregnancy had more emergency department (ED) visits before birth compared to their matches.

Outcome (%)	Mental health diagnosis before pregnancy		No mental health diagnosis before pregnancy	
	Enrolled beneficiaries	Matched non-enrolled beneficiaries	Enrolled beneficiaries	Matched non-enrolled beneficiaries
Prenatal care visit count[a]				
0 to 2	8.5	16.9	9.7	27.4
3 to 9	38.4	41.9	39.7	36.8
10 or more	53.2	41.2	50.5	35.7
Any MOUD in 12 months before birth	63.9	56.1	56.7	46.6
Any MOUD in birth month	48.5	38.8	47.7	37.5
MOUD three-month continuity[b]	43.5	42.9	48.0	38.6
Any MOUD in 11 months after birth	50.9	49.9	53.8	53.4
Total ED visits 12 months before birth				
None	23.9	29.1	30.0	36.1
1 to 2	36.7	38.6	39.0	45.8
3 or more	39.4	32.4	31.0	18.1
Total ED visits 11 months after birth				
None	58.4	55.1	60.6	61.0
1 to 2	29.9	31.3	29.6	29.2
3 or more	11.8	13.6	9.7	9.7
C-section delivery	37.9	35.5	37.9	35.7
Had postpartum care[c]	66.8	66.8	60.6	60.3
Severe maternal morbidity[d]				
0 to 9	6.6	12.8	13.0	11.6
10 to 17	31.1	26.8	35.7	36.1
18 or more	62.3	60.4	51.3	52.3

Outcome (%)	Mental health diagnosis before pregnancy		No mental health diagnosis before pregnancy	
	Enrolled beneficiaries	Matched non-enrolled beneficiaries	Enrolled beneficiaries	Matched non-enrolled beneficiaries
Any inpatient stays in 12 months before birth	26.2	17.9	17.0	11.9
Any inpatient stays in the birth month	89.9	90.9	85.6	86.3
Any inpatient stays in 11 months after birth	12.6	10.9	7.9	7.6
Gestational age at end of pregnancy				
Less than 37 weeks	22.9	20.2	20.6	17.7
37 to 38 weeks	49.9	52.2	51.6	49.8
More than 38 weeks	16.9	15.7	16.6	19.9
Insufficient information	10.3	12.0	11.2	12.6
Sample size	485	485	277	277

Notes: Data sources include Transformed Medicaid Statistical Information System (T-MSIS) data from 2020 to 2023 and state vital records data. Enrollees are Medicaid beneficiaries enrolled in the Maternal Opioid Misuse (MOM) Model, non-enrollees are Medicaid beneficiaries who meet eligibility criteria for enrollment in MOM Model areas, and matched non-enrollees are members of the non-enrollee sample propensity score-matched to the enrollee sample. Prenatal enrollment indicates enrollment in the MOM Model during pregnancy. ED = emergency department.

Mental health diagnosis before pregnancy indicates the presence of one or more mental health disorder diagnoses before the start of pregnancy. Mental health disorders included anxiety disorder; bipolar disorder; depression; personality disorder; post-traumatic stress disorder; schizophrenia; other psychotic disorders; attention-deficit/hyperactivity disorder, conduct disorders and hyperkinetic syndrome; autism spectrum disorders; intellectual disabilities and related conditions; learning disabilities; other developmental delays; and other mental health-related conditions.

[a] Prenatal care visit counts were constructed from vital records data where available. Otherwise, they were identified using Current Procedural Terminology, Healthcare Common Procedure Coding System, and International Classification of Diseases, 10th revision codes for prenatal care services received between 270 days before the child's birth date and the child's birth date.

[b] An individual is considered as having MOUD continuity during pregnancy if there was a period during pregnancy with MOUD prescriptions or procedures with a combined duration of at least 90 days. Discontinuities of up to 7 days were allowed.

[c] Postpartum care was identified using Current Procedural Terminology and International Classification of Diseases, 10th revision codes for postpartum care 90 days before the child's birth date and 140 days after the child's birth date.

[d] Defined using the California Maternal Quality Care Collaborative obstetric comorbidity scoring system.

Table E.11. Maternal Outcomes by Maternal Opioid Misuse (MOM) Model Enrollment, by Mental Health History

Description of key findings: As shown in the highlighted rows, enrollees with a mental health diagnosis before pregnancy were more likely to have had inpatient stays before birth compared to their matches, while enrollees without a mental health diagnosis before pregnancy had more emergency department (ED) visits before birth compared to their matches.

Outcome (%)	Mental health diagnosis before pregnancy		No mental health diagnosis before pregnancy	
	Enrolled beneficiaries	Matched non-enrolled beneficiaries	Enrolled beneficiaries	Matched non-enrolled beneficiaries
Prenatal care visit count[a]				
None	3.5	4.6	3.5	10.6
1 to 2	7.5	11.3	10.1	14.6
3 to 9	39.0	43.1	38.1	37.1
10 or more	50.0	41.0	48.2	37.6
Any MOUD in 12 months before birth	62.7	55.4	56.3	47.2
Any MOUD in birth month	47.7	37.8	46.7	39.9
MOUD three-month continuity[b]	46.8	40.8	48.5	42.2
Any MOUD in 11 months after birth	53.2	51.4	55.6	52.3
Total ED visits 12 months before birth				
None	23.9	29.5	32.3	38.6
1 to 2	38.1	38.4	40.4	44.2
3 or more	38.1	32.1	27.3	17.2
Total ED visits 11 months after birth				
None	58.0	54.7	60.4	62.1
1 to 2	29.4	31.3	30.8	28.5
3 or more	12.7	13.9	8.8	9.3
C-section delivery	38.8	36.2	36.4	35.1
Had postpartum care[c]	65.1	66.4	58.8	60.4
Severe maternal morbidity[d]				
0 to 9	7.8	11.8	13.1	12.4
10 to 17	29.5	26.3	34.8	37.1
18 or more	62.7	61.9	52.0	50.5

Outcome (%)	Mental health diagnosis before pregnancy		No mental health diagnosis before pregnancy	
	Enrolled beneficiaries	Matched non-enrolled beneficiaries	Enrolled beneficiaries	Matched non-enrolled beneficiaries
Any inpatient stays in 12 months before birth	25.7	17.7	16.2	11.6
Any inpatient stays in the birth month	88.5	91.3	85.9	86.1
Any inpatient stays in 11 months after birth	11.5	11.6	8.1	8.1
Gestational age at end of pregnancy				
Less than 37 weeks	22.0	19.7	19.9	16.2
37 to 38 weeks	48.8	52.1	50.5	51.5
More than 38 weeks	17.7	15.4	16.2	19.4
Insufficient information	11.5	12.7	13.4	12.9
Sample size	654	654	396	396

Notes: Data sources include Transformed Medicaid Statistical Information System (T-MSIS) data from 2020 to 2023 and state vital records data. Enrollees are Medicaid beneficiaries enrolled in the Maternal Opioid Misuse (MOM) Model, non-enrollees are Medicaid beneficiaries who meet eligibility criteria for enrollment in MOM Model areas, and matched non-enrollees are members of the non-enrollee sample propensity score-matched to the enrollee sample. MOUD = medication for opioid use disorder.

Mental health diagnosis before pregnancy indicates the presence of one or more mental health disorder diagnoses before the start of pregnancy. Mental health disorders included anxiety disorder; bipolar disorder; depression; personality disorder; post-traumatic stress disorder; schizophrenia; other psychotic disorders; attention-deficit/hyperactivity disorder, conduct disorders and hyperkinetic syndrome; autism spectrum disorders; intellectual disabilities and related conditions; learning disabilities; other developmental delays; and other mental health-related conditions.

[a] Prenatal care visit counts were constructed from vital records data where available. Otherwise, they were identified using Current Procedural Terminology, Healthcare Common Procedure Coding System, and International Classification of Diseases, 10th revision codes for prenatal care services received between 270 days before the child's birth date and the child's birth date.

[b] An individual is considered as having MOUD continuity during pregnancy if there was a period during pregnancy with MOUD prescriptions or procedures with a combined duration of at least 90 days. Discontinuities of up to 7 days were allowed.

[c] Postpartum care was identified using Current Procedural Terminology and International Classification of Diseases, 10th revision codes for postpartum care 90 days before the child's birth date and 140 days after the child's birth date.

[d] Defined using the California Maternal Quality Care Collaborative obstetric comorbidity scoring system.

Table E.12. Maternal Outcomes by Maternal Opioid Misuse (MOM) Model Enrollment, by Enrollment Timing

Description of key findings: As shown in the highlighted rows, positive differences in prenatal care visit count and medication for opioid use disorder (MOUD) outcomes between enrolled and matched non-enrolled beneficiaries are larger in magnitude for the prenatal enrollment sample as compared to the postpartum enrollment sample for any MOUD before birth or in the birth month, while these differences were larger for the postpartum enrollment sample for MOUD three-month continuity and MOUD after birth.

Outcome (%)	Prenatal enrollment		Postpartum enrollment	
	Enrolled beneficiaries	Matched non-enrolled beneficiaries	Enrolled beneficiaries	Matched non-enrolled beneficiaries
Prenatal care visit count[a]				
0 to 2	8.9	20.7	20.1	16.0
3 to 9	38.8	40.0	38.2	43.1
10 or more	52.2	39.2	41.7	41.0
Any MOUD in 12 months before birth	61.3	52.6	57.6	51.4
Any MOUD in birth month	48.2	38.3	45.1	39.2
MOUD three-month continuity[b]	45.1	41.3	53.5	41.3
Any MOUD in 11 months after birth	52.0	51.2	59.7	53.1
Total ED visits 12 months before birth				
None	26.1	31.6	29.5	36.5
1 to 2	37.5	41.2	42.7	38.9
3 or more	36.4	27.2	27.8	24.7
Total ED visits 11 months after birth				
None	59.2	57.2	58.0	58.3
1 to 2	29.8	30.6	30.2	29.5
3 or more	11.0	12.2	11.8	12.2
C-section delivery	37.9	35.6	37.8	36.5
Had postpartum care[c]	64.6	64.4	58.0	63.2
Severe maternal morbidity[d]				
0 to 9	8.9	12.3	12.2	11.1
10 to 17	32.8	30.2	28.1	30.9
18 or more	58.3	57.5	59.7	58.0
Any inpatient stays in 12 months before birth	22.8	15.7	20.1	14.6
Any inpatient stays in the birth month	88.3	89.2	85.4	89.6

Outcome (%)	Prenatal enrollment		Postpartum enrollment	
	Enrolled beneficiaries	Matched non-enrolled beneficiaries	Enrolled beneficiaries	Matched non-enrolled beneficiaries
Any inpatient stays in 11 months after birth	10.9	9.7	8.3	11.8
Gestational age at end of pregnancy				
Less than 37 weeks	22.0	19.3	19.1	16.0
37 to 38 weeks	50.5	51.3	46.5	53.5
More than 38 weeks	16.8	17.2	18.1	16.3
Insufficient information	10.6	12.2	16.3	14.2
Sample size	762	762	288	288

Notes: Data sources include Transformed Medicaid Statistical Information System (T-MSIS) data from 2020 to 2023 and state vital records data. Enrollees are Medicaid beneficiaries enrolled in the Maternal Opioid Misuse (MOM) Model, non-enrollees are Medicaid beneficiaries who meet eligibility criteria for enrollment in MOM Model areas, and matched non-enrollees are members of the non-enrollee sample propensity score-matched to the enrollee sample. ED = emergency department.

Prenatal enrollment indicates enrollment in the MOM Model during pregnancy. Postpartum enrollment indicates enrollment in the MOM Model on or after the child's birth date.

[a] Prenatal care visit counts were constructed from vital records data where available. Otherwise, they were identified using Current Procedural Terminology, Healthcare Common Procedure Coding System, and International Classification of Diseases, 10th revision codes for prenatal care services received between 270 days before the child's birth date and the child's birth date.

[b] An individual is considered as having MOUD continuity during pregnancy if there was a period during pregnancy with MOUD prescriptions or procedures with a combined duration of at least 90 days. Discontinuities of up to 7 days were allowed.

[c] Postpartum care was identified using Current Procedural Terminology and International Classification of Diseases, 10th revision codes for postpartum care 90 days before the child's birth date and 140 days after the child's birth date.

[d] Defined using the California Maternal Quality Care Collaborative obstetric comorbidity scoring system.

Table E.13. Maternal Outcomes by Maternal Opioid Misuse (MOM) Model Enrollment, by Care Integration Approach, Prenatal Enrolled Beneficiaries

Description of key findings: As shown in the highlighted rows, positive differences in medication for opioid use disorder (MOUD) outcomes are largest in magnitude for integrated single site awardees, followed by integrated without colocation awardees, and finally followed by the enhanced care coordination awardee. Positive differences in prenatal care visit counts are largest among integrated single site and enhanced care coordination awardees. Enrolled beneficiaries in integrated single site awardees were more likely to have had an inpatient stay before birth compared to their matches. These differences are similar in magnitude to those for the full sample.

Outcome (%)	Integrated single site (Colorado, Tennessee, Texas)		Integrated without colocation (Maine, New Hampshire, West Virginia)		Enhanced care coordination (Indiana)	
	Enrolled beneficiaries	Matched non-enrolled beneficiaries	Enrolled beneficiaries	Matched non-enrolled beneficiaries	Enrolled beneficiaries	Matched non-enrolled beneficiaries
Prenatal care visit count[a]						
0 to 2	13.5	36.0	9.6	15.5	6.5	16.4
3 to 9	54.5	45.5	42.8	40.6	30.0	37.3
10 or more	32.0	18.5	47.6	43.9	63.5	46.3
Any MOUD in 12 months before birth	63.5	47.8	63.1	51.3	59.4	55.4
Any MOUD in birth month	51.7	34.8	48.7	35.3	46.3	41.3
MOUD three-month continuity[b]	41.0	29.2	49.7	47.6	44.8	43.8
Any MOUD in 11 months after birth	51.7	48.9	55.1	44.4	50.6	55.4
Total ED visits 12 months before birth						
None	19.7	24.2	32.6	40.6	25.9	30.7
1 to 2	36.5	39.9	35.8	36.9	38.8	43.8
3 or more	43.8	36.0	31.6	22.5	35.3	25.4
Total ED visits 11 months after birth						
None	57.9	55.6	56.7	57.2	61.0	57.9
1 to 2	30.9	26.4	30.5	31.0	29.0	32.2
3 or more	11.2	18.0	12.8	11.8	10.1	9.8
C-section delivery	48.3	33.7	36.9	41.2	33.8	33.8
Had postpartum care[c]	80.9	77.5	66.3	72.2	56.4	54.9

Outcome (%)	Integrated single site (Colorado, Tennessee, Texas)		Integrated without colocation (Maine, New Hampshire, West Virginia)		Enhanced care coordination (Indiana)	
	Enrolled beneficiaries	Matched non-enrolled beneficiaries	Enrolled beneficiaries	Matched non-enrolled beneficiaries	Enrolled beneficiaries	Matched non-enrolled beneficiaries
Severe maternal morbidity[d]						
0 to 17	30.9	41.0	34.2	32.1	50.1	48.1
18 or more	69.1	59.0	65.8	67.9	49.9	51.9
Any inpatient stays in 12 months before birth	44.9	19.7	16.0	18.2	16.1	12.8
Any inpatient stays in the birth month	90.4	96.6	94.1	97.9	84.6	81.9
Any inpatient stays in 11 months after birth	9.0	13.5	9.1	7.0	12.6	9.3
Gestational age at end of pregnancy						
Less than 37 weeks	28.7	20.8	31.0	27.8	14.9	14.6
37 to 38 weeks	43.3	58.4	44.4	46.5	56.7	50.4
More than 38 weeks	25.3	19.1	18.2	19.8	12.3	15.1
Insufficient information	2.8	1.7	6.4	5.9	16.1	19.9
Sample size	178	178	187	187	397	397

Notes: Data sources include Transformed Medicaid Statistical Information System (T-MSIS) data from 2020 to 2023 and state vital records data. Enrollees are Medicaid beneficiaries enrolled in the Maternal Opioid Misuse (MOM) Model, non-enrollees are Medicaid beneficiaries who meet eligibility criteria for enrollment in MOM Model areas, and matched non-enrollees are members of the non-enrollee sample propensity score-matched to the enrollee sample. Prenatal enrollment indicates enrollment in the MOM Model during pregnancy. ED = emergency department.

Integrated single site awardees provided integrated care at a single location. Integrated without colocation awardees provided integrated care across geographically dispersed providers. Enhanced care coordination awardees provided enhanced care coordination.

[a] Prenatal care visit counts were constructed from vital records data where available. Otherwise, they were identified using Current Procedural Terminology, Healthcare Common Procedure Coding System, and International Classification of Diseases, 10th revision codes for prenatal care services received between 270 days before the child's birth date and the child's birth date.

[b] An individual is considered as having MOUD continuity during pregnancy if there was a period during pregnancy with MOUD prescriptions or procedures with a combined duration of at least 90 days. Discontinuities of up to 7 days were allowed.

[c] Postpartum care was identified using Current Procedural Terminology and International Classification of Diseases, 10th revision codes for postpartum care 90 days before the child's birth date and 140 days after the child's birth date.

[d] Defined using the California Maternal Quality Care Collaborative obstetric comorbidity scoring system.

Table E.14. Maternal Outcomes by Maternal Opioid Misuse (MOM) Model Enrollment, by Care Integration Approach

Description of key findings: As shown in the highlighted rows, positive differences in medication for opioid use disorder (MOUD) outcomes are largest in magnitude for integrated single site awardees, followed by integrated without colocation awardees, and finally followed by the enhanced care coordination awardee. Positive differences in prenatal care visit counts are largest among integrated single site and enhanced care coordination awardees. Enrolled beneficiaries in integrated single site awardees were more likely to have had an inpatient stay before birth compared to their matches.

Outcome (%)	Integrated single site (Colorado, Tennessee, Texas)		Integrated without colocation (Maine, New Hampshire, West Virginia)		Enhanced care coordination (Indiana)	
	Enrolled beneficiaries	Matched non-enrolled beneficiaries	Enrolled beneficiaries	Matched non-enrolled beneficiaries	Enrolled beneficiaries	Matched non-enrolled beneficiaries
Prenatal care visit count[a]						
0 to 2	14.9	34.8	15.8	17.3	9.1	15.1
3 to 9	55.2	47.8	43.2	42.1	30.6	37.8
10 or more	29.9	17.4	41.0	40.6	60.2	47.1
Any MOUD in 12 months before birth	61.7	45.8	58.3	48.9	60.8	56.2
Any MOUD in birth month	50.7	32.8	43.5	33.5	48.0	43.1
MOUD three-month continuity[b]	42.3	26.9	51.4	45.3	47.3	44.5
Any MOUD in 11 months after birth	54.7	46.8	54.3	43.5	53.8	57.4
Total ED visits 12 months before birth						
None	18.4	23.4	33.5	43.5	27.0	31.2
1 to 2	39.8	39.8	36.7	36.3	39.8	42.9
3 or more	41.8	36.8	29.9	20.1	33.3	25.9
Total ED visits 11 months after birth						
None	57.7	54.7	55.8	60.8	60.8	56.9
1 to 2	29.9	26.9	31.3	29.1	29.2	32.0
3 or more	12.4	18.4	12.9	10.1	10.0	11.0
C-section delivery	48.8	33.8	38.5	39.2	33.8	34.9
Had postpartum care[c]	81.1	75.1	64.7	72.7	55.3	56.0

Outcome (%)	Integrated single site (Colorado, Tennessee, Texas)		Integrated without colocation (Maine, New Hampshire, West Virginia)		Enhanced care coordination (Indiana)	
	Enrolled beneficiaries	Matched non-enrolled beneficiaries	Enrolled beneficiaries	Matched non-enrolled beneficiaries	Enrolled beneficiaries	Matched non-enrolled beneficiaries
Severe maternal morbidity[d]						
0 to 9	6.5	17.4	6.8	5.8	12.4	13.1
10 to 17	24.9	22.9	25.2	23.7	37.0	36.3
18 or more	68.7	59.7	68.0	70.5	50.6	50.6
Any inpatient stays in 12 months before birth	44.3	22.9	19.8	17.3	15.4	11.9
Any inpatient stays in the birth month	90.0	96.5	93.2	98.2	83.9	82.5
Any inpatient stays in 11 months after birth	8.5	13.9	9.4	6.8	11.2	10.7
Gestational age at end of pregnancy						
Less than 37 weeks	27.9	20.4	29.9	25.5	14.7	14.2
37 to 38 weeks	42.8	55.2	44.2	49.6	54.3	51.8
More than 38 weeks	26.9	21.9	19.1	20.5	12.8	13.5
Insufficient information	2.5	2.5	6.8	4.3	18.2	20.5
Sample size	201	201	278	278	571	571

Notes: Data sources include Transformed Medicaid Statistical Information System (T-MSIS) data from 2020 to 2023 and state vital records data. Enrollees are Medicaid beneficiaries enrolled in the Maternal Opioid Misuse (MOM) Model, non-enrollees are Medicaid beneficiaries who meet eligibility criteria for enrollment in MOM Model areas, and matched non-enrollees are members of the non-enrollee sample propensity score-matched to the enrollee sample. ED = emergency department.

Integrated single site awardees provided integrated care at a single location. Integrated without colocation awardees provided integrated care across geographically dispersed providers. Enhanced care coordination awardees provided enhanced care coordination.

[a] Prenatal care visit counts were constructed from vital records data where available. Otherwise, they were identified using Current Procedural Terminology, Healthcare Common Procedure Coding System, and International Classification of Diseases, 10th revision codes for prenatal care services received between 270 days before the child's birth date and the child's birth date.

[b] An individual is considered as having MOUD continuity during pregnancy if there was a period during pregnancy with MOUD prescriptions or procedures with a combined duration of at least 90 days. Discontinuities of up to 7 days were allowed.

[c] Postpartum care was identified using Current Procedural Terminology and International Classification of Diseases, 10th revision codes for postpartum care 90 days before the child's birth date and 140 days after the child's birth date.

[d] Defined using the California Maternal Quality Care Collaborative obstetric comorbidity scoring system.

Table E.15. Maternal Outcomes by Maternal Opioid Misuse (MOM) Model Enrollment, by Peer Recovery Specialist Focus, Prenatal Enrolled Beneficiaries

Description of key findings: As shown in the highlighted rows, positive differences in medication for opioid use disorder (MOUD) outcomes are larger in magnitude for awardees with a primary focus on peer recovery specialists compared to awardees with a secondary focus. Enrolled beneficiaries in primary focus awardees were more likely to have had an inpatient stay before birth compared to their matches. These differences are similar in magnitude to those for the full sample.

Outcome (%)	Primary focus (Maine, New Hampshire, Tennessee, Texas)		Secondary focus (Indiana, West Virginia)	
	Enrolled beneficiaries	Matched non-enrolled beneficiaries	Enrolled beneficiaries	Matched non-enrolled beneficiaries
Prenatal care visit count[a]				
0 to 2	13.1	27.9	6.3	16.0
3 to 9	50.8	42.0	30.8	38.0
10 or more	36.1	30.2	62.9	46.1
Any MOUD in 12 months before birth	65.6	49.2	59.1	55.3
Any MOUD in birth month	53.4	34.8	45.6	40.9
MOUD three-month continuity[b]	46.9	38.0	44.5	44.3
Any MOUD in 11 months after birth	56.1	46.6	50.1	54.8
Total ED visits 12 months before birth				
None	25.6	32.5	27.0	30.8
1 to 2	36.1	39.7	38.9	43.1
3 or more	38.4	27.9	34.2	26.1
Total ED visits 11 months after birth				
None	57.4	56.7	61.1	57.5
1 to 2	29.5	28.5	29.4	32.1
3 or more	13.1	14.8	9.4	10.3
C-section delivery	43.6	37.7	34.6	34.2
Had postpartum care[c]	77.0	78.0	55.5	55.1
Severe maternal morbidity[d]				
0 to 9	5.9	12.8	11.2	11.9
10 to 17	25.6	24.9	37.1	33.7
18 or more	68.5	62.3	51.7	54.4

Outcome (%)	Primary focus (Maine, New Hampshire, Tennessee, Texas)		Secondary focus (Indiana, West Virginia)	
	Enrolled beneficiaries	Matched non-enrolled beneficiaries	Enrolled beneficiaries	Matched non-enrolled beneficiaries
Any inpatient stays in 12 months before birth	33.8	18.0	15.5	14.2
Any inpatient stays in the birth month	92.8	97.4	84.9	83.4
Any inpatient stays in 11 months after birth	10.2	10.5	11.7	9.2
Gestational age at end of pregnancy				
Less than 37 weeks	29.5	27.2	17.3	14.4
37 to 38 weeks	43.9	49.8	54.6	51.2
More than 38 weeks	22.6	19.3	12.8	16.0
Insufficient information	3.9	3.6	15.3	18.4
Sample size	305	305	445	445

Notes: Data sources include Transformed Medicaid Statistical Information System (T-MSIS) data from 2020 to 2023 and state vital records data. Enrollees are Medicaid beneficiaries enrolled in the Maternal Opioid Misuse (MOM) Model, non-enrollees are Medicaid beneficiaries who meet eligibility criteria for enrollment in MOM Model areas, and matched non-enrollees are members of the non-enrollee sample propensity score-matched to the enrollee sample. Prenatal enrollment indicates enrollment in the MOM Model during pregnancy. ED = emergency department.

Awardees with a primary focus had peer recovery specialists as a primary MOM Model component. Awardees with a secondary focus had peer recovery specialists available but less central components of the model.

[a] Prenatal care visit counts were constructed from vital records data where available. Otherwise, they were identified using Current Procedural Terminology, Healthcare Common Procedure Coding System, and International Classification of Diseases, 10th revision codes for prenatal care services received between 270 days before the child's birth date and the child's birth date.

[b] An individual is considered as having MOUD continuity during pregnancy if there was a period during pregnancy with MOUD prescriptions or procedures with a combined duration of at least 90 days. Discontinuities of up to 7 days were allowed.

[c] Postpartum care was identified using Current Procedural Terminology and International Classification of Diseases, 10th revision codes for postpartum care 90 days before the child's birth date and 140 days after the child's birth date.

[d] Defined using the California Maternal Quality Care Collaborative obstetric comorbidity scoring system.

Table E.16. Maternal Outcomes by Maternal Opioid Misuse (MOM) Model Enrollment, by Peer Recovery Specialist Focus

Description of key findings: As shown in the highlighted rows, positive differences in medication for opioid use disorder (MOUD) outcomes are larger in magnitude for awardees with a primary focus on peer recovery specialists compared to awardees with a secondary focus. Enrolled beneficiaries in primary focus awardees were more likely to have had an inpatient stay before birth compared to their matches.

Outcome (%)	Primary focus (Maine, New Hampshire, Tennessee, Texas)		Secondary focus (Indiana, West Virginia)	
	Enrolled beneficiaries	Matched non-enrolled beneficiaries	Enrolled beneficiaries	Matched non-enrolled beneficiaries
Prenatal care visit count[a]				
None	4.3	9.7	3.1	5.3
1 to 2	12.0	16.6	6.5	10.1
3 to 9	51.3	44.4	31.0	38.1
10 or more	32.4	29.3	59.4	46.5
Any MOUD in 12 months before birth	61.2	46.2	60.3	56.3
Any MOUD in birth month	49.5	31.9	46.8	42.8
MOUD three-month continuity[b]	48.7	37.0	47.1	44.5
Any MOUD in 11 months after birth	56.1	44.1	53.6	56.7
Total ED visits 12 months before birth				
None	26.3	34.4	27.9	31.9
1 to 2	38.3	38.8	39.7	42.3
3 to 9	32.4	23.2	29.1	23.1
10 or more	3.1	3.6	3.3	2.6
Total ED visits 11 months after birth				
None	56.4	57.7	60.9	57.5
1 to 2	29.6	28.6	29.8	31.5
3 or more	14.0	13.8	9.3	11.0
C-section delivery	43.6	36.7	34.9	35.2
Had postpartum care[c]	76.0	76.8	54.3	56.3

Outcome (%)	Primary focus (Maine, New Hampshire, Tennessee, Texas)		Secondary focus (Indiana, West Virginia)	
	Enrolled beneficiaries	Matched non-enrolled beneficiaries	Enrolled beneficiaries	Matched non-enrolled beneficiaries
Severe maternal morbidity[d]				
0 to 9	6.6	11.5	11.9	12.2
10 to 17	24.5	24.0	35.3	34.3
18 or more	68.9	64.5	52.7	53.5
Any inpatient stays in 12 months before birth	33.9	19.4	15.0	12.9
Any inpatient stays in the birth month	92.3	97.7	84.3	84.0
Any inpatient stays in 11 months after birth	10.2	10.5	10.4	10.2
Gestational age at end of pregnancy				
Less than 37 weeks	29.1	26.3	16.7	14.0
37 to 38 weeks	43.1	49.2	52.9	52.9
More than 38 weeks	23.5	21.2	13.3	14.4
Insufficient information	4.3	3.3	17.1	18.8
Sample size	392	392	645	645

Notes: Data sources include Transformed Medicaid Statistical Information System (T-MSIS) data from 2020 to 2023 and state vital records data. Enrollees are Medicaid beneficiaries enrolled in the Maternal Opioid Misuse (MOM) Model, non-enrollees are Medicaid beneficiaries who meet eligibility criteria for enrollment in MOM Model areas, and matched non-enrollees are members of the non-enrollee sample propensity score-matched to the enrollee sample. ED = emergency department.

Awardees with a primary focus had peer recovery specialists as a primary MOM Model component. Awardees with a secondary focus had peer recovery specialists available but less central components of the model.

[a] Prenatal care visit counts were constructed from vital records data where available. Otherwise, they were identified using Current Procedural Terminology, Healthcare Common Procedure Coding System, and International Classification of Diseases, 10th revision codes for prenatal care services received between 270 days before the child's birth date and the child's birth date.

[b] An individual is considered as having MOUD continuity during pregnancy if there was a period during pregnancy with MOUD prescriptions or procedures with a combined duration of at least 90 days. Discontinuities of up to 7 days were allowed.

[c] Postpartum care was identified using Current Procedural Terminology and International Classification of Diseases, 10th revision codes for postpartum care 90 days before the child's birth date and 140 days after the child's birth date.

[d] Defined using the California Maternal Quality Care Collaborative obstetric comorbidity scoring system.

Table E.17. Maternal Outcomes by Maternal Opioid Misuse (MOM) Model Enrollment, by Multicomponent Maternal Care Transformation, Prenatal Enrolled Beneficiaries

Description of key findings: As shown in the highlighted rows, positive differences in certain medication for opioid use disorder (MOUD) outcomes are largest in magnitude for awardees with three to four model components addressing maternal care transformation, followed by awardees with two components, followed by the awardee with one component. Additionally, positive differences in prenatal care visit counts are largest for the one component awardee, and enrolled beneficiaries in the three to four component awardees were more likely to have had an inpatient visit before birth compared to their matches. These differences are similar in magnitude to those for the full sample.

Outcome (%)	One component (Indiana)		Two components (Maine, West Virginia)		Three to four components (New Hampshire, Tennessee, Texas)	
	Enrolled beneficiaries	Matched non-enrolled beneficiaries	Enrolled beneficiaries	Matched non-enrolled beneficiaries	Enrolled beneficiaries	Matched non-enrolled beneficiaries
Prenatal care visit count[a]						
0 to 2	6.5	16.4	8.4	16.2	15.1	34.4
3 to 9	30.0	37.3	41.9	40.1	55.4	44.1
10 or more	63.5	46.3	49.7	43.7	29.6	21.5
Any MOUD in 12 months before birth	59.4	55.4	64.7	53.3	64.0	46.8
Any MOUD in birth month	46.3	41.3	50.9	36.5	52.2	33.9
MOUD three-month continuity[b]	44.8	43.8	50.3	47.9	42.5	31.7
Any MOUD in 11 months after birth	50.6	55.4	57.5	46.1	52.2	47.8
Total ED visits 12 months before birth						
None	25.9	30.7	32.9	39.5	21.5	25.8
1 to 2	38.8	43.8	35.3	37.7	37.6	40.9
3 or more	35.3	25.4	31.7	22.8	40.9	33.3
Total ED visits 11 months after birth						
None	61.0	57.9	57.5	55.1	58.6	57.5
1 to 2	29.0	32.2	30.5	32.3	29.6	25.8
3 or more	10.1	9.8	12.0	12.6	11.8	16.7
C-section delivery	33.8	33.8	37.1	39.5	48.9	36.0
Had postpartum care[c]	56.4	54.9	66.5	70.7	79.0	79.0

Outcome (%)	One component (Indiana)		Two components (Maine, West Virginia)		Three to four components (New Hampshire, Tennessee, Texas)	
	Enrolled beneficiaries	Matched non-enrolled beneficiaries	Enrolled beneficiaries	Matched non-enrolled beneficiaries	Enrolled beneficiaries	Matched non-enrolled beneficiaries
Severe maternal morbidity[d]						
0 to 17	50.1	48.1	32.9	30.5	30.6	40.9
18 or more	49.9	51.9	67.1	69.5	69.4	59.1
Any inpatient stays in 12 months before birth	16.1	12.8	16.2	19.8	43.5	18.3
Any inpatient stays in the birth month	84.6	81.9	95.2	97.6	89.2	96.8
Any inpatient stays in 11 months after birth	12.6	9.3	8.4	7.8	10.2	12.4
Gestational age at end of pregnancy						
Less than 37 weeks	14.9	14.6	32.9	27.5	28.5	23.1
37 to 38 weeks	56.7	50.4	44.3	46.7	41.9	54.8
More than 38 weeks	12.3	15.1	16.8	19.8	26.3	19.9
Insufficient information	16.1	19.9	6.0	6.0	3.2	2.2
Sample size	397	397	167	167	186	186

Notes: Data sources include Transformed Medicaid Statistical Information System (T-MSIS) data from 2020 to 2023 and state vital records data. Enrollees are Medicaid beneficiaries enrolled in the Maternal Opioid Misuse (MOM) Model, non-enrollees are Medicaid beneficiaries who meet eligibility criteria for enrollment in MOM Model areas, and matched non-enrollees are members of the non-enrollee sample propensity score-matched to the enrollee sample. Prenatal enrollment indicates enrollment in the MOM Model during pregnancy. ED = emergency department.

Qualitative case study findings highlight four model characteristics that drive seamless, patient-centered care: care integration approach, provider information sharing, comprehensive and universal opioid use disorder screening, and peer recovery specialist focus. New Hampshire, Tennessee and Texas have successfully implemented three or four components; Maine and West Virginia two components; and Indiana one component.

[a] Prenatal care visit counts were constructed from vital records data where available. Otherwise, they were identified using Current Procedural Terminology, Healthcare Common Procedure Coding System, and International Classification of Diseases, 10th revision codes for prenatal care services received between 270 days before the child's birth date and the child's birth date.

[b] An individual is considered as having MOUD continuity during pregnancy if there was a period during pregnancy with MOUD prescriptions or procedures with a combined duration of at least 90 days. Discontinuities of up to 7 days were allowed.

[c] Postpartum care was identified using Current Procedural Terminology and International Classification of Diseases, 10th revision codes for postpartum care 90 days before the child's birth date and 140 days after the child's birth date.

[d] Defined using the California Maternal Quality Care Collaborative obstetric comorbidity scoring system.

Table E.18. Maternal Outcomes by Maternal Opioid Misuse (MOM) Model Enrollment, by Multicomponent Maternal Care Transformation

Description of key findings: As shown in the highlighted rows, positive differences in certain medication for opioid use disorder (MOUD) outcomes are largest in magnitude for awardees with three to four model components addressing maternal care transformation, followed by awardees with two components, followed by the awardee with one component. Additionally, positive differences in prenatal care visit counts are largest for the one component awardee, and enrolled beneficiaries in the three to four component awardees were more likely to have had an inpatient visit before birth compared to their matches.

Outcome (%)	One component (Indiana)		Two components (Maine, West Virginia)		Three to four components (New Hampshire, Tennessee, Texas)	
	Enrolled beneficiaries	Matched non-enrolled beneficiaries	Enrolled beneficiaries	Matched non-enrolled beneficiaries	Enrolled beneficiaries	Matched non-enrolled beneficiaries
Prenatal care visit count[a]						
0 to 2	9.1	15.1	12.9	17.1	18.5	31.7
3 to 9	30.6	37.8	40.6	39.6	55.4	47.4
10 or more	60.2	47.1	46.5	43.3	26.1	20.9
Any MOUD in 12 months before birth	60.8	56.2	62.7	54.4	58.6	42.2
Any MOUD in birth month	48.0	43.1	47.9	38.2	47.4	28.9
MOUD three-month continuity[b]	47.3	44.5	52.5	47.0	44.6	30.5
Any MOUD in 11 months after birth	53.8	57.4	58.1	46.5	53.4	44.2
Total ED visits 12 months before birth						
None	27.0	31.2	33.2	41.9	22.9	28.9
1 to 2	39.8	42.9	36.4	37.3	40.2	39.8
3 or more	33.3	25.9	30.4	20.7	36.9	31.3
Total ED visits 11 months after birth						
None	60.8	56.9	57.1	59.0	57.4	57.8
1 to 2	29.2	32.0	31.8	30.4	28.9	26.5
3 or more	10.0	11.0	11.1	10.6	13.7	15.7
C-section delivery	33.8	34.9	39.6	39.6	47.0	34.5
Had postpartum care[c]	55.3	56.0	64.5	71.0	77.1	76.3

Outcome (%)	One component (Indiana)		Two components (Maine, West Virginia)		Three to four components (New Hampshire, Tennessee, Texas)	
	Enrolled beneficiaries	Matched non-enrolled beneficiaries	Enrolled beneficiaries	Matched non-enrolled beneficiaries	Enrolled beneficiaries	Matched non-enrolled beneficiaries
Severe maternal morbidity[d]						
0 to 9	12.4	13.1	6.0	6.0	7.6	14.5
10 to 17	37.0	36.3	26.3	23.0	22.5	23.3
18 or more	50.6	50.6	67.7	71.0	69.9	62.2
Any inpatient stays in 12 months before birth	15.4	11.9	17.1	18.4	42.2	20.5
Any inpatient stays in the birth month	83.9	82.5	93.5	97.7	90.0	97.2
Any inpatient stays in 11 months after birth	11.2	10.7	8.8	6.9	9.6	12.4
Gestational age at end of pregnancy						
Less than 37 weeks	14.7	14.2	30.9	25.8	28.5	22.5
37 to 38 weeks	54.3	51.8	44.7	49.8	41.4	52.2
More than 38 weeks	12.8	13.5	18.0	19.4	26.5	22.9
Insufficient information	18.2	20.5	6.5	5.1	3.6	2.4
Sample size	571	571	217	217	249	249

Notes: Data sources include Transformed Medicaid Statistical Information System (T-MSIS) data from 2020 to 2023 and state vital records data. Enrollees are Medicaid beneficiaries enrolled in the Maternal Opioid Misuse (MOM) Model, non-enrollees are Medicaid beneficiaries who meet eligibility criteria for enrollment in MOM Model areas, and matched non-enrollees are members of the non-enrollee sample propensity score-matched to the enrollee sample. ED = emergency department.

Qualitative case study findings highlight four model characteristics that drive seamless, patient-centered care: care integration approach, provider information sharing, comprehensive and universal opioid use disorder screening, and peer recovery specialist focus. New Hampshire, Tennessee and Texas have successfully implemented three or four components; Maine and West Virginia two components; and Indiana one component.

[a] Prenatal care visit counts were constructed from vital records data where available. Otherwise, they were identified using Current Procedural Terminology, Healthcare Common Procedure Coding System, and International Classification of Diseases, 10th revision codes for prenatal care services received between 270 days before the child's birth date and the child's birth date.

[b] An individual is considered as having MOUD continuity during pregnancy if there was a period during pregnancy with MOUD prescriptions or procedures with a combined duration of at least 90 days. Discontinuities of up to 7 days were allowed.

[c] Postpartum care was identified using Current Procedural Terminology and International Classification of Diseases, 10th revision codes for postpartum care 90 days before the child's birth date and 140 days after the child's birth date.

[d] Defined using the California Maternal Quality Care Collaborative obstetric comorbidity scoring system.

Table E.19. Outcomes for Maternal Opioid Misuse (MOM) Model Infant Analytic Sample

Description of key findings: The birthweight rates presented in this table are comparable to rates for the overall Medicaid population. Rates of neonatal intensive care unit (NICU) stay are slightly higher than overall rates.[a]

Outcome (%)	Infants
Birthweight	
Normal birthweight (2,500 grams or more)	94.1
Low birthweight (1,500 to 2,500 grams)	5.0
Very low birthweight (1,000 to 1,500 grams)	0.8
Extremely low birthweight (less than 1,000 grams)	0.1
Neonatal intensive care unit (NICU) stay[b]	16.5
Sample size	170,253

Notes: Data sources include Transformed Medicaid Statistical Information System (T-MSIS) data from 2020 to 2023. The infant analytic sample is defined as all births in MOM Model areas, where births are determined by International Classification of Diseases, 9th and 10th revision codes for live births.
[a] Sources: CMS, 2020; Goodman et al., 2019.
[b] NICU stays are inpatient stays with revenue center codes indicating nursery-newborn levels I through IV that occurred between 30 days before and after the birth date.

Appendix F. MOM Model Evaluation: Exploratory Analyses of MOM Model Beneficiary Depression Screenings and Results

July 1, 2021 – December 31, 2024

This Appendix presents tables derived from the Beneficiary-level process evaluation data submitted by awardees during MOM Model implementation. We report observations and exploratory analyses related to MOM Model Beneficiaries' experiences with and results of depression screenings, with a focus on experiences and results by timing of enrollment (1st or 2nd trimester, 3rd trimester-postpartum).

In each of the following tables, the column labeled "Total (All)" includes all MOM Model enrolled Beneficiaries with depression screenings in awardee-reported data. Screening results (positive, negative) are shown for Beneficiaries that enrolled during the 1st or 2nd trimester of their MOM Model-associated pregnancy.

Table F.1. Number and Timing of Depression Screenings by Enrollment Timing among MOM Model Beneficiaries with Two or More Screenings

Data Elements	Total (All)	Enrolled 1st/2nd Trimester
Number of Beneficiaries	1931	734
Number Depression Screens	**% (#)**	**% (#)**
1	53.4 (1032)	30.3 (584)
2	26.1 (503)	38.4 (742)
3	7.5 (144)	9.1 (176)
4	4.3 (83)	6.5 (126)
5	2.4 (47)	3.5 (68)
6	1.6 (31)	2.7 (53)
7 or more	4.7 (91)	9.4 (182)
Among Beneficiaries with >=2 screenings	899	512
>=1 prenatal and >=1 postpartum	69.4 (624)	87.9 (450)

Note: Excludes Beneficiaries missing depression screening results.

Source: Analysis of Beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, May 2025

Table F.2. Demographic Characteristics of MOM Model Beneficiaries by Enrollment Timing and First Depression Screening Result Among Beneficiaries with Two or More Depression Screenings

Data Elements	Total (All)	Enrolled 1st/2nd Trimester	
	All	Positive First Screening	Negative First Screening
Number of Beneficiaries	899	254	258
Age Group	**% (#)**	**% (#)**	**% (#)**
<26	15.5 (139)	18.1 (46)	13.6 (35)
26-30	31.2 (280)	30.3 (77)	31.0 (80)
>31	53.4 (480)	51.6 (131)	55.4 (143)
High School or GED	**% (#)**	**% (#)**	**% (#)**
Yes	68.1 (612)	71.7 (182)	68.6 (177)
No	22.3 (200)	22.8 (58)	20.9 (54)
Missing	9.7 (87)	5.5 (14)	10.5 (27)
Marital Status	**% (#)**	**% (#)**	**% (#)**
Married	13.8 (124)		17.1 (44)
Living with other partner	33.6 (302)	32.3 (82)	37.2 (96)
Other	47.6 (428)	51.2 (130)	40.3 (104)
Missing	4.0 (36)		5.4 (14)

Note: “All” column excludes Beneficiaries if they have missing depression screening results.
Yellow cells indicate suppression due to fewer than 11 cases in a cell.
Source: Analysis of Beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, May 2025

Table F.3. Health Characteristics of MOM Model Beneficiaries by Enrollment Timing and First Depression Screening Result Among Beneficiaries with Two or More Depression Screenings

Data Elements	Total (All)	Enrolled 1st/2nd Trimester	
	All	Positive First Screening	Negative First Screening
Number of Beneficiaries	899	254	258
Behavioral health diagnosis	**% (#)**	**% (#)**	**% (#)**
Not observed	15.4 (138)	9.8 (25)	17.1 (44)
Observed	84.7 (761)	90.2 (229)	83.0 (214)
Alcohol use disorder	**% (#)**	**% (#)**	**% (#)**
Not observed	91.0 (818)	87.4 (222)	94.6 (244)
Observed	9.0 (81)	12.6 (32)	5.4 (14)
Tobacco-related disorder	**% (#)**	**% (#)**	**% (#)**
Not observed	57.8 (520)	52.0 (132)	57.0 (147)
Observed	42.2 (379)	48.0 (122)	43.0 (111)
Other substance-related disorder	**% (#)**	**% (#)**	**% (#)**
Not observed	50.6 (455)	55.1 (140)	44.2 (114)
Observed	49.4 (444)	44.9 (114)	55.8 (144)
Anxiety and fear-related disorders	**% (#)**	**% (#)**	**% (#)**
Not observed	40.2 (361)	23.2 (59)	51.2 (132)
Observed	59.8 (538)	76.8 (195)	48.8 (126)
Depressive disorder	**% (#)**	**% (#)**	**% (#)**
Not observed	45.6 (410)	31.1 (79)	58.9 (152)
Observed	54.4 (489)	68.9 (175)	41.1 (106)

Note: “All” column excludes Beneficiaries if they have missing depression screening results.
Source: Analysis of Beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, May 2025

Table F.4. Depression Follow-Up Received by Enrollment Timing Among Beneficiaries with At Least One Positive Screening for Depression

Data Elements	Total (All)	Enrolled 1st/2nd Trimester
Number of Beneficiaries	558	254
Depression Follow Up, After First Positive Screen	**% (#)**	**% (#)**
No	23.3 (130)	21.3 (54)
Yes	76.7 (428)	78.7 (200)
Type of Depression Follow Up, After First Positive Screen	**% (#)**	**% (#)**
No additional evaluation for depression	61.8 (345)	59.1 (150)
Additional evaluation for depression	38.2 (213)	40.9 (104)
No suicide risk assessment	82.4 (460)	86.2 (219)
Suicide risk assessment	17.6 (98)	13.8 (35)
No referral to a practitioner who is qualified to diagnose and treat depression	55.6 (310)	59.5 (151)
Referral to a practitioner who is qualified to diagnose and treat depression	44.4 (248)	40.6 (103)
No pharmacological interventions	77.8 (434)	82.3 (209)
Pharmacological interventions	22.2 (124)	17.7 (45)
No other interventions or follow-up for the diagnosis or treatment of depression	66.5 (371)	65.4 (166)
Other interventions or follow-up for the diagnosis or treatment of depression	33.5 (187)	34.7 (88)

Note: “All” column excludes Beneficiaries if they have missing depression screening results.
Depression follow up defined for those who ever had a positive screen

Source: Analysis of Beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, May 2025

Table F.5. Positive Result of Last Depression Screening by Enrollment Timing for MOM Model Beneficiaries with Two or More Depression Screenings

Data Elements	Total (All)	Enrolled 1st/2nd Trimester	
	All	Positive First Screening	Negative First Screening
Number of Beneficiaries	899	254	258
Positive last depression screen	34.5 (310)	52.8 (134)	17.1 (44)

Note: "All" column excludes Beneficiaries if they have missing depression screening results.

Source: Analysis of Beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, May 2025

Table F.6. Demographic Characteristics by Enrollment Timing of MOM Model Beneficiaries with a Positive First Depression Screening

Data Elements	Total (All)	Enrolled 1st/2nd Trimester
Number of Beneficiaries	310	134
Age Group	**% (#)**	**% (#)**
<26	18.7 (58)	21.6 (29)
26-30	34.5 (107)	33.6 (45)
>31	46.8 (145)	44.8 (60)
Prior Birth	**% (#)**	**% (#)**
Yes	70.3 (218)	72.4 (97)
No	24.2 (75)	
Missing	5.5 (17)	
High School or GED	**% (#)**	**% (#)**
Yes	69.4 (215)	72.4 (97)
No	22.9 (71)	
Missing	7.7 (24)	
Marital Status	**% (#)**	**% (#)**
Married		
Living with other partner	33.6 (104)	32.1 (43)
Other	52.6 (163)	52.2 (70)
Missing		

Note: "All" column excludes Beneficiaries if they have missing depression screening results.
Yellow cells indicate suppression due to fewer than 11 cases in a cell.
Source: Analysis of Beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, May 2025

Table F.7. Health Characteristics by Enrollment Timing Among MOM Model Beneficiaries with a Positive First Screening

Data Elements	Total (All)	Enrolled 1st/2nd Trimester
Number of Beneficiaries	310	134
Behavioral health diagnosis	**% (#)**	**% (#)**
Not observed	12.6 (39)	8.2 (11)
Observed	87.4 (271)	91.8 (123)
Alcohol use disorder	**% (#)**	**% (#)**
Not observed	90.0 (279)	88.1 (118)
Observed	10.0 (31)	11.9 (16)
Other substance-related	**% (#)**	**% (#)**
Not observed	60.7 (188)	59.0 (79)
Observed	39.4 (122)	41.0 (55)
Tobacco-related disorder	**% (#)**	**% (#)**
Not observed	61.3 (190)	51.5 (69)
Observed	38.7 (120)	48.5 (65)
Anxiety and fear-related disorders	**% (#)**	**% (#)**
Not observed	26.5 (82)	17.9 (24)
Observed	73.6 (228)	82.1 (110)
Depressive disorder	**% (#)**	**% (#)**
Not observed	30.0 (93)	24.6 (33)
Observed	70.0 (217)	75.4 (101)

Note: “All” column excludes Beneficiaries if they have missing depression screening results.
Source: Analysis of Beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, May 2025

Table F.8. Demographic Characteristics of MOM Model Beneficiaries with Two or More Depression Screenings and a Negative Last Depression Screening Result

Data Elements	Total (All)	Enrolled 1st/2nd Trimester
Number of Beneficiaries	589	120
Age Group	**% (#)**	**% (#)**
<26	13.8 (81)	14.2 (17)
26-30	29.4 (173)	26.7 (32)
>31	56.9 (335)	59.2 (71)
Prior Birth	**% (#)**	**% (#)**
Yes	70.3 (414)	74.2 (89)
No	22.2 (131)	
Missing	7.5 (44)	
High School or GED	**% (#)**	**% (#)**
Yes	67.4 (397)	70.8 (85)
No	21.9 (129)	
Missing	10.7 (63)	
Marital Status	**% (#)**	**% (#)**
Married	15.1 (89)	
Living with other partner	33.6 (198)	32.5 (39)
Other	45.0 (265)	50.0 (60)
Missing	6.3 (37)	

Note: "All" column excludes Beneficiaries if they have missing depression screening results.
Yellow cells indicate suppression due to fewer than 11 cases in a cell.
Source: Analysis of Beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, May 2025

Table F.9. Health Characteristics by Enrollment Timing and First Depression Screening Result among MOM Model Beneficiaries with Two or More Depression Screenings

Data Elements	Total (All)	Enrolled 1st/2nd Trimester	
	All	Positive First Screening	Negative First Screening
Number of Beneficiaries	589	120	214
Behavioral health diagnosis	**% (#)**	**% (#)**	**% (#)**
Not observed	16.8 (99)	11.7 (14)	15.9 (34)
Observed	83.2 (490)	88.3 (106)	84.1 (180)
Alcohol use disorder	**% (#)**	**% (#)**	**% (#)**
Not observed	91.5 (539)	86.7 (104)	94.4 (202)
Observed	8.5 (50)	13.3 (16)	5.6 (12)
Other substance-related	**% (#)**	**% (#)**	**% (#)**
Not observed	45.3 (267)	50.8 (61)	42.1 (90)
Observed	54.7 (322)	49.2 (59)	57.9 (124)
Tobacco-related disorder	**% (#)**	**% (#)**	**% (#)**
Not observed	56.0 (330)	52.5 (63)	54.2 (116)
Observed	44.0 (259)	47.5 (57)	45.8 (98)
Anxiety and fear-related disorders	**% (#)**	**% (#)**	**% (#)**
Not observed	47.4 (279)	29.2 (35)	52.8 (113)
Observed	52.6 (310)	70.8 (85)	47.2 (101)
Depressive disorder	**% (#)**	**% (#)**	**% (#)**
Not observed	53.8 (317)	38.3 (46)	58.9 (126)
Observed	46.2 (272)	61.7 (74)	41.1 (88)

Note: “All” column excludes Beneficiaries if they have missing depression screening results.
Source: Analysis of Beneficiary-level data reported by MOM Model awardees through December 2024 to the Centers for Medicare & Medicaid Services Innovation Center Gateway, May 2025