

PATIENT PROTECTION COMMISSION- IMPROVEMENT OF MATERNAL-NEONATAL CARE

BRIAN K. IRIYE, MD

MANAGING PHYSICIAN – HIGH RISK PREGNANCY
CENTER

MY BACKGROUND

- Board Certified in OB/GYN and Maternal Fetal Medicine
- Residency in OB/GYN- Johns Hopkins Hospital
- MFM Fellowship- University of California, Irvine
- Past President and Lifetime Achievement Award Winner- Society for Maternal Fetal Medicine
- Gabbe Award- Lifetime achievement award for the Foundation for the SMFM
- Multiple Research Articles- Preterm Birth, Cesarean Reduction, Quality Measures
- Current President- Hera Women's Health

MATERNAL AND NEONATAL MORTALITY

USA

Maternal

- 18.6 deaths per 100,000 births
- 50.3 per 100,000 in Black women

Neonatal

- 3.5 per 1000 births
- 6.6 per 1000 births in black populations

Nevada

Maternal

- 20.4 deaths per 100,000 births
- 49.9 per 100,000 black women

Neonatal

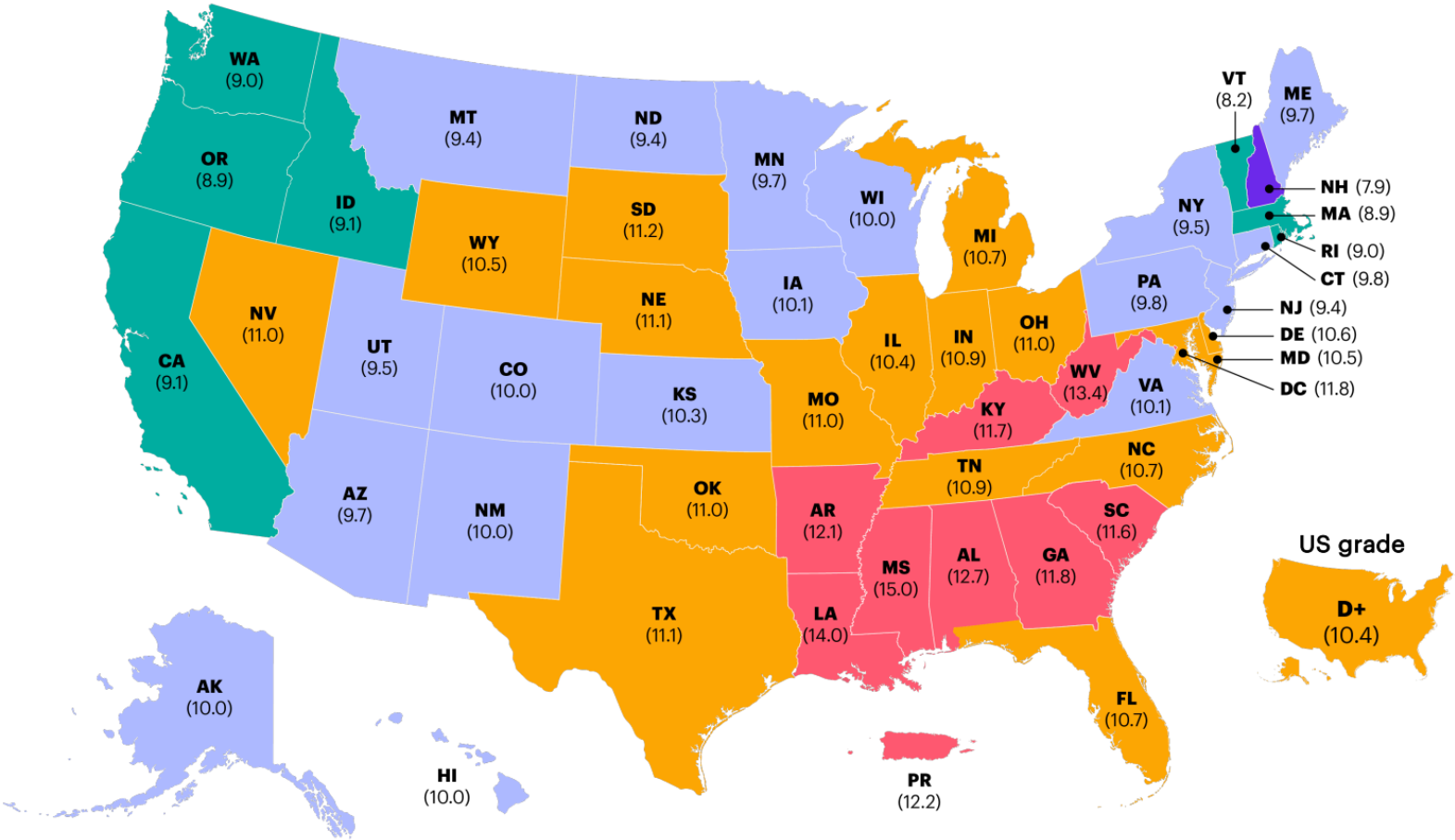
- 3.5 per 1000 births
- Unknown in black populations and less consistently published.

PRETERM BIRTH

PRETERM BIRTH GRADE

D

Preterm birth rate (born before 37 weeks gestation) and grade by state, 2024



11 states met the Healthy People 2030 target for preterm birth of 9.4% of all live births.

GRADE AND PRETERM BIRTH RATE

A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
7.7% or less	7.8 to 8.1%	8.2 to 8.5%	8.6 to 8.9%	9.0 to 9.2%	9.3 to 9.6%	9.7 to 10.0%	10.1 to 10.3%	10.4 to 10.7%	10.8 to 11.1%	11.2 to 11.4%	11.5% or greater

- High maternal mortality rates
- Persistent inequities in maternal and neonatal outcomes
- Elevated preterm birth rates driving morbidity and mortality

MATERNAL AND NEONATAL SYSTEM CHALLENGES

There are unfavorable outcomes that are preventable:

- High maternal mortality rates
- Persistent inequities in maternal and neonatal outcomes
- Elevated preterm birth rates driving neonatal morbidity and mortality

Core issue: Nevada. continues to underperform on measurable maternal and neonatal health indicators.

PROBLEMS IN MATERNAL AND NEONATAL SPACE

System Governance & Quality Infrastructure

- Absence of a Nevada Perinatal Quality Collaborative
- Limited statewide leadership, coordination, and shared data infrastructure
- Quality improvement not anchored in a formal, standardized framework

Workforce and Access Constraints

- OB Physician shortage leading to poor access
- Rural disparities in prenatal, delivery, and neonatal services

Financial Misalignment and Spending

- Inappropriate spending patterns – need to look at total cost and consider ROI
- Lack of quality-based incentives

Neonatal Outcomes and NICU De-regionalization

- High Preterm Birth rates leading to preventable expensive NICU admissions
- De-regionalized Level 3 NICU care
- Lack of robust, standardized data on neonatal outcomes

Social determinants of Health (SDOH) and Upstream Drivers

- Lack of screening for SDOH
- Limited or confusing follow up or care management after screening

Poor Payment Structure

- No incentives or poor incentives to priorities

MY GOALS TODAY

- Attempt to show the people of Nevada there is a path forward for improved outcomes and better care
- To intertwine several diverse solutions and show how they build upon each other
- To convince not only by outcomes but by cost and ROI
- To show difficulties of VBC and how it requires careful thoughts to prevent avoidable complications

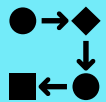
THREE PRINCIPLES

- Maternal and neonatal morbidity and mortality can be reduced
- Preterm birth can be a preventable outcome
- Need thoughtful spending to push appropriate outcomes, which will drive savings

Perinatal Quality Collaboratives (PQCs)



A statewide team working to improve the quality of care for pregnancies.



Identify key healthcare and quality processes that need to be improved and use methods to make change



A PQC is needed to increase quality, improve outcomes, and decrease cost. Due to our worsening problems and racial disparities; I would recommend this **needs to be mandatory participation for hospitals.**



Nevada is 1 of only 2 states without a PQC

PQCs are an implementation engine:
they take evidence-based bundles and
make them reliably happen in hospitals
statewide via protocols, training, data
feedback, coaching.

Why is Implementation Needed? **Because Usually it is Very Slow**

Physician adoption of new practices years after discovery

It's widely said that new practices aren't adopted in medicine for 17 years. This paper suggests that's just an average, and some standards aren't fully adopted until much later.

From A. Balas, Institute of Medicine, in Yearbook of Medical Informatics 2000

Table II. Landmark Clinical Trials and Current Rate of Use for Selected Procedures

Clinical Procedure	Landmark Trial	Current Rate of Use
Flu vaccination	1968 [7]	55% [8]
Thrombolytic therapy	1971 [9]	20% [10]
Pneumococcal vaccination	1977 [11]	35.6% [8]
Diabetic eye exam	1981 [4]	38.4% [6]
Beta blockers after MI	1982 [12]	61.9% [6]
Mammography	1982 [13]	70.4% [6]
Cholesterol screening	1984 [14]	65% [15]
Fecal occult blood test	1986 [16]	17% [17]
Diabetic foot care	1993 [18]	20% [19]

Flu vaccine, year 32:
55% doing it,
45% still not

Beta blockers, year 18:
62% doing it,
38% still not

Cholesterol, year 16:
65% doing it,
35% still not

Diabetic foot care, year 7:
20% doing it,
80% still not

17 years for something to be standard of care and then for 50% implementation

This problem is exacerbated in obstetrics where there are more small groups than larger groups and dissemination of information and protocols are further delayed.

PQC PAST SUCCESSES

- California's PQC reduced severe maternal mortality (SMM) by 20.8% with a hemorrhage protocol implementation
- Illinois PQC initiated a statewide hypertension initiative and found a 27% reduction in severe maternal morbidity with more timely treatment of hypertension. Reduced time to treatment
- Ohio PQC reduced elective deliveries at < 39 weeks
- IMPORTANT THAT IN ADDITION TO IMPROVING OUTCOMES IT ALSO DECREASES COST

Nevada and PQC- My Presentations Here

- Nevada was 1 of only 14 states without a PQC in (2019)
- **Nevada is one of only 3-5 states without a PQC (2022)**
- **Nevada is still one of 2 states without a PQC (2024)**



STANDARDS ARE NOT NEGOTIABLE

- **Nevada is an outlier** and outside the national standard for maternal and neonatal safety.
- This is not a political statement- they are in red and blue states, supported by CDC, HRSA, ACOG, SMFM, and state health departments
- This is not something new -- 96% of the country uses PQCs to reduce preventable harm
- PQCs are no longer innovative- they are STANDARD INFRASTRUCTURE

PQC'S HAVE A COST BUT THEY SAVE MONEY

- PQC's reduce:
 - Severe maternal morbidity
 - Maternal ICU admissions
 - NICU length of stay
 - Litigation
- ALL of these have substantial and well documented -
AND HENCE THEY DECREASE COST

COST OF A PQC

- First year start up of 550K to 700K in personnel
- Personnel- This is where underfunding kills PQCs
 - Director- 0.5 FTE- 130K
 - MFM- 0.3-0.5 FTE 160K at 0.4 FTE
 - Program coordinator/ Quality Lead- 100K
 - Data Analyst 130K
 - Admin Support 45K

NON LABOR AND TOTAL COSTS OF A PQC

- Travel- 75K
- Meetings and Training- 100K
- Data Systems and Tech Startup- 300K
- Legal, Compliance, Overhead- 75K

- Total startup cost- 1.1 million

EXAMPLE OF PQCS SAVING STATES AND INSURERS MONEY

- CMQCC implemented a OB hemorrhage protocol which saved an estimated 9 million dollars
- PQC in NC saved 98 million over 11 years representing a 925% ROI
- Ohio PQC reduced early elective deliveries resulting in a cost savings of over \$28 million dollars

ONGOING COSTS- 900K-1 M PLUS COLA- HOW TO FUND THIS?

- Ongoing funding- a per delivery fee
- 32000 deliveries per year x \$40/ delivery paid by both Medicaid and Commercial entities.
- Scales with volume and savings
- THIS is < 0.2% of the TOTAL Maternity SPEND
- One avoided severe maternal morbidity spend offset many deliveries
- Hospital Contributions– HOSPITALS are mandatory participants within 2 years.
 - We should not charge hospitals
 - QI staff time, data submission mandatory- and are costs
 - CAH hospitals get increased travel subsidies

ROI

- Medicaid- savings of 0.8-2.2million/year
- Commercial- savings of 1.0-3.0 million/year
- Hospitals
 - Fewer catastrophic events/transfers
 - Reduced malpractice exposure
 - Statewide benchmarking and best practices

Patients- safer deliveries, reduced preventable complications, rural equity and access

State of NV- public health infrastructure, long awaited alignment with CMS priorities.

FUNDING IS NOT JUST FINANCIAL

- This is not a hospital tax or a payer tax. It is a per-delivery maternal safety infrastructure investment aligned with who captures savings
- This is a small, predictable investment to reduce the highest-cost maternal complications.
- Payers fund the collaborative because they capture the savings; hospitals participate because they capture the safety benefits.
- Providers and hospitals provide the heavy lifting of the meetings, data collection, education



February 13, 2026

Senator Fabian Doñate
Chair
Senate Committee on Health and Human
Services
401 South Carson Street, Room 2124
Carson City, NV 89701

Assemblymember Tracy Brown-May
Chair
Assembly Committee on Health and Human
Services
401 South Carson Street, Room 3132
Carson City, NV 89701

Senator Angela D. Taylor
Vice Chair
Senate Committee on Health and Human
Services
401 South Carson Street, Room 2112
Carson City, NV 89701

Assemblymember Duy Nguyen
Vice Chair
Assembly Committee on Health and Human
Services
401 South Carson Street, Room 3123
Carson City, NV 89701

Re: In support of establishing and investing in a statewide perinatal quality collaborative

Dear Senator Doñate, Senator Taylor, Assemblymember Brown-May, Assemblymember Nguyen, and members of the Nevada Senate and Assembly Committees on Health and Human Services:

On behalf of the undersigned organizations and our members in Nevada, we write in strong support of the establishment of a perinatal quality collaborative (PQC). PQCs are key tools to improve healthcare for pregnant and postpartum patients and infants, and also reduce healthcare spending in the long term. Additionally, PQCs around the country have continually received bipartisan support. We urge you to introduce and enact legislation during the next legislative session granting authority to the Nevada Department of Human Services to establish a statewide PQC with sustained funding to support multidisciplinary efforts to improve perinatal health outcomes for Nevadan patients and families.

We represent healthcare providers and professionals who care deeply for the health, safety, and well-being of pregnant and postpartum patients and infants. Our members have dedicated their lives to deliver quality, safe, and compassionate care. As such, we are committed to lowering the nation's unacceptably high maternal and infant death rates, as well as eliminating the wide racial and ethnic disparities in health outcomes. The United States ranks behind other high-income countries in maternal mortality rates, including Canada, the United Kingdom, and Japan.¹ According to the World Factbook,

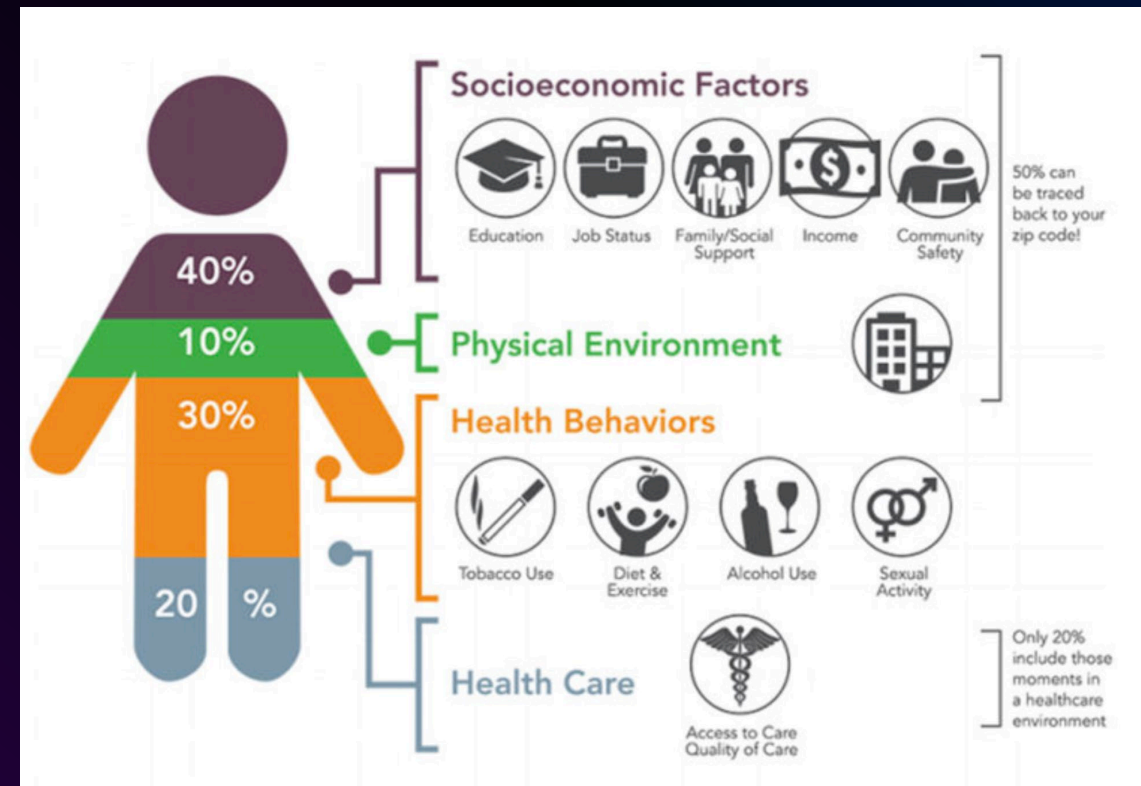
THE HIDDEN CARE CHALLENGE

- Some of the most important impacts in care live in the shadows:
 - Hidden by patients
 - Not discussed by providers
 - With poor alignment with payers



SDOH- SOCIAL DETERMINANTS OF HEALTH

1. SDOH are the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks.
2. They are responsible for 60- 80% of outcomes



MAIN ISSUES

- Access
- Transportation
- Food Insecurity
- Weak Social Support
- Upfront investment in SDOH yield long-term savings in preventing preterm birth, NICU, hospital visits and prolonged admissions

HOUSING INSTABILITY AS AN EXAMPLE

Those with housing instability have:

- 20% higher rates of preterm birth
- 60% higher chance of prolonged hospitalization
- 170% more likely to visit the ER within 3 months of birth

POOR UNDERSTANDING OF THE TRUE MAGNITUDE

- SDOH factors are episodic, sensitive, and not volunteered unless explicitly asked
- Medical coding is optional and based on physician coding
- Screening is inconsistent, non-standardized
- Patients under report without trust or clear benefit
- Health systems separate social and medical data- this prevents population level analysis and hides associations
- Public attention is focused on mortality; morbidity is more common

SOLUTIONS

Establish a statewide prenatal SDOH standard

- 1 or 2 screening tools done at first visit
- Embed into Medicaid managed care contracts

Make Medicaid MCOs the engine

- SDOH screen required in MCO contracts
- Submit the data- Z codes or otherwise
- Close the loop on navigation

Z59.41 — Food insecurity (common due to nutritional needs in pregnancy and links to adverse outcomes like low birth weight).

Z59.00, Z59.01, Z59.02 — Homelessness (unspecified, sheltered, unsheltered; critical for unstable housing affecting prenatal attendance and outcomes).

Z59.1 (or subcodes like Z59.10-Z59.19) — Inadequate housing (e.g., lack of heating, utilities, or space).

Z59.82 — Transportation insecurity (barriers to attending prenatal appointments or accessing emergency care).

Z59.6 — Low income (economic instability affecting ability to afford care, nutrition, or medications).

Z59.7 (or subcodes like Z59.71, Z59.72) — Insufficient social insurance/welfare support or health insurance coverage.

Z60.2 — Problems related to living alone (isolation, lack of support during pregnancy/postpartum).

Z62.819 — Personal history of unspecified abuse in childhood (adverse childhood experiences/ACEs, linked to intergenerational trauma and perinatal risks).

SOLUTIONS

- Central infrastructure to drive uptake
 - Single resource directory that is curated and updated
 - Closed loop referral platform
 - State reporting dashboards

Practices then only do 3 things

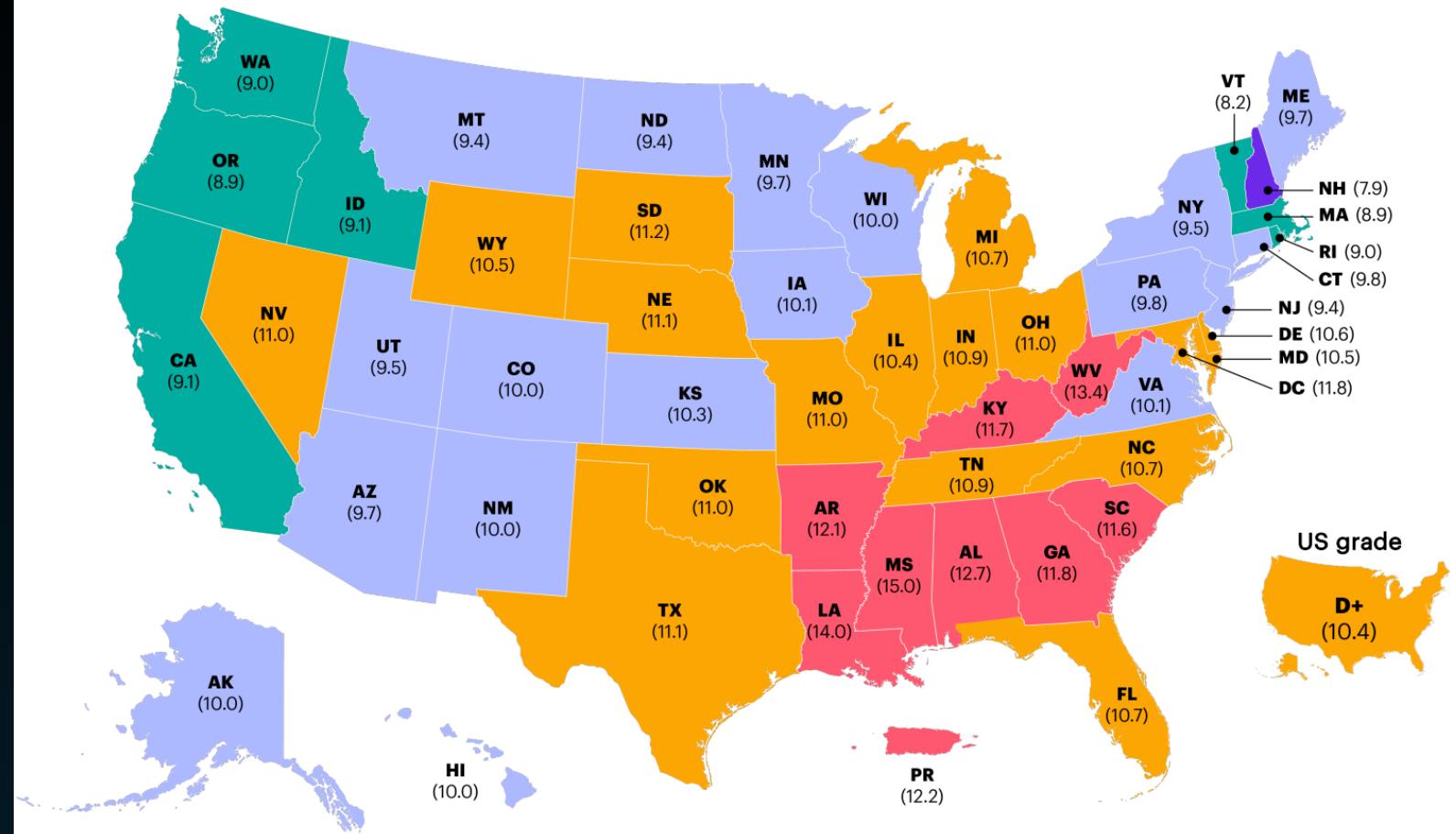
- Screen
- Send e-referral
- Document referral outcome returned by the hub

NOW AND FUTURE

- Right now coding tells us this is a 1-2% problem
- More realistically it is 15-25% problem
- Over 32000 births per year this is a 4800- 8000 deliveries per year problem
- We don't have to think we will solve poverty to do this as savings come from even modest effects
 - - even a $\frac{1}{4}$ to $\frac{1}{2}$ percentage point reduction in preterm birth saves 2-6 million a year from NICU stays

Reduce the Burden of Preterm Birth

Preterm birth rate (born before 37 weeks gestation) and grade by state, 2024



11 states met the Healthy People 2030 target for preterm birth of 9.4% of all live births.

GRADE AND PRETERM BIRTH RATE

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PRETERM BIRTH

PRETERM BIRTH GRADE

D

RATE OF 10.8 PERCENT
TO 11.1 PERCENT

[Learn more](#)

US RATE



NV RATE



NV RANK



3,552 babies were born preterm in Nevada in 2024. Nevada ranks 37th of 52 (includes all states, DC, and Puerto Rico) for preterm birth with a rate of 11.0%.

Nevada is among the top twenty states with the lowest rates of maternal mortality.

Nevada is currently implementing five of six supportive maternal and infant health initiatives included in this year's Report Card.

The preterm birth rate in Nevada was 11.0% in 2024, lower than the rate in 2023

Cascading Effects of Prematurity

Preterm Birth

Neonatal Length of Hospital Stay

NICU Admission/Neonatal Morbidity

Long-Term Health Concerns

Neuro-Behavioral Concerns/
Educational System



BEYOND THE OUTCOMES- PRETERM BIRTH AND ECONOMIC DAMAGE

- Estimated at 34 Billion dollars in the US per year on COLA adjusted data
- NICU day for Medicaid is roughly \$1860 / day (2021 data)
- NICU day cost for commercial insurance is \$3000-\$5000 per day (2021data)

CURRENT SCREENING

Challenging, as risk scoring systems fail to identify 50–60% of pregnancies who deliver preterm

Davey MA, Watson L, Rayner JA, Rowlands S. Risk-scoring systems for predicting preterm birth with the aim of reducing associated adverse outcomes. Cochrane Database Syst Rev 2015; 2015(10): Cd004902.

Ferreira A, Bernardes J, Gonçalves H. Risk Scoring Systems for Preterm Birth and Their Performance: A Systematic Review. J Clin Med 2023; 12(13).



WHAT IF WE COULD REDUCE PRETERM BIRTH

- Reduce NICU admits by 22%
- Reduce preterm births prior to 32 weeks by greater than 50%
- Lessen neonatal morbidity by 20%

RELEASED 1/6/2026

Neonatal impact of maternal biomarker screening for risk of preterm birth with targeted interventions (PRIME): A multicenter, randomized, controlled trial

Brian K. Iriye¹  | John M. O'Brien²  | Christopher S. Ennen³  |
Perry S. Barrilleaux⁴  | Jill A. Berkin⁵  | Anna Palatnik⁶  | Moeun Son⁷  |
Cynthia Gyamfi-Bannerman⁸  | Mollie McDonnold⁹  | Glenn R. Markenson¹⁰  |
Anthony C. Sciscione^{11,12} | Joseph R. Biggio¹³  | Samuel Wolf¹⁴ |
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¹⁵Department of Obstetrics and Gynecology, Inova Health, Fairfax, Virginia, USA

¹⁶Walker Bioscience, Carlsbad, California, USA

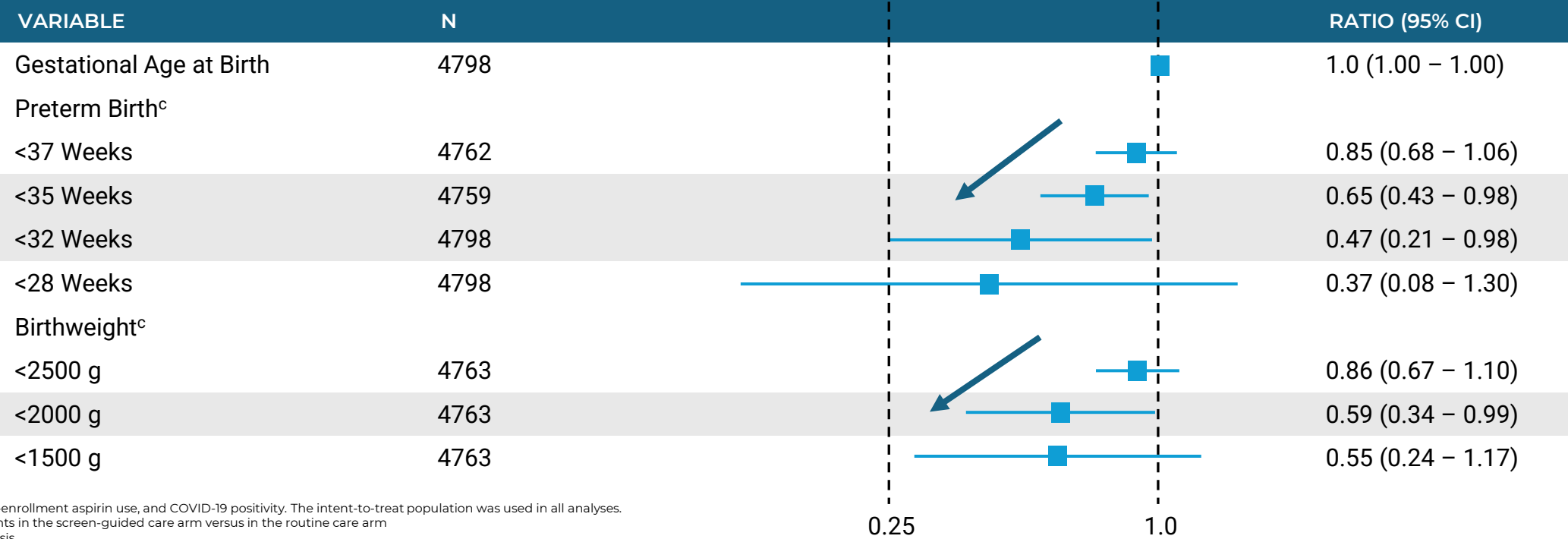
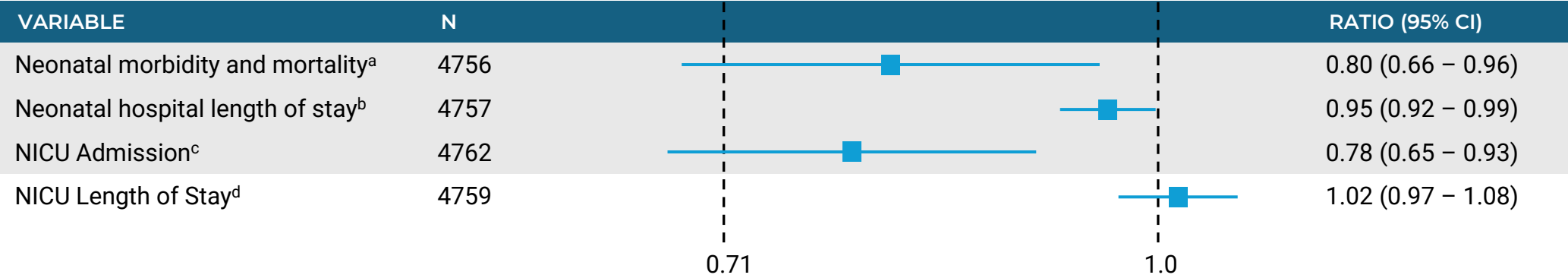
- Recent US trial in 19 centers in the US
- Largest Preterm birth prevention study in the USA in 2-3 decades
- Enrolled 5018 patients
- Stopped early due to efficacy at interim analysis
- Used a blood draw for prediction of preterm birth and a bundle of interventions that were low cost and low risk for people who screened higher risk
 - Low dose ASA
 - Vaginal progesterone
 - Weekly nursing call

PRIME STUDY RESULTS

56% fewer deliveries before 32 weeks

32% fewer deliveries before 35 weeks

Fewer babies born at <2000g



NICU= neonatal intensive care unit
Data were adjusted for covariates parity, pre-enrollment aspirin use, and COVID-19 positivity. The intent-to-treat population was used in all analyses.
Lower ratios denote lower rates of these events in the screen-guided care arm versus in the routine care arm
a Odds ratio; ordinal logistic regression analysis.
b Incidence rate ratio; Poisson regression analysis.
c Odds ratio; logistic regression analysis.

PRIME STUDY

Prevention and Number Needed to Screen (NNS)

	NNS to prevent 1 NICU admission	NNS needed to prevent 1 NICU day
PRIME	38.5	4.2
Vag Progesterone for Short cervical length (current standard of care)	150	

REDUCE THE BURDEN OF PRETERM BIRTH– SAVE MONEY

- Recommend testing all Medicaid patients with the PreTRM test
 - Currently Molina is running a pilot
 - SilverSummit is in final negotiations of running a pilot
 - Have state negotiate with test maker

Cost savings from a universal program, assuming 400 per test and saving 1 NICU day (\$1850/day) for every 4.2 patients screened. Cost savings for Medicaid of \$572,000 per year for the 13,500 patients on Medicaid

Greater savings in long term costs from reduction in neonatal re-admits, neurobehavioral abnormalities, special education.

ANOTHER STATE HAS ALREADY SEEN THIS!!

The screenshot displays the official website of the Illinois General Assembly (ILGA.GOV). The navigation bar at the top includes links for LEGISLATION & LAWS, REPORTS & INQUIRY, RULES & REGULATIONS, SENATE, HOUSE, and a LOG IN button. The main content area is titled "SB3637 - 104th General Assembly". Below the title, there are tabs for Bill Status, Full Text, Votes, Witness Slips, and Printer Friendly Version. The "Bill Status" tab is active, showing the following information:

- PROTEOMIC BLOOD TEST COVERAGE**
- Last Action**
 - 2/05/2026 - Senate: Referred to [Assignments](#)
- Senate Sponsors**
 - Sen. [Kimberly A. Lightford](#)
- Statutes Amended In Order of Appearance**
 - 305 ILCS 5/5-54 new
- Synopsis As Introduced**
 - Amends the Illinois Public Aid Code. Requires the medical assistance program to provide coverage and reimbursement for a prescribed proteomic blood test to identify and manage the risk of spontaneous preterm birth in pregnant persons. Provides that the test results shall be used to assign care management services and other appropriate interventions to manage risk, prolong pregnancy, and improve outcomes.

- Illinois senate introduced a bill for test coverage
- Amends the Illinois Public Aid Code. Requires the medical assistance program to provide coverage and reimbursement for a prescribed proteomic blood test to identify and manage the risk of spontaneous preterm birth in pregnant persons. Provides that the test results shall be used to assign care management services and other appropriate interventions to manage risk, prolong pregnancy, and improve outcomes.

Regionalize Neonatal Care (and Maternal care)

- Clark County has **9** hospitals that have a labor and delivery . **All 9 have Level 3 NICU Units**- This is WAY TOO MANY and can have deleterious effects from weakening staff experience and other factors
- Hospitals treating **<100 VLBW babies** have significantly higher mortality rates. Low volume centers have an increase in mortality odds 5.4 times higher than high volume centers (Only 2 hospitals in NV do > 100 VLBW NICU admits- Sunrise and Renown)
- **1 of 20 babies dies unnecessarily in low volume centers**
- Also having more NICUs increases costly NICU admissions as the number of NICU admissions increases with the number of beds

REGIONALIZE MATERNAL AND NEONATAL CARE

- **There were only 445 VLBW births in ALL OF NEVADA in 2023**
- **340 of these were in clark county split among 9 level 3 NICUs or an average of 42 per unit (well under safety averages). Let's say Sunrise did only 100. That would be an average of 30 per unit in the other 8 remaining NICU's**
- Hospitals in the highest 20 percent of VLBW mortality tend to stay there the lowest 20 percent also account for higher variability in outcome
- NV has shortages of OB physicians, and this spreads them out and provides more serious problems in maternal care as well.

WHY DO WE HAVE SO MANY LEVEL 3 NICU'S?

- **They are profit makers-** The NICU is generally the 2nd or 3rd most profitable center in a hospital
- Under NRS 439A.100 there is a “certificate of need like” process but this has been watered down and only requires a letter of approval
- Under senate bill 494 this has now been transitioned to the Nevada Health Authority
- Also all level 3 NICUs are not the same, some do **little or no pediatric surgery. Many pediatric subspecialties are not at most of these low volume level 3 NICUs** and that worsens care or leads to transport.

“IMPORTANTLY, THERE IS NO EVIDENCE THAT HIGHER NICU AVAILABILITY IN RECENT YEARS HAS LED TO NEWBORN BENEFIT AT A POPULATION LEVEL, POSSIBLY BECAUSE THE HIGHER USE OF NICUS HAS OCCURRED PRIMARILY IN NEWBORNS OF LOWER ACUITY”

Davis R, Stuchlik PM, Goodman DC. The Relationship Between Regional Growth in Neonatal Intensive Care Capacity and Perinatal Risk. Med Care. 2023 Nov 1;61(11):729-736. doi: 10.1097/MLR.0000000000001893. Epub 2023 Jul 14. PMID: 37449856; PMCID: PMC10564047.

THE PUSH BACK TO REGIONALIZATION

- Option 1- tie a minimum volume of VLBW infants (50-100) to maintain level 3 certification or be downgraded to a level 2 or reduced level 3 sub tier (California model)
 - Those non-high-volume Level 3 NCUs have a reduced payment rate as they are often not full-service Level 3 centers. This would result in low-volume operations that are unsustainable as profit centers.
 - Make level 3 NICUs also meet certification for level 3 maternal level of care designation to improve care for moms.
 - 6 states have explicit level 3 volume requirements in the US
 - Recognize level 4 NICUs with only 1 per county and increased payments for NICU stay. Must also certify for maternal level of care at the equivalent level

THE PUSH BACK TO REGIONALIZATION

- Option 2- Establish tiers via state regulation. Mandate DHCFP to certify tiers
 - **Level 3 regional** (full surgery, pediatric subspecialties, and high volume) vs **Level 3 community** (no or limited surgical cases and/or < 50-100 VLBW cases/yr). This is equivalent of a California model.
 - Adjust payments for regional level 3s to boost per diem by 20% for surgery and staffing. Reduce fees for lower level 3 “lite” with reduced fees by 20-25%
 - Tie payments to VLBW volumes with a lack of minimal volumes leading to loss of reimbursement boosts

THE PUSH BACK TO REGIONALIZATION

- This would reduce the nine Level III NICUs in Clark County to approximately 3-4 high-volume units, reducing preventable deaths by 20-30%.
- This would also cut unnecessary payments for the “level 3 light” care by 1-2 million dollars/year
- This market-driven approach avoids forced closures, aligns with Nevada's limited CON, and prioritizes outcomes over profits.
- It would also save lives and prevent morbidity in children

THE PUSH FOR REGIONALIZATION

- Research shows that regionalization- concentrating complex care in fewer centers- dramatically reduces neonatal morbidity and mortality. For example, care and high volume level 3 and 4 NICUs are associated with 30-50% less mortality for VLBW infants
- It's also not just lives but also dollars. What does regionalization do:
 - Corrects resource distribution and coordinates pediatric subspecialties
 - Yields economic benefits that surpass costs
 - Shifting to regionalization could easily save 5-6 million annually by reducing unnecessary admissions and overpayments to low-capability units and long-term disabilities
 - 40 states have a system of risk appropriate care- ACOG, AAP and the March of Dimes have jointly recommended regionalized systems of perinatal care ²
 - Due to financing, “Medicaid is a key partner in the financing of perinatal regionalization”²

2. https://nichq.org/wp-content/uploads/2024/09/Medicaid_Funding_Opportunities_in_Support_of_Perinatal_Regionalization_Systems.pdf

ROI OF REGIONALIZATION

- **Medicaid NICU spend- Assumption of 50% of NICU admits (probably more)**
 - Spend of 80-85 million per year
- **Results in Utilization and efficiency improvements: fewer avoidable NICU admits through improved standards, reduced NICU length of stay**
 - Avoided NICU admissions + shorter LOS
 - **Savings: –\$12.0M to –\$13.5M**
- **Targeted payment realignment- incremental cost increase of 7 million**
 - +20% payment for high-volume, full-service Level III NICUs
 - –15% payment for low-volume, non-full-service Level III NICUs
 - Assumes majority of Medicaid NICU days shift to high-volume centers
- **Financial impact PLUS Improved Outcomes**
 - Savings of 12.-13.5 million, reinvestment of 7 million= **COST savings of 5-6.5 million yearly in Clark County**

SUPPORT



- I have received multiple phone calls and in person support:
 - Pediatric Surgeons
 - Pediatric Cardiologists
 - Payers/Health care systems
 - OBGYNs
 - Competing MFM groups

HOW THESE SOLUTIONS FIT TOGETHER

- PQCs
 - Improves maternal and neonatal care
 - Reduces variation in care to reduce disparities
 - Provides data for future improvement and education
- SDOH screening and centralized referral system
 - Provides knowledge of problem depth
 - Improves access and reduces disparities
 - Decreases preterm birth and maternal and neonatal morbidity and mortality

HOW THESE SOLUTIONS FIT TOGETHER

- Biomarker Screening
 - Reduces preterm birth which hits marginalized communities most
 - Reduces NICU admits and long term disparities
- Regionalize NICUs
 - Reduce unnecessary neonatal morbidity and mortality
 - Reduces costs and the use on a level 3 NICU as a cost center

**ALL OF THE OPTIONS PRESENTED PROVIDE IMPROVED OUTCOMES
AND REDUCE COST– THEY ALL HAVE AN ROI**

ACCESS AND OB GYN PHYSICIAN SHORTAGE

- Nevada Ranks 46th in the US in OBGYNs per population
- Rural areas more affected
- Low number of residency slots in compared to other states
- Few rural maternity units, expanded maternity care deserts, longer travel distances for prenatal care, worse early access
- First trimester initiation of prenatal care: NV 76.8%
- Inadequate Prenatal care: NV 16.5%
- **Medicaid payments stifile access**

DOULA OUTCOMES

Generally associated with some decreases in cesarean delivery and improvement most in black populations

However recent meta-analysis while stating the above also states:

The quality of contributing studies was generally low, and the wide CIs for outcomes such as cesarean delivery in RCTs conducted in the United States suggest that some of our findings may be prone to a type 2 error. Finally, it is possible that a reduction in cesarean delivery rates may be accompanied by an increase in complications such as chorioamnionitis, hemorrhage, lacerations, and hypoxic ischemic encephalopathy.

DOULA SUPPORT

Cochrane Review: Subgroup analyses should be interpreted with caution, and considered as exploratory and hypothesis-generating, but evidence suggests continuous support with certain provider characteristics, in settings where **epidural analgesia was not routinely available**, in settings where **women were not permitted to have companions of their choosing in labour**, and in **middle-income country settings**, may have a favourable impact on outcomes such as caesarean birth.

THE PAYMENT SYSTEM EXACERBATES ACCESS ISSUES

Doula Requirements

- No malpractice
- Minimal office personnel
- No costly equipment
- No college education required
- Recognized certification process- 20-60 hours of core instruction with training and practical requirements spanning 3-12 months
- **900 dollars for delivery**
- **100 dollars per visit up to 1500 max**

OB/GYN provider requirements

- Office space
- Personnel
- Contracting/credentialing
- Malpractice
- Equipment / computers systems, EMR,
- 4 years college, 4 years med school , 4 years of residency
- **Overall payment for vaginal delivery- \$882**
- **Overall with 9 mos prenatal care, delivery and PP with 24/7/365 call responsibility, \$2200**

VALUE BASED CARE

One of the few MFMs in US to have a value-based agreement with shared savings

Was one of a group of 5 MFMs in the US to review the 2027 ACOG change in payment guidelines

Formerly on ACOG Committee on Health Economics

Editor of the Practice Management book for the SMFM, led the practice management division for 7 years

Given lectures and working groups for the SMFM on VBC and quality

Led SMFM survey on VBC arrangements and outcomes

Led the SMFM, ACOG, NICHD quality metrics workshop



VALUE BASED PAYMENT

- Opportunity and Risks
 - Taking a step towards value based payment is an important step
 - Maternal and infant care is an appropriate area of focus
 - However, pregnancy differs from most medical episodes
 - 2 patients
 - Long episode – 9 months + 12 months PP
 - Poor current access

VALUE BASED PAYMENT- NV ROADMAP

- Focus on maternal infant health is aspirational and important
- Recognizes the current fragmented care, need for multi-payer alignment and need for integrated behavioral health
- Concentration on 3 types of metrics: structural, process, and outcome metrics
- These are strong foundations for possible change

PREGNANCY IS A LONG AND DYNAMIC EPISODE

- Gestational diabetes
- Preeclampsia
- Preterm labor- 50-60% of cases not predicted by current paid screening methods
- Behavioral health changes
- Problem is most value-based models don't account for evolving risk

PREGNANCY IS A TWO-PATIENT CONDITION

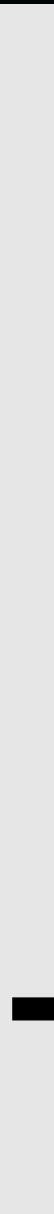
- It is often forgotten that the effect of pregnancy treatments is for 2 patients and one with a long effect on quality of life with an infant
- Neonatal outcomes drive many major costs
- NICU admissions often exceed and many times by large multiples of the prenatal care episode
- Value based models must measure neonatal outcomes and NICU utilization

NEED FOR RISK ADJUSTMENT

- Maternal and neonatal outcomes are influenced by:
 - SDOH
 - Chronic disease/obesity
 - Substance exposure
 - Parity
 - Access
- Providers caring for higher risk populations may appear to perform worse and if rewards or punishments are given, this may harm access by disincentivizing care for those that need it most
- Risk adjustment must be central to maternity value models if they are outcome based
- Bundled payments are problems to those who have more risk and need more services

VALUE BASED PAYMENT- POSSIBLE CONSIDERATIONS

- None of the payers know how to do this well
- Consider case rates for maternal-neonatal care with risk corridors based upon utilization
- Have conditions that are complex as bundle breakers for the episode, if bundling care for providers- I would strongly argue against
- Collect data for risk adjustment and payment adjustments
- Have increased payments for rural and high-risk low-access areas
- Look at important structural and process measures rather than outcomes early, as they can lead to better care without the need for risk adjustment



65



NICU Hospital Capacity & Supply Sensitivity and Increased Utilization

- Goodman DC, et al. *Hospital-Level NICU Capacity, Utilization, and 30-Day Outcomes*. JAMA Network Open; 2024. Shows that hospitals with **higher NICU bed supply had increased NICU admissions** for late-preterm and term infants, *without lower mortality or adverse events*. ([PMC](#))
- Freedman S. *Intensive Care Supply and Admission Decisions* (SSRN/Elsevier). Finds that a **30% increase in NICU beds was associated with higher NICU admission rates**, especially among healthier newborns. ([PubMed](#))

Significant Variation Across Regions & Hospitals for NICU Use

- Harrison WN, et al. *Regional Variation in Neonatal Intensive Care Admissions...* (Sci. Direct; 2018). Demonstrates **wide regional variation in NICU admission rates** across birthweight categories and that **greater bed supply correlates with higher admissions for larger infants.** ([sciencedirect.com](https://www.sciencedirect.com))
- Haidari ES, Lee HC, Illuzzi JL, et al. *Hospital variation in admissions to neonatal intensive care units by diagnosis severity* (J Perinatol, 2021). Shows **high interhospital variation** in NICU admissions, especially for infants with mild diagnoses, suggesting **possible overuse.** ([cpqcc.org](https://www.cpqcc.org))

Poor NICU Trends & Overutilization Growth

- **CDC National Vital Statistics Report** (“Number 525”, 2025): Documents that the overall percentage of infants admitted to NICUs in the U.S. **rose from 8.7% in 2016 to 9.8% in 2023**, including increases across gestational age and birthweight groups. ([CDC](#))
- • • Health Care Cost Institute (HCCI) analysis (2023): Shows **NICU use and spending increased** between 2017 and 2021, with average NICU admission costs over \$70,000 and wide variation in length of stay. ([Health Care Cost Institute](#))

NICU Growth and Lack of Need

- Dartmouth Institute/Lown Institute analysis (2019): Reports that **NICU bed supply increased by ~69% from 1995–2013** with **no clear alignment to regional need**, implicating supply-induced utilization. ([Lown Institute](#))

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- Centers for Disease Control and Prevention, National Center for Health Statistics. Neonatal intensive care unit admissions in the United States, 2016–2023. NCHS Data Brief. 2025;(525):1-8.
- American Academy of Pediatrics Committee on Fetus and Newborn. Levels of neonatal care. Pediatrics. 2012;130(3):587-597.
- Health Care Cost Institute. NICU use and spending in the commercially insured population, 2017–2021. HCCI; 2023.