

Bridging the Gap:

Improving Maternal and
Rural Health Symposium

PRESENTED BY:    UnityPoint Health



Welcome

IOWA
HHS

HEALTHY
birthDAY
IMPROVING BIRTH OUTCOMES

Welcome



Courtney Greene

Director of External Partnerships & Community
Engagement

UnityPoint Health



UnityPoint Health

IOWA
HHS

HEALTHY
birthDAY
IMPROVING BIRTH OUTCOMES

Welcome



Kelly Garcia

Director of Iowa Health and Human Services
(IHHS)



UnityPoint Health

IOWA
HHS

HEALTHY
birthDAY
IMPROVING BIRTH OUTCOMES

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



Dr. Stephen Hunter

M.D., PH.D.

UNIVERSITY OF IOWA HOSPITALS & CLINICS

IOWA
HHS

HEALTHY
birthDAY
IMPROVING BIRTH OUTCOMES

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

STATE OF IOWA
DEPARTMENT OF
Health
AND
Human
SERVICES

IOWA
Maternal Quality Care Collaborative



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

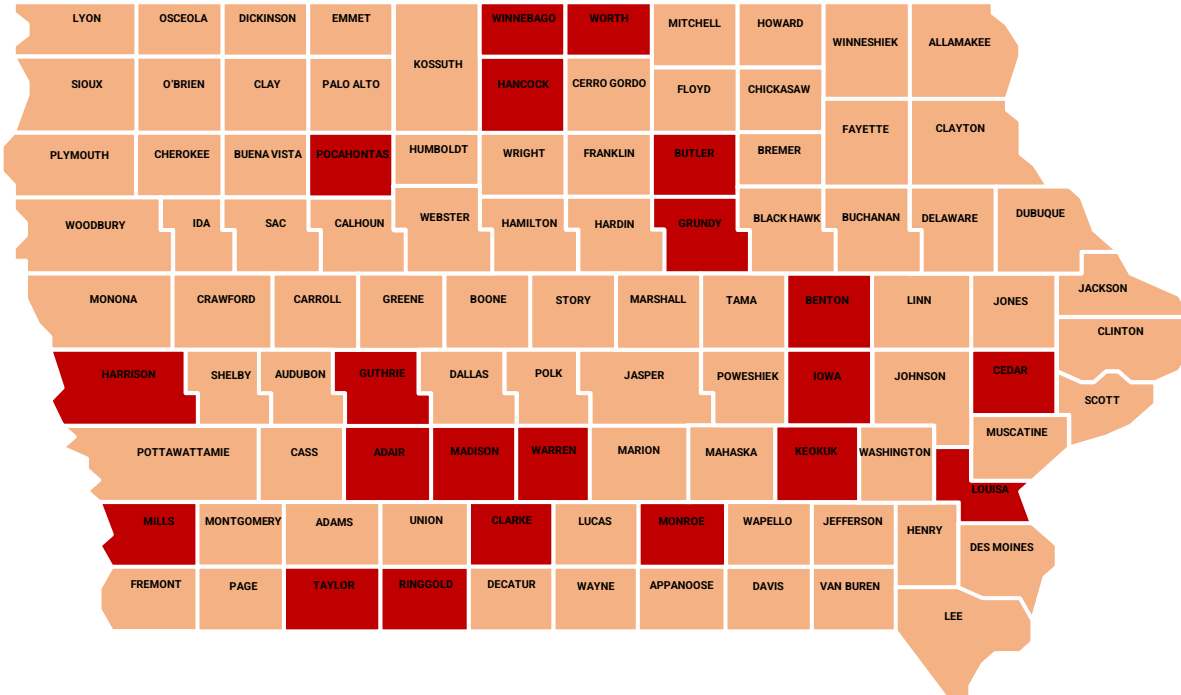
Year	Facility name	City
2000	Eldora Regional Medical Center - Hardin County	Eldora
2000	Grape Community Hospital - Fremont County	Hamburg
2001	Jones Regional Medical Center	Anamosa
2001	Jefferson County Health Center	Fairfield
2001	Trinity Medical Center North	Davenport
2001	Metropolitan Medical Center	Des Moines
2004	Mercy Medical Center	Dyersville
2004	Humboldt County Memorial Hospital - Humboldt County	Humbolt
2004	Decatur County Hospital	Leon
2004	Mercy Hospital of Franciscan Sisters	Oelwein
2005	Audubon County Memorial Hospital	Audubon
2005	Clarinda Regional Health Center	Clarinda
2005	Buchanan County Health Center	Independence
2005	Loring Hospital	Sac City
2006	Alegent Health Mercy Hospital	Corning
2008	Mitchell County Regional Health Center-Osage	Osage
2010	Sanford Merrill Medical Center	Rock Rapids
2012	Horn Memorial Hospital	Ida Grove
2012	Jackson County Regional Health Ctr	Maquoketa
2013	Keokuk Area Hospital-Keokuk	Keokuk

2014	Davis County Hospital	Bloomfield
2014	Knoxville Hospital & Clinics-Knoxville	Knoxville
2016	Greene County Medical Center	Jefferson
2016	Mercy Medical Center - West Lakes	West Des Moines
2017	Mercy Medical Center - Centerville	Centerville
2018	Lucas County Health Center	Chariton
2018	Avera Holy Family Health	Estherville
2018	Guttenberg Municipal Hospital	Guttenberg
2018	Ellsworth Municipal Hospital (Hansen Family Hospital)	Iowa Falls
2018	Van Buren County Hospital	Keosauqua
2018	Manning Regional Healthcare Center	Manning
2018	Osceola Community Hospital, Inc	Sibley
2018	Washington County Hospital and Clinics	Washington
2018	Van Diest Medical Center (Formerly Hamilton Hospital)	Webster City
2019	UnityPoint Health - Marshalltown	Marshalltown
2020	Henry County Health Center	Mt. Pleasant
2020	MercyOne New Hampton Medical Center	New Hampton
2020	Unity Point Health-Trinity Muscatine	Muscatine
2020	Unity Point Health-Iowa Lutheran Closing July 31	Des Moines
2020	MercyOne Siouxland Regional Medical Center Closing Sept.1	Sioux City
2020	Red Oak Closing	Red Oak
2021	Hegg Memorial Closing Jan 1	Rock Valley

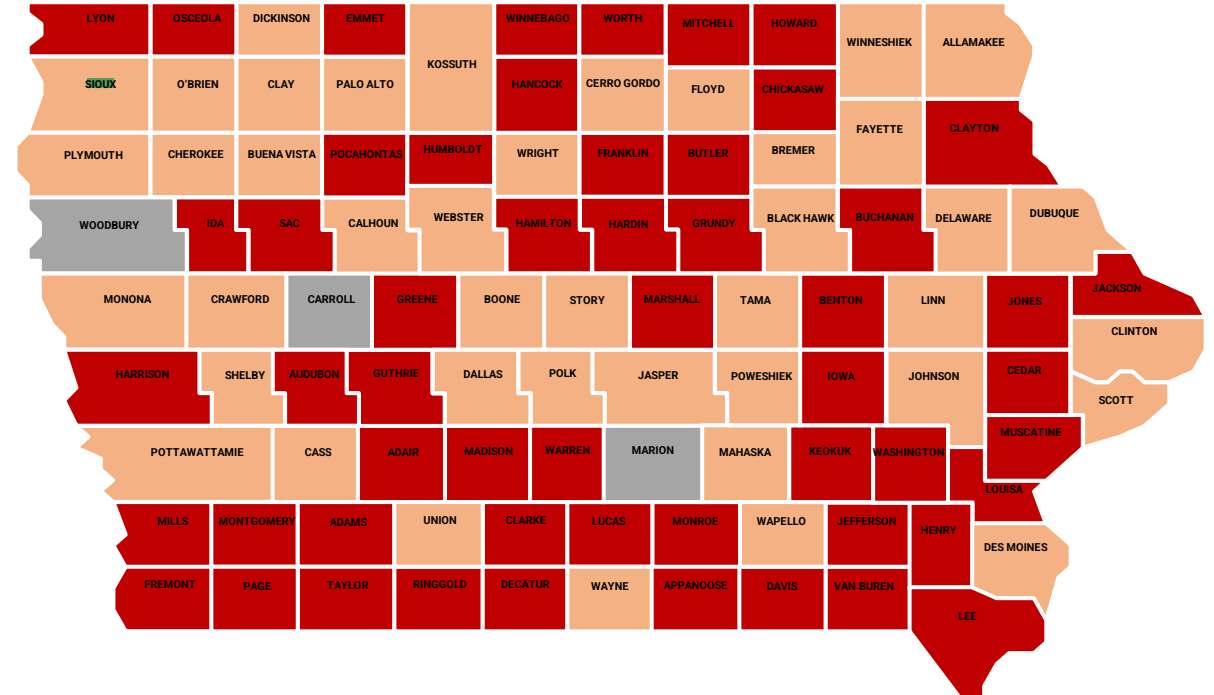


Iowa OB unit closures by county

Iowa OB Units by County 1999



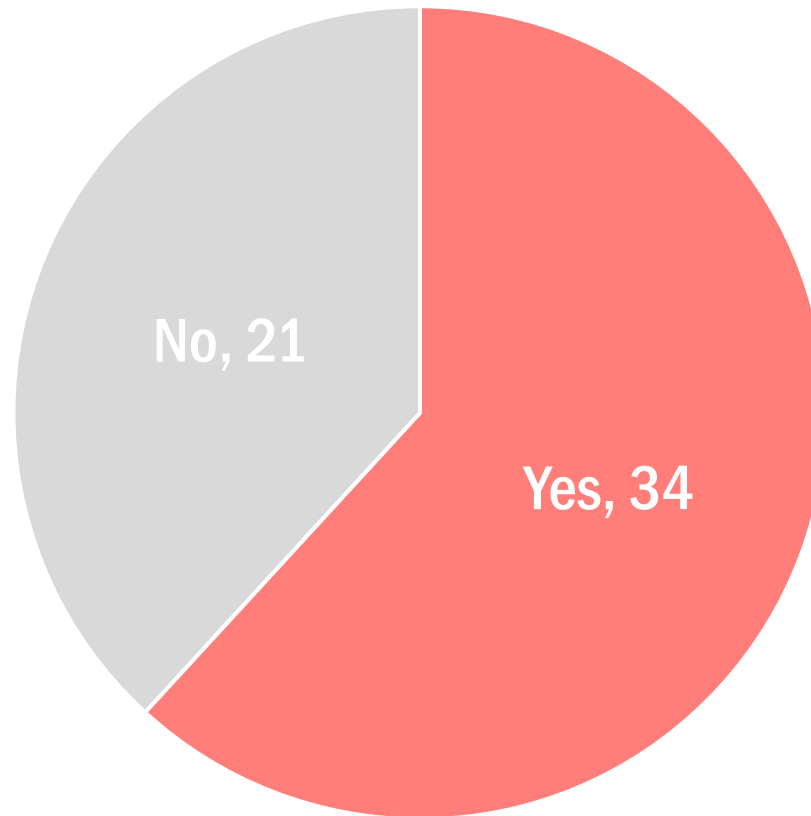
Iowa OB Units by County 2023



● OB Unit ● No OB Unit

Iowa Hospital CEO survey:

Do you have concerns regarding the continued viability of your Labor & Delivery unit?



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

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

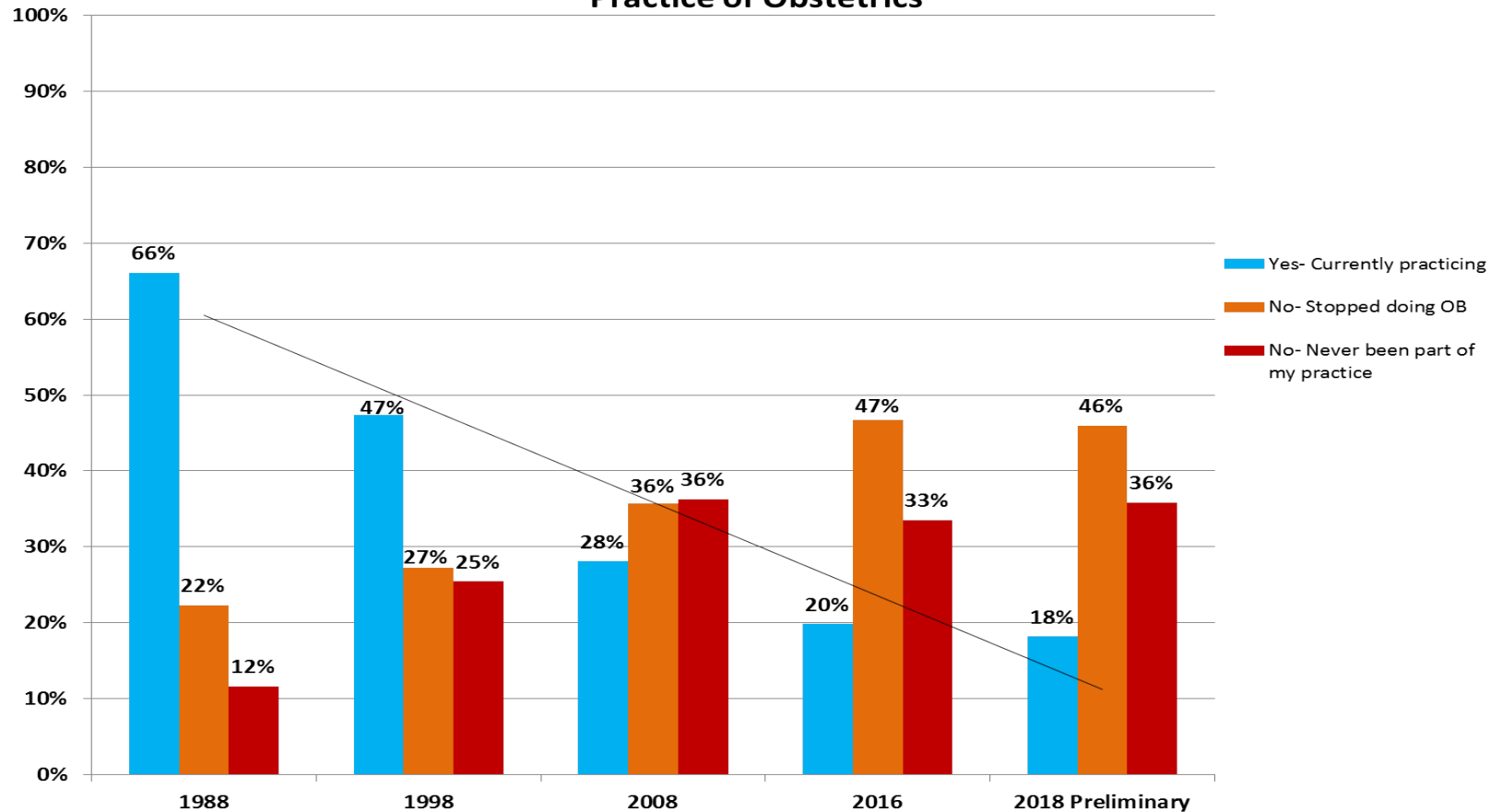
Workforce: Rural Track OB/GYN Residency

- 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

UI-Affiliated FM Residency Alumni Practicing in Iowa
Practice of Obstetrics



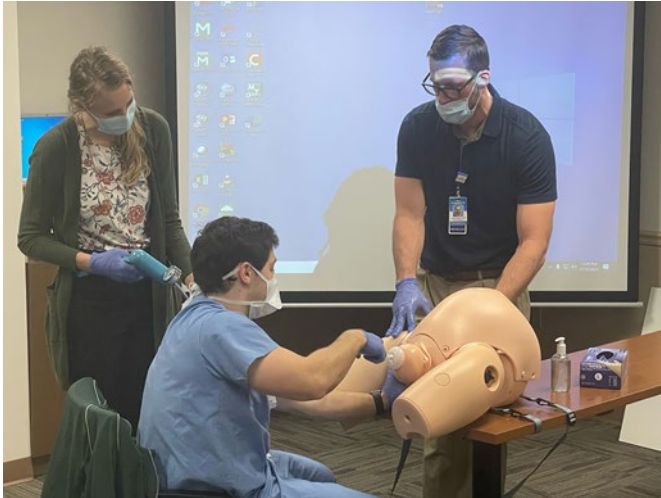
In 2022
only 7%!!!

Source: Office of Statewide Clinical Education Programs, UI Carver College of Medicine, July 2018

IOWA
HHS



Workforce: FM-OB Fellowships



Dr. Stroeh and FM/OB faculty Dr. Pymm using the OB sim to demonstrate vacuum assisted vaginal delivery at Broadlawns

- 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

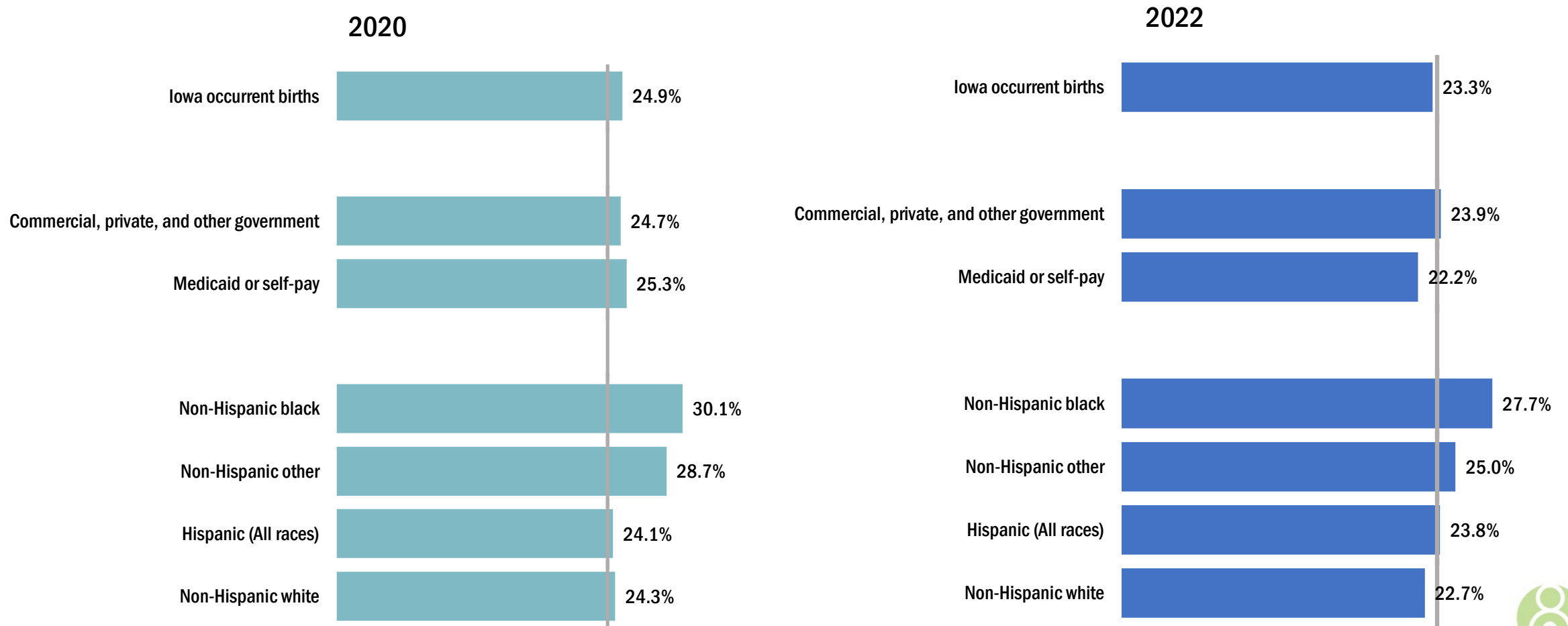
- The Alliance for Innovation on Maternal Health (AIM) Program is a national, data-driven quality improvement initiative led by ACOG in partnership with other professional organizations invested in maternal health.
- The goal of AIM is to eliminate preventable maternal morbidity and mortality by ensuring 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.

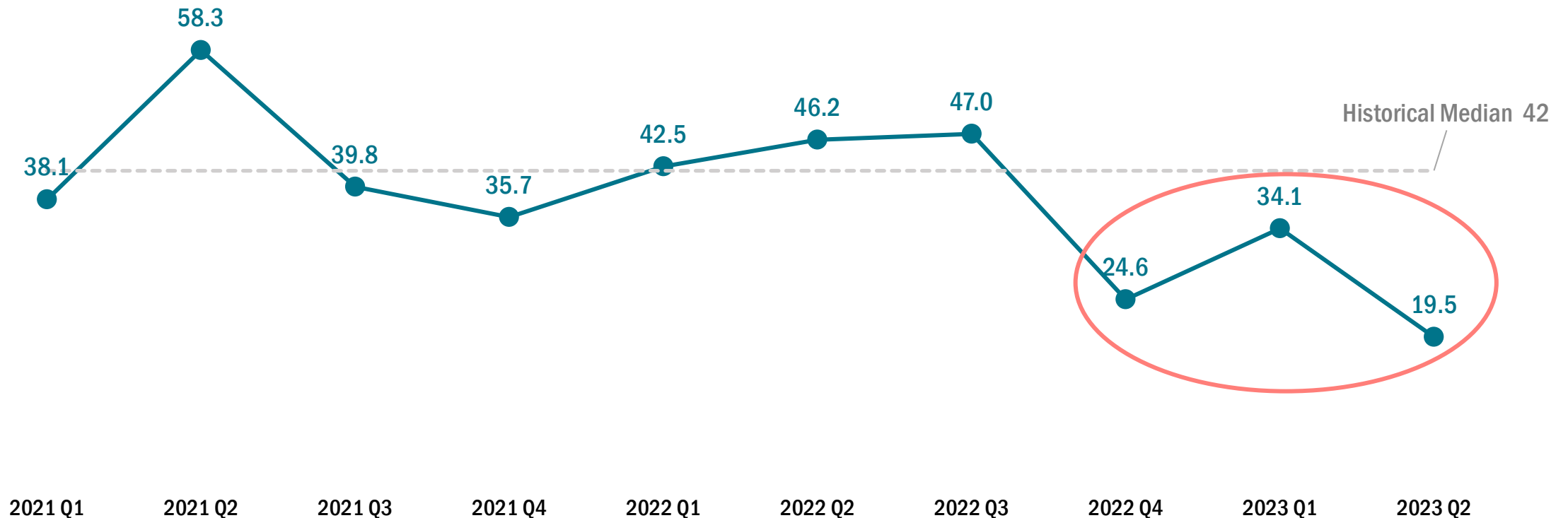
In 2022 Iowa achieved the Healthy People 2030 NTSV cesarean birth goal and reduced disparities by race and income.

The Healthy People 2030 goal for NTSV cesarean is 23.6%.



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.



Education & Quality of Care: The Iowa OB Mobile Simulation Program



- 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

- Virtual Site Visit – OB Unit
- In-Person Site Visit – OB Unit
- In-Person Site Visit Planned – OB Unit
- Site Visit Not Yet Planned– OB Unit
- Virtual Site Visit – ED Unit
- In-Person Site Visit – ED Unit
- In-Person Site Visit Planned– ED Unit
- Site Visit Not Yet Planned– ED Unit

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

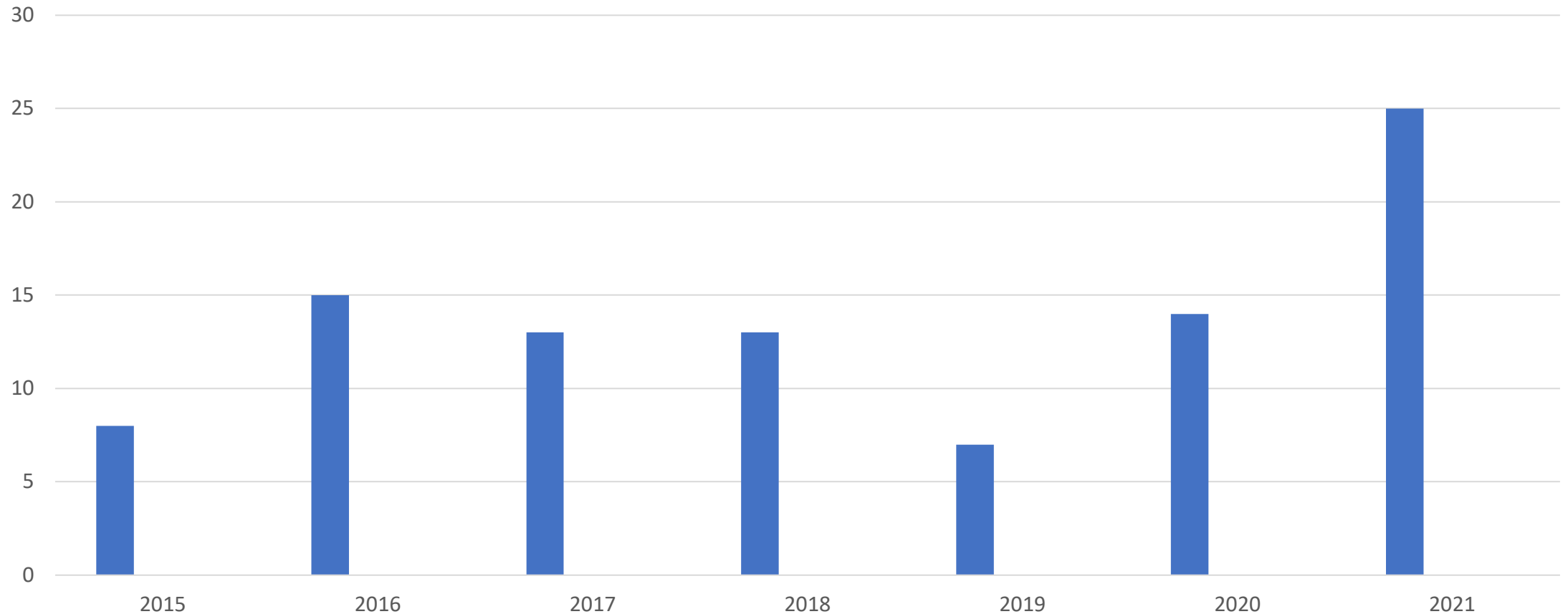
Systems

- 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

IOWA
HHS

HEALTHY
birthDAY
IMPROVING BIRTH OUTCOMES

Prenatal Care, Birth Outcomes, and Hospital Closures

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



1
2
3
4
5 1
6 2
7 3
8 4
9 5
10 6
1 1 7
2 2 8
3 3 9 1
4 4 0 2
5 5 1 3
6 6 2 4
7



I2D2 Vision

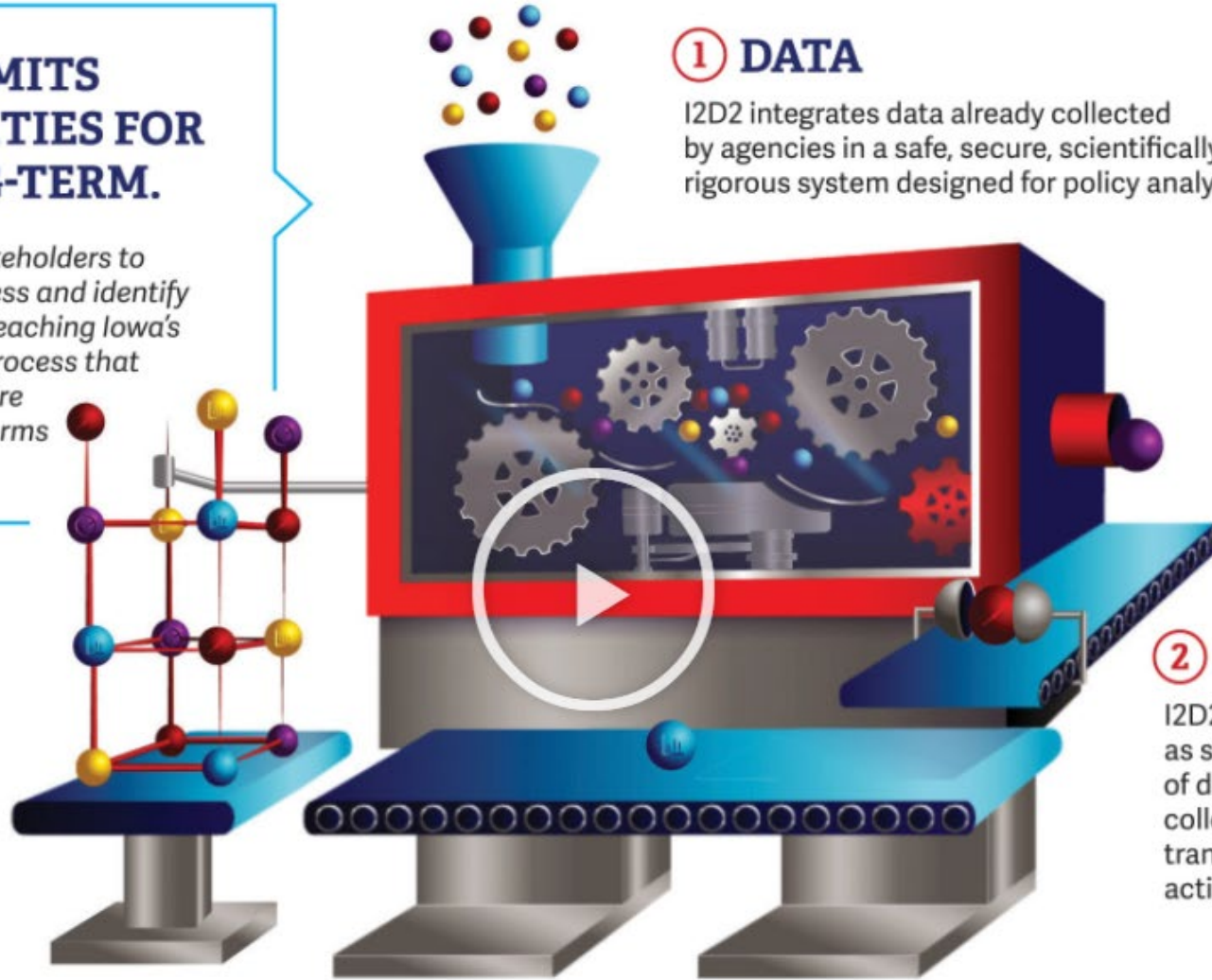
Our system of early childhood policies and programs across the state will be informed by rigorous analysis of timely, comprehensive, and integrated data from health, human services, and education systems. Implications of policy and program analysis will be considered in collaboration to direct services and resource allocation.



1
2
3
4
5 1
6 2
7 3
8 4
9 5
10 6
1 1 7
2 2 8
3 3 9 1
4 4 0 2
5 5 1 3
6 6 2 4

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.



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

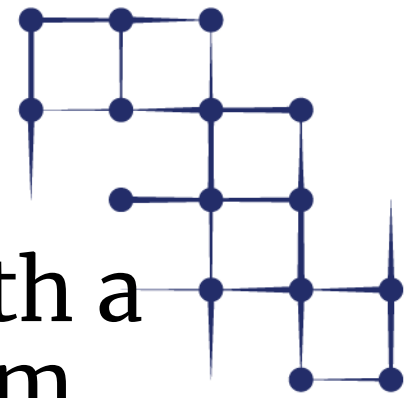
Interviews

- 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

99 47 57
00 58 68
1 68 79
2 78 80
8 191
2 02
3 13
4 4
5 6
6 7
7 8
8 9
9 0



Phase I: County-level Findings

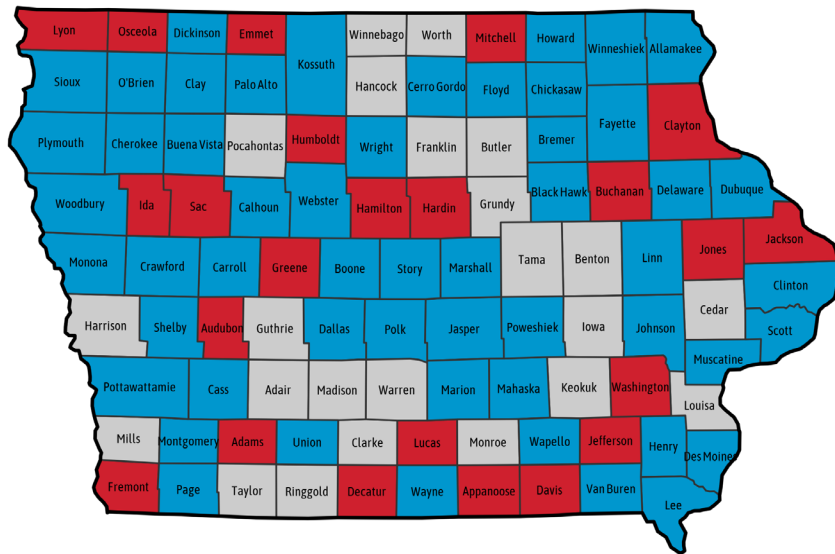


On average, counties with a unit closure differed from counties that have a birthing unit open:

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

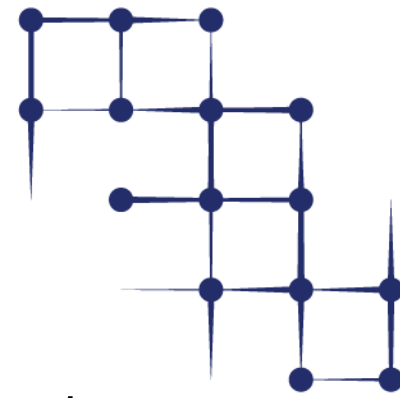
<https://i2d2.iastate.edu/wp-content/uploads/2022/09/2022-IDPH-Birthing-Hospitals-Report-Sept-2022.pdf>

Note: aggregate findings based on 1999-2017 birth records



■ Closed Only Hospital ■ Hospital Remains Open ■ Never had a Hospital

Phase I: Individual-level Analyses

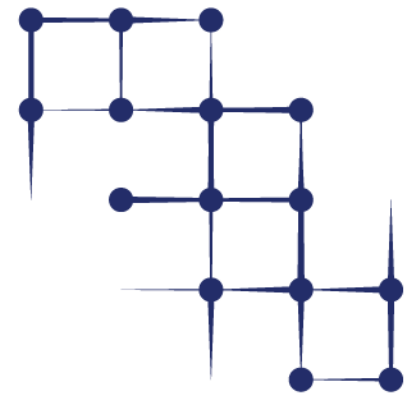
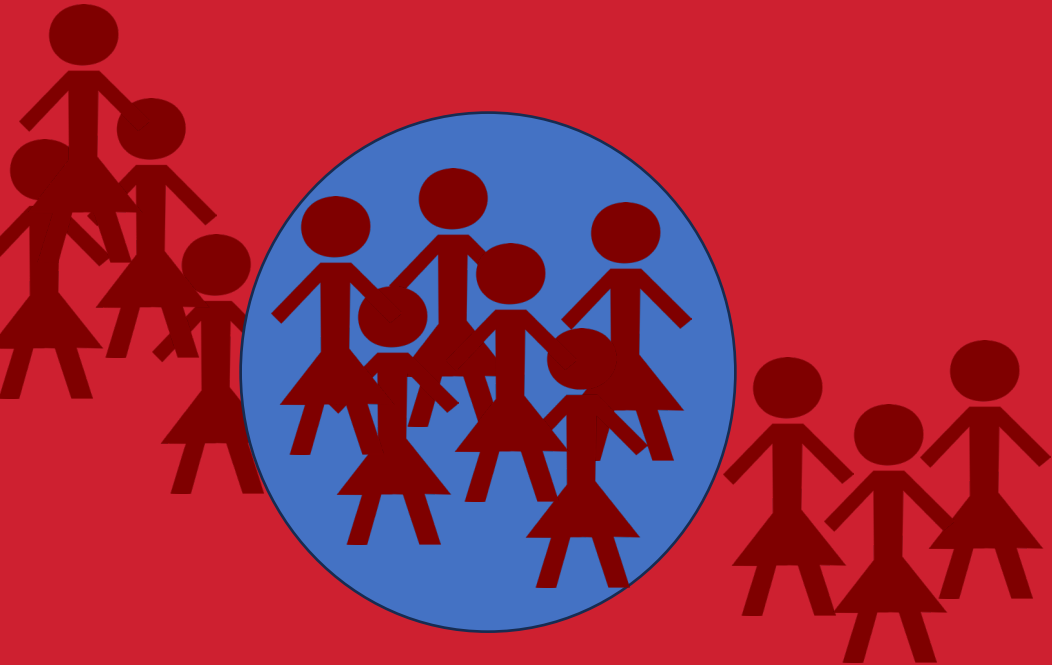


Variable	Definition
Adequate Prenatal Care	1 st visit in 1 st trimester and at least 4 visits overall
Preterm birth	< 36 weeks
Low birthweight	< 2,500 grams
Low maternal education	< 12 years (and at least 18 years old)
Teen mother	< 20 years at time of birth

- 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

Phase I: Individual-level Outcomes

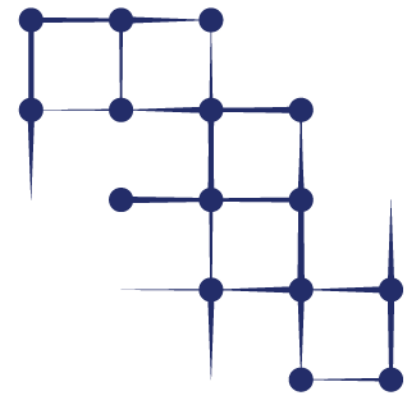
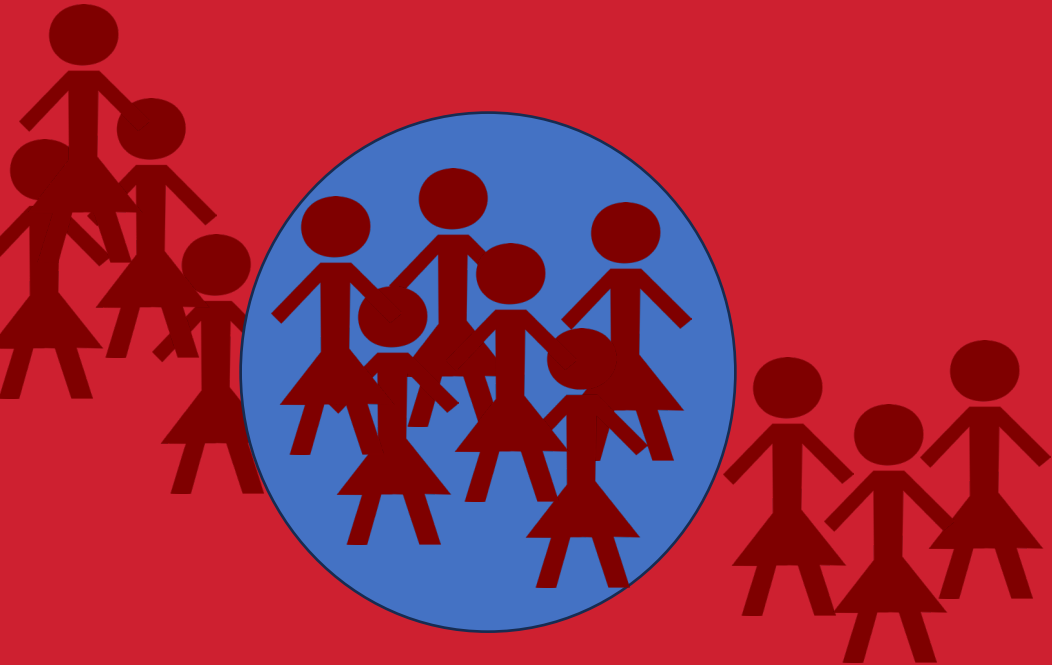
Sub-group analysis



- 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

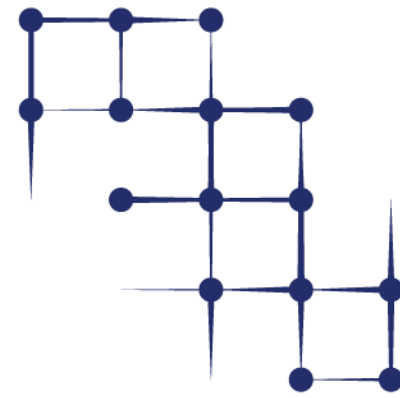
Sub-group Analysis



- 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



Analysis identified trends in the following outcomes:

- Inadequate prenatal care
- Birth weight
- Gestational age

Hospital closures



Inadequate
Prenatal Care



Negative impacts
on birth weight
and 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**

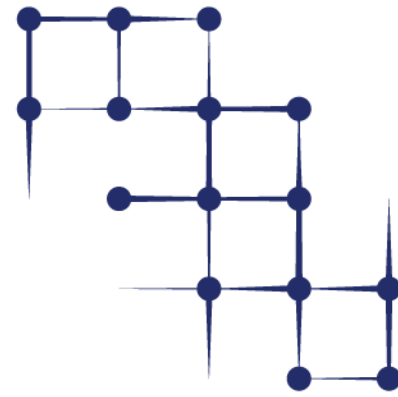


- WIC and Medicaid recipients

- **started prenatal care earlier**

- **have more visits overall**

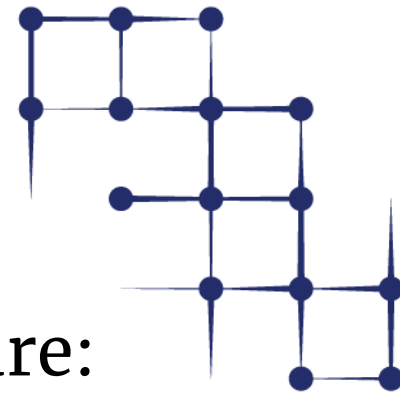
- **less likely to receive inadequate prenatal care**



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



• 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

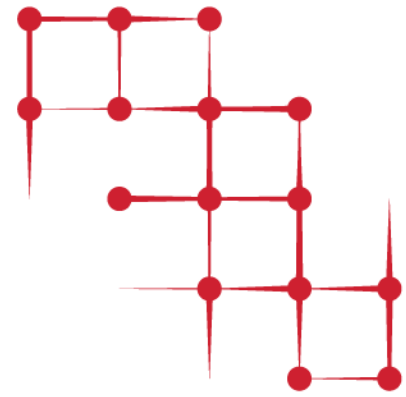


**FINDINGS SUGGEST →
WIC/Medicaid is buffering
negative prenatal care
effects for moms with
lower education**



Qualitative Results

9 interviews with 17 family support individuals



Theme 1	Transportation Challenges <ul style="list-style-type: none">• Burden on high-risk clients
Theme 2	Impacts on Prenatal Care <ul style="list-style-type: none">• Limited attendance and access• Induction observations
Theme 3	Insurance Challenges
Theme 4	Impacts on Relationships <ul style="list-style-type: none">• Hospital and community• Client and medical provider

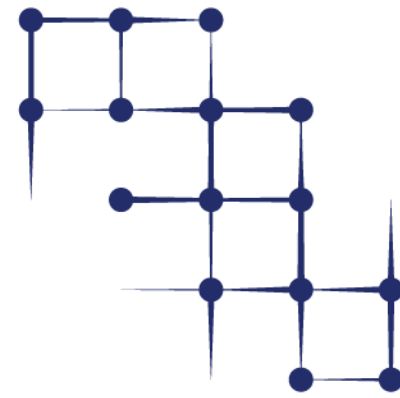
"[One client] refused to leave [the hospital] and slept in her car because she was afraid... because the first child they went home, and she almost gave birth in her car... because the 45 minute drive. So, with this child... she's like, I'm not leaving, so, she spent hours in the parking lot, and she ended up having it that night.

*" 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?"*

*"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."*

Transition to Phase II: Are there any differences after 2018?



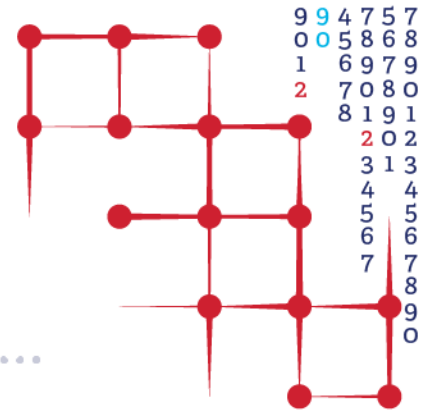
New Closures in Phase 2 Analysis

2019	2020	2021
Marshall	Chickasaw	Monona
Van Buren	Henry	
	Montgomery	
	Muscatine	

- 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

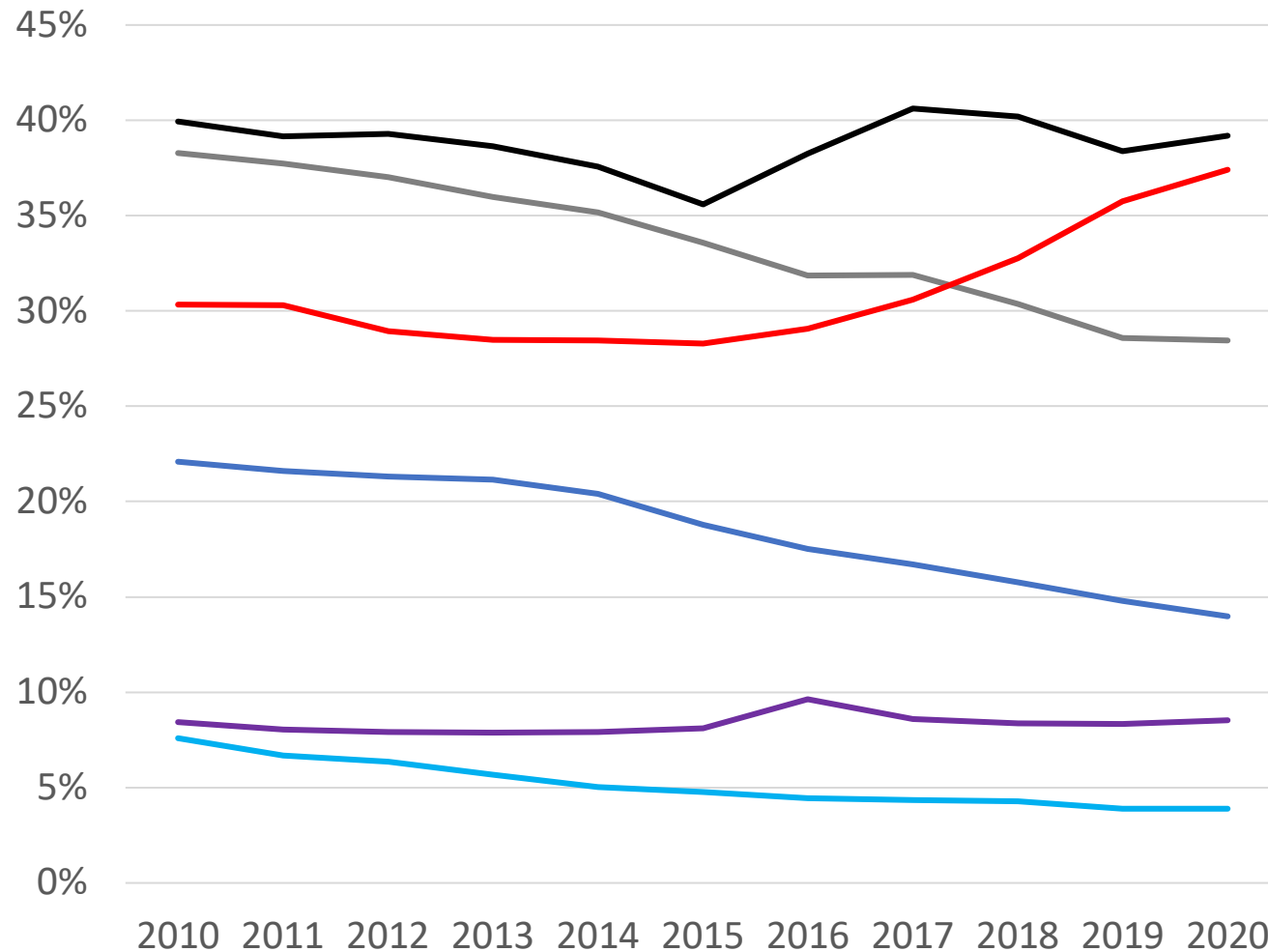


Statewide Trends



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%)



- Tobacco Use
- Teen Pregnancy
- WIC Receipt
- Medicaid Receipt
- Inadequate PC
- Labor Induction

Summary of Phase II Findings



Closure impacts preterm births (but not birthweight)



Moms with low education doing BETTER than pre-2018

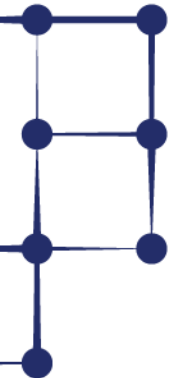
+ starting care earlier if there's a closure

+ attending more total visits if there's a closure

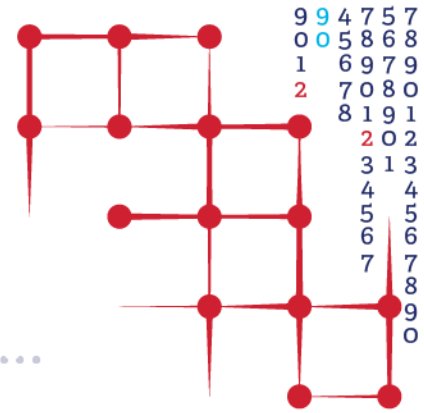
+ odds of inadequate care are NO DIFFERENT



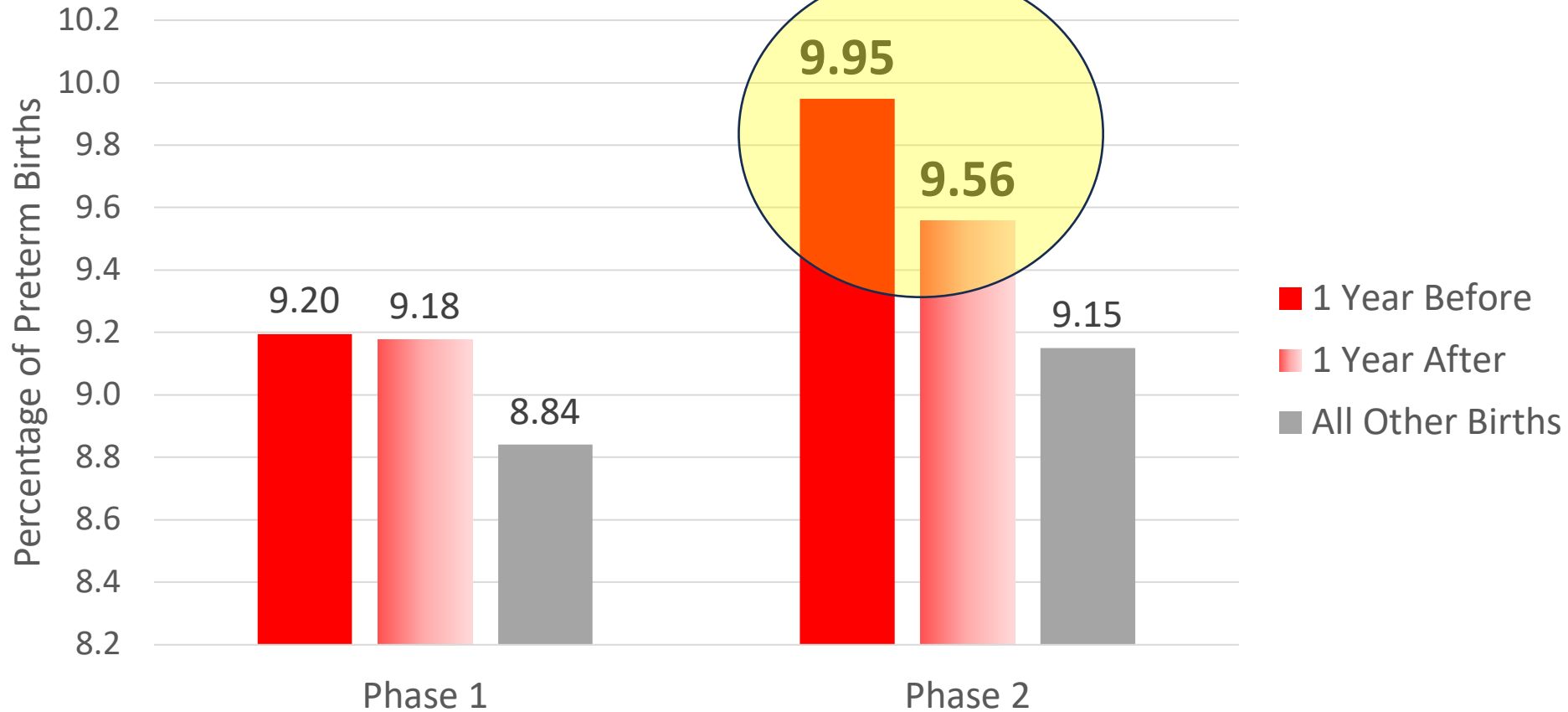
Loss of buffer effect for Medicaid & WIC participation



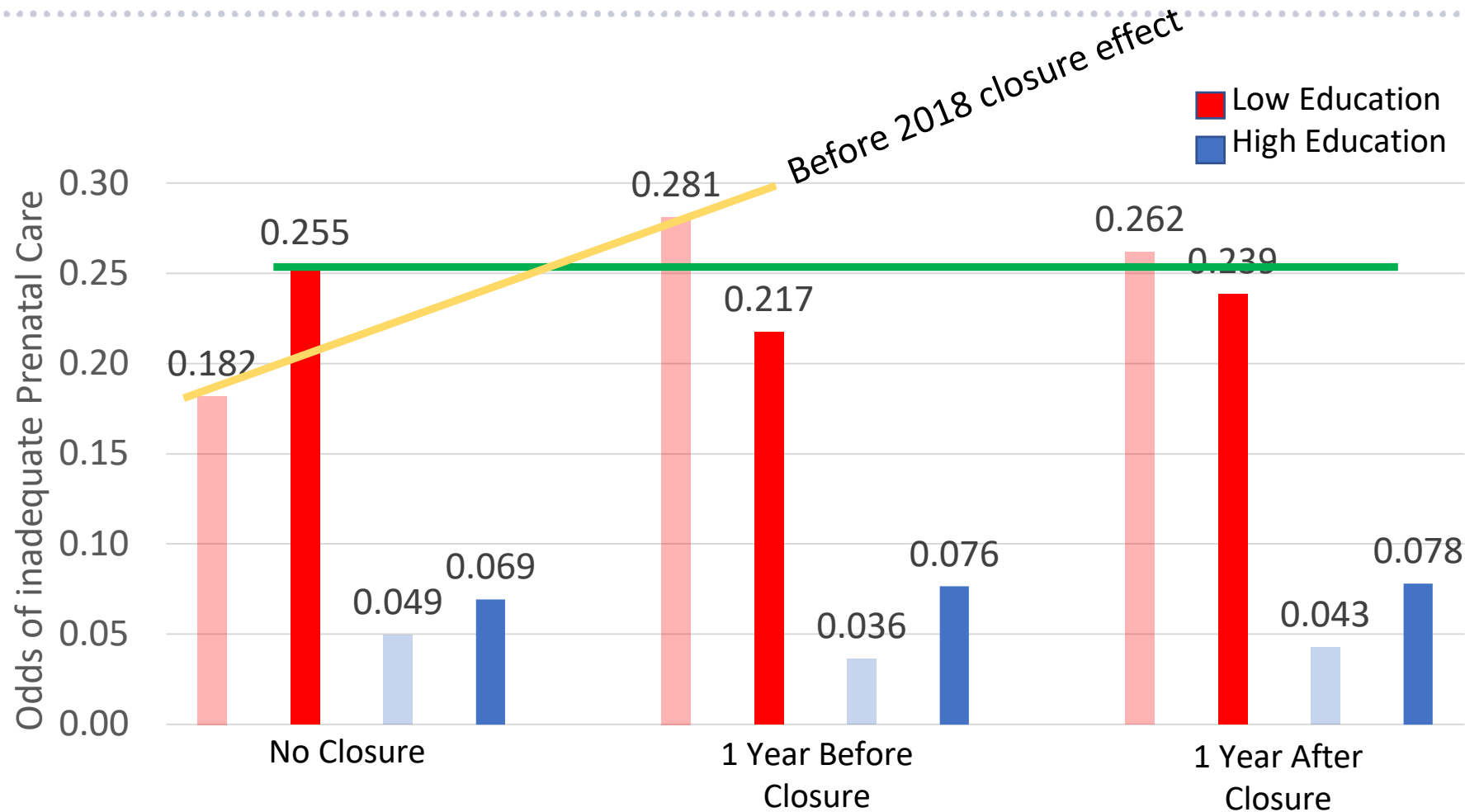
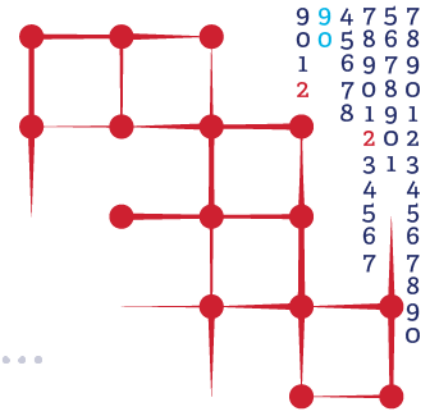
Higher Rates of Preterm Births



Early (Preterm) Birth by Closure Status



Inadequate Prenatal Care by Maternal Education



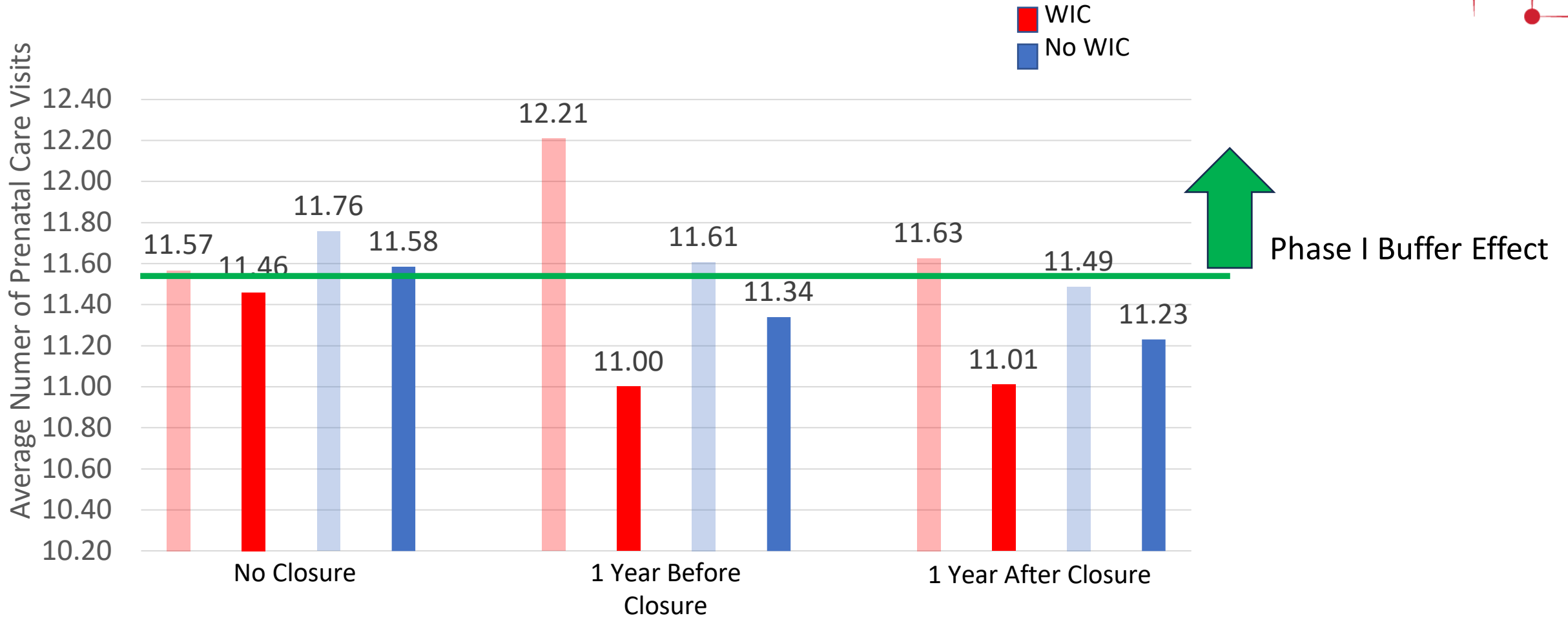
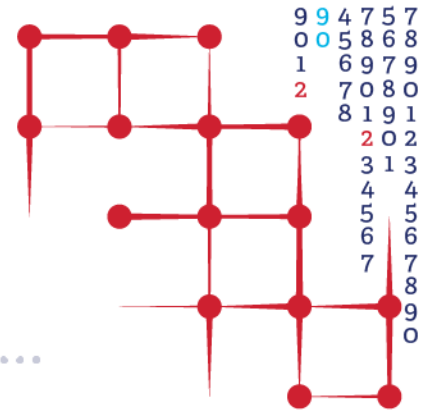
POST 2018:

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



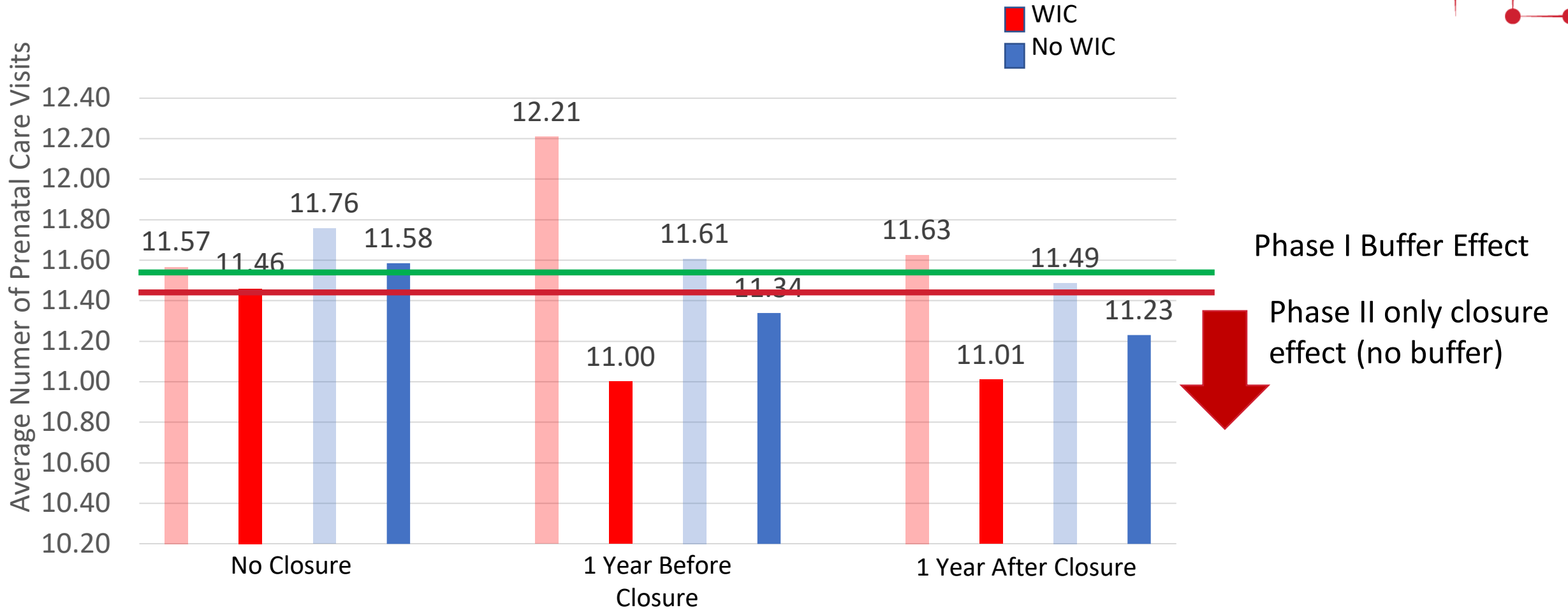
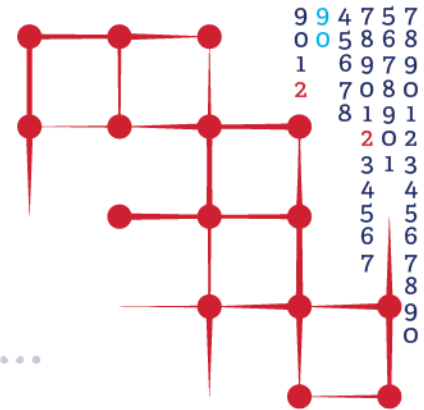
Note: Left bar of the same color is always Phase I, right bar is Phase II

Total Visits by WIC



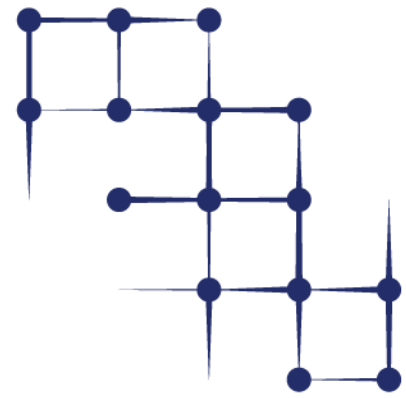
Note: Left bar of the same color is always Phase I, right bar is Phase II

Total Visits by WIC



Note: Left bar of the same color is always Phase I, right bar is Phase II

Summary of Phase II vs Phase I



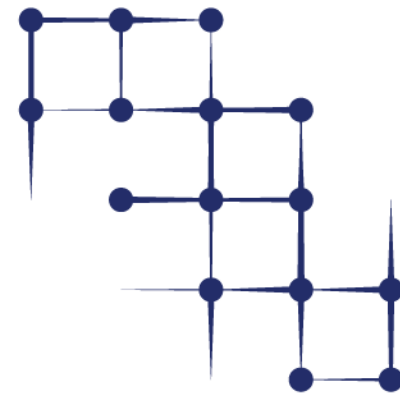
What happens when the only birth unit closes in a county?



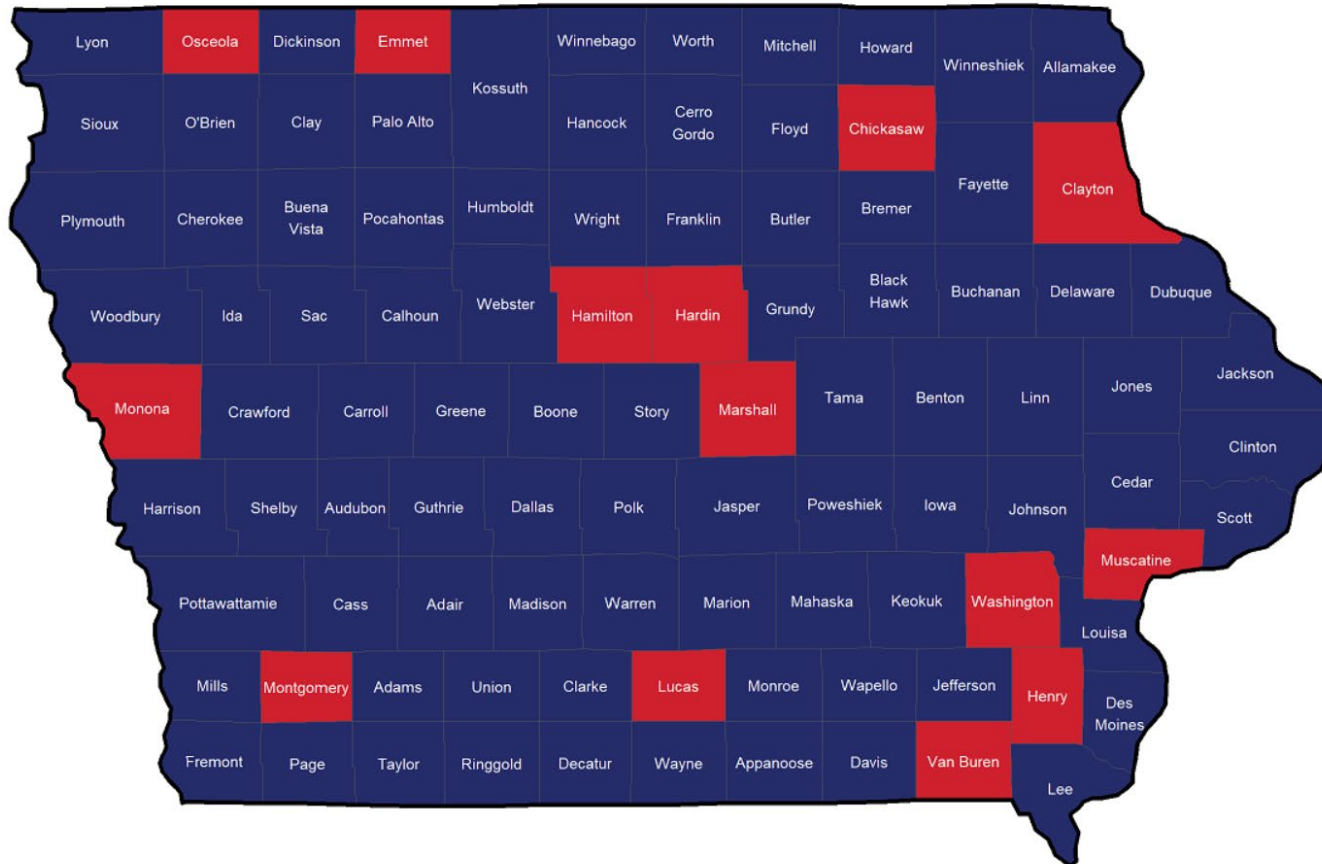
- Main effects on preterm birth
- Moms with Low Education doing BETTER in recent years with closures
- Potential buffering effects for women participating in Medicaid and Medicaid, particularly for those with low education
- Amplification effects of closures for ~~mothers with less than a high school degree, older mothers, mothers with previous children~~



Phase III: What is the difference between counties with positive vs. less positive effects?



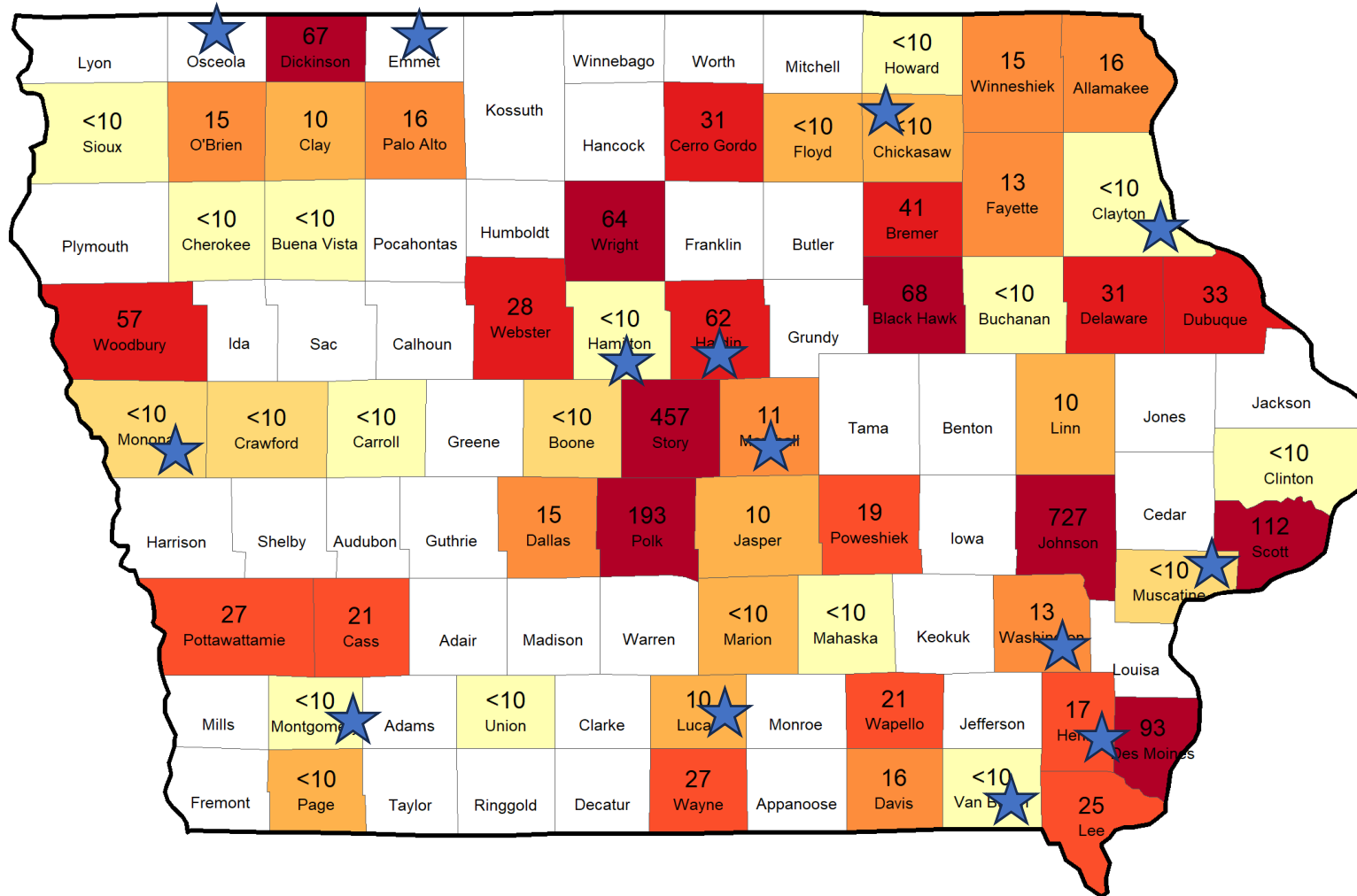
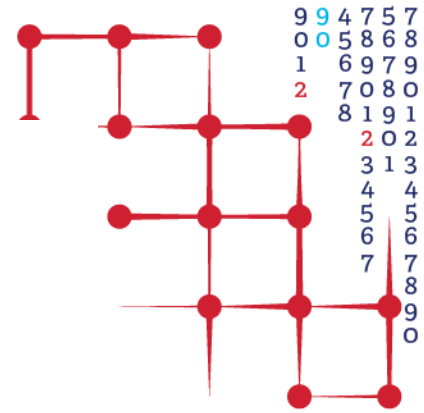
Birthing Unit Closures 2018-2022



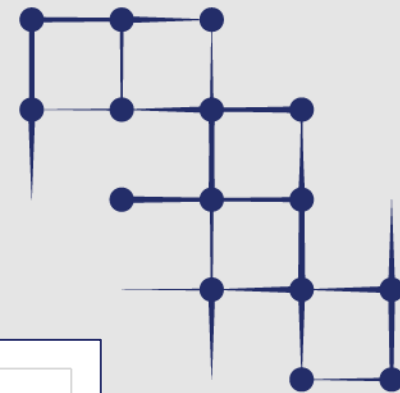
- Collect program-level information across counties (state interventions, pilot work, county-health emphases, etc.)
- Matched pair counties – collect qualitative information from families and providers (focus groups)

Births in Iowa

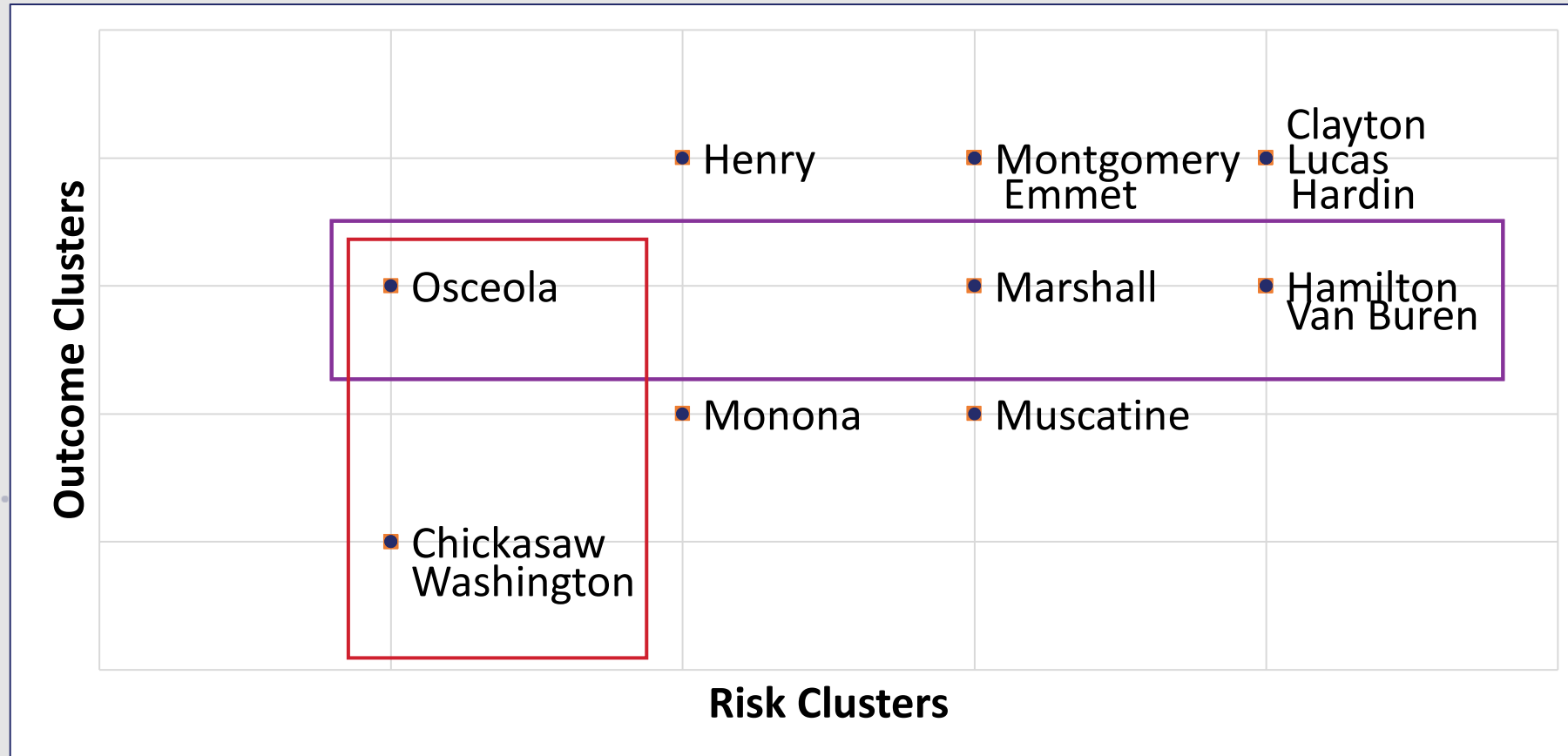
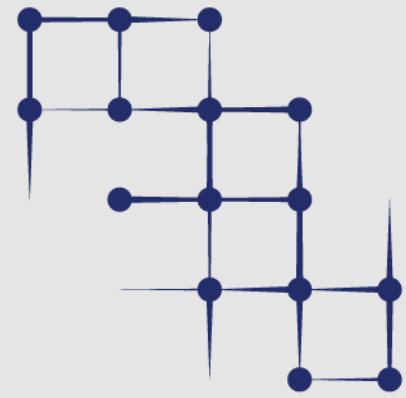
To Residents of Counties with Birthing Unit Closures 2018-2022



Finding “matched pairs”



Finding “matched pairs”

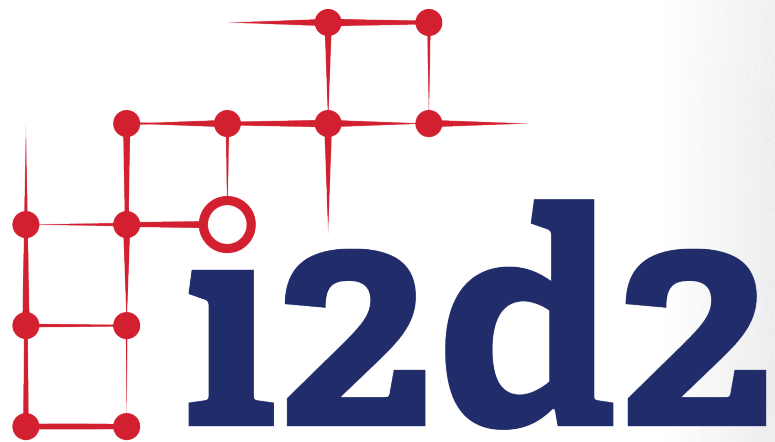


Counties in the same row share the same patterns of outcomes.

Counties in the same column share the same patterns of child and family risk characteristics.



i2d2@iastate.edu



Iowa's Integrated Data System
for Decision-Making



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

IOWA
HHS

HEALTHY
birthDAY
IMPROVING BIRTH OUTCOMES

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

IOWA
HHS

HEALTHY
birthDAY
IMPROVING BIRTH OUTCOMES

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

Preconception

Prenatal care

Birth

Postpartum

Well-
person/primary
care

Gynecologic
problems

Contraception

Newborn

Standards for the Practice of Midwifery



STANDARD I

Midwifery Care Is Provided by Qualified Practitioners.

STANDARD IV

Midwifery Care Occurs Within the Context of the Family, Community, History, and a System of Health Care.

STANDARD II

Midwifery Care Is Composed of Knowledge, Skills, and Clinical Judgments That Foster the Delivery of Evidence-Informed, Client-Centered Care.

STANDARD V

Midwifery Care Is Documented in a Format That Is Accessible, Confidential, and Complete.

STANDARD III

Midwifery Care Supports Individual Rights and Self-Determination and Respects Human Dignity, Individuality, and Diversity.

STANDARD VI

Midwifery Care Is Evaluated According to an Established Process for Quality Management.

Other Midwife Credentials

Certified Midwife

- Same graduate education, board examination, and scope of practice as CNMs
- Have an undergraduate background other than nursing
- Credential not recognized in Iowa

Certified Professional Midwife

- Apprenticeship education
- A variety of educational requirements depending on the certifying body person chooses
- Passed legislation to recognize CPMs in Iowa

University of Iowa Hospitals and Clinics Nurse-Midwifery Education Program and Clinical Practice

Program Development Timeline



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.”

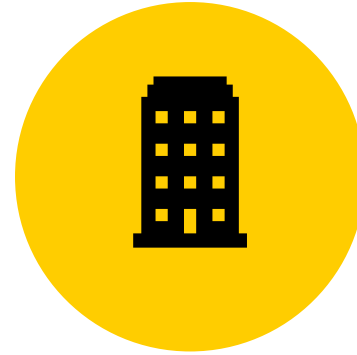
Program Strengths



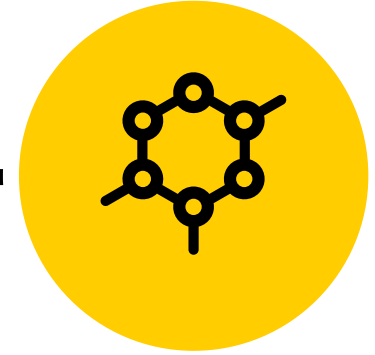
**Strong Clinical
Focus**



**3 Faculty to 1
Student Ratio**



**Interdisciplinary
Experience**



**Focus on Rural
Health and Health
Disparities**

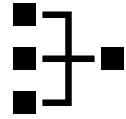
Program Quick Facts



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



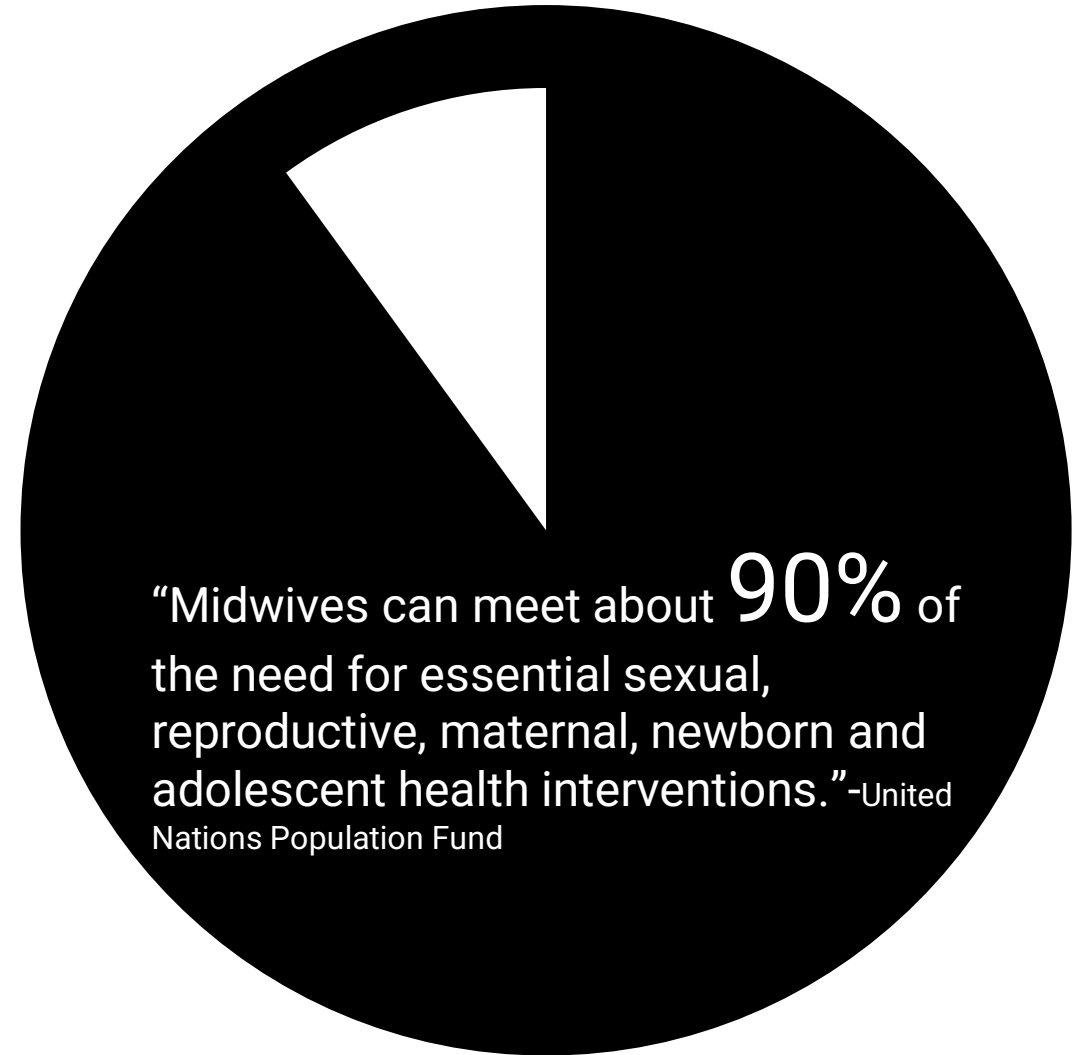
- VBAC for people with 1 or 2 cesareans
- Seamless collaboration with the physician team
- Robust GYN practice



- CNM faculty involved in department and institutional committees
- Academically productivity
- 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.

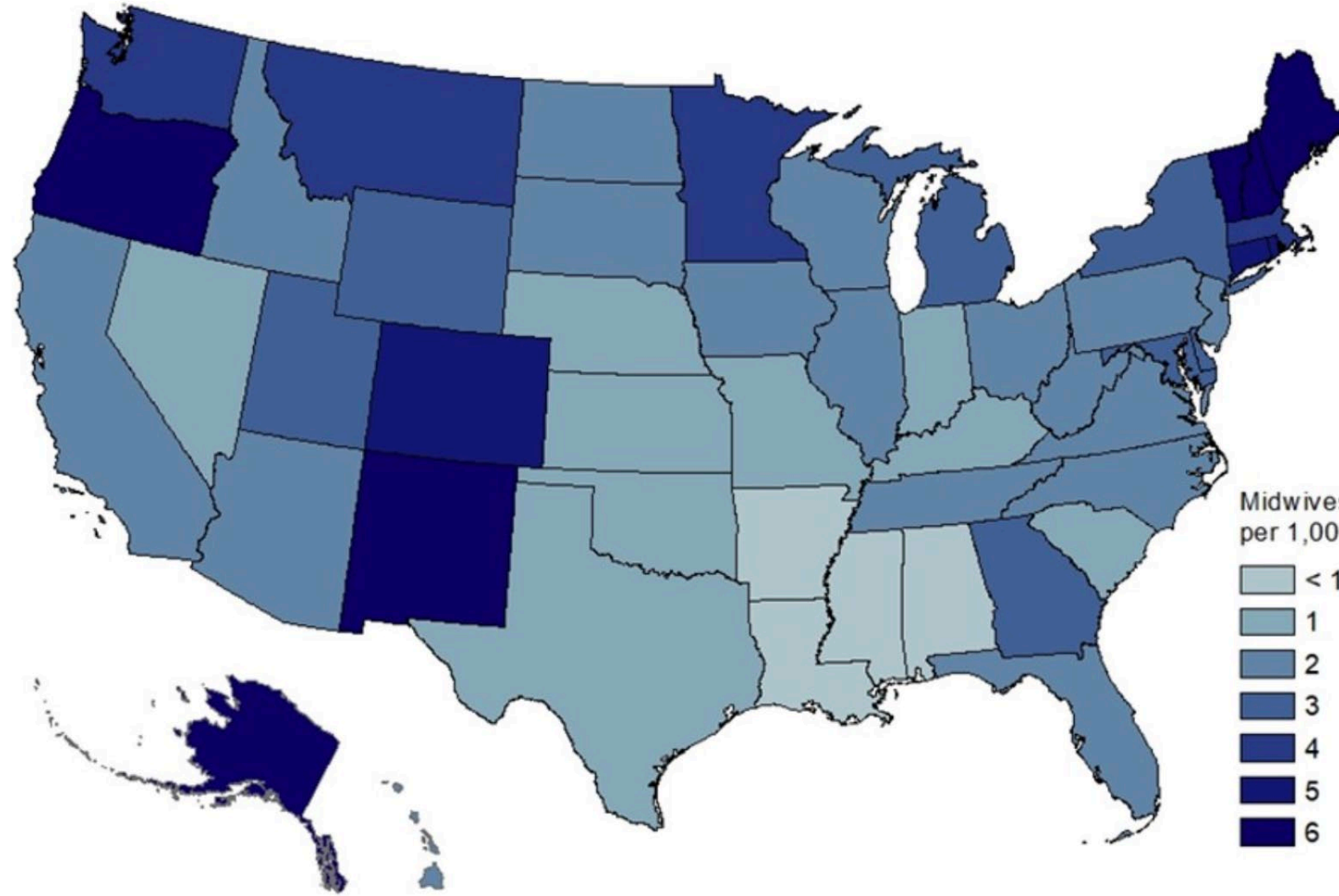
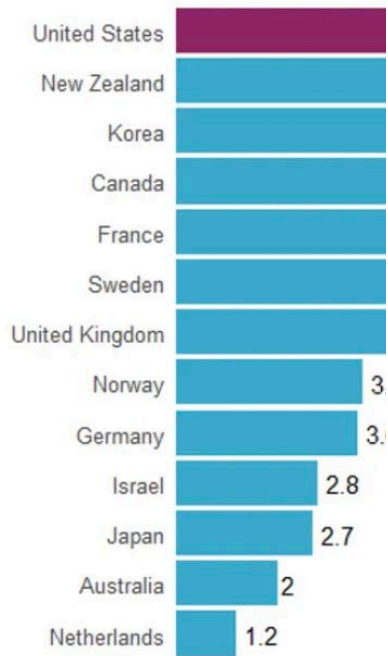


<https://www.unfpa.org/sowmy>

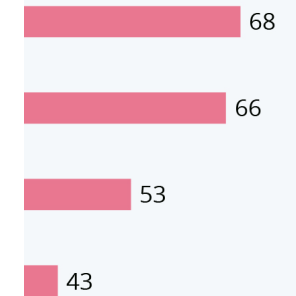
U.S. Midwife Workforce Far Behind Globally

US Maternal Mortality is Extremely High Among High-Income OECD Nations

Density of Midwives by State, 2020



Midwives per 1,000 Births in 2018



7, data for U.S. from 2015



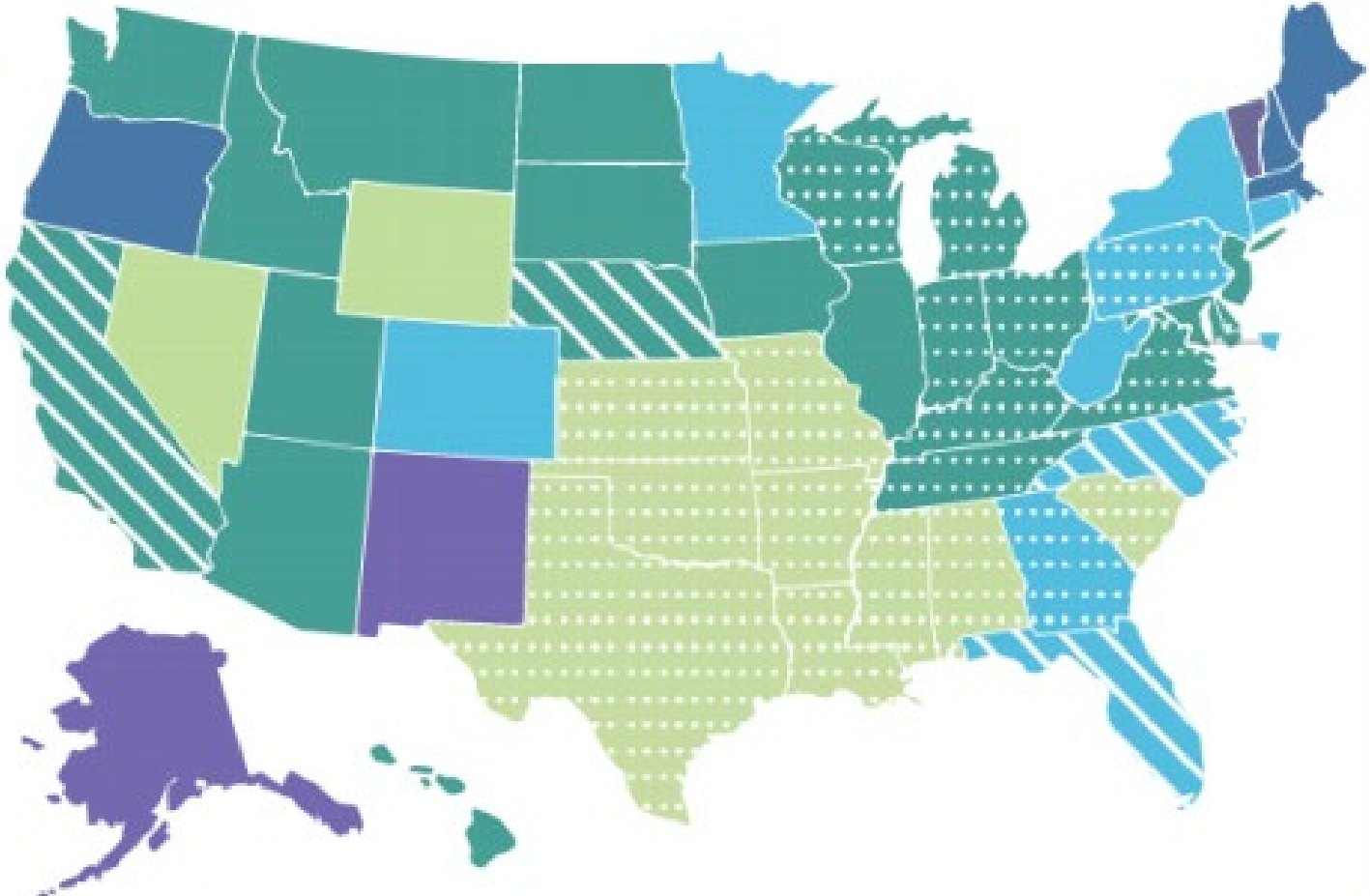
Figure 3. U.S. Births Attended by Nurse-Midwives and State Variation of Scope of Practice for CNM Care, 2018

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



Source: Institute for Medicaid Innovation (2020). *Improving Maternal Health Access, Coverage, and Outcomes in Medicaid*.

Institute for Medicaid Improvement- Midwifery-Led Care Series

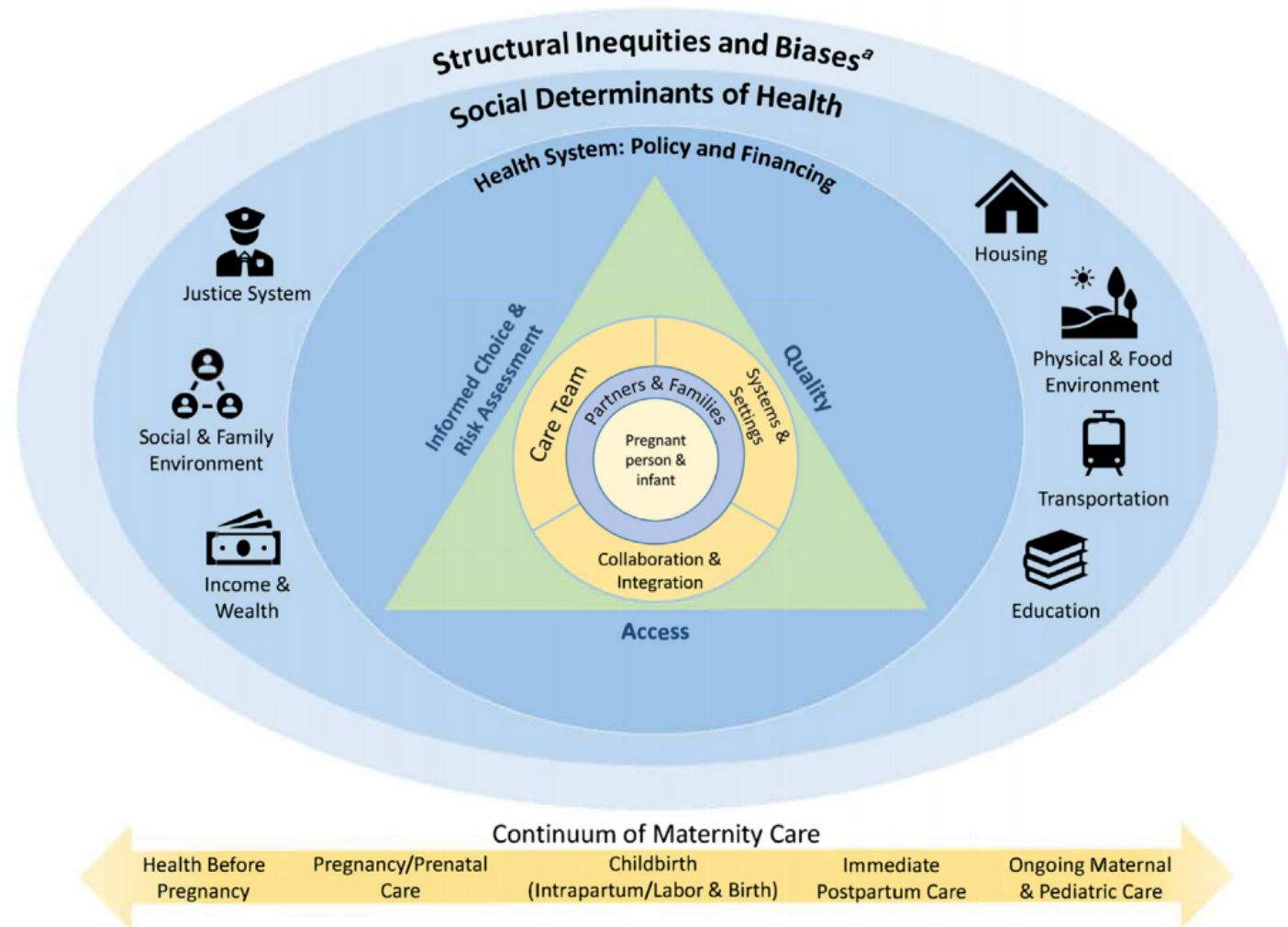


Figure 1. Interactive continuum of maternity care: A conceptual framework. *Note.* ^a“Structural inequities and biases include systemic and institutional racism. Interpersonal racism and implicit and explicit bias underlie the social determinants of health for women of color” (National Academies of Sciences, Engineering, and Medicine, 2020, p. S-1). From *Birth Settings in America: Improving Outcomes, Quality, Access, and Choice*, by the National Academies of Sciences, Engineering, and Medicine, 2020 (<https://doi.org/10.17226/25636>). The National Academies Press. Copyright © 2020 National Academies of Sciences, Engineering, and Medicine. Used with permission.

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

REVERSING THE U.S. MATERNAL MORTALITY CRISIS

A Report of the Aspen Health Strategy Group



Foreword by Kathleen Sebelius and Tommy G. Thompson

Edited by Alan R. Weil and Alexandra J. Reichert

Five Themes

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 Big Ideas

Make a National Commitment to Improvement

- Public and private cooperation
- We need ambitious goals
- Challenge grants from CMMI

Build and Support Community Care Models

- Midwifery, doula and community worker care
- Address workforce shortages and lack of people of color in these roles

Redesign Insurance Around Women's Needs

- Medicaid extension to 12 months PP
- All states should accept ACA Medicaid expansion

Tackle Racism that Undermines Women-Centered Maternity Care

- Quality metrics should be disaggregated by race
- Workforce
- Anti-racism and bias training

Invest in Research, Data and Analysis

- Standardize reporting structure
- Data collection by hospitals, group practices, states, etc
- Funding

Key Policy Recommendations for Midwives

Midwifery Student Support

- Consider midwifery students for similar funding and loan repayment programs as other professions that are experiencing shortages

Midwifery Education Program

- Midwifery programs are expensive to operate
- Consider public-private partnership to support program operation and administration

Midwifery Practice

- Eliminate institutional barriers to privileging and admitting patients
- Eliminate certificate of need for free-standing birth centers

Insurance Coverage

- Increase Medicaid reimbursement rate for midwives to 100%
- Extend Medicaid coverage to 12 months postpartum

Midwifery at the Table

- Ensure midwives are involved in policy decisions for reproductive healthcare
- Invite midwives to participate in quality initiatives

<https://www.gao.gov/assets/gao-23-105861-highlights.pdf>

Thank You

→ www.uihc.org



lastascia-coleman@uiowa.edu



<https://uihc.org/nurse-midwifery-education-program>

OBSTETRIC CRISIS IN IOWA?

DEMOGRAPHIC PROBLEM?

WORKFORCE PROBLEM?

DISTRIBUTION PROBLEM?

QUALITY OUTCOMES PROBLEM?

Table 1

Lyon	Osceola	Dickinson	Emmet		Winnebago	Worth	Mitchell	Howard	Winneshiek				< 10,000
				Kossuth						Allamakee			10-20,000
	Obrien	Clay	Palo Alto		Hancock	Cerro Gordo	Floyd	Clay	Fayette				20-30,000
										Clayton			30-50,000
Plymouth	Cherokee	Buena Vista	Pocahontas	Humboldt	Wright	Franklin	Butler	Bremer	Fayette				50-100,000
											Dubuque		>100,000
Woodbury	Ida	Sac	Calhoun	Webster	Hamilton	Hardin	Grundy	Blackhawk	Buchanan	Delaware		Jackson	>500,000
Mills	Crawford	Carroll	Greene	Boone	Story	Marshall	Tama	Benton	Linn	Jones		Clinton	
Harrison	Shelby	Audabon	Guthrie	Dallas	Polk	Jasper	Poweshiek	Iowa	Johnson	Cedar		Scott	
Pottawattamie		Cass	Adair	Madison	Warren	Marion	Mahaska	Keokuk	Washington		Henry		
Mills	Mercury	Adams	Union	Clarke	Lucas	Monroe	Wapello		Jefferson		Des Moines		
Fremont	Page	Taylor	Ringold	Decatur	Wayne	Appanoose	Davis		Van Buren	Lee			

6 hospitals
 Reported 0
 <50 deliveries
 In 2022

Table 1

Lyon	Osceola	Dickinson	Emmet		Winnebago	Worth	Mitchell	Howard	Winneshiek			
				Kossuth						Allamakee		
Sioux	O'Brien	Clay	Palo Alto		Hancock	Cerro Gordo	Floyd	Chickasaw	Fayette			
										Clayton		
Plymouth	Cherokee	Buena Vista	Pocahontas	Humboldt	Wright	Franklin	Butler	Bremer	Fayette			
											Dubuque	
Woodbury	Ida	Sac	Calhoun	Webster	Hamilton	Hardin	Grundy	Blackhawk	Buchanan	Delaware		Jackson
Monona	Crawford	Carroll	Greene	Boone	Story	Marshall	Tama	Benton	Linn	Jones		Clinton
Harrison	Shelby	Audabon	Guthrie	Dallas	Polk	Jasper	Poweshiek	Iowa	Johnson	Cedar		Scott
Pottawattamie			Cass	Adair	Madison	Warren	Marion	Mahaska	Keokuk	Washington		Louisa
										Henry		
Mills	Montgomery	Adams	Union	Clarke	Lucas	Monroe	Wapello		Jefferson			Des Moines
Fremont	Page	Taylor	Ringold	Decatur	Wayne	Appanoose	Davis		Van Buren	Lee		

- 99 Counties
- 20 Urban
- 79 Rural
- 1 Metropolitan

Table 1

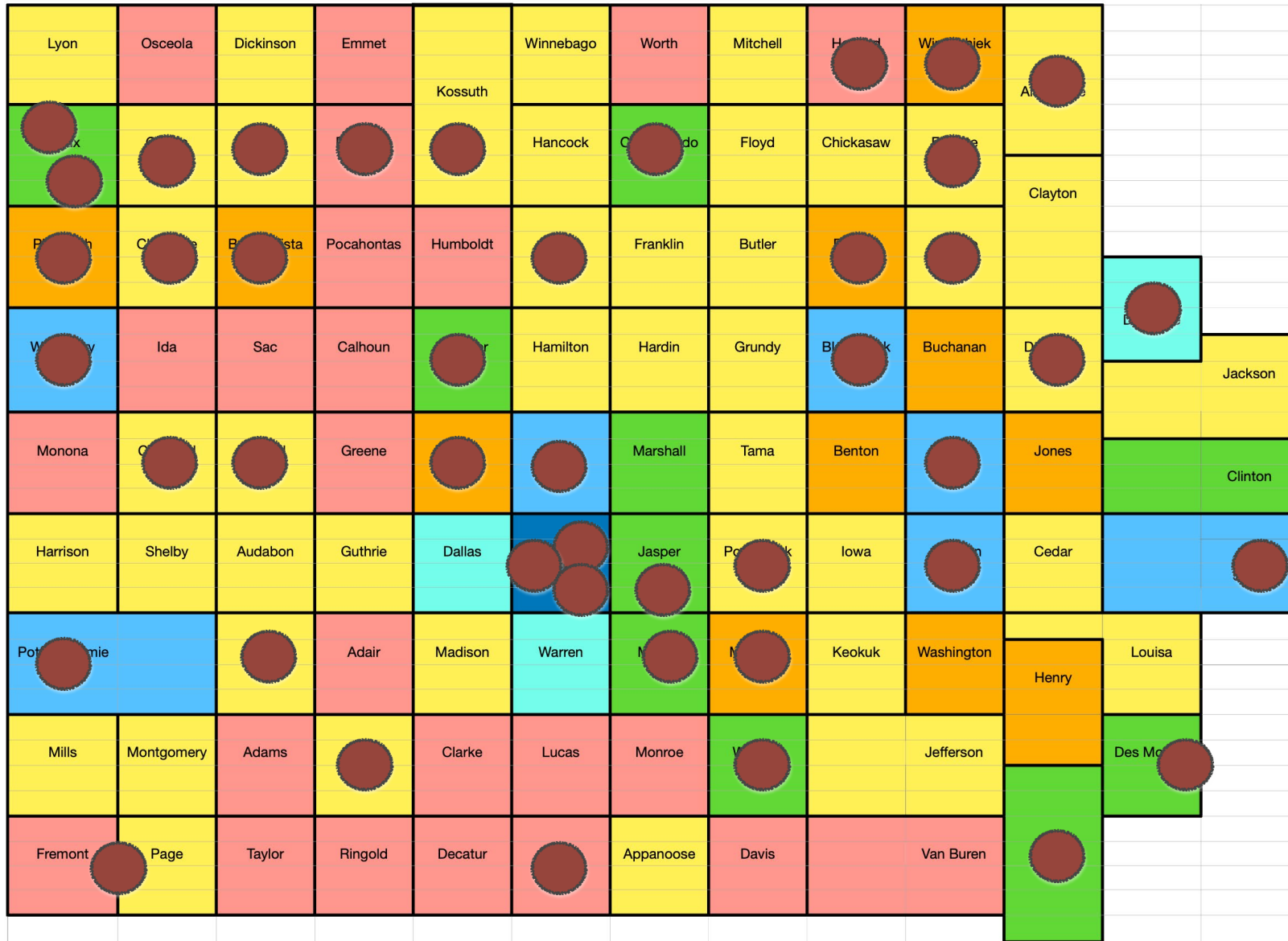
Lyon	Osceola	Dickinson	Emmet		Winnebago	Worth	Mitchell	Howard	Winneshiek				
				Kossuth						Allamakee			
Sioux	O'Brien	Clay	Palo Alto		Hancock	Cerro Gordo	Floyd	Chickasaw	Fayette				
										Clayton			
Plymouth	Cherokee	Buena Vista	Pocahontas	Humboldt	Wright	Franklin	Butler	Bremer	Fayette				
											Dubuque		
Woodbury	Ida	Sac	Calhoun	Webster	Hamilton	Hardin	Grundy	Blackhawk	Buchanan	Delaware		Jackson	
Monona	Crawford	Carroll	Greene	Boone	Story	Marshall	Tama	Benton	Linn	Jones		Clinton	
Harrison	Shelby	Audabon	Guthrie	Dallas	Polk	Jasper	Poweshiek	Iowa	Johnson	Cedar		Scott	
Pottawattamie			Cass	Adair	Madison	Warren	Marion	Mahaska	Keokuk	Washington		Henry	Louisa
Mills	Montgomery	Adams	Union	Clarke	Lucas	Monroe	Wapello		Jefferson			Des Moines	
Fremont	Page	Taylor	Ringold	Decatur	Wayne	Appanoose	Davis		Van Buren		Lee		

**18 of 20 Urban
Counties with
Birthing Centers**

**26 of 82 CAH
Hospitals with
Birthing
Centers**

**3 of 5 Rural
Hospitals
With Birthing
Centers**

Table 1



Distribution of Birthing Centers In Iowa as of 2023

Total Deliveries in Iowa

2020 - 36,584

2022 - 36,253

Total Deliveries in Urban Hospitals

2020 - 31,063 - 84.9%

2022 - 30,938 - 85.4%

Total Deliveries CAH Hospitals

2020 - 4,826 -13.2%

2022 - 4,658 -12.8%

Total Deliveries in Rural Hospitals

2020 - 695 - 1.9%

2022 - 657 - 1.8%

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

IOWA
HHS

HEALTHY
birthDAY
IMPROVING BIRTH OUTCOMES

BREAK

10:30-10:45

IOWA
HHS

HEALTHY
birthDAY
IMPROVING BIRTH OUTCOMES

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





UNIVERSITY OF MINNESOTA
RURAL HEALTH
RESEARCH CENTER

Access to Rural Maternity Care: The Role of Geography and Equity

Julia D. Interrante, PhD, MPH

Disclosure Statement

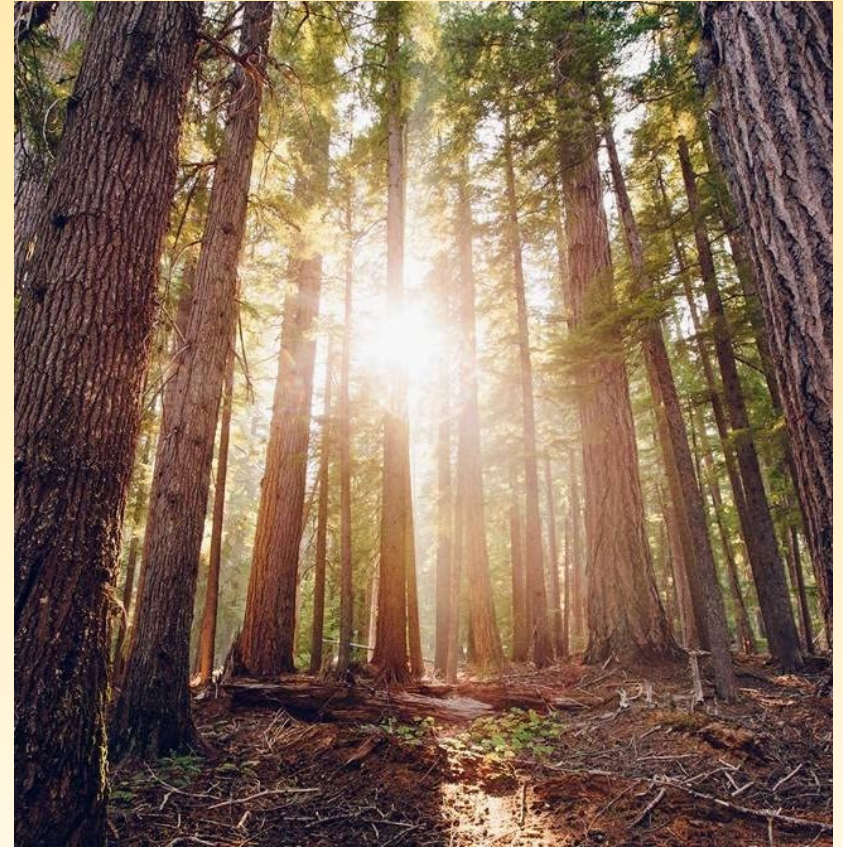
- Relevant to the content of this educational activity, I do not have any financial conflicts with ineligible companies to disclose.



UNIVERSITY OF MINNESOTA
RURAL HEALTH
RESEARCH CENTER

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.



UNIVERSITY OF MINNESOTA
RURAL HEALTH
RESEARCH CENTER

Funding Acknowledgement



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.



UNIVERSITY OF MINNESOTA
RURAL HEALTH
RESEARCH CENTER

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.

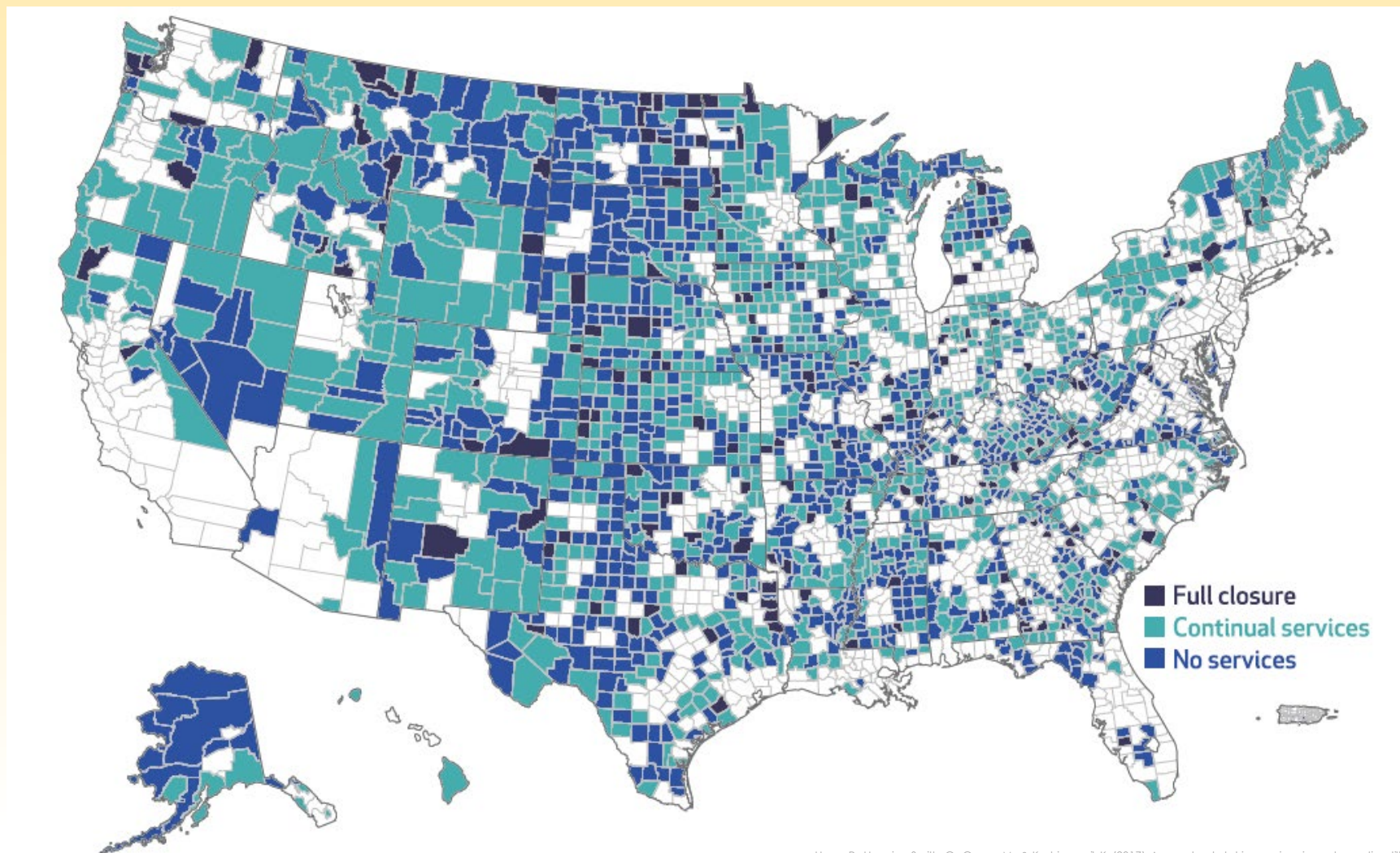


Changes to maternity care in rural U.S. communities



UNIVERSITY OF MINNESOTA
RURAL HEALTH
RESEARCH CENTER

More than half of rural counties have no place to give birth, 2004-2014

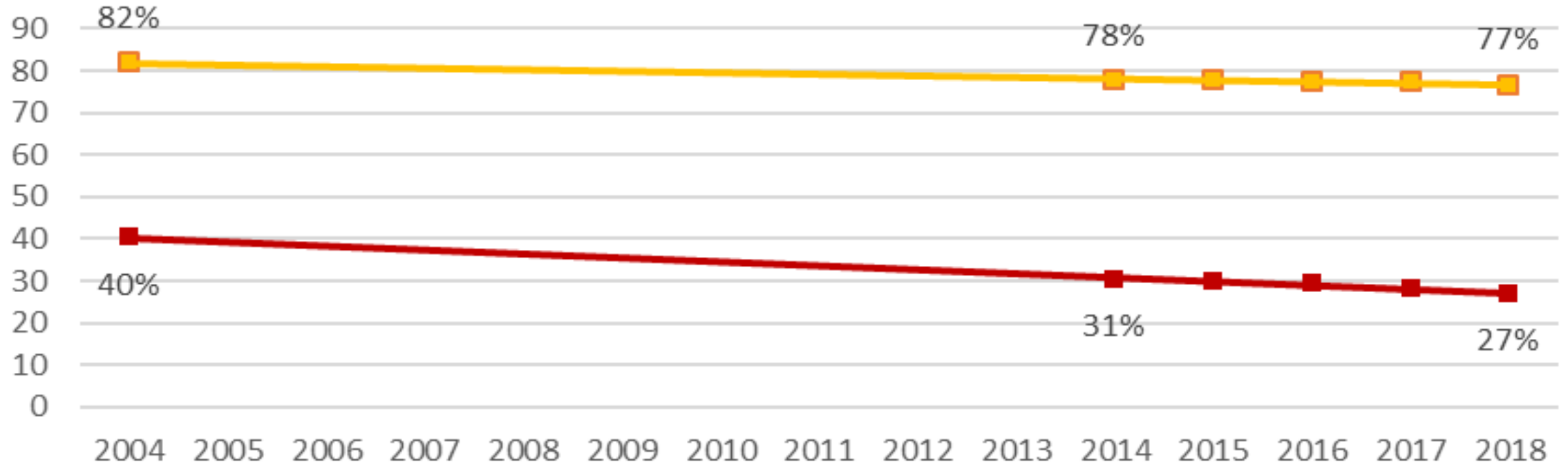


UNIVERSITY OF MINNESOTA
RURAL HEALTH
RESEARCH CENTER

Hung, P., Henning-Smith, C., Casey, M., & Kozhimannil, K. (2017). Access to obstetrics services in rural counties still declining, with 9 percent losing services, 2004-2014. *Health Affairs*, 36(9), 1663-1671.

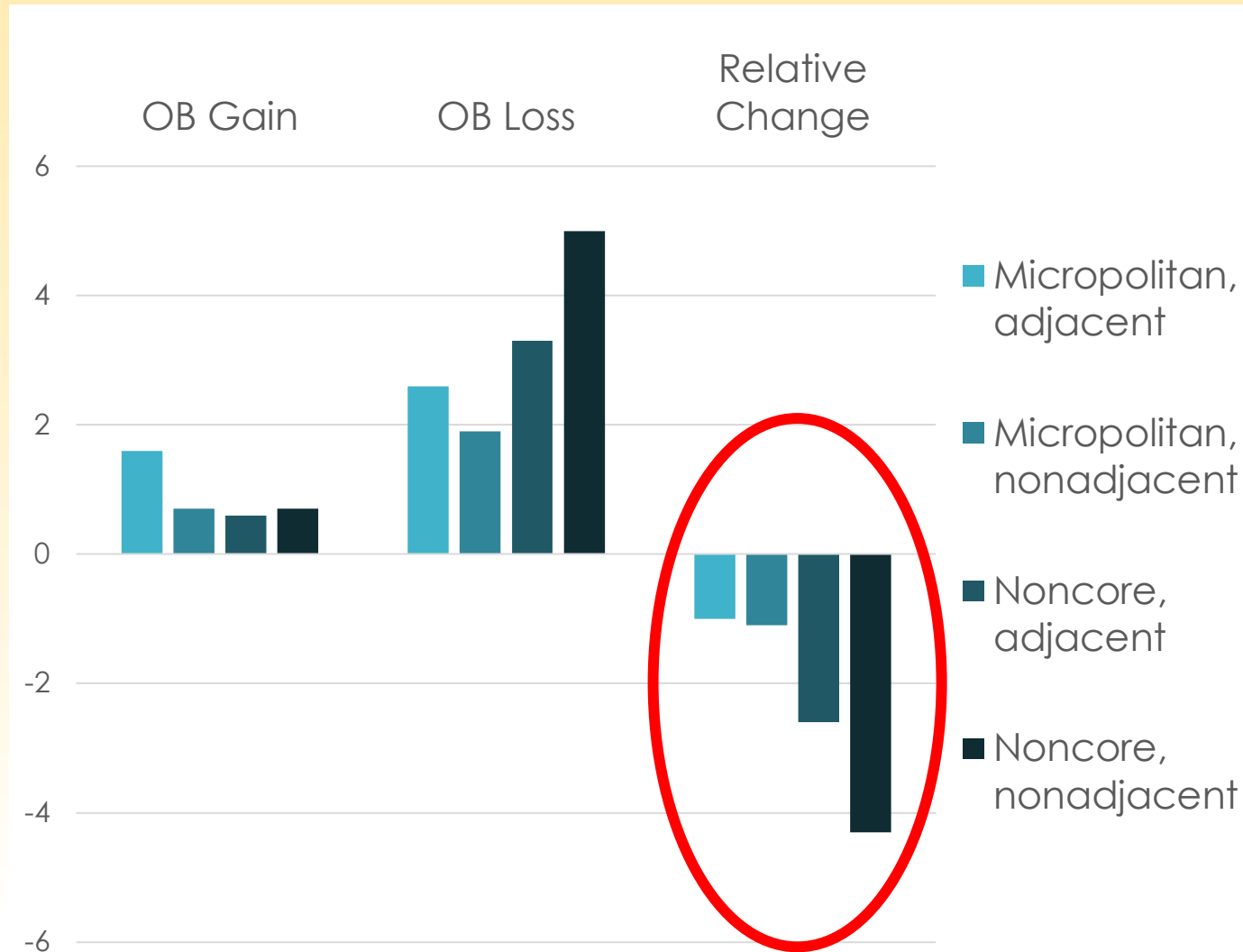
What has happened since 2014?

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



UNIVERSITY OF MINNESOTA
RURAL HEALTH
RESEARCH CENTER

Rural Hospitals and Rural Births, 2018

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

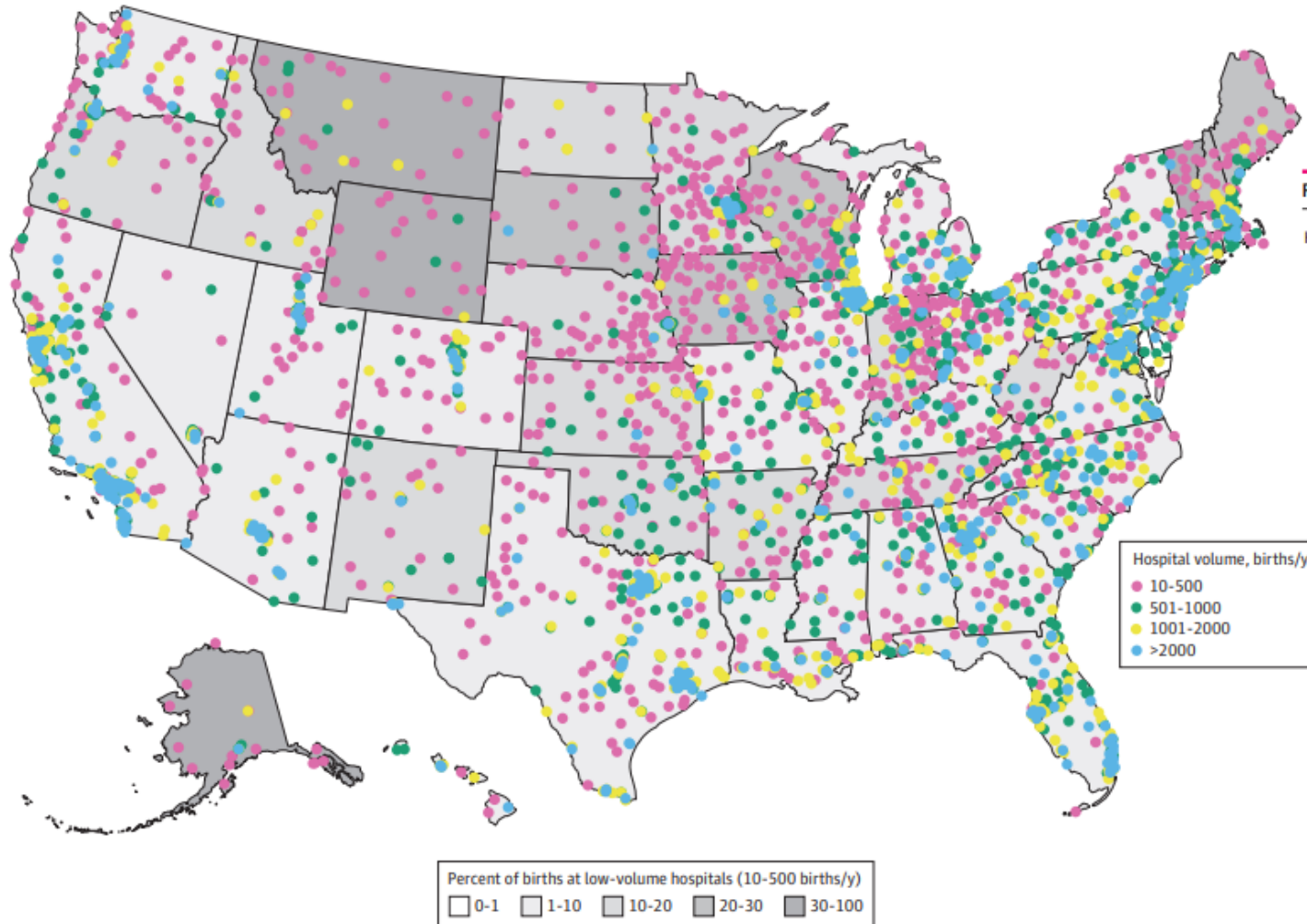
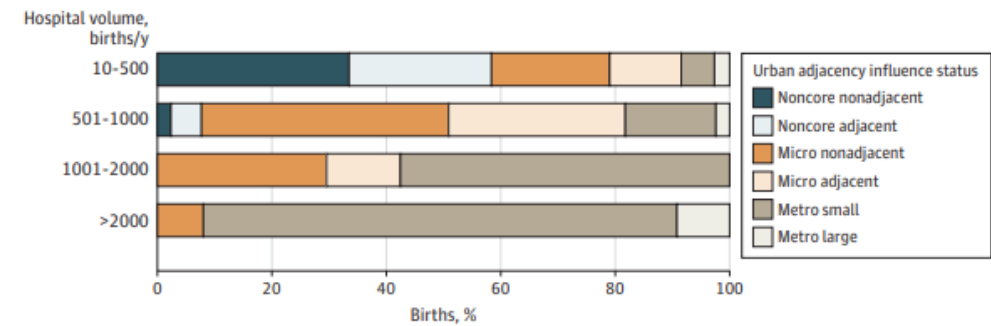


Figure 3. Urban Adjacency of Isolated Obstetric Hospitals From 2010 to 2018



UNIVERSITY OF MINNESOTA
RURAL HEALTH
RESEARCH CENTER

What happens when rural communities lose maternity services?



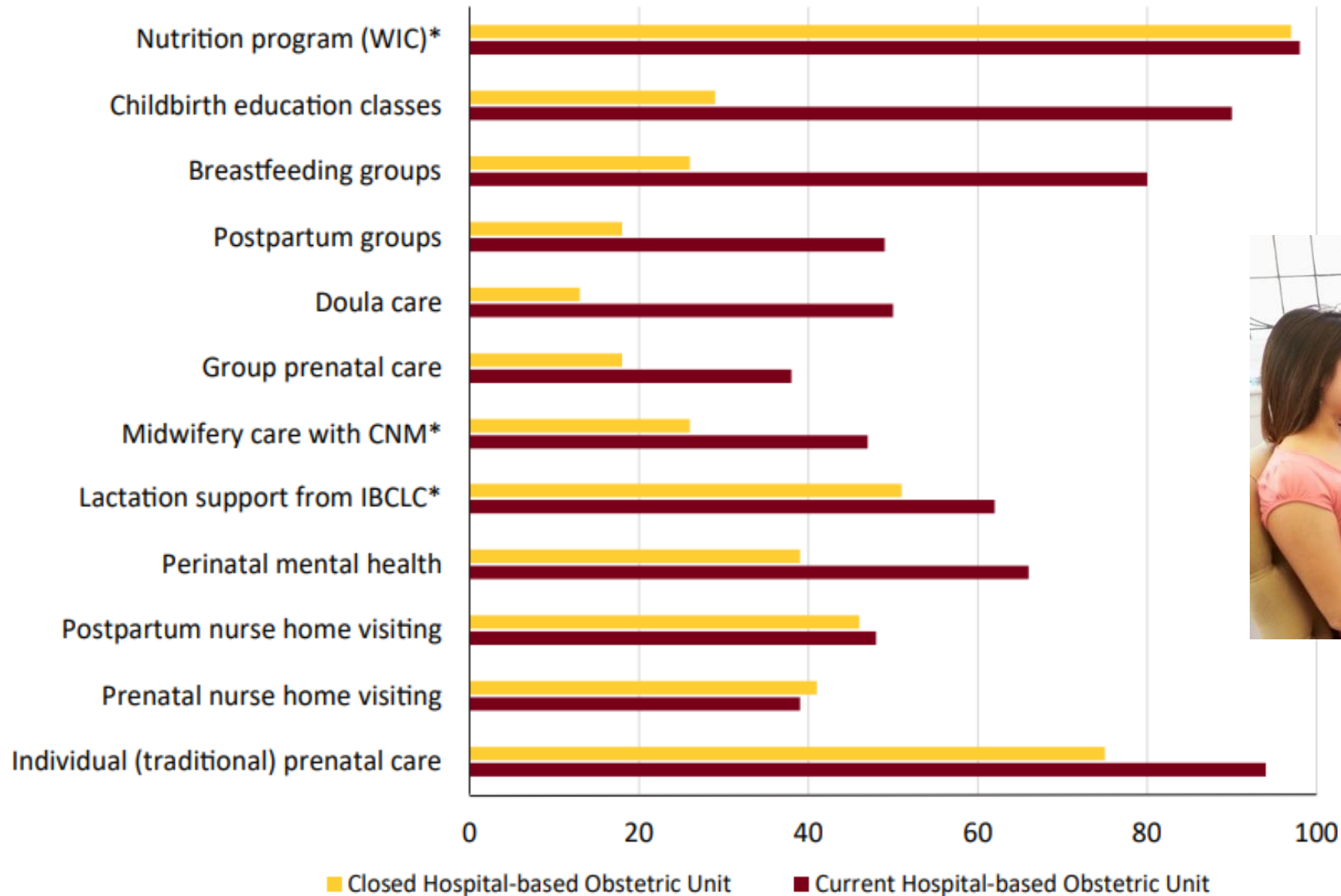
UNIVERSITY OF MINNESOTA
RURAL HEALTH
RESEARCH CENTER

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)



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.



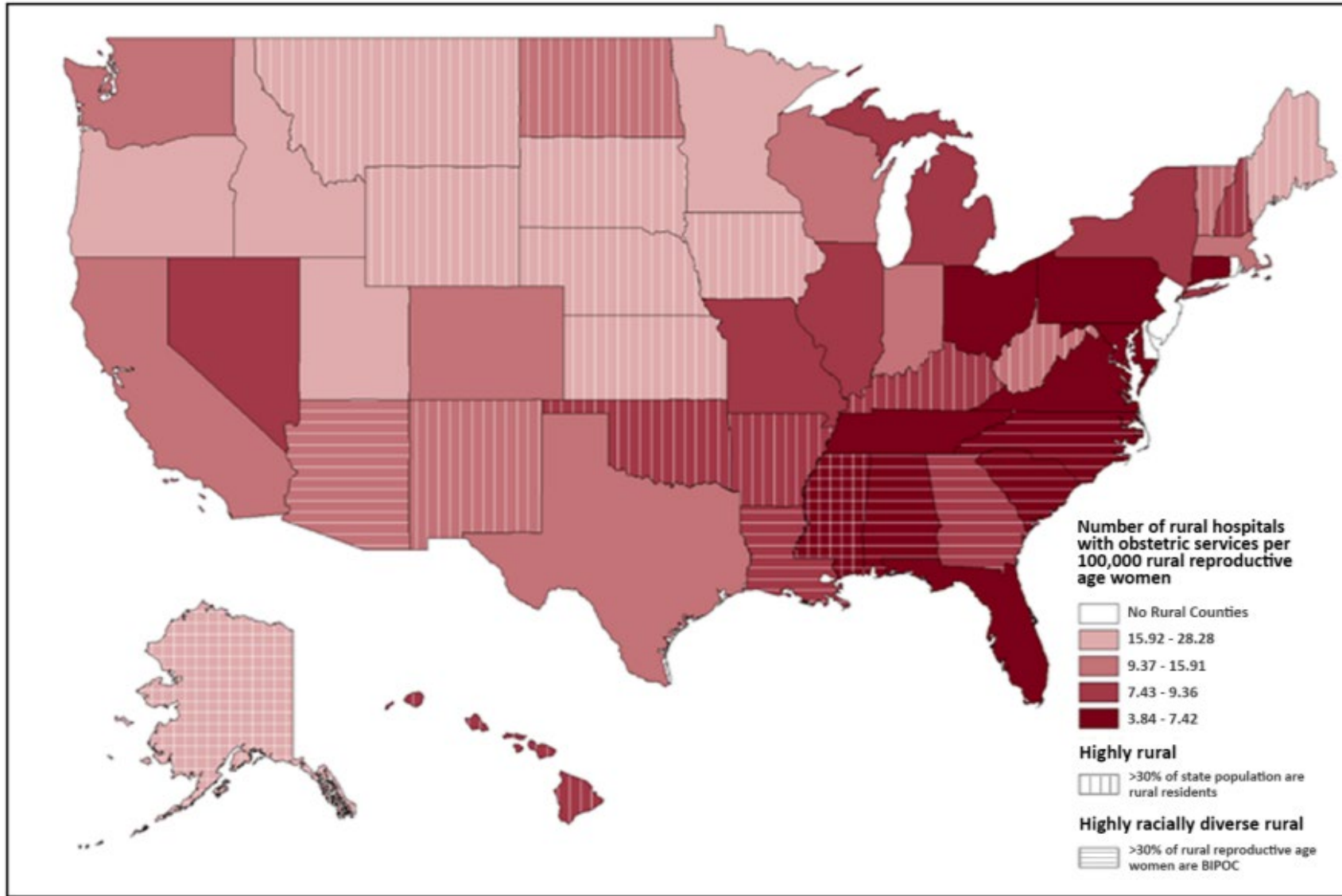
UNIVERSITY OF MINNESOTA
RURAL HEALTH
RESEARCH CENTER

Racial and ethnic differences in access and support for maternity care



UNIVERSITY OF MINNESOTA
RURAL HEALTH
RESEARCH CENTER

Figure 1. Access to Hospital-Based Obstetric Services for Rural Residents, Focusing on Highly Rural and Racially Diverse States, 2018



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



UNIVERSITY OF MINNESOTA
RURAL HEALTH
RESEARCH CENTER

Availability of Supports among Rural Hospitals with Obstetric Services by County Racial Majority

	Majority-BIPOC (n=28)	Majority-white (n=62)	p-value
Available locally %			
Local access to care			
Individual (traditional model) prenatal care	82.1	100.0	<0.01
Nurse home visiting for prenatal	21.4	46.8	0.02
Nurse home visiting for postpartum	35.8	53.2	0.12
Perinatal mental health services	50.0	72.6	0.04
Lactation support from IBCLC	50.0	67.7	0.11
Family-centered models of care			
Midwifery care with CNM	46.4	46.8	0.98
Group prenatal care	35.7	43.5	0.54
Doula care	32.1	58.1	0.02
Peer and community supports for families			
Postpartum support groups	32.1	56.5	0.03
Breastfeeding support groups	71.4	83.9	0.17
Health-focused programming			
Childbirth education classes	78.6	95.2	0.02
Nutrition program (WIC)	100.0	96.8	0.34

What is needed to keep rural maternity care?

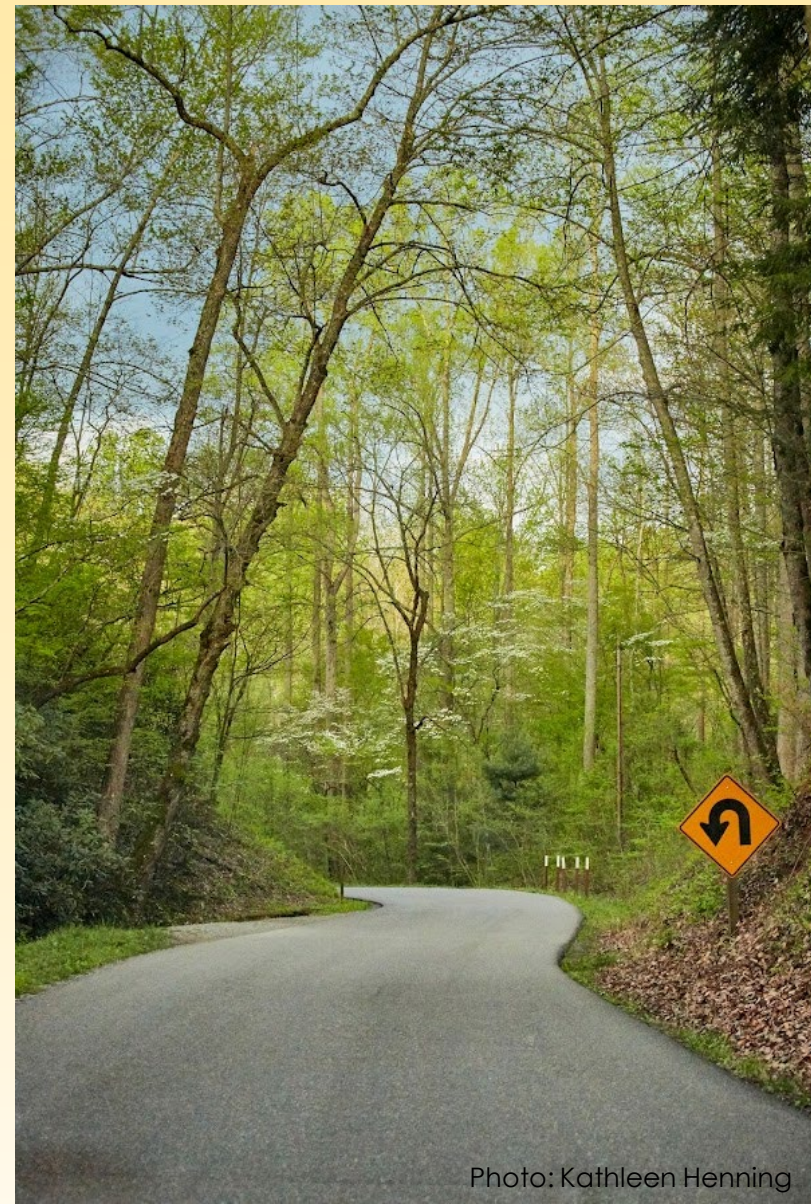


Photo: Kathleen Henning



UNIVERSITY OF MINNESOTA
RURAL HEALTH
RESEARCH CENTER

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^a

Criteria	Responding, No.	Median (IQR)
Births needed to provide obstetric care safely	89	200 (100-350)
Births needed to make obstetric services financially viable	49	200 (120-360)
Actual births in 2019	91	274 (120-446)
Respondents that reported fewer actual births than		
Births needed to provide obstetric care safely, No. (%)	87	26 (29.9)
Births needed to make obstetric services financially viable, No. (%)	48	20 (41.7)

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.



UNIVERSITY OF MINNESOTA
**RURAL HEALTH
RESEARCH CENTER**

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



UNIVERSITY OF MINNESOTA
RURAL HEALTH
RESEARCH 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



UNIVERSITY OF MINNESOTA
RURAL HEALTH
RESEARCH CENTER

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



UNIVERSITY OF MINNESOTA
RURAL HEALTH
RESEARCH CENTER

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

Funded by the Federal Office of Rural Health Policy, Health Resources and Services Administration.



rhrc.umn.edu

Connect with us

- @ info@ruralhealthresearch.org
- facebook.com / RHRGateway
- twitter.com / rhrgateway



UNIVERSITY OF MINNESOTA
**RURAL HEALTH
RESEARCH CENTER**

Thank you!



Website: <https://rhrc.umn.edu/>

Email: inter014@umn.edu

Twitter: @UMNRHRC



UNIVERSITY OF MINNESOTA
RURAL HEALTH
RESEARCH CENTER

References

Rural Maternal Health

- Kohimannil KB, Interrante JD, Henning-Smith C, and Admon LK. Rural-Urban Differences in Severe Maternal Morbidity and Mortality, 2007-2015. *Health Affairs*, 2019.
- Interrante JD, Tuttle MS, Admon LK, Kozhimannil KB. Severe Maternal Morbidity and Mortality Risk at the Intersection of Rurality, Race and Ethnicity, and Medicaid. *Womens Health Issues*. 2022.
- Interrante JD, Admon LK, Carroll C, Henning-Smith C, Chastain P, and Kozhimannil KB. Association of Health Insurance, Geography, and Race and Ethnicity With Disparities in Receipt of Recommended Postpartum Care in the US. *JAMA Health Forum*. 2022.

Rural Maternal Hospitals and Workforce

- Handley SC, Passarella M, Herrick HM, Interrante JD, Lorch SA, Kozhimannil KB, Phibs CS, Foglia EE. Birth Volume and Geographic Distribution of US Hospitals With Obstetric Services From 2010 to 2018. *JAMA Network Open*. 2021;4(10):e2125373.
- Hung P, Kozhimannil KB, Casey MM, Henning-Smith C, Prasad S. State Variations in the Rural Obstetric Workforce. UMN Rural Health Research Center Policy Brief. May 2016.



References

Declining Access to Rural Maternity Care

- Hung, P., Henning-Smith, C., Casey, M., & Kozhimannil, K. (2017). Access to Obstetrics Services in Rural Counties Still Declining, with 9 percent Losing Services, 2004-2014. *Health Affairs*, 36(9), 1663-1671.
- 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.
- Hung P, Kozhimannil KB, Henning-Smith C, Casey MM. Closure of Hospital Obstetric Services Disproportionately Affects Less-Populated Rural Counties. University of Minnesota Rural Health Research Center Policy Brief, April 2017.
- Kozhimannil KB, Interrante JD, Tuttle MKS, Henning-Smith C. Changes in Hospital-Based Obstetric Services in Rural US Counties, 2014-2018. *JAMA*. 2020;324(2):197-199.
- Interrante JD, Tuttle MS, Basile Ibrahim B, Admon LK, and Kozhimannil KB. State and Regional Differences in Access to Hospital-Based Obstetric Services for Rural Residents, 2018. UMN Rural Health Research Center Policy Brief. August 2021.



References

Consequences of Loosing Rural Maternity Care

- Kozhimannil KB, Hung P, Henning-Smith C, Casey MM, Prasad S. Association Between Loss of Hospital-Based Obstetric Services and Birth Outcomes in Rural Counties in the United States. *JAMA*. 2018;319(12):1239-1247.
- Chastain PL, Tuttle MS, Fritz AH, Basile Ibrahim B, and Kozhimannil KB. Evidence-Based Supports for Maternal and Infant Health in 133 Rural US Counties with and without Hospital-Based Obstetric Care. UMN Rural Health Research Center Infographic. December 2022.
- Handley SC, Passarella M, Interrante JD, Kozhimannil KB, Lorch SA. Perinatal outcomes for rural obstetric patients and neonates in rural-located and metropolitan-located hospitals. *Journal of Perinatology*. 2022;42:1600-1606.
- Kozhimannil KB, Interrante JD, Tuttle MS, Gilbertson M, DeArruda Wharton K. Local Capacity for Emergency Births in Rural Hospitals Without Obstetrics Services. *Journal of Rural Health*. 2020;37(2):385-393.



UNIVERSITY OF MINNESOTA
RURAL HEALTH
RESEARCH CENTER

References

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.
- Kozhimannil KB, Interrante JD, Basile Ibrahim B, Chastain P, Millette MJ, Daw J, Admon LK. Racial/Ethnic Disparities in Postpartum Health Insurance Coverage Among Rural and Urban U.S. Residents. *J Womens Health*. 2022.
- Interrante JD, Admon LK, Stuebe AM, Kozhimannil KB. After Childbirth: Better Data Can Help Align Postpartum Needs with a New Standard of Care. *Women's Health Issues*. 2022;32(3):208-212.



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

IOWA
HHS

HEALTHY
birthDAY
IMPROVING BIRTH OUTCOMES



IOWA
HHS

HEALTHY
birthDAY
IMPROVING BIRTH OUTCOMES



Maternal Morbidity and Mortality in Iowa – Root Causes and Key Opportunities



Robert Kruse

M.D., MPH, FAFP–
STATE MEDICAL DIRECTOR, IHHS



Elizabeth Matney

STATE MEDICAID DIRECTOR, IHHS

IOWA
HHS

HEALTHY
birthDAY
IMPROVING BIRTH OUTCOMES

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

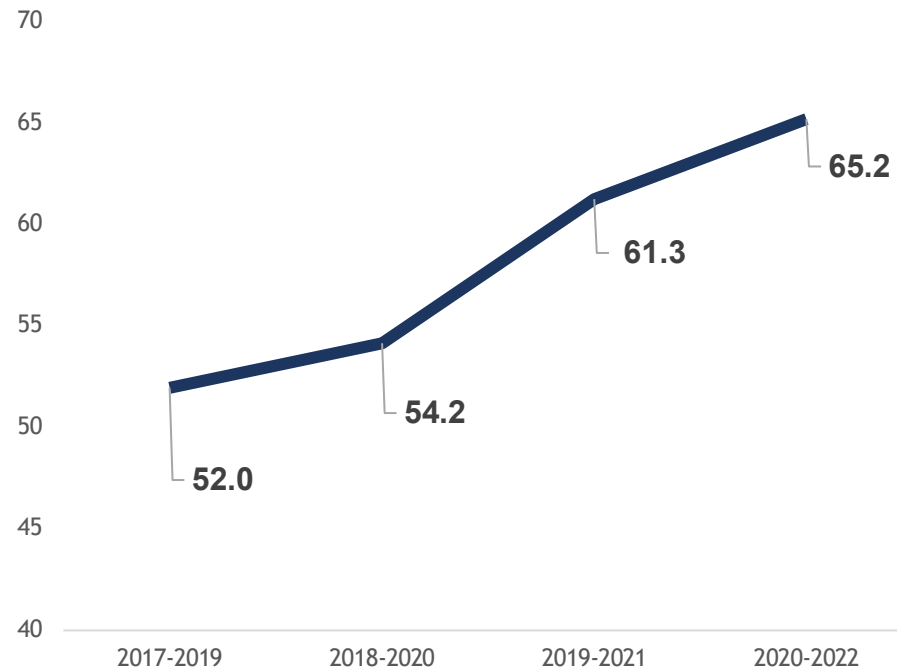


Iowa hospital discharge data are collected by the Iowa Hospital Association on behalf of the Iowa Department of Health and Human Services in accordance with Iowa Code section 135.166.



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



Count of events per time period

2017-2019

- n=537

2018-2020

- n=547

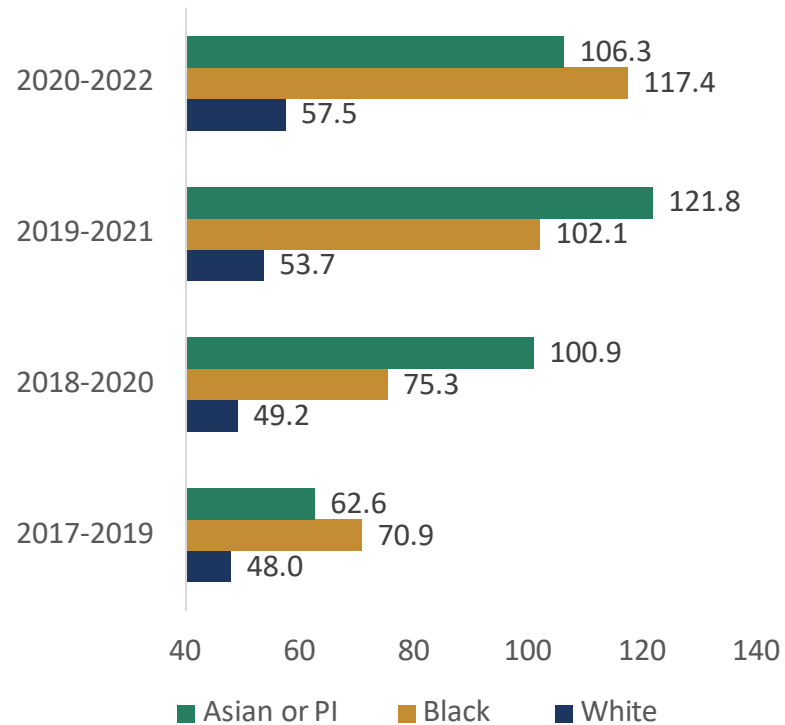
2019-2021

- n=612

2020-2022

- n=643

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

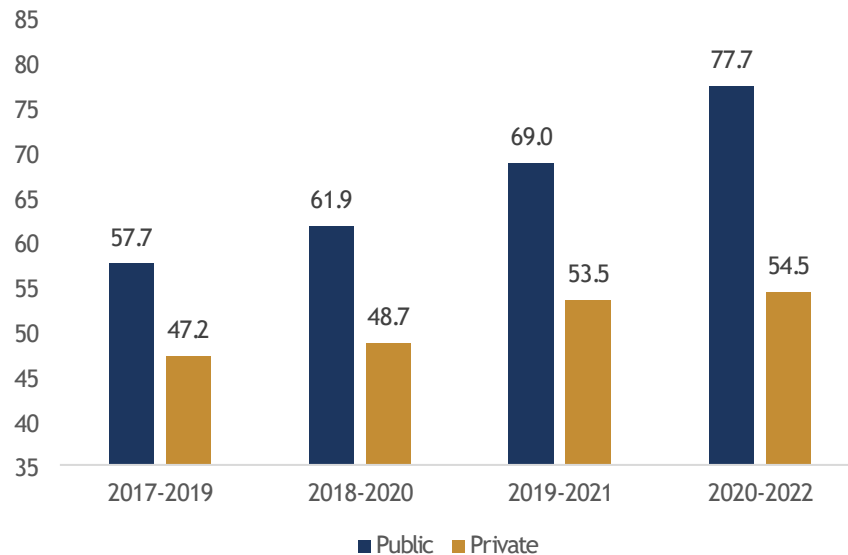
- Asian/Pacific Islanders n=33
- Blacks n= 59
- Whites n= 406

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

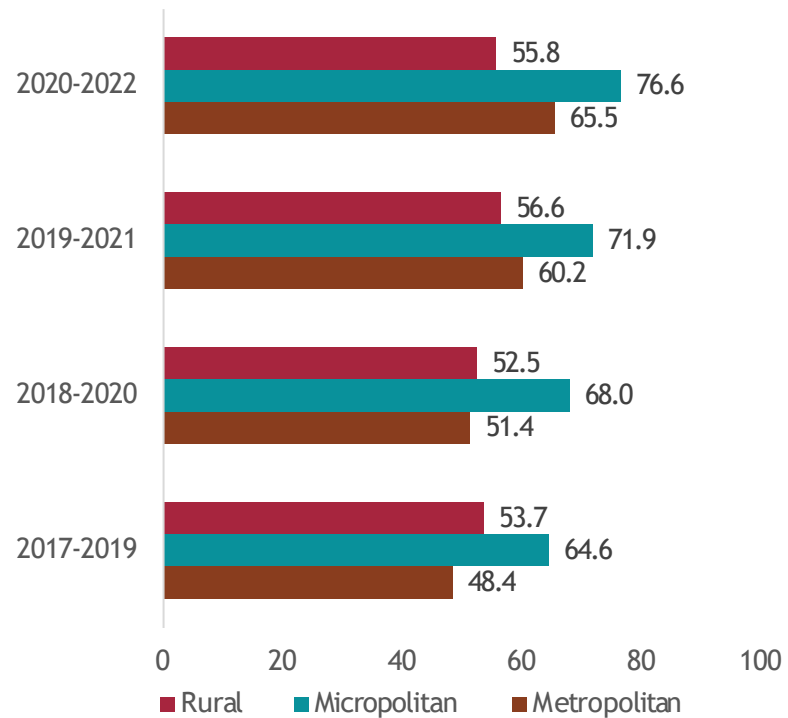
2019-2021

- 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



Count of events per time period

2020-2022

- Rural n= 112
- Micropolitan n= 115
- Metropolitan n= 416

2019-2021

- Rural n= 114
- Micropolitan n= 110
- Metropolitan n= 388

2018-2020

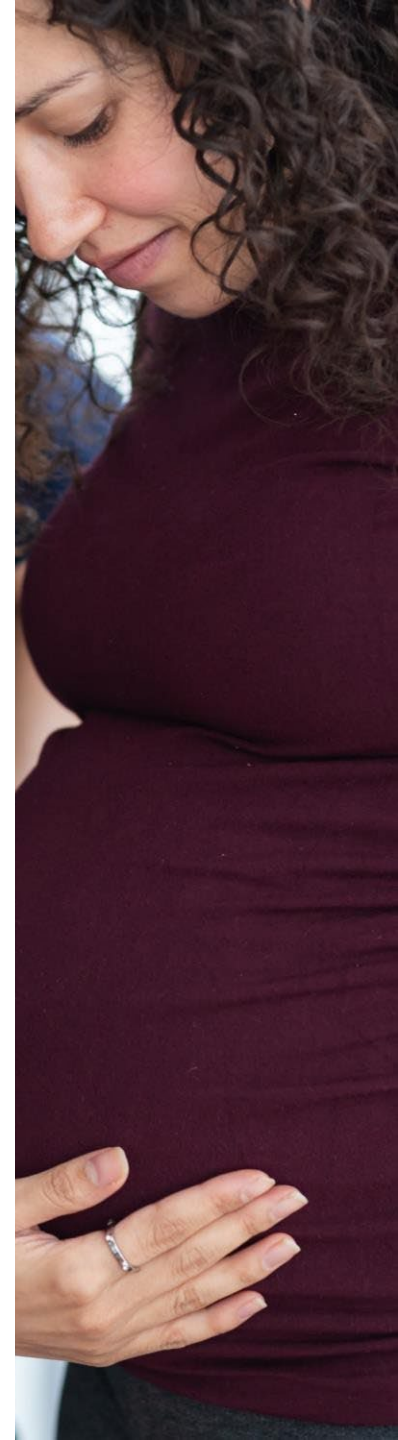
- Rural n= 107
- Micropolitan n= 105
- Metropolitan n= 335

2017-2019

- Rural n= 112
- Micropolitan n= 102
- Metropolitan n= 323

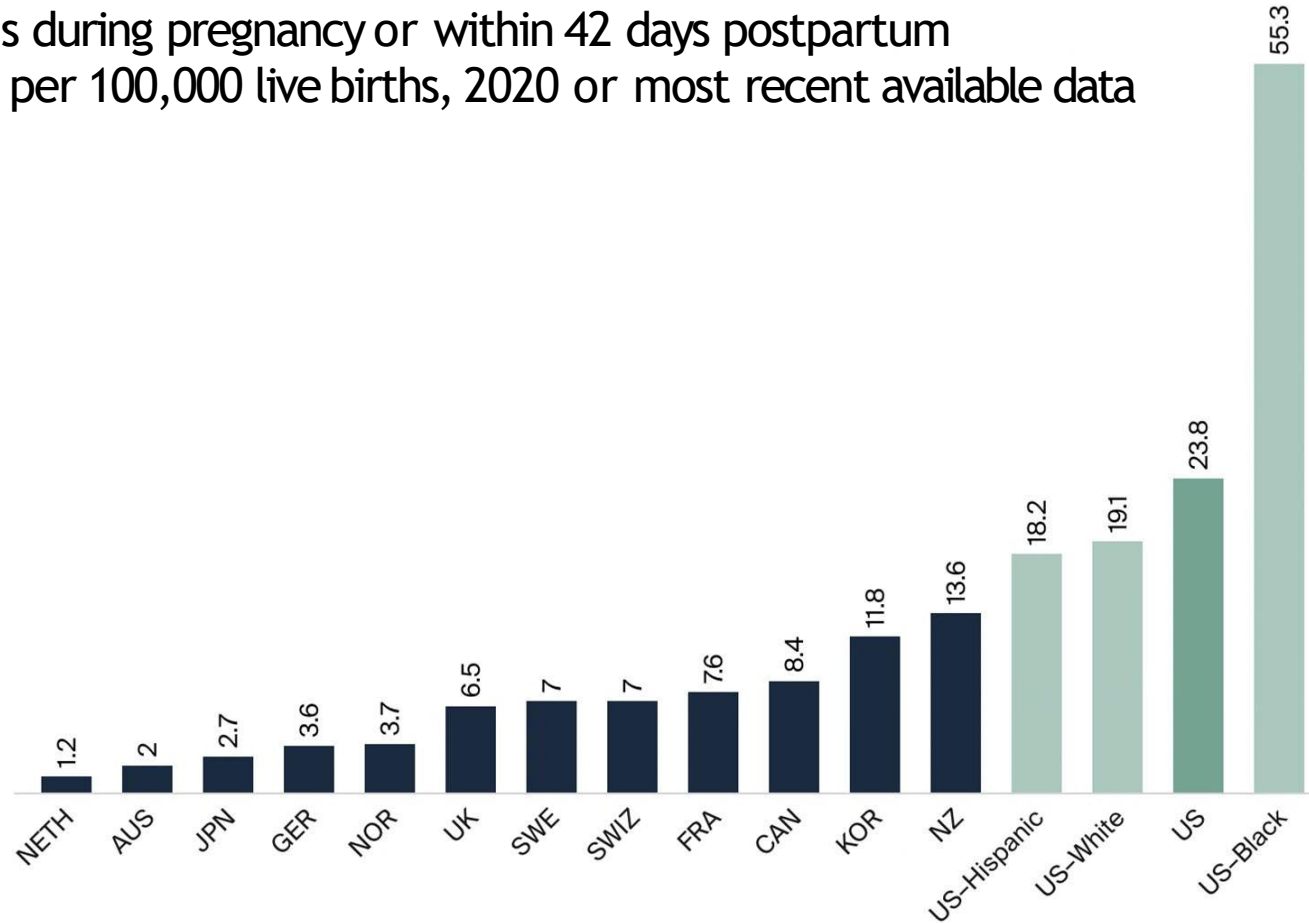


Maternal Mortality



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



<https://www.commonwealthfund.org/blog/2022/us-maternal-mortality-crisis-continues-worsen-international-comparison>

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.

Maternal Mortality Terminology

Pregnancy-associated death:

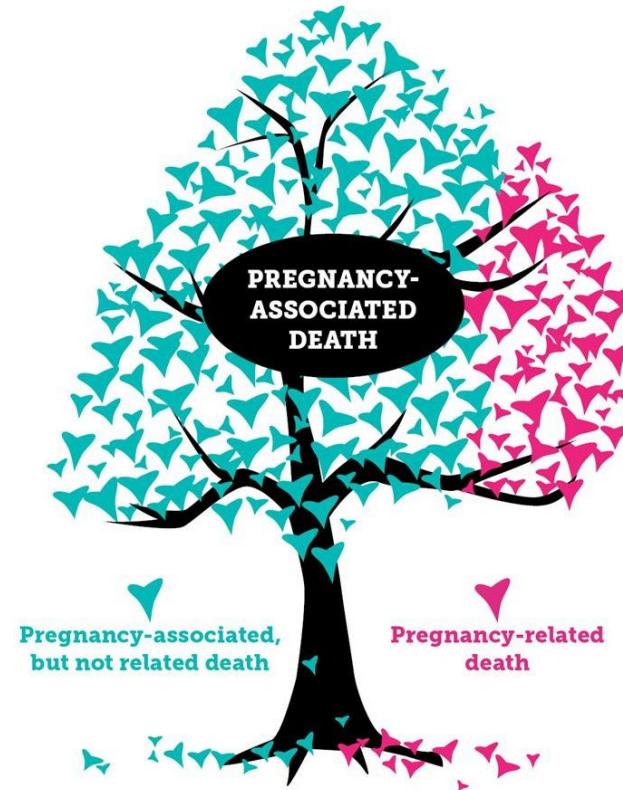
The death of a woman while pregnant or within **one year** of the end of pregnancy, irrespective of cause.

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.



Sourced from: MMRIA Facilitation Guide and Review to Action <https://reviewtoaction.org/content/mmria-committee-facilitation-guide>
Graphic sourced from: South Dakota DoH <https://doh.sd.gov/statistics/maternalmortality.aspx>

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

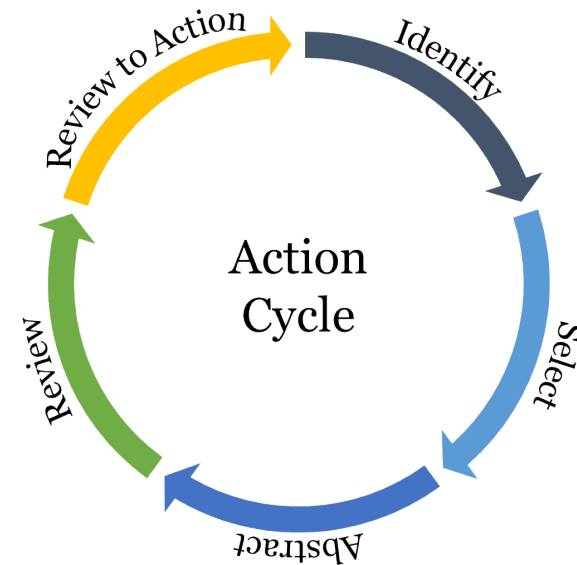
- Was the death pregnancy-related?
- What was the underlying cause of death?
- Was the death preventable?
- What are the contributing factors to the death?
- What specific and feasible actions might have changed the course of events?

MMRC Is

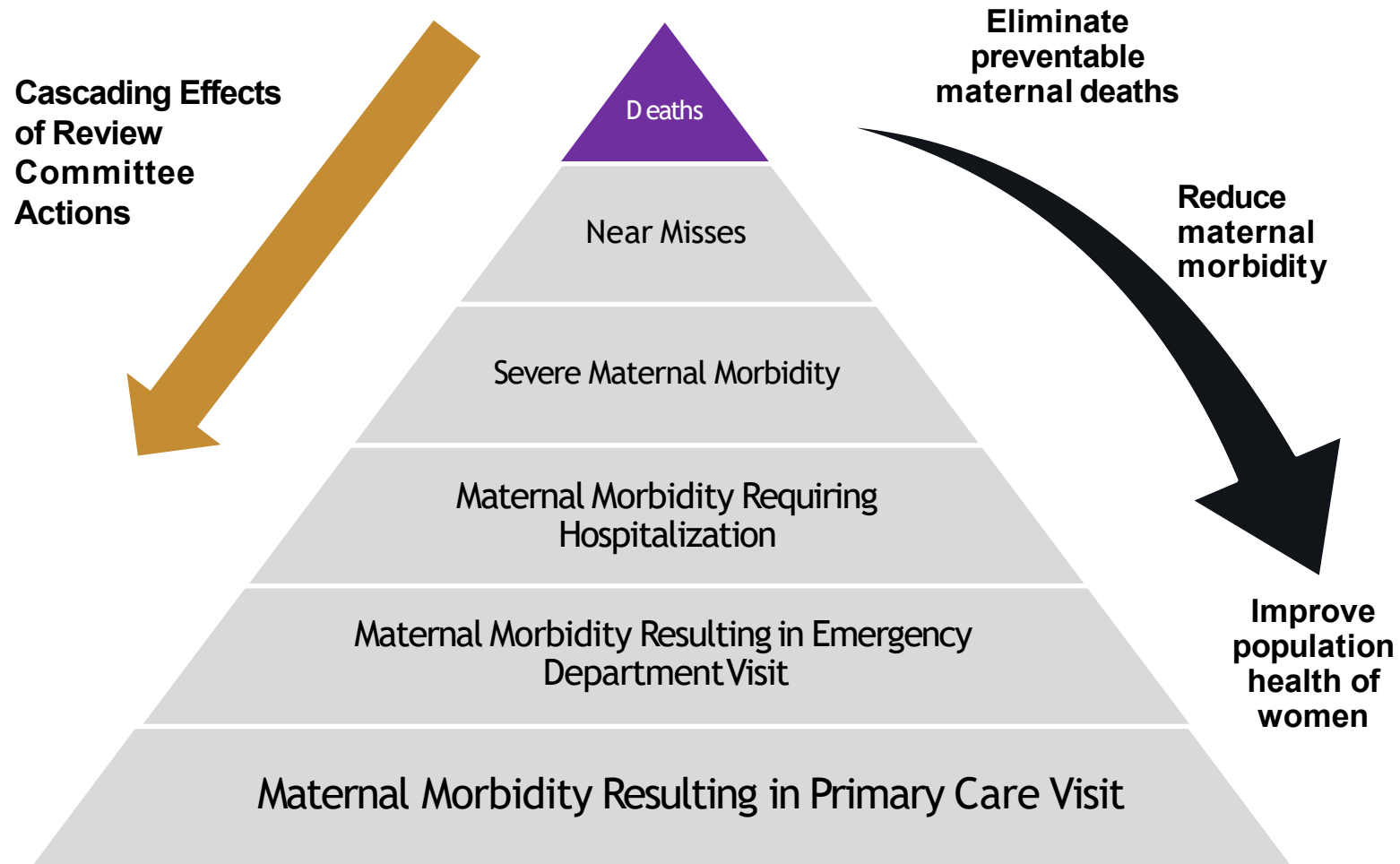
- Ongoing anonymous and confidential process of data collection, analysis, interpretation and action
- Systematic process guided by policies, statutes, rules, etc.
- Intended to move from data collection to prevention activities

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



Impact

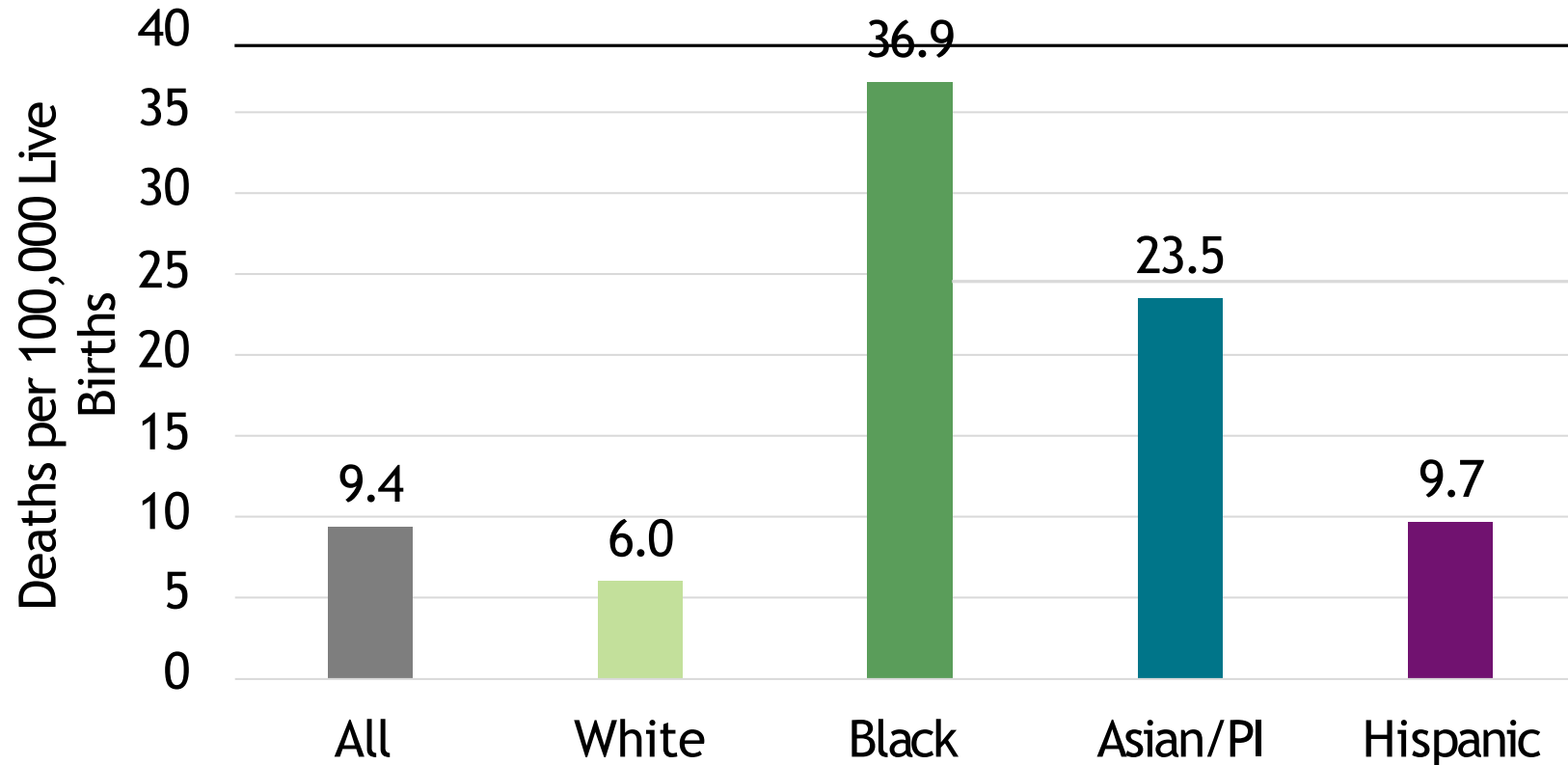


Iowa 2021 MMRC Committee Results

Category of Death	Preventable	Unpreventable	Undetermined	Timing of Death
Pregnancy Related	<ul style="list-style-type: none"> Eclampsia (leading cause) Postpartum hemorrhage Suicide 			<ul style="list-style-type: none"> 75% were within 42 days of the end of the pregnancy 25% within 43 days to 1 year of the end of the pregnancy
Pregnancy-Associated but NOT related	<ul style="list-style-type: none"> Blunt force trauma from motor vehicle crash (leading cause) Drug overdose pneumonia cerebral artery hemorrhage, endocarditis related to IV drug use 	Blunt force trauma from motor vehicle crash		<ul style="list-style-type: none"> 46 % occurred during pregnancy 0 occurred within 42 days of the end of the pregnancy 54% occurred within 43 days to 1 year of the end of the pregnancy
Pregnancy-Associated but unable to determine pregnancy relatedness	<ul style="list-style-type: none"> Suicide Cardiac arrhythmia Homicide (domestic violence) 		Cardiac arrest	

Maternal Mortality Ratio by Race/Ethnicity

Cases from 2016-2018*, 39 Deaths



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

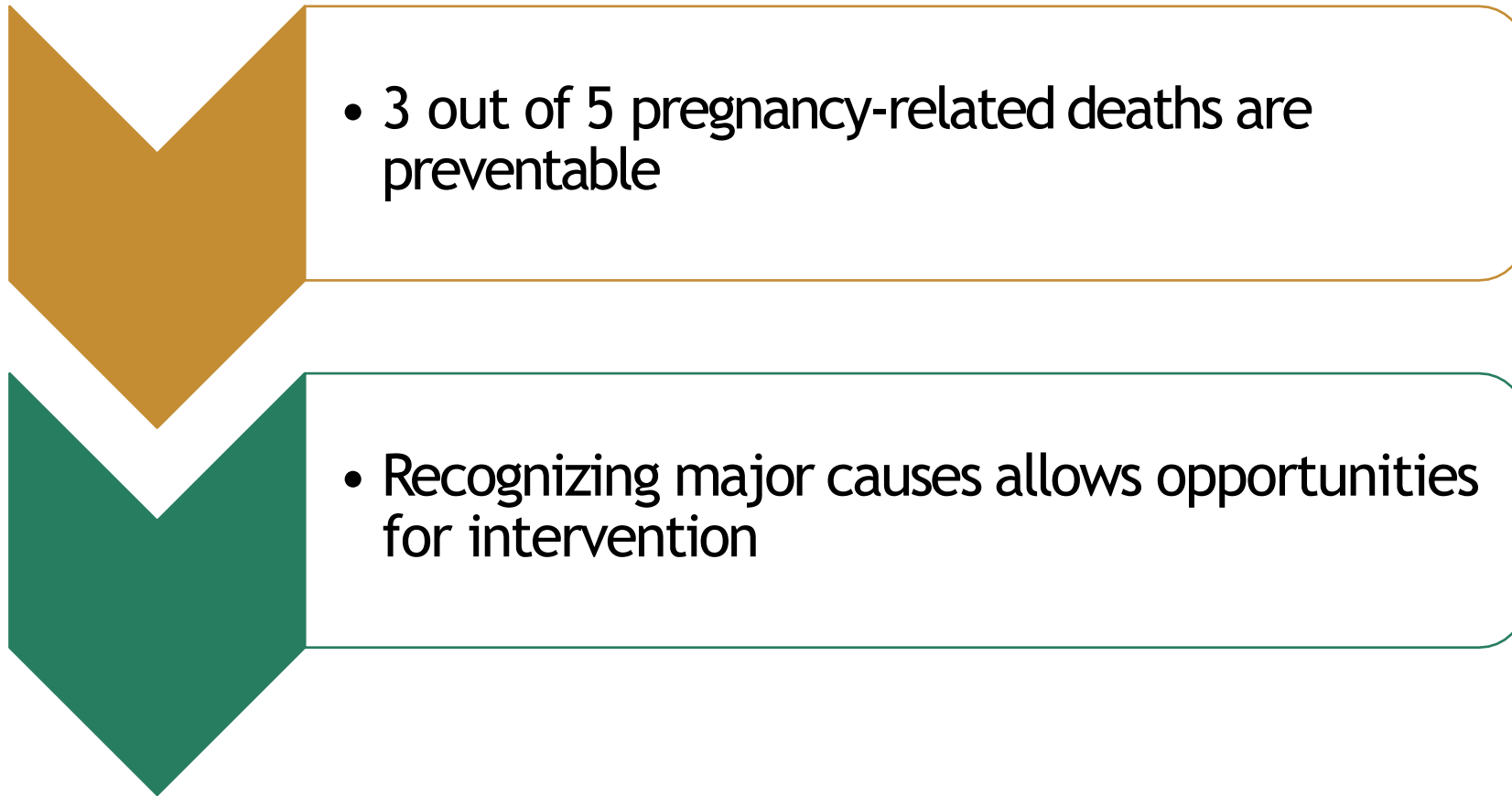


—

Successful Strategies to Improve Outcomes



Preventability of pregnancy-related deaths



(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

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

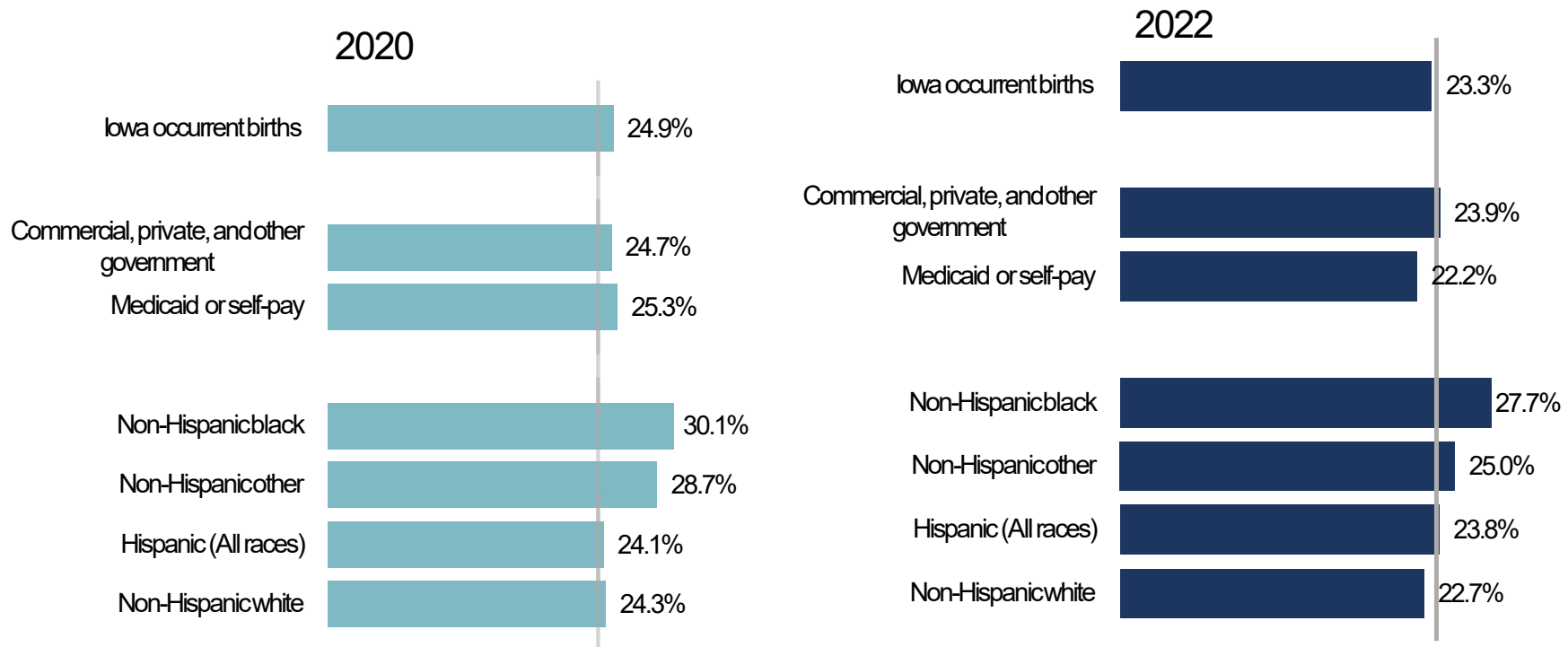
Global aim to reduce the NTSV cesarean birth rate in Iowa to below the Healthy People 2030 target of 23.6%

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

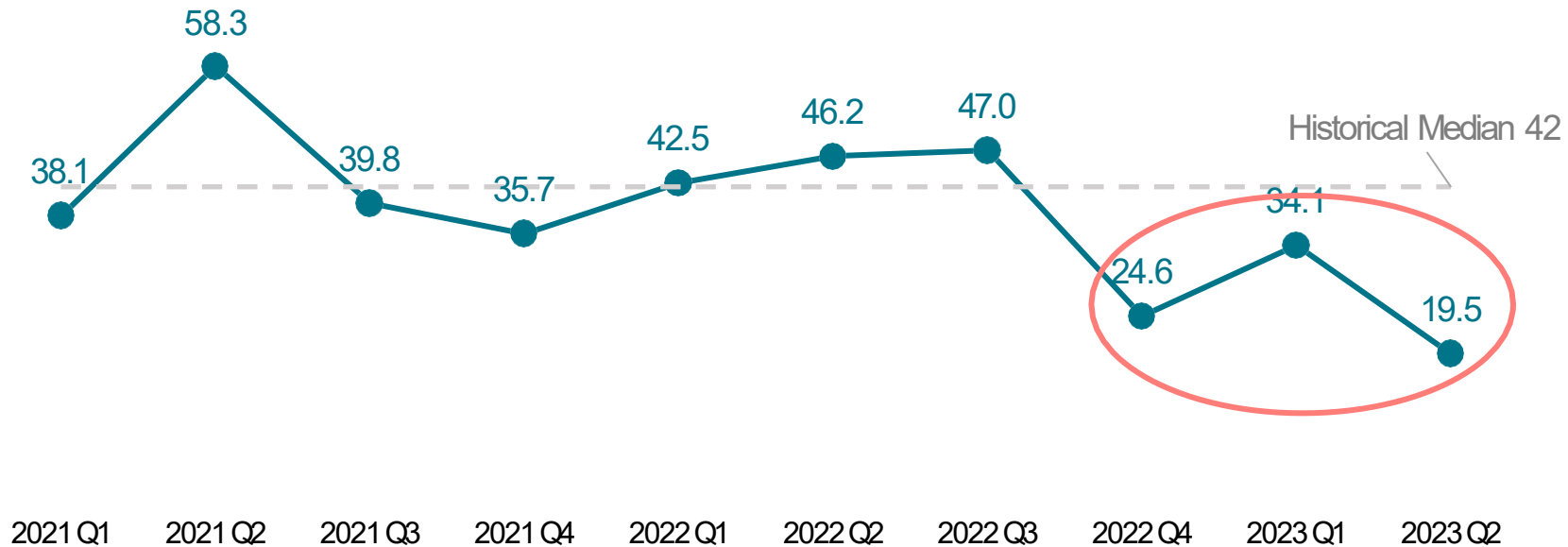
Focus on preparation, recognition, and response to hemorrhage

- 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 over

12-month collaborative launching tomorrow, anticipate 55 hospitals

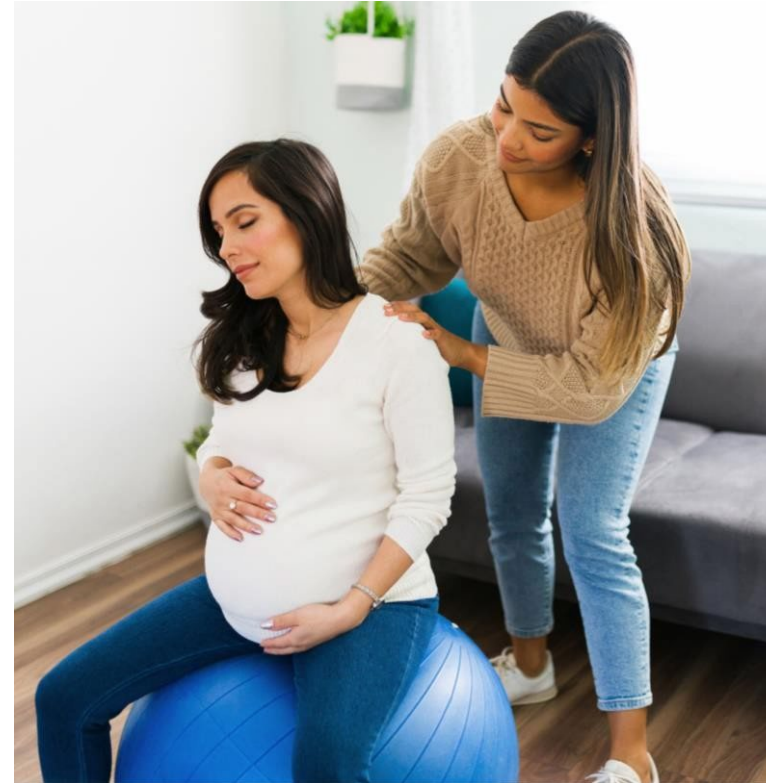
Global aim is to eliminate preventable maternal death from hypertensive disorders of pregnancy (HDP) by 2024

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/>

Substance Abuse

- refer to health care providers - resources on Your Life Iowa
- <https://yourlifeiowa.org/>
- If opioid user - Refer for MAT and provide access to Naloxone

What else can you do to help?

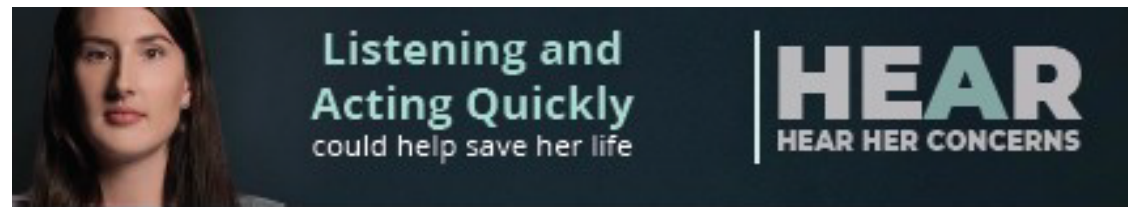
- ✓ Educate
- ✓ 50% of pregnancy-related deaths occur in the postpartum period!



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

YOUR BABY IS ONLY SAFE WHEN YOU ARE. BUCKLE UP

zero Fatalities

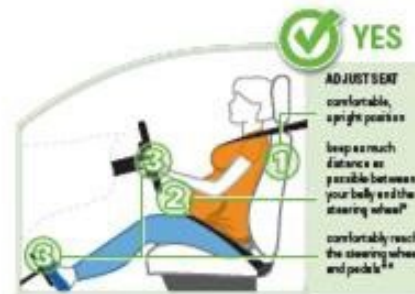
18% of Iowa maternal deaths were the result of motor vehicle crashes in the last 3 years.

71% of the women were not wearing a seatbelt and frequently were ejected from the vehicle.

WHAT'S THE RIGHT WAY TO WEAR MY SEAT BELT?



SHOULD I ADJUST MY SEAT?



* If you need additional room, consider adjusting the steering wheel or having someone else drive, if possible.
** If you're a passenger, move your seat back as far as possible.

State-Funded Family Medicine Obstetrics Fellowship Program



Created in 2023 Iowa Acts Senate File 561



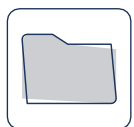
Administrative Rules are proceeding to rulemaking - 5 month process



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

- ✓ 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 a 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 part 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,

Maternal Health Symposium

Elizabeth Matney, State
Medicaid Director

October 30, 2023

Overview

Medicaid's Role in Maternal Health

HHS Maternal Health Initiatives

- Maternal Health Task Force
- AIM
- Hospital Directed Payments

MCO Initiatives

- Amerigroup
- Iowa TotalCare
- 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.

Maternal Task Force

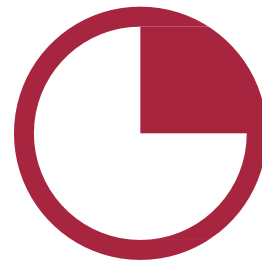


Developed about 20 years ago to provide a space to discuss Iowa Medicaid “Birth Certificate Match to Paid Claims Report.”



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 increase 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 babyshower.
- 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

IOWA
HHS

HEALTHY
birthDAY
IMPROVING BIRTH OUTCOMES

Questions?

Birth Queen + a Special Message



IOWA
HHS

HEALTHY
birthDAY
IMPROVING BIRTH OUTCOMES

4Kira4Moms

“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/>



IOWA
HHS

HEALTHY
birthDAY
IMPROVING BIRTH OUTCOMES

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

IOWA
HHS

HEALTHY
birthDAY
IMPROVING BIRTH OUTCOMES



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

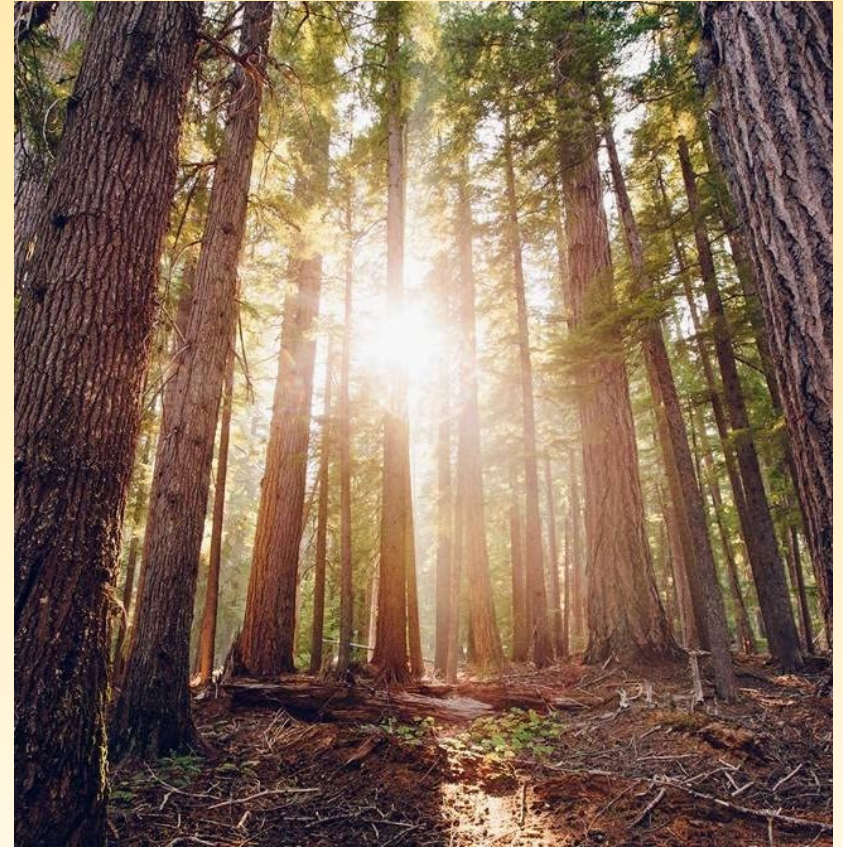
- Relevant to the content of this educational activity, I do not have any financial conflicts with ineligible companies to disclose.



UNIVERSITY OF MINNESOTA
RURAL HEALTH
RESEARCH CENTER

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.



UNIVERSITY OF MINNESOTA
RURAL HEALTH
RESEARCH CENTER

Funding Acknowledgement



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.



UNIVERSITY OF MINNESOTA
RURAL HEALTH
RESEARCH CENTER

Agenda

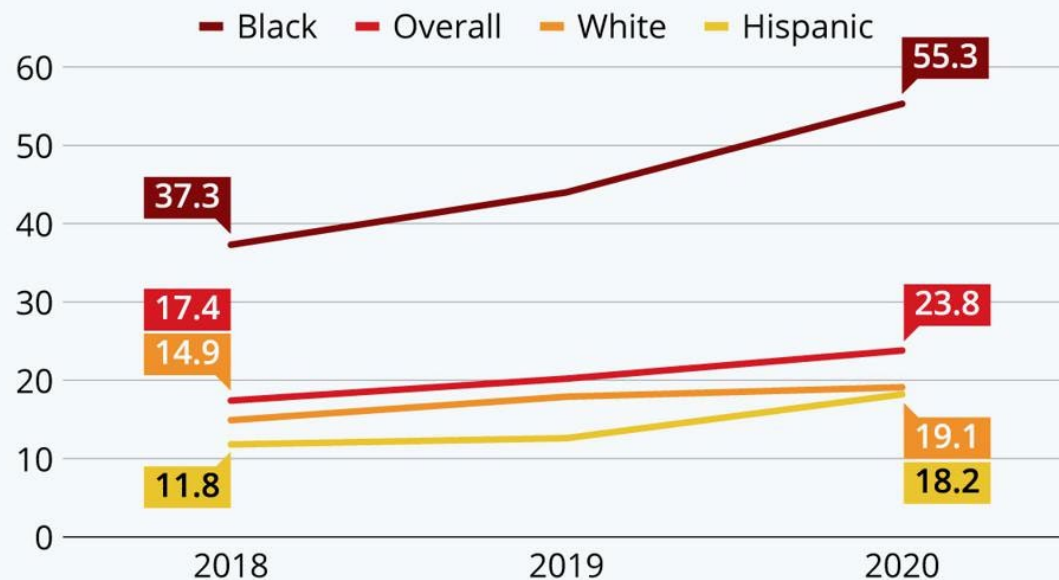
1. Describe differences in maternal morbidity and mortality across intersections of rurality, race and ethnicity, and income.
2. Examine causes of maternal morbidity and mortality and how those differ across intersecting patient identities.
3. Describe policy options for addressing overall prevalence and disparities in maternal morbidity and mortality in rural communities.



Rising Rates of Maternal Mortality in the US

The Uneven Burden Of U.S. Maternal Mortality

Pregnancy-related deaths in the United States per 100,000 live births (by race/ethnicity of mother)



Non-Hispanic Black/white mothers

Sources: CDC, National Vital Statistics System



Forbes statista

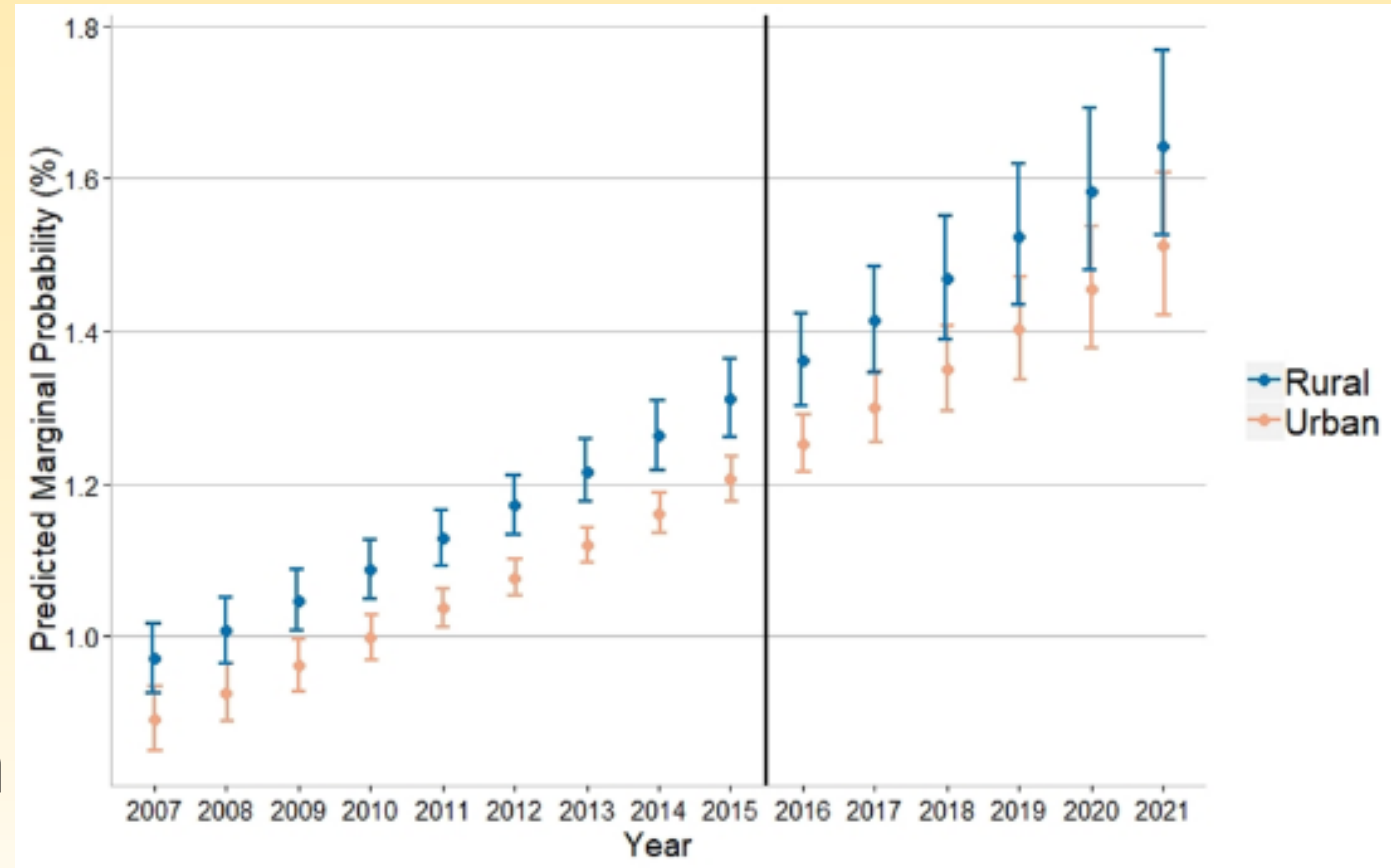
- In-hospital severe maternal morbidity and mortality inequities by:
 - Rurality
 - Race/ethnicity
 - Income (Medicaid status)
 - And at their intersections



UNIVERSITY OF MINNESOTA
RURAL HEALTH
RESEARCH CENTER

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

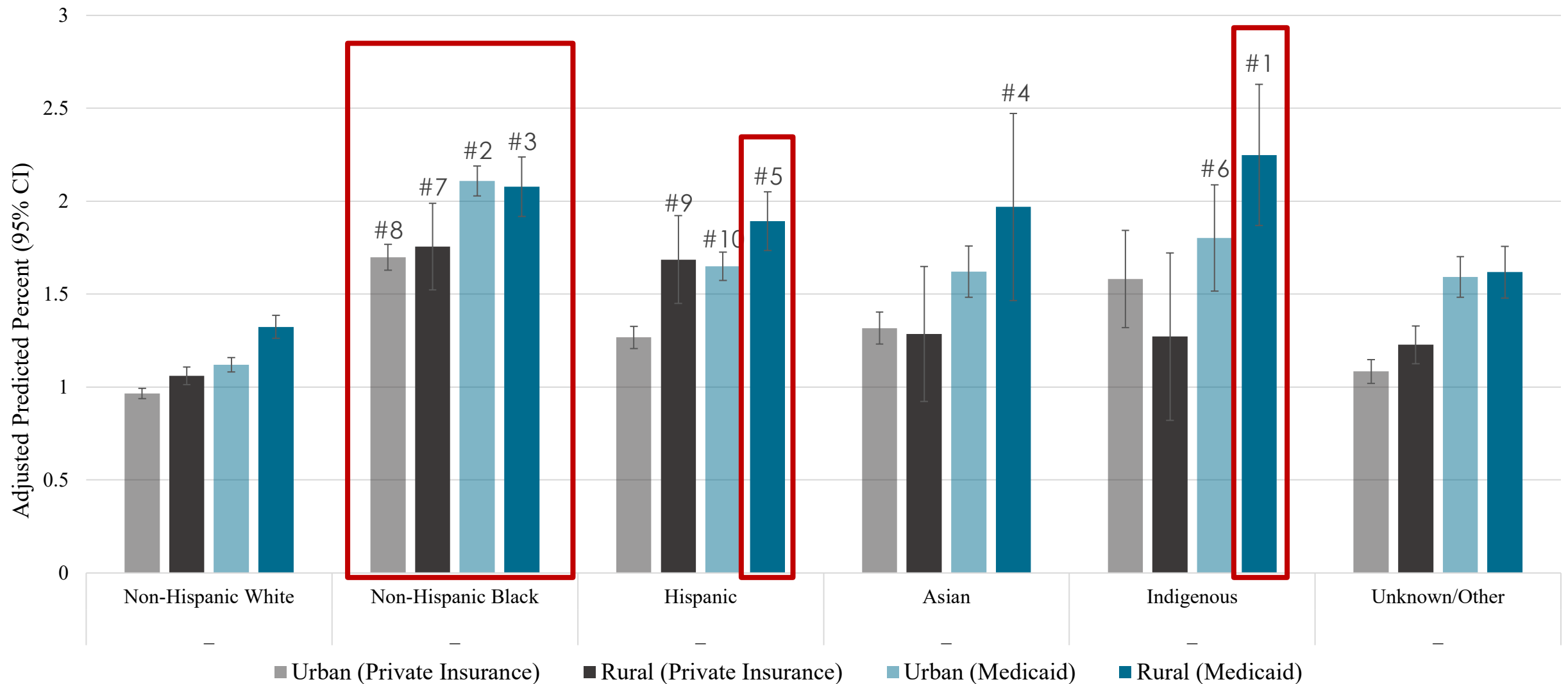


Kozhimannil KB, Interrante JD, Henning-Smith C, Admon LK. Rural-Urban Differences in Severe Maternal Morbidity And Mortality In The US, 2007-15. *Health Aff (Millwood)*. 2019 Dec;38(12):2077-2085.

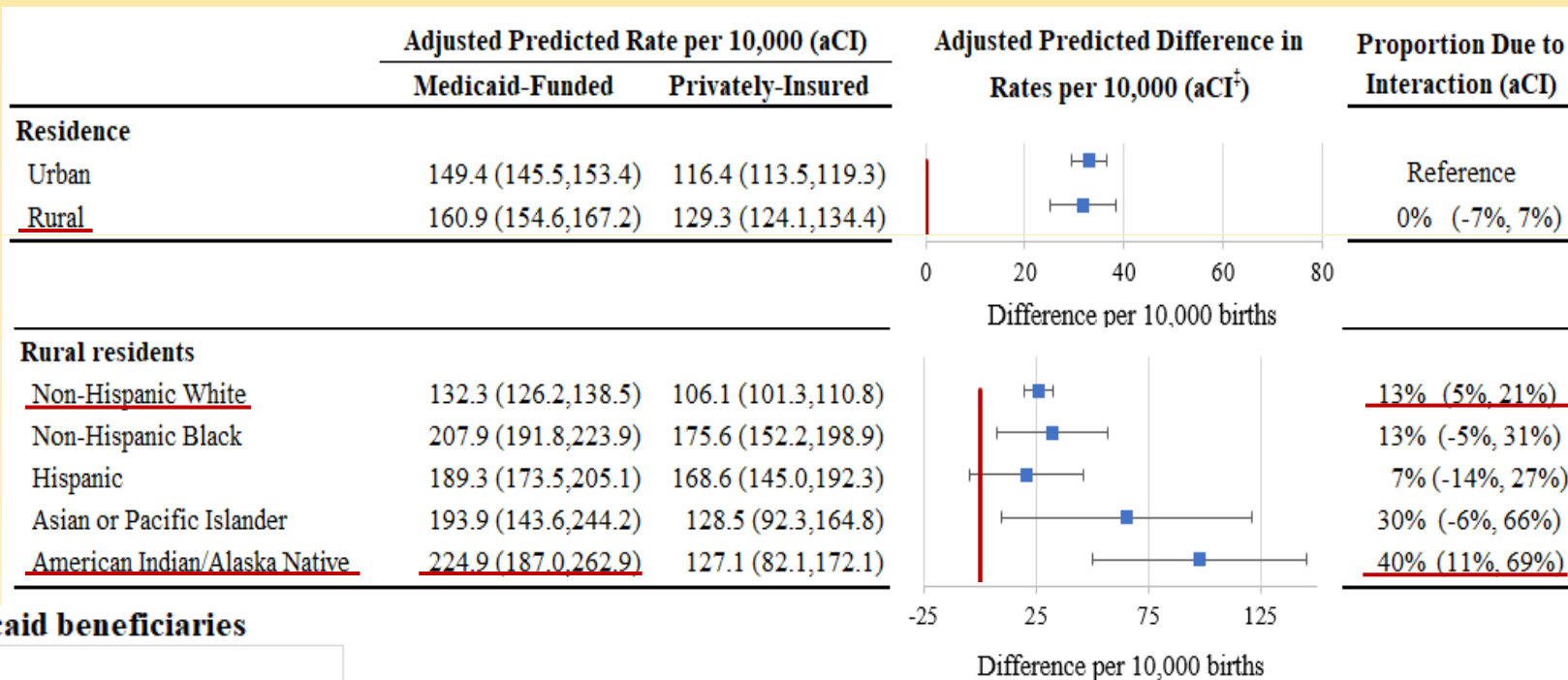


UNIVERSITY OF MINNESOTA
RURAL HEALTH
RESEARCH CENTER

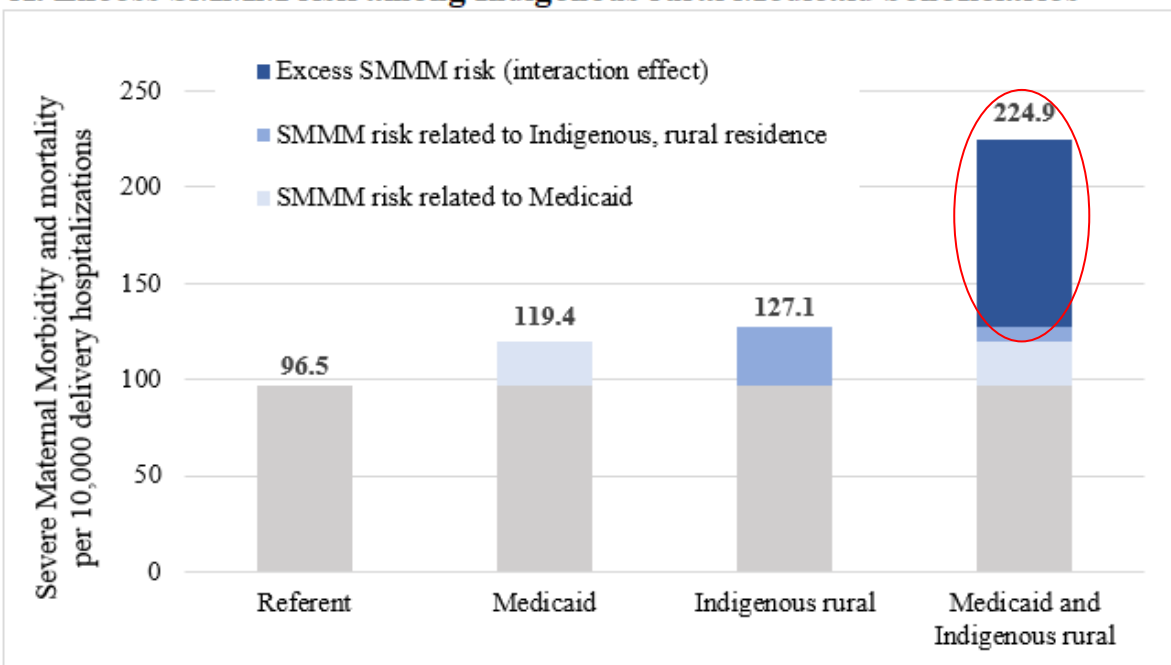
Adjusted incidence of severe maternal morbidity/mortality across rural/urban, insurance, & race and ethnicity



Additive risk by Medicaid, race, and geography



A. Excess SMMM risk among Indigenous rural Medicaid beneficiaries



Interrante JD, Tuttle MS, Admon LK, Kozhimannil KB. Severe Maternal Morbidity and Mortality Risk at the Intersection of Rurality, Race and Ethnicity, and Medicaid. *Womens Health Issues*. 2022 Jun;S1049-3867(22)00052-4.



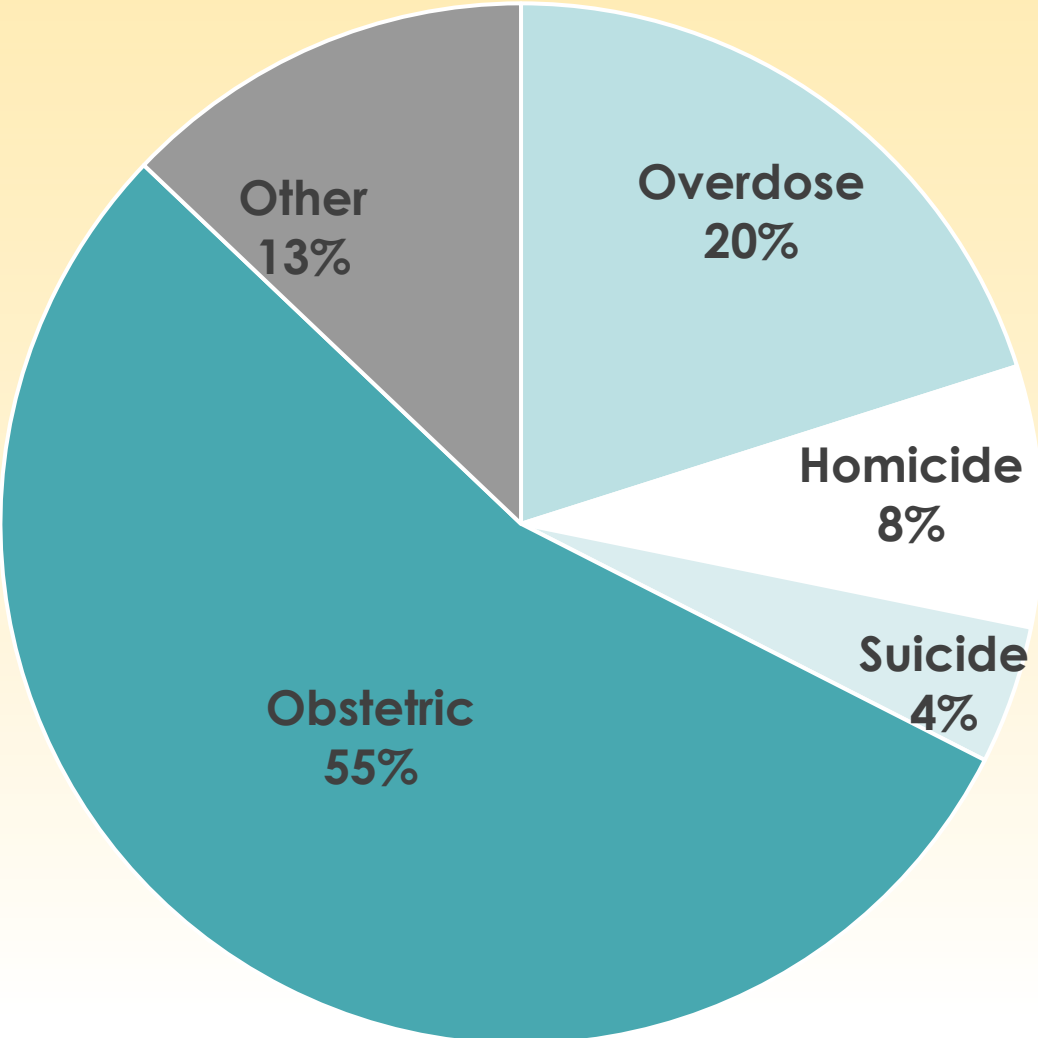
UNIVERSITY OF MINNESOTA
RURAL HEALTH
RESEARCH CENTER

What drives high rates of maternal morbidity and mortality?



UNIVERSITY OF MINNESOTA
RURAL HEALTH
RESEARCH CENTER

Pregnancy-Associated Deaths, 2020



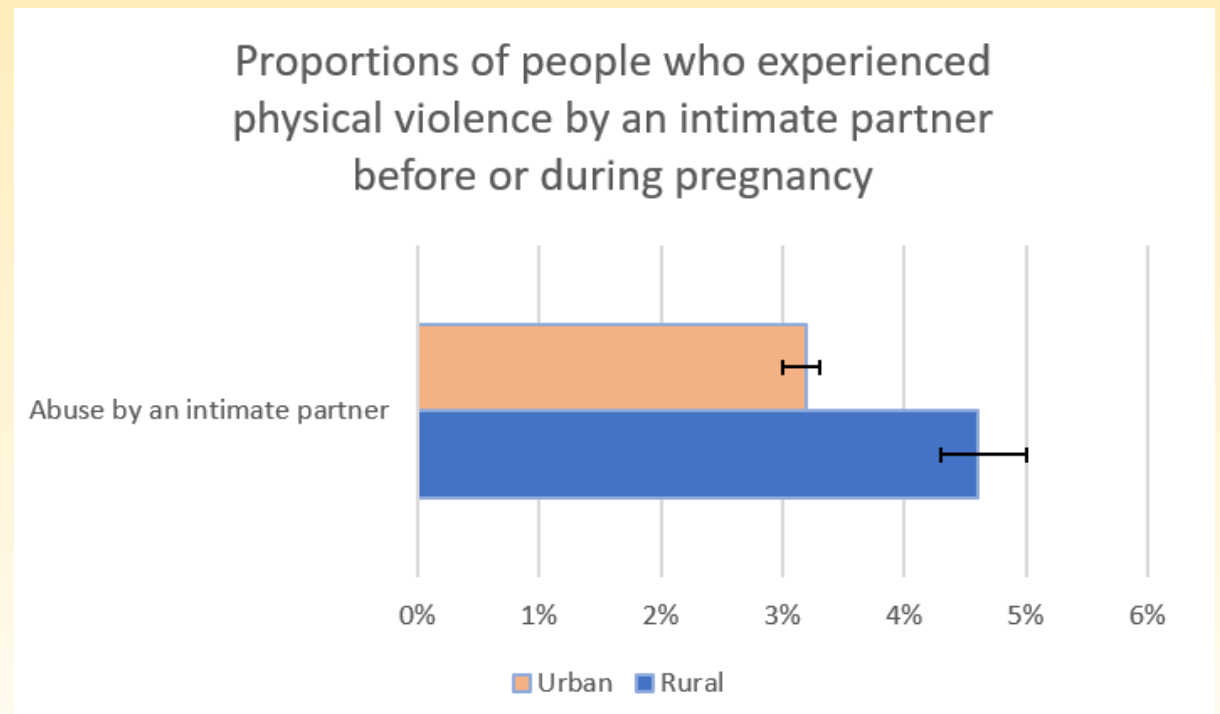
IPV around the time of pregnancy is particularly harmful

- 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



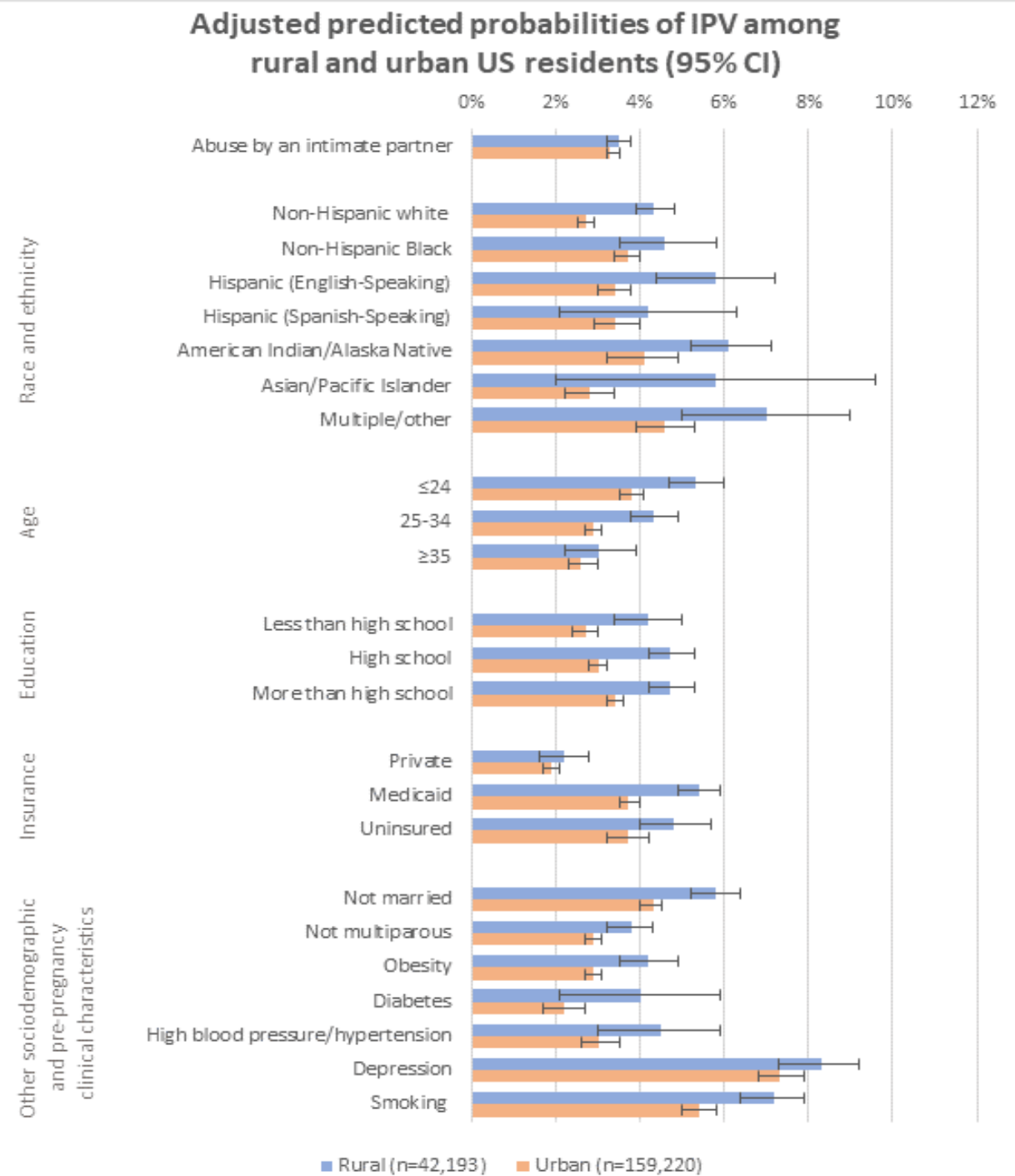
More rural residents experienced physical violence by an intimate partner

4.6% of rural residents experienced physical IPV before or during pregnancy, compared to 3.2% of urban residents



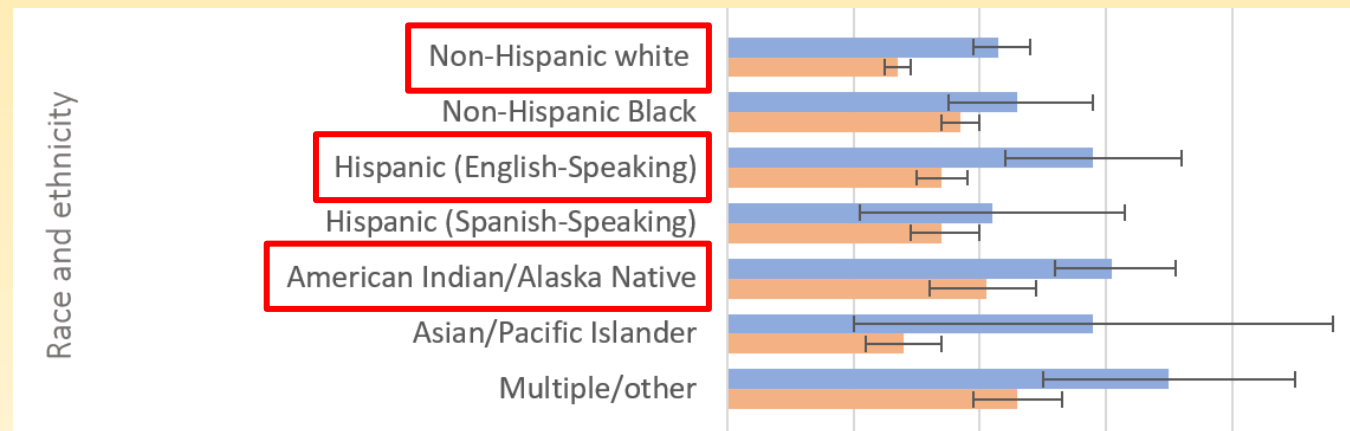
Rural birthing people were more likely to experience IPV

Predicted probabilities of experiencing physical violence by an intimate partner were **higher among rural residents across most measured characteristics**, compared to urban residents

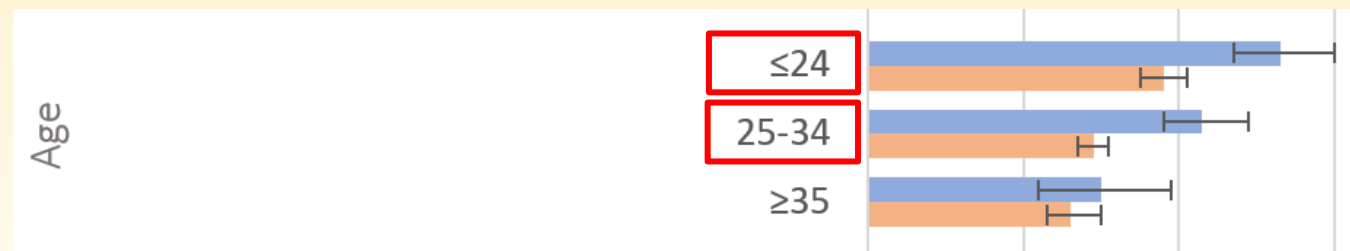


...and rural-urban differences were pronounced among certain groups

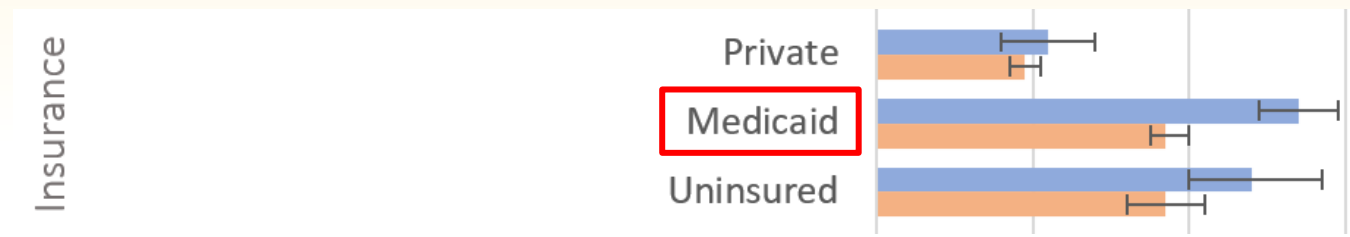
Rural residents who identified as Non-Hispanic white, Hispanic (English-speaking), and American Indian/Alaska Native



Rural residents who were 18-34 years of age

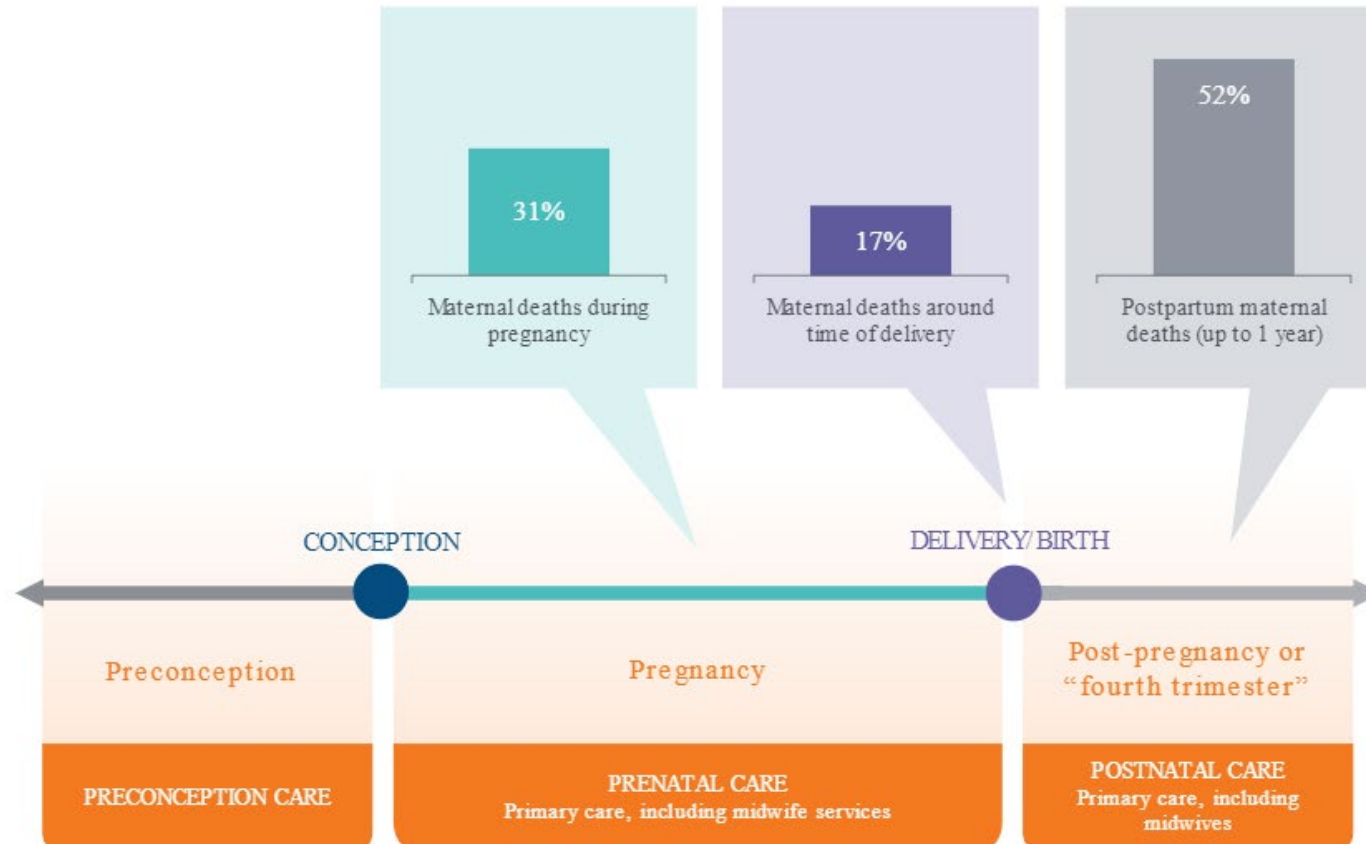


Rural Medicaid beneficiaries



Importance of Postpartum Care

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

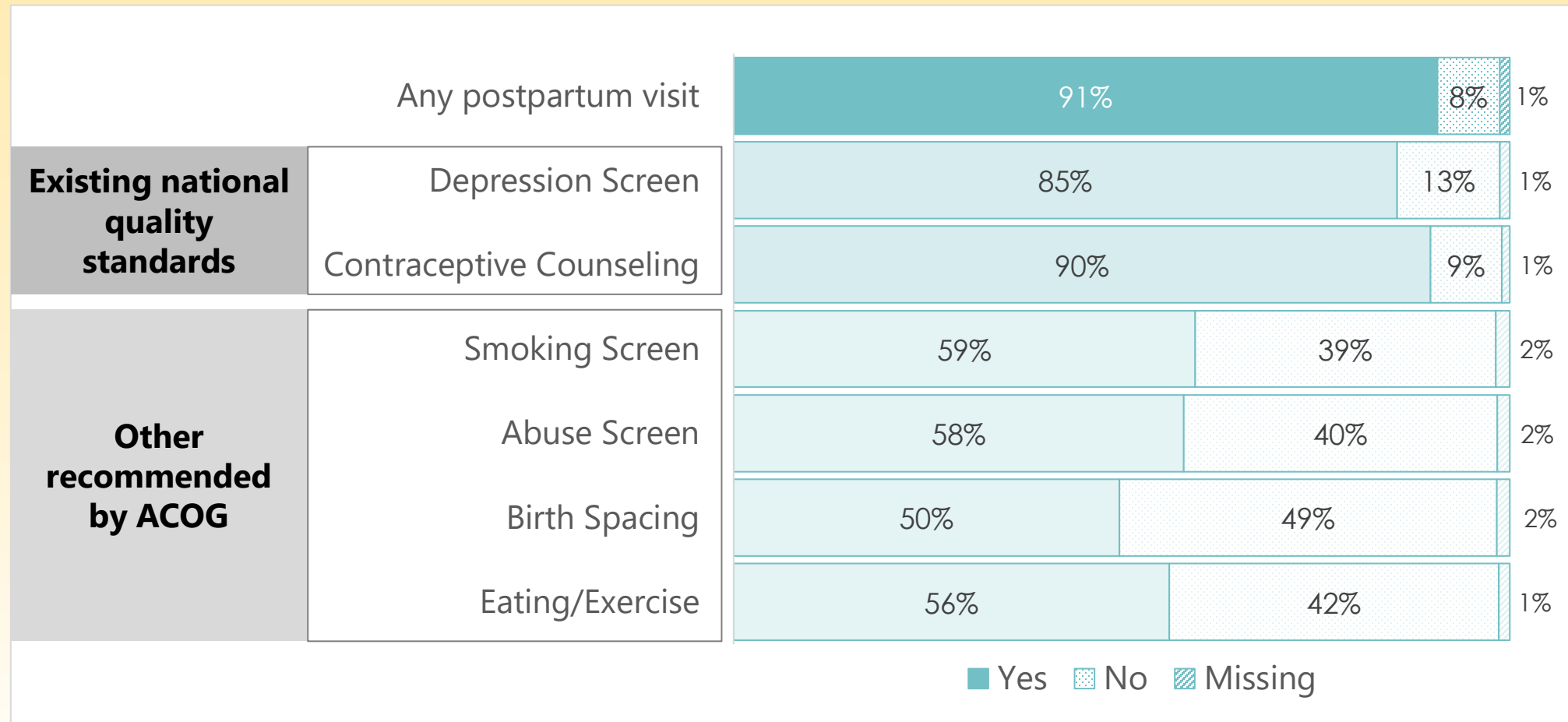


Source: Eugene Declercq and Laurie Zephyrin, *Maternal Mortality in the United States: A Primer* (Commonwealth Fund, Dec. 2020). <https://doi.org/10.26099/ta1q-mw24>

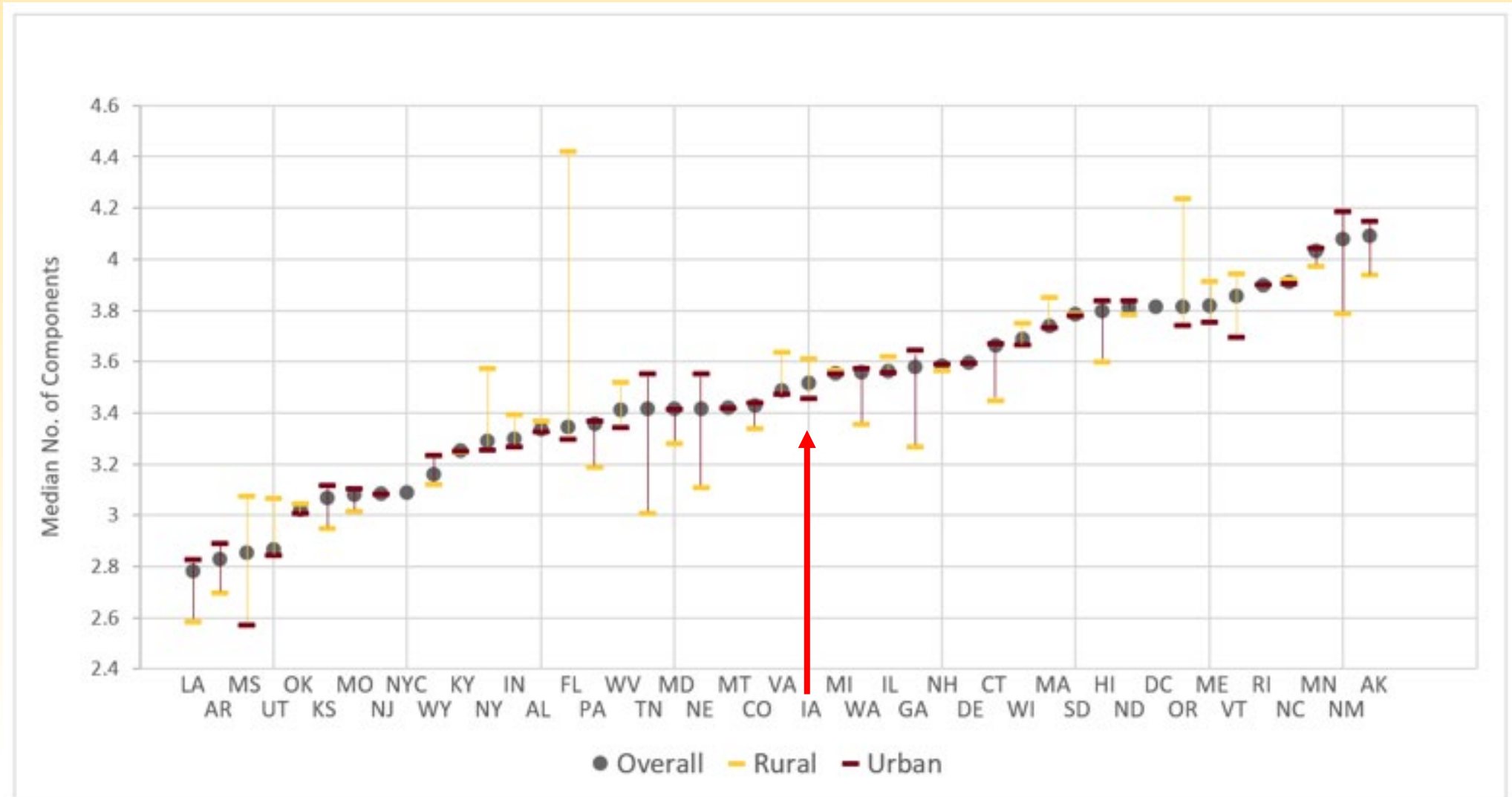


UNIVERSITY OF MINNESOTA
**RURAL HEALTH
RESEARCH CENTER**

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



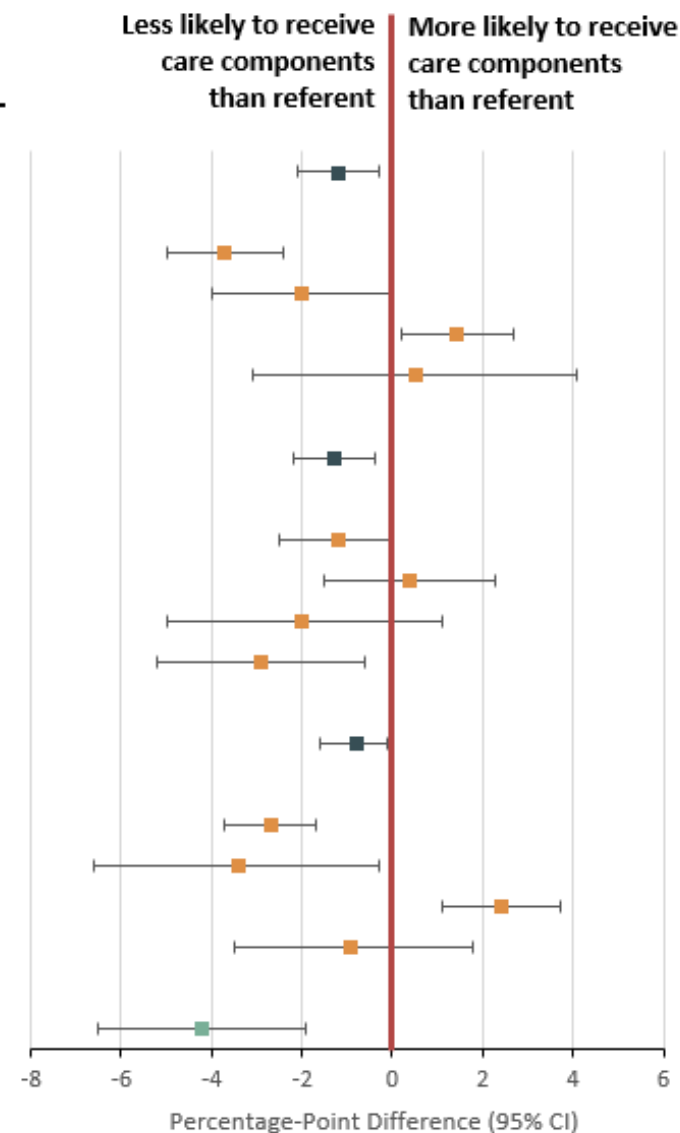
Median Number of Postpartum Care Components Received by State and Rurality



A closer look: depression screening and contraceptive counseling

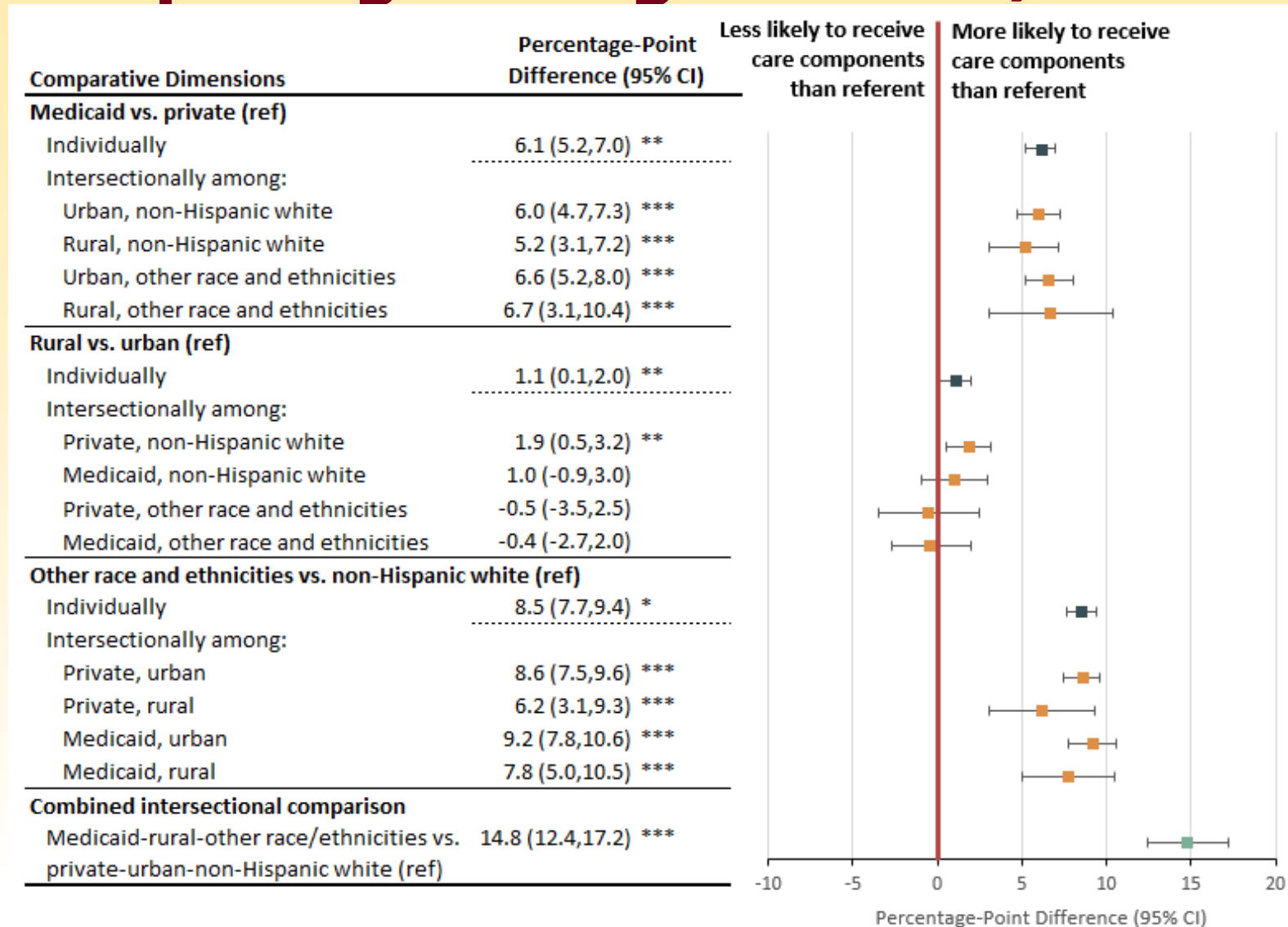
- Lower among Medicaid-insured patients, rural residents, and racialized people.
- Differences were greater at the intersection of patient identities.

Comparative Dimensions	Percentage-Point Difference (95% CI)
Medicaid vs. private (ref)	
Individually	-1.2 (-2.1,-0.3) **
Intersectionally among:	
Urban, non-Hispanic white	-3.7 (-5.0,-2.4) ***
Rural, non-Hispanic white	-2.0 (-4.0,0.0) *
Urban, other race and ethnicities	1.4 (0.2,2.7) *
Rural, other race and ethnicities	0.5 (-3.1,4.1)
Rural vs. urban (ref)	
Individually	-1.3 (-2.2,-0.4) **
Intersectionally among:	
Private, non-Hispanic white	-1.2 (-2.5,0.0)
Medicaid, non-Hispanic white	0.4 (-1.5,2.3)
Private, other race and ethnicities	-2.0 (-5.0,1.1)
Medicaid, other race and ethnicities	-2.9 (-5.2,-0.6) *
Other race and ethnicities vs. non-Hispanic white (ref)	
Individually	-0.8 (-1.6,-0.1) *
Intersectionally among:	
Private, urban	-2.7 (-3.7,-1.7) ***
Private, rural	-3.4 (-6.6,-0.3) *
Medicaid, urban	2.4 (1.1,3.7) ***
Medicaid, rural	-0.9 (-3.5,1.8)
Combined intersectional comparison	
Medicaid-rural-other race/ethnicities vs. private-urban-non-Hispanic white (ref)	-4.2 (-6.5,-1.9) ***

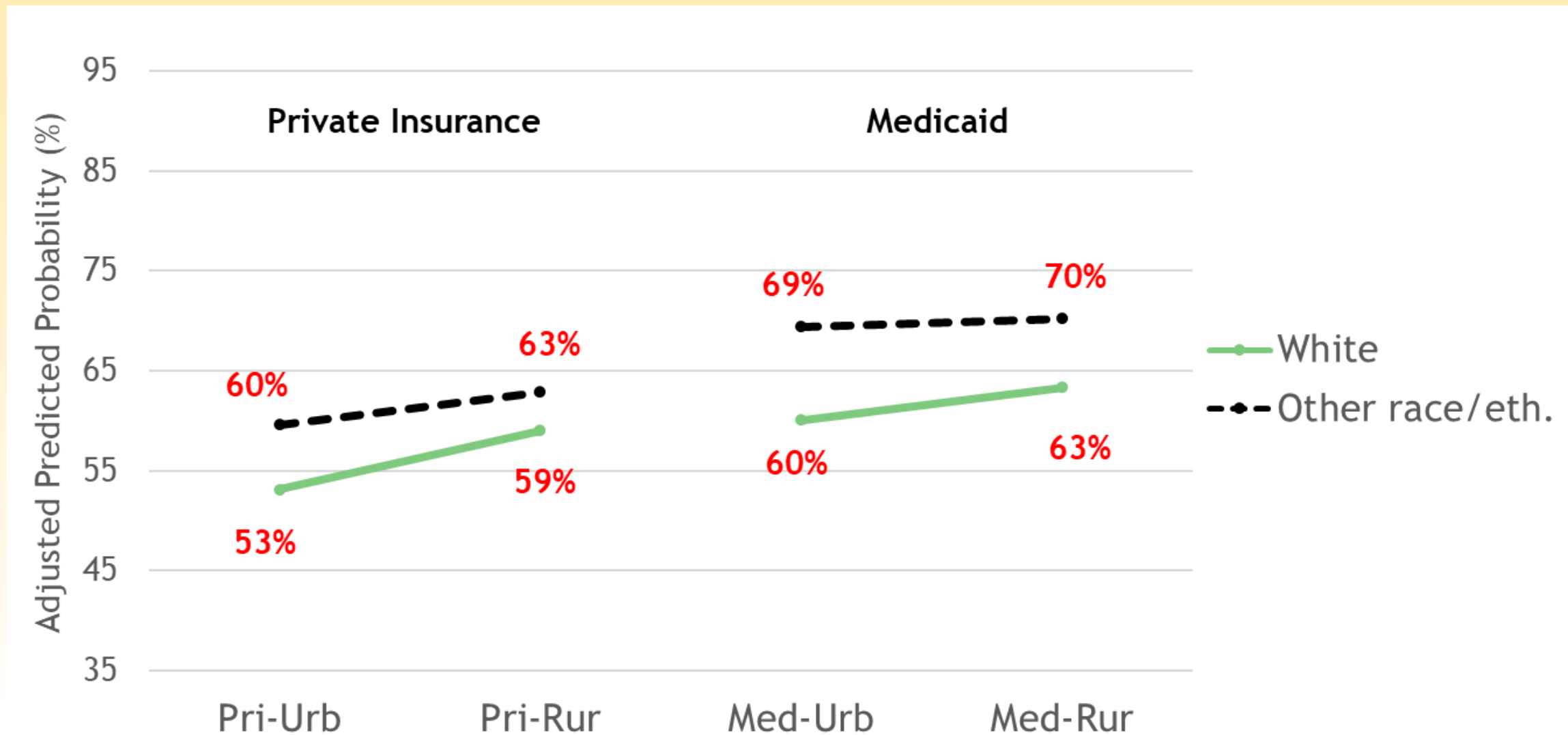


Other recommended components (smoking, abuse, birth spacing, eating/exercise)

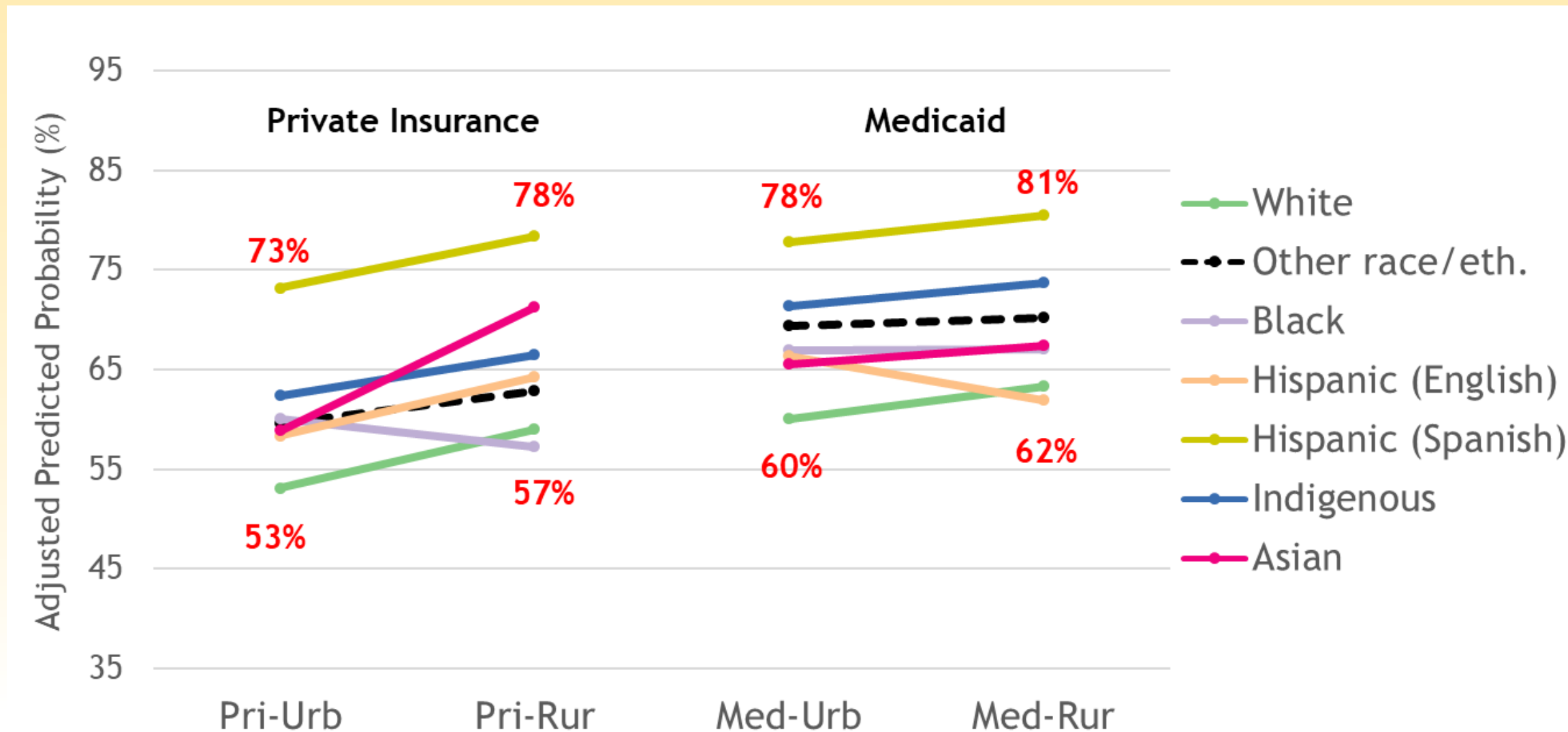
- Higher among Medicaid-insured patients, rural residents, and racially minoritized groups.
- Disparities for other components much greater than those with existing quality standards.



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?



UNIVERSITY OF MINNESOTA
RURAL HEALTH
RESEARCH CENTER

Policy Options

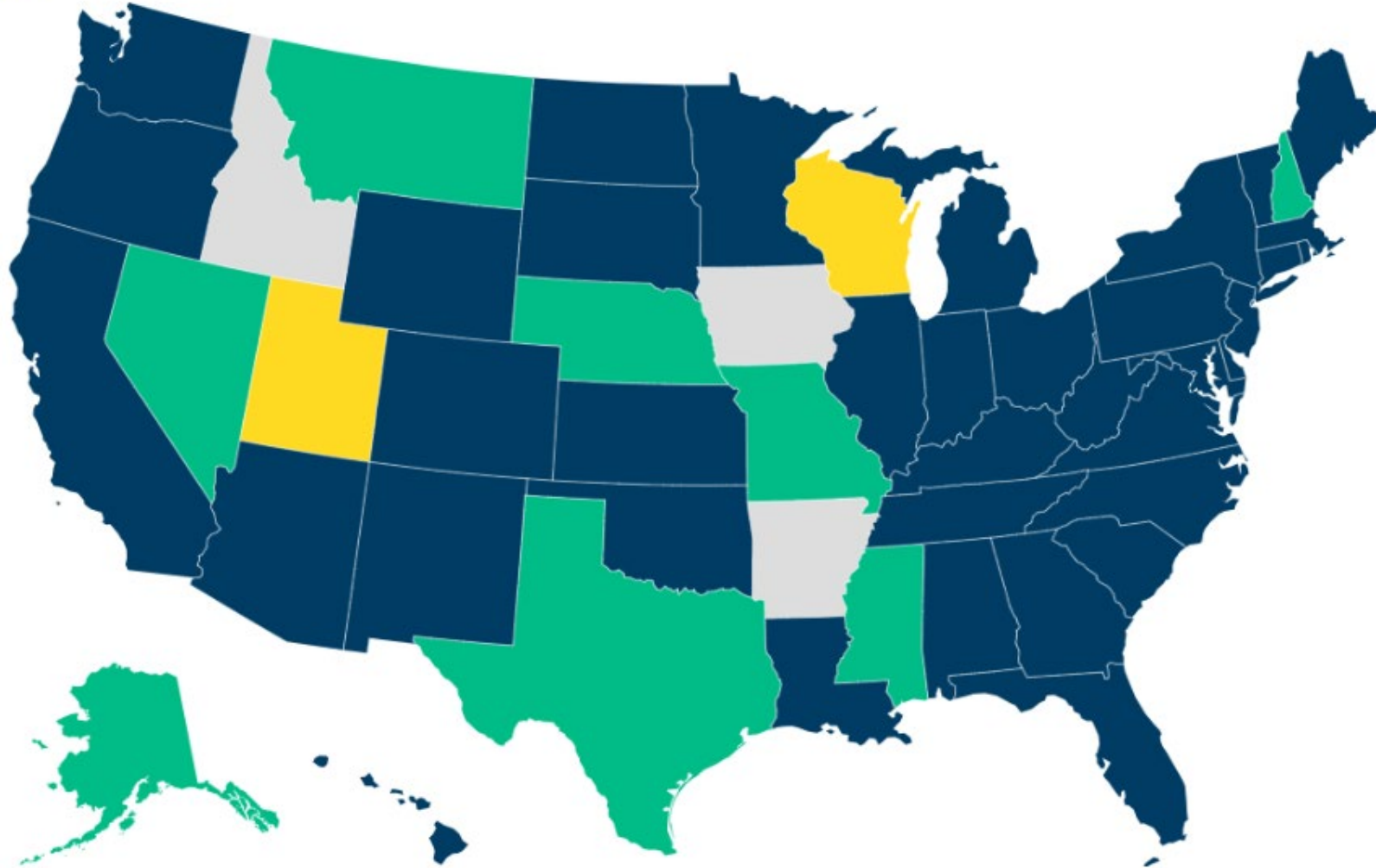
- Rural Maternal and Obstetric Modernization of Services (MOMS) Act – includes data collection and standardization, reporting, research
- Improve data
 - Investment in data infrastructure for clinical, public health, and policy analysis for postpartum health
 - Establish norms for data analysis and reporting 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*



UNIVERSITY OF MINNESOTA
RURAL HEALTH
RESEARCH CENTER

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)



NOTE: CMS approved the U.S. Virgin Island's [state plan amendment](#) on 6/23/2023.

SOURCE: [KFF analysis of approved and pending](#) 1115 waivers, state plan amendments, and state legislation, as of October 12, 2023. • PNG •

Created with [Datawrapper](#)



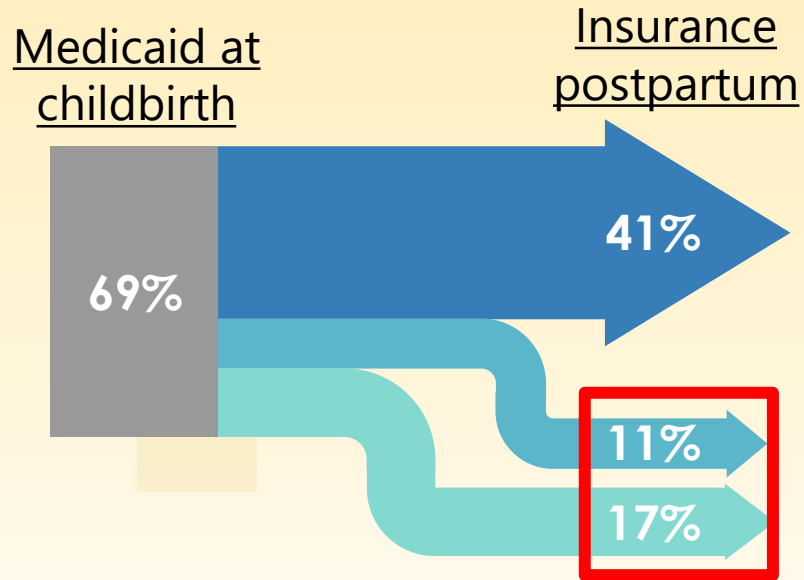
Photo: Kathleen Henning



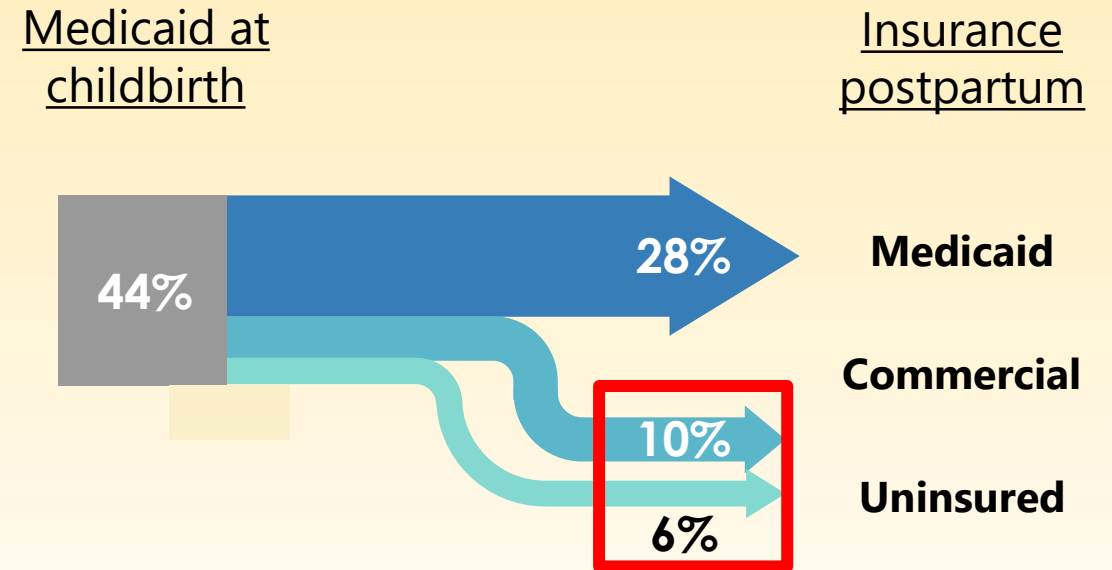
UNIVERSITY OF MINNESOTA
RURAL HEALTH
RESEARCH CENTER

Insurance disruptions among rural residents with Medicaid at childbirth

Black, Indigenous, and People of Color



White, non-Hispanic



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

Funded by the Federal Office of Rural Health Policy, Health Resources and Services Administration.



rhrc.umn.edu

Connect with us

- @ info@ruralhealthresearch.org
- facebook.com / RHRGateway
- twitter.com / rhrgateway



UNIVERSITY OF MINNESOTA
**RURAL HEALTH
RESEARCH CENTER**

Thank you!



Website: <https://rhrc.umn.edu/>

Email: inter014@umn.edu

Twitter: @UMNRHRC



UNIVERSITY OF MINNESOTA
RURAL HEALTH
RESEARCH CENTER

BREAK

2:45 – 3:00

IOWA
HHS

HEALTHY
birthDAY
IMPROVING BIRTH OUTCOMES

Community-based Solutions – Panel Discussion



IOWA
HHS

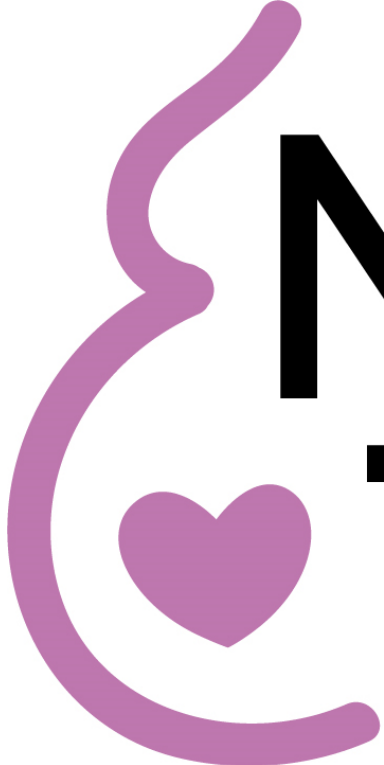
HEALTHY
birthDAY
IMPROVING BIRTH OUTCOMES

EveryStep



Care & Support Services | Home Care | Hospice
Interpretation | Community Health | Grief & Loss Services

Stephanie Cassady | Coordinated Intake & Referral Manager



Nine2 Thrive™

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.*

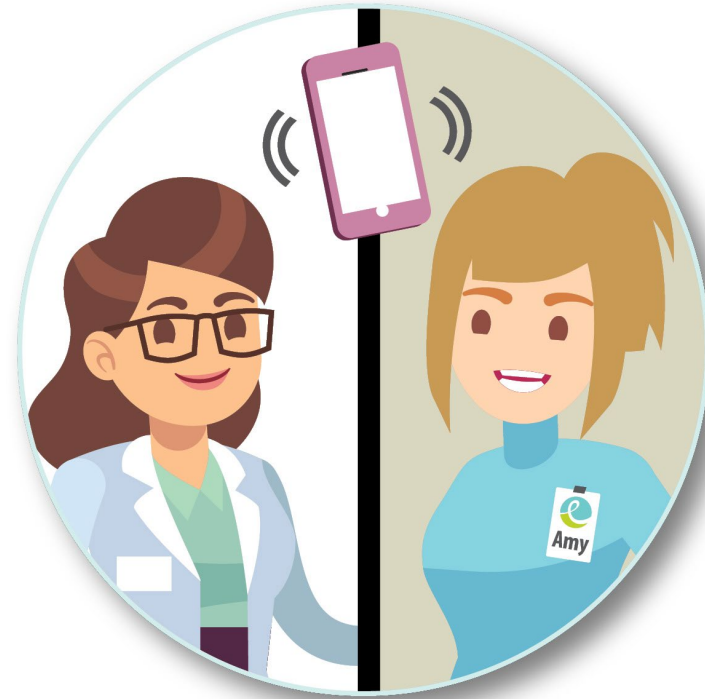
Nine2Thrive - Step 1

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

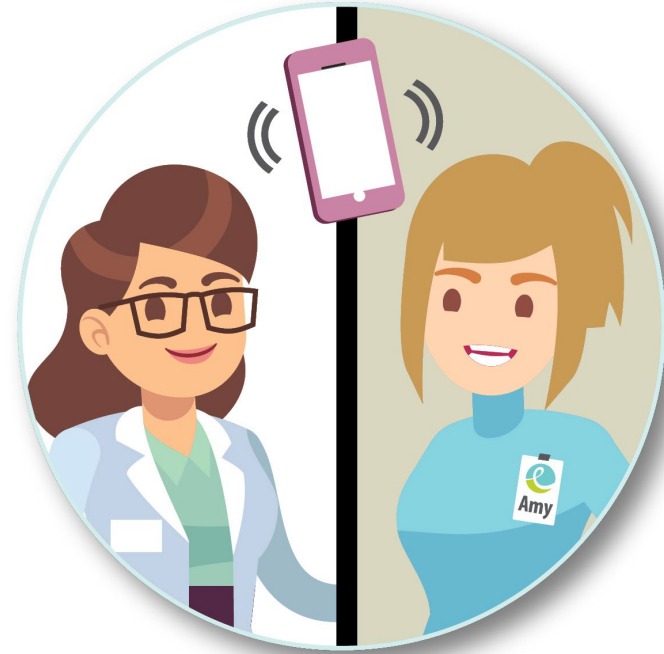
Nine2Thrive connects parent/family to appropriate community and healthcare resources.



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

Stephanie Cassady
Coordinated Intake & Referral Manager
scassady@everystep.org

Hannah Rivas
Family Support Director
hrivas@everystep.org

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.

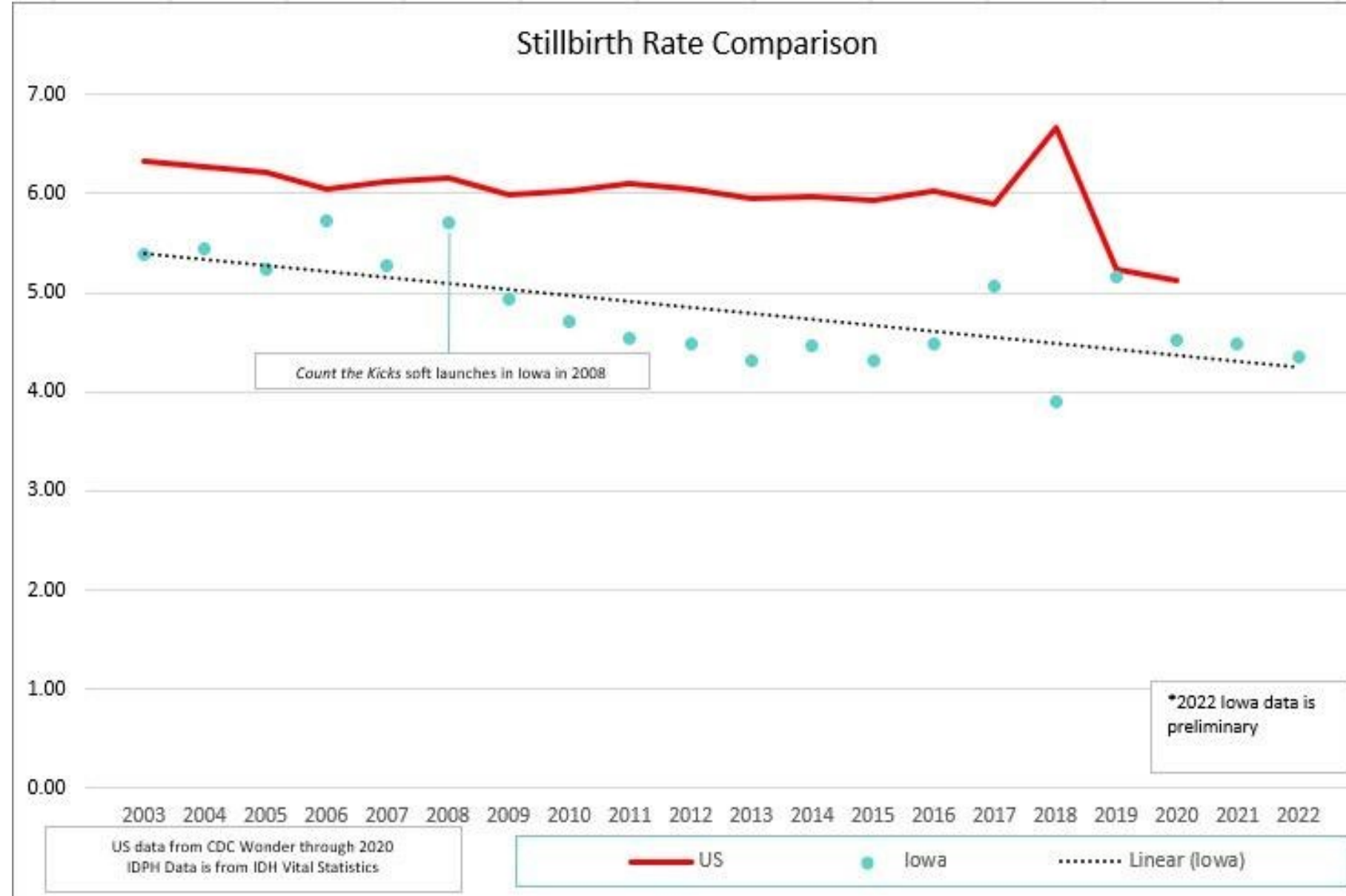


We save 1 in 3 at-risk babies in Iowa.



Research shows Iowa's stillbirth rate declined one percent every three months for a decade while the U.S. remained relatively stagnant.

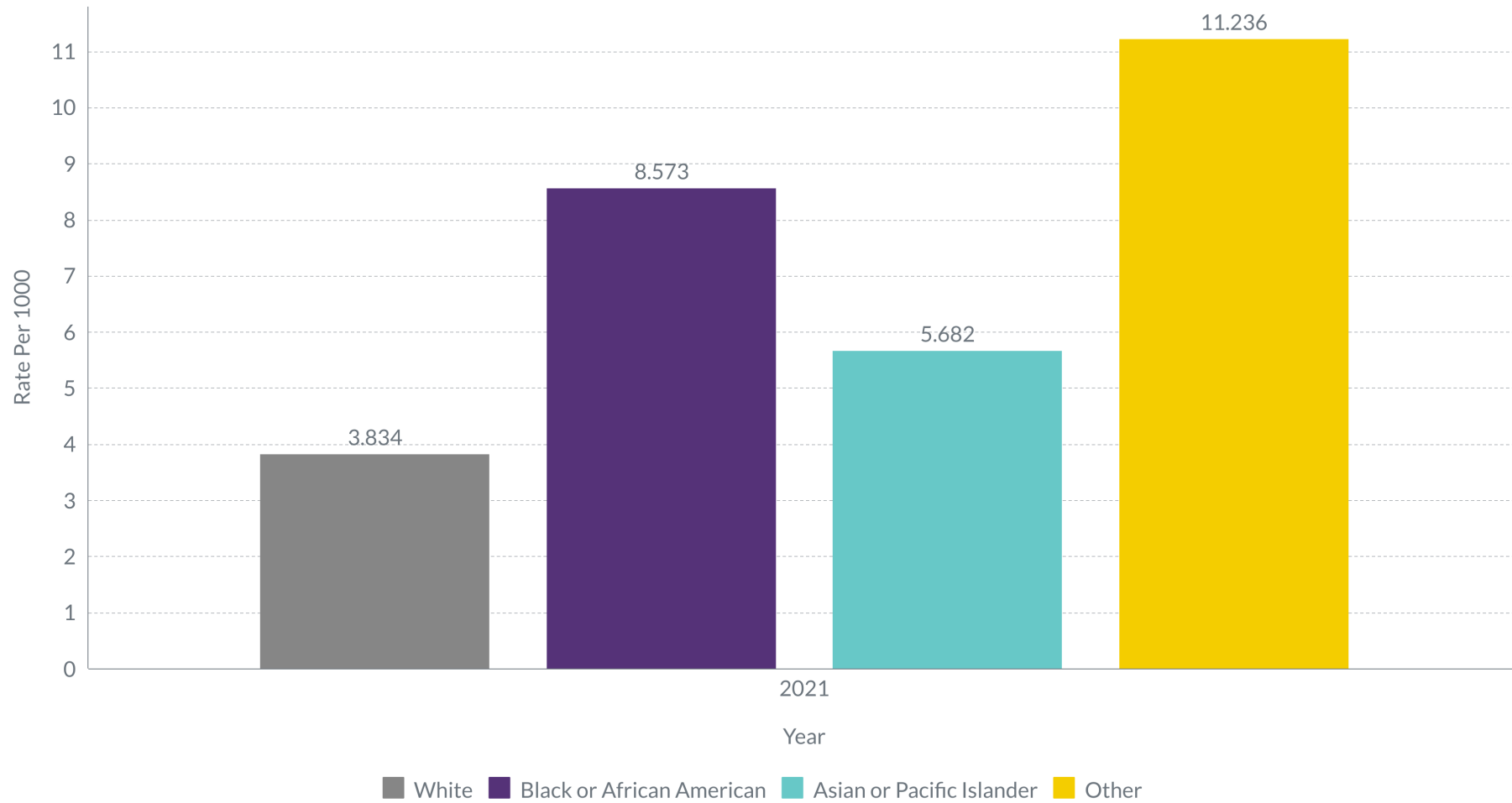
Iowa's African American stillbirth rate decreased by 39% in the first five years of our program.



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



Iowa State Stillbirth Data by Race



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.



[Read the Report](#)

Fetal Movement Monitoring – Bridging the Gap

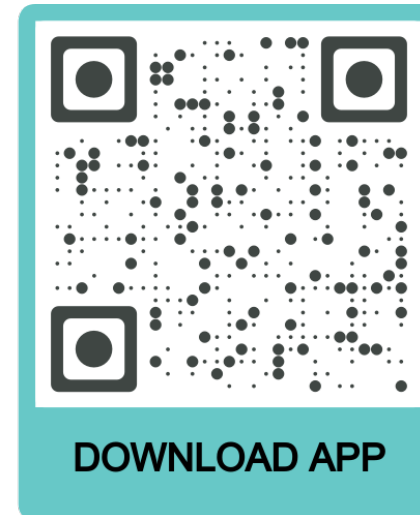
How can mHealth technology play a role?



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

3rd trimester?

Start Counting!
Counting kicks is what you should do. It's important and easy too!
ASK HOW. ASK NOW.

Download the FREE **Count the Kicks** app today!

©2023 Healthy Birth Day, Inc.
Count the Kicks® is a campaign of Healthy Birth Day, Inc., a 501(c)(3) organization dedicated to the prevention of stillbirth and infant death through education, advocacy and support.
This information is for educational purposes only and is not meant for diagnosis or treatment. Use of this information should be done in accordance with your healthcare provider.

HEALTHY BIRTHDAY
SA
save a life
The International Childbirth Education Association endorses Healthy Birth Day, Inc., and The Count the Kicks® stillbirth prevention campaign.

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

Counting kicks saves lives.
CountTheKicks.org

Counting kicks saves lives.
It's as easy as 1, 2, 3!

1. Count your baby's movements.
2. Know what is normal for your baby.
3. Call your provider if something changes.

Download the FREE Count the Kicks app today!

CountTheKicks.org

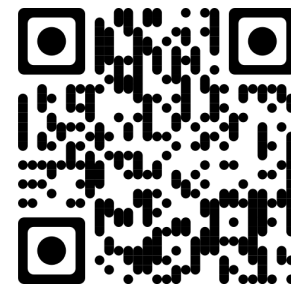
HEALTHY BIRTHDAY

Count the Kicks is a campaign of Healthy Birth Day, Inc., a 501(c)(3) organization dedicated to the prevention of stillbirth and infant death through education, advocacy and support. This information is for educational purposes only and is not meant for diagnosis or treatment. Use of this information should be done in accordance with your healthcare provider.
©2023 Healthy Birth Day

COPYRIGHTED MATERIAL - DO NOT COPY

3rd Trimester?
Start counting your baby's kicks!

count the KICKS



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



Save Babies With Us!

A Healthcare Professional's Guide on Talking to Expectant Parents about Count the Kicks and Fetal Monitoring!

Visit bit.ly/CTK-CE-Training to register today!



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



IOWA
HHS

HEALTHY
birthDAY
IMPROVING BIRTH OUTCOMES

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

IOWA
HHS

HEALTHY
birthDAY
IMPROVING BIRTH OUTCOMES

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

STATE OF IOWA
DEPARTMENT OF
Health
AND
Human
SERVICES

IOWA
Maternal Quality Care Collaborative



The Future: Remaining challenges and opportunities

Financial Viability

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?

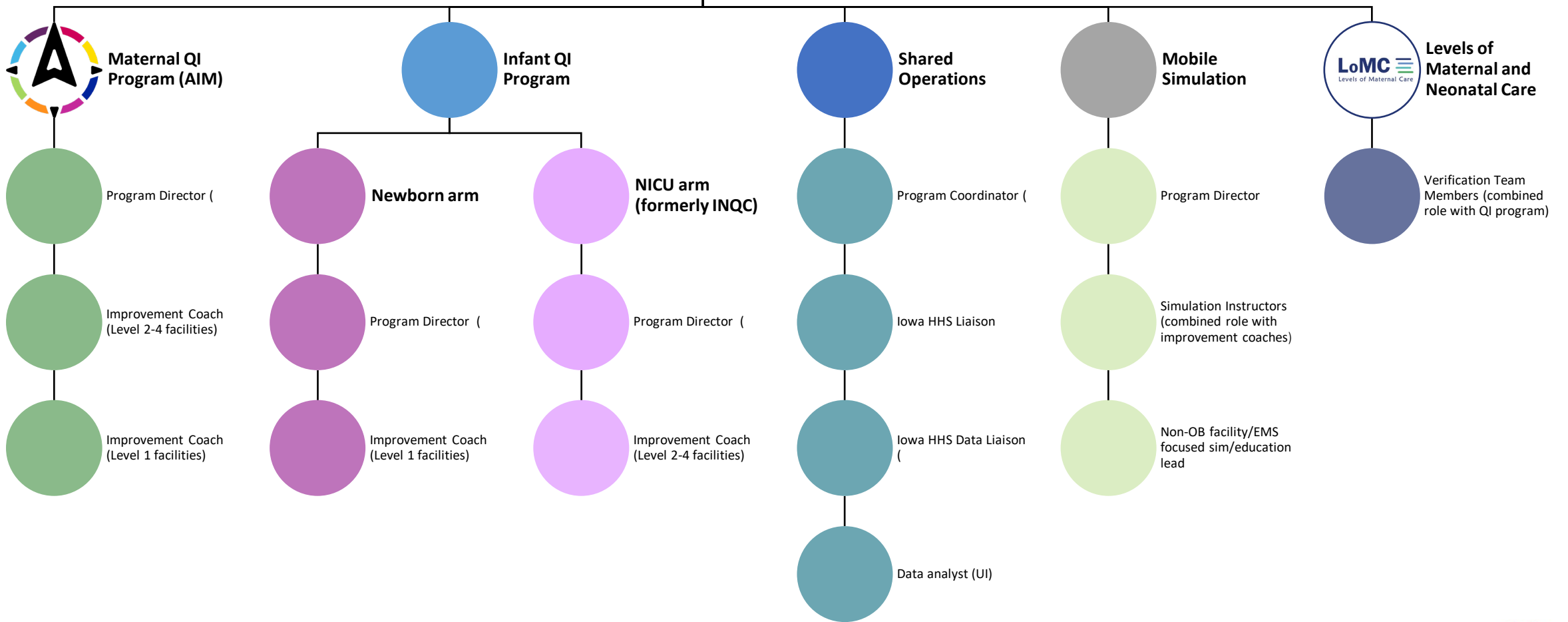
Community Coordination: An unmet need

- 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

Iowa Statewide Perinatal Care Program



Unmet funding needs

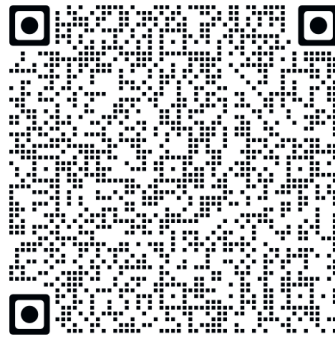
- Rough estimation of annual cost to fund a singular Perinatal Program to maintain existing support to Iowa hospitals is \$1 million
 - Streamlined operations will maximize programmatic support to hospitals
 - If we are successful with grants, we will still have a gap of approximately \$300,000 to fully 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

Thank You to Our Sponsors

Presenting Sponsor

