

MAP Work Session Data in Practice: Turning Maternal Health Insight into Action



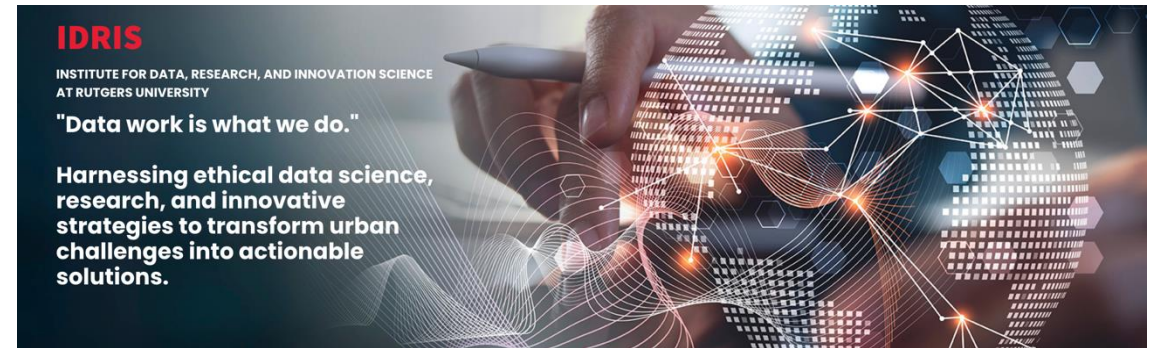
Small Data Meets AI in Maternal Health

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Dr. Stuart Fischbein - "Birthing Instincts" and Trusting Nature in Childbirth | The Daily Show

3:07 30%, 40% C-section rates.

3:09 Some countries, it's 70% and 80%.

3:13 We're inducing women.

3:14 30%, 50%, 80% of women in certain hospitals

3:17 are being induced.

3:18 I mean, how many cows get induced?

3:20 MICHELLE WOLF: Mm-hmm.

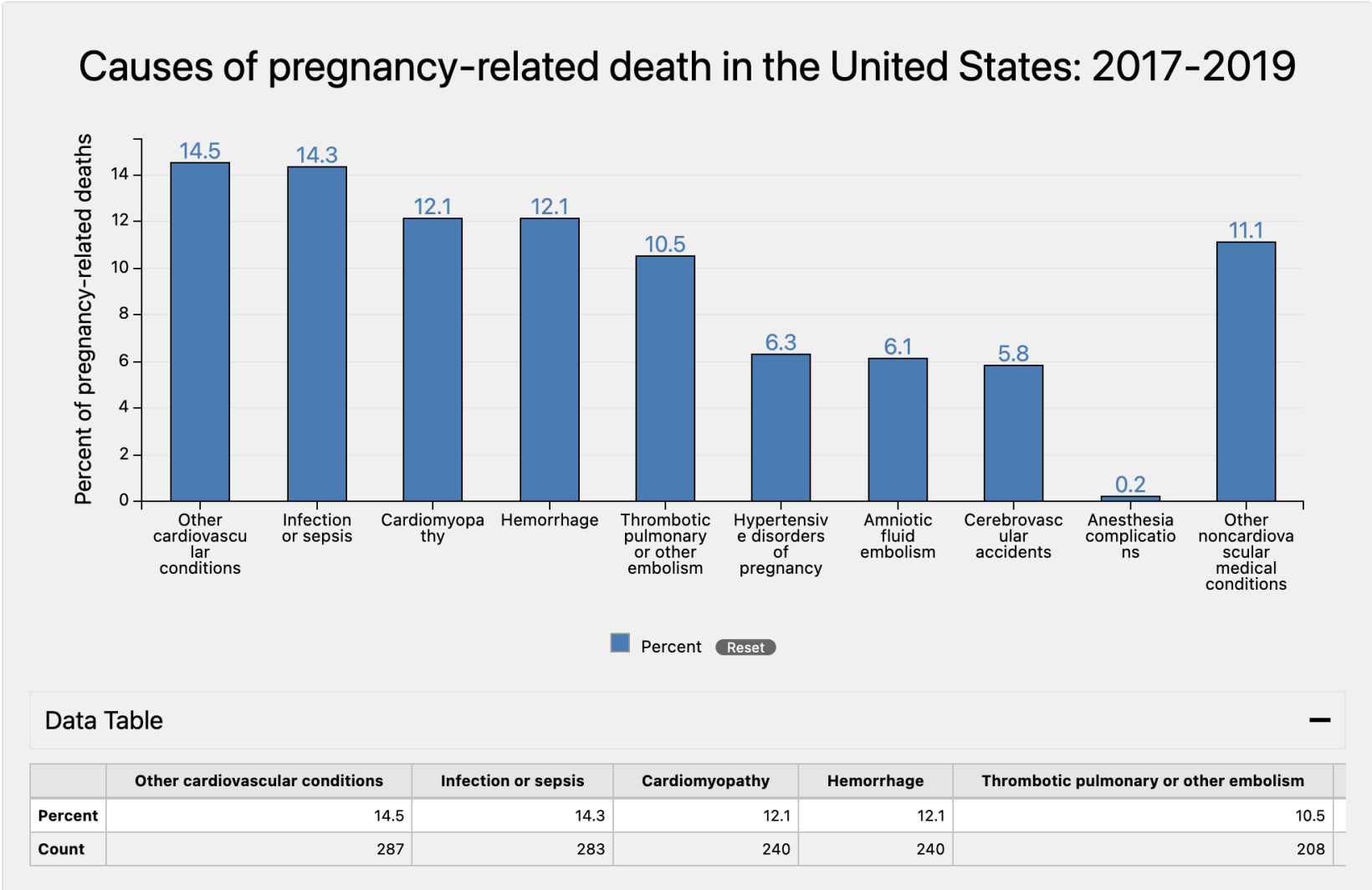
3:21 That's a-- it's just the medical

3:24 model sees birth as a problem.

3:27 The midwifery model sees birth as a normal function

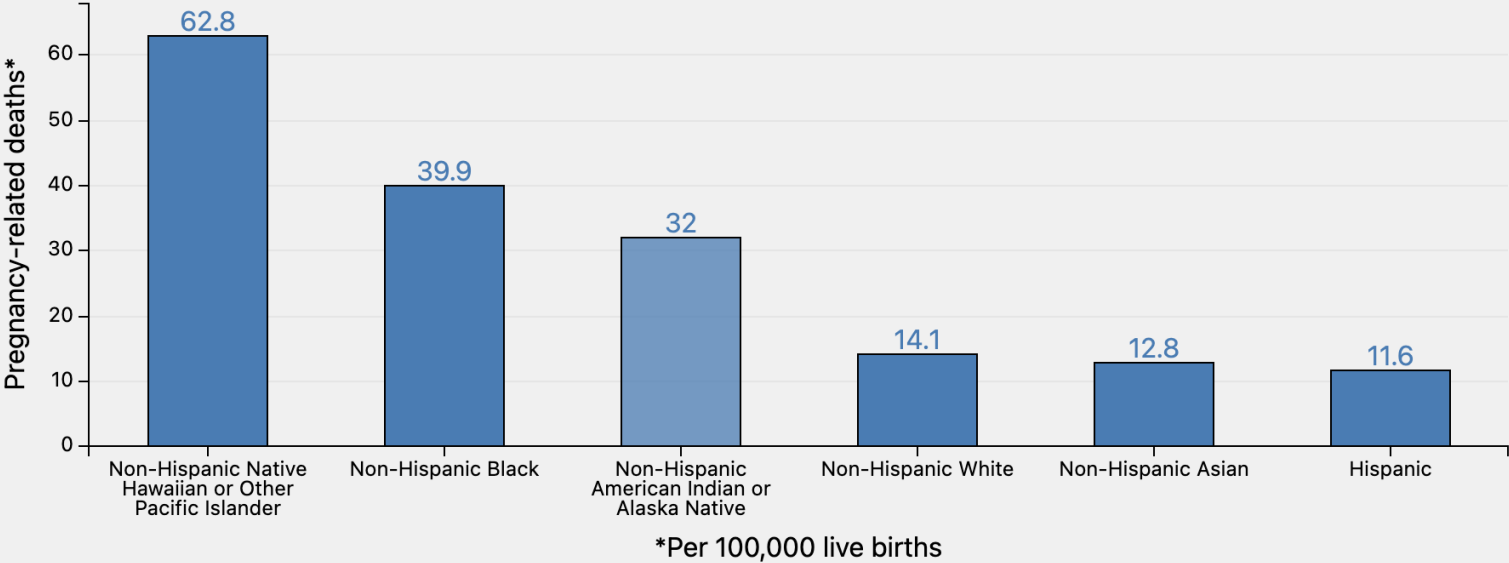
3:30 of a woman's body, that they trust

Causes of Pregnancy-Related Deaths



Pregnancy-Related Deaths by Race/Ethnicity

Pregnancy-related mortality ratio by race/ethnicity: 2017-2019

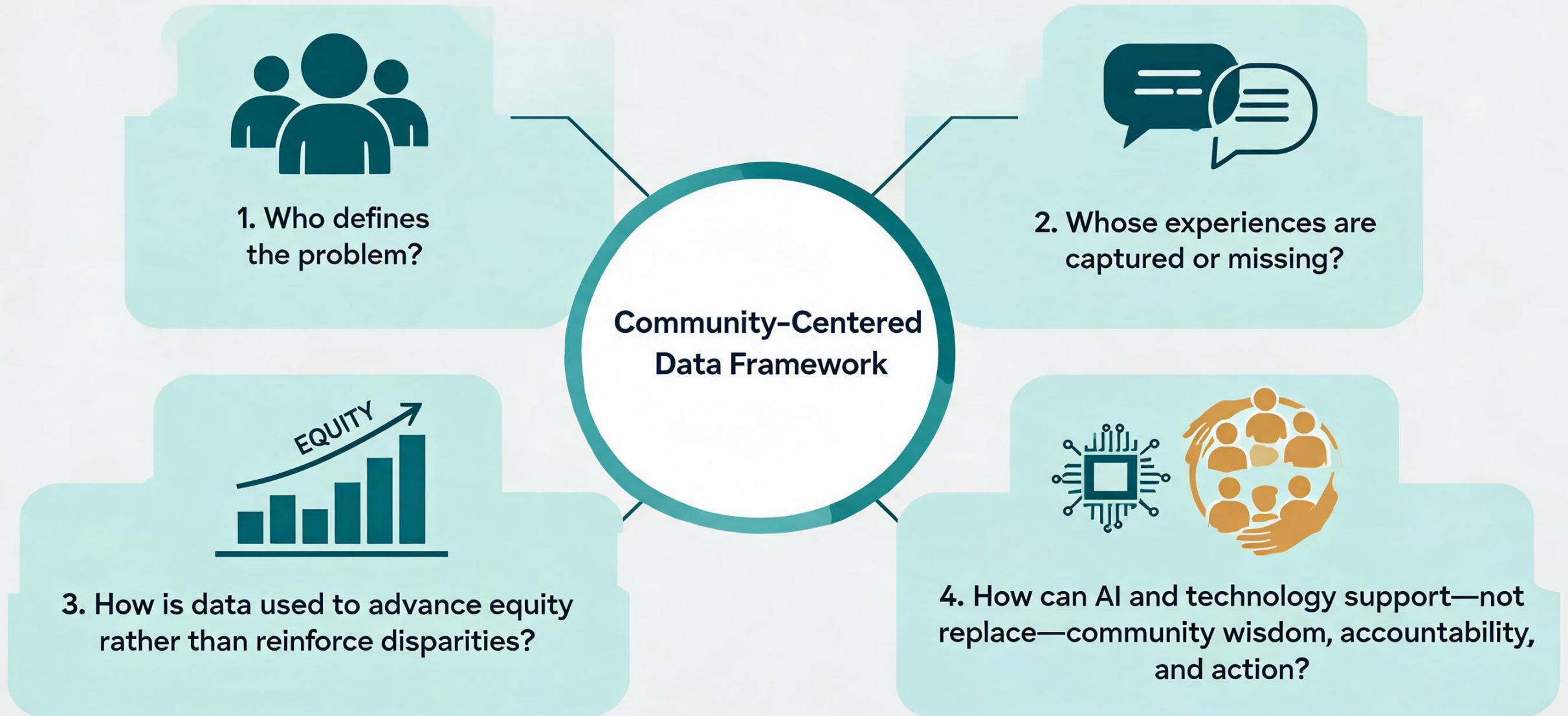


■ Pregnancy-related mortality ratio Reset

Data Table

	Non-Hispanic Native Hawaiian or Other Pacific Islander	Non-Hispanic Black	Non-Hispanic American Indian or Alaska
Pregnancy-related mortality ratio	62.8	39.9	
Count	18	663	

Data guided by lived experience, priorities, and voices



1 COMMUNITY VOICE AND OWNERSHIP

- Birthing people, families, and community-based organizations help define the questions, outcomes, and priorities.
- Community leadership is at the center of the process.



2 EQUITY-CENTERED DATA COLLECTION

- Data practices intentionally identify disparities by race, geography, income, language, disability, and other relevant factors.
- Avoid extractive or stigmatizing approaches.



7 SHARED INTERPRETATION

- Data findings are reviewed with community partners to ensure context, meaning, and implications are understood accurately.
- Communities help make sense of the data—and what it means.



COMMUNITY-DRIVEN MATERNAL HEALTH DATA

Grounded in trust. Driven by equity.
Guided by community. Focused on action.



Better data. Better decisions.
Healthier communities.

3 SMALL DATA AND LIVED EXPERIENCE

- Stories, narratives, interviews, and community observations are treated as valuable evidence alongside large datasets.



5 RESPONSIBLE USE OF AI AND TECHNOLOGY

- AI tools are evaluated for bias, accuracy, privacy, and real-world impact before being used in maternal health settings.



- ✓ Bias Assessment
- ✓ Accuracy
- ✓ Privacy Protection
- ✓ Real-World Impact
- ✓ Community Review



Privacy. Safety.
Human oversight.

6 ACTION ORIENTATION

- Data should inform decisions, improve programs, allocate resources, and support accountability—not simply describe problems.



4 TRANSPARENCY AND TRUST

- Communities understand how data is collected, shared, protected, and used.
- Clear communication builds trust.



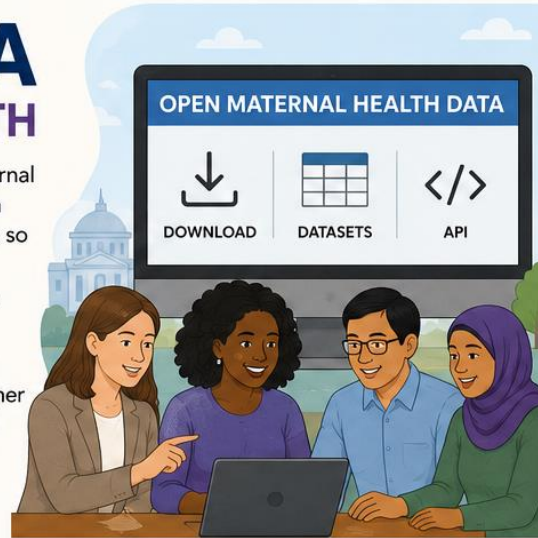
When communities lead, data drives change.

Together, we build a maternal health system that is equitable, accountable, and responsive to all.

OPEN DATA IN MATERNAL HEALTH

Open data in maternal health refers to maternal health data that is made publicly available in usable, downloadable, and reusable formats so researchers, policymakers, providers, and communities can analyze it, compare trends, and improve care.

It often includes indicators such as maternal mortality, prenatal care, delivery care, and other population-level measures that can support monitoring and equity work.



EXAMPLES OF MATERNAL HEALTH INDICATORS



WHO CAN USE OPEN MATERNAL HEALTH DATA?



IN PRACTICE, OPEN DATA CAN:

IDENTIFY GAPS IN MATERNAL OUTCOMES



Spot areas with higher maternal mortality or lower care access.

TRACK DISPARITIES BY PLACE OR POPULATION



Compare outcomes across different groups and locations to advance equity.

SUPPORT EVIDENCE-BASED DECISION-MAKING



Use data to shape policies, allocate resources, and improve programs and services.

GOOD OPEN DATA IN MATERNAL HEALTH SHOULD BE:

TIMELY



Data is up to date and released regularly.

WELL-DOCUMENTED



Clear metadata, definitions, and methods are provided.

ETHICALLY MANAGED



Protects privacy, ensures informed use, and avoids re-identification risks.

EQUITY-FOCUSED



Designed and used in ways that promote equity and do not reinforce stigma.



PROTECTING PEOPLE, PROMOTING TRUST

Open data should never compromise privacy or dignity. It must be ethically managed to avoid risks and stigma.



Remove identifiers



Aggregate small numbers



Use secure systems



Engage communities in decisions



**OPEN DATA.
BETTER INSIGHTS.
BETTER OUTCOMES.
HEALTHIER MOTHERS.
STRONGER COMMUNITIES.**



Why State Comparisons Are Challenging

Eight factors that make state-to-state comparisons difficult, grouped into three themes.

Definitions & Measurement

- 1 Different Definitions and Measures
- 8 Inconsistent Equity Measures

Data Quality & Methods

- 2 Variation in Data Collection
- 5 Uneven Review Processes
- 6 Small Numbers
- 7 Time Lags

Population & Systems

- 3 Different Population Characteristics
- 4 Differences in Health Care Systems

BUILDING BETTER BENCHMARKS FOR MATERNAL HEALTH

Better benchmarks come from better data, better measurement, and better context.

1

STANDARDIZED NATIONAL DEFINITIONS for maternal health indicators.

MATERNAL HEALTH INDICATORS

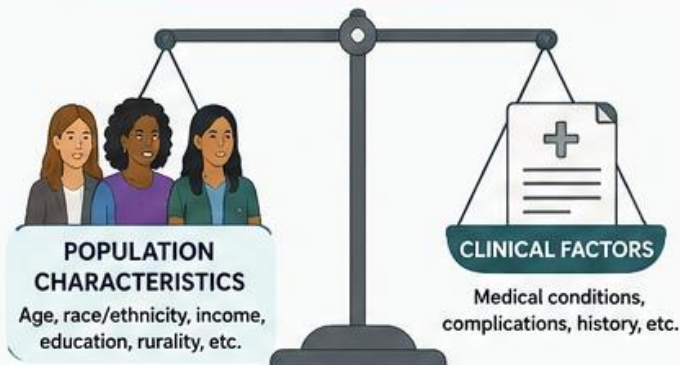
- ✓ Maternal Mortality
- ✓ Severe Maternal Morbidity
- ✓ Prenatal Care
- ✓ Postpartum Care
- ✓ Readmissions



Using the same definitions means we're measuring the same things.

2

RISK-ADJUSTED MEASURES that account for demographic and clinical differences.



Adjusting for differences helps ensure fair and meaningful comparisons.

3

COMMON DATA STANDARDS across states.

- ✓ Standardized data elements
- ✓ Consistent coding
- ✓ Interoperable systems



Common standards make data comparable, reliable, and actionable.

4

STRATIFIED REPORTING by race, ethnicity, geography, insurance status, and other factors.



RACE / ETHNICITY



GEOGRAPHY



INSURANCE STATUS



AND MORE

5

LONGITUDINAL TRENDS within a state over time instead of single-year comparisons.



6

PROCESS MEASURES (e.g., postpartum visit completion, severe hypertension treatment) alongside outcome measures like maternal mortality.

PROCESS MEASURES (What we do)



Postpartum visit completion



Severe hypertension treatment



Smoking cessation counseling

OUTCOME MEASURES (What happens)



Maternal mortality



Severe maternal morbidity



Preterm birth

 TheUpshot

***Unwanted Epidurals, Untreated Pain:
Black Women Tell Their Birth Stories***

Regardless of income or education, Black mothers have worse birth outcomes.

OPINION

SEPTEMBER 12, 2023 | 5 MIN READ

Without Small Data, AI in Health Care Contributes to Disparities

Artificial intelligence systems in health care must be trained on the data of lived experience to prevent bias and disparities

BY FAY COBB PAYTON

Explore our newly updated, enhanced, and expanded [International Health Care System Profiles](#) to learn how 31 countries across six continents approach health care.

AREA OF FOCUS

Advancing Health Equity →

ISSUE BRIEFS

JUNE 4, 2024

TOPLINES

The U.S. maternal mortality rate continues to far exceed those of other high-income nations, despite a decline since the end of the COVID-19 pandemic



Persistent inequities in health care are a big reason why Black women in the U.S. are by far the most likely to die from pregnancy or childbirth



Insights into the U.S. Maternal Mortality Crisis: An International Comparison



▲ Anna Ruocco (left), a midwife, provides home breastfeeding assistance to a mother with her newborn, on June 17, 2022, in Turin, Italy. Midwifery-led care models have been shown to provide care that is comparable to, or sometimes even better than, that provided by obstetrician-gynecologists, or ob-gyns. In the U.S., Canada, and Korea, ob-gyns outnumber midwives, while in most other countries midwives greatly outnumber ob-gyns. Photo by Diana Bagnoli/Getty Images

References

- <https://www.youtube.com/watch?v=5lhi0Xxnc4E>
- Payton, F.C. and Rogers, M. Black Maternal Care: A Call to Action for Engineering, Data Science, Electronic Health Records and Justice, Big Data Health Science Conference, 2024, Columbia, SC. (*Selected Best oral presentation in the Electronic Health Records Core Breakout Session and paper to appear in 2024 Biomedical Central Proceedings*)
- Payton, F.C. Without Small Data, AI in Health Care Contributes to Disparities, Scientific American, September 2023.
- <https://www.cdc.gov/reproductivehealth/maternal-mortality/pregnancy-mortality-surveillance-system.htm#race-ethnicity>
- <https://www.cdc.gov/reproductivehealth/maternal-mortality/pregnancy-mortality-surveillance-system.htm#race-ethnicity>
- https://www.nytimes.com/2023/05/06/upshot/black-births-maternal-mortality.html?eafs_enabled=false
- <https://www.commonwealthfund.org/publications/issue-briefs/2024/jun/insights-us-maternal-mortality-crisis-international-comparison>
- <https://opengovdata.org/>

Thank you!



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