Rural Maternal Health Environmental Scan: Final Report

Highlighting Challenges, Innovations, and Policy Opportunities in Critical Access Hospitals

March 2026

MICHIGAN CENTER for RURAL HEALTH

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Executive Summary

The purpose of this environmental scan is to strengthen maternal and infant health in rural Michigan by examining how Critical Access Hospitals (CAHs) support maternal care across both birthing and non-birthing settings. This report assesses hospital readiness, participation in Alliance for Innovation on Maternal Health (AIM) initiatives, emergency obstetric preparedness, and the operational realities rural facilities face as maternal care increasingly shifts outside traditional Labor & Delivery (L&D) units.

As access to local birthing services changes across rural communities, CAHs and their Emergency Departments (EDs) are playing an expanding role in maternal safety. This scan provides a current understanding of that role and identifies opportunities to strengthen readiness, coordination, and support for CAHs across the maternal care continuum.

Strengthening maternal readiness in CAHs also directly supports infant health. As more deliveries occur unexpectedly in rural EDs, neonatal resuscitation, immediate stabilization, and safe transfer become increasingly critical components of rural infant health outcomes.

Key Partners

Michigan Department of Health and Human Services (MDHHS), Division of Maternal & Infant Health: Provides statewide leadership, data, and programmatic support to improve maternal and infant outcomes, reduce disparities, and strengthen perinatal systems of care across Michigan.
Michigan Health & Hospital Association (MHA): Represents and supports Michigan hospitals through advocacy, education, and statewide initiatives that strengthen hospital quality, workforce, and rural health system sustainability.
Michigan State University College of Human Medicine: Advances community-engaged medical education, research, and rural health innovation, providing clinical expertise and academic partnerships to improve health outcomes across Michigan.
Michigan Critical Access Hospitals: Frontline healthcare providers delivering essential services in rural communities, offering real-world insight, implementation experience, and patient-centered perspectives that ground statewide initiatives in local practice.

Key Findings

Focus groups and data review revealed:

- EDs are now core maternal safety sites in rural communities, frequently managing obstetric emergencies and unplanned deliveries despite not being designed as birthing environments.
- Workforce fragility is a major threat to sustaining rural L&D services, with single-provider dependency placing entire service lines at risk.
- Regionalization of maternal care is occurring by default, not by design, resulting in variable transfer processes, increasing travel burden, and EDs functioning as unplanned birthing sites.
- Although common barriers were identified across all CAHs, significant differences exist in regional variables, processes, and available resources, indicating that certain improvements and investments will require regionally tailored approaches outside of uniform statewide models.
- CAHs are not resistant to quality improvement frameworks such as AIM and Maternal Levels of Care (MLC); rather, they often lack the capacity and infrastructure required for urban-scale implementation.
- Maternal readiness gaps simultaneously create risks for newborns, particularly in unplanned ED deliveries where neonatal resuscitation, thermoregulation, and timely transfer are critical to infant outcomes.
- Simulation, interdisciplinary training, and practical readiness tools were identified as the most urgent and actionable needs across both birthing and non-birthing hospitals.
- Social drivers of health directly contribute to delayed prenatal care and emergency maternal presentations.
- The new CMS Conditions of Participation (2025–2027) create an immediate policy opportunity to align maternal safety expectations with the operational realities that CAHs already manage.

Funding Acknowledgment

This project was supported by the 2025 State Rural Health Association/State Office of Rural Health (SRHA/SORH) Maternal and Child Health Supplemental Funding, provided by the Federal Office of Rural Health Policy within the Health Resources and Services Administration (HRSA) and administered by the National Rural Health Association (NRHA).

A Message from John Barnas, Executive Director of the Michigan Center for Rural Health

"This Rural Maternal Health Environmental Scan is a reflection of the realities facing rural communities and a call to action to strengthen maternal and infant health in rural Michigan. Thank you to our partners who shared their experiences ensuring this work is grounded in real-world practice. As access to local labor and delivery services shifts, we must recognize and support the evolving role of Critical Access Hospitals and their emergency departments in maternal care. These teams need resources, training, and support to continue providing high-quality care. We believe that where someone lives should not determine the quality or safety of care they receive, and we think this report can guide meaningful investments, partnerships, and policies that improve outcomes for rural families."

Introduction

In Michigan, maternal health outcomes are shaped as much by geography and community context as by the clinical care a person receives. Large portions of the state's rural landscape are classified as maternity care deserts, where access to birthing services requires significant travel.[5] In rural Michigan, more than one in four women live over 30 minutes from a birthing hospital, and in some counties, travel exceeds 37 miles and 40 minutes.[5,6] Evidence shows that increased travel time to maternity care is associated with a higher risk of stillbirth, NICU admission, preterm birth, delayed prenatal care, and financial and emotional strain on families.[5,6]

These access challenges do not occur in isolation. Disparities in prenatal care utilization are further compounded by transportation barriers, housing instability, limited broadband access, and environmental vulnerability. Communities experiencing higher levels of social and environmental risk also demonstrate lower rates of adequate prenatal care, highlighting the intersection between social drivers of health and maternal outcomes.[6]

Maternal mortality in Michigan also reflects broader systemic and community-level challenges impacting access to care. According to the Center for Health & Research Transformation (CHRT), nearly 75% of maternal deaths in Michigan between 2016–2020 were considered preventable with changes at the provider, facility, system, community, or policy level.[21] Pregnancy-related deaths were most commonly linked to infection/sepsis, thrombotic or pulmonary embolism, hypertensive disorders of pregnancy, cardiovascular conditions, and hemorrhage, while pregnancy-associated deaths were frequently connected to substance use disorder, mental health concerns, homicide, and other social and behavioral health factors.[21] These findings reinforce the importance of strengthening both clinical readiness and community-based maternal supports across rural settings.

Rural hospitals across Michigan are navigating workforce shortages, declining birth volumes, and financial pressures that threaten the sustainability of local L&D services.[11] As L&D units close or reduce services, maternal risk does not disappear; it shifts. Increasingly, that risk is present in EDs, where teams are asked to manage obstetric emergencies, unplanned deliveries, and neonatal resuscitation events despite limited exposure and training opportunities.[11]

Importance of Environmental Scan

Despite the critical role CAHs play in maternal health, Michigan lacks a current, unified understanding of how birthing and non-birthing CAHs fit into the maternal care continuum, overlooking the growing responsibility carried by rural EDs.

As maternal care becomes increasingly regionalized across Michigan, rural Emergency Departments are playing an expanding role in maternal stabilization, emergency response, neonatal resuscitation, and transfer coordination despite often having limited obstetric exposure and training opportunities. Understanding how rural hospitals operationalize maternal readiness within the realities of workforce shortages, low birth volumes, geographic isolation, transportation barriers, and limited specialty access is essential to strengthening maternal and infant outcomes across rural communities.

At the same time, national and state quality frameworks, including the AIM Patient Safety Bundles, the Joint Commission's MLC Verification program, and the newly finalized CMS Conditions of Participation for obstetrical services (effective 2025–2027), are raising expectations for obstetric readiness, staff training, transfer protocols, and quality improvement. These frameworks provide important opportunities to improve safety, but they also introduce new operational demands that may be particularly challenging for low-volume rural hospitals to meet without targeted support.[11,16,17]

This environmental scan was conducted to better understand operational realities across rural maternal care settings, identify gaps and emerging practices, and inform practical, rural-focused strategies that strengthen maternal and infant care across Michigan. Findings may also help guide future maternal health investments, technical assistance efforts, and statewide readiness initiatives in ways that better align with the realities facing rural hospitals and Emergency Departments.

This environmental scan was conducted to bridge that gap. By combining data, national guidance, and lived experiences from rural hospital leaders and frontline staff, this report aims to provide a realistic picture of maternal readiness across CAHs in Michigan and identify practical, rural-scaled strategies to strengthen maternal and infant health outcomes.

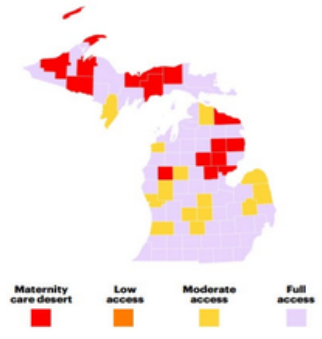
Role of CAHs in Maternity Care

CAHs are central to how maternal care is delivered and experienced in rural Michigan, regardless of whether they provide on-site L&D services. In some communities, CAHs continue to operate low-volume L&D units despite workforce shortages, financial strain, and declining birth volumes. In rural settings, sustained low delivery volumes can limit opportunities to maintain obstetric clinical competencies, team-based readiness, and emergency response proficiency, particularly as national rural policy and quality frameworks emphasize ongoing preparedness and regulatory compliance regardless of volume.[1,11,17]

Low volume also contributes to workforce fragility in rural areas, where recruitment and retention of obstetrical providers are already challenging, and consistent clinical exposure is important for maintaining procedural skills.[9,10] These hospitals often represent the only local option for childbirth.[7] Their continued presence helps reduce travel burdens for pregnant individuals and supports continuity of prenatal, delivery, and postpartum care close to home, factors consistently linked to improved maternal outcomes in rural settings.[6,11,15]

In other communities, CAHs no longer provide inpatient obstetric services. In these settings, the hospital's EDs increasingly serve as the first point of care for pregnant patients experiencing complications, rapid labor, or delayed presentation due to transportation and distance challenges.[15] Emergency teams are now responsible for maternal stabilization, unplanned deliveries, neonatal resuscitation, and coordination of transfers to higher levels of care.[15]

Figure 1. Maternity Care Deserts in Michigan



Source: March of Dimes PeriStats. "Maternity Care Desert: Michigan, 2021.

These realities are further compounded by the uneven distribution of obstetric services across rural Michigan, where many communities continue to experience significant travel burdens and limited local access to maternity care. Figure 1 highlights the distribution of maternity care deserts across Michigan and underscores the geographic barriers that shape maternal access and emergency readiness in rural communities.

In these scenarios, ED teams must stabilize both the birthing individual and the newborn, often providing the first critical minutes of neonatal care that shape early infant outcomes. Focus group findings highlighted that although these events may be infrequent, they are high-risk, emotionally intense, and often occur without regular opportunities for staff to practice or simulate obstetric emergencies.[15]

Role of CAHs in Maternity Care

Together, these realities demonstrate that CAHs function as essential anchors of maternal safety in rural communities. Whether through maintaining local birthing services or responding to obstetric emergencies at the point of crisis, CAHs play a critical role in ensuring pregnant individuals have access to timely, lifesaving care. Their role in the maternal health continuum extends beyond traditional definitions of maternity care and underscores the need for policies, training, and support systems that reflect the realities rural hospitals are already navigating.

Overview of AIM

AIM is a national maternal safety initiative that supports hospitals in reducing preventable maternal morbidity and mortality through evidence-based practices.[1] AIM provides standardized patient safety bundles focused on improving readiness, recognition, response, and reporting for time-sensitive obstetric emergencies, including obstetric hemorrhage, severe hypertension in pregnancy, and maternal sepsis.[1]

In Michigan, AIM participation is coordinated through the Michigan Alliance for Innovation on Maternal Health (MI AIM) Collaborative, which is supported by the Michigan Department of Health and Human Services (MDHHS) and the MHA Keystone Center. The collaborative supports hospitals through education, data feedback, and quality improvement technical assistance.[7] Participation in AIM is widely recognized as a way for hospitals to operationalize obstetric emergency preparedness and align with national maternal safety expectations.[7]

For the purposes of this environmental scan, AIM is not evaluated as a standalone program. Instead, AIM is used as a marker of maternal readiness among hospitals that offer L&D services, providing insight into how these facilities structure obstetric emergency response, standardize care processes, and align with evolving requirements such as the CMS CoP, as well as voluntary verification programs like MLC. As reflected in later findings, differences in AIM participation across rural CAHs with L&D services are driven primarily by variation in staffing capacity, quality improvement infrastructure, and available resources, rather than differences in commitment to maternal safety.[1,7] Findings from hospitals without L&D services highlight the relevance of specific AIM resources, particularly the Obstetric Emergency Readiness Toolkit, as practical readiness supports for Emergency Department–based maternal stabilization.

Environmental Scan Overview

Scope

This environmental scan provides a comprehensive understanding of how maternal and infant health is supported across Michigan CAHs, including both hospitals that maintain L&D services and those that do not. The scope extends beyond identifying where services exist to examine how maternal care is experienced, supported, and managed in real-world rural hospital settings.

The scan evaluates hospital readiness through the lens of AIM participation, obstetric emergency preparedness, operational capacity, workforce realities, and alignment with new maternal care standards, including CMS Conditions of Participation (CoPs) and Maternal Levels of Care (MLC). By incorporating quantitative data and qualitative insights from hospital leaders and frontline staff, this project presents a current picture of the maternal care continuum across rural communities.

GOALS

1. Assess hospital readiness through AIM Bundles, obstetric emergency preparedness, operational capacity, and alignment with maternal standards of care.
2. Understand the current rural maternal landscape for both birthing and non-birthing CAHs, including how L&D services are maintained, how EDs manage OB emergencies, and how care coordination occurs across regions.
3. Identify key barriers and opportunities by capturing challenges, strengths, funding gaps, and innovative practices that can strengthen maternal and infant health services in rural settings.

Short Term Outcomes

Short-term outcomes focus on providing targeted TA to both birthing and non-birthing CAHs, improving operational efficiency and care coordination, and increasing awareness of AIM resources, OB emergency readiness tools, and MLC. These efforts are intended to strengthen immediate readiness for maternal emergencies and support hospitals in aligning current practices with emerging maternal safety expectations.

Long Term Outcomes

Long-term outcomes aim to establish a sustainable framework for quality maternal care across rural Michigan. This includes supporting CAHs in utilizing or adapting the OB Emergency Readiness Kit, encouraging adoption of AIM Bundles and MLC principles, and convening CAHs with L&D services to share best practices. Over time, these activities are designed to create a connected rural learning environment and ensure ongoing alignment with statewide maternal health initiatives. A key component of long-term success is continued partnership and alignment with MDHHS and MHA to ensure rural hospitals are uniquely supported to participate in statewide maternal and infant health efforts.

Methodology

This environmental scan used a mixed-methods approach to understand how maternal care is supported across rural Michigan CAHs. By combining qualitative insight from hospital leaders and frontline staff with quantitative data from state and national sources, the project captured both the lived operational realities of rural hospitals and the broader maternal health trends shaping those realities.

Qualitative Data

Qualitative data was collected by the Michigan Center for Rural Health (MCRH) Staff, with support from the MHA Keystone Center, through structured interviews and focus groups with representatives from birthing CAHs, non-birthing CAHs, and ED teams. Participants included hospital administrators, nursing leadership, ED staff, L&D staff, and quality improvement personnel. Conversations were guided by a standardized discussion protocol designed to explore how maternal and OB emergencies present in rural hospital settings, workforce and operational challenges related to maintaining L&D services, ED readiness for maternal stabilization and neonatal resuscitation, experiences with AIM participation, transfer processes, and training or resource gaps. These discussions provided detailed insight into how policies, geography, staffing, and resources intersect in real-world care delivery. Notes and transcripts were reviewed and synthesized to identify recurring themes, barriers, strengths, and opportunities reflected throughout this report.

Methodology Continued

Participant Representation

Focus groups and interviews included representation from CAHs across Michigan, reflecting a range of maternal service models. Of the hospitals represented, twenty-eight CAHs do not provide L&D services; four CAHs maintain L&D services and participate in the AIM; and three CAHs maintain L&D services but do not participate in AIM. This distribution allowed the scan to capture perspectives from hospitals functioning as ED maternal stabilization sites, as well as those actively maintaining obstetric services with differing levels of quality improvement involvement. Participant quotes are included to illustrate common themes and system-level challenges faced across rural settings and do not reflect individual hospital performance or quality of care.

Quantitative Data

Quantitative data was compiled from state and national sources to contextualize the qualitative findings and describe the broader maternal health landscape in rural Michigan. These sources included March of Dimes maternity care desert and distance-to-care data, Rural Health Information Hub (RHI Hub) and NRHA rural maternal health resources, prior MCRH research on access to maternity services, and publicly available data related to maternal outcomes, prenatal care access, and social drivers of health. These data points were used to illustrate trends in access, travel burden, and disparities that influence how and why maternal emergencies present in rural hospital settings, providing important context for the themes and recommendations identified throughout this report.

QUALITATIVE FINDINGS & THEMES

Michigan CAH Without L&D | ED Focus Groups

Service Delivery, Access, and Capacity

Participants from CAHs without L&D services consistently described their EDs as the first point of care for pregnant patients experiencing complications, rapid labor, or delayed presentation. Several hospitals reported instances of babies being delivered in the ED or patients arriving via Emergency Medical Services (EMS) in advanced labor. These events were described as infrequent but high-acuity situations that require immediate coordination from teams who do not routinely provide obstetric care.

ED staff shared that while these presentations may occur only a handful of times per year or in some cases only once every few years, the expectation remains that they must be prepared to stabilize both mother and newborn at any time. Participants noted that in some communities, emergency department deliveries appear to be occurring more frequently than staff had historically experienced. Participants also described the important role EMS plays in maternal presentations, often transporting patients who are already in advanced labor or experiencing complications due to long travel distances to the nearest birthing hospital.

Operational Barriers and Readiness Gaps

Operational challenges were a dominant theme across discussions. Participants noted that equipment and medications needed for obstetric emergencies were not always staged in consistent locations, and staff often relied on personal knowledge of where supplies were kept rather than standardized protocols. Documentation, transfer rules during active labor, and uncertainty around best practices for maternal stabilization in the ED were also discussed.

Transfer coordination was described as essential but unpredictable. Weather, distance, receiving hospital capacity, and transport availability all contributed to delays. Participants described situations where transportation delays related to weather, distance, and receiving hospital capacity resulted in extended wait times for transport, illustrating how rural emergency departments at non-birthing critical access hospitals may need to manage obstetric patients for prolonged periods while awaiting transfer to a facility with obstetric services.

QUALITATIVE FINDINGS & THEMES

Michigan CAH Without L&D | ED Focus Groups

Obstetric Emergency Readiness

A recurring theme was the lack of opportunity for regular practice and simulation related to obstetric emergencies. Staff expressed discomfort not because of unwillingness to care for these patients, but because the events occur too infrequently to maintain confidence. Participants repeatedly emphasized that hands-on practice and interdisciplinary drills are critical to complement existing policies and written protocols.

Participants also emphasized the need for standardized protocols and operational checklists to support consistent obstetric emergency response in low-volume rural settings. The AIM Obstetric Emergency Readiness Kit was discussed as a potential framework, and several hospitals expressed interest in learning more about adapting it to strengthen local readiness efforts. Respondents noted that integrating these tools into joint training for ED teams and EMS could reduce uncertainty and improve coordinated response.

Transfer Coordination and Regional Relationships

While formal transfer agreements with hospitals that provide Labor and Delivery services exist, participants described the process of identifying a receiving facility and arranging transport as largely relationship-based rather than protocol-driven. Emergency department staff were often responsible for identifying a receiving hospital, frequently calling multiple facilities to locate available capacity, while EMS partners coordinated transport once a destination was secured. While strong regional partnerships exist, there was little standardization in how transfers were initiated or managed across hospitals and EMS agencies. These challenges were compounded during winter weather events and times of high hospital census. This reinforces the need to establish a framework for risk-appropriate care (RAC), define clear transfer protocols, and strengthen regional coordination to support timely and appropriate maternal transfers.

Social Drivers Contributing to ED Care

Participants frequently connected emergency maternal presentations to transportation barriers, childcare responsibilities, and housing instability. Staff described situations in which patients delayed seeking care due to difficulty arranging transportation or managing family responsibilities. As a result, patients often arrived at the hospital with more advanced conditions, increasing the likelihood that maternal care began in the Emergency Department rather than in routine prenatal or obstetric settings.

QUALITATIVE FINDINGS & THEMES

Michigan CAH With L&D Participating in AIM

Service Delivery, Access, and Community Role

Participants from CAHs that maintain L&D services and participate in AIM described their hospitals as essential access points for maternal care within their communities. These hospitals often represent the only local option for childbirth, allowing patients to receive prenatal, delivery, and postpartum care close to home. Staff described tracking annual birth volumes, monitoring delivery types, and coordinating care for high-risk pregnancies through established transfer relationships with higher-level facilities. Despite relatively low birth volumes compared to urban hospitals, participants emphasized the importance of maintaining these services to reduce travel burdens and preserve continuity of care for rural families.

Workforce Challenges and Sustainability

Even among hospitals with established L&D programs, workforce challenges were consistently cited as a concern. Participants noted reliance on a small number of nurses, obstetric physicians, advanced practice providers, and anesthesia professionals with maternal expertise, making staffing coverage and on-call requirements difficult to sustain. Several hospitals described operating with only two OB/GYNs, sometimes supplemented by a traveler, while others referenced recent loss of core providers and the significant operational strain that followed.

Recruitment challenges and burnout were frequently discussed, with participants describing how the departure of even one experienced provider could disrupt call schedules, increase reliance on temporary coverage, and in some cases raise questions about long-term program sustainability.

AIM Practice and Readiness

Participants consistently described AIM as improving structure, confidence, and consistency in responding to obstetric emergencies. Drills, standardized equipment placement, and clearly defined team roles were cited as key benefits. Participants described how regular emergency drills and the consistent use of tools such as hemorrhage carts improved team coordination and reduced uncertainty during obstetric emergencies.

Staff noted that while they were providing safe care before AIM, participation helped formalize practices and embed readiness into daily workflow. AIM bundles were described as particularly helpful in reinforcing team communication during high-stress events.

QUALITATIVE FINDINGS & THEMES

Michigan CAH With L&D Participating in AIM

Barriers to Sustaining AIM Participation

Despite the benefits, participants acknowledged that maintaining AIM participation requires time and staff capacity that can be difficult to sustain in rural settings. Competing responsibilities, staff turnover, and limited quality improvement personnel were cited as challenges. Participants noted that AIM provided a framework that helped standardize maternal safety practices that had previously been implemented more informally. Participants also expressed interest in continued technical assistance, peer learning opportunities, and rural-focused support to help maintain momentum without overwhelming small teams.

Michigan CAH With L&D Not Participating in AIM

Service Delivery and Low-Volume Reality

Participants from CAHs that maintain L&D services but are not participating in AIM described their programs as small, low-volume units that are deeply important to their communities but increasingly difficult to sustain. Annual birth volumes were often described in the double digits, creating significant on-call demands for nurses and providers while generating limited revenue to offset staffing costs. Despite these challenges, participants emphasized that maintaining L&D services was viewed as a community responsibility and a critical access point for pregnant individuals who would otherwise face long travel distances for care.

Workforce Challenges and Risk to Sustainability

Workforce barriers emerged as the most significant concern among these hospitals. Participants described reliance on a small number of experienced nurses and providers to maintain competency in obstetric care. Recruitment of new staff with obstetric experience was described as extremely difficult, and maintaining skills for rare emergency events was an ongoing challenge. Participants described the challenge of maintaining 24/7 labor and delivery coverage in hospitals with low birth volumes, noting that staffing models can become difficult to sustain when annual delivery volumes are limited. Participants also noted that the departure of even one key staff member could place the entire labor and delivery program at risk.

QUALITATIVE FINDINGS & THEMES

Michigan CAH With L&D Not Participating in AIM

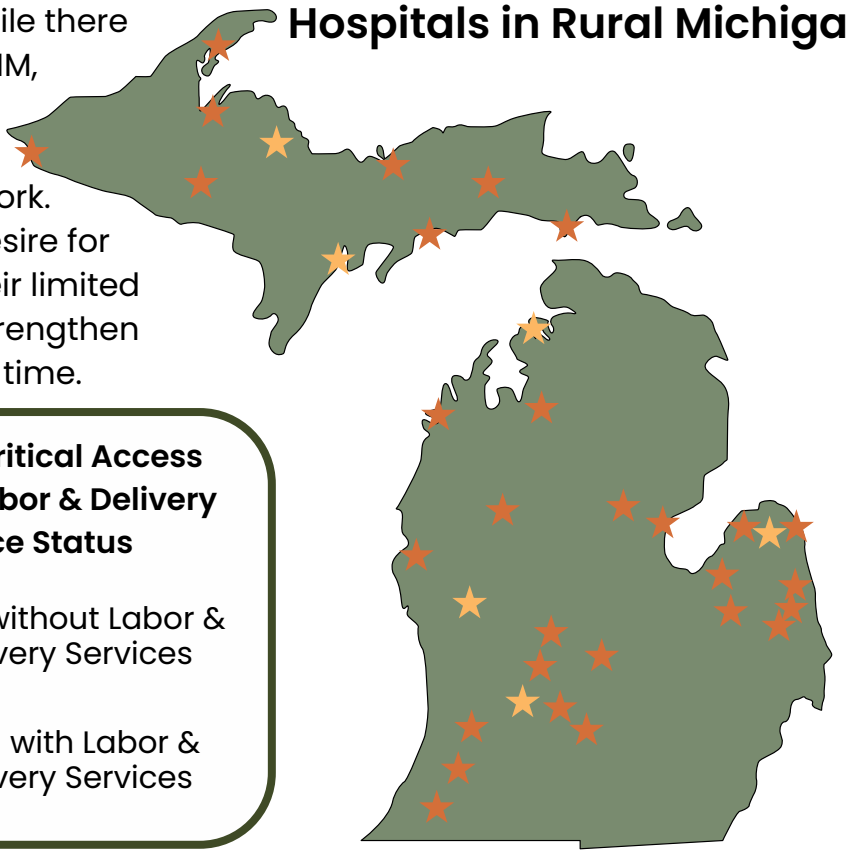
Current Practices Without Formal AIM Structure

Participants described many practices that aligned with AIM principles, such as experienced staff knowing how to respond during emergencies, informal staging of equipment, and reliance on team familiarity. However, these practices were not standardized through drills, checklists, or quality improvement processes. Readiness often depends on individual experience rather than system-wide protocols. Participants expressed interest in strengthening readiness but described barriers related to time, staffing, and uncertainty about how AIM could be adapted to fit a small rural team.

Support and Rural-Scaled Approaches

There was strong interest in practical, rural-focused support that would improve readiness without adding administrative burden. Participants emphasized the value of peer learning, hands-on training, and tools that could be implemented quickly within existing workflows. Participants also noted that while there was interest in implementing AIM, limited staff capacity made it challenging for hospitals to identify someone to lead the work. These hospitals expressed a desire for support that acknowledges their limited capacity while helping them strengthen maternal safety practices over time.

Availability of Labor & Delivery Services Among Critical Access Hospitals in Rural Michigan



QUALITATIVE FINDINGS & THEMES

Common Themes Across All Focus Groups

Across all focus groups, regardless of whether hospitals provided L&D services or participated in AIM, several consistent themes emerged related to workforce, readiness, transfer coordination, and the realities of maternal care in rural settings.

Workforce challenges were identified as the single greatest threat to sustaining obstetric services and maintaining readiness for maternal emergencies. Participants from both birthing and non-birthing hospitals described reliance on a very small number of staff with obstetric experience. Recruitment challenges, burnout, and the difficulty of maintaining competency for rare events were repeatedly discussed. Participants emphasized that the sustainability of many rural obstetric programs is often closely tied to individual staff members, meaning the loss of even one nurse or provider can place the entire program at risk.

Participants consistently emphasized that hands-on practice and simulation were more valuable than additional policies or documentation. Across all groups, staff described a desire for interdisciplinary drills, particularly those that include EMS, and practical tools that could be used during high-stress situations. Readiness was described as dependent on muscle memory and team familiarity rather than written procedures.

Transfer coordination was also described as essential but highly variable. Participants noted that successful transfers often relied on personal relationships and repeated phone calls rather than standardized protocols. Weather, transport availability, and bed capacity at receiving hospitals were cited as frequent challenges that could quickly turn an ED or small L&D unit into a prolonged maternal care setting.

Finally, participants across all settings described how transportation barriers and long travel distances contribute to delayed care and higher-acuity maternal presentations. Staff noted that these realities are increasingly shaping how and where maternal emergencies are present in rural communities.

These shared experiences demonstrate that, regardless of service model, CAHs are navigating similar operational and workforce challenges while attempting to maintain safe maternal care for their communities.

QUALITATIVE FINDINGS & THEMES

Common Themes Across All Focus Groups

Michigan CAH Operational Readiness

Participants across all focus groups described varying levels of awareness regarding the upcoming CMS Conditions of Participation and MLC expectations. While many were not familiar with the specific regulatory language, they recognized that requirements related to emergency readiness, transfer protocols, staff training, and quality improvement would directly affect their operations. Several participants expressed uncertainty about how their current processes aligned with these expectations and noted the difficulty of translating regulatory requirements into day-to-day practice within small rural teams.

Hospitals described obstetric readiness as highly dependent on the experience of individual clinicians and recent events, with protocols often evolving in response to specific cases rather than being embedded in standardized, system-wide frameworks. Equipment staging, emergency roles, and documentation practices often vary by shift or staff member. Participants emphasized that without clear tools, checklists, and training resources, it would be difficult to confidently demonstrate compliance with emerging maternal care standards.

The AIM Obstetric Emergency Readiness Kit was consistently discussed as a potential bridge between regulatory expectations and practical implementation. Participants noted that having structured checklists, equipment lists, and response guides would help translate abstract standards into usable tools for both ED and L&D settings. As one participant noted, uncertainty often exists around what operational “readiness” should look like until an emergency occurs. Across settings, there was a clear desire for technical assistance that could help hospitals understand how CMS expectations, MLC, and AIM resources connect to the operational realities they face each day. Participants emphasized that readiness tools paired with hands-on training would be far more useful than policy documents alone.

Funding Challenges

Funding constraints emerged as a consistent operational barrier across CAHs. While both public and private maternal health funding opportunities exist in Michigan, rural facilities often face administrative, financial, and staffing limitations that prevent them from successfully accessing these resources.

QUALITATIVE FINDINGS & THEMES

Common Themes Across All Focus Groups

Simulation training and interdisciplinary drills, particularly those involving EMS, were repeatedly described as valuable but financially out of reach without external support. Participants also noted that travel costs, backfilling staff time for training, and purchasing dedicated equipment for obstetric emergencies were often prohibitive for small rural facilities.

There was also uncertainty about where to find funding opportunities specific to maternal and infant health. Many participants expressed interest in pursuing grants or external funding but noted that they lacked the time or staff capacity to identify opportunities or complete applications. One participant noted that while hospitals often recognize the resources and improvements needed to strengthen maternal care, securing funding to support those efforts can be difficult.

Across settings, participants expressed that targeted funding for training, readiness equipment, and regional collaboration would significantly improve their ability to strengthen maternal safety practices.

Social Drivers of Health Impacting OB Services

Participants across all focus groups frequently connected maternal emergencies and delayed presentations to broader social challenges experienced by patients in rural communities. Transportation barriers were the most commonly cited issue, with staff describing how long travel distances to birthing hospitals often lead patients to delay seeking care until symptoms become severe. Limited access to reliable transportation, particularly during the winter months, was noted as a consistent concern.

Participants also described how childcare responsibilities, housing instability, and limited support systems contribute to delayed prenatal care and late presentation during complications. Staff shared examples of patients attempting to manage family needs before seeking care, resulting in higher-acuity situations upon arrival to the ED or L&D unit. One participant noted that some patients delay seeking care while trying to arrange childcare or transportation, which can contribute to later presentations for care. These factors were described as directly influencing where and how maternal emergencies are present in rural hospitals. Participants emphasized that addressing maternal safety in rural communities requires recognizing how these social realities shape patient behavior and access to care.

QUANTITATIVE FINDINGS & THEMES

Michigan CAH Operational Readiness

Michigan CAHs play a vital role in ensuring access to obstetrical care for rural communities, yet many face growing challenges in meeting evolving regulatory and quality expectations amid persistent workforce shortages, limited specialty coverage, and constrained financial and operational capacity. The CMS CoPs for obstetrical services apply to all Michigan Critical Access Hospitals, including those with and without labor and delivery services, establishing baseline expectations for emergency preparedness and the management of obstetrical patients across rural settings. In contrast, participation in initiatives such as the AIM Patient Safety Bundles (AIM participation for CAHs with labor and delivery services) and Joint Commission MLC Verification is voluntary and intended to complement the CoPs by advancing higher levels of readiness and standardized approaches to maternal safety. The AIM Bundles operationalize evidence-based clinical practices at the bedside by focusing on critical maternal conditions, while MLC Verification evaluates whether a facility has the structural, staffing, and system-level capacity to provide care safely, based on patient risk.

Together, these frameworks provide a lens to identify both clinical and operational gaps that may impact maternal outcomes and underscore both the importance of preparedness for obstetrical emergencies and the significant strain these layered expectations place on small, resource-limited facilities.[1,7] While these initiatives offer essential guidance for improving maternal safety and risk-appropriate care, they also reveal gaps in staffing, emergency preparedness, training infrastructure, data reporting, and inter-facility transfer coordination. Together, these three frameworks align regulatory requirements, evidence-based clinical care, and organizational readiness, providing a comprehensive roadmap to strengthen maternal health services in Michigan's rural Critical Access Hospitals.

QUANTITATIVE FINDINGS & THEMES

Conditions of Participation

New CMS CoPs for obstetrical services in hospitals and Critical Access Hospitals were finalized in November 2024 under the title Health and Safety Standards for Obstetrical Services in Hospitals and CAHs.[19]

The updated CoPs include new requirements for the organization and supervision of obstetrical services, delivery of care protocols, emergency readiness, staff training, and quality improvement. These standards are designed to improve maternal and infant health outcomes while promoting consistency and safety in the provision of obstetrical care. CMS has indicated that sub-regulatory and interpretative guidance will be issued in the future to assist with implementation. Importantly, the rule clarifies that if deficiencies are identified during a survey, hospitals will first be required to submit a Plan of Correction before any additional actions are taken.

Implementation Timeline | CMS CoP Requirements for OB Services

Title	Effective Date	CFR Reference
Emergency Services Readiness	Jul 1, 2025	42 C.F.R. §§ 482.55(c), 485.618(e)
Transfer Protocols	Jul 1, 2025	42 C.F.R. § 482.43(c)
Organization and Supervision of Services	Jan 1, 2026	42 C.F.R. §§ 482.59(a), 485.649(a)
Delivery of Care	Jan 1, 2026	42 C.F.R. §§ 482.59(b), 485.649(b)
Staff Training Requirements	Jan 1, 2027	42 C.F.R. §§ 482.59(c), 485.649(c)
QAPI Program Integration	Jan 1, 2027	42 C.F.R. §§ 482.21, 485.641

QUANTITATIVE FINDINGS & THEMES

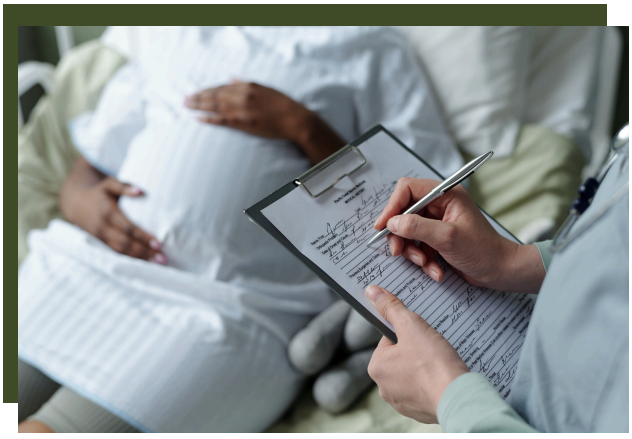
Conditions of Participation

Summary of Key Requirements

Beginning July 1, 2025 | all acute care hospitals and CAHs with EDs must meet new readiness standards. These include implementing evidence-based protocols for obstetrical emergencies, ensuring the availability of essential equipment and medications, and providing annual staff training informed by the facility's Quality Assurance and Performance Improvement (QAPI) program. In addition, hospitals must maintain written policies for transferring patients within and between facilities, and ensure staff are trained on these procedures annually. While CMS does not require written policies for accepting transfers, it does encourage their development.

Effective January 1, 2026 | hospitals and CAHs offering obstetrical services must ensure that those services are well-organized, follow nationally recognized standards of practice, and are integrated with the broader hospital system. Obstetrical services must be supervised by experienced clinicians, and all providers must have clearly delineated privileges. Facilities must align delivery of care policies with their capabilities and ensure high-quality, safe care. Required equipment—such as fetal and cardiac monitors, call-in systems, and emergency supplies—must be readily accessible and appropriate for the facility's scope and volume of services.

Starting January 1, 2027 | staff training must occur at least every two years and at the time of hire, with content based on QAPI findings and tailored to specific roles. The training should incorporate evidence-based practices and address priority areas such as substance use and culturally appropriate care. Facilities must also use their QAPI programs to identify and address disparities in obstetrical outcomes, conduct at least one annual performance improvement project focused on OB care, and, where applicable, integrate publicly available data from their state or local Maternal Mortality Review Committee (MMRC) into quality efforts.



QUANTITATIVE FINDINGS & THEMES

Joint Commission Maternal Levels of Care Requirements and AIM

The Joint Commission's MLC Verification program and the AIM Patient Safety Bundles provide complementary frameworks for assessing hospital readiness and operational capacity to deliver safe, risk-appropriate maternal care.[8,16] AIM bundles operationalize evidence-based clinical practices at the bedside, focusing on critical maternal conditions, while MLC verification evaluates whether a facility has the structural, staffing, and system-level capacity to provide care safely according to patient risk. Together, they offer a lens to identify both clinical and operational gaps that may impact maternal outcomes.

Michigan has participated in AIM since 2015, with bundles targeting Obstetric Hemorrhage, Severe Hypertension in Pregnancy, Safe Reduction of Primary Cesarean Birth, Sepsis in Obstetric Care, and Substance Use Disorder.[8] Hospitals, including CAHs, leveraging AIM bundles can align clinical practice with quality metrics and CMS Performance Improvement Initiatives, such as reporting on Cesarean birth rates and Cesarean births with complications. This dual alignment provides insight into both readiness to provide safe care and opportunities for operational improvement.

The MLC Verification program is available to U.S. hospitals and birthing centers that provide maternity services and on-site deliveries. Facilities do not need Joint Commission accreditation but must comply with applicable federal requirements, including Medicare Conditions of Participation when applicable.[16] The verification process focuses specifically on maternal services and a facility's ability to deliver risk-appropriate care, rather than conducting a full hospital accreditation survey. Participation involves an online application (submitted 4–6 months prior) and a comprehensive on-site review, during which hospitals demonstrate their capacity in areas such as:

- Risk-appropriate care systems: Implementing evidence-based practices to identify patient risk and deliver appropriate care.[16]
- Information management and transfer planning: Ensuring timely coordination and safe transfer when higher-level care is required.[16]
- Performance improvement: Monitoring outcomes and implementing strategies for continuous improvement.[16]
- Program management: Understanding facility capabilities and collaborating with referral hospitals or telehealth partners.[16]

QUANTITATIVE FINDINGS & THEMES

Joint Commission Maternal Levels of Care Requirements and AIM Continued

Following the on-site review, facilities receive a preliminary report and, if needed, submit an Evidence of Standards Compliance (ESC) summary within approximately 60 days.[16] Once verified, the designation is valid for three years with no intracycle monitoring required. Participation in AIM bundles supports hospitals in meeting these operational requirements and identifying gaps in readiness, workflow, and inter-facility coordination.[8]

National strategies for Risk-Appropriate Maternal Care emphasize the importance of including facilities that do not provide obstetric services in regional systems of care. The August 2022 report on implementing maternal care on a national scale introduced the concept of a "Level 0" designation to recognize hospitals often in rural that lack obstetric units yet remain a critical point of entry for pregnant patients. Although formal criteria for Level 0 facilities do not yet exist within the LoMC framework, the expectation that these hospitals maintain clear policies for evaluation, stabilization, consultation, and transport directly aligns with the updated CMS Conditions of Participation. By fostering communication and relationships between non-obstetric facilities, critical access hospitals, free-standing emergency departments, and higher-level obstetric centers, healthcare systems can operationalize regionalization in a practical and sustainable way. Ensuring that every pregnant patient receives timely, risk-appropriate care regardless of where they first present.

In summary, for an environmental scan, AIM Patient Safety Bundles and MLC Verification together provide a framework to assess hospital readiness, identify operational gaps, and align clinical care with state and national quality expectations. Implemented together, they guide hospitals, including rural and CAHs, in improving maternal safety and ensuring risk-appropriate care.

QUANTITATIVE FINDINGS & THEMES

AIM Obstetric ED Readiness Toolkit

The AIM Obstetric Emergency Readiness Kit is a structured resource developed by the AIM to help hospitals and birthing facilities implement standardized, evidence-based practices in response to obstetric emergencies.[1] These critical events, such as severe hypertension, obstetric hemorrhage, maternal sepsis, venous thromboembolism, maternal mental health crises, and maternal cardiac arrest, require rapid, coordinated responses to improve maternal outcomes and reduce preventable mortality and morbidity.[1] The kit provides a comprehensive set of tools designed to strengthen readiness, recognition, response, and reporting, while supporting hospitals in implementing AIM patient safety bundles and promoting team-based care. It includes condition-specific checklists and emergency response protocols, simulation and training resources to prepare interdisciplinary teams, maternal early warning systems and risk screening tools, recommended supply and equipment lists for OB emergency carts, and patient education and structured communication tools.[1] Additionally, it offers guidance for data collection, audit tools, and dashboards aligned with the AIM data platform to track performance and drive quality improvement.[1] By providing these resources, the AIM Obstetric Emergency Readiness Kit helps facilities enhance standardization, improve response times and communication during emergencies, support compliance with national safety standards, and ultimately strengthen maternal safety and outcomes across all care settings.[1]

QUANTITATIVE FINDINGS & THEMES

Social Drivers of Health Impacting Obstetric Services

Social drivers of health influence maternal outcomes through conditions that affect access to prenatal care, safe delivery services, and postpartum follow-up. Healthy People 2030 defines social determinants of health as "the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect health, functioning, and quality-of-life outcomes".[12] In rural communities, these factors often intersect with geographic isolation, limited service availability, and constrained infrastructure, shaping how and when individuals access maternity care.

Transportation, Distance, and Delayed Presentation

Transportation and distance to care are among the most consistently cited social drivers influencing rural maternal outcomes. National rural health research shows that rural women are more likely to initiate prenatal care later and to have fewer prenatal visits, with transportation challenges, long travel distances, and limited provider availability identified as contributing factors.[14] In some rural communities, pregnant individuals must travel 25 to 40 miles or more to access prenatal or delivery services, a burden associated with delayed care and increased reliance on Emergency Departments for urgent obstetric needs.[6,7,14] These patterns align with focus group findings describing Emergency Departments functioning as maternal stabilization sites when distance, weather, or timing delays access to planned obstetric care.

Postpartum Access and Compounding Risk

The postpartum period represents a critical window for maternal morbidity and mortality, and rural barriers often persist after delivery. National data indicate that approximately one-third of pregnancy-related deaths occur between one week and one year postpartum, with inadequate postpartum care increasing the risk of maternal death three- to fourfold.[13] In rural areas, postpartum follow-up can be further constrained by transportation barriers, limited service availability, and workforce shortages, increasing the likelihood that postpartum complications present emergently rather than through routine care.

QUANTITATIVE FINDINGS & THEMES

Social Drivers of Health Impacting Obstetric Services Continued

Insurance Coverage and Affordability

Insurance coverage patterns also shape maternal access and continuity of care in rural communities. Medicaid is the single largest payer for maternity care in the United States, financing approximately 43 percent of all births nationally, with rural communities relying on Medicaid coverage at higher rates than urban areas.[13] While Medicaid coverage expands access to prenatal and delivery services, reimbursement levels and administrative requirements can affect service sustainability in low-volume rural hospitals, contributing to workforce strain and service consolidation.

Broadband Access and Telehealth Limitations

Telehealth has been identified as a potential strategy to reduce travel burden for prenatal and postpartum care; however, its effectiveness in rural communities is limited by broadband availability, technology access, and reimbursement policy. National rural maternal health analyses note that limited broadband access, cost of equipment, and inconsistent reimbursement remain significant barriers to telehealth implementation for perinatal care.[13] March of Dimes has further reported that counties with low telehealth access are significantly more likely to be classified as maternity care deserts, reinforcing broadband connectivity as a structural driver of maternal access.[5,6]

Implications for Rural Hospitals and Emergency Departments

These social and structural conditions increase the likelihood that obstetric needs present later and with higher acuity in rural settings. National rural maternal health guidance emphasizes that when local obstetric capacity is limited or absent, EDs continue to serve pregnant patients regardless of training or facility design, underscoring the need for maternal readiness approaches that account for Emergency Department–based stabilization and transfer.[13] These findings mirror focus group themes describing delayed presentation, complex transfers, and the emotional and clinical intensity of managing obstetric emergencies in low-volume settings.

QUANTITATIVE FINDINGS & THEMES

CAH Innovative Models & Emerging Practices

Quantitative review of funded initiatives and documented projects across Michigan indicates that rural CAHs and their partners are actively piloting innovative maternal health models designed to address access gaps, workforce constraints, and postpartum continuity of care. These initiatives complement qualitative findings by demonstrating how rural systems are responding to known structural barriers through targeted, scalable approaches.

Several projects emphasize virtual and hybrid care delivery, particularly in regions where distance and workforce shortages limit in-person services. Examples include virtual prenatal and postpartum support models, substance use recovery services integrated into perinatal care, and telehealth-enabled lactation and behavioral health supports. These approaches are designed to reduce travel burden while maintaining continuity of care across pregnancy and the postpartum period.

Other initiatives focus on workforce expansion and role diversification, including training and credentialing of lactation consultants and doulas, support for Medicaid billing pathways, and trauma-informed education for maternal health providers. These efforts address persistent workforce gaps identified in rural settings and support team-based maternal care models that extend beyond traditional hospital staffing structures.

Collectively, these innovative models demonstrate that rural maternal health improvement is increasingly driven by flexible funding, cross-sector partnerships, and integration of medical, behavioral, and social supports. While many of these projects are supported through time-limited grants, they provide practical examples of strategies that align with rural realities and inform future policy, partnership, and sustainability efforts (see Appendix B and C).

QUANTITATIVE FINDINGS & THEMES

Rural Maternity Care Access in Michigan: MSU College of Human Medicine Study

Previous Michigan-specific research has documented significant gaps in access to maternity care for women living in rural communities. In partnership with Michigan State University College of Human Medicine, a prior study titled Access to Maternity and Prenatal Care Services in Rural Michigan examined the availability of prenatal and delivery services across the state's rural counties.[20] The study found that among Michigan's 57 rural counties, only 29 hospitals provided maternity care, with geographic high-risk areas identified in the Upper Peninsula and the northeast Lower Peninsula.

The study also highlighted limited access to trial of labor after cesarean services in rural hospitals. Only two rural hospitals billed for the expected rate of trial of labor after cesarean births, while the majority provided no such services, resulting in large regions where women were unable to pursue this option locally.[20] These findings underscored how hospital capacity, workforce availability, and institutional policy can shape maternal care options in rural settings.

Building on this work, an updated analysis is currently underway to reassess access to trial of labor after cesarean and vaginal birth after cesarean services in rural compared to urban Michigan hospitals. The study will examine hospital service availability, billing patterns, and geographic access to patient-centered birth options within the current healthcare landscape. This updated research will provide timely context for the findings of this environmental scan by further illuminating how structural, workforce, and policy factors continue to influence maternal care options in rural communities. The study is being completed by medical students in the rural track, and results will be shared with stakeholders upon completion.

RECOMMENDATIONS

The recommendations that follow are informed by both the lived experiences of Michigan CAHs and the rapidly evolving national maternal-safety landscape. They align with emerging national rural maternal safety guidance that emphasizes stabilization readiness, regional coordination, and participation in quality improvement among both birthing and non-birthing hospitals. The convergence of new CMS Conditions of Participation for obstetrical services and broader maternal-safety initiatives has created a pivotal moment for strengthening maternal readiness across hospitals. Rural hospitals are expected to align with these standards while navigating workforce shortages, geographic challenges, and low-volume delivery realities. Michigan has an opportunity to intentionally structure rural maternal readiness in ways that both meet national expectations and reflect the operational realities of CAHs. By doing so, the state can strengthen safety, reduce variability, and position rural Michigan as a leader in adapting national maternal frameworks to rural settings.

Findings from this environmental scan demonstrate that maternal safety in rural Michigan is shaped less by lack of commitment and more by structural realities, including geographic distance, workforce fragility, low birth volume, and variability in regional processes. CAHs, whether or not they maintain L&D services, are functioning as essential maternal-stabilization sites. The following recommendations identify actionable opportunities for state partners, regulatory agencies, healthcare systems, and maternal-health partners to strengthen maternal readiness, operational clarity, and regional coordination across rural Michigan.

Policy & System-Level Recommendations

1. Recognize EDs as Maternal-Safety Sites

EDs in hospitals without L&D services are actively managing unplanned deliveries and maternal-stabilization events. These facilities are integral components of the maternal-care continuum and serve as frontline stabilization sites in maternity-care deserts. State and federal maternal-health initiatives should recognize ED obstetric readiness as an eligible activity within maternal-health funding, training programs, and technical-assistance efforts. Hospitals without L&D units must still be prepared to stabilize obstetric emergencies, and policy structures should reflect that operational reality.

RECOMMENDATIONS

Policy & System-Level Recommendations

2. Establish a Tiered Rural Maternal-Readiness Framework

Michigan should adopt a tiered maternal-readiness framework that balances statewide safety expectations with regional flexibility. A foundational level of readiness should apply to all CAHs, regardless of delivery volume or service model. This foundational level should include standardized obstetric-emergency protocols, clearly defined maternal-transfer pathways aligned with MLC principles, integration of maternal readiness into hospital QAPI programs, and interdisciplinary emergency drills reflective of ED-based stabilization realities.

Enhanced participation pathways should be available to hospitals seeking deeper engagement, including participation in AIM initiatives, pursuit of MLC verification, engagement in regional simulation collaboratives, or participation in structured peer-learning networks. A tiered approach ensures baseline maternal safety statewide while recognizing variation in capacity across rural settings. State partners could operationalize this framework through voluntary readiness pathways, technical assistance, and alignment with existing maternal safety initiatives such as AIM and MLC.

3. Strengthen Regional Maternal-Transfer Processes and High-Risk Pathways

Transfers were consistently described as variable and relationship-based, particularly during high-acuity events or regional capacity constraints. While hospitals are required to maintain internal transfer policies and CAHs must have transfer agreements in place, findings suggest an opportunity to strengthen how these processes function operationally across diverse maternal scenarios.

Regional partners should prioritize operationalizing and stress-testing maternal-transfer protocols to ensure they function effectively across a wide array of high-risk situations. This includes clarifying escalation thresholds, strengthening communication expectations between sending and receiving facilities, and conducting scenario-based drills to evaluate how policies perform under real-world conditions. Well-practiced transfer pathways and access to specialist consultation are critical for hospitals stabilizing obstetric emergencies.

RECOMMENDATIONS

Policy & System-Level Recommendations

4. Provide Rural-Scaled Support for CMS Conditions of Participation Requirements

The 2025 through 2027 CMS Conditions of Participation for obstetrical services present both regulatory expectations and an opportunity to strengthen rural maternal systems. State partners and regulatory agencies should develop and distribute rural-specific templates, checklists, and example policies aligned with emergency-readiness, transfer-protocol, and staff-training requirements. Translating regulatory language into practical workflows will reduce administrative burden while improving compliance and safety. National rural guidance underscores the importance of practical readiness tools and standardized protocols for hospitals that infrequently encounter obstetric emergencies.

5. Strengthen Workforce Sustainability in Low-Volume Settings

Low birth volume creates patient-safety, recruitment, and sustainability challenges. Maintaining obstetric readiness in environments with infrequent deliveries can make it difficult for clinicians to maintain procedural competency and complicate recruitment of obstetric providers and nurses seeking regular procedural exposure. State and regional partners should develop and support innovative workforce strategies that help rural hospitals maintain obstetric readiness despite low delivery volume. These strategies may include shared regional staffing models, telehealth-supported consultation, workforce incentives, and financial structures that recognize readiness costs independent of delivery volume. Protecting workforce stability is central to preserving safe maternal access in rural communities.

6. Support Rural-Appropriate Maternal Quality Measurement

Similar to workforce challenges in low-volume settings, traditional maternity quality measures were largely developed for higher-volume hospitals and may be difficult to apply in rural settings with low delivery volume. State partners should support rural hospitals in participating in maternal quality improvement efforts through rural-appropriate measurement approaches, regional or aggregated reporting models, and technical assistance that helps hospitals interpret and apply maternal safety data. Quality improvement efforts should also include both birthing and non-birthing hospitals, recognizing their role in maternal stabilization, emergency response, and transfer coordination.

RECOMMENDATIONS

Policy & System-Level Recommendations

7. Include Social Drivers of Health in Maternal-Safety Planning

Transportation barriers, childcare responsibilities, housing instability, and delayed care-seeking significantly influence how maternal emergencies present in CAHs. Maternal-safety initiatives should embed screening for social needs and integrate care-navigation strategies into preparedness planning to support earlier intervention and safer maternal outcomes. Aligning maternal safety with community-level realities strengthens both prevention and stabilization efforts and reflects growing recognition that access barriers influence maternal outcomes in rural communities.

8. Strengthen Immediate Neonatal-Stabilization Capacity

Although this environmental scan focuses primarily on maternal systems, emergency deliveries in rural EDs and during transport directly affect newborn outcomes. Maternal emergency readiness inherently includes the first minutes of neonatal care. Michigan should ensure neonatal-stabilization practices are embedded within maternal-emergency protocols and interdisciplinary simulation initiatives. Aligning neonatal-stabilization readiness with maternal-transfer pathways maintains scope while acknowledging the interconnected nature of maternal and newborn safety.

9. Strengthen Behavioral Health & Substance Use Coordination Within Rural Maternal Care Systems

Support stronger coordination between rural hospitals, Emergency Departments, behavioral health providers, substance use services, and community-based organizations to improve identification of and response to maternal behavioral health and substance use concerns. Efforts may include strengthening referral pathways, improving awareness of available regional resources, incorporating trauma-informed approaches into maternal care settings, and supporting coordination for pregnant and postpartum individuals experiencing behavioral health or substance use challenges. Statewide maternal mortality findings demonstrate that many pregnancy-associated deaths are connected to substance use disorder and behavioral health concerns, reinforcing the importance of addressing maternal safety through both clinical and community-based approaches.

RECOMMENDATIONS

Partnership & Implementation Recommendations

Strengthening maternal readiness will require coordinated action among partners. The following implementation strategies reflect hospital-identified needs while maintaining alignment with state and national maternal-health infrastructures.

1. Leverage Existing State and National Maternal-Health Infrastructures

Partners should build upon established maternal-health infrastructures, including MI-AIM and MLC initiatives, to provide consistent quality-improvement support to both birthing and non-birthing rural facilities. These statewide and national frameworks offer evidence-based bundles, clinical-readiness tools, and standardized pathways that can be adapted to the realities of CAHs and rural EDs. Rural adaptation, rather than replication of urban models, should guide implementation.

2. Deploy Practical Obstetric-Emergency Readiness Resources

Hospitals identified the need for structured tools to standardize response to obstetric emergencies, particularly in low-volume and ED-based settings. Partners should introduce structured obstetric-emergency readiness resources, such as the AIM Obstetric Emergency Readiness Toolkit and similar evidence-based checklists and equipment guides, and provide implementation guidance tailored to the realities of CAHs. Supporting equipment staging, checklist use, medication protocols, and clearly defined team roles will strengthen response consistency and improve confidence during high-acuity events. National maternal-safety guidance similarly emphasizes the importance of structured emergency-readiness tools in hospitals that infrequently encounter obstetric emergencies.

3. Support Development of Maternal-Focused Community Paramedicine Models

Emerging models such as maternal-focused community paramedicine may offer opportunities to strengthen prenatal and postpartum support, reinforce discharge education, identify early warning signs, and address transportation and social barriers contributing to delayed maternal care in rural communities. Community paramedicine approaches may also help strengthen continuity between hospitals, Emergency Departments, EMS systems, and community-based services in regions experiencing significant maternal access challenges.

RECOMMENDATIONS

Partnership & Implementation Recommendations

4. Expand Access to EMS-Inclusive, Hands-On Training and Clinical Refreshers

Hospitals emphasized the value of interdisciplinary training that includes EMS and reflects the maternal scenarios most commonly encountered in rural settings. Partners should expand access to voluntary, hands-on training opportunities focused on obstetric-emergency recognition, urgent maternal warning signs, stabilization practices, and post-delivery complications. Simulation exercises addressing obstetric hemorrhage, severe hypertension in pregnancy, maternal sepsis, and maternal stabilization prior to transfer were frequently identified as high-value activities.

National rural guidance supports regular obstetric-readiness refreshers and interdisciplinary simulation for ED and EMS staff in hospitals without L&D units. Any expansion of training opportunities should be accompanied by accessible resources and technical assistance to support participation.

5. Establish a Michigan Rural Maternal-Care Network

Hospitals expressed interest in peer-learning and shared resources. A structured rural maternal-care network could support regular virtual convenings focused on readiness practices, regulatory alignment, transfer coordination, and quality-improvement strategies. Similar multidisciplinary rural learning networks are recommended nationally to support knowledge-sharing across CAHs.

6. Expand Telehealth-Supported Maternal Care Coordination

Expand opportunities for telehealth-supported maternal care coordination, specialty consultation, behavioral health access, and postpartum follow-up across rural regions experiencing transportation barriers and limited specialty care access. Telehealth-supported approaches may help strengthen coordination between rural hospitals, Emergency Departments, maternal specialists, and referral centers while improving access to services for geographically isolated communities.

RECOMMENDATIONS

Partnership & Implementation Recommendations

7. Convene a Focused L&D CAH Collaborative

Hospitals maintaining L&D services identified unique workforce and sustainability challenges. A focused collaborative for these facilities would allow sharing of staffing strategies, readiness practices, and participation in maternal-quality improvement efforts. Concentrated dialogue among low-volume birthing CAHs can strengthen sustainability and reduce isolation.

8. Engage State, National, and Funding Partners in Rural Maternal Readiness

Findings from this scan should be shared with state partners, national hospital associations, and potential funders to support investment in training, equipment, telehealth support, and rural maternal innovation. Strategic alignment with national maternal-safety priorities may unlock funding pathways and reinforce Michigan's leadership in rural-adapted maternal-system design.

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Appendix A
AIM OB Emergency Readiness Overview

The AIM Obstetric Emergency Readiness Kit is designed to:

- Strengthen readiness, recognition, response, and reporting capabilities for OB emergencies.
- Support hospitals in implementing AIM patient safety bundles.
- Promote team-based care and standardized protocols.
- Provide resources and tools for quality improvement.

Key Components

1. Checklists & Protocols
   - Condition-specific readiness checklists (e.g., hemorrhage, hypertensive emergencies, sepsis).
   - Emergency response protocols aligned with AIM patient safety bundles.
2. Team Training & Simulation Resources
   - Drills and simulation guides to prepare interdisciplinary teams.
   - Debriefing tools to support learning after drills or real events.
3. Risk Assessment & Screening Tools
   - Maternal early warning signs tools (MEWS, MEOWS).
   - Sample risk screening forms for use during prenatal care and triage.
4. Supply & Equipment Lists
   - Recommended emergency supplies for OB emergency carts or kits.
   - Inventory checklists to ensure readiness.
5. Patient Education & Communication Tools
   - Materials to inform patients about warning signs and when to seek help.
   - Structured communication tools (e.g., SBAR format).
6. Data Collection & Quality Improvement
   - Guidance on tracking indicators aligned with the AIM data platform.
   - Sample audit tools and dashboards to measure improvement over time.

Focus Areas (Common OB Emergencies Addressed)

Obstetric Hemorrhage
Maternal Sepsis
Maternal Mental Health
Maternal Cardiac Arrest
Severe Hypertension in Pregnancy
Venous Thromboembolism (VTE)
Cardiac Conditions in Pregnancy

Benefits

- Promotes standardization and team preparedness.
- Improves response time and communication during emergencies.
- Supports compliance with national quality and safety standards.
- Enhances maternal safety and outcomes across settings.

Appendix B
Key Private Funders & Initiatives

The following organizations are the primary private drivers of maternal health equity and access in Michigan's rural corridors.

Funder	Geographic Focus	Key Maternal Health Programs
Michigan Health Endowment Fund https://mihealthfund.org/grantmaking/healthy-kids	Statewide	Grants up to $750,000 for "Healthy Kids", focusing on the experiences that shape a child's life from before birth through young adulthood, and our initial investments will be in three areas: Healthy Start, Healthy Families, and Healthy Schools.
BCBSM Foundation https://www.bcbsm.com/foundation/grants/community-health/	Statewide	The "Advancing Maternal Health Equity" initiative supports nonprofits addressing birth outcome gaps and maternal morbidity.
Superior Health Foundation https://www.superiorhealthfoundation.org/all-grants	Upper Peninsula (UP)	The Superior Health Foundation offers a variety of grants aimed at improving health and wellness within our communities. These grants focus on enhancing access to healthcare, promoting preventive health initiatives, and supporting innovative health programs.
Gerber Foundation https://www.gerberfoundation.org/about/	West Michigan (Lake, Newaygo, Muskegon, Oceana)	Heavily focused on the 0–18 age range, but provides grants for prenatal and perinatal projects that impact early childhood outcomes.
Perigee Fund https://perigeefund.org/how-we-fund/funding-opportunity-families-at-the-heart/	National Organization	Fund strategies that shift practice, policy, and resources so that families impacted by trauma have greater access to mental health care and relationship-based support in the places where they are during pregnancy and early childhood.
Robert Wood Johnson Foundation https://www.rwjf.org/en/grants/active-funding-opportunities.html	National Organization	Broad focus areas: health equity, health and healthcare, healthy communities, healthy children and family, & leadership

Government Grants

Government Grants may also be available for maternal health. Please review the Health Resources and Services Administration site. HRSA provides grant opportunities on Maternal and Infant Health. https://www.hrsa.gov/grants/find-funding#find

Appendix C
Innovations Through Grant Opportunities/Previously Funded Opportunities

Project Title: CIRCLE UP - Upper Peninsula Health Care Solutions Program: Maternal & Infant Health
Funder: Michigan Health Endowment Fund
Grantee: Upper Peninsula Health Care Solutions
Year: 2025
Award Amount: $298,704
Geography: Alger, Baraga, Chippewa, Delta, Dickinson, Gogebic, Houghton, Iron, Keweenaw, Luce, Mackinac, Marquette, Menominee, Ontonagon, Schoolcraft
Overview: To improve access to care for birthing individuals with substance use or opioid use disorders in Michigan's Upper Peninsula, the CIRCLE UP program will integrate evidence-based pharmacotherapy, mental health services, and support for social determinants of health into pre- and postnatal care through a virtual recovery model. The initiative will collaborate with local providers and partners to reduce treatment barriers and train healthcare professionals, while establishing a replicable model for virtual recovery services to expand access across the region and state.
Link: https://mihealthfund.org/grant-database

Project Title: Rural Access to Breastfeeding Support
Funder: Michigan Health Endowment Fund
Grantee: Marlette Regional Hospital
Year: 2024
Award Amount: $58,000
Overview: To address the severe lack of breastfeeding support available in Michigan's Thumb region, Marlette Regional Hospital will initiate a breastfeeding access program led by a Certified Breastfeeding Specialist, offering individual consultations and community classes at primary care facilities and community classes. This initiative will provide comprehensive support, including assessments, education, and expression techniques to approximately 200 mother-infant pairs throughout the grant period
Link: https://mihealthfund.org/grant-database

Project Title: MI Postpartum Promise
Funder: Action for Women's Health
Grantee: Corwell Health
Year: 2025
Award Amount: unknown
Overview: The three-year grant will enable Corewell Health to advance its MI Postpartum Promise, a statewide initiative dedicated to helping mothers across Michigan recover and thrive after childbirth.
Link: https://newsroom.corewellhealth.org/ActionForWomensHealthGrant

Appendix C
Innovations Through Grant Opportunities/Previously Funded Opportunities

Project Title: Equity in Birth: Transforming Care for Survivors of Domestic & Sexual Violence
Funder: Michigan Health Endowment Fund
Grantee: Michigan Coalition to End Domestic & Sexual Violence
Year: 2025
Award Amount: $245,892
Geography: Statewide
Overview: To improve maternal health and support survivors of domestic and sexual violence, this project will train doulas, birthing professionals, and survivor advocates across Michigan. The training will focus on addressing the intersection of domestic and sexual violence with maternal health, specifically targeting perinatal survivors from Black, Indigenous, and People of Color communities, as well as those in rural areas, to improve maternal and infant health outcomes. The project will also leverage sustainable training models to equip professionals with the tools needed to deliver trauma-informed, survivor-centered care and ensure lasting impact across the state.
Link: https://mihealthfund.org/grant-database

Project Title: LCP (Lactation Consultant Program) Expand
Funder: Michigan Health Endowment Fund
Grantee: Henry Ford College Foundation
Year: 2025
Award Amount: $225,264
Geography: Statewide
Overview: Expand access to lactation support and improve breastfeeding outcomes across Michigan, the Lactation Consultant Program expansion will enhance Henry Ford College Foundation's existing training through virtual education and local mentoring. This initiative will expand access to culturally congruent lactation care by providing online courses, hands-on clinical rotations with local mentors, and a specialized Breastfeeding Masterclass for Doulas, aimed at increasing the number of qualified lactation consultants and addressing workforce gaps in areas with high population density.
Link: https://mihealthfund.org/grant-database

Project Title: How YOU Birth Doula Billing Buddies Access Health, Inc.
Funder: Michigan Health Endowment Fund
Grantee: How You Birth Doula Initiative
Award Amount: $113,073
Geography: Statewide
Overview: Access Health, Inc. will support a doula cohort in West Michigan by training them on Medicaid billing processes. The program will include a peer-instructed training model, "Billing Buddies," to enhance participation and sustainability for doulas facing challenges and frustrations with credentialing.
Link: https://mihealthfund.org/grant-database