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Lurie Institute for Disability Policy

Cost-Benefit Analysis of Doula Care in Medicaid Programs

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Topics

- **Background**
- **Research Objectives**
- **Methods**
- **Findings**
- **Conclusion & Policy implications**

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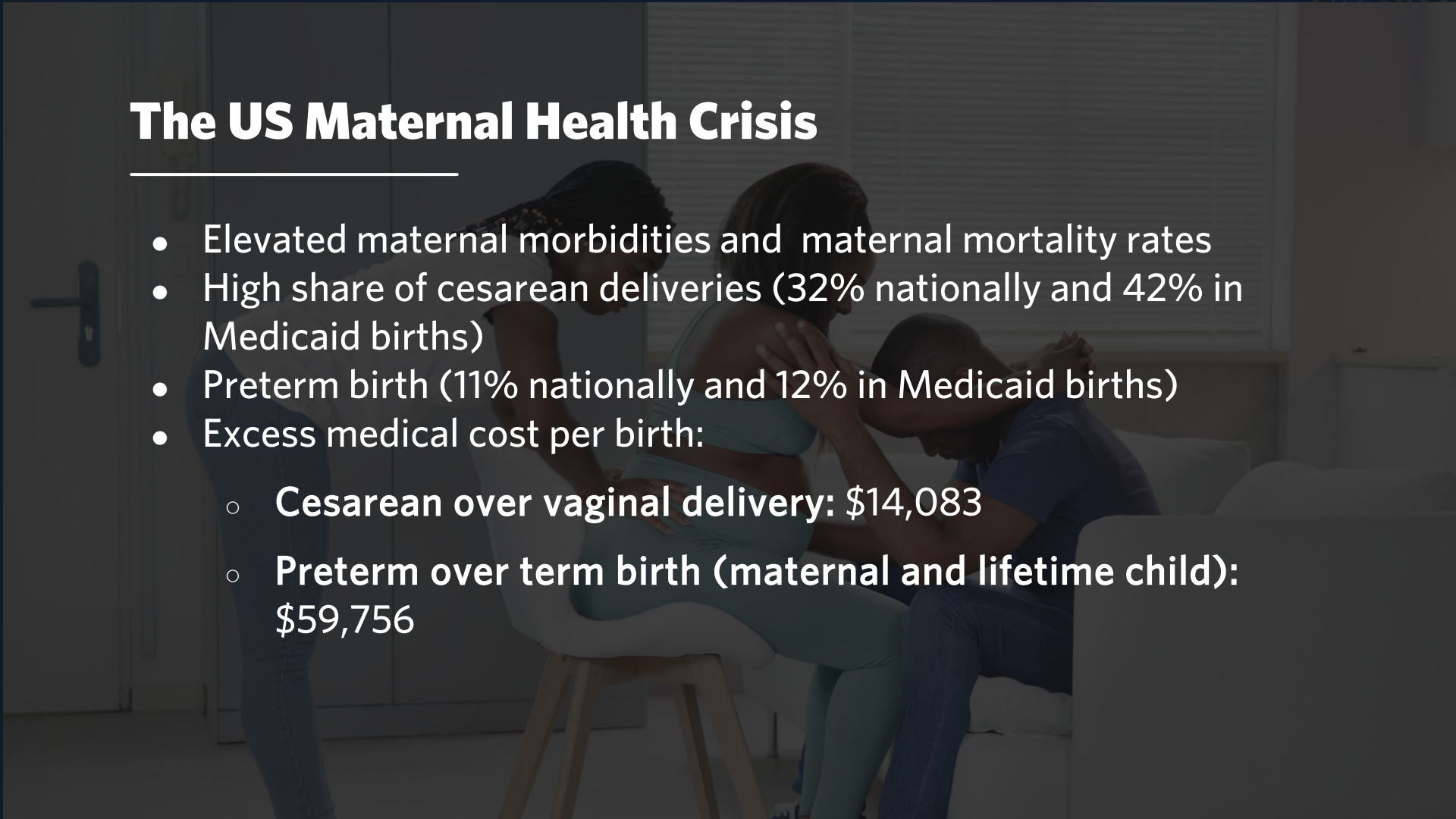
Background

The US Maternal Health Crisis



- Elevated maternal morbidities and maternal mortality rates
- High share of cesarean deliveries (32% nationally and 42% in Medicaid births)
- Preterm birth (11% nationally and 12% in Medicaid births)
- Excess medical cost per birth:
    - **Cesarean over vaginal delivery:** $14,083
    - **Preterm over term birth (maternal and lifetime child):** $59,756

Policy Context

- Doulas are nonclinical trained professionals who can provide emotional, physical, and informational support during pregnancy, delivery, and after childbirth
- In 2023, Medicaid financed 41.2% of U.S. births
- By December 2024, 43 states and Washington DC added Medicaid coverage for doula care
- **Doula care significantly reduces cesarean deliveries (by 47%) and preterm births (by 29%)** [Falconi, 2024, https://ajph.aphapublications.org/doi/10.2105/AJPH.2024.307808]
- Under 10% of births in the US are supported by a doula.
- Nevertheless, the US share is higher than that in any other country
- Need for evidence-based policy analysis

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Research Objectives

Research Objectives

- Estimate economic impact of scaling doula care services to 20% of Medicaid-financed births
- Evaluate cost-effectiveness across various scenarios
- Conduct national and state-specific cost-benefit analyses

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Methods

Methods

- Cost benefit analysis framework
- 2024 US dollar adjustment
- 20% coverage scenario modeling
- Sensitivity analysis

Table 1: Model Parameters for Doula in Medicaid (2024 dollars)

Parameter	Value (Range)
Relative Risk of Cesarean delivery \a	0.53 (0.43-0.66)
Relative Risk Preterm birth \a	0.71 (0.51-0.98)
Cesarean delivery rate in propensity-matched women with no doula \a	43.9%
Cesarean delivery rate in propensity-matched women with doula \a	23.9%
Preterm birth rate in propensity-matched women with no doula \a	11.5%
Preterm birth rate in propensity-matched women with no doula \a	8.5%
Doula services cost per birth \b	$1,774 ($1,292-$2,260)
Cesarean delivery cost differential over vaginal delivery \c	$14,083
Preterm birth differential medical costs over term birth \d	$59,756

Sources:
a From propensity score-matched analysis of Medicaid claims data from Falconi et al. 2024: https://ajph.aphapublications.org/doi/10.2105/AJPH.2024.307808
b Average of current Medicaid reimbursement rates across states with doula coverage, adjusted to 2024 dollars: 2024 Update: Medicaid Coverage for Doula Care (2025): https://healthlaw.org/2024-update-medicaid-coverage-for-doula-care-requires-sustainable-and-equitable-reimbursement-to-be-successful/
c Derived from spending differential between cesarean ($26,280) and vaginal deliveries ($14,768) in 2020, adjusted to 2024 dollars ($):
KFF Health System Tracker (2023): https://www.healthsystemtracker.org/brief/health-costs-associated-with-pregnancy-childbirth-and-postpartum-care/#Average%20additional%20health%20spending%20by%20people%20with%20large%20employer%20coverage%20who%20give%20birth,%20relative%20to%20those%20who%20do%20not%20give%20birth,%202018-200
d Includes total medical costs for affected child, maternal delivery cost in 2016, adjusted to 2024 dollars using medical care CPI inlation factor: Waitzman et al., 2021d. Preterm birth lifetime costs in the United States in 2016: An update. (https://pmc.ncbi.nlm.nih.gov/articles/PMC10549985/#:~:text=The%20total%20cost%20of%20preterm,two%2Dthirds%20of%20the%20total);
CPI Inflation Calculator using the Consumer Price Index for All Urban Consumers (CPI-U) U.S. city average series for all items https://www.bls.gov/data/inflation_calculator.htm

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Results

Cost-Effectiveness

Table 2: Cost-Benefit Analysis for Doula in Medicaid Programs

Share of Medicaid Births Covered by Doula (1)	Cesareans Prevented per 1,000 births \e (2)	Preterm Births Prevented per 1,000 births \e (3)	Doula Care Cost per Birth (4)	Cesarian Cost Savings per Birth (5)	Preterm Cost Savings per Birth (6)	Medical Care Savings per Birth, (5)+(6) (7)	Net Savings per Birth, (7)-(4) (8)	Benefit-Cost Ratio (BCR) (8)/(4) (9)
1.0%	2.1	0.33	$17.76	$29.06	$19.93	$48.99	$31.23	1.76
10.0%	20.6	3.34	$177.60	$290.57	$199.28	$489.86	$312.26	1.76
20.0%	**41.3**	**6.67**	$355.20	$581.15	$398.57	$979.72	**$624.52**	1.76
25.0%	51.6	8.3	$444.00	$726.44	$498.21	$1,224.65	$780.65	1.76

e Events Prevented = Baseline Rate × (1-Relative Risk) × Coverage Rate

- Estimate economic impact of scaling doula care services to 20% of Medicaid-financed births
- Evaluate cost-effectiveness across various scenarios
- Conduct national and state-specific cost-benefit analyses

Sensitivity Analysis

- Cost savings persist across all sensitivity scenarios, demonstrating doula care cost-effectiveness
  - Net saving per birth: $625
  - Range: $135 to $1,114
  - Net benefit-cost ratio 1.76
  - Range: 0.38 to 4.52

Table 3: One-Way Sensitivity Analysis Results at 20% Coverage Rate

Parameter Variation (1)	Cesareans Prevented per 1,000 births \e (2)	Preterms Prevented per 1,000 births \e (3)	Doula Care Cost per Birth (4)	Medical Care Savings per Birth, (5)	Net Savings per Birth, (5)-(4) (6)	Net Benefit-Cost Ratio (6)/(4) (7)
Baseline Effectiveness	41.3	6.7	$355	$980	$625	1.76
Effectiveness +50%	61.9	10.0	$355	$1,470	$1,114	3.14
Effectiveness -50%	20.6	3.3	$355	$490	$135	0.38
Baseline Costs	41.3	6.7	$355	$980	$625	1.76
Doula Costs +50%	41.3	6.7	$533	$980	$447	0.84
Doula Costs -50%	41.3	6.7	$178	$980	$802	4.52

e Events Prevented = Baseline Rate × (1-Relative Risk) × Coverage Rate

Top 10 States and MA

National implementation: **$925 million annual savings** across all Medicaid programs

Table 4: Projected Annual Savings from 20% Doula Coverage in Medicaid in 10 States with Highest Savings and MA, 2023-2024

Rank	Location	% of Births Financed by Medicaid \f	Number of Births Financed by Medicaid	Projected Net Saving, $ Million, (4)*$625/$1,000,000
(1)	(2)	(3)	(4)	(5)
1	Texas	48%	185,348	$116
2	California	40%	161,965	$101
3	New York	49%	98,769	$62
4	Florida	42%	93,001	$58
5	Georgia	45%	56,224	$35
6	Illinois	40%	49,327	$31
7	Ohio	39%	49,073	$31
8	North Carolina	37%	44,873	$28
9	Pennsylvania	35%	44,722	$28
10	Tennessee	46%	37,939	$24
26	Massachusetts, MA	32%	21,209	$13
NA	**United States**	**41%**	**1,479,782**	**$925**

f Kaiser Family Foundation: https://www.kff.org/medicaid/state-indicator/births-financed-by-medicaid/

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Conclusions

$625

Net savings per birth
(range: $135 to $1,114)

1.76

Net benefit-cost ratio
(range: 0.38 to 4.52)

$924 million

National annual savings
(20% coverage)

Conclusions

- Expanding doula care through Medicaid is a highly cost-effective intervention
- significant potential for improving maternal health outcomes while reducing medical costs
    - Net saving per birth: $625 (range: $135 to $1,114)
    - National annual savings (20% coverage): $924 million
    - Net benefit-cost ratio: 1.76 (range: 0.38 to 4.52)
    - Expand doula care within Medicaid programs
    - Potential to reduce maternal health disparities

Sources

a From propensity score-matched analysis of Medicaid claims data from Falconi et al. 2024: https://ajph.aphapublications.org/doi/10.2105/AJPH.2024.307808

b Average of current Medicaid reimbursement rates across states with doula coverage, adjusted to 2024 dollars: 2024 Update: Medicaid Coverage for Doula Care (2025): https://healthlaw.org/2024-update-medicaid-coverage-for-doula-care-requires-sustainable-and-equitable-reimbursement-to-be-successful/

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d Includes total medical costs for affected child, maternal delivery cost in 2016, adjusted to 2024 dollars using medical care CPI inlation factor: Waitzman et al., 2021d. Preterm birth lifetime costs in the United States in 2016: An update. (https://pmc.ncbi.nlm.nih.gov/articles/PMC10549985/#:~:text=The%20total%20cost%20of%20preterm,two%2Dthirds%20of%20the%20total);
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e Events Prevented = Baseline Rate × (1-Relative Risk) × Coverage Rate

f Kaiser Family Foundation: https://www.kff.org/medicaid/state-indicator/births-financed-by-medicaid/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D

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Thank you!
Any Questions?

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