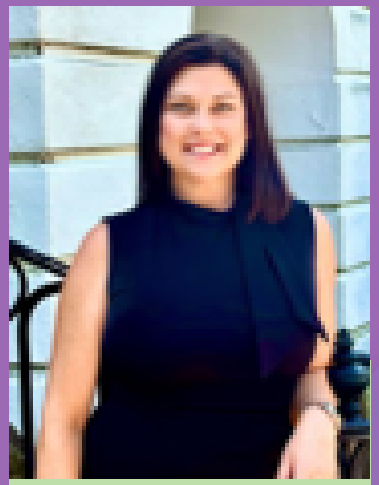
SOUTH CAROLINA MATERNAL HEALTH INNOVATION COLLABORATIVE

Maternal Health Task Force

MEETING

December 3, 2024
10 am to 12 pm
Microsoft Teams

Institute for Families in Society at the University of South Carolina



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Agenda

DATA REVIEW

BREAK

WORKGROUPS

DEBRIEF

NEXT STEPS

ADJOURN

Reminders

MUTE

To minimize background noise, kindly mute your microphone when you are not speaking.

CHAT

Feel free to use the chat for any questions or comments, and we will do our best to address them during the meeting.

ENGAGE

Stay engaged and fully participate!

RESPOND

Complete the post-meeting survey to share your valuable feedback.

Introduce Yourself!

IN THE CHAT PLEASE SHARE...

-Name

-Organization/Community

-What's one thing that always makes you smile?

DATA WALK

Maternal Health in SC

Sarah Gareau, DrPH, MEd, MCHES

Institute for Families in Society
at the
University of South Carolina

Maternal Health Data Walk (CY 2023)

Presented by: Sarah Gareau, DrPH, MEd, MCHES

South Carolina Maternal Health Innovation Collaborative (SCMHIC) Taskforce Meeting
December 3rd, 2024

Acknowledgments

We would like to thank the following team members at IFS for their contribution to this work:

- Ana López – De Fede, PhD; Distinguished Research Professor Emerita and Associate Director
- Chloe Rodriguez Ramos, MPH; Translation and Implementation Products Coordinator
- Linga Murthy Kotagiri, MD, MPH; Senior Maternal & Child Health Data Manager
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- Verna Brantley; Senior Research Associate/SAS Programmer
- Carol Reed, MPH; Senior Qualitative Research Associate
- Chanell Haley, PhD; Mixed Methods Health Scientist
- Nathaniel Bell, PhD; Associate Professor and Director of Research and Evaluation

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Data Snapshots

- Perinatal Mental Health
- Co-occurring Conditions
- Newborn Outcomes
- High Maternal Vulnerability

Service Delivery

- Change in Women of Childbearing Age
- High MVI, Maternity Care Deserts, and OB Adequacy
- Hospital Perinatal Level
- ED Visits

Access to Care

- Drive Distance

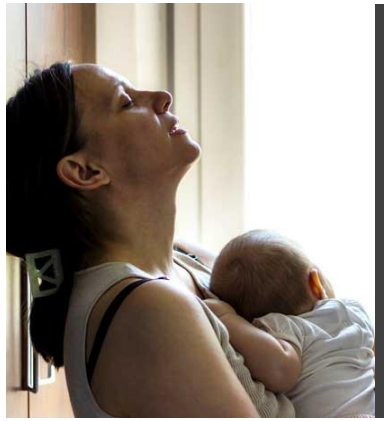
Contents

Data Snapshots

“I was worried about miscarrying again. I was worried about what kind of mom I was going to be. I was worried about stuff going wrong and not getting the correct attention. That was the most emotional nine months ever.”

-Voices/Voces Birthing Person Participant

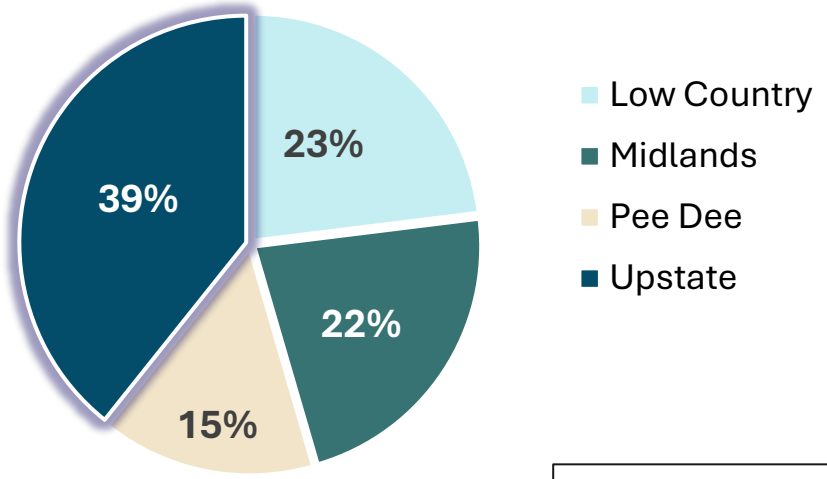
Perinatal Mental Health Conditions in SC



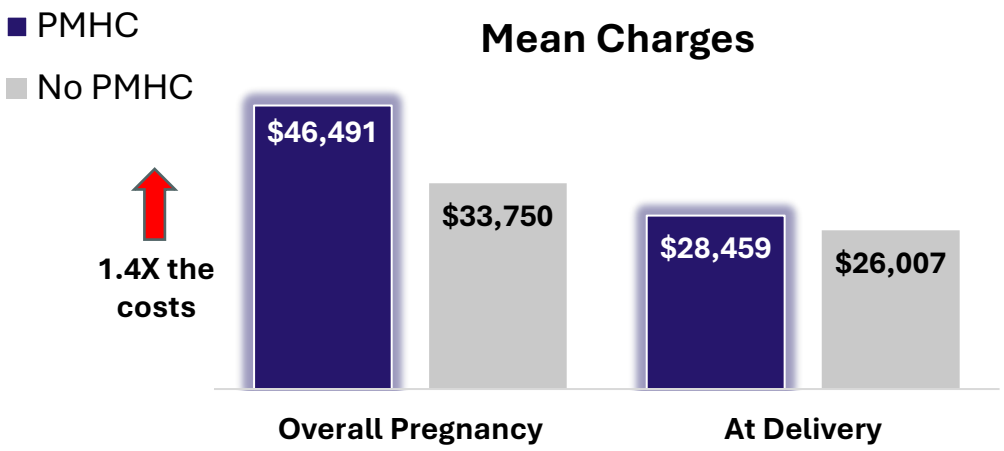
In CY2023, about **1 in 5** deliveries had a Perinatal Mental Health Condition (PMHC)

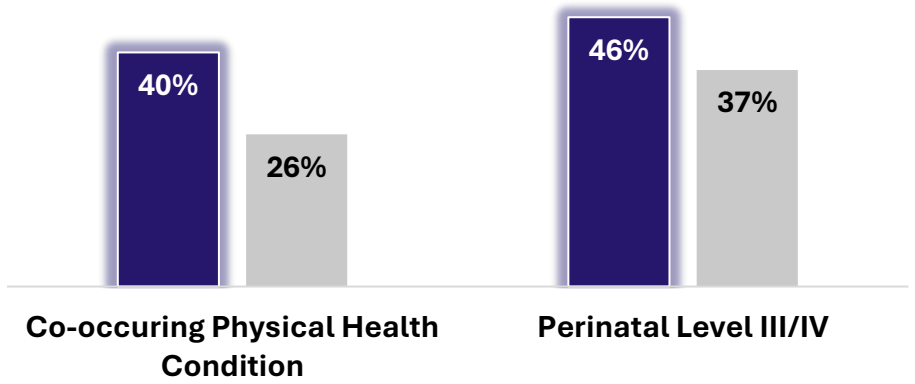
N = 9,493

Proportion of Deliveries with PHMC



Mean Charges





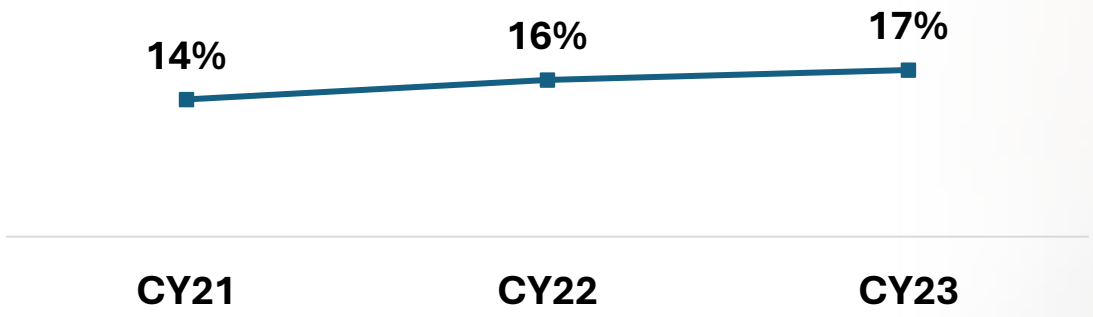
TAKEAWAY

Compared to non-PMHC deliveries, **those with PMHC had higher charges and greater rates** of co-occurring physical health (PH) conditions and of delivery in a perinatal level III/IV facility.

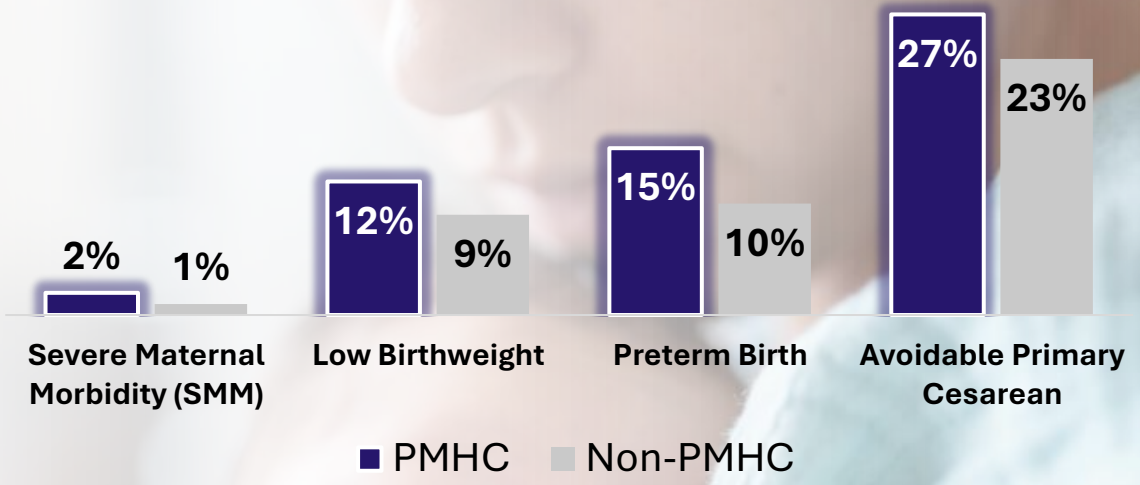
NOTE: Postpartum records for CY 2023 deliveries are incomplete. Final Ns and rates will be higher.

Trend and Outcomes among PMHC Deliveries

Statewide PMHC Trend



Outcomes (CY 2023)



NOTE: PMHC is captured within 12-months prior to or at delivery and refers to mood, anxiety, and anxiety-related disorders. Cochran Armitage test was used to calculate trends.

TAKEAWAY

The statewide PMHC rate increased significantly over time **(22%, p<.05)**. This relative increase was even higher among birthing persons in the Upstate **(29%)** and Pee Dee regions **(32%)**.

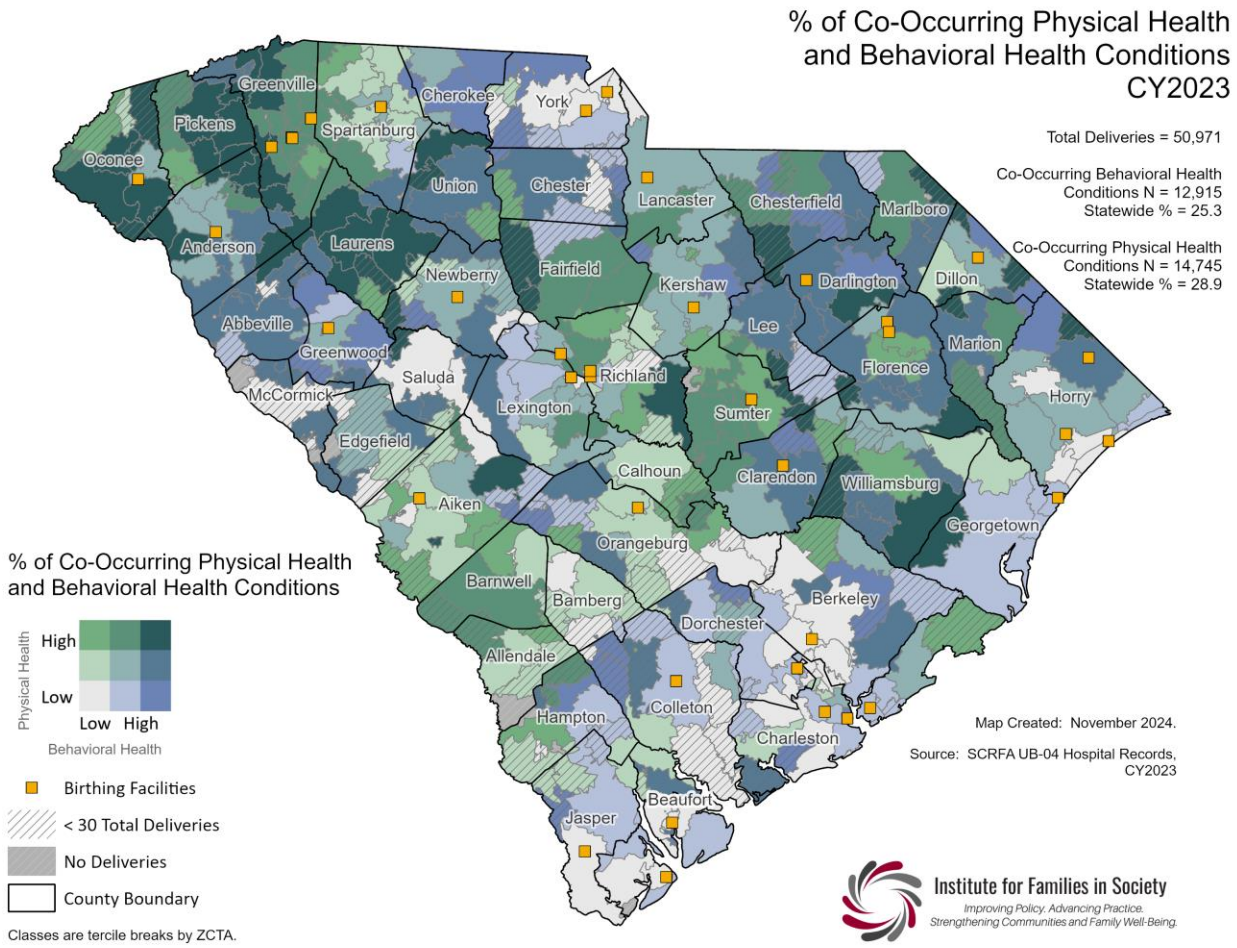
Increases were also seen across all race, payer, and residence groups with the largest relative increase among birthing persons identifying as **Hispanic (40%)** or who were **uninsured (86%)**.

Indicating potential missed opportunities for timely screening and intervention, **1 in 5 birthing persons** who had a mental health diagnosis on an ED visit or inpatient stay in the year prior to their delivery also had one postpartum.

To learn more about PMHC deliveries in SC, visit the statewide and hospital SCBOI dashboards.

You can also access the AIM PMHC Learning Series Sessions here.

Co-Occurring Conditions

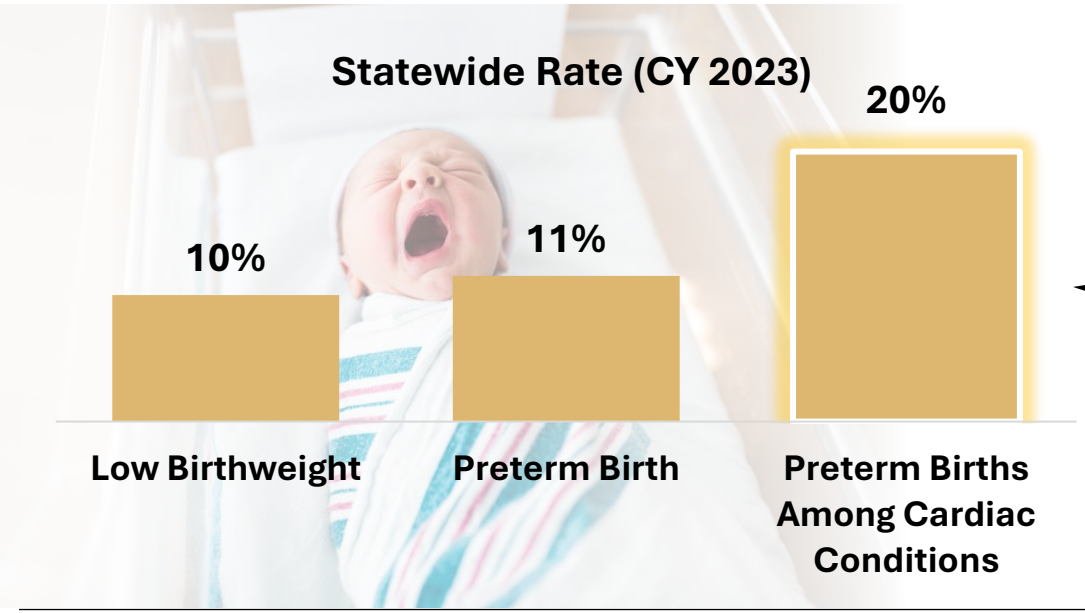


TAKEAWAY

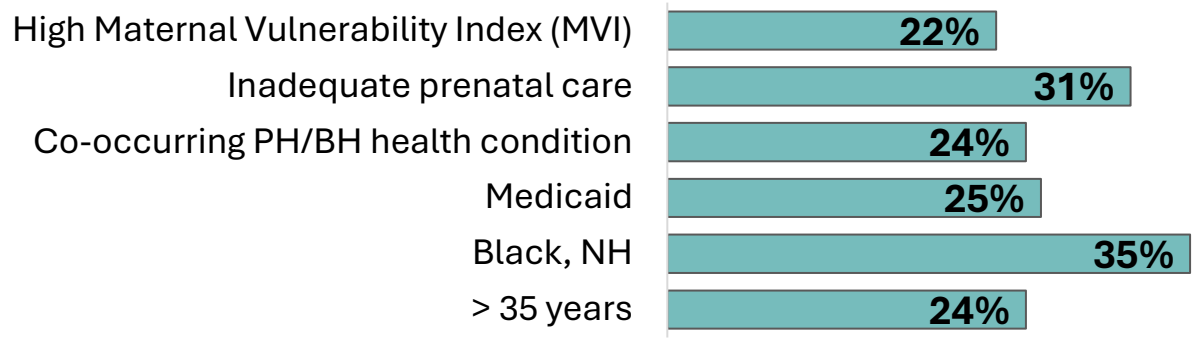
This map identifies within each county the areas with greatest need. **Overall, rates of co-occurring behavioral health (BH) and physical health (PH) conditions were highest in six SC counties;** four in the Upstate (Oconee, Pickens, Anderson, Laurens) and two in the Pee Dee (Chesterfield and Darlington). Of these, half (Pickens, Laurens, and Chesterfield) did not have a birthing facility within their county, indicating greater potential need for care coordination.

Interpreting the map: The **bright green** is high for physical health only, the **bright blue** is high for behavioral health only, and the **dark green-blue** counties are high for both.

Newborn Outcomes



Disparities were present for all newborn outcomes, with the highest rates seen for **preterm births among cardiac conditions**.



NEW!
PC-06 Unexpected Newborn Complications

1 in 7 SC newborns have unexpected complications (89.6% moderate, 1.5% severe, 8.8% both).

TOP 3 CONDITIONS	%
Moderate Respiratory Complications with Length of Stay (LOS)	45%
Moderate Respiratory Complications with LOS procedures	25%
Moderate Birth Trauma with LOS	22%

Compared to the CY 2023 statewide rate (14%), **disparities** were seen among those:

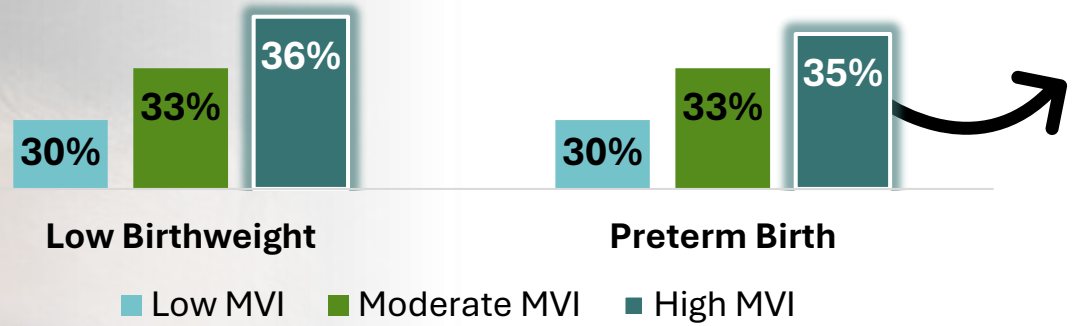
- >35 years of age (15%)
- who delivered via cesarean (18%)
- with perinatal obesity (16%)
- with co-occurring PH/BH health conditions (17%)

Maternal Vulnerability Index Snapshot

What is the Maternal Vulnerability Index?

The US Maternal Vulnerability Index (MVI) measures vulnerability for adverse maternal health outcomes across reproductive, physical, mental health/substance abuse, and general healthcare, socioeconomic determinants, and physical environment.

Low Birthweight and Preterm Birth by MVI (CY 2023)



High MVI had **23%** higher odds of **preterm birth** (aOR=1.23), and **31%** higher odds of **low birthweight** (aOR=1.31) compared to low MVI.

Top Three Factors with a High Distribution among the High MVI Group

- Residing in a rural area (63%)
- Having less than a high school education (42%)
- Being younger <20 (46%)

SMM at Delivery or Postpartum by MVI (CY 2022)

When assessing maternal outcomes by vulnerability, **those with high MVI had higher rates of SMM** during delivery or postpartum. This trend was **also seen when observing rates of ICU** (N=109 for high MVI vs. N=64 for low MVI) **and postpartum inpatient stays** (5.1% for high MVI vs. 3.8% for low MVI).

NOTE: aOR= Adjusted Odds Ratio. Logistic regression models adjusted for: age, race, residence, payer, education, prenatal care, BMI, and chronicity profile. Chi square p- value of <.05 is defined as statistically significant. CY22 data was used for the MVI maternal outcome analysis as postpartum data for CY23 is not yet complete.

Service Delivery

"I think all of us as an agency or as agencies need to take a look at how we are providing our services and how people are able to access our services."

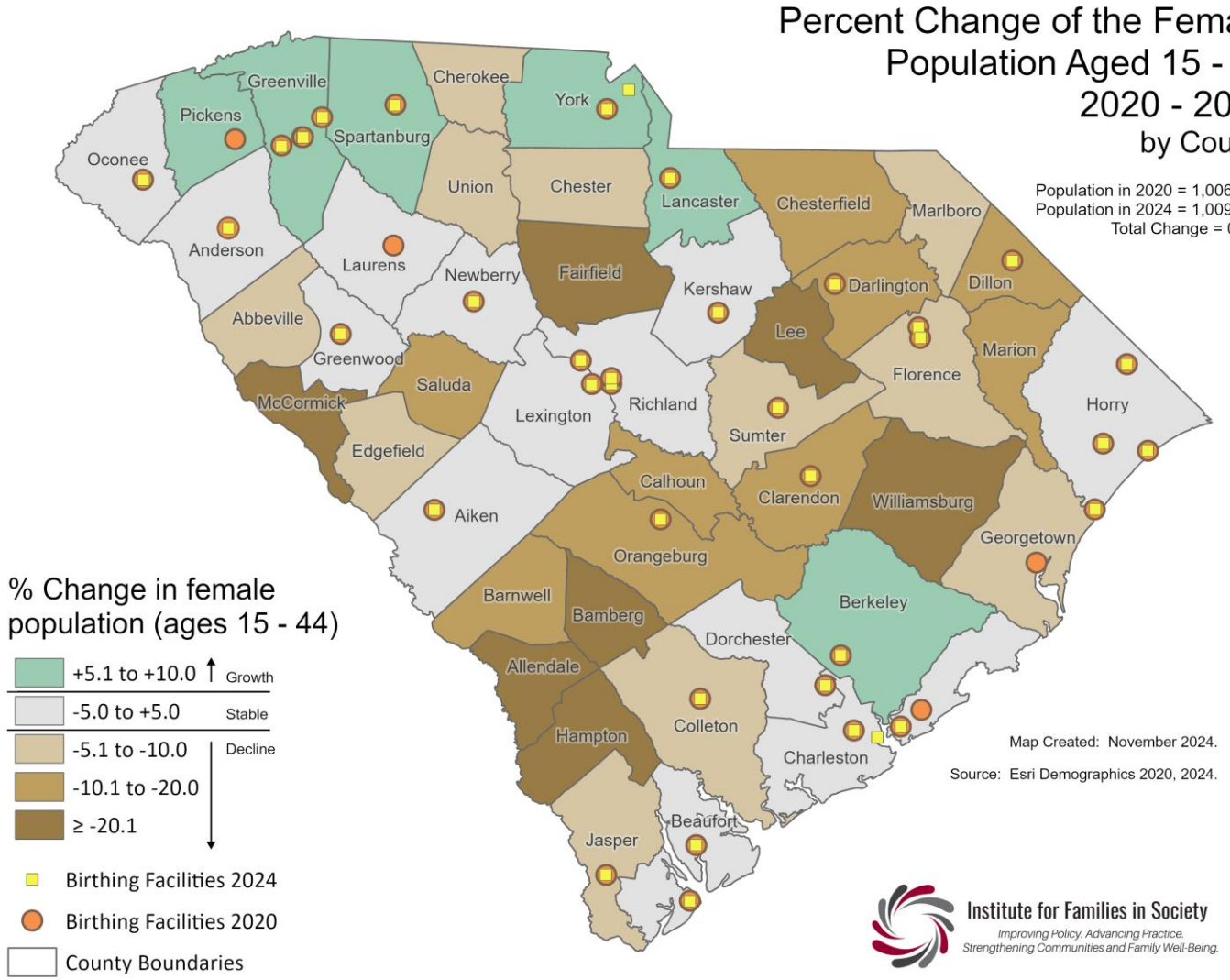
- Voices/Voces MCH Leader Participant

Change in Women of Childbearing Age

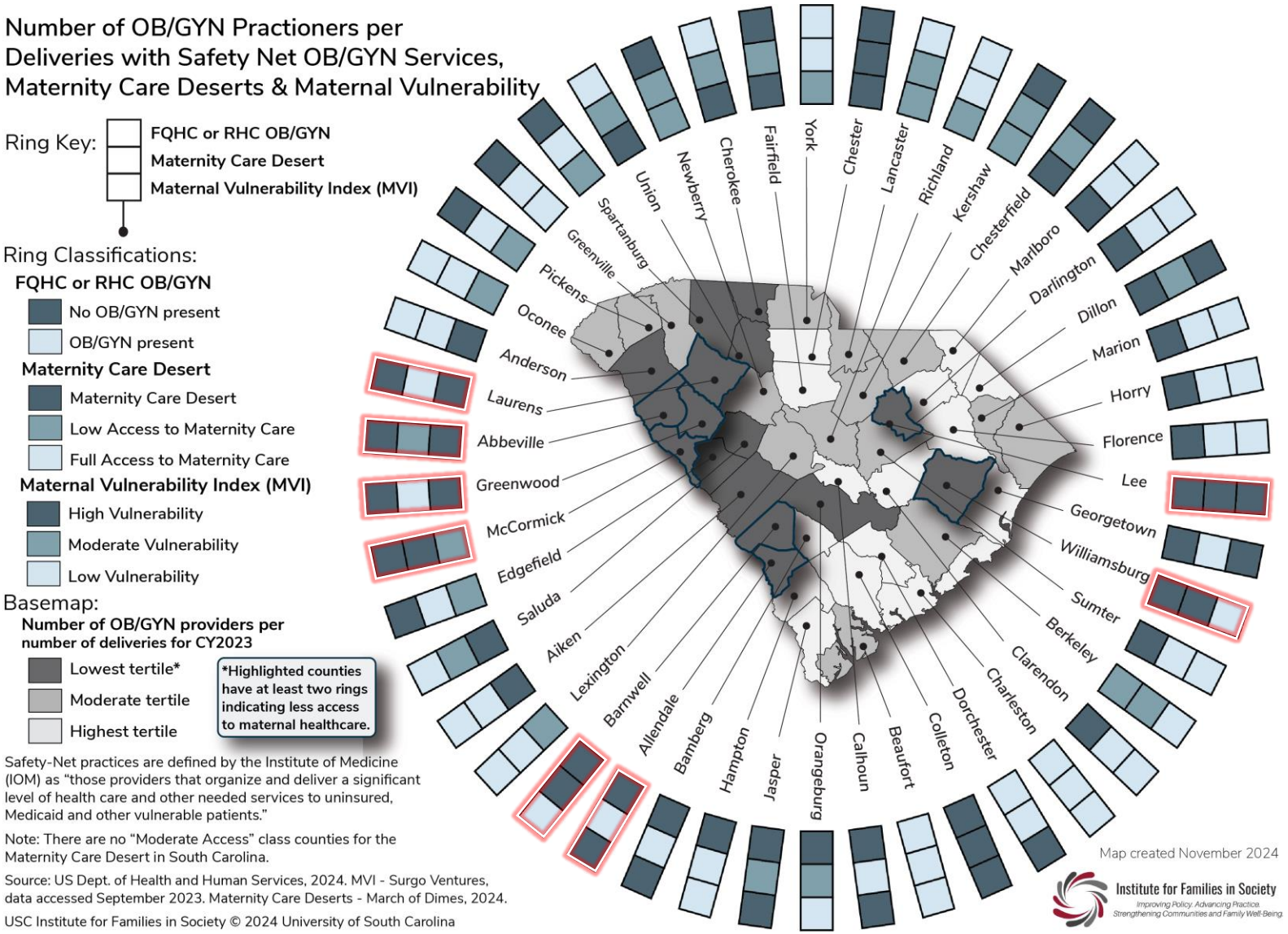
TAKEAWAY

From 2020 – 2024, six SC counties **(Pickens, Greenville, Spartanburg, York, Lancaster, and Berkeley) saw upwards of a 5.1% to 10% growth in the child-bearing age population.** This suggests additional providers and services may be needed in these areas as reflected by recent birthing facility openings in the Piedmont and Berkeley.

Seven others **(McCormick, Fairfield, Lee, Williamsburg, Bamberg, Allendale, and Hampton) saw a decrease of over 20% in the population. Of note:** None had a birthing facility indicating challenges of maintaining service delivery with fewer patients.



High MVI, Maternity Care Deserts, and OB Adequacy

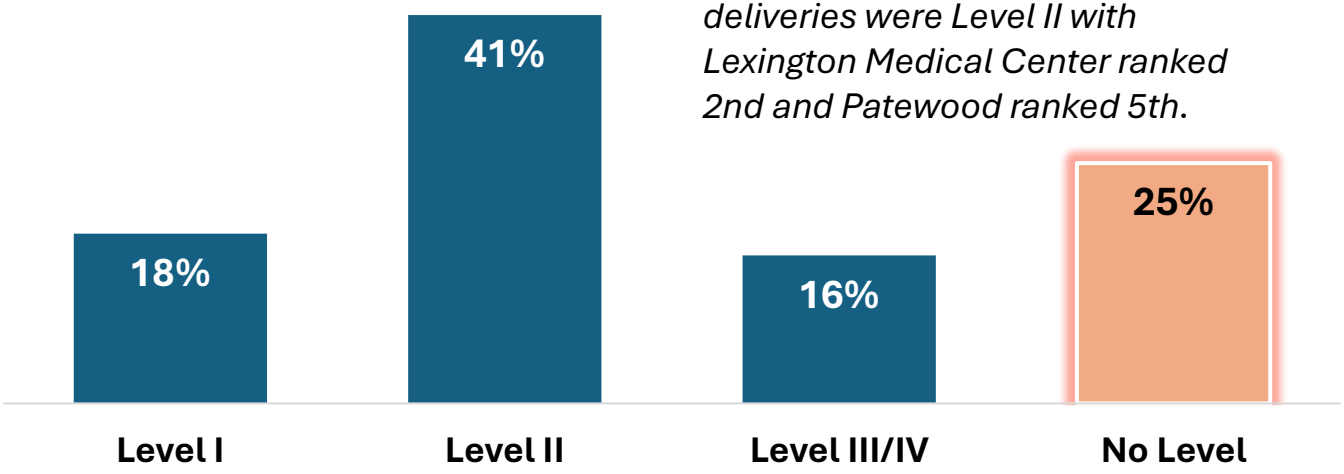


Lowest Tertile (Highest Need) Counties
Abbeville
Allendale
Barnwell
Greenwood
Laurens
Lee
McCormick
Williamsburg

NOTE: These findings might underestimate the true access to OB adequacy. A more in-depth analysis is essential to accurately assess the number of physicians delivering both OB and GYN services.

SC Hospital Profile (CY 2023)

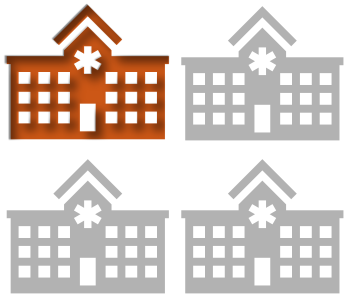
Hospital Perinatal Level (% of total hospitals)



Half of the top 10 hospitals by N deliveries were Level II with Lexington Medical Center ranked 2nd and Patewood ranked 5th.

Colleton, Kershaw, McLeod Health Dillon, Hilton Head, and Newberry County had fewer than 300 deliveries. *Kershaw is currently closing with OB staff moving to MUSC NE Columbia. MUSC Orangeburg was the only Level II with fewer than 400 deliveries.*

1 in 4



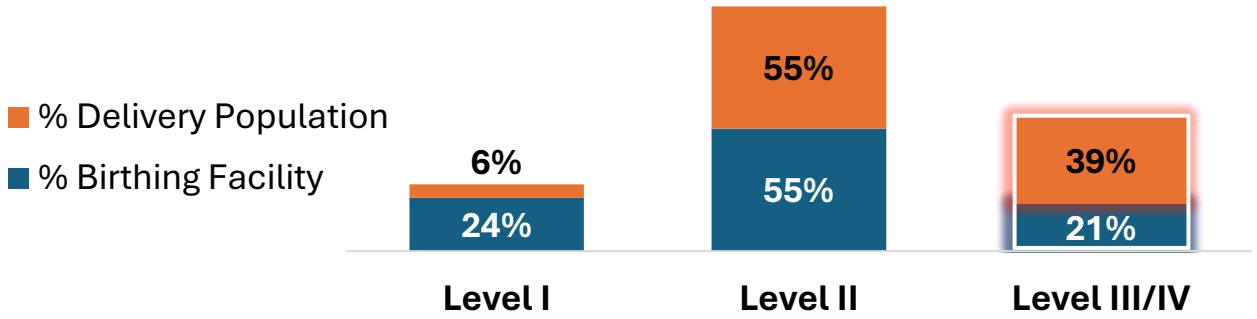
SC hospitals do not have a labor and delivery unit and may have greater need for emergency department staff OB training.

TAKEAWAY

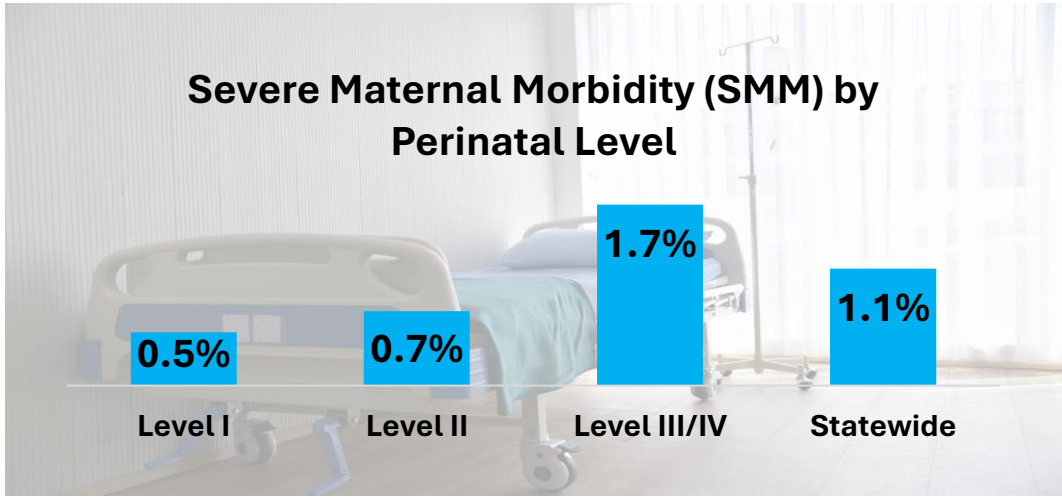
- Since 2012, 13 labor & delivery units have closed.
- Of the 13 “No level” facilities, 6 (46%) were a “never birthing” facility and 7 (54%) had closed their OB services.

Perinatal Level Analysis of Birthing Facilities (CY 2023)

Perinatal Level of Birthing Facilities in Comparison to Delivery Population Served



Severe Maternal Morbidity (SMM) by Perinatal Level



QUICK FACTS

43% of perinatal level I delivery patients resided in rural areas, almost 2x the statewide rate.

72% of perinatal level I deliveries were covered by Medicaid, compared to 60% of deliveries statewide.

1 in 3 perinatal level III/IV deliveries were to birthing persons with co-occurring physical health conditions. This is compared to 9% of perinatal level I and 26% of perinatal level II.

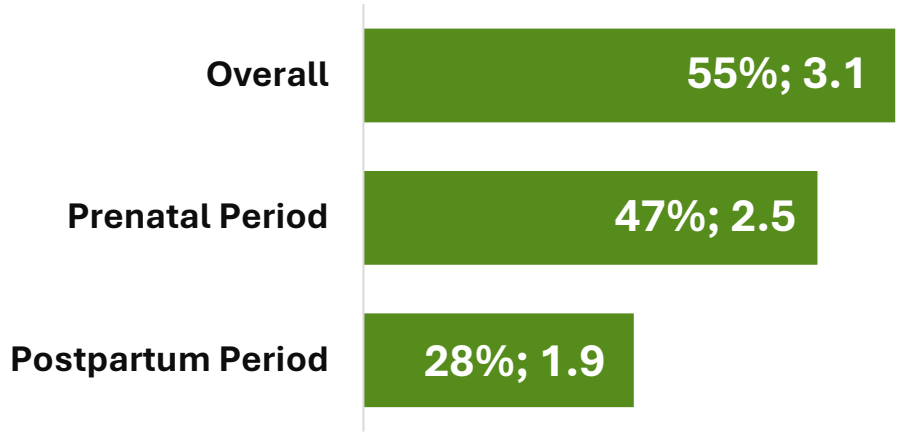
TAKEAWAY:

- Perinatal III/IV facilities see a disproportionate number of obstetric patients in comparison to the number of facilities.
- Perinatal level III/IV obstetric patients often exhibited co-occurring conditions and experienced SMM, preterm (55%), and low birthweight (58%). This suggests that complex deliveries are often transferred or admitted to these facilities ($p<.001$) indicating potential need to implement ACOG's maternal levels of care.
- Lower-level facilities require proper resources to provide adequate and equitable care/services to all birthing persons.

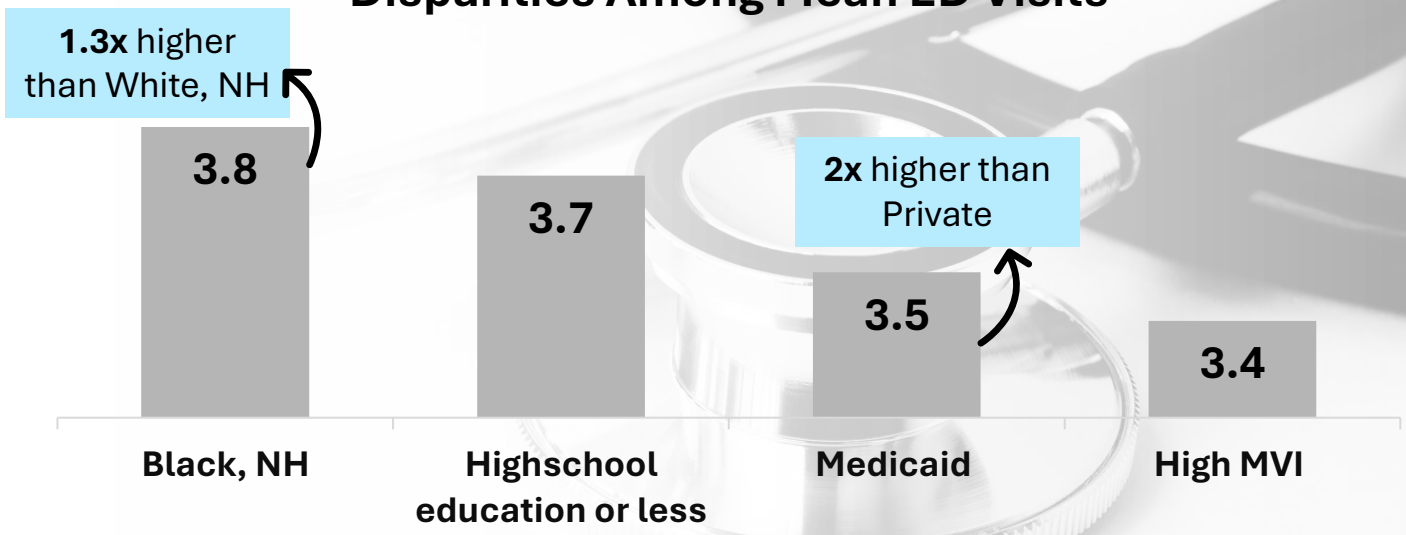
Characteristics of ED Visits (CY 2022)

ED Visits

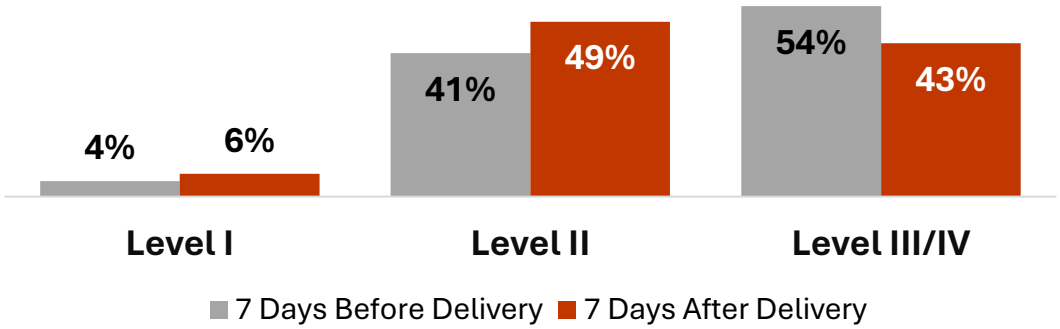
Rate (%); Mean



Disparities Among Mean ED Visits



ED Visits 7 Days Pre- and Post-Delivery by Perinatal Level



TAKEAWAY:

Statewide, 3,558 delivery patients showed up in an ED in the week prior to delivery and another 2,021 in the week after. Most visits were in a birthing facility, indicating the need for these ED providers to also be trained to recognize maternal early warning signs.

Non-obstetric diagnoses on these visits: 1 in 3 hypertension; 1 in 10 mental health; 1 in 16 cardiac or circulatory system.

NOTE: CY22 data was used for the ED analysis as postpartum data for CY23 is not yet complete.

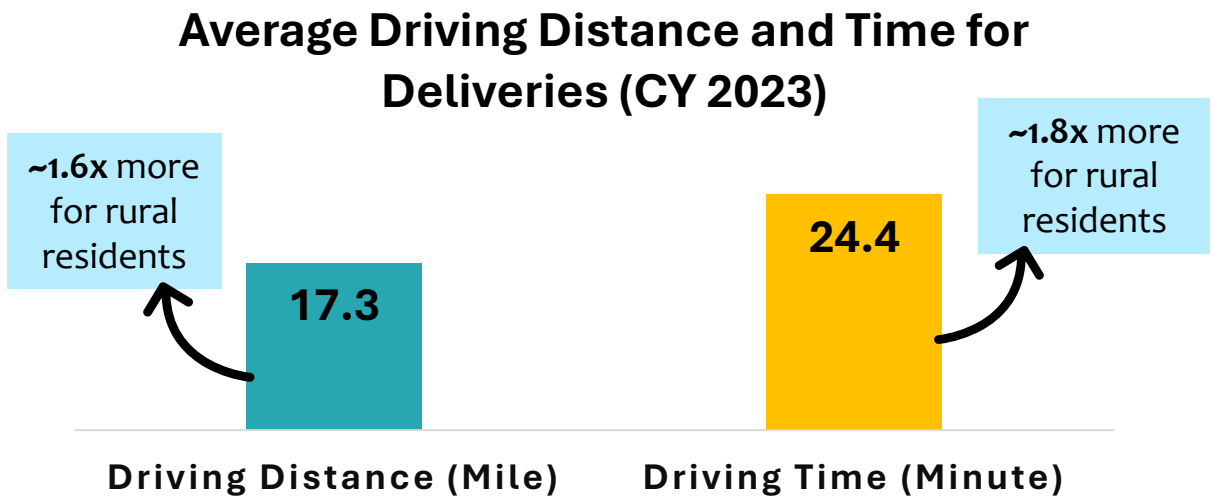
Access to Care

"Access has everything to do with can you take time off from your work or your family obligations? Do you have transportation? At this point, do you have connection to internet, do you have a device? Like, there's so many layers of things where you could see the inequities start happening more and more."

- Voices/Voces MCH Leader Participant

Drive Distance Analysis

Drive distance is defined as the distance from the center of the zip code tabulation area (ZCTA) where the birthing person resides to the birthing facility they attended.



TAKEAWAY:

Both adjusting for co-occurring conditions and not, in CY 2023, drive time was associated with poor outcomes. **The farther a birthing person travels to their birthing hospital, the greater the risk of maternal morbidity outcomes**, including increasing rates of SMM, avoidable C-section, low birthweight and prematurity ($p<0.5$).

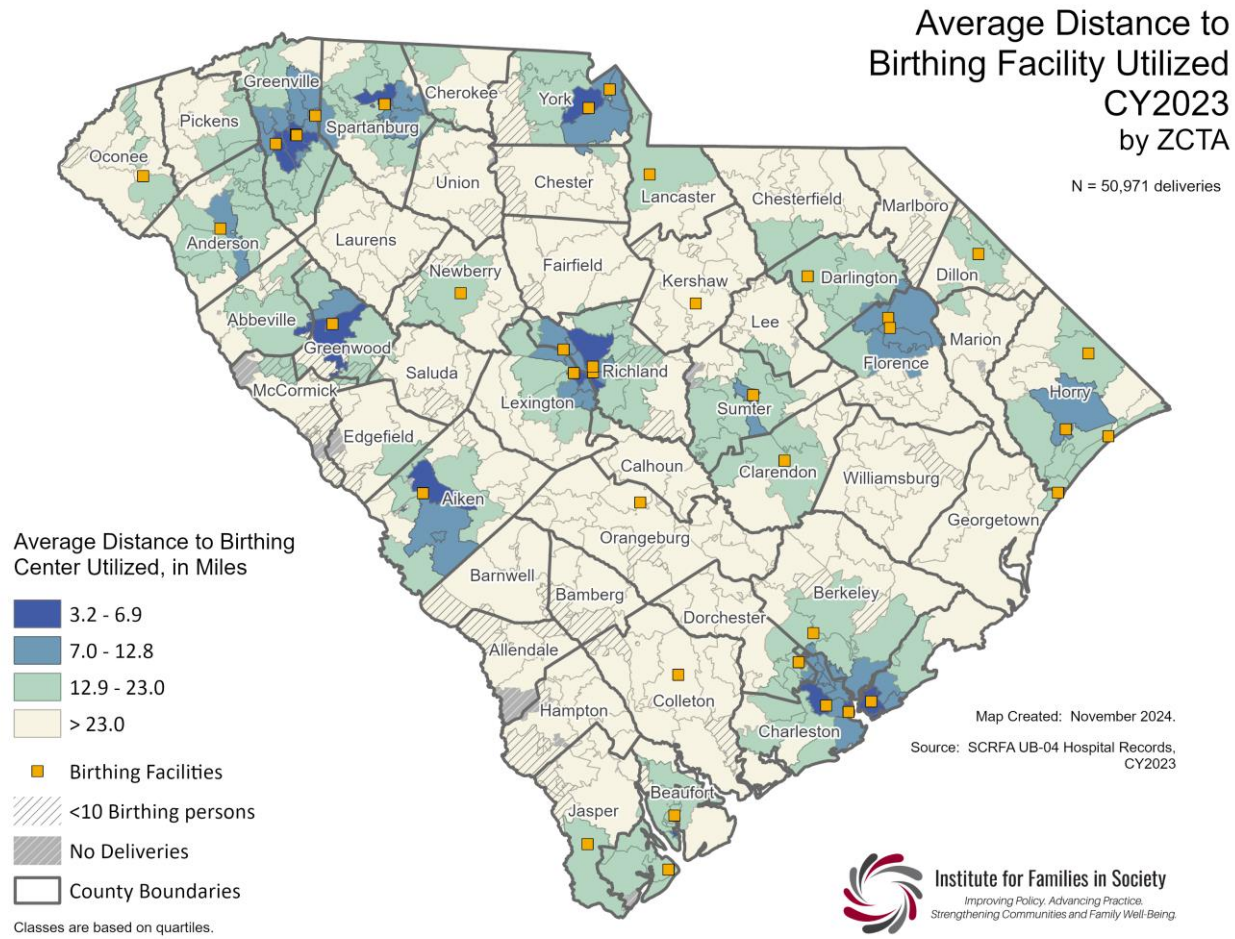
Drive Distance Analysis (cont.)

Additional analysis shows that in CY 2023:

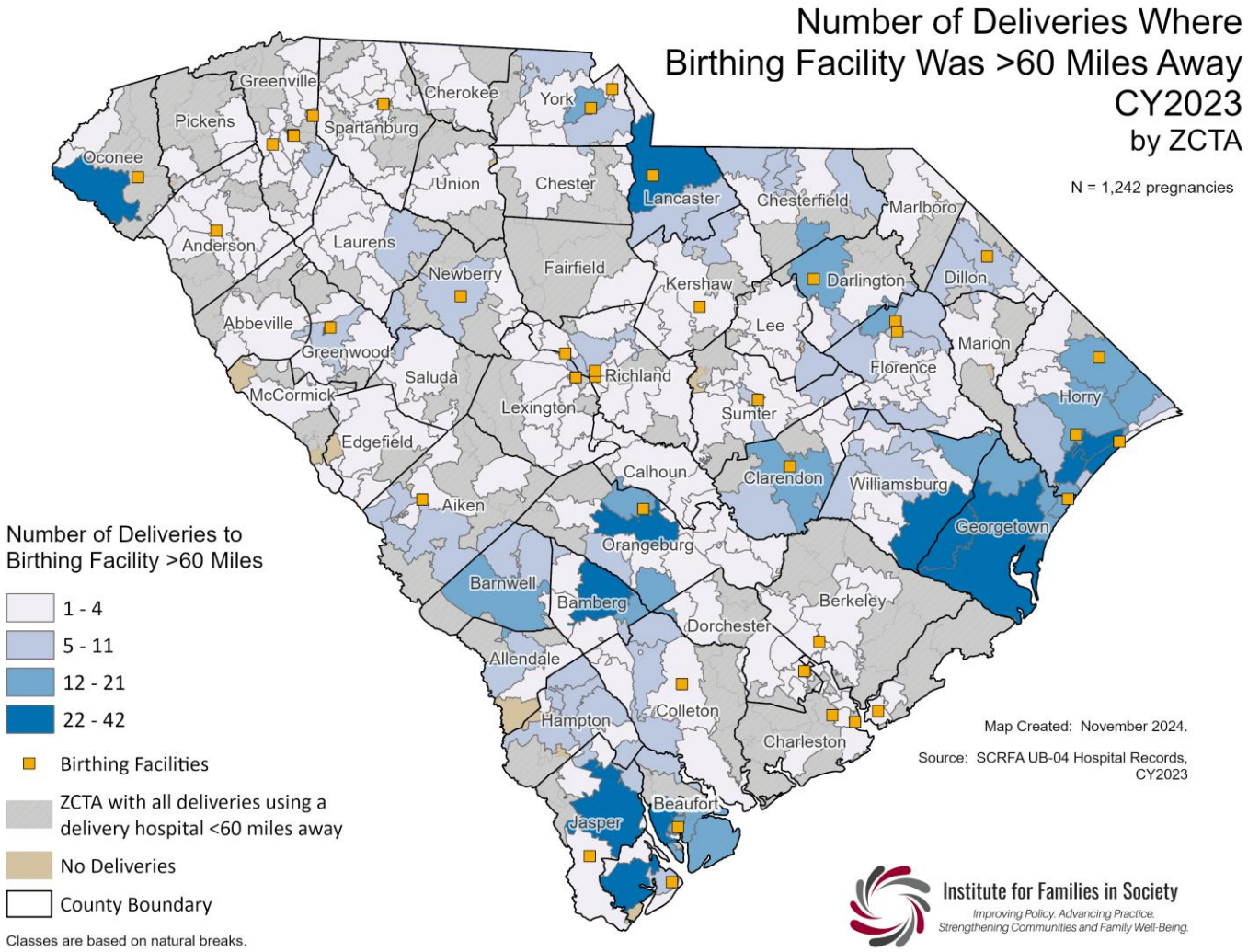
2 out of 5
birthing persons traveled outside of their residential county for their delivery.

Of those who traveled 60 miles or more for care (1,242) over **80%** continued to seek care outside of their residential county, even though a birthing facility was available within their county. Further investigation of **commuting patterns and realized access** are needed.

Compared to those who traveled the shortest distance to their birthing facility, those who traveled the furthest were **more likely** to be Medicaid beneficiaries, have a co-occurring PH/BH health condition, reside in a rural area, and have high MVI.



Drive Distance Analysis (cont.)



TAKEAWAY

In this map, county areas in **dark blue** represent the greatest number of deliveries which traveled over 60 miles to their birthing facility. Those who traveled the furthest resided in Jasper/Beaufort, Georgetown/Horry, Orangeburg, Lancaster, Williamsburg, Bamberg, and Oconee.

Next Steps

"If you want to give really good care, you have to go deeper. You have to meet your patients where they are, and you have to let them teach you. They are the experts on their own bodies. We are the experts in medicine. And so, allowing it to be a mutual learning relationship is the key to giving the best care."

- Voices/Voces MCH Leader Participant

NEW! SCMHIC WEBSITE

schealthviz.sc.edu/scmhic

SC HealthViz

schealthviz.sc.edu/county-profiles

Arriving 2025.

More data. More options.

- New CY23 ZCTA-Level Data
- Key Findings
- Contextual Information

SCHealthViz

Contact

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Break

MHI Grant Requirements

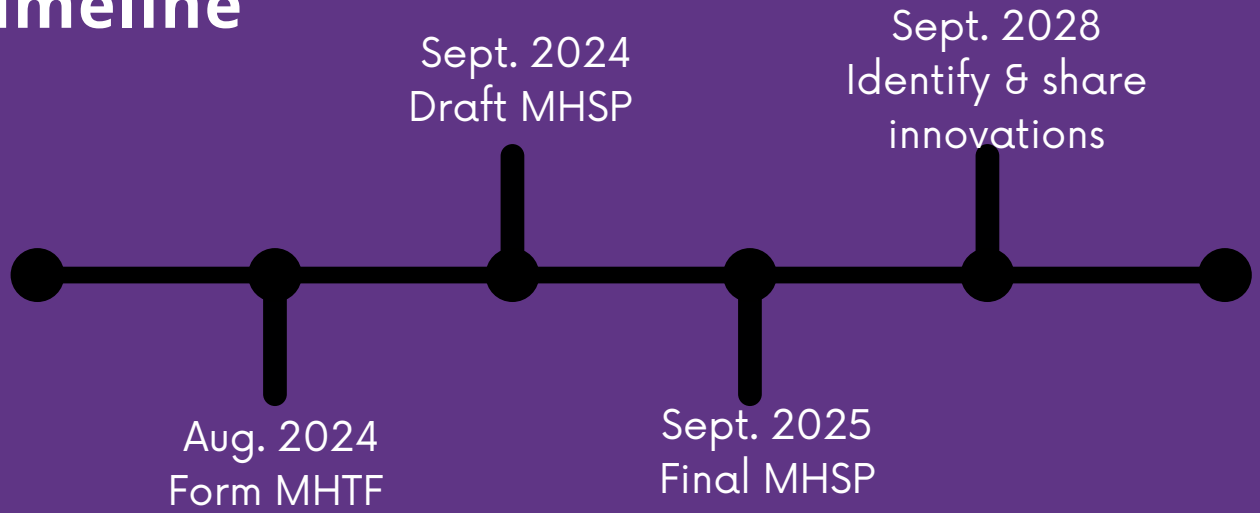
HRSA Funded

Certain required key actions, timelines, & focus areas

Key Actions

- Establish a state-focused MHTF
- Improve state-level maternal health data & surveillance
- Promote & execute innovation in maternal health service delivery
- Measure & track performance & conduct a program evaluation
- Foster collaborate learning with traditional & non-traditional partners

Timeline



MHTF Work Groups

Data Collection, Analysis, & Distribution

Service Delivery

Workforce Development

Empowerment & Literacy

MHTF Work Groups

- Meet your workgroup members
  - Flexibility to change groups if needed
- Facilitators & notetakers will be present
- Be prepared to share!
  - Each workgroup will present their insights

Workgroups

If you do not automatically move to a breakout room, please wait in the main room.

Debrief

GROUP SHARING

Please share a brief overview of your workgroup's discussion.

- *under two minutes please*
- *focus on key questions for strategic planning*

Next Meetings

WORKGROUP MEETINGS

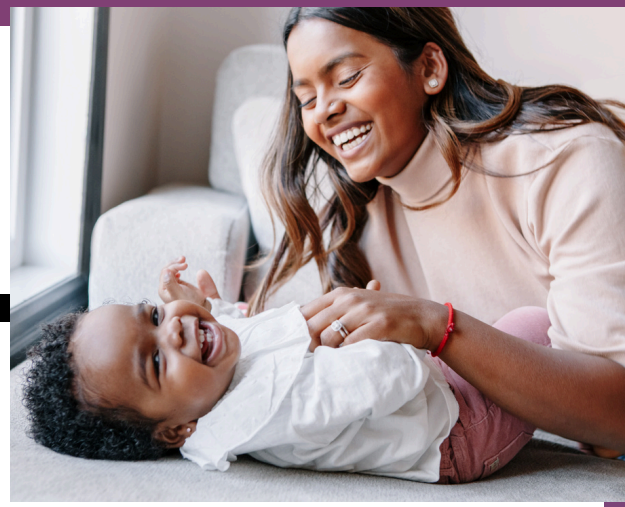
Scheduled based on discussions and results of a post meeting survey

Expect a calendar invite for sometime in February

MHTF MEETING

March 3, 2025
10 am to 3 pm
Location: TBD

Next Meetings



December 2024	January 2025	February 2025	March 2025	April 2025
MHTF *virtual*	X	Workgroup Meetings	MHTF *in-person*	X
May 2025	**June 2025**	**July 2025**	**August 2025**	**Sept. 2025**
Workgroup Meetings	MHTF *virtual*	X	Workgroup Meetings	MHTF *in-person*

Next Steps

Post-Meeting Survey

Share feedback & thoughts
Workgroup leadership & meeting schedules

MHSP Review Survey

https://redcap.link/scmhic2

Reflection Activity

"The one thing I will take with me from this meeting is..."