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Declining Access to Maternity Care in Rural and Underserved Communities: A review of policy and structural factors

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Partnership HealthPlan of California
Feb 12, 2024

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Funded by the Federal Office of Rural Health Policy
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Funding acknowledgement

Research described in this presentation 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, and by the National Institutes of Health (NIH) under PHS Grant #R01 HD099197.

The information, conclusions and opinions expressed are those of the authors and no endorsement by FORHP, HRSA, HHS, or NIH is intended or should be inferred.

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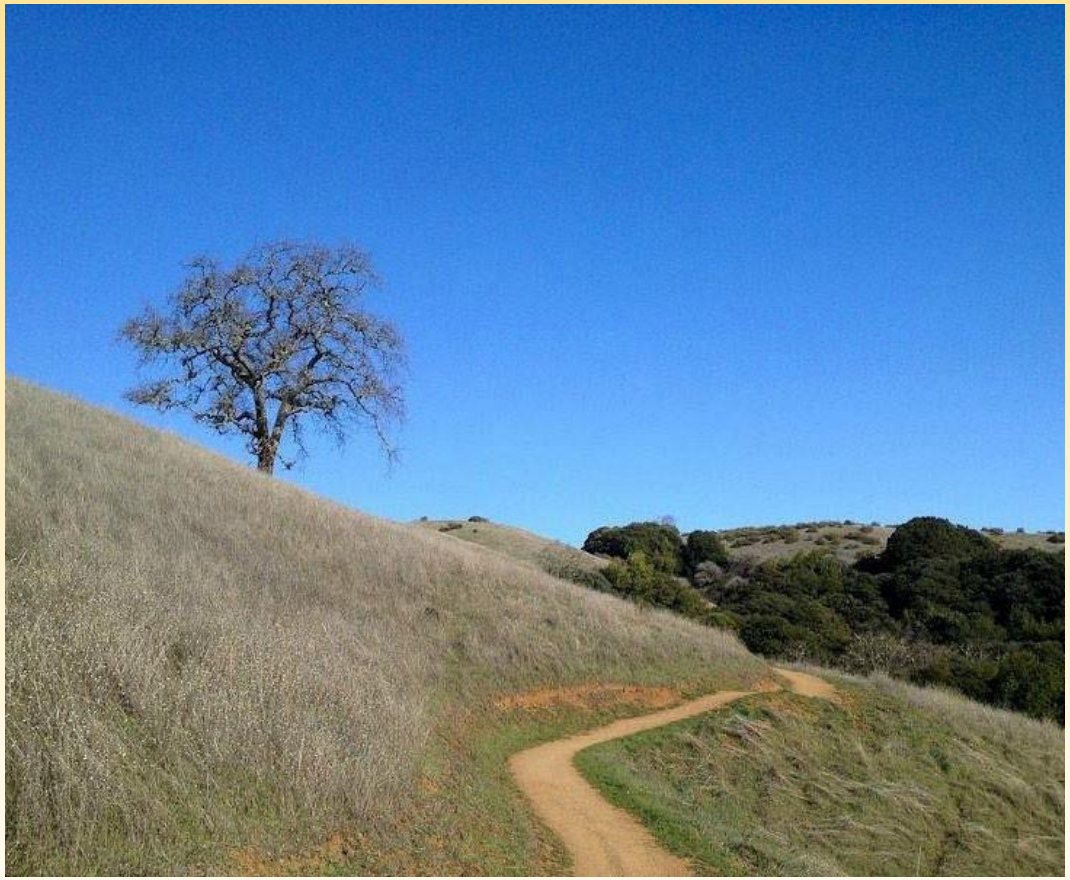
Land Acknowledgment – Fairfield, CA

- I gratefully acknowledge this land as the traditional, ancestral Indigenous territories of the Patwin people
- I recognize the value of Indigenous wisdom about land and childbirth, and encourage everyone to be respectful of the distinctive and permanent relationship that exists between Indigenous people and their traditional knowledge and territories



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Goals

1. Understand the maternal health disparities in US rural communities
2. Understand the factors of current health care policy that impact rural maternity care access
3. Understand the factors of structural urbanism that limit care in rural communities
4. Explore policy solutions that address maternal care access and equity

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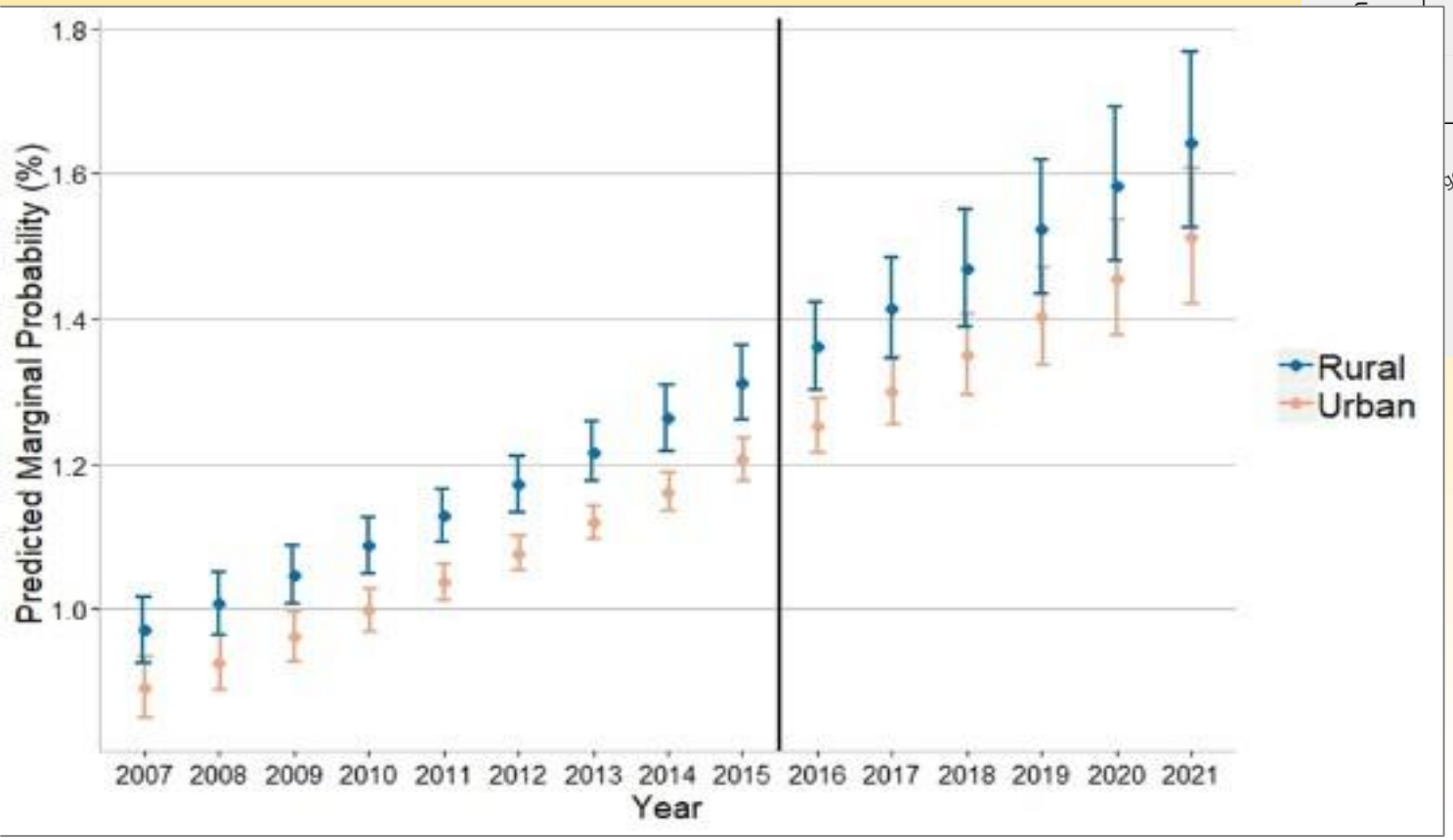
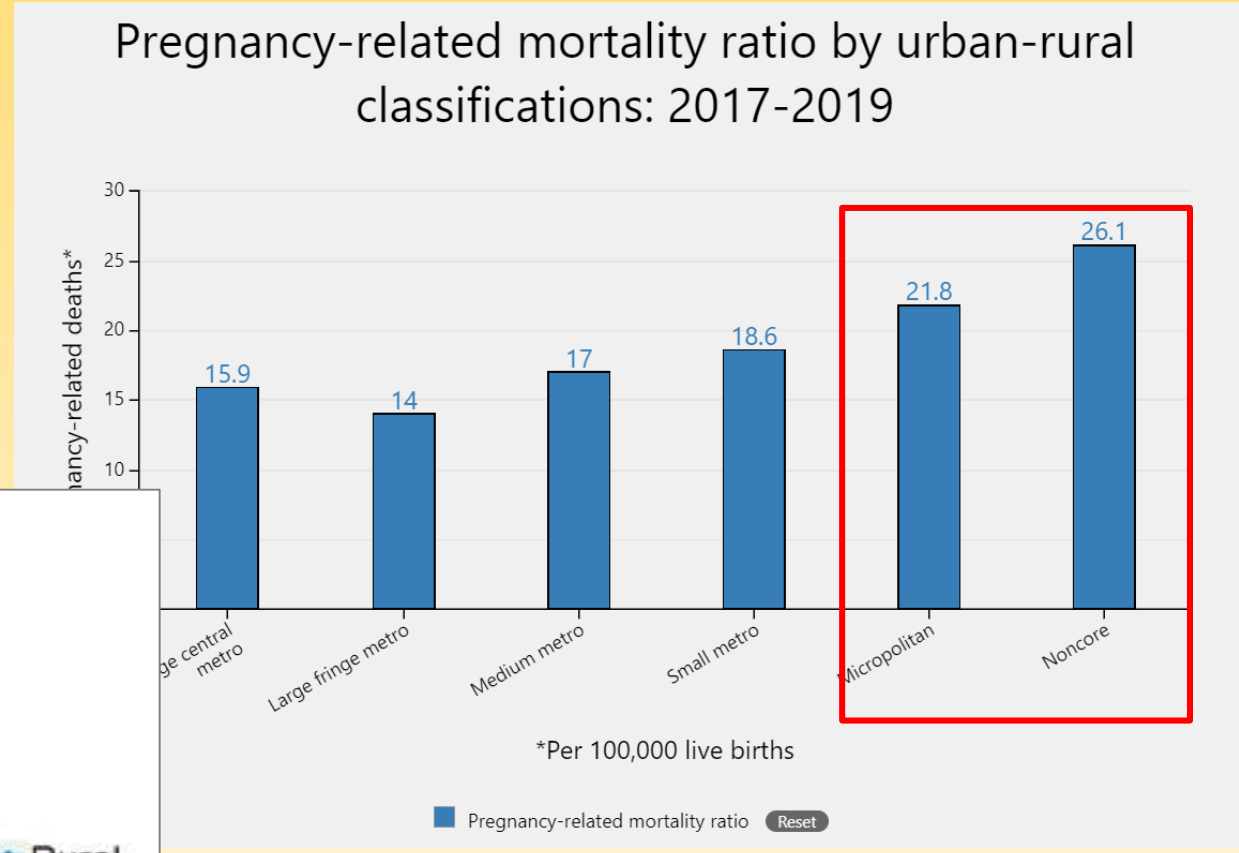
The US maternal mortality crisis deeply affects rural residents.





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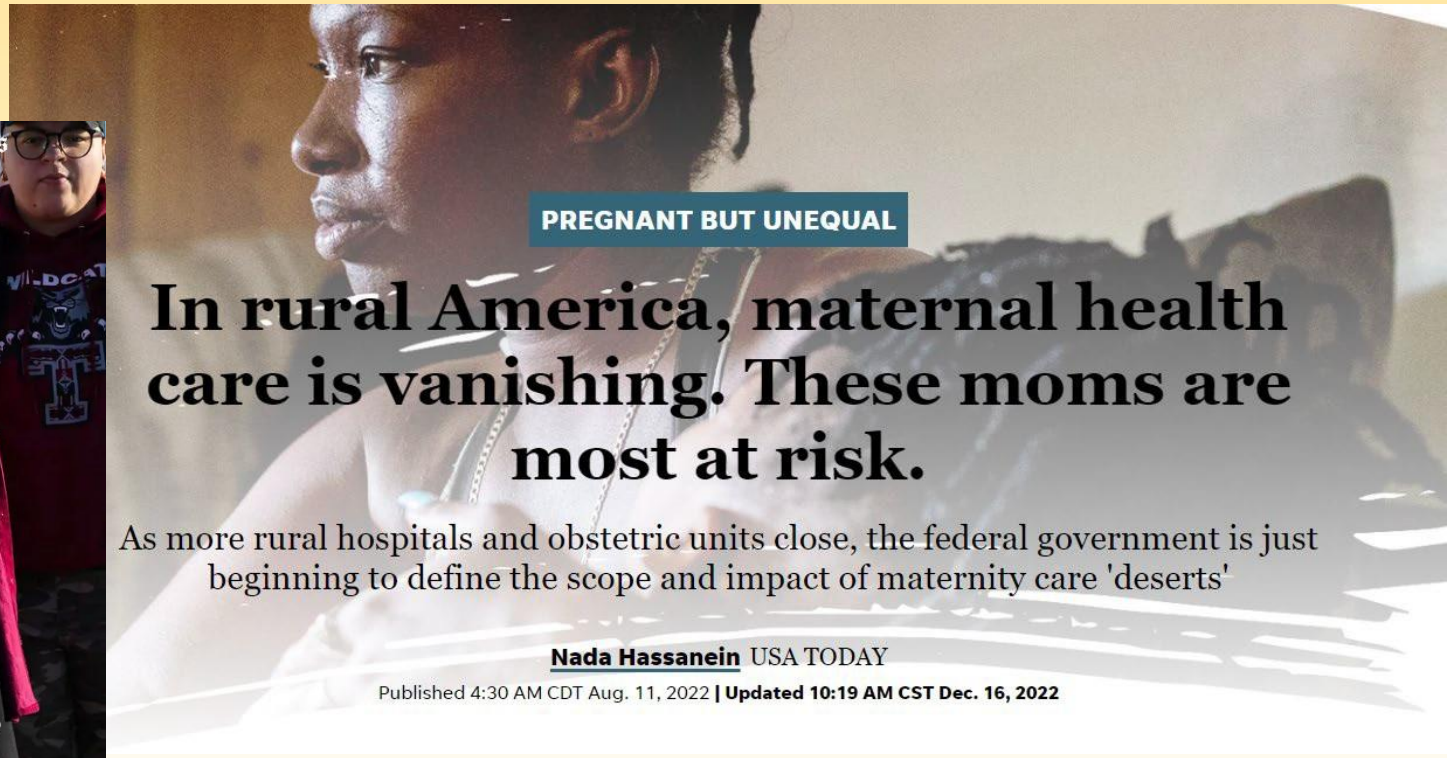
Data and media coverage of pregnancy and childbirth in rural America reveal inequities



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Language matters: It's not "maternity care deserts"

- Communities without access to maternity care are not "deserts"
- Deserts are naturally occurring, and medically underserved areas are not
- Deserts are not vacuous; they are thriving places, and home to Indigenous people and cultures for centuries

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Declining access to obstetric care in rural U.S. communities

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Grannies know the important questions

- Nearly 40 million reproductive-age people live in rural US communities
- Half a million babies born in rural hospitals each year
- A group of grannies in rural Alabama asked their member of Congress if what they were seeing in their communities was unique or part of a broader pattern
- They knew the right questions, so we did the research to get answers

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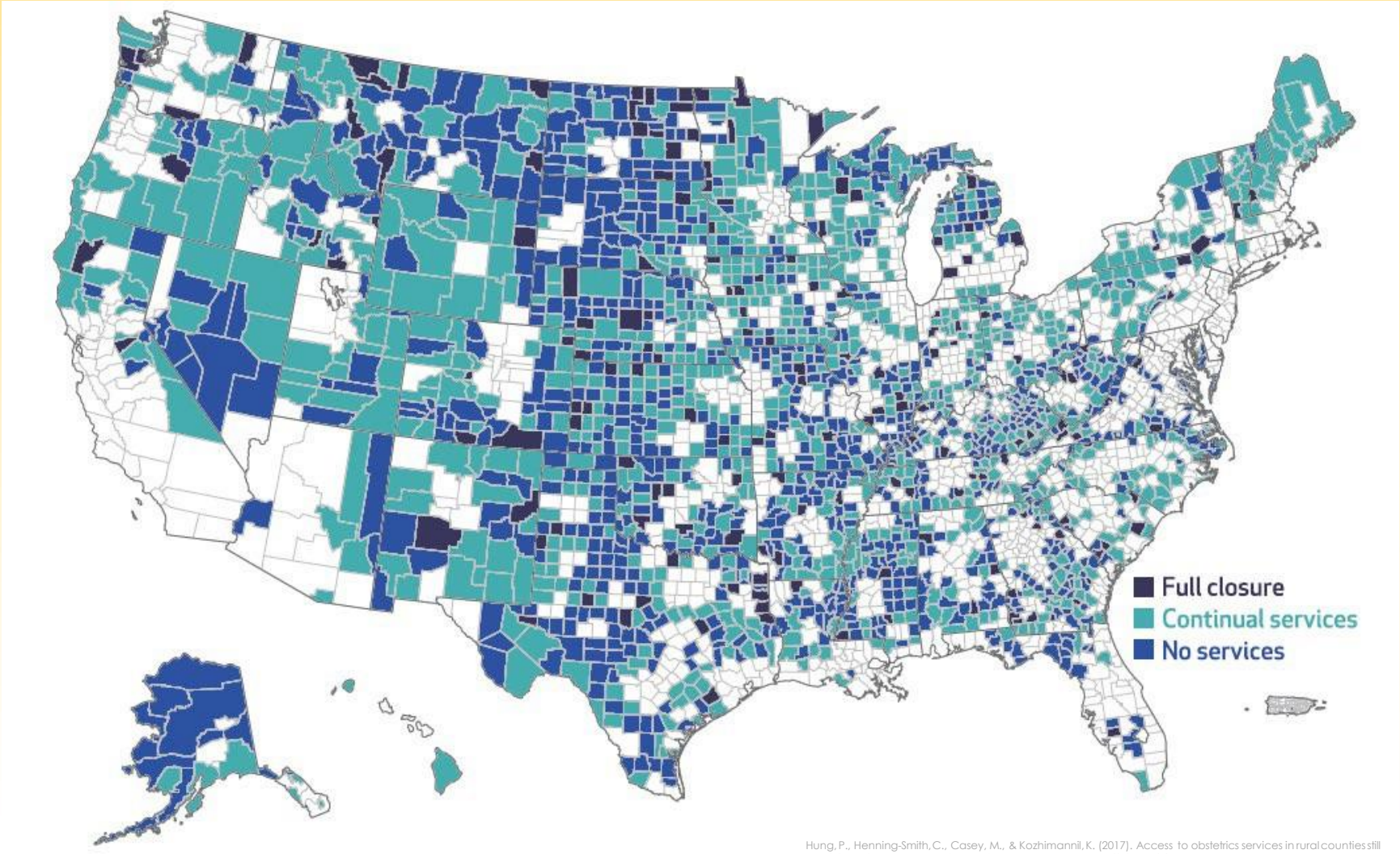
More than half of rural counties had no place to give birth, 2004-2014



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.

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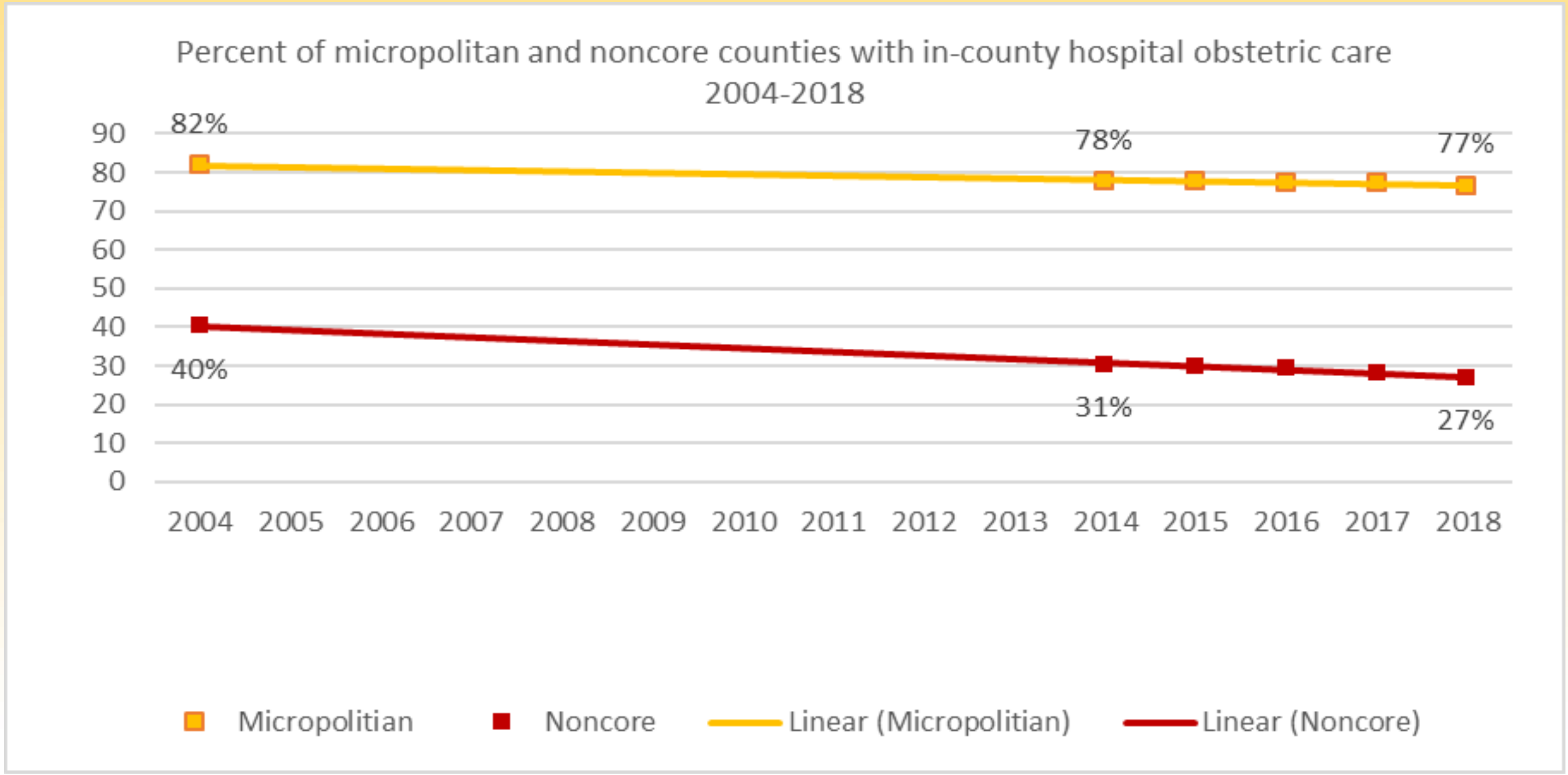
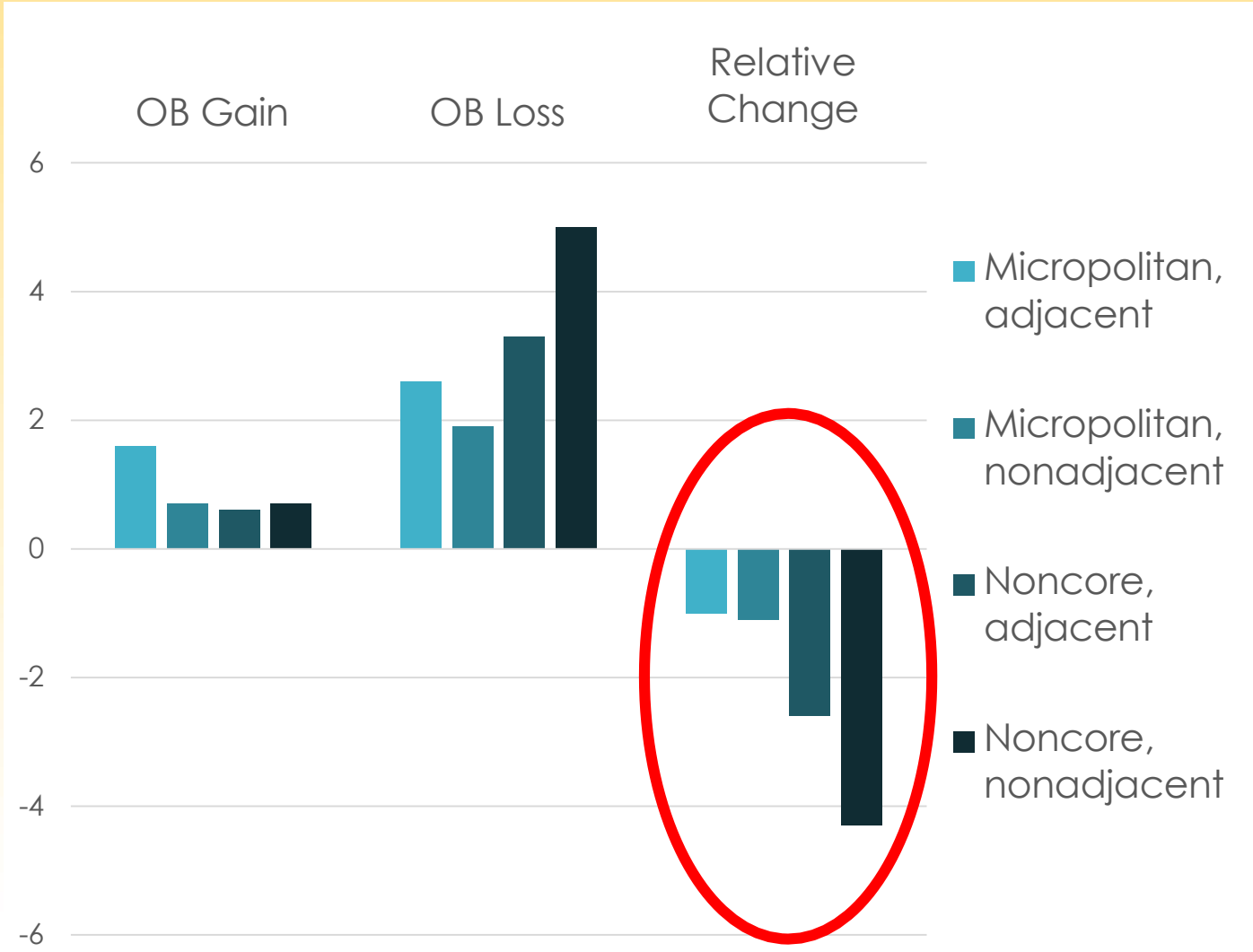
Rural counties most likely to lose obstetric care:

1. Fewer births and fewer physicians
2. In states with lower pregnancy-related Medicaid eligibility thresholds
3. More Black residents

What has happened since 2014?



Obstetric service loss was concentrated in remote, rural areas (2014-2018)



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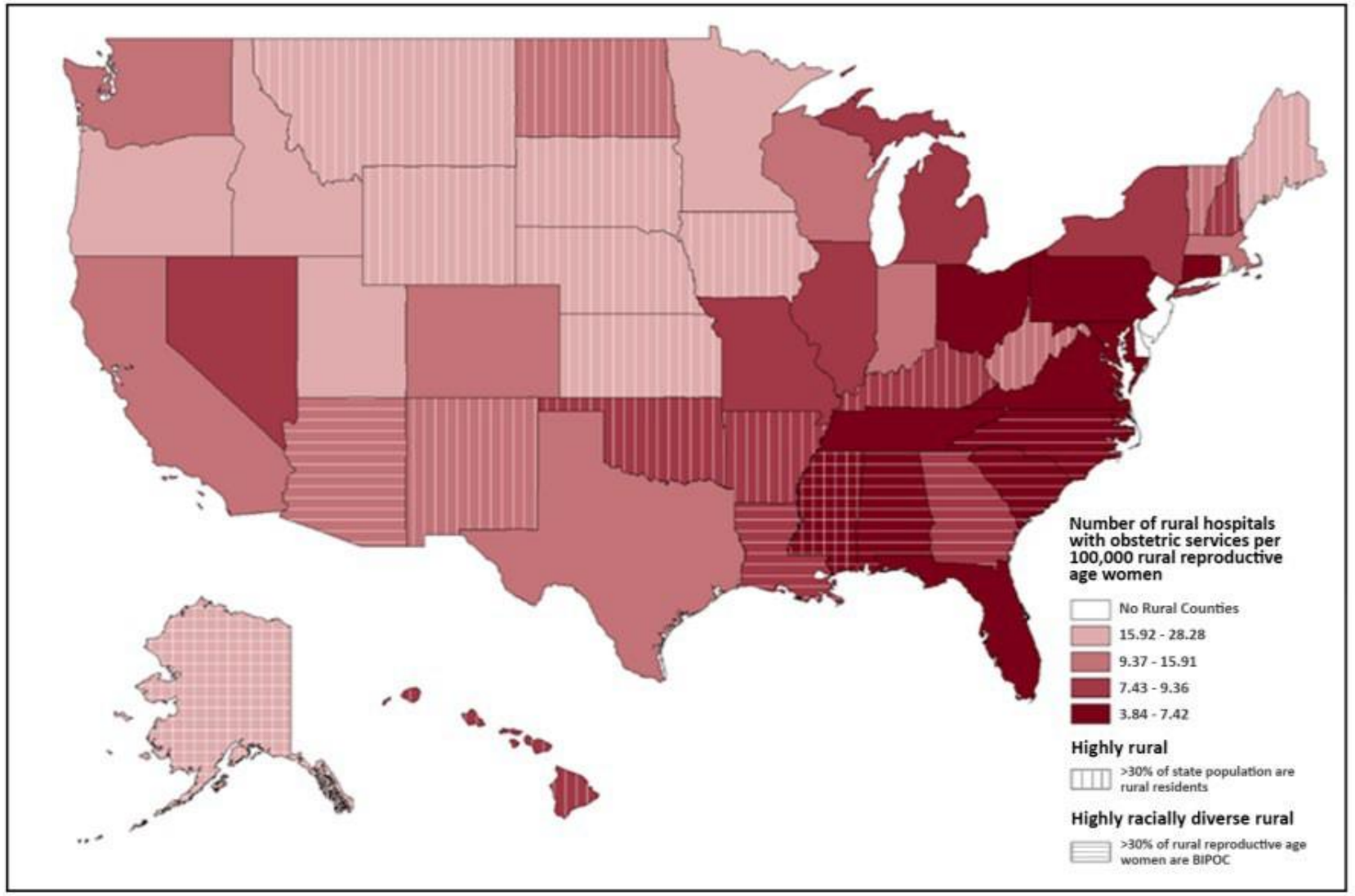
Risk at the intersection of race and rurality

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 rural states highlighted with hashmarks.

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It's actually quite hard to figure out which hospitals provide obstetric services.

- Development of enhanced methodology
- Two-stage assessment:
  - single-year assessments of obstetric unit status using multiple AHA variables and one variable from the POS data
  - multi-year assessments to check for and correct unit status inconsistencies, including cases of hospital mergers and acquisitions

Methodology Brief:
https://rhrc.umn.edu/wp-content/uploads/2023/04/UMN-OB-Unit-Identification-Methods_4.14-update.pdf

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Some limitations of commonly-cited measures of maternity care access/closures

- March of Dimes
  - Does not include family physicians who provide obstetric care, important providers of care in rural communities
  - Includes all Ob/Gyn physicians as providers of obstetric care, some (many) do not
- Chartis group/AHA reports
  - Use of AHA hospital survey data on births, OB beds, and maternal levels of care

Current research to update the statistics

- Using newly-released data through 2022, we are currently updating information on rural obstetric unit closures. Stay tuned!

What happens when rural communities lose obstetric services?

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Grannies care about what happens, and legislators and administrators need to understand the impact of their decisions.

- 2017 study
- Research objective: To examine the relationship between loss of hospital-based obstetric services and location of childbirth and birth outcomes in rural counties
- Data and methods:
  - birth certificates linked to AHA survey data (county)
  - N=4,941,387 births, 1086 rural counties (2004-2014)
  - interrupted time series

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Rural obstetric unit closures have consequences for births and babies.

- Increased risks (non-urban-adjacent counties)
  - Preterm birth
  - Out-of-hospital birth
  - Births in hospitals without obstetric units (also a risk in urban-adjacent counties, but declined over time)
- Greater travel distances

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We also surveyed emergency departments at rural hospitals without obstetrics.

- 2020 study
- Goal: using WHO criteria, describe emergency obstetrics capacity at rural US hospitals that do not routinely provide childbirth services
- Using AHA data, we identified a random sample of rural EDs at hospitals without obstetrics.

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Rural hospitals without obstetrics struggle to provide emergency care.

- Most (65%) located 30+ miles away from a hospital with obstetric services
- Challenges faced in the past year:
  - emergency room births (28%)
  - a close call or an unanticipated adverse birth outcome (32%)
  - delay in urgent transport for a pregnant patient (22%)
- Majority (80%) reported the need for additional training or resources to handle emergency obstetric situations

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We asked rural hospital administrators about decisions to continue or close obstetrics services, and about care in their communities.

- In 2021, we developed and conducted a national survey of rural hospitals that were providing obstetrics in 2018 – some had closed their units.
- We asked about safety, financial viability, community need for obstetrics and about local services and support for pregnant people.

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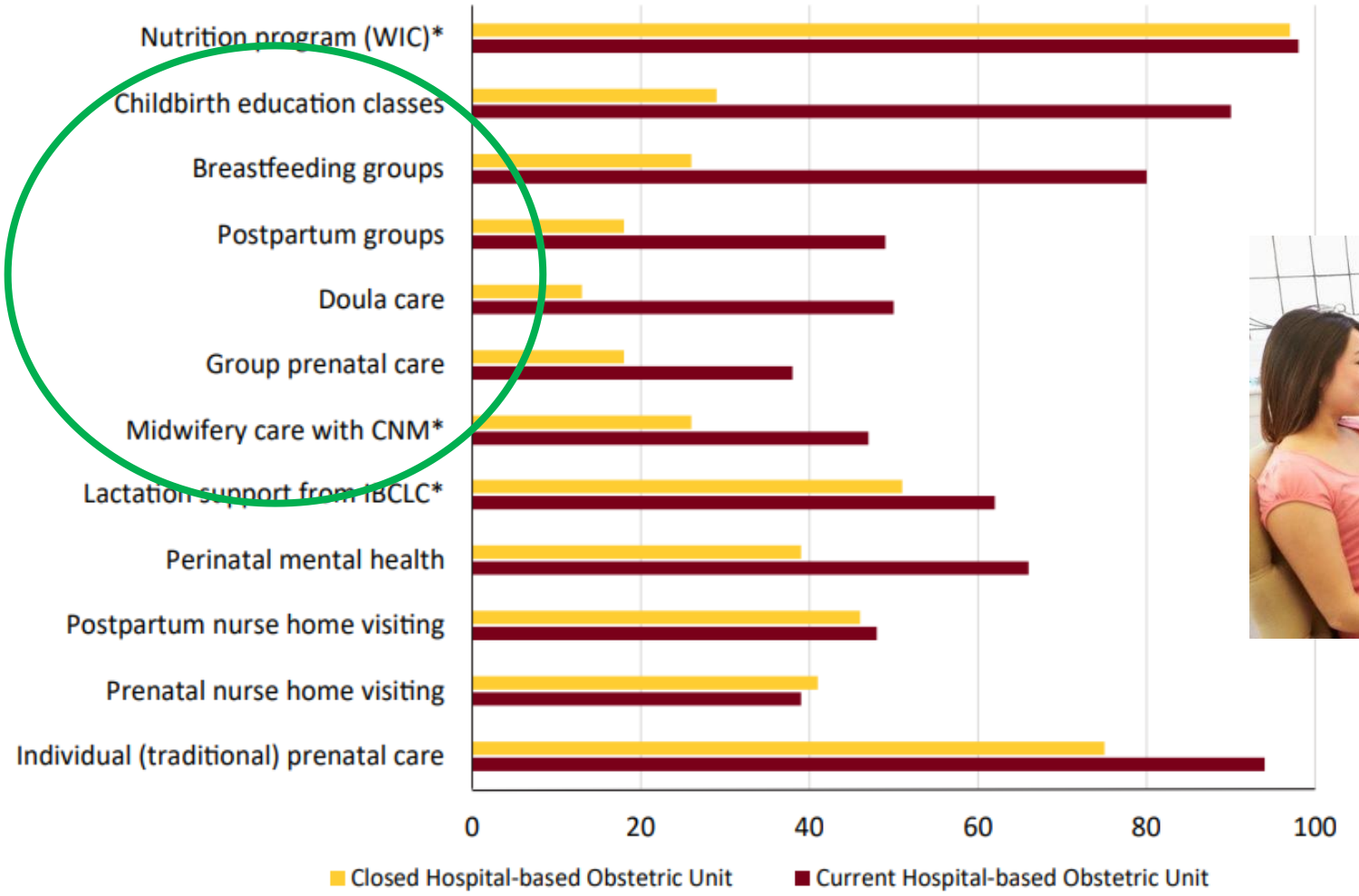
Percent of Surveyed Rural Communities with Evidence-Based Supports by Status of Obstetric Units in 2021 (n=133)



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In 2023, we examined the volume-outcome relationship for rural and urban hospitals.

- What is the association between birth volume and severe maternal morbidity in rural and urban hospitals?
  - Does it differ for low and higher-risk patients?
- Data: linked birth certificates and hospital discharge data for births in CA, MI, PA, and SC (2004-2020)
- Different volume categories for rural and urban hospitals

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Many rural hospitals close obstetric units, remaining low volume rural units struggle with poor outcomes.

Table 1. Associations Between Annual Birth Volume Category and Severe Maternal Morbidity (SMM) for Hospitals in Urban and Rural US Counties

Birth volume category	Total patients, No.	SMM incidence, No. (%)	Risk ratio (95% CI)	
			Unadjusted	Adjusted
Urban counties				
Low (10-500 births)	261 553	1316 (0.50)	0.69 (0.61-0.79)	1.00 (0.90-1.11)
Medium (501-1000 births)	860 892	4908 (0.57)	0.78 (0.66-0.93)	1.01 (0.90-1.13)
Medium-high (1001-2000 births)	2 535 466	16 476 (0.65)	0.89 (0.80-1.00)	1.03 (0.96-1.10)
High (>2000 births)	7 365 512	53 507 (0.73)	Reference	Reference
Rural counties				
Low (10-110 births)	8182	57 (0.70)	1.48 (1.01-2.18)	1.65 (1.14-2.39)
Medium (111-240 births)	59 374	324 (0.55)	1.16 (0.90-1.49)	1.37 (1.10-1.70)
Medium-high (241-460 births)	175 176	967 (0.55)	1.17 (0.96-1.44)	1.26 (1.05-1.51)
High (>460 births)	277 221	1304 (0.47)	Reference	Reference

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This is true for both low and higher risk obstetric patients at rural hospitals.

Table 4. Association Between Birth Volume Category and Severe Maternal Morbidity for Higher-risk and Low-risk Obstetric Patients at Hospitals in Rural Counties

	Risk ratio (95% CI)			
	Higher-risk patients		Low-risk patients	
Annual birth volume	Unadjusted	Adjusted	Unadjusted	Adjusted
Low (10-110 births)	1.29 (0.87-1.90)	1.49 (1.01-2.20)	2.37 (1.31-4.30)	2.32 (1.32-4.07)
Medium (111-240 births)	1.09 (0.84-1.41)	1.30 (1.03-1.65)	1.60 (1.15-2.22)	1.66 (1.20-2.28)
Medium-high (241-460 births)	1.05 (0.85-1.29)	1.16 (0.95-1.43)	1.54 (1.13-2.10)	1.68 (1.29-2.18)
High (>460 births)	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]

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Why do rural hospitals close their obstetric units?

Or why do they keep them open?

(also, more from Plumas District Hospital: Lissette Brown, Tiffany Leonhardt)

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Why do rural hospitals close obstetric units?

- Financial constraints
  - Fixed costs are constant, and revenue is variable and depends on volume
  - Payer mix and the role of Medicaid
- Workforce constraints
  - Yes, it's physician shortages, but also nursing, administration
- Patient safety concerns
  - Clinicians worried about providing safe care
  - Low birth volume challenges

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The correct people to answer this question are rural hospital administrators, who make these decisions every day.

- Reminder of the survey we conducted in 2021 (administrators at rural hospitals that had OB in 2018)
- From both a financial and safety perspective, those with obstetrics said they needed 200 births a year
  - They gave us an answer, but the answer is a response to policy incentives – different policies may change the answers they give

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What do rural communities need and deserve?

- One-third of hospitals we surveyed kept obstetrics open, even below minimum thresholds for safety and financial viability
- Why? Community need

"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."

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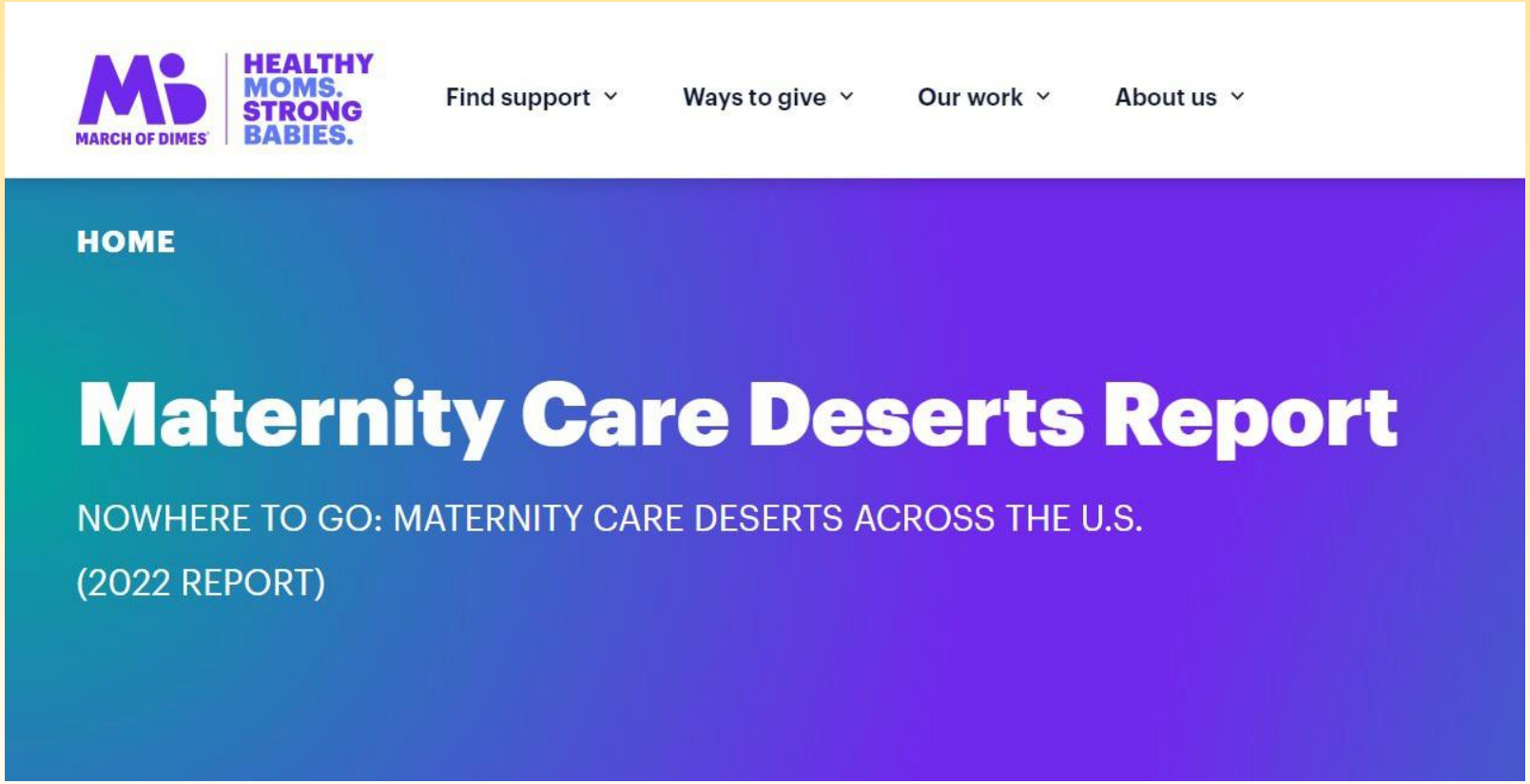
But closures keep happening.
And we need to stop calling them “deserts.”



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Closures are happening in those same Alabama communities where grannies raised the alarm in 2016.

NEWS ISRAEL-HAMAS WAR POLITICS U.S. NEWS WORLD BUSINESS HEALTH NBC NEWS TIPLINE VIDEO WATCH LIVE

WOMEN'S HEALTH

Driving 100 miles in labor; giving birth in the ER: Fears rise as 3 maternity units prepare to close in Alabama

The state has one of the country's highest maternal mortality rates. Now, three hospitals plan to stop delivering babies, putting some pregnant women at even higher risk.

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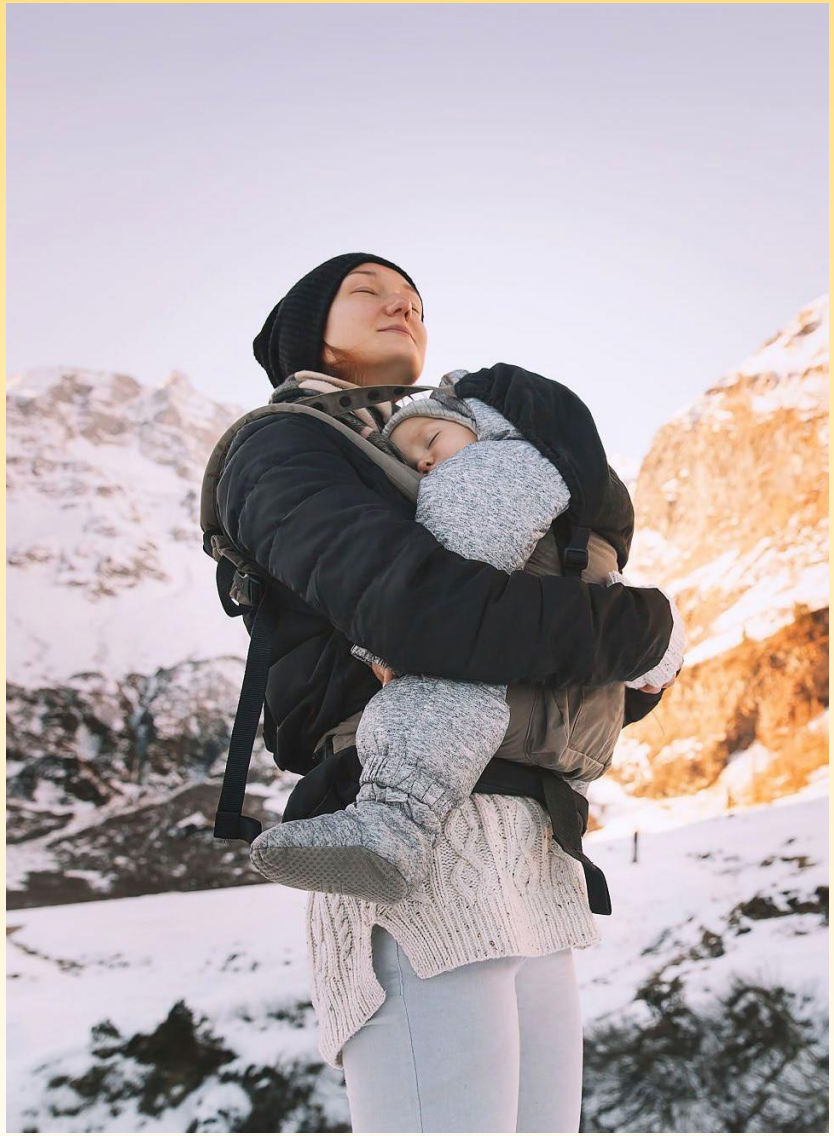

What could help keep rural maternity care viable and accessible?

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Two major financing challenges

- Volume-based payment
  - High fixed costs related to obstetric workforce, facilities
  - Volume-based revenues are lower for facilities with fewer patients
    - Structural urbanism (health care systems build around needs of heavily-populated areas)
- Reimbursement rate discrepancies between public and private insurers
  - Medicaid reimbursement rates are lower than private insurance
  - Higher proportion of rural births are Medicaid-funded

Medicaid policy ideas and discussions

- Medicaid expansion
  - Slowed rural hospital closures overall
  - Didn't reduce rural obstetric unit closures
- Postpartum Medicaid extension
  - Can reduce known inequities in insurance coverage, particular benefits to rural residents
- But incremental adjustments don't tackle the fundamental challenges

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Possible ways to tackle financing challenges

(and more to come from Kristof Stremikis)

- Cost-based reimbursement (build on Critical Access Hospitals model)
- Resources and training for emergency obstetrics: Rural Emergency Hospitals
- Medicaid policies that focus on low-volume payment adjustments – could include specific focus on birth
- Rural Maternal and Obstetric Modernization of Services (MOMS) Act – includes focus on workforce, training

Other major challenges to access and equity

- Workforce
  - Basic services/care
  - Specialized services/care
- Distance and lack of transportation
- Poverty and lack of community infrastructure
- Lack of rural relevant initiatives and metrics

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Possible ways to address these challenges: Workforce (and more to come from Holly Smith)

- Midwifery
  - Strong rural role, scope of practice, partnership with OB/GYN
- Doula care
  - Attention to mileage reimbursement and supply
- Birth centers
  - Some of the same financing challenges
  - Need strong referral networks
- Telemedicine support
  - Growing use of prover-to-provider

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Possible ways to address these challenges: Distance and poverty

- Medicaid waivers for transportation support
  - Alaska: Medicaid-funded maternal homes near obstetrics-ready hospitals at the end of pregnancy
- Broadband
  - Broadband Equity Access and Deployment Program (BEAD)
- Employment
  - Rural jobs, Paid parental leave
- Child care access

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Possible ways to address these challenges: Rural relevance

- Representation of rural voices
  - Clinical guidelines and quality standards
  - Maternal mortality review committees
    - Our 2019 research showed limited rural representation (2 states required – TX, PN)
- Perinatal quality collaboratives
  - (1) Support networks of care and telehealth; (2) Support remote education and training; (3) Implement rural appropriate versions of National Safety Bundles; (4) Engage and support providers beyond obstetricians; and (5) Engage community.

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Possible ways to address these challenges: Centering tribes and Indigenous people

(and more from Alinea Stevens and Sandra Lowry)

1. Collecting and reporting data with and among Indigenous people and tribal nations
2. Ensuring decision-making includes Indigenous, rural/urban, and tribal representation
3. Making money available to community-based groups
4. Improving workforce diversity

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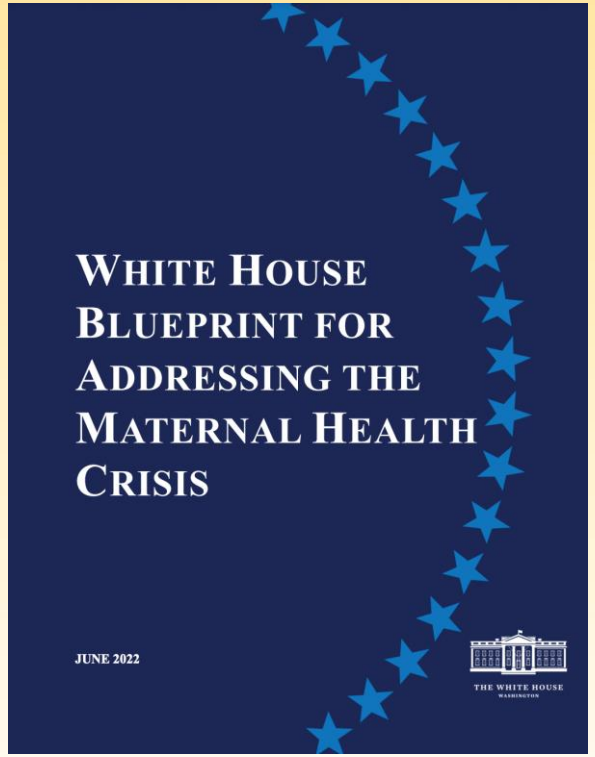
Federal policies and investments are helping make maternity care accessible.

- Improving Access to Maternity Care Act (2018)
- Rural MOMS Act (2022)
- Investments
  - White House Blueprint on Maternal Health
  - RMOMS program (HRSA)
  - Maternity Care Health Professional Target Areas (MCTAs)



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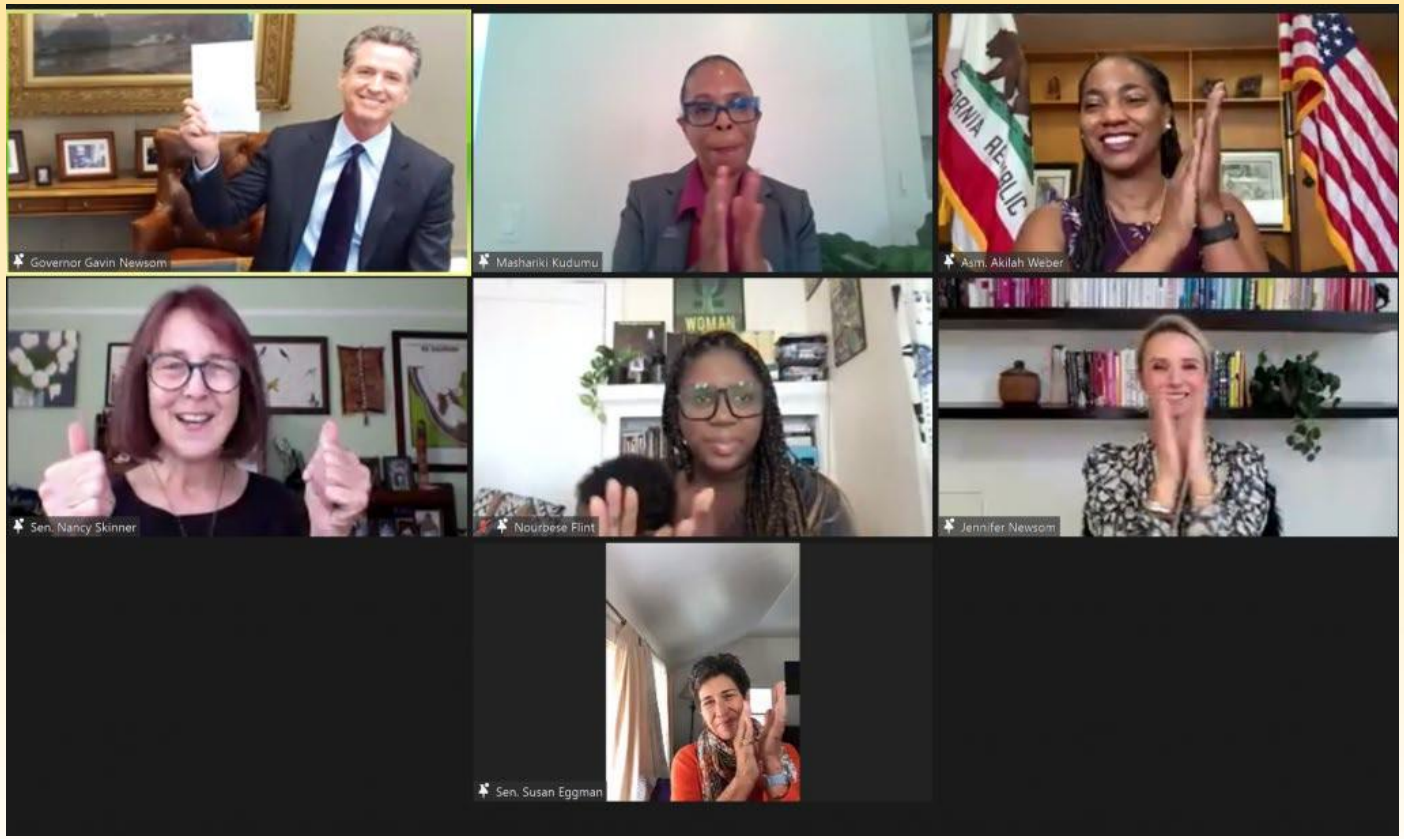
The state of California is helping make maternity care accessible.



- California legislation
  - 2021 California Momnibus Act (SB 65)
  - Others?
- CMQCC (Holly Smith)
- CHCF (Kristof Stremikis)
- Rural and tribal clinics and groups

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Rural communities are helping make maternity care accessible.

- Case studies
  - 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
  - Kotzebue, AK: Maniilaq Health Center

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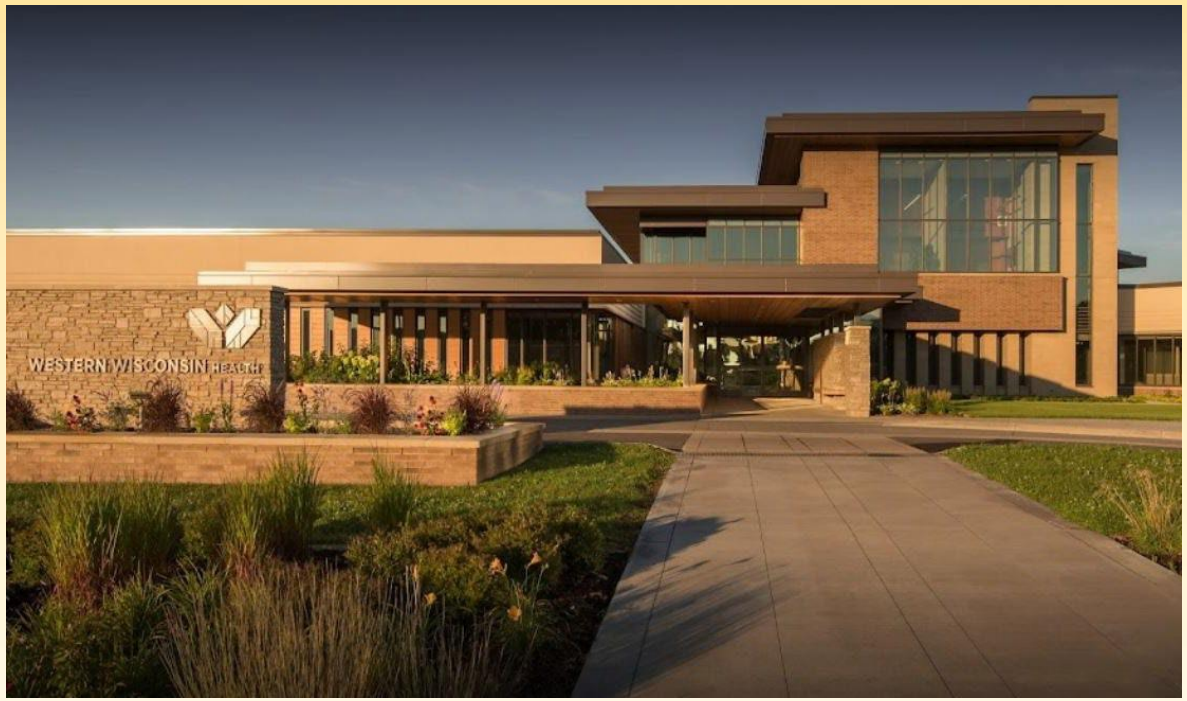
Western Wisconsin Health: Recommendations

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



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San Luis Valley Health: Recommendations

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. Connect with other services in the community

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Maniilaq Health Center: Recommendations

1. Integration of cultural values and practices in maternity units
2. The Maniilaq Social-Medicine Program improves care in rural, isolated populations.
3. Training community members lessens staffing difficulties and increases culturally-centered care within the facility.
4. Use of maternal homes via Alaska's Medicaid program

Maniilaq Health Center Staff, wearing their atikluks to deliver high-quality patient care.

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Additional slides and references

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