Welcome

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Director of External Partnerships & Community Engagement
UnityPoint Health
Welcome

Kelly Garcia

Director of Iowa Health and Human Services (IHHS)
The Landscape of Iowa Birthing Centers & Maternal Healthcare in Iowa: Current and Future

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The Landscape of Iowa Birthing Centers & Maternal Healthcare in Iowa: Current and Future

Stephen Hunter, MD, PhD

Maternal Child Health Symposium
Des Moines, Iowa
October 30, 2023
Support acknowledgement:
HRSA State Maternal Health Innovation Program

This presentation was supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS). The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement, by HRSA, HHS or the U.S. Government.
Maternity Healthcare Challenges in Iowa
# Iowa OB unit closures

<table>
<thead>
<tr>
<th>Year</th>
<th>Facility name</th>
<th>City</th>
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<tbody>
<tr>
<td>2000</td>
<td>Eldora Regional Medical Center - Hardin County</td>
<td>Eldora</td>
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<td>2000</td>
<td>Grape Community Hospital - Fremont County</td>
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<td>Keokuk Area Hospital-Keokuk</td>
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<td>Washington County Hospital and Clinics</td>
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<td>2018</td>
<td>Van Diest Medical Center (Formerly Hamilton Hospital)</td>
<td>Webster City</td>
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<tr>
<td>2019</td>
<td>UnityPoint Health - Marshalltown</td>
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<td>Henry County Health Center</td>
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<td>2020</td>
<td>Unity Point Health-Trinity Muscatine</td>
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<td>Unity Point Health-Iowa Lutheran Closing July 31</td>
<td>Des Moines</td>
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<td>2020</td>
<td>MercyOne Siouxland Regional Medical Center Closing Sept. 1</td>
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<tr>
<td>2020</td>
<td>Red Oak Closing</td>
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<tr>
<td>2021</td>
<td>Hegg Memorial Closing Jan 1</td>
<td>Rock Valley</td>
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</tbody>
</table>
Iowa OB unit closures by county

Iowa OB Units by County 1999

Iowa OB Units by County 2023

OB Unit   No OB Unit
Iowa Hospital CEO survey:
Do you have concerns regarding the continued viability of your Labor & Delivery unit?

Yes, 34
No, 21
Reported associations between loss of hospital-based obstetric services and birth outcomes in rural counties

• Increased neonatal mortality rates
• Increased premature birth rates
• Decreased outpatient prenatal care use and later entry to prenatal care
• Increased out-of-hospital births
• Increased labor inductions and cesarean birth rates
• Increased maternal morbidity and mortality

Poor outcomes are associated with increased healthcare and societal costs

CDC Data Brief, Sept 2017
Kozhimannil, KB., et al JAMA 2018; 319(12)
Lisonkova, S et al. CMAJ 2016
Radke S, et al, JRH 2023
HRSA Maternal Health Innovation award
Dr. Hunter’s Top 5 Iowa Maternal Healthcare Issues

1. Workforce
2. Education and quality of care
3. Data
4. Communication & coordination
5. Access to care
Issues addressed with the 2019 HRSA MHI award

1. Workforce (grown our pool of obstetrical providers)
   • Rural track OB/GYN residents
   • FM-OB fellowships
   • CNM training program

2. Education and quality of care
   • AIM program (implementation of maternal safety bundles)
   • OB Mobile Simulation Program

3. Data collection and harmonization
   • Standardized Delivery and OB Discharge Summary

4. Communication & coordination
   • Formation of the Iowa Maternal Quality Care Collaborative as umbrella organization for state

5. Access to care
   • Telemedicine
   • Maternal Transport Program
Workforce:
Where will Iowa’s OB providers come from?

- Iowa ranks 52nd out of 52 states and territories for OB/GYN physicians per capita
- ACOG predicts a 9,000 provider national OB/GYN shortage by 2030
- Nationally, the number of Family Medicine physicians providing OB care has dropped >50% in the last 15 years
Workforce:
Rural Track OB/GYN Residency

• Established community-based sites and developed curriculum for specific experiences that are required for a Rural Track residency through ACGME

• Secured approval for program and started first learner in July 2021

• Performed a robust marketing and outreach initiative

• Successfully integrated first rural resident

• Received approval for expansion to two residents for the rural track and began training two learners per year in July 2022
UI-Affiliated FM Residency Alumni Practicing Obstetrics in Iowa

In 2022 only 7%!!!
Workforce: FM-OB Fellowships

- Broadlawns Started a program in 2021. They recruited a fellow Jul21-Jun22- Dr. Stroeh and has successfully recruited for Jul 2022 & 2023.

- UP Des Moines is offering enhanced OB training to a UP Lutheran FM graduate who will be practicing in Grinnell- Dr. Flanagan.

- UIHC FM/CR program
  - Collaboration between the FM department and Eastern Iowa Health Center in Cedar Rapids (Mercy and UnityPoint hospitals)
Workforce:
Nurse-Midwifery Education Program (NMEP)

Pre-Accreditation from the Accreditation Commission for Midwifery Education (ACME) was received in August 2021

• First and only Nurse-Midwifery education program in Iowa
• Hospital-based certificate program through UIHC
  • Articulation agreement in place with Thomas Jefferson University to complete the Master’s piece (if learner does not already have a Master’s or PhD)
• Application period December 2022 – March 15, 2023
• First cohort begins September 2023

Visit https://uihc.org/nurse-midwifery-education-program for more information
Education & Quality of Care: The Iowa AIM Program

• The Alliance for Innovation on Maternal Health (AIM) Program is a national, data-driven quality improvement initiative led by ACOG in partnership with other professional organizations invested in maternal health.
• The goal of AIM is to eliminate preventable maternal morbidity and mortality by ensuring the current standard of care is provided in all birthing facilities in the US.
• AIM develops evidence-based safety bundles for clinical conditions representing the leading causes of maternal mortality.
• AIM supports bundle implementation by partnering with states to promote implementation in local hospitals.
• AIM bundle implementation is often driven at the state level by a maternal or perinatal quality collaborative.
Education & Quality of Care: The Iowa AIM Program

• Iowa joined AIM in October 2020 following formation of the Iowa Maternal Quality Care Collaborative (IMQCC) to oversee the program.

• Bundle selection is based on Iowa’s maternal mortality data and preference of Iowa facilities:
  • Safe Reduction of Primary Cesarean Birth (May 2021 – August 2022) – 44/56 hospitals
  • Obstetric Hemorrhage (October 2022 – July 2023) – 56/56 hospitals
  • Severe Hypertension and Preeclampsia (planned for September 2023 – July 2024) – 56/56 hospitals anticipated

• Bundles are implemented through Quality Improvement Collaboratives, using QI methodology from the Institute for Healthcare Improvement.
In 2022 Iowa achieved the Healthy People 2030 NTSV cesarean birth goal and reduced disparities by race and income. The Healthy People 2030 goal for NTSV cesarean is 23.6%.

Iowa occurred births, Iowa Vital Records. Data courtesy of Dr. Debra Kane, MCH Epidemiologist, Iowa HHS.
Near-miss events of SMM from hemorrhage have declined significantly during the Iowa AIM OB Hemorrhage collaborative. We defined SMM from hemorrhage as transfusion of 4 or more units of blood, hysterectomy, or ICU admission due to hemorrhage. Presented as cases per 10,000 births as reported by AIM facilities.
Began in-person travel in the summer of 2022 to both emergency departments and birthing hospitals
Visiting 2-3 facilities per month
Pre- and post-surveys are conducted to get feedback from attendees to identify any existing gaps in training and to ensure learning objectives are met
Data:

Data Support Objectives

- Develop an Iowa delivery summary that is a uniform template to be used in the medical record
  - Support from other facilities has led to the pursuit of developing a uniform discharge summary as well
- Increase accessibility to data for obstetrical quality improvement and surveillance projects
- Knowledge resource for other committee-related projects
Communication & Coordination:
The Iowa Maternal Quality Care Collaborative (IMQCC)

Outcomes
• Reduce maternal morbidity and mortality
• Identify and close disparity gaps
• Improve Patient/Family-Centered care

Systems
• Build a sustainable infrastructure for statewide quality improvement.
• Enhance capacity of birthing hospitals to perform effective QI and implement best-practices.
• Facilitate communication and collaboration between Iowa’s maternal health stakeholders.
Access:

**Telehealth**

- Expand MFM telemedicine activities for additional sites
  - Implement a new telemedicine platform software to support multiple concurrent sites
  - Add MFM/High Risk OB video visits and telemedicine consults
  - Add OBGYN ultrasound services
- Increase access to maternal mental services via telemedicine
- Increase access to postpartum Lactation services via telemedicine
Pregnancy Associated Deaths for Iowa Residents

Pregnancy associated death: The death of a woman while pregnant or within one year of the end of pregnancy, irrespective of cause. Sourced from: MMRIA Facilitation Guide and Review to Action
Thank You.
Setting the Stage – Research on Birthing Center Closures and Next Steps

Dr. Heather Rouse

PH.D.– ASSOCIATE PROFESSOR OF HUMAN DEVELOPMENT AND FAMILY STUDIES AND DIRECTOR OF L2D2– IOWA’S INTEGRATED DATA SYSTEM FOR DECISION-MAKING
Prenatal Care, Birth Outcomes, and Hospital Closures

Bridging the Gap: Improving Maternal and Rural Health Symposium
October 2023

i2d2 Iowa’s Integrated Data System for Decision-Making
Our system of early childhood policies and programs across the state will be informed by rigorous analysis of timely, comprehensive, and integrated data from health, human services, and education systems. Implications of policy and program analysis will be considered in collaboration to direct services and resource allocation.
I2D2 Commits to Priorities for the Long-Term.

We work with stakeholders to assess effectiveness and identify shortcomings in reaching Iowa's goals through a process that uses Data to inspire Dialogue that informs Decision-making.

1. Data
   I2D2 integrates data already collected by agencies in a safe, secure, scientifically rigorous system designed for policy analysis.

2. Dialogue
   I2D2 integrates people as stakeholder stewards of data to gather collective insight and translate findings into actionable intelligence.

3. Decision-Making
   I2D2 integrates data insights with executive leader and program manager decision-making to advance a statewide culture of evidence-based services to improve outcomes.
Meet the Team

Heather Rouse
Director

Todd Abraham
Assistant Director of Data and Analytics

Gio Chighladze
Data Scientist

Taylor Watson
Coordination and Communications

Cora Herbkersman
Data Analyst

12d2 Iowa’s Integrated Data System for Decision-Making
Purpose of the Study

2020

- State Home Visiting team looking for ways to connect prenatally with families
- Birthing unit closures *could* necessitate additional help for families to connect with services
- This analysis sought to identify potential subgroups who could be targeted for preventative home visiting services
Phase I Data Sources

Administrative Data
- County level and individual-level analyses
- 1999–2017 birth records
- Hospital closure lists
- Home visiting program enrollment

Interviews
- 8 counties identified by IDPH and I2D2
- 9 interviews with 17 family support individuals
- Questions about:
  - Pre closure
  - Immediately post closure
  - Impacts in the years following the closure
  - Impact of COVID-19
  - County response and recommendations
On average, counties with a unit closure differed from counties that have a birthing unit open:

- Higher rates of inadequate and severely inadequate prenatal care
- Later month of initiation of prenatal care


Note: aggregate findings based on 1999-2017 birth records
Phase I: Individual-level Analyses

1) How do risk factors relate to maternal outcomes (prenatal care and labor induction) and infant outcomes (gestational age and birth weight)?

2) Does birth unit closure affect maternal and child outcomes?

3) Are there potential indirect influences (i.e., buffer or amplification effects) for subgroups

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition</th>
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<tr>
<td>Adequate Prenatal Care</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; visit in 1&lt;sup&gt;st&lt;/sup&gt; trimester and at least 4 visits overall</td>
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<tr>
<td>Preterm birth</td>
<td>&lt; 36 weeks</td>
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<tr>
<td>Low birthweight</td>
<td>&lt; 2,500 grams</td>
</tr>
<tr>
<td>Low maternal education</td>
<td>&lt; 12 years (and at least 18 years old)</td>
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<tr>
<td>Teen mother</td>
<td>&lt; 20 years at time of birth</td>
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</table>
Phase I: Individual-level Outcomes

Sub-group analysis

- Literature supported sub-groups
  - WIC/Medicaid participants
  - Low maternal education (Age 20+)
  - Single and 1st time mothers

- Goal: Identify populations which may most benefit from home visitation and resource connections
Phase I: Individual-level Outcomes

Sub-group Analysis

• Findings were largely consistent with previous published work by other experts in this area

• Direct effects not generally significant

• Next level of analysis analyzed amplifying and buffering effects
Phase I: Individual-level Outcomes

Summary of Patterns

Hospital closures

Inadequate Prenatal Care

Negative impacts on birth weight and gestational age

Analysis identified trends in the following outcomes:

• Inadequate prenatal care
• Birth weight
• Gestational age
Phase I: Individual-level Outcomes

Prenatal Care

Buffering and Amplification Effects

In the year after a facility closure:

👍 • Single mothers
  - attended more prenatal visits

👍 • WIC and Medicaid recipients
  - started prenatal care earlier
  - have more visits overall
  - less likely to receive inadequate prenatal care
In the year after a facility closure:

- Single mothers
  - attended more prenatal visits
- WIC and Medicaid recipients
  - started prenatal care earlier
  - have more visits overall
  - less likely to receive inadequate prenatal care
- Mothers with lower education levels
  - attended fewer prenatal visits
  - started prenatal care later
Phase I: WIC/Medicaid Buffering Effect

Every year, roughly 3,600 children in home visiting are born to mothers without a High School education.

FINDINGS SUGGEST → WIC/Medicaid is buffering negative prenatal care effects for moms with lower education.
### Qualitative Results

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<td>Induction observations</td>
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<td>Hospital and community</td>
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<td>Client and medical provider</td>
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9 interviews with 17 family support individuals
"[One client] refused to leave [the hospital] and slept in her car because she was afraid... because the first child they went home, and she almost gave birth in her car... because the 45 minute drive. So, with this child... she's like, I'm not leaving, so, she spent hours in the parking lot, and she ended up having it that night.

"You go from your OB experience to give birth and then your postnatal and you have so many different providers throughout that process... For many of our families, they've been through a lot, it's traumatic and so to build trust takes a lot for them. So, to go through all these different providers can be kind of scary and challenging and a barrier in and of itself."

"A lot of people just... went without prenatal care since they had to travel... So, they actually just stopped receiving prenatal period because they didn't have any means to get any other places. Then they might have to go to an ER somewhere when they were ready to deliver."

“That power gets taken away from them, 'oh you’re on Medicaid. You're going to this specific Community Center or whatever for your care'... Like they lose that power of choice, which can be frustrating, but also... If you don't feel like you get to truly choose and control... why would they continue to follow through with that care?"
Transition to Phase II: Are there any differences after 2018?

- Update analysis with 2018-2020 births (~105,000)
- 7 new closures 2019-2021
- Additional Control Variables
  - Pre-pregnancy BMI
  - BMI Change
  - Smoking
- Included All Births
  - Single Birth vs. Multiple Birth Control

### New Closures in Phase 2 Analysis

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<tr>
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<th>2019</th>
<th>2020</th>
<th>2021</th>
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<td>Marshall</td>
<td>Chickasaw</td>
<td>Monona</td>
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<td>Van Buren</td>
<td>Henry</td>
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<tr>
<td></td>
<td>Montgomery</td>
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<td>Muscatine</td>
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This Photo by Unknown Author is licensed under CC BY-NC-ND
2007–17 vs 2018–20

- **Medicaid** receipt and **Inadequate prenatal care** have remained consistent

- **WIC** receipt has declined (36% to 29%)

- **Induction** increased (29% to 35%)

- **Tobacco Use** has declined (21% to 15%)

- **Teenage motherhood** has declined (6.5% to 4%)
Summary of Phase II Findings

- Closure impacts preterm births (but not birthweight)
  - Moms with low education doing BETTER than pre-2018
    + starting care earlier if there’s a closure
    + attending more total visits if there’s a closure
    + odds of inadequate care are NO DIFFERENT

- Loss of buffer effect for Medicaid & WIC participation
Higher Rates of Preterm Births

Early (Preterm) Birth by Closure Status

<table>
<thead>
<tr>
<th>Percentage of Preterm Births</th>
<th>1 Year Before</th>
<th>1 Year After</th>
<th>All Other Births</th>
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<tr>
<td>Phase 1</td>
<td>9.20</td>
<td>9.18</td>
<td>8.84</td>
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<tr>
<td>Phase 2</td>
<td>9.95</td>
<td>9.56</td>
<td>9.15</td>
</tr>
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Legend:
- Red: 1 Year Before
- Pink: 1 Year After
- Gray: All Other Births
Inadequate Prenatal Care by Maternal Education

**POST 2018:**
This is GOOD for women with lower education – they are doing BETTER than they were before 2018, and essentially showing NO EFFECTS of closures.

Note: Left bar of the same color is always Phase I, right bar is Phase II.
Total Visits by WIC

Note: Left bar of the same color is always Phase I, right bar is Phase II
Total Visits by WIC

Average Number of Prenatal Care Visits

<table>
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<tr>
<th>No Closure</th>
<th>1 Year Before Closure</th>
<th>1 Year After Closure</th>
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</thead>
<tbody>
<tr>
<td>WIC</td>
<td>No WIC</td>
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<tr>
<td>11.57</td>
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<td>11.76</td>
<td>11.61</td>
<td>11.63</td>
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<tr>
<td>11.00</td>
<td>11.34</td>
<td>11.01</td>
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<tr>
<td>11.49</td>
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<td>11.23</td>
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Note: Left bar of the same color is always Phase I, right bar is Phase II
Summary of Phase II vs Phase I

What happens when the only birth unit closes in a county?

- Main effects on preterm birth
- Moms with Low Education doing BETTER in recent years with closures
- Potential buffering effects for women participating in WIC and Medicaid, particularly for moms with low education
- Amplification effects of closures for mothers with less than a high school degree, older mothers, mothers with previous children
Phase III: What is the difference between counties with positive vs. less positive effects?

**Birthing Unit Closures**
2018-2022

- Collect program-level information across counties (state interventions, pilot work, county-health emphases, etc.)

- Matched pair counties – collect qualitative information from families and providers (focus groups)
Finding “matched pairs”

<table>
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<tr>
<th>Outcome Clusters</th>
<th>Risk Clusters</th>
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<td>Osceola</td>
<td>Henry</td>
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<td></td>
<td>Hamilton</td>
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<td></td>
<td>Van Buren</td>
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</table>
Finding “matched pairs”

Counties in the same row share the same patterns of outcomes.
Counties in the same column share the same patterns of child and family risk characteristics.
Setting the Stage – Research on Birthing Center Closures and Next Steps - Questions

Dr. Heather Rouse

PH.D.– ASSOCIATE PROFESSOR OF HUMAN DEVELOPMENT AND FAMILY STUDIES AND DIRECTOR OF L2D2– IOWA’S INTEGRATED DATA SYSTEM FOR DECISION-MAKING
Bridging the Gap: Innovative Clinical Approaches

Lastascia Coleman
CNM, ARNP, MSN, FACNM
UNIVERSITY OF IOWA HOSPITALS & CLINICS

Dr. Joel Wells
WAYNE COUNTY HOSPITAL & CLINIC SYSTEM
Midwifery Education and Clinical Practice in Iowa

Lastascia Coleman CNM, MSN, ARNP, FACNM
Clinical Associate Professor, Department of OBGYN, Carver College of Medicine
Program Director, University of Iowa Hospitals and Clinics Nurse-Midwifery Education Program

October 30, 2023
What is a Certified Nurse-Midwife?
What is a Certified Nurse-Midwife (CNM)?

**Education**
- Bachelor’s degree in nursing or another field
- Master’s or Doctoral degree
- Must have an RN

**State licensure**
- Licensed as independent providers in the state of Iowa (ARNP)
- Full prescriptive authority

**National Certification - American Midwifery certification Board**
- Taken prior licensure
- Recertification required every 5 years
## Scope of Practice for CNMs

<table>
<thead>
<tr>
<th>Preconception</th>
<th>Prenatal care</th>
<th>Birth</th>
<th>Postpartum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well-person/primary care</td>
<td>Gynecologic problems</td>
<td>Contraception</td>
<td>Newborn</td>
</tr>
</tbody>
</table>
## Standards for the Practice of Midwifery

<table>
<thead>
<tr>
<th>STANDARD I</th>
<th>STANDARD IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midwifery Care Is Provided by Qualified Practitioners.</td>
<td>Midwifery Care Occurs Within the Context of the Family, Community, History, and a System of Health Care.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STANDARD II</th>
<th>STANDARD V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midwifery Care Is Composed of Knowledge, Skills, and Clinical Judgments That Foster the Delivery of Evidence-Informed, Client-Centered Care.</td>
<td>Midwifery Care Is Documented in a Format That Is Accessible, Confidential, and Complete.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STANDARD III</th>
<th>STANDARD VI</th>
</tr>
</thead>
</table>
### Other Midwife Credentials

<table>
<thead>
<tr>
<th>Certified Midwife</th>
<th>Certified Professional Midwife</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Same graduate education, board examination, and scope of practice as CNMs</td>
<td>• Apprenticeship education</td>
</tr>
<tr>
<td>• Have an undergraduate background other than nursing</td>
<td>• A variety of educational requirements depending on the certifying body person chooses</td>
</tr>
<tr>
<td>• Credential not recognized in Iowa</td>
<td>• Passed legislation to recognize CPMs in Iowa</td>
</tr>
</tbody>
</table>
University of Iowa Hospitals and Clinics Nurse-Midwifery Education Program and Clinical Practice
Program Development Timeline

- **2019**: HRSA MHI Grant
- **2020**: Feasibility Study
- **2021**: Preparing for Preaccreditation
- **2022**: Preaccreditation Status Granted
- **2023**: First Class Started
Program Accreditation

• The University of Iowa Hospitals & Clinics Nurse-Midwifery Education Program is pre-accredited by the Accreditation Commission for Midwifery Education.
UIHC NMEP Mission

“The mission of the UIHC NMEP is to provide midwifery education to a diverse group of nurses focused on health disparities and rural populations that addresses the healthcare needs of people in Iowa.”
Program Strengths

1. Strong Clinical Focus
2. 3 Faculty to 1 Student Ratio
3. Interdisciplinary Experience
4. Focus on Rural Health and Health Disparities
Program Quick Facts

- 5 semesters
- Integrated curriculum
- Early clinical experiences
- 4 students per cohort
- Simulation lab experiences
Nurse-Midwifery Clinical Practice

- Been in existence for over 30 years
- Grown from 2 CNMs to 13
- CNMs now attend about 25% of births at UIHC
- Anticipating around 850 births in 2024
- Implemented a spoke and hub model for rural outreach
- Rural sites in Muscatine and Washington
- Urban outreach in Cedar Rapids
- Became its own division in the department in FY22
- Only division offering evening appointments
- VBAC for people with 1 or 2 cesareans
- Seamless collaboration with the physician team
- Robust GYN practice
- CNM faculty involved in department and institutional committees
- Academically productive
- Extensive experience with the education of learners across disciplines
Why does midwifery-led care matter?
Midwifery care is only a piece of the puzzle needed to address the issues we face with improving maternal and reproductive healthcare, but it’s a big piece we are missing.

“Midwives can meet about 90% of the need for essential sexual, reproductive, maternal, newborn and adolescent health interventions.” - United Nations Population Fund

https://www.unfpa.org/sowmy
US Maternal Mortality is Extremely High Among High-Income OECD Nations

Density of Midwives by State, 2020

- United States: 68
- New Zealand: 66
- Korea: 53
- Canada: 43

Data Source: Data: OI
https://stats.oecd.org/

U.S. Midwife Workforce Far Behind Globally

Midwives per 1,000 Births

- < 1
- 1
- 2
- 3
- 4
- 5
- 6

Midwives per 10,000 Women of Childbearing Age

https://www.statista.com/chart/23559/midwives-per-capita/
https://healthfininst.medium.com/maternal-health-in-the-us-where-we-stand-compared-to-other-nations-f9f75cb806fb
https://www.midwife.org/workforce-study-data-release
Figure 3. U.S. Births Attended by Nurse-Midwives and State Variation of Scope of Practice for CNM Care, 2018

U.S. Births Attended by Certified Nurse-Midwives
- > 20%
- 15% - 20%
- 10% - 15%
- 5% - 10%
- 0% - 5%

Scope of Practice for Certified Nurse-Midwives
- Collaborative Agreement Required
- Supervision Required
- Independent Practice Allowed

Systems-Level Approaches to Improving Access to Midwifery Care

- State and federal policy
- More educational opportunities
- Improve practice climate
- Payment reform
Aspen Health Strategy Group

- Co-chaired by Kathleen Sebelius and Tommy Thompson, former US Secretaries for HHS
Better Outcomes are Within Reach
Case for Perinatal Quality Collaboratives in California

The Medical Model of Birth Does Not Meet Women’s Needs
• Pregnancy is normal
• Overdiagnosis/ overtreatment
• Internationally, midwives attend most births with good outcomes

Racism is at the Root of Maternal Mortality
• Burden of poor outcomes fall on Black and Native birthing people
• Healthcare industry built on racist policy

Payment and Regulatory Structure Favor the Medical Model
• Payment structures place emphasis on medical model
• Payments are then higher for intervention

High Rates of Mortality Reflect Underinvestment in Women’s Health
• Health of women during the lifespan is not a focus
• Underinsured, gaps in coverage, fragmentation of services common

Five Themes
### Five Big Ideas

<table>
<thead>
<tr>
<th>Make a National Commitment to Improvement</th>
<th>Build and Support Community Care Models</th>
<th>Redesign Insurance Around Women’s Needs</th>
<th>Tackle Racism that Undermines Women-Centered Maternity Care</th>
<th>Invest in Research, Data and Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Public and private cooperation</td>
<td>• Midwifery, doula and community worker care</td>
<td>• Medicaid extension to 12 months PP</td>
<td>• Quality metrics should be disaggregated by race</td>
<td>• Standardize reporting structure</td>
</tr>
<tr>
<td>• We need ambitious goals</td>
<td>• Address workforce shortages and lack of people of color in these roles</td>
<td>• All states should accept ACA Medicaid expansion</td>
<td>• Workforce</td>
<td>• Data collection by hospitals, group practices, states, etc</td>
</tr>
<tr>
<td>• Challenge grants from CMMI</td>
<td></td>
<td></td>
<td>• Anti-racism and bias training</td>
<td>• Funding</td>
</tr>
</tbody>
</table>

---

**University of Iowa Health Care**
# Key Policy Recommendations for Midwives

<table>
<thead>
<tr>
<th>Midwifery Student Support</th>
<th>Midwifery Education Program</th>
<th>Midwifery Practice</th>
<th>Insurance Coverage</th>
<th>Midwifery at the Table</th>
</tr>
</thead>
</table>
| • Consider midwifery students for similar funding and loan repayment programs as other professions that are experiencing shortages | • Midwifery programs are expensive to operate  
• Consider public-private partnership to support program operation and administration | • Eliminate institutional barriers to privileging and admitting patients  
• Eliminate certificate of need for free-standing birth centers | • Increase Medicaid reimbursement rate for midwives to 100%  
• Extend Medicaid coverage to 12 months postpartum | • Ensure midwives are involved in policy decisions for reproductive healthcare  
• Invite midwives to participate in quality initiatives |

OBSTETRIC CRISIS IN IOWA?

DEMOGRAPHIC PROBLEM?

WORKFORCE PROBLEM?

DISTRIBUTION PROBLEM?

QUALITY OUTCOMES PROBLEM?
6 hospitals
Reported 0
<50 deliveries
In 2022
<table>
<thead>
<tr>
<th>County</th>
<th>County</th>
<th>County</th>
<th>County</th>
<th>County</th>
<th>County</th>
<th>County</th>
<th>County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lyon</td>
<td>Ossacaia</td>
<td>Dickinson</td>
<td>Emmet</td>
<td>Kossuth</td>
<td>Winnebago</td>
<td>Worth</td>
<td>Mitchell</td>
</tr>
<tr>
<td>Sioux</td>
<td>Obrian</td>
<td>Clay</td>
<td>Palo Alto</td>
<td>Hancock</td>
<td>Cerro Gordo</td>
<td>Floyd</td>
<td>Chickasaw</td>
</tr>
<tr>
<td>Plymouth</td>
<td>Cherokee</td>
<td>Buena Vista</td>
<td>Pocahontas</td>
<td>Humboldt</td>
<td>Wright</td>
<td>Franklin</td>
<td>Butler</td>
</tr>
<tr>
<td>Woodbury</td>
<td>Ida</td>
<td>Sac</td>
<td>Calhoun</td>
<td>Webster</td>
<td>Hamilton</td>
<td>Hardin</td>
<td>Grundy</td>
</tr>
<tr>
<td>Monona</td>
<td>Crawford</td>
<td>Carroll</td>
<td>Greene</td>
<td>Boone</td>
<td>Story</td>
<td>Marshall</td>
<td>Tama</td>
</tr>
<tr>
<td>Harrison</td>
<td>Shelby</td>
<td>Audubon</td>
<td>Guthrie</td>
<td>Dallas</td>
<td>Polk</td>
<td>Jasper</td>
<td>Poweshiek</td>
</tr>
<tr>
<td>Pottawattamie</td>
<td>Cass</td>
<td>Adair</td>
<td>Madison</td>
<td>Warren</td>
<td>Marion</td>
<td>Mahaska</td>
<td>Keokuk</td>
</tr>
<tr>
<td>Mills</td>
<td>Montgomery</td>
<td>Adams</td>
<td>Union</td>
<td>Clarke</td>
<td>Lucas</td>
<td>Monroe</td>
<td>Wapello</td>
</tr>
<tr>
<td>Fremont</td>
<td>Page</td>
<td>Taylor</td>
<td>Ringgold</td>
<td>Decatur</td>
<td>Wayne</td>
<td>Appanoose</td>
<td>Davis</td>
</tr>
</tbody>
</table>

- **99 Counties**
- **20 Urban**
- **79 Rural**
- **1 Metropolitan**
18 of 20 Urban Counties with Birthing Centers

26 of 82 CAH Hospitals with Birthing Centers

3 of 5 Rural Hospitals With Birthing Centers
Distribution of Birthing Centers In Iowa as of 2023
<table>
<thead>
<tr>
<th>Category</th>
<th>2020</th>
<th>2022</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Deliveries in Iowa</td>
<td>36,584</td>
<td>36,253</td>
<td>1.9%</td>
</tr>
<tr>
<td>Total Deliveries in Urban</td>
<td>31,063</td>
<td>30,938</td>
<td>0.1%</td>
</tr>
<tr>
<td>Hospitals</td>
<td>4,826</td>
<td>4,658</td>
<td>12.8%</td>
</tr>
<tr>
<td>Total Deliveries in Rural</td>
<td>695</td>
<td>657</td>
<td>1.9%</td>
</tr>
<tr>
<td>Hospitals</td>
<td>657</td>
<td>657</td>
<td>0.0%</td>
</tr>
</tbody>
</table>
NECESSARY COMPONENTS OF A MODERN BIRTHING UNIT

• Obstetric Provider
  • OB/Gyn, FP/OB, Certified Nurse Midwife
• Obstetric Nurses
• Anesthesia
• Surgical Department and C-section provider
• 24/7 availability
NECESSARY COMPONENTS OF A MODERN BIRTHING UNIT

- Obstetric Provider - How many and team make-up?
  - OB/Gyn, FP/OB, Certified Nurse Midwife
- Obstetric Nurses - How many?
- Anesthesia - How many and make-up?
- Surgical Department and C-section provider - Must be 24/7
- 24/7 availability MEANS CALL!
QUESTIONS TO ASK ABOUT THE FUTURE OB SYSTEM IN IOWA

- How many and what type of providers?
- Where will they be trained?
- How are they best distributed?
- What outcomes do we desire or expect?
- Do we want a state-wide plan?
- What about prenatal care close to home?
QUESTIONS TO ASK ABOUT THE FUTURE OB SYSTEM IN IOWA

What questions can you come up with about a future OB delivery system?
Bridging the Gap: Innovative Clinical Approaches - Questions

Lastascia Coleman
CNM, ARNP, MSN, FACNM
UNIVERSITY OF IOWA HOSPITALS & CLINICS

Dr. Joel Wells
WAYNE COUNTY HOSPITAL & CLINIC SYSTEM
BREAK
10:30-10:45
Welcome Back!

Laura Jackson
Executive Vice President
Health Equity, Access and Improvement
Wellmark
Access to maternity care and evidence-based supports for maternal and infant health in rural areas: the Role of Geography and Equity

Julia D. Interrante

PH.D., MPH –
UNIVERSITY OF MINNESOTA RURAL HEALTH RESEARCH CENTER
Access to Rural Maternity Care: The Role of Geography and Equity

Julia D. Interrante, PhD, MPH

Bridging the Gap: Improving Maternal and Rural Health Symposium 2023
Disclosure Statement

• Relevant to the content of this educational activity, I do not have any financial conflicts with ineligible companies to disclose.
Land Acknowledgment

- We gratefully acknowledge the land in Minnesota as the traditional, ancestral Indigenous territories of Wahpekute, Annishinaabe, and Očeti Šakówiŋ (Dakota) nations.

- We encourage everyone to be respectful of the distinctive and permanent relationship that exists between Indigenous people and their traditional territories.
This research was supported by the Federal Office of Rural Health Policy (FORHP), Health Resources and Services Administration (HRSA), U.S. Department of Health and Human Services (HHS) under PHS Grant #5U1CRH03717. The information, conclusions and opinions expressed are those of the authors and no endorsement by FORHP, HRSA, or HHS is intended or should be inferred.
Agenda

1. Describe the status and consequences of declining access to hospital-based obstetric care across rural communities in the United States.

2. Examine the availability of evidence-based supports for maternal health care in rural communities with and without hospital-based obstetric care.

3. Delineate racial and ethnic differences in rural access to maternity care and evidence-based supports for maternal health.
Changes to maternity care in rural U.S. communities
More than half of rural counties have no place to give birth, 2004-2014

Access to obstetrics services in rural counties still declining, with 9 percent losing services, 2004-2014. Health Affairs, 36(9), 1663-1671.

What has happened since 2014?

Percent of micropolitan and noncore counties with in-county hospital obstetric care
2004-2018

- Micropolitan
- Noncore
- Linear (Micropolitan)
- Linear (Noncore)
Obstetric Changes in Rural Communities, 2014-2018

<table>
<thead>
<tr>
<th>OB Gain</th>
<th>OB Loss</th>
<th>Relative Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Micropolitan, adjacent</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Micropolitan, nonadjacent</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Noncore, adjacent</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Noncore, nonadjacent</td>
</tr>
</tbody>
</table>

-6 -4 -2 0 2 4 6
Rural Hospitals and Rural Births, 2018

Figure 2. Geographic Distribution of US Obstetric Hospitals by Volume Category in 2018

Figure 3. Urban Adjacency of Isolated Obstetric Hospitals From 2010 to 2018

UNIVERSITY OF MINNESOTA RURAL HEALTH RESEARCH CENTER
What happens when rural communities lose maternity services?
Changes in Birth Location and Outcomes

- With loss of obstetric services:
  - Rural non-urban-adjacent had higher rates of:
    - Preterm birth
    - Out-of-hospital birth
    - Births in hospitals without obstetric units
  - Rural urban-adjacent, increase in:
    - Births in hospitals without obstetric units
  - Rural residents have to travel even greater distances to give birth
Percent of Surveyed Rural Communities with Evidence-Based Supports by Status of Obstetric Units in 2021 (n=133)

- Nutrition program (WIC)*
- Childbirth education classes
- Breastfeeding groups
- Postpartum groups
- Doula care
- Group prenatal care
- Midwifery care with CNM*
- Lactation support from IBCLC*
- Perinatal mental health
- Postpartum nurse home visiting
- Prenatal nurse home visiting
- Individual (traditional) prenatal care

Key:
- Gold: Closed Hospital-based Obstetric Unit
- Maroon: Current Hospital-based Obstetric Unit
Emergency Obstetrics in Hospitals Without Maternity Services

- Most hospitals (65%) located 30+ miles away from a hospital with obstetric services.

- Some reported having emergency room births in the past year (28%), a close call or an unanticipated adverse birth outcome (32%), and/or a delay in urgent transport for a pregnant patient (22%).

- Majority (80%) reported the need for additional training or resources to handle emergency obstetric situations.
Racial and ethnic differences in access and support for maternity care
The states with the darker color have fewer rural hospitals providing obstetric care (per capita), with highly rural and highly racially diverse states highlighted with hashmarks.
Key Findings on Rural Maternity Care

Access

• More than half of rural counties have no hospital-based obstetrics services

• Most vulnerable communities
  – Black residents
  – Low-income
  – Shortage areas
  – Remote
  – Less generous Medicaid programs
# Availability of Supports among Rural Hospitals with Obstetric Services by County Racial Majority

<table>
<thead>
<tr>
<th>Available locally %</th>
<th>Majority-BIPOC (n=28)</th>
<th>Majority-white (n=62)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Local access to care</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual (traditional model) prenatal care</td>
<td>82.1</td>
<td>100.0</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Nurse home visiting for prenatal</td>
<td>21.4</td>
<td>46.8</td>
<td>0.02</td>
</tr>
<tr>
<td>Nurse home visiting for postpartum</td>
<td>35.8</td>
<td>53.2</td>
<td>0.12</td>
</tr>
<tr>
<td>Perinatal mental health services</td>
<td>50.0</td>
<td>72.6</td>
<td>0.04</td>
</tr>
<tr>
<td>Lactation support from IBCLC</td>
<td>50.0</td>
<td>67.7</td>
<td>0.11</td>
</tr>
<tr>
<td><strong>Family-centered models of care</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Midwifery care with CNM</td>
<td>46.4</td>
<td>46.8</td>
<td>0.98</td>
</tr>
<tr>
<td>Group prenatal care</td>
<td>35.7</td>
<td>43.5</td>
<td>0.54</td>
</tr>
<tr>
<td>Doula care</td>
<td>32.1</td>
<td>58.1</td>
<td>0.02</td>
</tr>
<tr>
<td><strong>Peer and community supports for families</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Postpartum support groups</td>
<td>32.1</td>
<td>56.5</td>
<td>0.03</td>
</tr>
<tr>
<td>Breastfeeding support groups</td>
<td>71.4</td>
<td>83.9</td>
<td>0.17</td>
</tr>
<tr>
<td><strong>Health-focused programming</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Childbirth education classes</td>
<td>78.6</td>
<td>95.2</td>
<td>0.02</td>
</tr>
<tr>
<td>Nutrition program (WIC)</td>
<td>100.0</td>
<td>96.8</td>
<td>0.34</td>
</tr>
</tbody>
</table>
What is needed to keep rural maternity care?
What can be done to improve equity, access, and outcomes for rural birthing people?

- Rural Maternal and Obstetric Modernization of Services (MOMS) Act – includes focus on workforce, training
- Resources and training for emergency obstetrics: Rural Emergency Hospitals
- Medicaid policies that focus on low-volume payment adjustments – could include specific focus on birth
Safe Maternity Care Survey of Rural Hospitals

• 200 annual births needed for financial viability (and safety)
  – 42% of hospitals reported having fewer actual births than they reported needing for financial viability

• Hospital’s continue to provide obstetric care because of local community needs
  “Many of the people who live here are poor and do not have vehicles to go elsewhere. They would come up here to deliver [babies] even if we did not have an obstetrics department.”

Table 2. Minimum Criteria for Rural Obstetric Services Provision: Safety and Finances

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Responding, No.</th>
<th>Median (IQR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Births needed to provide obstetric care safely</td>
<td>89</td>
<td>200 (100-350)</td>
</tr>
<tr>
<td>Births needed to make obstetric services financially viable</td>
<td>49</td>
<td>200 (120-360)</td>
</tr>
<tr>
<td>Actual births in 2019</td>
<td>91</td>
<td>274 (120-446)</td>
</tr>
</tbody>
</table>

Respondents that reported fewer actual births than

<table>
<thead>
<tr>
<th>Births needed to provide obstetric care safely, No. (%)</th>
<th>87</th>
<th>26 (29.9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Births needed to make obstetric services financially viable, No. (%)</td>
<td>48</td>
<td>20 (41.7)</td>
</tr>
</tbody>
</table>

Kozhimannil KB, Interrante JD, Admon LK, Basile Ibrahim BL. Rural Hospital Administrators’ Beliefs About Safety, Financial Viability, and Community Need for Offering Obstetric Care. JAMA Health Forum. 2022:3(3)e220204.
Making Maternity Care Work and Support for Rural Birthing People

- Virtual site visits, 2020-2021
  - Baldwin, WI: Western Wisconsin Health
  - Lakin, KS: Kearny County Hospital
  - Russellville, AR: ANGELS at the University of Arkansas for Medical Sciences and the Millard-Henry Clinic
  - Bethel, AK: Yukon-Kuskokwim Delta Regional Medical Center
  - Alamosa, CO: San Luis Valley Health
  - Andrews, TX: Permian Regional Medical Center
Western Wisconsin Health: Recommendations

1. Recruit clinicians and staff based on mission, not money
2. Engage with the local birth community
3. Provide pregnant patients the birth experiences they deserve
San Luis Valley Health: Alamosa, CO

1. Prenatal care, screenings throughout pregnancy
2. Certified Nurse Midwives
3. Childbirth education classes
4. Postpartum peer support
5. Breastfeeding support
6. Perinatal mental health support
7. Others available in the community
Research Team Acknowledgements

• Katy B. Kozhimannil
• Carrie Henning-Smith
• Lindsay K. Admon
• Peiyin Hung
• Sara C. Handley
• Mariana K. S. Tuttle
• Bridget Basile Ibrahim
• Phoebe Chastain
• Alyssa Fritz
• Emily Sheffield
Gateway provides easy and timely access to research conducted by the Rural Health Research Centers

ruralhealthresearch.org

This free online resource connects you to:

- Research and Policy Centers
- Products & Journal Publications
- Fact Sheets
- Policy Briefs
- Research Projects
- Email Alerts
- Experts
- Dissemination Toolkit

rhrc.umn.edu
Thank you!

Website: https://rhrc.umn.edu/
Email: inter014@umn.edu
Twitter: @UMNRHRC
References

Rural Maternal Health


Rural Maternal Hospitals and Workforce


Declining Access to Rural Maternity Care


- Hung, P., Kozhimannil KB, Casey M, Moscovice IS. Why are obstetric units in rural hospitals closing their doors? Health Services Research, 2016; 51(4):1546-60.


Consequences of Losing Rural Maternity Care


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Maintaining Rural Maternity Care

• Kozhimannil KB, Interrante JD, Admon LK, Basile Ibrahim BL. Rural Hospital Administrators’ Beliefs About Safety, Financial Viability, and Community Need for Offering Obstetric Care. JAMA Health Forum. 2022;3(3):e220204.


Access to maternity care and evidence-based supports for maternal and infant health in rural areas: the Role of Geography and Equity - Questions

Julia D. Interrante

PH.D., MPH –
UNIVERSITY OF MINNESOTA RURAL HEALTH RESEARCH CENTER
LUNCH + EXHIBITORS
12:00 - 12:30
Maternal Morbidity and Mortality in Iowa – Root Causes and Key Opportunities

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STATE MEDICAID DIRECTOR, IHHS
Maternal Morbidity and Mortality in Iowa - Root Causes and Key Opportunities

October 30, 2023
Presenters

✓ Dr. Robert Kruse, MD, MPH, FAAFP, State Medical Director
✓ Director Elizabeth Matney, State Medicaid Director
✓ Panel Participants
  ✓ Monica Goedken, Violence Prevention Coordinator
  ✓ Lindsey Jones, MHA, Title X Family Planning Director
  ✓ Nicole Newman, RD, LD, CLC, State WIC Breastfeeding Coordinator
  ✓ Steph Trusty, RN, BSN, Maternal Mortality Review Committee Coordinator
✓ Moderator
  ✓ Juliann Van Liew, MPH, Wellness and Preventative Health Director
Maternal Morbidity and Mortality in Iowa Root Causes and Key Opportunities

Robert Kruse, MD, MPH, FAAFP
State Medical Director
October 30, 2023
Learning Objectives

Identify the some of the root causes of maternal morbidity and mortality in Iowa

Describe key opportunities to reduce Severe Maternal Morbidity (SMM) and Reduce preventable maternal deaths
Severe maternal morbidity using Iowa Hospital Discharge Data

Iowa hospital discharge data are collected by the Iowa Hospital Association on behalf of the Iowa Department of Health and Human Services in accordance with Iowa Code section 135.166.

The Department may use these data to conduct public health surveillance and evaluate public health surveillance programs.
The SMM rate has increased by nearly 25% from 2017-2019 to 2020-2022

Rate per 10,000 delivery hospitalizations

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Count of Events (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017-2019</td>
<td>537</td>
</tr>
<tr>
<td>2018-2020</td>
<td>547</td>
</tr>
<tr>
<td>2019-2021</td>
<td>612</td>
</tr>
<tr>
<td>2020-2022</td>
<td>643</td>
</tr>
</tbody>
</table>
The SMM rate among Black and Asian mothers was consistently higher than that of White mothers.

Rate per 10,000 delivery hospitalizations

Count of events per time period
2020-2022
- Asian/Pacific Islanders n=37
- Blacks n= 90
- Whites n= 457

2019-2021
- Asian/Pacific Islanders n=41
- Blacks n= 80
- Whites n= 436

2018-2020
- Asian/Pacific Islanders n=33
- Blacks n= 59
- Whites n= 406

2017-2019
- Asian/Pacific Islanders n=21
- Blacks n= 55
- Whites n=407
The SMM rate was consistently higher among mothers with publicly reimbursed deliveries compared to those with privately reimbursed deliveries.

Rate per 10,000 delivery hospitalizations

Count of events per time period

2017-2019
- Public insurance n=209
- Private insurance n=316

2018-2020
- Public insurance n=189
- Private insurance n=318

2019-2021
- Public insurance n=175
- Private insurance n=355

2020-2022
- Public insurance n=175
- Private insurance n=355
The SMM rate was consistently higher among mothers who resided in micropolitan counties compared to rural or metropolitan counties.

Rate per 10,000 delivery hospitalizations

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Rural Count</th>
<th>Micropolitan Count</th>
<th>Metropolitan Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017-2019</td>
<td>112</td>
<td>102</td>
<td>323</td>
</tr>
<tr>
<td>2018-2020</td>
<td>107</td>
<td>105</td>
<td>335</td>
</tr>
<tr>
<td>2019-2021</td>
<td>114</td>
<td>110</td>
<td>388</td>
</tr>
<tr>
<td>2020-2022</td>
<td>112</td>
<td>115</td>
<td>416</td>
</tr>
</tbody>
</table>

Count of events per time period

- 2020-2022:
  - Rural: 112
  - Micropolitan: 115
  - Metropolitan: 416

- 2019-2021:
  - Rural: 114
  - Micropolitan: 110
  - Metropolitan: 388

- 2018-2020:
  - Rural: 107
  - Micropolitan: 105
  - Metropolitan: 335

- 2017-2019:
  - Rural: 112
  - Micropolitan: 102
  - Metropolitan: 323
Maternal Mortality
U.S. Maternal Mortality compared to other high-income countries
Deaths during pregnancy or within 42 days postpartum
Cases per 100,000 live births, 2020 or most recent available data

Maternal mortality rates vary significantly by state

Maternal deaths per 100,000 live births between 2018 and 2021.

Note: Gray indicates states for which data is not available. Maternal deaths are defined as deaths "while pregnant or within 42 days of termination of pregnancy," excluding those from accidental or incidental causes.

Source: Centers for Disease Control and Prevention
Maternal Mortality Terminology

Pregnancy-associated death:
The death of a woman while pregnant or within one year of the end of pregnancy, irrespective of cause.

Pregnancy-related death:
The death of a woman while pregnant or within one year of the end of pregnancy from a pregnancy complication, a chain of events initiated by pregnancy, or the aggravation of an unrelated condition by the physiologic effects of pregnancy.

Pregnancy-associated but NOT related death:
The death of a woman during pregnancy or within one year of the end of pregnancy from a cause that is not related to pregnancy.

Source: NNMSA Facilitation Guide and Review to Action [https://www.ezaction.org/leaders/nmsa_committee_facilitation_guide]  
Graphic sourced from South Dakota Dept [https://web.agency.vic.gov.au/maternalmortality.png]
Maternal Mortality Review Committee (MMRC)

Part of an ongoing quality improvement cycle which incorporates multidisciplinary expertise, typically staffed by/hosted by public health agency. This leads to understanding of the drivers of a maternal death and determination of what interventions will have the most impact at patient, provider, facility, system and community level to prevent future deaths.

Guiding Questions

• Was the death pregnancy-related?
• What was the underlying cause of death?
• Was the death preventable?
• What are the contributing factors to the death?
• What specific and feasible actions might have changed the course of events?

MMRC Is

• Ongoing anonymous and confidential process of data collection, analysis, interpretation and action
• Systematic process guided by policies, statutes, rules, etc.
• Intended to move from data collection to prevention activities

MMRC Is NOT:

• A mechanism for assigning blame or responsibility for any death
• A research study
• Peer review
• An institutional review
• A substitute for existing mortality and morbidity inquiries
Deaths
Near Misses
Severe Maternal Morbidity
Maternal Morbidity Requiring Hospitalization
Maternal Morbidity Resulting in Emergency Department Visit
Maternal Morbidity Resulting in Primary Care Visit

Eliminate preventable maternal deaths
Reduce maternal morbidity
Improve population health of women

Cascading Effects of Review Committee Actions

<table>
<thead>
<tr>
<th>Category of Death</th>
<th>Preventable</th>
<th>Unpreventable</th>
<th>Undetermined</th>
<th>Timing of Death</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pregnancy Related</td>
<td>Eclampsia (leading cause)</td>
<td></td>
<td></td>
<td>75% were within 42 days of the end of the pregnancy</td>
</tr>
<tr>
<td></td>
<td>Postpartum hemorrhage</td>
<td></td>
<td></td>
<td>25% within 43 days to 1 year of the end of the pregnancy</td>
</tr>
<tr>
<td></td>
<td>Suicide</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pregnancy-Associated but NOT related</td>
<td>Blunt force trauma from motor vehicle crash (leading cause)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Drug overdose</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pneumonia</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cerebral artery hemorrhage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Endocarditis related to IV drug use</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pregnancy-Associated but unable to determine pregnancy relatedness</td>
<td>Suicide</td>
<td></td>
<td></td>
<td>46% occurred during pregnancy</td>
</tr>
<tr>
<td></td>
<td>Cardiac arrhythmia</td>
<td></td>
<td></td>
<td>0 occurred within 42 days of the end of the pregnancy</td>
</tr>
<tr>
<td></td>
<td>Homicide (domestic violence)</td>
<td></td>
<td></td>
<td>54% occurred within 43 days to 1 year of the end of the pregnancy</td>
</tr>
<tr>
<td></td>
<td>Cardiac arrest</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Maternal Mortality Ratio by Race/Ethnicity
Cases from 2016-2018*, 39 Deaths

Deaths per 100,000 Live Births

- All: 9.4
- White: 6.0
- Black: 36.9
- Asian/PI: 23.5
- Hispanic: 9.7
What are other factors driving rising rates of maternal mortality in the U.S.?

- Increasing prevalence of conditions that make pregnancy high-risk such as hypertension/heart disease, diabetes, obesity, and substance use disorders
- Challenges with accessing primary care, health insurance gaps, and barriers to accessing family planning services increase the likelihood that women will enter pregnancy in poor health
- Lack of access to specialty care for high-risk pregnancies and appropriate transition from pregnancy care to primary/preventative care services
- Rising cesarean birth rates increase likelihood of hemorrhage and surgical complications in future pregnancies/deliveries
- Pregnant and postpartum women are more likely to get severely ill from COVID-19
- Social and structural barriers to good health including access to respectful, high-quality healthcare
Successful Strategies to Improve Outcomes
Preventability of pregnancy-related deaths

- 3 out of 5 pregnancy-related deaths are preventable

- Recognizing major causes allows opportunities for intervention

(Petersen, 2019)
Opportunities for Intervention

**Patient/Family**
- Lack of knowledge of warning signs and need to seek care; non-adherence to medical regimens

**Provider**
- Missed or delayed diagnosis and treatment, failure to screen or assess, use of ineffective treatments, failure to seek consultation, lack of knowledge

**Systems of care**
- Lack of communication as barrier to coordination of care between providers
- Policies & procedures, care coordination, inadequate training, inadequate personnel

**Facility**
- Limited experience with OB emergencies, lack of appropriate personnel

**Community**
- Unstable housing, limited access to transportation

Building U.S. Capacity to Review and Prevent Maternal Deaths, 2018
The Alliance for Innovation on Maternal Health (AIM Program)

What is AIM? The Alliance for Innovation on Maternal Health (AIM) Program is a national data-driven maternal safety and quality improvement initiative.

Kick off for Iowa’s first Safety Bundle was held January 28 & 29 2021

Learn more about the AIM Program at: https://saferbirth.org/
Safe prevention of primary cesarean birth: Collaborative overview

15-month collaborative involving 43 of 56 birthing hospitals in Iowa

Global aim to reduce the NTSV cesarean birth rate in Iowa to below the Healthy People 2030 target of 23.6%

- Approach to labor induction and cervical ripening
- Interpretation of labor progress and diagnosis of labor dystocia
- Interpretation of fetal heart rate patterns and indications for operative delivery
- Use of data to identify champions and outliers, promote friendly competition
- Utilization of bedside nursing care and labor positioning to promote labor progress
- Patient and family-centered approaches to care, including cesarean when indicated
In 2022 Iowa achieved the Healthy People 2030 NTSV cesarean birth goal and reduced disparities by race and income.
The Healthy People 2030 goal for NTSV cesarean is 23.6%.

Iowa occurrent births, Iowa Vital Records. Data courtesy of Dr. Debra Kane, MCH Epidemiologist, Iowa HHS.
Reducing harm from obstetric hemorrhage: Collaborative overview

10-month collaborative involving all 56 birthing hospitals in Iowa

Global aim: to eliminate preventable maternal death from hemorrhage in the state of Iowa by 2023

Focus on preparation, recognition, and response to hemorrhage

- Risk assessment
- Blood loss quantification
- Standard prophylaxis against uterine atony
- Standard approach to hemorrhage management, including hemodynamic support
- Use of data to guide improvement

Rates of hemorrhage may appear to increase at an individual facility due to improved recognition as quantification of blood loss is introduced
Near-miss events of SMM from hemorrhage have declined significantly during the Iowa AIM OB Hemorrhage collaborative.

We defined SMM from hemorrhage as transfusion of 4 or more units of blood, hysterectomy, or ICU admission due to hemorrhage. Presented as cases per 10,000 births as reported by AIM facilities.
Severe Hypertension and Preeclampsia: Collaborative overview

12-month collaborative launching tomorrow, anticipate 55 hospitals

Global aim is to eliminate preventable maternal death from hypertensive disorders of pregnancy (HDP) by 2024

Focus on preparation, recognition, and response to hypertensive conditions by both obstetrical and emergency medicine clinical staff

- Standard definitions, diagnostic criteria, and management approaches for HDP
- Use of low-dose aspirin for risk reduction among at-risk pregnant patients
- Timely treatment of severe hypertensive episodes
- Response to eclampsia
- Early postpartum follow-up of patients at risk for worsening hypertension following delivery
Iowa HHS Pilot Doula Pilot Project Goals

- Decrease maternal mortality & morbidity
  - Providing culturally congruent support to pregnant moms
  - Increase early entry to prenatal care
  - Multidisciplinary support
- Increase breastfeeding initiation rates
- Diversification of Perinatal workforce
- Create a model for insurers to consider reimbursement for doula services
Your role in reducing the number of pregnancy-related deaths.

**Health Screening: Recognize and refer**

### Depression
- EPDS
- PHQ-9
- Patient Health Questionnaire- (PHQ-2) - persistent for two weeks or more refer to health care providers
  - Little interest or pleasure in doing things.
  - Feeling down, depressed or hopeless

### Domestic Violence
- If you are concerned about your safety or the safety of your children, I will personally do everything I can to make sure you are safe and remain safe before you leave here today. We care and know what to do to keep you safe.
  
  24/7 Domestic Violence Hotline 1-800-799-7233;

- For training, and education resources [https://www.futureswithoutviolence.org/health/](https://www.futureswithoutviolence.org/health/)

### Substance Abuse
- Refer to health care providers - resources on Your Life Iowa
  
  [https://yourlifeiowa.org/](https://yourlifeiowa.org/)

- If opioid user - Refer for MAT and provide access to Naloxone
What else can you do to help?

- Educate

50% of pregnancy-related deaths occur in the postpartum phase.

Two informational flyers titled: "Recognize Postpartum warning signs" and "Urgent Maternal Warning Signs".
Recognition is Key!

How Can You Help?

If a pregnant or recently pregnant woman expresses concerns about any symptoms she is having, take the time to Hear Her. If she says something doesn’t feel right, encourage her to seek medical help. If she is experiencing an urgent maternal warning sign, she should get medical care right away. Be sure that she says she is pregnant or was pregnant within the last year.

Learn the urgent maternal warning signs:

- Severe headache that won’t go away or gets worse over time
- Dizziness or fainting
- Thoughts about harming yourself or your baby
- Changes in your vision
- Fever of 100.4°F or higher
- Extreme swelling of your hands or face
- Trouble breathing
- Chest pain or fast-beating heart
- Severe nausea and throwing up (not like morning sickness)
- Severe belly pain that doesn’t go away
- Baby’s movement stopping or slowing down during pregnancy
- Vaginal bleeding or fluid leaking during pregnancy
- Heavy vaginal bleeding or leaking fluid that smells bad after pregnancy
- Swelling, redness or pain of your leg
- Overwhelming tiredness
Educate about COVID-19 vaccination

- The CDC updated guidance for COVID-19 vaccines while pregnant or breastfeeding to recommend that all people aged 12 years and older, including women who are pregnant, breastfeeding, trying to get pregnant now, or might become pregnant in the future, receive the COVID-19 vaccine.
- Pregnant women are more likely to get severely ill with COVID-19.
- Getting a COVID-19 vaccine can protect pregnant and breastfeeding women from severe illness from COVID-19.
- Evidence continues to build showing that:
  - COVID-19 vaccination during pregnancy is safe and effective.
  - COVID-19 vaccines are not associated with fertility problems in women or men.
Social Media Campaign

What's the Right Way to Wear My Seat Belt?

- **Correct:**
  - Shoulder belt:
    - Cross over your chest (not over your mouth).
    - Secure in between your ears and shoulders.
  - Lap belt:
    - Position belt over your hip bone and loosely across your lower abdomen.

- **Wrong:**
  - Shoulder belt:
    - Leave shoulder strap unsecured or under your arm.
  - Lap belt:
    - Place belt on lap or behind your back.

Should I Adjust My Seat?

- **Yes:**
  - Adjust your seat to achieve:
    - Shoulders or chest: Close enough to the steering wheel.
    - Lap belt: Sitting on top of seat cushion.
    - Head:
      - Not over the top of the seat back.
      - A maximum of 2 inches in back of head.
State-Funded Family Medicine Obstetrics Fellowship Program

- Future RFPs will be posted to allow new teaching hospital program as needed.
  - $560,000 for 4 fellows – 2023 appropriation
  - Up to $140,000 per fellow reimbursed to teaching hospital for salary and benefits paid to the fellow
- Reimbursement conditions:
  - One year in fellowship at the teaching hospital
  - Fellow has a signed program agreement with the teaching hospital to engage in full-time family medicine OB practice in a rural or underserved area for 5 years.
  - January 1 annual report to the legislature
    - Number of fellows, outcomes and effectiveness
  - Can reimburse for fellows who start the program after July 1, 2023

- Created in 2023 Iowa Acts Senate File 561
- Administrative Rules are proceeding to rulemaking - 5 month process
- RFP will be posted to admit teaching hospitals that wish to participate
- Anticipate April 2024 for reimbursements to participating teaching hospitals - After rules and RFP completed.
- Claims will be processed in IowaGrants for teaching hospitals in the program
Overview

Medicaid’s Role in Maternal Health

HHS Maternal Health Initiatives
- Maternal Health Task Force
- AIM
- Hospital Directed Payments

MCO Initiatives
- Amerigroup
- Iowa Total Care
- Molina

Questions
Iowa Medicaid’s Role in Maternal Health

About Medicaid
Maternal Health

Medicaid covers nearly half of all births in the U.S. each year.

Iowa Medicaid covers around 15,000 births in Iowa per year and is one of the largest payors in the state.

Medicaid coverage for mothers starts during pregnancy and lasts for at least 60 days after giving birth.

What Iowa Medicaid is Improving

Over the past year, our team has worked to flip our mentality from working in silos, to working across divisions for better outcomes.

Medicaid needs to be the lever to move forward goals from the public health division plan.
Developed about 20 years ago to provide a space to discuss Iowa Medicaid “Birth Certificate Match to Paid Claims Report.”

The purpose of this report is to highlight access to:
- prenatal care
- selected behaviors and birth outcomes
- comparison women whose labor and delivery costs were not reimbursed by Medicaid.

The task force meets quarterly.
Benefits of the Maternal Health Taskforce

- **Relationships**
  - Positive relationships have been developed between Iowa Medicaid, the MCOs, Public Health and Obstetrical Health Care Providers.

- **Communication**
  - There is increased communication to providers and use of data to support action.

- **Policy Changes**
  - Provides a safe space to discuss policy changes.

- **Eligibility**
  - One of the early changes was increasing the eligibility criteria for pregnant women in Iowa. Medicaid pregnant women are eligible for Medicaid up to 375% of the FPL.
Hospital Directed Payments

- The program will require federal approval of the provider assessment model and the Medicaid managed care directed payment pre-print.
- Effective date was July 1, 2023.
Amerigroup Maternal Health Initiatives

Rural Doula Pilot Project

- Grant pilot project partnership with What You Love LLC.
- Trains and certifies doulas, and offers free doula services in Mills, Montgomery, Fremont and Page counties.
- Since it began, 10 doulas have become certified to assist mothers in the above counties.

Concierge Pilot Project

- Amerigroup (AGP) is piloting Concierge Care, a smartphone app for members with high-risk pregnancies.
- It offers weekly guides, videos, reminders, smart device monitoring, local resources, 8 weeks of postpartum support, and 24/7 chat with a Care Navigator from AGP’s maternal/ObGyn team.

Mom’s Meals Pilot Project

- AGP is teaming up with Iowa HHS, Iowa Stops Hunger and other MCOs to pilot a program. It provides 30 days of meals to food-insecure pregnant Medicaid members in specific Iowa counties.
- Amerigroup reaches out to eligible members through calls and refers them to the project using their maternal health case management team.
Iowa Total Care Maternal Health Initiatives

| Doula Program | - Provides educational and support to expectant mothers in Polk, Johnson, and Muscatine County.  
- The program includes three prenatal visits, assistance during childbirth and three postpartum visits. |
|---------------|--------------------------------------------------------------------------------------------------|
| My Health Pays | - Members earn monetary reward dollars when they complete their healthy activities and provides food, utilities, rent, education, childcare services and many others.  
- Members earn reward dollars for completing their first trimester and postpartum appointments and complete the of “Notification of Pregnancy” during the first and second trimesters. |
| Text Campaigns | - Text campaigns educate and remind pregnant members to complete the “Notification of Pregnancy” and join the SSFB care management program.  
- Members receive text reminders to mothers who have recently delivered to schedule their postpartum visit. |
| ‘Start Smart for your Baby’ Care Management Program | - ITC hosts community baby shower gatherings for expectant mothers and provide educational resources and baby supplies.  
- The SSFB Care Management Program guarantees that mothers benefit from all-encompassing, well-coordinated care management with the aim of enhancing birth outcomes for both mothers and infants. |
Molina Healthcare Maternal Health Initiatives

**Doula Pilot Program**
- Molina’s Doula Pilot program offers culturally competent doula services to expectant members at any stage of pregnancy with educational, emotional and physical support.
- Doula services offered in Black Hawk and Polk counties with eligibility requirements.
- Planned expansion for Dubuque, Linn, and Scott counties in 2024.

**Maternity Extra Benefits Program**
- Members earn a gift card reward for completing prenatal and postpartum visits.
- Members earn a gift card reward or receive a car seat for attending a Molina baby shower.
- Home-delivered meals for high-risk pregnancies and postpartum members.
- Molina offers community baby showers for expectant members and members with a baby six months or less.

**Healthy Beginnings Pregnancy Program**
- The Healthy Beginnings (HB) maternity care management program connects with expectant members early in pregnancy to monitor health, provide education, support mother and family members, and encourage supportive provider/member relationships.
- HB provides care management services for high or at-risk pregnancies.
- Low-risk expectant members are connected to value-added benefits, healthy rewards, and health education to support their pregnancy.

**Lactation Support**
- Molina supports the Iowa Black Doula Collective (IBDC) to offer lactation support training to interested doulas or other persons to increase culturally responsive certified lactation consultants.
- Lactation consultants support mothers and babies to improve maternal health and breastfeeding outcomes.
- Supports referrals from providers, community-based partners, or care management programs.

**Count the Kicks/Healthy Birth Day Inc.**
- Molina and Count the Kicks partner to offer virtual baby showers for eligible members.
- Rural member access to maternal health education statewide.
PANEL

Stephanie Trusty  
R.N., BSN-  
MATERNAL MORTALITY REVIEW COMMITTEE COORDINATOR,  
IHHS

Lindsey Jones  
Title X Family Planning Director,  
IHHS

Nicole Newman  
R.D., L.D., CLC-  
STATE WIC BREASTFEEDING COORDINATOR,  
IHHS

Monica Goedken  
Violence Prevention Coordinator,  
IHHS
Questions?
Birth Queen + a Special Message
Our mission is to fight for improved maternal outcomes through advocacy and coalition building, educate the public about the impact of maternal mortality in communities, provide peer support to victim’s families, and promote the idea that maternal mortality should be viewed, and discussed as a human rights issue.

https://4kira4moms.com/
An intersectional look at prevalence, causes, and policy solutions for maternal morbidity and mortality in rural areas

Julia D. Interrante

PH.D., MPH –
UNIVERSITY OF MINNESOTA RURAL HEALTH RESEARCH CENTER
Intersectional Prevalence, Causes, and Policy Solutions for Maternal Morbidity and Mortality

Julia D. Interrante, PhD, MPH

Bridging the Gap: Improving Maternal and Rural Health Symposium 2023
Disclosure Statement

• Relevant to the content of this educational activity, I do not have any financial conflicts with ineligible companies to disclose.

Photo: Kathleen Henning
Land Acknowledgment

• We gratefully acknowledge the land in Minnesota as the traditional, ancestral Indigenous territories of Wahpekute, Annishinaabe, and Očeti Šakówiŋ (Dakota) nations.

• We encourage everyone to be respectful of the distinctive and permanent relationship that exists between Indigenous people and their traditional territories.
This research was supported by the Federal Office of Rural Health Policy (FORHP), Health Resources and Services Administration (HRSA), U.S. Department of Health and Human Services (HHS) under PHS Grant #5U1CRH03717. The information, conclusions and opinions expressed are those of the authors and no endorsement by FORHP, HRSA, or HHS is intended or should be inferred.
Agenda

1. Describe differences in maternal morbidity and mortality across intersections of rurality, race and ethnicity, and income.

2. Examine causes of maternal morbidity and mortality and how those differ across intersecting patient identities.

3. Describe policy options for addressing overall prevalence and disparities in maternal morbidity and mortality in rural communities.
Rising Rates of Maternal Mortality in the US

In-hospital severe maternal morbidity and mortality inequities by:
- Rurality
- Race/ethnicity
- Income (Medicaid status)
- And at their intersections
Geography Affects Maternal Health Risks

• Severe maternal morbidity and mortality increasing among both rural and urban residents
• 9% greater odds among rural compared to urban residents

Adjusted incidence of severe maternal morbidity/mortality across rural/urban, insurance, & race and ethnicity
Additive risk by Medicaid, race, and geography


<table>
<thead>
<tr>
<th>Residence</th>
<th>Medicaid-Funded</th>
<th>Privately-Insured</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>149.4 (145.5,153.4)</td>
<td>116.4 (113.5,119.3)</td>
</tr>
<tr>
<td>Rural</td>
<td>160.9 (154.6,167.2)</td>
<td>129.3 (124.1,134.4)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rural residents</th>
<th>Adjusted Predicted Difference in Rates per 10,000 births (aCI)</th>
<th>Proportion Due to Interaction (aCI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Hispanic White</td>
<td>132.3 (126.2,138.5) - 106.1 (101.3,110.8)</td>
<td>13% (5%, 21%)</td>
</tr>
<tr>
<td>Non-Hispanic Black</td>
<td>207.9 (191.8,223.9) - 175.6 (152.2,198.9)</td>
<td>13% (-5%, 31%)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>189.3 (173.5,205.1) - 168.6 (145.0,192.3)</td>
<td>7% (-14%, 27%)</td>
</tr>
<tr>
<td>Asian or Pacific Islander</td>
<td>193.9 (183.6,244.2) - 128.5 (92.3,164.8)</td>
<td>30% (-6%, 66%)</td>
</tr>
<tr>
<td>American Indian/Alaska Native</td>
<td>224.9 (187.0,262.9) - 127.1 (82.1,172.1)</td>
<td>40% (11%, 69%)</td>
</tr>
</tbody>
</table>

A. Excess SMMM risk among Indigenous rural Medicaid beneficiaries

Severe Maternal Morbidity and Mortality per 10,000 Deliveries by Hospitalization

- Excess SMMM risk (interaction effect)
- SMMM risk related to Indigenous, rural residence
- SMMM risk related to Medicaid

<table>
<thead>
<tr>
<th>Severe Maternal Morbidity and Mortality per 10,000 Deliveries by Hospitalization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Referent</td>
</tr>
<tr>
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</tr>
<tr>
<td>96.5</td>
</tr>
</tbody>
</table>
What drives high rates of maternal morbidity and mortality?
Pregnancy-Associated Deaths, 2020

- Obstetric: 55%
- Overdose: 20%
- Homicide: 8%
- Suicide: 4%
- Other: 13%
IPV around the time of pregnancy is particularly harmful

- Violence is one of the most common health concerns reported by pregnant people.
- IPV is associated with negative health outcomes for birthing people and their infants.
More rural residents experienced physical violence by an intimate partner

4.6% of rural residents experienced physical IPV before or during pregnancy, compared to 3.2% of urban residents.
Rural birthing people were more likely to experience IPV

Predicted probabilities of experiencing physical violence by an intimate partner were higher among rural residents across most measured characteristics, compared to urban residents.
...and rural-urban differences were pronounced among certain groups

Rural residents who identified as Non-Hispanic white, Hispanic (English-speaking), and American Indian/Alaska Native

Rural residents who were 18-34 years of age

Rural Medicaid beneficiaries
Importance of Postpartum Care

Half of pregnancy-related deaths occur after the day of birth.

Weighted percent of patients who received recommended postpartum care, PRAMS 2016-2019

<table>
<thead>
<tr>
<th>Existing national quality standards</th>
<th>Any postpartum visit</th>
<th>Depression Screen</th>
<th>Contraceptive Counseling</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>91%</td>
<td>85%</td>
<td>90%</td>
</tr>
<tr>
<td></td>
<td>8%</td>
<td>13%</td>
<td>9%</td>
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<tr>
<td></td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other recommended by ACOG</th>
<th>Any postpartum visit</th>
<th>Smoking Screen</th>
<th>Abuse Screen</th>
<th>Birth Spacing</th>
<th>Eating/Exercise</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>59%</td>
<td>39%</td>
<td>40%</td>
<td>49%</td>
<td>42%</td>
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<td>2%</td>
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</tbody>
</table>

- **Yes**
- **No**
- **Missing**

UNIVERSITY OF MINNESOTA RURAL HEALTH RESEARCH CENTER
Median Number of Postpartum Care Components Received by State and Rurality
A closer look: depression screening and contraceptive counseling

- Lower among Medicaid-insured patients, rural residents, and racialized people.

- Differences were greater at the intersection of patient identities.
Other recommended components (smoking, abuse, birth spacing, eating/exercise)

- Higher among Medicaid-insured patients, rural residents, and racially minoritized groups.

- Disparities for other components much greater than those with existing quality standards.
Risk-adjusted postpartum smoking screening rates by race and ethnicity, geography, and insurance.
Risk-adjusted postpartum smoking screening rates by race and ethnicity, geography, and insurance.
What is needed to address prevalence and disparities in rural maternal morbidity and mortality?
Policy Options

• Rural Maternal and Obstetric Modernization of Services (MOMS) Act – includes data collection and standardization, reporting, research

• Improve data
  – Investment in data infrastructure for clinical, public health, and policy analysis for postpartum health
  – Establish norms for data analysis and reporting across intersectional identities
  – Analyze and evaluate policy based on overall effects AND equity impacts

• Care bundles in maternal health, including addressing racial disparities

• Universal screening policies and payment

• Extending postpartum Medicaid coverage beyond 60 days postpartum*
Postpartum Coverage Tracker Map

- **12-month extension implemented (38 states including DC)**
- **Planning to implement a 12-month extension (8 states)**
- **Limited coverage extension proposed (2 states)**

SOURCE: KFF analysis of approved and pending 1115 waivers, state plan amendments, and state legislation, as of October 12, 2023. ▪ PNG ▪ Created with Datawrapper.
Insurance disruptions among rural residents with Medicaid at childbirth

Black, Indigenous, and People of Color

- Medicaid at childbirth: 69%
- Insurance postpartum: 41%
- Uninsured: 11%
- Commercial: 17%

White, non-Hispanic

- Medicaid at childbirth: 44%
- Insurance postpartum: 28%
- Uninsured: 10%
- Commercial: 6%
Extending postpartum Medicaid coverage beyond 60 days postpartum

• Health insurance access and continuity can facilitate access to postpartum care, reducing health risks associated with a range of conditions

• Action to extend pregnancy-related Medicaid could benefit people transitioning from Medicaid to either commercial coverage or no insurance after childbirth
  – 1 in 4 BIPOC and 1 in 6 white rural residents

• Equity impact will depend on policy specifics
Research Summary

• Maternal morbidity and mortality:
  – Medicaid policy change to improve maternal health must account for structural challenges posed by rural locations and by racism.
  – Policies that reduce risk among Medicaid patients could have additional additive benefits in reducing racial and ethnic as well as rural/urban disparities.

• Postpartum care content:
  – Examining postpartum care by attendance at a single visit obscures information about the content and quality of care.
  – Inequities in content of care received are extensive across insurance status, rurality, race/ethnicity; these disparities are compounded for patients with multiple intersecting disadvantaged identities.
Research Summary + Knowledge Gaps

• Obstetric care access and rural postpartum support
  – Access to care during pregnancy, childbirth, and postpartum is limited and declining for rural residents.
  – Postpartum services and support decline when hospital obstetric units close; such closures are concentrated in rural BIPOC communities

• Knowledge Gaps
  – Postpartum data, intersectional analysis as standard
  – Policy analysis with attention to equity impacts
Research Team Acknowledgements

- Katy B. Kozhimannil
- Carrie Henning-Smith
- Lindsay K. Admon
- Peiyin Hung
- Sara C. Handley
- Mariana K. S. Tuttle
- Bridget Basile Ibrahim
- Phoebe Chastain
- Alyssa Fritz
- Emily Sheffield
Gateway provides easy and timely access to research conducted by the Rural Health Research Centers

ruralhealthresearch.org

This free online resource connects you to:

- Research and Policy Centers
- Products & Journal Publications
- Fact Sheets
- Policy Briefs
- Research Projects
- Email Alerts
- Experts
- Dissemination Toolkit
Thank you!

Website: https://rhrc.umn.edu/
Email: inter014@umn.edu
Twitter: @UMNRHRC
BREAK
2:45 – 3:00
Community-based Solutions – Panel Discussion
Nine2Thrive - History

• Nine2Thrive™ was developed in 2019 to connect pregnant individuals with signs of stress to support by improving birth outcomes for babies.

• Nine2Thrive is funded by Maternal Infant, and Early Childhood Visiting (MIECHV) grant.

• Nine2Thrive currently operates in six clinics in Polk and Wayne Counties.
Nine2Thrive aims to identify risks and provide a support system with links to medical providers and community-based services to help provide support, reduce stress, and provide a greater chance for a healthy baby.
Studies show that extreme stress during pregnancy can have a direct effect on unborn babies, including pre-term birth, low birth weight and poor physical and emotional health by the age of 18 months.
Nine2Thrive helps address the concerns around social determinants of health. This approach reduces birthing parent stress.
Nine2Thrive - Step 1

Health care providers complete a screening during a prenatal visit to identify concerns.
Nine2Thrive – Step 2

If concerns are identified, the provider will refer to Nine2Thrive.
Nine2Thrive – Step 3

Nine2Thrive connects parent/family to appropriate community and healthcare resources.
Nine2Thrive – Step 4

Nine2Thrive will continue to check in with the parent/family throughout pregnancy.

Nine2Thrive will follow up with the referring health care provider on the supports/resources provided.
Nine2Thrive Outcomes

• Nine2Thrive made 1,299 referrals to community-based resources for 198 individuals from July 2022-June 2023.

• Nine2Thrive in six clinics found the following outcomes:
  
  • Participants had fewer low-weight births and were more likely to carry full term.
  
  • Participants were more likely to attend prenatal care appointments.
  
  • Participants stress levels decreased significantly.
Nine2Thrive Outcomes Continued

- Health care providers could see more patients in the same amount of time.
- Health care providers stress decreased.
- Program design allowed flexibility to meet the unique needs.
“By connecting expecting mothers to community resources during their pregnancies, Nine2Thrive’s model of identifying and supporting at-risk expecting mothers could serve as a key strategy in helping reduce maternal stress and improve maternal and child health outcomes in the state.” – Health Care Provider
Questions

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Family Support Director
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Nine2Thrive Program
Phone: 515.333.4533
Fax: 515.333.4534
Email: Nine2Thrive@everystep.org
Count the Kicks is a highly effective, evidence-based stillbirth prevention program.

We developed a proven early warning system for moms.

We save 1 in 3 at-risk babies in Iowa.
Research shows Iowa’s stillbirth rate declined one percent every three months for a decade while the U.S. remained relatively stagnant.

Iowa’s African American stillbirth rate decreased by 39% in the first five years of our program.

Source: Iowa Department of Health + Human Services vital statistics 2003-2022
Rural Iowa Stats

- Approximately one-third of births in Iowa are in rural settings.
- Family physicians deliver approximately 16% of rural babies.
- In 2018, 54% of rural counties were without hospital based obstetrics.
- Half of rural women live more than 30 mins drive to maternity unit.
- Rural Iowa women are at a higher incidence of chronic conditions, poverty and travel barriers and have a higher incidence of out of hospital birth and other pregnancy complications.
Stillbirth in the U.S. Report
The Link Between Stillbirth and Maternal Mortality and Morbidity: Firsthand Accounts from American Women

► According to one study, more than 15% of maternal deaths within days of delivery occur in women who experienced a stillbirth.

► Research shows that the risk of severe maternal morbidity is more than four times higher among stillbirth deliveries compared with live births.

► Women most at risk for severe maternal outcomes may also be at higher risk for stillbirth based on pre-existing or demographic characteristics and conditions related to their stillbirth.
Fetal Movement Monitoring – Bridging the Gap

How can mHealth technology play a role?
Count the Kicks App – Free and Easy to Use

- Our FREE app is evidence-based and available in 16 languages
- Available for Apple and Android products
- Set a daily reminder to Count the Kicks
- Download history to share with their provider, family or friends via text or email

We do not share or sell app user information.
Centering Health Equity

- Kick Counting Bracelets
- App in 16 Languages
- Social Determinants of Health Survey
- Non-Clinical Supports
Free Educational Materials

- Posters in English, Spanish, and Burmese
- App Card Reminders in English and Spanish
- Brochures in English, Spanish, and Burmese
- Additional free resources like printable movement monitoring charts

www.CountTheKicks.org
CE Training: 2.25 CEs

The purpose of this educational activity is to train healthcare professionals how to talk to their patients about fetal monitoring and using best practices to track fetal monitoring.

Register Here: bit.ly/savebabiesCTK
Use code SAVEBABIES-IA
Nahla’s Story

“Definitely pay attention to *Count the Kicks*. Had I not, Nahla wouldn’t be here. Don’t second guess yourself. Don’t feel bad or stupid, don’t worry about insurance or the emergency room bill, go check on your baby because your baby might not be here. Just pay attention, seriously. It is your baby’s life.”

-Dana M., Nahla’s mom
IHHS Doula Project

Jazzmine Brooks
IHHS Doula Project + Rural Black Doula
JBrooks@everystep.org
Home Visitation

PJ West
MIECHV Deputy Director
Community-based Solutions – Panel Discussion
Closing the Gap: Policy and System Changes for Maternal Rural Health – Closing Session Insights

Dr. Stephen Hunter
M.D., PH.D.
UNIVERSITY OF IOWA HOSPITALS & CLINICS
Closing the Gap – Policy and System Changes for Maternal Rural Health

Stephen Hunter, MD, PhD

Maternal Child Health Symposium
Des Moines, Iowa
October 30, 2023
The Future:
Remaining challenges and opportunities
Financial Viability
Regionalized care models
Access:
Maternal Transport Program, an unmet need

- A patient needed to be transferred to UIHC for worsening Covid-19 from a neighboring state. A local ambulance could not be found to transport her from 4:30 am to 5:00 pm. She ultimately got transferred to Peoria when another hospital could transport her.

- A 23-week patient with preeclampsia from a Level II hospital needed to come to UIHC to be delivered. It took over 12 hours from the time that UIHC accepted the transfer for an ambulance to be found while she waited. She was quite ill when she arrived.

- A pregnant patient presented at a Level I Iowa hospital that no longer does obstetrics. No ambulance service could be found promptly, so she delivered in a hospital that no longer does OB without proper supplies, equipment, or trained personnel. (One hospital that has closed their L&D service had 16 deliveries in the last year)

- A patient presented in a Level 1 hospital with an undiagnosed Placenta Accreta. The hospital recognized the problem and had to pack the patient with her abdomen open to transport her to a higher level of care via their local EMS, who were very uncomfortable with the situation.

- A patient in rural Iowa delivered one of her twins on the roadside. After a 911 call, local EMS came to pick her up and transported her to a Level 1 hospital which does not do OB. This hospital was desperately trying to find help to deliver the second twin, who was breech. They called the doctor and nurses from another Level 1 hospital in a frantic search for help, who got in an ambulance to respond, leaving their own hospital and county without coverage temporarily. Once the baby was delivered, all three patients had to be transferred to a hospital that had L&D and neonatal services for further care.
Workforce & Education: Nurses, an unmet need

- Nursing level of care in low-volume facilities is a long-standing issue
  - Not specific to OB or even maternal-child care
  - Many lack formal education in basic topics such as electronic fetal monitoring (EFM)
  - Often on shift solo given low-volume nature of facilities
  - Lack of dedicated nurse educator positions

- Exacerbated by COVID-driven workforce challenges

- IMQCC has partnered with Iowa AWHONN to initiate some programs to support EFM education in the state

- Develop a program where nurses from low-volume hospitals can rotate through higher volume hospitals?
Community Coordination: An unmet need

• IMQCC leadership, including HHS staff, recognize the need to improve the coordination of care delivery at the community level.
  • Communication between healthcare providers and local stakeholders, such as public health agencies
  • Reduce redundancy in services and ensure education is aligned
  • Enhance participation in available programs (WIC, Title V) among those eligible
  • Growth of home visiting and other support to vulnerable Iowans
Education & Quality of Care:
The future of Iowa AIM remains uncertain

- Additional grant funding has been awarded to maintain the IMQCC and Iowa AIM program
  - CDC’s State Perinatal Quality Collaboratives award, 2023-2027
  - HRSA’s AIM State Capacity award, 2023-2027
- Program has some content overlap with the long-standing Iowa Statewide Perinatal Care Program
  - Active discussions of how to bring all programmatic components related to education and care quality for facilities under one umbrella organization
  - The Perinatal Program has state funding, but amount is fixed and inadequate to allow for program expansion
  - The Perinatal Program is required by Iowa code to perform Level of Care verification for Iowa birthing facilities
Unmet funding needs

- Rough estimation of annual cost to fund a singular Perinatal Program to maintain existing support to Iowa hospitals is $1 million
  - Streamlined operations will maximize programmatic support to hospitals
  - If we are successful with grants, we will still have a gap of approximately $300,000 to fully fund the program
  - Anticipating an opportunity to apply for another HRSA MHI award in 2024
  - Program growth (community partnership, nursing education) will require additional funding
- A statewide Maternal transport program would require funding and operational coordination beyond what could be funded with another HRSA grant or by a single healthcare system
QUESTIONS?
Next Steps

1. Fill out your evaluation and attestation form – Attestation form is in your folder – virtual attendees do NOT need that form.

2. If you have additional questions for speakers – fill out the document in your folder and leave it on your table for collection

3. Continuing Education will be awarded in 6-8 weeks via email
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IMPROVING BIRTH OUTCOMES