Advancing Rural Maternal Health Equity

May 2022

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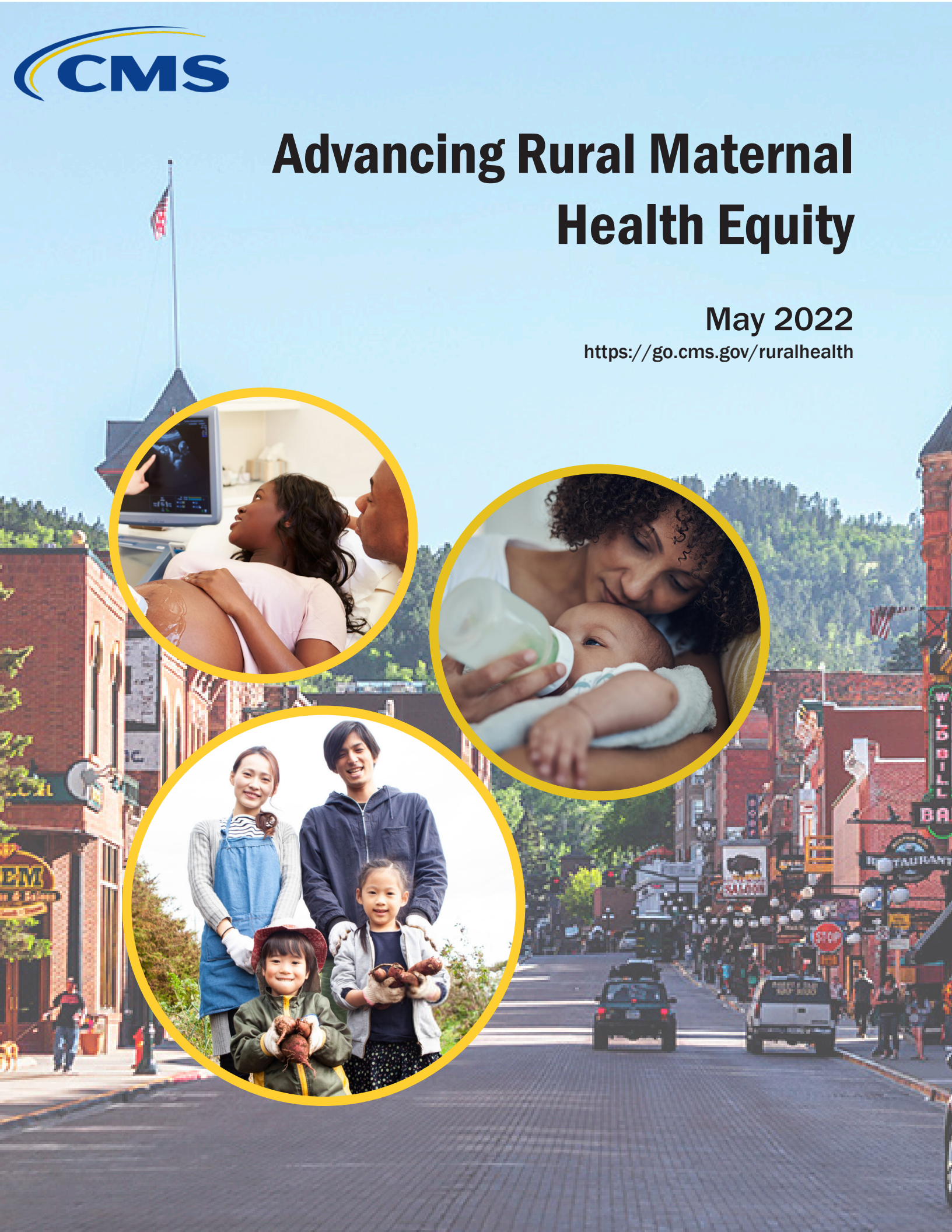

Message from the CMS Office of Minority Health

Over the past decade, the need to improve rural maternal healthcare has gained increasing recognition due to rising maternal mortality rates and the disproportionate effect they have on non-Hispanic Black, American Indian, and Alaska Native women. Hospital and obstetric department closures, gaps in insurance coverage, and workforce shortages in rural communities have contributed to maternal health disparities for rural women and their babies. Therefore, the Centers for Medicare & Medicaid Services (CMS) has made it a priority to collaborate with rural partners and stakeholders at the national, regional, state, and local levels to reduce rural maternal health disparities and improve access to high-quality maternal healthcare for women and their babies living in rural communities.

The CMS Office of Minority Health has led several activities under its Rural Maternal Health Initiative to gather stakeholder feedback regarding opportunities to improve rural maternal healthcare access, quality, and outcomes in rural, frontier, and tribal communities, as well as in the remote areas of U.S. territories. These activities align with CMS's Strategic Vision pillars, the first of which is focused on advancing health equity by addressing health disparities in our health system. These rural maternal health efforts are strengthened and amplified through U.S. Department of Health and Human Services (HHS) and White House initiatives as noted in the HHS Rural Health Action Plan, White House Proclamation on Black Maternal Health Week, and the Call to Action to Reduce Maternal Mortality and Morbidity.

CMS remains committed to all the people we serve and to providing those in rural communities with access to more affordable, equitable, and quality maternal healthcare. We thank all our rural stakeholders and partners for collaborating and providing opportunities to advance rural maternal healthcare and health equity. We look forward to the work ahead and our continued partnership to improve maternal healthcare in rural, frontier, and tribal communities, as well as U.S. territories.

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Director, CMS Office of Minority Health

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Introduction

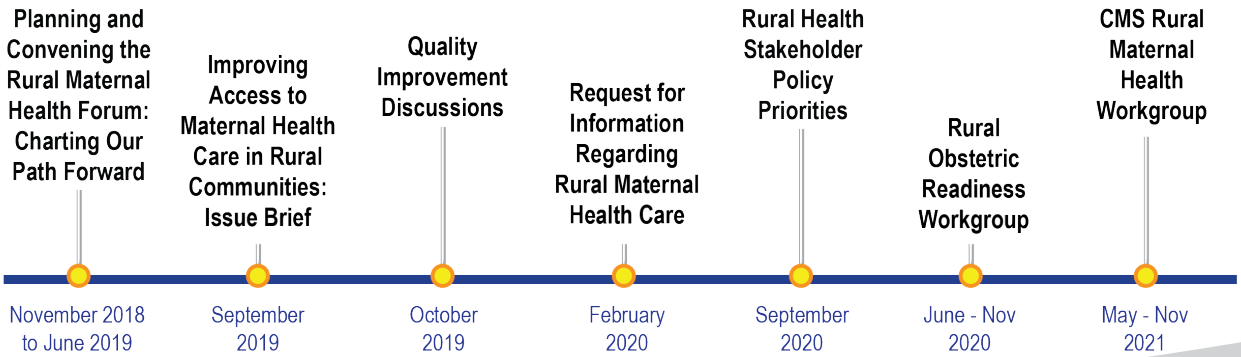
Background

Over the past decade, there has been increasing recognition of the need to improve rural maternal health due to rising maternal mortality rates across the country and the disproportionate effect they have on non-Hispanic Black and American Indian/ Alaska Native (AI/AN) women. Non-Hispanic Black and AI/AN women are two to three times more likely to suffer a pregnancy-related death than non-Hispanic White women,[1] and these disparities exist in communities across the country, regardless of other socioeconomic factors. Non-Hispanic Black, AI/AN, Asian/Pacific Islander, and Hispanic women also experience higher rates of severe maternal morbidity.[2] Additionally, rural women experience poorer maternal health outcomes compared to their non-rural counterparts, including higher pregnancy-related mortality.[3] Hospital and obstetric department closures, gaps in insurance coverage, and workforce shortages in rural communities have led to a lack of access to high-quality maternal health services and contributed to these maternal health disparities.

Since November 2018, the Centers for Medicare & Medicaid Services Office of Minority Health (CMS OMH) has led several activities as part of its Rural Maternal Health Initiative to better understand rural maternal health disparities and improve access to high-quality maternal health services in rural communities. These efforts are in alignment with the CMS Strategic Pillars and the agency's broader strategic initiative to improve maternity care access and quality, improve health outcomes, and reduce disparities. The Rural Maternal Health Initiative has focused on gathering stakeholder information and input regarding rural maternal health through a variety of methods: an interactive forum, case study interviews, stakeholder discussions, a formal Request for Information, a review of rural health stakeholder policy priorities, an external workgroup, and an internal CMS workgroup.

Purpose of this Report

This report provides a high-level summary of the activities that CMS OMH implemented as part of its Rural Maternal Health Initiative between June 2019 and November 2021. The purpose of this report is to raise awareness of these efforts with rural stakeholders, identify collaborative opportunities, and thereby further advance rural maternal healthcare equity across the country.



CMS OMH Rural Maternal Health Initiative

Rural Maternal Health Forum: Charting Our Path Forward

In June 2019, CMS hosted an interactive "Conversation on Maternal Healthcare in Rural Communities: Charting a Path to Improved Access, Quality and Outcomes" in Washington D.C. to increase understanding and awareness of the difficulties women in rural communities face and highlight the need for a coordinated and collaborative roadmap to improve access to maternal health and improve health outcomes.

The event was hosted in collaboration with partners, including federal partners, professional health organizations, and non-profit professional associations. It drew nearly 900 in-person and virtual attendees from across the country and from varied stakeholder groups, including providers, hospitals, insurers, associations, non-profits, community health centers, and government. Attendees listened to expert panel discussions and shared their top priorities for improving access to maternal health services. The top priorities that attendees put forth related to Payment (e.g., examining opportunities at federal and state levels to enhance Medicaid funding for telehealth, transportation, doula services, interstate referrals, housing, and cost-based reimbursement for critical access hospitals), Workforce (e.g., provide loan repayments and rural training), and Clinical/Quality Improvement (e.g., support care coordination, including team-based care and coordination with remote delivery providers).

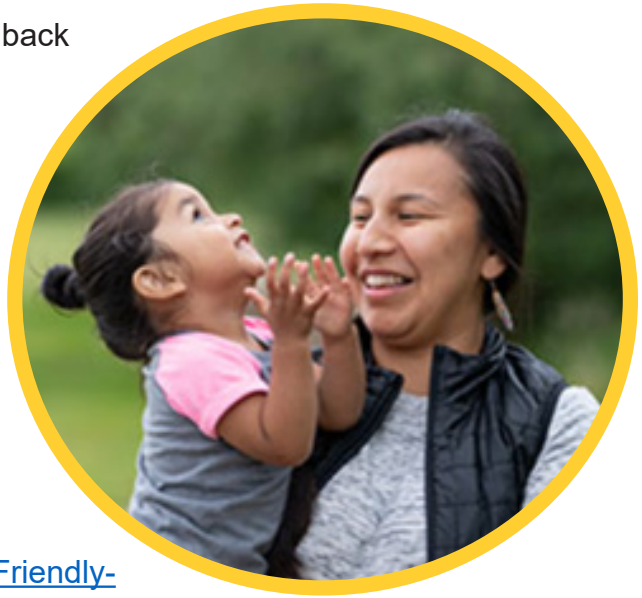
Improving Access to Maternal Health Care in Rural Communities: Issue Brief

In September 2019, building on the Rural Maternal Health Forum, CMS released an issue brief, "Improving Access to Maternal Health Care in Rural Communities," which focuses on access to care for women in rural communities before, during, and after pregnancy. The issue brief was developed to describe the scope of the challenges rural women encounter accessing high-quality maternal healthcare, including maternal healthcare disparities faced by racial and ethnic minority women, and to focus attention on the need for national, state, and community-based organizations to collaborate on developing an action plan to improve rural maternal healthcare access and outcomes.

The issue brief features specific programs that are designed to address barriers to rural maternal health access and quality. The report provides an overview of the six interviews CMS conducted with diverse maternal health organizations across the United States to highlight

a variety of promising approaches, facilitators, barriers, and opportunities for further impact. These case studies illustrate creative and innovative solutions to stabilize rural hospital obstetrical services, regionalization and coordination of care, quality improvement initiatives, training and guideline development, provider recruitment and retention strategies, and expansion of care models. Specific strategies included partnering with community or state associations, collaborating with urban or academic providers, or using telehealth and other innovations. These examples highlight policy and structural changes that could be examined to improve access to maternal health services in rural communities.

Quality Improvement Discussions



In October 2019, as follow-up on stakeholder feedback shared during the Rural Maternal Health Forum, CMS OMH conducted outreach to seven rural hospitals across the United States to learn about their participation in maternal health quality improvement activities (e.g., Alliance for Innovation on Maternal Health [AIM] Safety Bundles). Promising practices offered by participants included focus on recruitment and retention of providers in rural hospitals, design and implementation of evidence-based practices, partnerships across the health system and with community members to maximize resources, and engagement in programs such as Pioneer Baby Initiative, Safe to Sleep Campaign, and the Baby Friendly-Hospital Initiative.

Request for Information Regarding Rural Maternal Health Care

In February 2020, CMS OMH issued a Request for Information (RFI) regarding Maternal and Infant Health Care in Rural Communities as a key follow-up to the Rural Maternal Health Forum and other CMS OMH rural maternal health activities. CMS OMH issued the RFI to seek public comments on opportunities to improve healthcare access, quality of care, and outcomes for rural women and infants before, during, and after pregnancy. CMS OMH received 135 RFI submissions; the themes and topics identified from the public comments were described within the context of the four RFI questions and interest areas that will inform CMS's future work.

The RFI included questions about improving access, quality, and outcomes for rural prenatal, obstetrical, and postpartum care, particularly regarding: (1) barriers to improvement; (2) opportunities for improvement; (3) initiatives that have shown positive impact; and (4) ways in which CMS and other federal stakeholders can support improvements. The interest areas comprised the social determinants of health, racial and ethnic disparities (particularly in tribal communities), behavioral health outcomes, and specific actions CMS can take to support rural women and their babies. The RFI also sought responses on the obstetric readiness of rural providers, including emergency medical services and emergency departments. Commenters offered diverse perspectives on a variety of relevant topic areas, the most prominent of which are listed in the following table.

RFI Categories	Prominent Comment Topic Areas
Barriers	Transportation, racial disparities, culturally appropriate care, mental health, health insurance, low volume and reimbursement, telehealth, facility closures, workforce shortages, and provider training and approaches
Opportunities	Data collection and analysis, telehealth, workforce constraints, and workforce recruitment and retention
Impactful Initiatives	Telehealth and workforce expansion
Recommendations	Transportation, enforcement policies, payment policies, review committees and quality collaboratives, health insurance, coverage policies, telehealth, existing innovative models, systems of care, technology infrastructure and interoperability, and workforce recruitment and retention
Obstetric Readiness	Social determinants of health, clinical quality improvement, provider training and development, workforce and equipment shortages, and hospital and obstetric unit closures

Rural Health Stakeholder Policy Priorities

In September 2020, CMS OMH conducted an informal literature review of rural stakeholder priorities, including maternal health, to prepare for fiscal year 2021 priorities and continued impact of the coronavirus disease 2019 (COVID-19) public health emergency (PHE). Stakeholders noted maternal health policy priorities such as expansion of Medicaid postpartum coverage, provider shortages, payment for maternal health services, provider training and education, and quality improvement activities.

Rural Obstetric Readiness Workgroup

From June 2020 through November 2020, in recognition of the challenges rural hospitals and rural obstetric departments face, the CMS Alliance to Modernize Healthcare federally funded research and development center (Health FFRDC) convened a Rural Obstetric Readiness Workgroup on behalf of CMS OMH to develop solutions for rural providers—specifically, hospitals and emergency services groups that do not typically provide obstetric services—to improve their readiness for obstetric care.[4] The Workgroup, which met monthly, comprised 26 rural health, maternal health, pediatric, emergency service, and public health experts from across the United States. The Workgroup focused their discussions in the following areas: 1) care disparities; 2) financial challenges; 3) workforce, training, and equipment inadequacies; and 4) regional relationships.

These discussions concerned potential solutions for rural providers that included partnering with nearby tertiary facilities, recruiting, and retaining obstetric professionals in rural areas, and cross-training multidisciplinary teams to increase cultural competency and address obstetric emergencies. The Workgroup categorized these potential solutions by level of impact (i.e., high, medium, low), based on the likelihood it would improve obstetric readiness challenges in rural communities and to further inform future discussions about broader rural maternal health priorities. The full list of these potential solutions for rural providers can be found in Appendix A. In addition, the Workgroup discussed potential solutions that were more appropriate for action from government, academia, professional organizations, and/or other groups, which can be found in Appendix B.

After the final Workgroup meeting, a group of federal partners from the CDC, CMS, HRSA, and IHS convened to discuss the Workgroup's achievements, as well as additional recommendations for improving the obstetric readiness of rural providers. These recommendations included actions that could be taken by federal, state, and local agencies, by communities, and by healthcare providers. The full list of recommendations from federal partners can be found in Appendix C.

CMS Rural Maternal Health Workgroup

From May 2021 through November 2021, CMS OMH convened an internal Rural Maternal Health Workgroup to examine the breadth and depth of feedback that CMS OMH efforts had received since 2018. The purpose of this Workgroup was to identify two to three proposed projects informed by this stakeholder input and information gathered from the activities under the CMS OMH Rural Maternal Health Initiative to advance rural maternal healthcare for historically marginalized groups. The Workgroup was comprised of multidisciplinary experts from across CMS.

The Workgroup reviewed themes from stakeholder information and input from CMS OMH Rural Maternal Health activities, and discussed opportunities related to coverage expansion, social determinants of health, and payment and service delivery models. The solutions, opportunities, and recommendations that emerged from these discussions contributed valuable information to support future maternal health strategic initiatives and strengthen CMS's ongoing commitment to improve rural maternity care.

Next Steps for Rural Maternal Health

The activities under the CMS OMH Rural Maternal Health Initiative have established a path forward for federal, regional, state, local agencies, and communities to collaborate on actions that advance rural maternal healthcare and health equity. CMS is examining the following opportunities in alignment with CMS's cross-cutting initiative on maternity care, announced in April 2022, as well as its broader priorities on addressing health disparities in the U.S. health system:

- Implementing recommendations related to disseminating best practices for quality improvement related to rural maternal health outcomes before, during, and after pregnancy; leveraging existing policy levers (e.g., building on the Affordable Care Act to expand access to quality, affordable health coverage and care, USPSTF Recommendations, American Rescue Plan Act) for improved engagement and payment of rural advanced practice and other professionals; and applying lessons learned during the PHE to promote innovative telehealth payment and service delivery models for maternal health in rural and underserved areas.
- Promoting flexibilities for rural providers to address obstetric readiness challenges and improve rural maternal health outcomes for women of color in their communities related to care disparities; financial challenges; workforce, training, and equipment inadequacies; and regional relationships.
- Amplifying opportunities to reduce maternal morbidity and mortality in the United States by aligning rural maternal health priorities with broader HHS and Administration initiatives (e.g., HHS Rural Health Action Plan).
- Continuing to engage and partner with rural stakeholders and federal partners to explore opportunities to reduce rural maternal health equity by addressing key areas, including:
    - Social determinants of health
    - Clinical quality improvement
    - Collaboration and partnerships
    - Payment and service delivery models
    - Workforce
    - Measuring and monitoring

CMS looks forward to building on opportunities to provide those it serves in rural communities with access to more affordable, equitable, and quality maternal healthcare, before, during, and after pregnancy, and also collaborating with rural stakeholders and partners to further advance rural maternal health equity for all women and their babies.

Appendix A:

Rural Obstetric Readiness Workgroup—Potential Solutions for Rural Providers

The Rural Obstetric Readiness Workgroup discussed potential solutions for rural providers to increase their obstetric readiness. There are some key points regarding these potential solutions:

- The potential solutions presented are aligned to four topic areas: care disparities; financial challenges; workforce, training, and equipment inadequacies; and regional relationships
- The numbering scheme is for identification purposes only. The potential solutions are not ranked in any particular order.
- Potential solutions are those that the Workgroup felt could feasibly be implemented by rural providers of interest (rural emergency medical services [EMS], emergency departments, and hospitals that do not typically provide OB services), with adequate resources and leadership.
- The Workgroup considered partnerships between stakeholders (i.e., community groups, payers, patients) to support implementation of the proposed potential solutions.
- The categorization of solutions as high-, medium-, and low-impact was based on the Workgroup's assessment and determination.

Care Disparities – Potential Solutions

High-Impact
1. Establish and/or adjust an evidence-based approach to change and/or eliminate implicit biases, including addition of unconscious biases trainings to eliminate positive and negative bias
2. Establish safe and effective protocols for homebirth handoffs from certified nurse midwives to EMS providers, birthing centers, and/or specialty facilities.
3. Connect patients to home visiting programs, community-based perinatal health workers, and other healthcare communities to identify and address potential risks earlier.
4. Create an interdisciplinary curriculum for professionals to examine systemic racism within existing systems (e.g., healthcare, legal, economic) and engage in constructive conversations about solutions to eliminate systemic racism.
5. Identify community stakeholders and obtain their buy-in before discussing cultural competency, implicit bias, and institutional racism with the community and addressing cultural gaps.
6. Implement and incentivize providers to participate in low-dose, high-frequency cultural humility training to ensure that equitable beliefs, attitudes, and behaviors become embedded in provider cultures.
7. Build trust and relationships to have effective discussions about institutional racism in any setting.
8. Hire and/or pay the community health workforce to regain trust and address community care needs.

9. Compensate community health workers for training to provide support to high-risk mothers during delivery, which offers economic, social, behavioral, and health benefits to the community at lower costs than licensed medical providers.

Medium-Impact

10. Identify and correct misinformation and disinformation in medical education programs.
11. Provide and/or enhance continuous obstetric training in rural areas with social and cultural humility content.
12. Provide cultural humility training for staff and then engage with community partners to reinforce the training concepts.

Low-Impact

13. Encourage providers to identify and discuss personal and cultural biases with colleagues through methods such as role-playing exercises.
14. Establish relationships between maternal-fetal specialists and their rural communities via telehealth consults to prevent high-risk medical situations.
15. Establish a standard definition of institutional racism.
16. Acknowledge that institutional racism exists and can manifest as reverse racism.

Financial Challenges—Potential Solutions

High-Impact

1. Identify and obtain state, local and/or private sector funding to increase obstetric readiness at local hospitals.
2. Obtain funding for Level 3-4 hospitals to facilitate trainings and drills at lower-level rural hospitals while allowing them to maintain their independence.
3. Increase funding for community health workers and community-based organizations by establishing relationships with philanthropic organizations.
4. Implement a mission-driven approach, align value-based payments, and establish funding structures for delivering necessary community-based obstetric care.
5. Adopt a payment model focused on budgeting to support fixed costs and other expenses, instead of a fee-for-service model.
6. Use cost savings yielded from telehealth services to reimburse urban providers.
7. Increase return on investment (ROI) by recruiting skilled staff and providing loan repayments via community support and city or county funds.
8. Establish and/or expand loan repayment programs specific to maternal care specialists in health professional shortage areas (HPSAs).

Medium-Impact

9. Use the Project Extension for Community Healthcare Outcomes (ECHO) financing framework to establish a tele-mentoring model within the field of obstetrics to improve obstetric readiness in rural communities.
10. Partner with federally funded freestanding birth centers to increase obstetric readiness.
11. Partner with Healthy Start programs to decrease ER visits, improve pregnancy and postpartum outcomes, and decrease costs.

12. Provide rural EMS with access to the local EHR system and integrate use into their workflows.

Low-Impact

13. Increase administrative support for payment structures that recognize the need for rural provider trainings (e.g., pay for procedural and cultural humility training).
14. Adopt a more holistic mentality to decrease closures of rural obstetric units due to lack of profitability, versus a service line mentality.
15. Establish a forum for rural providers to access resources, research strategies, share their experiences, and review lessons learned to benefit their communities.
16. Obtain grant writing support from state offices of rural health and/or other resources.

Training, Equipment, and Workforce Inadequacies—Potential Solutions

High-Impact

1. Continue pushing for maternity care accreditation requirements, specifically related to the frequency, attendance, content, and design of simulation training.
2. Take advantage of local nursing programs to build a rural nursing workforce.
3. Hire staff from rural communities to address the needs of those communities.
4. Provide Helping Babies Breathe (HBB) and Sugar, Temperature, Airway, Blood pressure, Lab work, and Emotional support (S.T.A.B.L.E.) programs to rural providers.
5. Create hospital toolkits/carts for the most common obstetric emergencies that have break-away locks and contain necessary equipment, medications, step-by-step instructions, intervention checklists, and role descriptions.
6. Develop toolkits with airway and temperature control equipment for newborns and establish Neonatal Resuscitation Program (NRP) training.
7. Stock ambulances with medication and equipment necessary to address the most common obstetric emergencies and train EMS staff how to use them.
8. Increase the number of rural perinatal community-based/-led health worker groups.
9. Include nurse practitioners in antepartum triage to provide care and/or interventions using telehealth in rural areas.
10. Design and provide trainings, simulations, and drills based on provider type and (un)available resources (e.g., EMS, hospital distance and services, transport capabilities).
11. Prioritize training and equipment most useful to facilities with limited financial resources.
12. Require certain obstetric trainings (e.g., Basic Life Support in Obstetrics (BLSO), Advanced Life Support in Obstetrics (ALSO), and NRP) for rural providers every year or two.
13. Increase retention and reduce provider burnout by cross-training rural providers to provide telemedicine resources.
14. Help general surgeons and family practitioners respond to obstetric emergencies (e.g., perform c-sections) by developing and deploying short trainings for them in rural areas.
15. Provide ultrasounds and avoid unnecessary patient transport by cross-training providers (e.g., EMS, nurses, family physicians).
16. Provide more team-based training for rural providers.

Medium-Impact

17. Increase rural provider training to address hemorrhage during pregnancy.
18. Use portable ultrasound machine devices (e.g., Butterfly iQ, Philips Lumify) in low-resource settings.

Low-Impact

19. Review successful programs that hospitals have implemented to bring young physicians back to their rural communities.
20. Obtain fetal monitors for obstetric emergencies.
21. Incentivize the use of assessment tools (e.g., Averting Maternal Death and Disability (AMDD) Walk Through Tool) to identify equipment and workforce gaps and meet learning/assessment standards.
22. Promote provider training on equipment and methodologies included in Alliance for Innovation on Maternal Health (AIM) bundles.

Regional Relationships—Potential Solutions

High-Impact

1. Incentivize Level 3-4 hospitals to be accountable for providing high-quality obstetric care in rural and neighboring lower-level hospitals, so that women with low-risk pregnancies can safely deliver.
2. Debrief with tertiary care centers after maternal or infant transfers to walk through each case, provide closure for staff, identify best practices to improve future transfer processes.
3. Hire CHWs to attend remote maternal-fetal medicine/ultrasound consults with patients to help facilitate the visit and support care coordination in the community.
4. Establish relationships between rural ERs and neighboring specialists for assistance on complex maternal-fetal medicine cases via real-time telemedicine consultations (e.g., in-person site visits, assessing resources, and providing education).
5. Establish a robust system for early identification and transport of high-risk pregnant women to the closest regional facility.
6. Provide rural EMS with necessary telemedicine and diagnostic equipment to receive guidance from specialists and provide care to patients on scene and/or during transport.
7. Establish actionable guidelines for two-way communication, transfer processes, and feedback loops so transfers go smoothly with neighboring systems.
8. Develop toolkits for local EMS regarding rural provider capabilities and EMS expectations during an obstetric transfer.
9. Create regional, multidisciplinary emergency obstetric quality improvement teams (e.g., low-level health facilities, transport teams, expert providers at receiving centers) and establish quarterly meetings for knowledge sharing (e.g., complex obstetric cases, postpartum hemorrhage control).
10. Identify available health resources (e.g., CHWs, birth centers) and integrate them into a referral network.
11. Bring EMS staff into facilities (e.g., birth centers, rural ERs) quarterly to simulate the most common transfer scenarios.

12. Provide opportunities for rural family physicians, ER physicians, and/or midwives to engage in rotations at higher-volume facilities to gain more exposure to diverse obstetric cases and different levels of care.
13. Establish tele-ultrasound mentoring programs so that rural providers can obtain ultrasound images and expert guidance from neighboring hospitals.
14. Create and/or increase partnerships with neighboring hospitals for training and support (e.g., Comprehensive Advanced Life Support (CALS), Pediatric Advanced Life Support (PALS), NRP trainings; simulation equipment; virtual trainings; expert consultations; telemedicine; transport support; work-life balance relief).
15. Establish programs for neonatologists and obstetricians/gynecologists to travel state-wide and provide basic Perinatal Continuing Education Program training to rural providers.
16. Invite local and/or neighboring obstetric or neonatal groups to train staff.
17. Use and/or develop transport models of care.

Medium-Impact

18. Use and/or develop communication tools that can quickly inform all involved providers about the mother and baby.
19. Apply successful monitoring practices to obstetric and maternal health systems (e.g., monitoring by trained CHWs, Veterans Affairs programs and technologies).
20. Aggregate rural data to garner more accurate findings and/or conclusions.
21. Collect data on pregnancy, labor and delivery, immediate postpartum and neonatal care, and care for the postpartum woman up to one year after delivery (e.g., pre-term births, low birth weight, cesarean rates, breastfeeding, and mom-baby dyad).
22. Include patient data in transfer decision-making to ensure transfer to an appropriate care facility.
23. Ensure that data is easy to report and/or can be extracted from data already being reported and is useful to providers and their patients.
24. Require standardized data collection as a best practice for quality improvement purposes.
25. Collect rural obstetric data using diagnosis codes from the International Classification of Diseases, Tenth Revision (ICD-10).
26. Disaggregate data by larger racial and ethnic groupings.
27. Incentivize hospitals to determine their levels of maternal care.
28. Perform cross-setting and cross-facility transfer simulations to enhance communication and collaboration.
29. Provide PowerPoint and video alternatives for staff in lieu of transfer simulations.

Low-Impact

30. Encourage tertiary care centers to include regionalization as part of their missions.
31. Include “Level 0” hospitals in business decisions made by regional hospital systems.
32. Encourage systems to value mother and baby receiving the same level of care.
33. Reference successful indigenous midwifery models in Canada and the U.S. to restore the practice for indigenous populations.

Appendix B:

Rural Obstetric Readiness Workgroup—Potential Solutions for Rural Health Stakeholders

Potential solutions proposed by the Workgroup that were determined to be more appropriate for action from government, academia, professional organizations, and/or other groups are listed below.

Group	Potential Solutions
Care Disparities and Mechanisms to Enhance Equity	N/A
Organizations, Government	Engage and compensate women and their families to serve on hospital/state advisory councils. Promote standardization of the 19,000 EMS agencies that exist across the country. Support Area Health Education Centers (AHECs) and rural residency programs that recruit, educate, and train community members to enter the medical field and remain in their communities to provide care.
Medical/Nursing Schools	Reserve seats for individuals from rural counties who would like to participate in medical residency programs. Increase the number of virtual rural provider residency programs so that individuals enrolled in such programs may continue to serve their own communities. Residency program leadership should model effective conversations regarding implicit bias for the benefit of residents and staff.
Training, Equipment, and Workforce	N/A
Government, Professional Organizations	Establish education and training requirements for consistency across providers and hospitals. Establish state-issued obstetric readiness certification programs and inspection standards for rural hospitals and provide preliminary state funding and resources for initial setup. Offer government-led technical assistance to help rural hospitals standardize their obstetric emergency procedures and therefore standardize training.

Group	Potential Solutions
Medical/ Nursing Schools, Professional Organizations	Establish rural nursing as an academic specialty. Establish a “rural medicine” designation for family physicians that would include obstetric and emergency medicine. Establish specialized residency/certification programs for general surgeons and nurse midwives.
Medical/Nursing Schools	Place family medicine residency programs in obstetric deserts. Incorporate rural-specific training into nursing curriculums.
Professional Organizations	Tailor the ALSO course for rural providers. Develop a more prescriptive AIM bundle for rural hospitals to reduce protocol and communication gaps. Develop or modify existing AIM bundles to address protocol implementation in non-typical birthing situations.
Regional Relationships	N/A
Organizations and/or Government	Create federal grants to help offer obstetric training to rural providers. Establish state designations for ERs based on level of obstetric care that can be provided. Establish state requirements that warrant inspections regarding staff certifications and equipment availability. Leverage residency programs to help rural providers attend obstetric or NICU management training in more urban areas. States with large rural populations should establish statutes encouraging regionalization and mechanisms to support hospitals (e.g., funding, aid). Pass state statutes that require tertiary hospitals to establish relationships with surrounding communities for data collection purposes. Establish state- and/or regional-wide telehealth programs among hospitals based on successful initiatives (e.g., those implemented in Georgia, Arkansas, Missouri, New Mexico, and Texas). Establish state-wide simulation libraries available for use by all hospitals (rural and urban).
Professional Organizations	ACOG should add a Level 0 to its Levels of Maternity Care (Levels 1-4) and readiness funding should be provided to these facilities. Professional organizations, such as ACOG, should establish clear obstetric guidelines for regionalization, like the neonatal regionalization guidelines established by AAP.

Appendix C:

Rural Obstetric Readiness Recommendations from Federal Partners Meeting

Federal partners from the CDC, CMS, HRSA, and IHS provided the following recommendations to improve the obstetric readiness of rural providers. These recommendations include potential actions for federal, regional, state, and local agencies, as well as for health care providers.

Care Disparities

- Encourage hospitals or systems to collect and report out stratified data across populations.
- Unbundle prenatal reimbursement to help women access care according to their needs in different settings.
- Model successful pipeline programs that can complement other efforts, such as loan repayment programs, which have been demonstrated to increase rural workforce representation.
- Use standardized definitions related to racism and discrimination that review committees use.

Financial Challenges

- Expand these solutions to include Medicaid and extend the postpartum period to one year.[5]
- Obtain payment through service arrangements and/or interagency agreements with state Medicaid programs, through Title V and maternal and child health services block grants.
- Obtain community benefit dollars (funds that must be invested into the community) for non-profit hospitals as part of their tax status, particularly for non-reimbursable services.
- Share resources and staff in a network to improve financial sustainability.
- States should offer an additional mechanism for reimbursement of low-volume obstetric services (e.g., hospitals certified by the Arizona Perinatal Trust can bill for services at a different level).

Training, Equipment, and Workforce

- Develop an obstetric equivalent of Advanced Cardiovascular Life Support (ACLS) to standardize training and equipment and so newly formed teams will all do the same thing.
- Obtain training and specialized equipment (e.g., for simulation) from regional centers; this is possible with a state-backed approach (funded by Title V and Medicaid administrative funds).
- Receive reimbursement for EMS treatment in place or finding more appropriate levels of care.
- Use Medicare as an example for how to pay for certain services, limiting state scope of practice or licensing, etc.
- Train medical students beyond their specialties (e.g., family medicine fellowship training that includes OB/GYN services) through the HRSA Maternal Child and Health Bureau's new state maternal health innovation programs.
- Bring training and equipment to lower-level facilities via perinatal quality collaboratives (PQCs).
- Use PQCs to help implement the AIM bundles.

Regional Relationships

- Encourage connections between local healthcare systems and state public health entities, who often understand the broad state of maternal and child outcomes locally and/or within the state, as well as resources and challenges.
- In states or jurisdictions using Certificate of Need (CON) programs to establish or discontinue services, require facilities discontinuing obstetric services to outline where patients will go for routine and/or emergency obstetric care and what partnerships and arrangements have been made.
- Attend state Maternal Mortality Review Committees (MMRCs) to provide rural perspectives and foster relationships with other stakeholders.
- Seek/provide technical assistance for establishing formal relationships, establishing memoranda of understanding and data use agreements, and having those conversations with other providers.
- Attend MMRC and PQC meetings via Zoom.
- Use CDC LOCATe to help strengthen relationships and establish a capability baseline for all facilities.

Other Solutions

- Incentivize providers by offering solutions to implement that fit into their daily workflows.
- Develop a standard package of training (a condensed ACLS equivalent) for small ERs with one doctor and a few nurses; all providers and nurses should receive the same curriculum.
- Leverage existing care coordination and care management infrastructure.

Appendix D:

Acronyms

Term	Definition
AI/AN	American Indian/Alaska Native
AIM	Alliance for Innovation on Maternal Health
COVID-19	Coronavirus Disease 2019
CMS	Centers for Medicare & Medicaid Services
HHS	U.S. Department of Health and Human Services
OMH	Office of Minority Health
PHE	Public Health Emergency
RFI	Request for Information

Endnotes

1 Centers for Disease Control and Prevention (CDC). Infographic: Racial/Ethnic Disparities in Pregnancy-Related Deaths – United States, 2007-2016. Division of Reproductive Health. Infographic: Racial/Ethnic Disparities in Pregnancy-Related Deaths — United States, 2007–2016 | CDC

2 Admon, L. K., et al. Racial and Ethnic Disparities in the Incidence of Severe Maternal Morbidity in the United States, 2012-2015. Obstet Gynecol. 2018 Nov;132(5):1158-1166.

3 Rural Health Information Hub. Need for Maternal Health Programs in Rural Areas. Rural Maternal Health Toolkit, 2021. Need for Maternal Health Programs in Rural Areas - RHIhub Toolkit (ruralhealthinfo.org)

4 Rural obstetric readiness was defined as being adequately equipped to handle obstetric emergencies during pregnancy, labor, and delivery; provide immediate postpartum and neonatal care; and care for the postpartum woman up to one year after delivery—even if a facility does not support a full range of obstetric services.

5 The American Rescue Plan Act of 2021, enacted on March 11, 2021, included provisions to support pregnant and postpartum individuals through Medicaid by providing a state option to extend postpartum coverage eligibility for 12 months and provide full benefits under the Medicaid state plan (P.L. No. 117-2 § 9812). Louisiana was the first state to implement the new state plan opportunity (effective April 1, 2022) and CMS is working with an additional nine states to extend postpartum coverage.