The Role for Medicaid in Reducing Low-Risk Cesarean Delivery
Improving Outcomes and Reducing Disparities

March 31, 2022

Doris Lotz and Kate Nilles, Mathematica
Kristen Zycherman, CMS
Mary Applegate, Ohio Department of Medicaid
Elliot Main, California Maternal Quality Care Collaborative
How to Submit a Question

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• For technical questions, select “Host” in the “Ask” menu
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Objectives

• Provide an overview of CMS’s Maternal and Infant Health Initiative
• Describe the Improving Maternal Health by Reducing Low-Risk Cesarean Delivery (LRCD) Learning Collaborative
• Discuss the importance of reducing LRCDs for Medicaid and CHIP beneficiaries to improve maternal and infant health outcomes
• Review the variation and disparities in LRCD in Medicaid and CHIP
• Understand state Medicaid and CHIP program levers to reduce LRCD rates
Overview
Maternal and Infant Health Initiative
and
Improving Maternal Health by Reducing Low-Risk Cesarean Delivery
Learning Collaborative

Kristen Zycherman, CMS
Maternal and Infant Health Initiative

• Maternal and Infant Health Initiative (MIHI) launched to improve access to and quality of care for pregnant and postpartum persons and their infants.

• The Centers for Medicaid and Medicare (CMS) convened an MIH expert workgroup in 2019-2020 to provide updated recommendations about where Medicaid and CHIP can influence change in maternal and infant health.

• Three MIHI focus areas
  – Increase the use and quality of postpartum care visits
  – Increase the use and quality of infant well-child visits
  – Reduce the rate of low-risk cesarean delivery (LRCD)
Focus Areas to Improve Maternal and Infant Health Quality

**Focus Areas**

- Strategies to decrease cesarean births for women with low-risk pregnancies
- Strategies to increase use and quality of postpartum care
- Strategies to increase use and quality of well-child visits

**Maternal Outcomes**

Primary aims: Eliminate preventable maternal mortality, SMM, and inequities

- Increased depression screening and increased breastfeeding competence
- Decreased severe maternal morbidity
- Decreased postpartum complications
- Increased access to contraceptive care, better management of chronic diseases and behavioral health issues, increased connection to ongoing care

**Infant Outcomes**

Primary aims: Reduce infant mortality and eliminate inequities in infant mortality rates

- Fewer NICU admissions
- Increased immunizations, increased breastfeeding, fewer injury related ED visits, safer sleep practices, and increased parent knowledge on injury prevention

**Labor and delivery**

- Postpartum
- Interpregnancy
- Subsequent pregnancy

- Overall woman's health status

- Improved birth spacing, early initiation of prenatal care, healthy women at start of possible subsequent pregnancy
- Lower risk for C-section delivery on possible subsequent pregnancy
- Healthier women at start of possible subsequent pregnancy, early initiation of prenatal care
- Healthy possible subsequent birth

C-section = cesarean section; ED = emergency department; NICU = neonatal intensive care unit; SMM = severe maternal morbidity
• **Webinar 1**: The Role of Medicaid in Reducing Low-Risk Cesarean Delivery: Improving Outcomes and Reducing Disparities

• **Webinar 2**: State Medicaid and CHIP Agencies and Obstetrical Partners: Working Together to Reduce Low-Risk Cesarean Deliveries

• **Webinar 3**: Using Data to Plan and Assess Quality Improvement Strategies to Reduce Low-Risk Cesarean Delivery in Medicaid and CHIP

• **Informational Webinar**: Improving Maternal Health by Reducing Low-Risk Cesarean Delivery Affinity Group Overview and Expression of Interest Process
Improving Maternal Health by Reducing Low-Risk Cesarean Delivery Affinity Group

• Action-oriented affinity group that will support state Medicaid and CHIP programs and their partners in identifying, testing, and implementing evidence-based change ideas for reducing the number of LRCDs and improving maternal health care.

• Opportunity for states to expand their knowledge of policies, programs, and practices to reduce LRCD rates and advance their knowledge of and skills in quality improvement and address inequities

Why Focus on Low-Risk Cesarean Delivery?

Doris Lotz, Mathematica
Reducing Low-Risk Cesarean Delivery (LRCD)

• Cesarean delivery poses greater risk of maternal morbidity and mortality for low-risk pregnancies.
  – Low-risk cesarean delivery is defined as Nulliparous (first birth), Term (37 or more weeks), Singleton (one fetus), and Vertex/cephalic (head-first) births delivered by cesarean.

• Healthy People 2030 goal for LRCD rate is 23.6%. The 2019 rate for LRCD in the United States was 25.6%.¹

• LRCD rate disparities between Black and White birthing persons, 30.6% and 24.7%, respectively.²

• Medicaid covers 42.0% of all births in the United States.
  – CMS and states have an opportunity to reduce LRCD births in Medicaid and CHIP and improve maternal and infant health outcomes.

Low-Risk Cesarean Delivery Rates, U.S. 2010-2020

Percentage of Low-Risk Cesarean Delivery by Race, U.S. 2020

<table>
<thead>
<tr>
<th>Race/Origin</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>All races and origins</td>
<td>25.9</td>
</tr>
<tr>
<td>White</td>
<td>24.9</td>
</tr>
<tr>
<td>Black</td>
<td>30.6</td>
</tr>
<tr>
<td>American Indian or Alaska Native</td>
<td>23.6</td>
</tr>
<tr>
<td>Asian</td>
<td>27.7</td>
</tr>
<tr>
<td>Native Hawaiian or Other Pacific Islander</td>
<td>29.2</td>
</tr>
<tr>
<td>Hispanic</td>
<td>25.1</td>
</tr>
</tbody>
</table>

Low-Risk Cesarean Delivery Rate per 100 Deliveries, by State: Births Paid by Medicaid, 2018

Notes:
The low-risk cesarean delivery rate is calculated for singleton, term, cephalic deliveries to women having a first birth. Using this definition, 32% of all births in 2018 were low-risk. There is not a separate option for CHIP on the U.S. standard birth certificate. “Medicaid” may include CHIP beneficiaries. Births with delivery method unknown (<1% of births) are excluded.

Source:
National Center for Health Statistics (NCHS). 2018 Natality Public Use Data on CDC WONDER online database.

Available at:
https://wonder.cdc.gov/
Improving Maternal Health Using Population Health Strategies

Mary Applegate, MD, FAAP, FACP
Medical Director
Ohio Department of Medicaid

March 31, 2022
The Next Generation of Managed Care: Beyond Payment

Simplified “Stairstep” Framework for Population Health Management

- Develop System
- Get/Keep Individuals in the System
- Identify Higher Risk (sub) Populations
- Provide Best-evidenced Care or Enhanced Services
- Maintain and Support Lifecourse Continuity
Why is Improving Health Outcomes SO Difficult?

Crises: events, projects

Trends & Patterns: time series run charts, statistical analysis, trials

System Structure:
pattern of interrelationship among key components:
hierarchy, process flows, mental models, program, alignment of Public Health, Medicaid, and Clinical Systems

Drivers of birth & other inequalities
* Racism
* Poverty
* Education
* Environment

Leverage for Improvement

Change: Organizations need structures, processes, & cultures that support desired outcomes
Ohio’s Maternal and Infant Support Program (MISP)

Coordinating Policy, Process and Practice

*Integrating evidence-based and evidence-informed services within the healthcare system in conjunction with Governor DeWine’s Task Force*
Key Infant Mortality Community Learnings

In communities with Medicaid-funded CBOs, women have expressed the following key barriers to improved health outcomes:

- Lack of Trust of the Health Care System
- Lack of Provider Empathy
- Lack of Effective Communication from Providers
- Lack of Social Supports
- Lack of Community Resources
- Lack of Medicaid Coverage of Alternative Providers and Services
Ohio’s Maternal and Infant Support Program (MISP)

**Complete**
- Pregnancy Risk Assessment Form/Report of Pregnancy
- Group Pregnancy Education and Group Prenatal Care
- Nurse Home Visiting
- Lactation Consulting and Breastfeeding

**In process**
- 12 months postpartum eligibility
- **Comprehensive Maternal Care**
- Renewal of Ohio Equity Institute Infant Mortality Grants

**This biennium**
- Lactation consultants
- Doulas
- Mom and baby dyad
- Welcome Home visits
Comprehensive Maternal Care (CMC) is designed for customized, high-quality, continuous and comprehensive equitable care.

- Give women and their families the clinical and community supports they need to improve outcomes, while helping them build a longitudinal trusting relationship within the healthcare system.

- Deliver person-centered, customizable interventions to women and babies by creating a framework for providers and community partners to work together.

- Improved maternal and infant outcomes
- Improved provider cultural competency
- Improved patient experience
- Improved cross-system collaboration
Patient Journey

Patient Identification

“No Wrong Door”
- Notification of Pregnancy or PRAF
- OBs, Hospitals, FQHCs, Emergency Department, PCPs, etc.

Risk Tiering and Attribution

- Informed Consent
- PRAF completed, if applicable
- Provider identifies MISP options based on patient risk assessment and provides choice to woman
- Linkage to selected partnering entities
- Can be performed at any prenatal appointment

Planning and Engagement

- Completed by Ohio Department of Medicaid
- Algorithm defined by state based on claims, vital stats, PRAF data, etc.
- Determine risk tiering for each woman
- Attribute to provider based on algorithm defined by the state

Continuous Eligibility

Team-Based Care

- Provider coordinates ongoing health care and community supports
- Uses a family-centered approach to deliver customized interventions to the patient and her family
- Routine, planned multidirectional communication with the team, including the patient, OB, PCP, and pediatrician

Routine Source of Primary Care

Postpartum Care
Components of CMC Model

- CMC Enrollment
- Patient Attribution
- Population Health Activities
- Outcome Reporting and Monitoring
- Per Member Payments and Performance Incentives
Proposed Comprehensive Maternity Care Measures

- Postpartum Care
- HIV Screening
- Hepatitis B Screening
- Tdap Vaccination
- Tobacco Cessation
- Primary Care Visits for Mother
- Prenatal Visits by Nine Weeks Gestation
- Breastfeeding
- Preterm Birth
- Percentage of Low Birthweight Births

- **NTSV: Low Risk Cesarean Delivery Rate**
  - Dental Visit
  - Infant Well Care Visit
  - Flu Vaccination
  - Maternal Depression Screening
  - WIC Enrollment

- Disparities in all of the above
NTSV Cesarean Birth Rate

The percentage of nulliparous, full-term (37-42 weeks), singleton, vertex-presenting deliveries of live births that were cesarean births

- **Anchor Date:** Date of Delivery
- **Payment Status:** Information only for year one
- **Denominator:** Members who were attributed to a CMC provider for at least six months during their pregnancy (need not be continuous), whose pregnancy resulted in a live birth (birth records), and whose pregnancy and delivery meet the following additional criteria:
  - are nulliparous (birth records, using the fields PLBL and PLBD)
  - delivery is between 37 and 42 weeks
  - singleton births (birth records, using the field PLUR)
  - vertex presentation – exclude cases with a non-vertex presentation diagnosis (**Non-Vertex Presentation**)
- **Numerator:** Number of women with a Cesarean section (value set **Cesarean Section**) or with delivery method ‘primary cesarean section’ according to birth records (using the field DelMethodCD).
- **Data Sources:** Medicaid administrative data linked to Vital Statistics Birth records.
- **Measurement Period:** Rolling 12-month measurement period updated on a quarterly basis, based on the latest accurate data available. The date of delivery must occur in the measurement period for inclusion in this measure.
- **Measure Steward:** CMC-specific measure
C-section Rates in Perinatal Episodes

- ~61-70k episodes per calendar year, 2017-2020
- Average c-section rate across all risk groups ~31.5-32.5%

Percent of Total Births
- ~1%
- ~8%
- ~91%

C-Section Percent of Births
- ~60-63%
- ~42-46%
- ~30-31%
Ohio’s Next Generation of Managed Care

• Low Risk Cesarean Delivery is part of a suite of markers for Quality.

• The primary locus of influence is within hospitals.
  • (hospital associations, perinatal quality collaboratives)

• Medicaid programs can have some influence through:
  • Payment (Vaginal=Cesarean delivery rates)
  • Value-based models of care such as CMC; hospital contracting
  • Expanded workforce: more family physicians, midwives, doulas
  • Opportunities related to alternative birthing units that prioritize the birthing experience for mothers from minority communities
  • Support for perinatal quality improvement efforts
    • (PQCs, LCs, PIPs, population health management/equity approaches)
California / CMQCC’s Initiative to Support Vaginal Births and Reduce Low-Risk Cesarean Deliveries

Elliott K. Main, MD
Medical Director
California Maternal Quality Care Collaborative
Clinical Professor, Department of Ob/Gyn
Stanford University School of Medicine
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United States Overall (Total) and NTSV Cesarean Rates: 1990-2013

- 50% rise in cesarean section (CS) rates over a 10 year period
- Cesarean deliveries account for 1/3 US births and are the most common hospital surgery

Osterman M et al, NVSR vol 63, num 6, Nov 2014
QUALITY OF CARE

By Katy Backes Kozhimannil, Michael R. Law, and Beth A. Virnig

Cesarean Delivery Rates Vary Tenfold Among US Hospitals; Reducing Variation May Address Quality And Cost Issues

ABSTRACT Cesarean delivery is the most commonly performed surgical procedure in the United States, and cesarean rates are increasing. Working with 2009 data from 593 US hospitals nationwide, we found that cesarean rates varied tenfold across hospitals, from 7.1 percent to 69.9 percent. Even for women with lower-risk pregnancies, in which more limited variation might be expected, cesarean rates varied fifteenfold, from 2.4 percent to 36.5 percent. Thus, vast differences in practice patterns are likely to be driving the costly overuse of cesarean delivery in many US hospitals. Because Medicaid pays for nearly half of US births, government efforts to decrease variation are warranted. We focus on four promising directions for reducing these variations, including better coordinating maternity care, collecting and measuring more data, tying Medicaid payment to quality improvement, and enhancing patient-centered decision making through public reporting.
Major Maternal Complications: Vaginal Births versus Primary Cesareans, Repeat Cesareans, and VBAC

Figure 1. Maternal morbidity, by method of delivery and previous cesarean history: 41-state and District of Columbia reporting area, 2013

1Difference in rates between primary cesarean and VBAC is not statistically significant.
NOTES: The birth certificate reporting area represented 90% of all U.S. births in 2013. ICU is intensive care unit.
https://www.cdc.gov/nchs/data/nvsr/nvsr64/nvsr64_04.pdf
Importance of the First Labor and Birth

If a woman has a Cesarean birth in the first labor, over 90% of ALL subsequent births will be Cesarean births.

A classic example of path dependency

If a woman has a vaginal birth in the first labor, over 90% of ALL subsequent births will be vaginal births.
Low-risk Cesarean Delivery Rate
aka Nulliparous, Term, Singleton, Vertex (NTSV)

- Risk Stratified ("standard population")
  - No further risk-adjustment needed
- Widely adopted nationally
  - HHS: Healthy People 2010, 2020, 2030 (Low-risk First-birth CS)
  - NQF endorsed, The Joint Commission (TJC) Perinatal Core Measure (PC-02), CMS Child Core Set Measure Set, LeapFrog, US News & World Report
- >20 years experience
- National data and trends available (annual National Center for Health Statistics)
- States can use birth certificate data and come within 0.1-0.2% of TJC PC-02
Variation in NTSV Cesarean Rate among CA Hospitals (2015)

All CA hospitals with 2015 NTSV rates >23.9% were invited to join the CMQCC Collaborative: 56 enlisted (shown in red)
KEY RESOURCES:

1) Labor support techniques
2) Active phase guidelines
3) CS rate transparency (unit and provider)
4) Latent phase guidelines
5) Induction guidelines
6) Techniques to reduce occiput posterior (face up fetal presentation)
7) Patient engagement
8) Unit culture/teamwork
9) Longer 2nd Stage

(COMMUN QI ACTIVITES: (in approximate order of use))
Early results in these 56 hospitals showed promising reductions and safety!

All balancing (safety) metrics showed no harm from lowering the NTSV cesarean delivery rate.

In fact, baby outcomes were better!
Hospital level variation is dramatic for all OB metrics
- In 2014, hospital variation was extreme: 14% to 70%
- In 2020, variation still present but much more limited

Distribution of NTSV Cesarean Rate Among California Hospitals

-- Comparison of 2014 to 2019, 226 Hospitals --

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<th>Statistics</th>
<th>Non-Parametric Test</th>
<th>Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paired t-test (equality of means)</td>
<td>$P = 0.03$</td>
<td>Difference in medians</td>
<td>2.9, 95% CI: 1.6-4.1</td>
</tr>
<tr>
<td>Pitman’s test (equality of variances)</td>
<td>$P &lt; 0.01$</td>
<td>Difference in IQR</td>
<td>2.8, 95% CI: 1.2-4.3</td>
</tr>
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This Project Meets All 3 Goals of a large-scale QI Initiative:

- Significant reduction in mean CS rates
- Significant reduction in variation (narrowing of the distribution curves)
- Reduction of outliers (hospitals with rates >30%)
Recognition

- CalHospitalCompare.org
- Yelp
- Joint Commission Measure
- Yearly Recognition by the CA Secretary of HHS for Hospitals With NTSV CS Rates <23.9%
Health Plan and Purchaser Engagement

- SmartCare California
  - Consortium of purchasers and payers developed engagement strategies

- Covered California (Affordable Care Act purchasing organization)
  - Pushed Health Plans to contract with hospitals meeting target or engaged with collaborative

- Some Commercial and Managed Medicaid Health Plans added NTSV CS to their quality incentive program

- Medicaid (Medi-Cal) structured their CMS 1115 Waiver program to include incentives for safety net hospitals to meet NTSV target

- Beginning in 2022 all California Medicaid MCOs will report their NTSV CS rates
**U.S. Cesarean Birth Rates by Race (NCHS-NVR Report)**

- Until 1995 Black women had lower Cesarean rates than White women
- The Black:White Cesarean rate disparity is actually worsening since 2010

**NTSV Cesarean Birth Rates by Race and Ethnicity Adjusted for Age and BMI**

- All races demonstrated significant improvement
- Black mothers decreased more than others, narrowing the difference
- Can standardized care reduce the subjectivity (and bias) in labor decisions?
123 hospitals with at least 10 Black NTSV births

Similar shift in distribution from 2015 to 2019

Note the large number of hospitals that met the HP2020 target for their Black population
Reducing Low Risk Cesarean Deliveries Can be Done: 4 Lessons

- “Don’t try this alone”…collect as many partner organizations as possible
- Good and timely data is critical
- Co-lead with an experienced OB QI organization to help lead change (e.g., state perinatal quality collaborative)
- Pull every lever…
Questions

Doris Lotz, Mathematica
Reminder: How to Submit a Question

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  – Only the presentation team will be able to see your comments
Announcements and Next Steps

Kate Nilles, Mathematica
Announcements and Next Steps

• Webinar recording and slides will be posted on Medicaid.gov at
  https://www.medicaid.gov/medicaid/quality-of-care/improvement-initiatives/maternal-infant-health-
  care-quality/index.html

• Upcoming webinars
  – State Medicaid and CHIP Agencies and Obstetrical Partners: Working Together to Reduce Low-Risk Cesarean Deliveries: TBD
  – Using Data to Plan and Assess Quality Improvement Strategies to Reduce Low-Risk Cesarean Delivery in Medicaid and CHIP: TBD

• Register for additional webinars at
  https://mathematica.webex.com/mathematica/onstage/g.php?PRID=b8c2078478d3be51928f2d528cb7a26c
Resources


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• Please complete the evaluation as you exit the webinar.

• If you have any questions, or we didn’t have time to get to your question, please email MACQualityImprovement@mathematica-mpr.com