

Perinatal & Women's Health Committee Strategic Web Meeting

Suzanne Theberge Robyn Y. Nishimi Navya Kumar

March 15, 2019

Welcome

Agenda

- Welcome and Introductions
- Results of the CMMI Strong Start for Women and Babies Initiative
 - Emily Johnston, PhD
- The Adverse Outcome Index Composite Measure
 Janet Muri, MBA, and Susan Mann, MD
- Perinatal Measure Development Experiences
 Sepheen Byron, MHS, and Lindsey Roth, MPP
- Perinatal Care Measure Development and Transition to eCQMs
 - Susan Yendro, RN, MSN, and Lisa Anderson, MSN, RN-BC
- NQF Member and Public Comment
- Next Steps
- Adjourn

Project Team

- Suzanne Theberge, MPH, Senior Project Manager
- Robyn Y. Nishimi, PhD, Senior Consultant
- Navya Kumar, MPH, Project Analyst

Perinatal & Women's Health Standing Committee

- Kimberly Gregory, MD, MPH (Co-Chair)
- Carol Sakala, PhD, MSPH (Co-Chair)
- Jill Arnold
- J. Matthew Austin, PhD
- Jennifer Bailit, MD, MPH
- Amy Bell, DNP, RNC-OB, NEA-BC, CPHQ
- Martha Carter, DHSc, MBA, APRN, CNM
- Tracy Flanagan, MD
- Ashley Hirai, PhD
- Mambarambath Jaleel, MD
- Diana Jolles, CNM, MS, PhD (c)
- Deborah Kilday, MSN, RN

- Sarah McNeil, MD
- Jennifer Moore, PhD, RN
- Kristi Nelson, MBA, BSN
- Juliet M Nevins, MD, MPA
- Sheila Owens-Collins, MD, MPH, MBA
- Cynthia Pellegrini
- Diana E. Ramos, MD, MPH, FACOG
- Naomi Schapiro, RN, PhD, CPNP
- Karen Shea, RN, MSN
- Marisa "Mimi" Spalding, JD, MPH
- Sindhu Srinivas, MD, MSCE
- Rajan Wadhawan, MD, MMM, CPE, FAAP
- Carolyn Westhoff, MD, MSc



Results from the Strong Start for Mothers and Newborns Evaluation

Presented by: Emily M Johnston, PhD The Urban Institute

Funded by: Center for Medicare and Medicaid Innovation DHHS

March 15, 2019

Background on Strong Start for Mothers and Newborns Initiative

Strong Start for Mothers and Newborns

- Enhanced prenatal care initiative to improve outcomes for low-income women and infants
 - Preterm birth rates
 - Low birthweight
 - Cost of care
- \$41.4 million federal investment supported 27 awardees operating 211 sites in 32 states, D.C., and Puerto Rico

Typical Care vs. Strong Start Care

Typical prenatal care for pregnant women with Medicaid

- Usually delivered in
 - » Private practices
 - » Federally Qualified Health Centers
 - » Hospital outpatient department clinics
- Medical in nature
- Overly interventionist
- Not sufficiently focused on education
- Does not always offer provider continuity
- Strong Start supported three evidence-based enhanced prenatal care models

Enhanced Prenatal Care

Birth Centers

- » Midwifery model of care
- » Enhanced with peer counseling
- » 2 awardees, 57 sites

Group Prenatal Care

- » Clinical care provided in a group supplemented by education and facilitated discussion
- » Most employed Centering Pregnancy
- » 15 awardees, 60 sites
- Maternity Care Homes
 - » Standard clinical care
 - » Enhanced with care coordination and referrals
 - » 17 awardees, 112 sites

Distribution of Strong Start Awardees and Sites Across the United States



Strong Start Evaluation Research Questions

- 1. How does Strong Start prenatal care differ from typical Medicaid maternity practice?
- 2. What are the characteristics of Strong Start participants?
- 3. What is the impact of Strong Start on outcomes?
- 4. What features of Strong Start help explain variations in outcomes and impacts?

Strong Start Evaluation – Mixed Methods

Qualitative Case Studies

- Interviews
- Focus groups
- Structured observations
- Participant-Level Process Evaluation
 - Surveys at intake, third trimester, and postpartum
 - Medical record review at exit
- Impact Analysis
 - Using linked birth certificate and Medicaid data acquired from states

Participant-Level Process Evaluation and Case Study Findings

Strong Start Served a High Risk Population

Nearly 46,000 women enrolled in Medicaid/CHIP

- 40% black
- **30%** Hispanic
- Many multiparous women had poor prior birth outcomes
 - 20% prior preterm birth
 - 11% prior low birthweight birth
 - 29% short interpregnancy interval
- Average risks were highest among Maternity Care Home participants and lowest among Birth Center participants

Strong Start Participants Had High Levels of Need



Strong Start Participants Spent More Time with Providers

Model	Extra Time with Providers		
Birth Center	Midwifery visits generally lasted at least 30 minutes, plus time with peer counselors during multiple prenatal and postpartum encounters		
Group Prenatal Care	Two hour sessions with the group care facilitator and (usually) co-facilitating prenatal care provider		
Maternity Care Home	Time with care managers (sometimes 24/7 access) during multiple prenatal and postpartum encounters		

More time provides

- Greater ability to identify and address medical, psychosocial, and educational needs
- Greater ability to build patient trust

Strong Start Programs Focused on Numerous Education Topics

- Nutrition
- Exercise
- Family planning
- Breastfeeding
- Stress management
- Smoking cessation
- Normal and abnormal pregnancy symptoms

- Infant care and safety
- Oral hygiene
- How to prepare for labor and delivery
- Managing health conditions
- Preterm birth prevention

Strong Start – Relationship-Based Care

Model	Participants Formed Relationships with
Birth Center	Midwives and peer counselors
Group Prenatal Care	Group facilitators and other group members
Maternity Care Home	Care managers

- Consistent Strong Start enhanced service provider
 - Increased understanding of patient needs
 - Improved trust and participant willingness to share feelings and ask questions
 - Promoted group bonding in Group Prenatal Care

Patient-Related Barriers to Strong Start Care

- Transportation: Reported by nearly all Maternity Care Home and Group Prenatal Care awardees
 Issues with Medicaid-covered transportation
- Childcare: Most problematic for Group Prenatal Care but also for some Maternity Care Homes
 - Birth Centers typically allowed or even welcomed children
- Time constraints: Jobs and school constrained participant ability to obtain care, especially for Group Prenatal Care
- Communication: Awardees struggled to sustain patient contact due to moves and changing phone numbers

Limited Resources and Community Constraints

- Strong Start was instrumental in identifying women's many psychosocial needs
- But insufficient resources to address these needs existed in most communities
 - Mental health services
 - Referrals for housing and domestic violence services
 - Medicaid transportation

Impact Analysis

Key Research Questions

- What are the combined impacts of enhanced services supported by Strong Start and care delivered in Birth Centers, Group Prenatal Care, or Maternity Care Homes – relative to typical prenatal care – on gestational age, birthweight, cost, and utilization?
- Do impacts differ across the three Strong Start models and across awardees?
- Does intensity of intervention lead to greater program impacts?

Data Sources

Evaluation project linked three main sources of data

- Birth certificates for 12 states and D.C.
 - » 2014-2016
- Medicaid eligibility files for 12 states and D.C.
 - » 2014-2016
- Medicaid claims and encounter data for 8 states and D.C.
 » 2014-2015
- Analytic file included Medicaid-covered births for women enrolled in Strong Start and women in comparison groups

Analytic Approach

Comparison group

- Women with Medicaid-covered births in the same counties as Strong Start participants, but who received typical care
- Propensity score reweighting
 - Created propensity score-based weights for the comparison group based on demographic characteristics, Medicaid eligibility, and risk factors
 - Estimated impacts as the difference in outcomes between Strong Start participants and the propensity score reweighted comparison group

Summary of Findings by Model

Maternity Care Homes

- Not associated with improvements in outcomes or reductions in costs
- Health and social service systems struggled to address social, physical, and mental health problems faced by high risk women served by Medicaid

Group Prenatal Care

- Showed some promise in lowering costs of prenatal care and increasing weekend deliveries
- Women experienced difficulties attending visits that have a set schedule due to work, transportation, and child care barriers

Birth Centers

- Associated with more positive birth outcomes and lower costs than typical care
- **This presentation will focus on the Birth Center findings**

Birth Center Model Findings: Birth Outcomes

Relative to the comparison group, Birth Center participants had:

»Greater gestational age »Lower preterm birth rate »Higher birthweight »Lower low birthweight rate »Higher weekend delivery rate »Lower C-section rate »Higher VBAC rate

Outcomes	2014 – 2016, Strong Start (N=3,432)	2014 – 2016, Comparison Group Reweighted (N=325,647)	2014 – 2016, Difference
Birth Outcomes			
Clinical gestational age (weeks)	39.0	38.6	0.4**
Preterm birth rate	6.3%	8.5%	-2.2**
Very preterm birth rate	1.7%	2.2%	-0.4
Birthweight (grams)	3,342.8	3,263.8	79.0**
Low birthweight rate	5.9%	7.4%	-1.5*
Very low birthweight rate	1.0%	1.1%	-0.1
Rate of Apgar score greater than or equal to 7	98.2%	98.2%	0.0
Process Outcomes			
C-section rate	17.5%	29.0%	-11.5**
VBAC rate	24.2%	12.5%	11.6**
Weekend delivery rate	23.7%	19.8%	4.0**

Source: Urban Institute analysis of merged birth certificate and Medicaid data

Notes: VBAC = vaginal birth after C-section. ** indicates significance at the 0.01 level; *indicates significance at the 0.05 level.

Birth Center Model Findings: Expenditure and Utilization Outcomes

Relative to the comparison group, Birth Center participants had:

» Lower expenses during delivery period

- » Fewer infant ED visits
- » Lower expenses in the year following delivery
- » Fewer infant hospitalizations

Outcomes	2014 - 2015 Births, Strong Start (N=1,853)	2014 - 2015 Births, Comparison Group Reweighted (N=114,409)	2014 - 2015 Difference
Expenditure Outcomes (Means)			
Prenatal care expenditures	\$2,203	\$2,192	\$10
Total expenditures during delivery period	\$6,527	\$8,286	-\$1,759**
Total delivery and post-delivery expenditures	\$10,562	\$12,572	-\$2,010**
Utilization Outcomes (Means)			
Number of ED visits 8 months before delivery month	1.19	1.16	0.03
Number of hospitalizations 8 months before delivery month	0.03	0.03	0.0
Number of days in NICU	0.71	0.95	-0.24
Number of ED visits for mother 11 months after delivery month	0.63	0.67	-0.04
Number of hospitalizations for mother 11 months after delivery month	0.04	0.04	0.01
Number of ED visits for infant in the first year of life	0.86	0.99	-0.13**
Number of hospitalizations for infant in the first year of life	0.07	0.08	-0.01*

Source: Urban Institute analysis of merged birth certificate and Medicaid data

Notes: ED = emergency department; NICU = neonatal intensive care unit. Prenatal period includes the 8 months before birth. Post-delivery period includes the 11 months after the delivery month. ** indicates significance at the 0.01 level; *indicates significance at the 0.05 level.

Summary of Birth Center Findings

- Strong Start participants receiving care in Birth Centers had more positive birth and process outcomes than women in the comparison group
- Improved outcomes were achieved at lower costs
- Concern that women receiving care in Birth Centers were healthier in unmeasurable ways
 - Sensitivity analysis using numerous diagnostic controls from claims data found similar results
- Birth Centers appear to be an effective and efficient option for serving lower-risk Medicaid-covered women
- The midwifery model of care includes longer visits and more emphasis on education and psychosocial support
 - May be critical components for improving birth outcomes

Implications for Medicaid and Prenatal Care Practice

Implications for Medicaid

Bottom line:

If more pregnant beneficiaries accessed Birth Centers for maternity care, they would likely experience better birth outcomes, and Medicaid would save money

Implications for Medicaid (continued)

- However, only a small fraction of Medicaid women obtain Birth Center care:
 - Managed care dominates Medicaid, but Birth Centers struggle to contract with MCOs
 - Even when Birth Centers contract with MCOs, reimbursement rates are often too low to cover costs
 - Financial strain of low payment rates is exacerbated when Medicaid payments are delayed or when slow Medicaid eligibility processes delay pregnant women's enrollment
 - Combined, these factors cause some Birth Centers to limit the number of Medicaid beneficiaries they serve

Implications for Medicaid (continued)

- State regulations can limit the supply of Birth Centers available to pregnant women:
 - State scope of practice laws and licensing policies make it difficult for Birth Centers and midwives to practice
 - Some states require Birth Centers to have hospital-based physician medical directors
- Existing Medicaid policy can hinder development of enhanced prenatal care models
 - Explicit coverage options or incentives for prenatal care enhancements are lacking
 - Proliferation of Medicaid managed care and proprietary health plan information means government officials possess fewer direct policy levers to influence service delivery

Implications for Prenatal Care Practice

- Maternity care in the U.S. is dominated by the medical model delivered by physicians and hospitals
- Without a complementary robust social safety net, the medical model produces worse outcomes at higher cost relative to other countries
- Too often, alternative approaches (like those in Strong Start) struggle to gain widespread support

Strong Start's Lessons Could Move the Needle

- The midwifery model of care more holistic, time intensive, and focused on health education and psychosocial support – can be practiced by any provider in any setting
- Moving forward, comprehensive prenatal care addressing medical *and* social determinants of health will be necessary to improve outcomes
- Societal investments in community social support systems will also be needed to address myriad needs of women in Medicaid

More Strong Start Information

CMMI Strong Start Website

- General information about the initiative
- Annual evaluation reports
- Final evaluation report

Questions?

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Questions?



The Adverse Outcome Index Composite Measure: Our (Non) Endorsement Journey Discussion

Janet Muri, MBA – National Perinatal Information Center Susan Mann, MD, Beth Israel Deaconess Medical Center

NQF Perinatal Committee Presentation

March 15, 2019 Our (Non) Endorsement Journey

Presenters



Janet Muri, MBA President, NPIC

Susan Mann, MD

Assistant Professor of Obstetrics and Gynecology Harvard Medical School Beth Israel Deaconess Medical Center

Webinar Objectives



- Briefly describe the Adverse Outcome Index three composite metrics
- Share history of 2011 measure submission of the Adverse Outcome Index Composite Measure
- Identify improvements incorporated into V4.0 of the Index and preparations for endorsement resubmission



- 10 adverse events (6 maternal/ 4 neonatal) that can occur during labor and delivery and may be mitigated by improved team training and communication*
- Requires ICD 10 coded data with a few standard variables from the administrative data set to calculate
- Made up of three composite metrics

*Mann, S. et al, Obstetrics and Gynecology, January, 2007



Adverse Outcome Index (AOI) Continued

Three composite metrics:

- Adverse Outcome Index (AOI) # of patients with one or more identified adverse outcomes / total # of deliveries
- Weighted Adverse Outcome Score (WAOS) total weighted adverse outcome score / total # of deliveries
- Severity Index (SI) total weighted adverse outcome score / # of patients with an adverse outcome

Ten Adverse Events (V4.0)



Measure	Weight	
In-Hospital Maternal Death		
In-Hospital Neonatal Death \geq 2500 Grams and \geq 37 Weeks Gestation		
Uterine Rupture During Labor	100	
Maternal Intensive Care	65	
Birth Trauma	60	
Unanticipated Operative Procedure		
Admission to NICU of Neonate \geq 2500 Grams and \geq 37 Weeks Gestation for $>$ 1 Day		
APGAR < 7 Excluded from "Modified AOI "	25	
Maternal Blood Transfusion	20	
4 th Degree Perineal Laceration	5	



2011 NQF (Non) Endorsement Journey

- Each event needed to reviewed, accepted and endorsed as a separate measure before a "composite" measure would be approved
- Cumbersome process with little technical support or guidance from NQF

Measure Feedback from 2011 Committee (V2.2 of AOI algorithm)



- In-patient maternal mortality: need method to exclude those that are deemed "preventable"
- In-patient neonatal mortality: need to focus on "early" neonatal death attributable to the delivery process
- Uterine rupture: rare event, weighted too heavily and could lead to increase in c-section rate (unintended consequence)
- Unplanned ICU admission: needs risk adjustment; can't assume bad care if patient admitted to ICU
- Birth Trauma: did not endorse AHRQ PSI 17- similar measure

Measure Feedback



- Unanticipated operative procedure: fairly good measure
- NICU admission of term infant: needs risk adjustment; perhaps process measure than outcome measure
- **APGAR 5 <7:** too subjective
- Maternal Blood transfusion: fairly good measure
- 3rd and 4th degree laceration: may be better to measure episiotomy



- Revisions made to accommodate ICD 10 coding including use of present on admission (POA) codes to remove events/cases not attributable to delivery team
- Modification of specific measures to reflect nationally accepted definitions
 - Birth trauma severe birth trauma as defined by NQF 716 -Unexpected complications of the term newborn
 - Maternal ICU admission: restricted to those with severe maternal morbidity (CDC definition)

V4.0 Update



- In use by NPIC since Q1, 2018 Data
- Trend data from Q4, 2015- present
- Comparison to AOI V3.0
 - AOI Range and average decreased
 - WAOS Range and average increased
 - SI Range and average increased
- Improvement: The cases identified are events that should be reviewed for QI/PI improvement
- V4.0 AOI is ready for resubmission

Discussion/ Comments



Thank you !

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Questions?



Perinatal Measure Development Experiences

Sepheen Byron, Assistant Vice President, NCQA Lindsey Roth, Senior Research Associate, NCQA

March 15, 2019

Measuring Effective Perinatal Care



Need electronic clinical data to capture key data elements

- Perinatal services delivered across multiple settings & providers
- Gestational age defines correct prenatal timing



HEDIS Electronic Clinical Data Systems Method *EHRs, HIEs/Registries, Case Management, Claims*

HEDIS® Perinatal Measures

New

Prenatal Immunization Status

Proportion of pregnancies in which women received Tdap and influenza during pregnancy

Proposed

Prenatal Depression Screening

Proportion of pregnancies in which members were screened for clinical depression during pregnancy and if screened positive, received follow-up care

Postpartum Depression Screening

Proportion of pregnancies in which members were screened for clinical depression during the postpartum period, and if screened positive, received follow-up care

NCQA's Measures Development Process

Relevance, Scientific Soundness, Feasibility

- Multi-stakeholder input
- Evidence and guideline review
- Feasibility testing
- Public comment
- Independent advisory panel approval process

NCQA's Experience with the NQF Measure Submission Process

- New Scientific Methods Review Panel
- Submission stops if Scientific Methods Panel votes down measure

Questions?



Perinatal Care Measure Development and Transition to eCQMs

Susan Yendro, MSN, RN Project Director, Quality Measurement The Joint Commission

Lisa Anderson, MSN, RN-BC Project Director, eCQMs The Joint Commission

Agenda

- Background
- Perinatal safety and measures
- Measure development process
- eCQM development
- eCQM challenges

The Joint Commission

An independent, not-for-profit organization founded in 1951

Evaluates and accredits nearly 21,000 health care organizations in the United States and 1,100 in 69 countries worldwide

Accredits organizations across the spectrum of health care, including hospitals, SNFs, home care, and ambulatory care.

Advanced Certification programs for special areas: Stroke, Cardiac, Joint Replacement, Perinatal Care, etc.



Our Mission and Vision

<u>Mission</u>: To continuously improve health care for the public, in collaboration with other stakeholders, by evaluating health care organizations and inspiring them to excel in providing safe and effective care of the highest quality and value.

<u>Vision</u>: All people always experience the safest, highest quality, best-value health care across all settings.

Our Levers to Improve Care

Standards

• Assess during on-site survey

Performance Measures

Share Leading Practices

- Webinars
- Leading practice library
- Education during survey



 Publications: Quick Safety, Sentinel Event Alert, TJC Journal on Quality and Patient Safety



Does this hospital have structures and processes in place to minimize patient harm?



Does this hospital have very low rates of patient harm?



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Certification

I know the (health care organization) is safe because it is accredited, but:

- How well does this doctor/center care for people with my condition? (measures)
- How well does this doctor/center perform the surgery/procedure I need? (measures)
- Do they have all the essential resources to care for me in any eventuality? (standards)

Joint Commission Perinatal Measures Requirements Grid

Measure Name	Accreditation (300+ births)	Certification (all hospital)	eCQM (optional)
PC-01 Elective Delivery	X	X	X
PC-02 Cesarean Birth	X	X	In progress
PC-03 Antenatal Steroids	X	X	
PC-04 Health Care-Associated Bloodstream Infections in Newborns	X	X	
PC-05 Exclusive Breast Milk Feeding	X	X	X
*PC-06 Unexpected Complications in Term Newborns	X	X	In progress

*As of 1/1/2019

Publicly Reporting C-Section Rates for Hospitals with Persistently High Rates

Required to submit data on PC-02 NTSV c-section rates since 2010

However, deferred publicly reporting hospitals' rates for several reasons:

- Optimal rate of C-section was not clear
- Questions remained about risk-adjustment
- Few reports of hospitals safely reducing rate

Since 2010, PC-02 rates have remained around 26%

25% of the hospitals have rates greater than 30%

Public Reporting of PC-02

Reporting will begin July 2020

We will only report rates for hospitals that are determined to have persistently high rates

We will use the following three criteria to determine a hospital's PC-02 rating:

- 1. ≥30 cases reported in both years
- 2. PC-02 rate >30% for the current year
- 3. Overall two-year average PC-02 rate >30%

Therefore, hospitals have 2019 to improve rates

Perinatal Safety – Potential Levers to Improve Care

- Accreditation versus Certification additions
 - Hypertension
 - Hemorrhage
 - Other perinatal safety issue
 - Potential new measure development

Challenge for measure submission to NQF

» Certification measures are not publicly reported

Perinatal Safety – Potential Levers to Improve Care

- Potential maternal morbidity or harm measure development considerations
 - What is the ideal measure?
 - Risk adjustment?
 - Burden?
 - eCQM?

Challenge for measure submission to NQF

» eCQM development testing can be challenging

The Joint Commission Measure Development Overview



eCQM Implementation Challenges

- Timeline for successful transmission while ensuring accurate reflection of quality of care
- IT work, priority, mapping for accurate data
- Significant unplanned expenses for IT, clinical staff, education
- Cost and maintenance
- EHR development for discrete documentation requirements while not compromising care at the bedside
- Changing EHR systems
- Vendor ability to produce QRDA document

eCQM Testing Challenges

- Site Recruitment
- Low number of test sites limits generalizability of testing findings
- Test sites that volunteer to participate tend to be more advanced in terms of eCQM reporting
- eCQM Knowledge
- eCQM tools & guidance evolving
- Time intensive
- Limited resources
eCQM Testing Challenges

Data element validity testing

 Agreement rates can be impacted by (lack of) implementation of eCQM workflows (e.g. Abnormal presentation 97.2% at one site and 65.8% at the other)

Data element feasibility

- Feasibility scorecard responses can have caveats:
 - "Score of 2 for data availability for Epic because of some unknowns.
 I'm told it is there as a common coded item but I do not know yet if it is a discrete field. "
 - "In 3-5 years we expect clinicians will enter their documentation mainly into Epic. Epic has ICD-10 codes and SNOMED but we are not in a phase yet to confirm that."

eCQM Mitigation Strategies

- Allow sufficient time for site recruitment assume several months
- Engage EHR vendors
- Identify other options to demonstrate scientific acceptability
- Consider testing in production



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Questions?

NQF Member and Public Comment

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Next Steps

Next Steps

- Strategic Web Meeting
- Measure Evaluation Fall 2019 Cycle

Contact Information

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