



CMQCC

California Maternal
Quality Care Collaborative

Introduction to the Toolkit to Support Vaginal Birth and Reduce Primary Cesareans

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Funding for the development of this
toolkit was provided by the California
Health Care Foundation

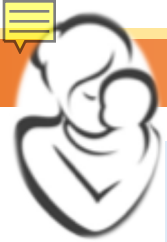


California
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California Maternal Quality Care Collaborative (CMQCC)

- Multi-stakeholder organization established in 2006: providers, state agencies, public groups with focus on Maternal Care
- Hosts California Maternal Mortality Review Committee
- Sister organization with CPQCC (neonatal care)
- Developer of QI toolkits: Early Elective Delivery, OB Hemorrhage, Preeclampsia, CVD in Pregnancy, and First Cesarean Prevention
- Leads multiple QI Collaboratives (Hemorrhage, HTN)
- Established Maternal Data Center in 2011



Today's Discussion

- Discuss the wide variation in risk adjusted CS rates
- Identify multiple reasons as to why should we care about CS rates
- Summarize key parts of The Toolkit: Readiness, Recognition, Response, Reporting—barriers, strategies and tools
- Recall pilot hospital success stories
- Identify areas to prioritize: What do we do first? (Implementation guide)



Let's Begin with a Test:

You are about to give birth. Pregnancy has gone smoothly. The birth seems as if it will, too. It's one baby, in the right position, full term, and you've never had a cesarean section — in other words, you're at low risk for complications.

What's likely to be the biggest influence on whether you will have a C-section?

- (A) Your personal wishes.
- (B) Your choice of hospital.
- (C) Your baby's weight.
- (D) Your baby's heart rate in labor.
- (E) The progress of your labor.

Rosenberg T, NYT, Jan 19 2016

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.

DOI: 10.1377/hlthaff.2012.1030
HEALTH AFFAIRS 32,
NO. 3 (2013): 527-535
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The People-to-People Health
Foundation, Inc.

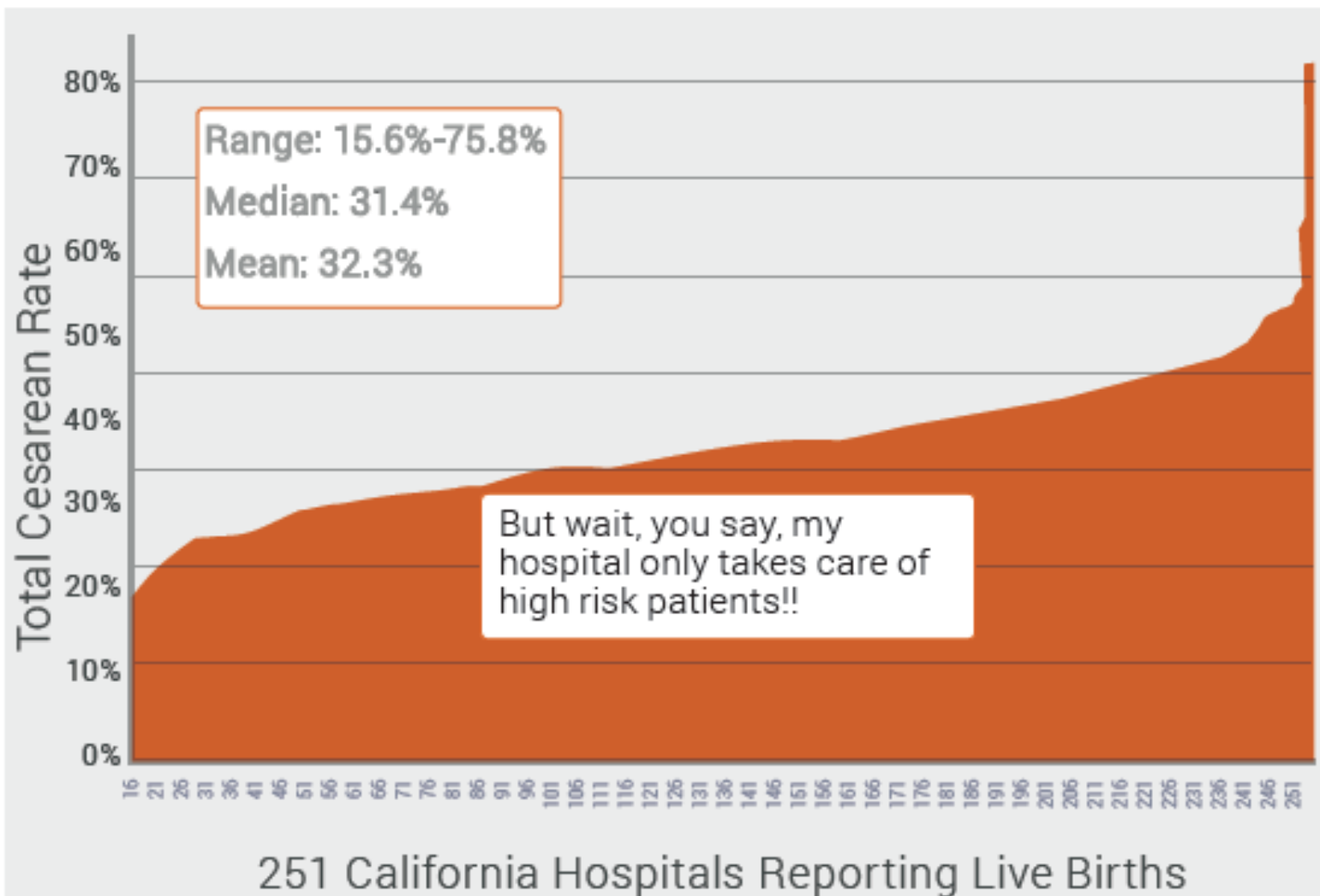
Katy Backes Kozhimannil (k bk@umn.edu) is an assistant professor in the Division of Health Policy and Management, School of Public Health, University of Minnesota, in Minneapolis.

Michael R. Law is an assistant professor in the Centre for Health Services and Policy Research, School of Population and Public Health, at the University of British Columbia, in Vancouver.

Beth A. Virnig is associate dean of research and a professor at the School of Public Health, University of Minnesota.



There is a Large Variation in Cesarean Rates Among California Hospitals





Why focus on Nulliparous Term Singleton Vertex Cesarean Birth?



Why does the Toolkit Focus on NTSV Cesarean Rate?

N
T
S
V

- Nulliparity is a critical risk adjuster because it creates a standardized population that can be compared between providers, hospitals, states, etc
- NTSV CS measure is already risk stratified
- NTSV is special in that it technically represents the most favorable conditions for vaginal birth, but also the most difficult labor management
- The NTSV population is the largest contributor to the recent rise in cesarean rates
- The NTSV population exhibits the greatest variation for all sub-populations of cesarean births for both hospitals and providers



“Still... My NTSV Patients are Higher Risk...”

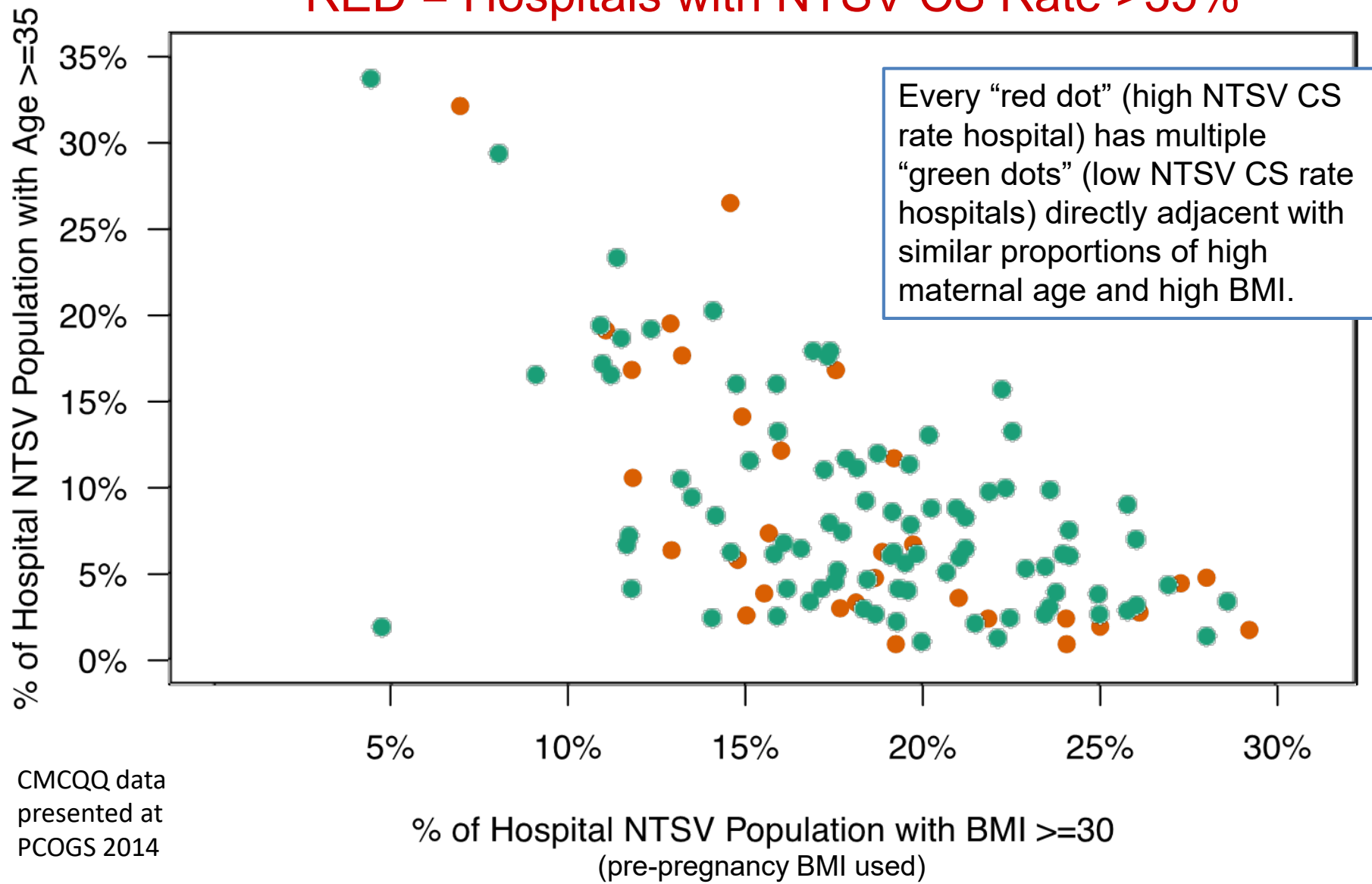
- NTSV CS measure is already risk stratified
- However, African-American women continue to have higher NTSV cesarean rates than white women
- Age and BMI clearly impact an individual's CS risk
- Formal risk-adjustment analysis using both age and BMI shows that over 2/3 hospitals realize less than 2% change
- Age and BMI effects may be provider dependent (more patience for obese women's labor)

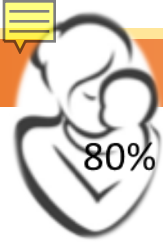


Effects of Maternal Age and BMI on Hospital NTSV CS Rates:

Green = Hospitals with NTSV CS Rate <25%

RED = Hospitals with NTSV CS Rate >35%





NTSV CS Rate Among CA Hospitals: 2014

(Nulliparous Term Singleton Vertex)

70%
60%
50%
40%
30%
20%
10%
0%

Range: 12%—70%
Median: 25.3%
Mean: 26.2%

Risk Adjustment
did not reduce
the variation

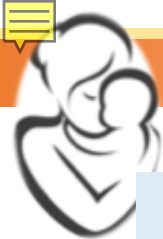
National Target = 23.9%

40% of CA
hospitals meet
national target

Large Variation =
Improvement Opportunity

1 7 13 19 25 31 37 43 49 55 61 67 73 79 85 91 97 103 109 115 121 127 133 139 145 151 157 163 169 175 181 187 193 199 205 211 217 223 229 235 241 247

Hospitals



What Indications Have Driven the **RISE** in CS?

Cesarean Indication	Percent of the Increase in Primary Cesarean Rate Attributable to this Indication	
	Yale (2003 v. 2009) (Total: 26% to 36.5%) Focus: <u>all</u> primary Cesareans	Kaiser SoCal (1991 v. 2008) (Primary: 12.5% to 20%) Focus: all primary <i>singleton</i> Cesareans
Labor progress complications (CPD/FTP)	28%	60%! ~38%
Fetal Intolerance of Labor	32%	~24%
Breech/Malpresentation	<1%	<1%
Multiple Gestation	16%	Not available
Various Obstetric and Medical Conditions (Placenta Abnormalities, Hypertension, Herpes, etc.)	6%	20% (Did not separate preeclampsia from other complications)
Preeclampsia	10%	
“Elective” (variously defined)	8% (Scheduled without “medical indications”)	18% (Those “without a charted indication”)



What Indications Drive the **VARIATION** in CS?

CS Indication	Proportion of <u>Overall</u> CS Rate	Proportion of <u>Primary</u> CS Rate	CS Rate for <u>this</u> Indication
Repeat (prior)	30-35%	---	90+%
“Abnormal Labor” (CPD/FTP)	25-30%	35-45%	Highly variable 60%!
Fetal Intolerance of labor	10-15%	15-20%	Highly variable
Breech/Transverse	10%	15-20%	98%
Multiple Gestation	5-9%	10-15%	60-80%
Other: Placenta Previa, Herpes, etc	~5%	~10%	90%



Importance of the First Birth

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

A photograph of a dirt path in a forest that splits into two directions, illustrating the concept of path dependency. The path is covered in fallen leaves and surrounded by green trees.

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



Why should we care about CS rates?



Why Should We Care?

- Rise in total CS rate without maternal or neonatal benefit
 - 6% in early 70's
 - 20% in mid 80's
 - 33% in 2010
 - Cerebral Palsy rates, neonatal seizure rates unchanged since 1980





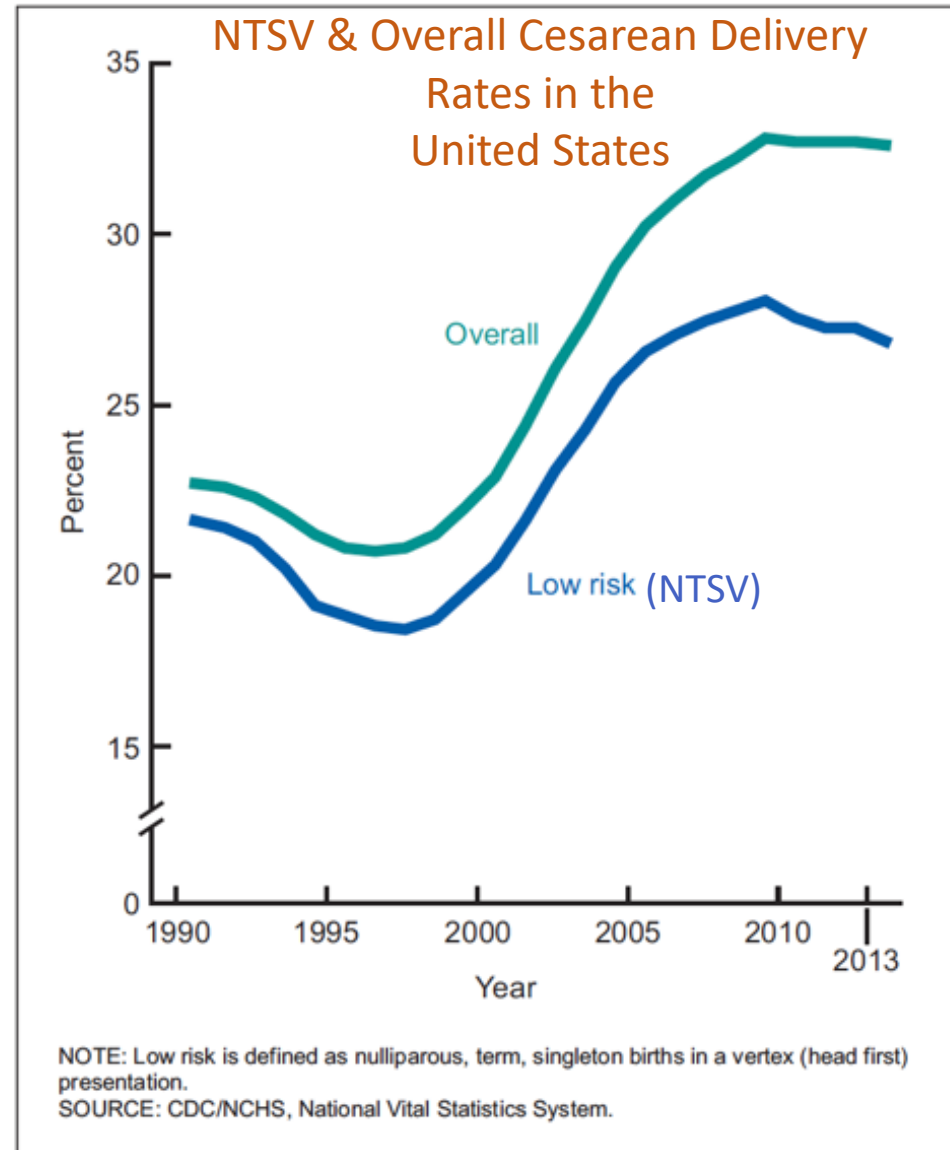
50% rise in CS rates over a 10 year period



In CA and the US, cesareans account for 1/3 of all births



Cesarean is the most common hospital surgery in the US!





Cesarean: Maternal Risks

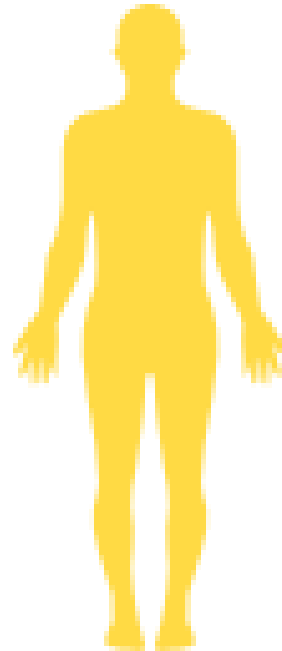
Acute

Common:

- Longer hospital stay
- Increased pain and fatigue
- Postpartum hemorrhage (transfusions ~2%)
- Slower return to normal activity and productivity
- Delayed or difficult breastfeeding

1/100 to 1/1000

- Anesthesia complications
- Wound infection
- Deep vein thrombosis



Long Term & Subsequent Births

1/100 to 1/1000

- Abnormal placentation (previas and accretas)
- Uterine rupture
- Surgical adhesions
- Bladder surgical injury
- Bowel surgical injury
- Bowel obstruction

*We perform over 160,000
Cesareans every year in California*

Transforming Maternity Care



Maternal Psychological Risks

ACUTE

- Delayed and/or ineffective bonding with neonate
- Maternal anxiety

LONGER TERM

- Post traumatic stress disorder (PTSD)
- Postpartum anxiety and depression



Cesarean: Neonatal Risks

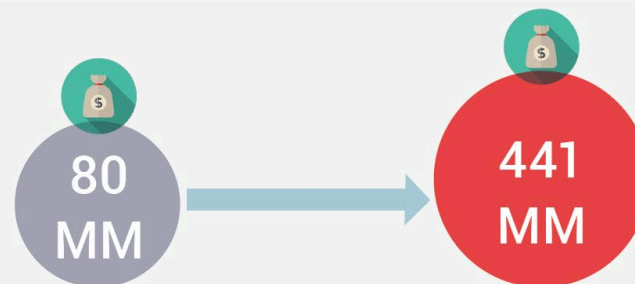
- Increased neonatal morbidity
 - Impaired neonatal respiratory function
 - Increased NICU admissions
 - Affects maternal-newborn interactions including breastfeeding
 - No reduction in cerebral palsy rates





The Cost... Another Important Reason to Reduce Unnecessary CS

California could save an estimated **\$80 to 441 million** each year by reducing unnecessary Cesarean births.¹





Summary of Issues

- Extreme variation among hospitals
- Rapid rise of rates without neonatal or maternal benefits (indeed can have complications)
- Significant consequences for future pregnancies
- Monetary cost, combined with the human cost of unnecessary cesarean, undermines the ongoing nationwide effort to provide high value maternity care for all women

But, cesarean births are also life-saving and they have an absolute role in Obstetrics—making the message to patients: “They shouldn’t be taken lightly”



Why has Cesarean Birth Reduction been so Hard?

- Direct challenge to MD autonomy
- Complex issue with many contributing factors
- Timing just hasn't been right
- Need for professional societies to lead the way
- Fear of liability is a big reason!





OB Quality Improvement and Safety Efforts Help to Decrease Liability

Utilize evidence-based best practice protocols that follow national consensus (e.g. oxytocin)

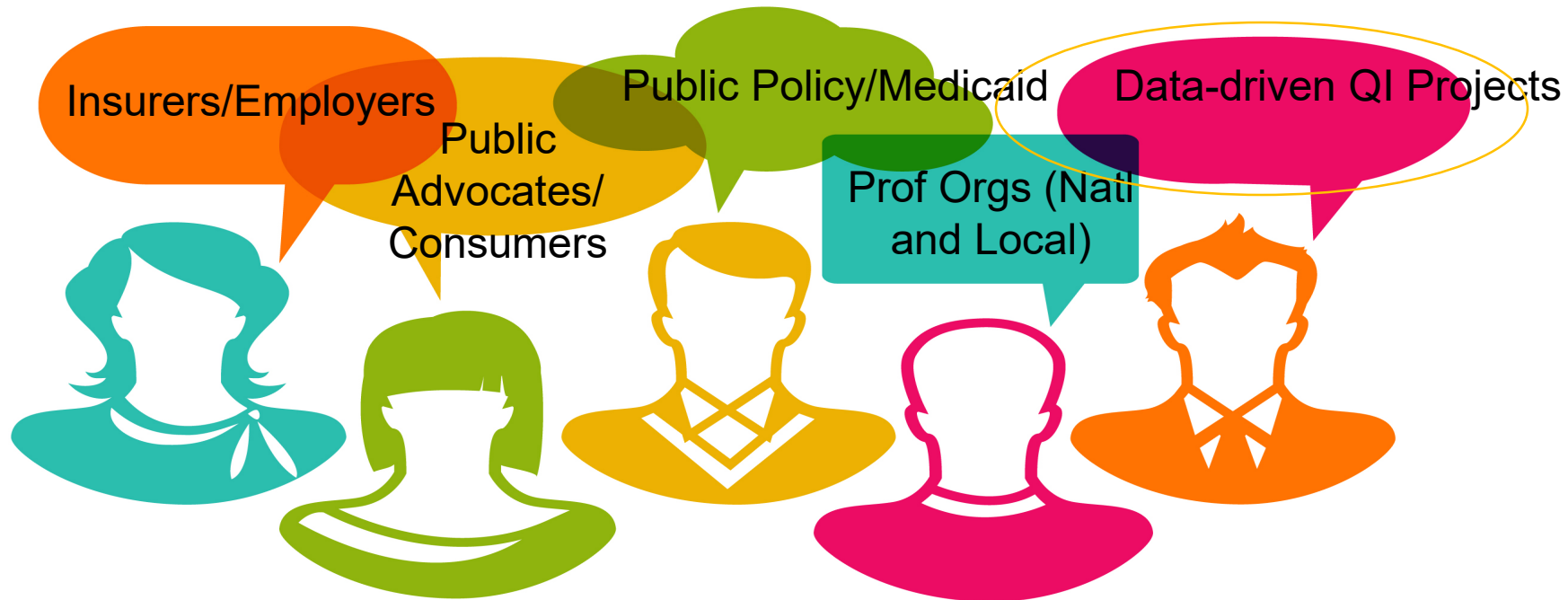
Utilize expert-vetted standardized approaches for labor and fetal heart rate abnormalities

Communication techniques which engage the patient in “shared decision making” creates a strong deterrence to lawsuits

Reducing primary cesareans, protects against post-cesarean complications and poor outcomes during future care



It takes a Village to Reduce Unnecessary Cesareans

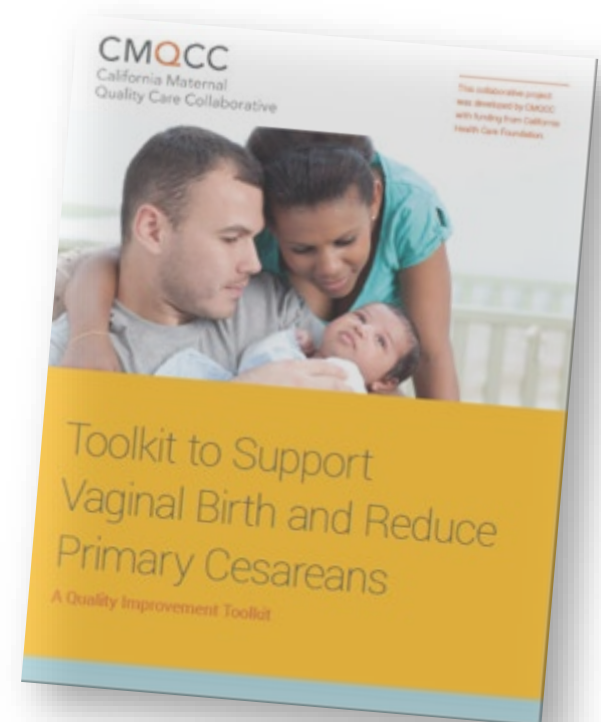


TEAMWORK



The CMQCC Toolkit

- Comprehensive, evidence-based “How-to Guide” to reduce primary cesarean delivery in the NTSV population
- Will be the resource foundation for the CA QI collaborative project
- The principles are generalizable to all women giving birth
- Released on the CMQCC website April 28, 2016
- Has a companion *Implementation Guide*





CMQCC Supporting Vaginal Birth Taskforce

Writing Group

- Obstetricians
- MFMs
- Certified Nurse Midwives
- Registered Nurses
- Educators
- Doulas
- Hospital Leaders
- Public Health

Review Group

- ACOG leaders
- AWHONN leaders
- ACNM leaders
- SOAP (Society of Obstetric Anesthesia Providers) leaders
- California Hospital Association
- Medical Liability providers
- Several Hospital Systems

Over 50 Contributors



The American College of
Obstetricians and Gynecologists
WOMEN'S HEALTH CARE PHYSICIANS

May 24, 2016

John Wachtel, MD
Chair: District IX
American Congress of Obstetricians and Gynecologists

Dear Dr. Wachtel:

In representing the American College of Obstetricians and Gynecologists (ACOG), we would like to congratulate you and all the contributors involved in the development of the CMQCC "Toolkit to Support Vaginal Birth and the plan implementation of a primary Cesarean delivery rate. ACOG strongly supports its dissemination and use to address the effort at reducing the primary Cesarean delivery rate. We encourage you to continue to encourage and support the implementation of this program.

We have had the honor to review this comprehensive toolkit and ACOG strongly supports its dissemination and use to address the efforts at reducing the primary Cesarean delivery rate.

Clearly, the rising Cesarean delivery rate, and particularly the primary Cesarean rate, is concerning to all involved in the provision of women's healthcare, and although here have been a number of efforts nationwide to address this issue, the plan implementation of a primary Cesarean delivery rate program to address this issue is unquestionably a commendable program to address this issue and should set a benchmark for achieving success in reducing the primary Cesarean delivery rate.

This excellent resource, and the plan for encouraging awareness and implementation is unquestionably a commendable program to address this issue and should set a benchmark for achieving success in reducing the primary Cesarean delivery rate.

Again, we express our appreciation for your leadership in developing this toolkit. Congratulations, and best wishes moving forward!

Sincerely,

Hal. C. Lawrence III, MD
Executive Vice President and CEO

Christopher M. Zahn, MD
Vice President, Practice Activities



When using a toolkit, you don't need to use every tool,
you just need to pick the right ones for the job



First and foremost, it should be understood that a labor support and cesarean reduction program seeks to reduce unnecessary cesarean births. The program's charter must clearly recognize that timely and well-chosen cesareans are sometimes necessary to prevent avoidable fetal and maternal harm.





The Toolkit is Aligned with the ACOG/SMFM Consensus Statement and the AIM Patient Safety Bundle

- Readiness
- Recognition and Prevention
- Response to Every Labor Challenge
- Reporting

**COUNCIL ON PATIENT SAFETY
IN WOMEN'S HEALTH CARE**
safe health care for every woman

**SAFE REDUCTION OF PRIMARY CESAREAN BIRTHS:
SUPPORTING INTENDED VAGINAL BIRTHS**

READINESS

Every Patient, Provider and Facility

- Build a provider and maternity unit culture that values, promotes, and supports spontaneous onset and progress of labor and vaginal birth and understands the risks for current and future pregnancies of cesarean birth without medical indication.
- Optimize patient and family engagement in education, informed consent, and shared decision making about normal healthy labor and birth throughout the maternity care cycle.
- Adopt provider education and training techniques that develop knowledge and skills on approaches which maximize the likelihood of vaginal birth, including assessment of labor, methods to promote labor progress, labor support, pain management (both pharmacologic and non-pharmacologic), and shared decision making.

RECOGNITION AND PREVENTION

Every patient

- Implement standardized admission criteria, triage management, education, and support for women presenting in spontaneous labor.
- Offer standardized techniques of pain management and comfort measures that promote labor progress and prevent dysfunctional labor.
- Use standardized methods in the assessment of the fetal heart rate status, including interpretation, documentation using NICHD terminology, and encourage methods that promote freedom of movement.
- Adopt protocols for timely identification of specific problems, such as herpes and breech presentation, for patients who can benefit from proactive intervention before labor to reduce the risk for cesarean birth.

PATIENT SAFETY BUNDLE
Safe Reduction of Primary Cesarean Births

OBSTETRICS & GYNECOLOGY

Volume 116, Number 5, November 2018

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2018-0094	1112
2018-0095	1113
2018-0096	1114
2018-0097	1115
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2018-0099	1117
2018-0100	1118



READINESS

Developing a maternity culture that values,
and supports intended vaginal birth



Strategies to Improve Readiness

- Create a unit culture to support intended vaginal birth
- Improve access and quality to modern childbirth education
- Improved shared decision making at critical points
- Bridge provider knowledge and skills gap
- Payment reform: Transition from paying for volume to paying for value



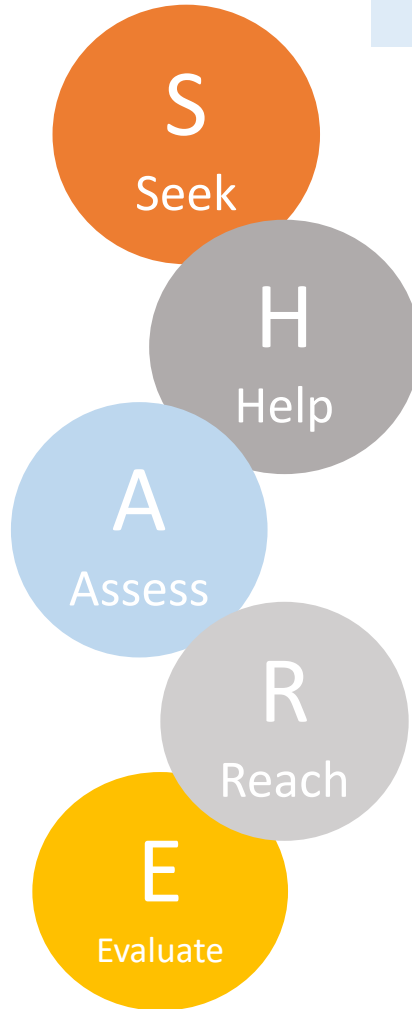
Examples of Readiness Tools included in Toolkit

- Sources of best childbirth education tools
- Tools/policies/concepts of “mother friendly” hospital
- Approaches to shared decision making and training aspects



Sharing in decision making: The SHARE Model

Readiness



Seek the patient's participation

Help her explore each option and the corresponding risks and benefits

Assess what matters most to her most

Reach a decision together and arrange for a follow up conversation

Evaluate her decision (revisit the decision and assess whether it has been implemented as planned)

The SHARE approach. Agency for Healthcare Research and Quality Website.

<http://www.ahrq.gov/professionals/education/curriculum-tools/shareddecisionmaking/index.html>.

Accessed December 1, 2015.



Shared Decision Making (continued)

PATIENT DECISION POINTS THAT IMPACT RISK OF CESAREAN

Choice of provider and/or facility for prenatal care and care at time of birth

Timing of admission to hospital (admission to labor and delivery while still in the latent/early phase is associated with an increased risk of cesarean)

Choice of fetal monitoring method (continuous monitoring is associated with an increased risk of cesarean)

Whether to have continuous labor support by a trained caregiver like a doula (continuous labor support improves chances of having a vaginal birth)

Induction of labor without medical indication



Birth Preferences Worksheet

- Collaborate with healthcare provider to determine birth preferences
- Tailor choices to what is available at each facility

Readiness

CMQCC
California Maternal
Quality Care Collaborative

My Preferences for Labor and Birth: A Plan to Guide Decision Making and Inform My Care Team

Your Name and Date of Birth:

Your Due date:

Physician/Midwife:

Pediatrician/Family Doctor:

Your Labor Support Team (please include partner, doula, friends, relatives, or children who will be present):

While low-risk women will need very little intervention, women with certain medical conditions may need procedures, such as continuous monitoring or induction of labor, to improve safety and ensure a healthy delivery. Your provider can tell you about the benefits, risks and alternatives of the decisions you may face during labor and birth. This is an opportunity to share your values and preferences and make informed decisions together, based on your specific needs. This form should go with you to the hospital to be shared with your care team and reviewed as labor progresses.

Environment:

Example available in the toolkit



Many More Tools in this Section... Over 20

TOOLS FOR PART I OF TOOLKIT - FOR PROVIDERS AND HOSPITALS

Strategy#	Name of Tool	CMQCC Tool	External Tool	Location
1	Lamaze International Policy Brief - Evidence-Based Childbirth Education: A Key Strategy to Improve U.S. Childbirth Outcomes		•	http://www.lamazeinternational.org/d/do/1787
1	The Centering Healthcare Institute - Centering Pregnancy® Model		•	https://www.centeringhealthcare.org/what-we-do/centering-pregnancy
2	AHRQ SHARE Approach for Shared Decision Making		•	http://www.ahrq.gov/professionals/education/curriculum-tools/shareddecisionmaking/index.html
2	AHRQ SHARE Approach Quick Reference Poster		•	http://www.ahrq.gov/sites/default/files/wysiwyg/professionals/education/curriculum-tools/shareddecisionmaking/tools/share-poster/shareposter.pdf
2	Maternity Neighborhood White Paper -Activation, Engagement, and Shared Decision Making		•	http://maternityneighborhood.com/whitepapers/activation-engagement-shared-decision-making
2	CMQCC Birth Preferences Guide (Birth Plan)	•		Appendix E
2	Informed Consent for Elective Cesarean (adapted with permission from Hoag Hospital)	•		Appendix I
5	Health Care Incentives Improvement Institute – Prometheus Payment Implementation Toolkit		•	http://www.hci3.org/prometheus_implementation_toolkit
5	Health Care Incentives Improvement Institute - Prometheus Payment Fact Sheet		•	http://www.rwjf.org/content/dam/farm/reports/issue_briefs/2009/rwjf41603
5	Center for Healthcare Quality and Payment Reform - Guide to Physician-focused Alternative Payment Methods		•	http://www.chqpr.org/downloads/Physician-FocusedAlternativePaymentModels.pdf
5	Center for Healthcare Quality and Payment Reform - A Better Way to Pay for Maternity Care Fact Sheet		•	http://www.nationalpartnership.org/research-library/maternal-health/nac/nac_resource_miller_2015.pdf
5	Center for Healthcare Quality and Payment Reform Slide Deck - How Payment Reform Can Lower Costs and Improve Quality (slide deck)		•	http://www.chqpr.org/downloads/MaternityCarePaymentReform2012.pdf
5	Center for Healthcare Quality and Payment Reform Slide Deck - How Payment Reform Can Lower Costs and Improve Quality (slide deck)		•	http://www.chqpr.org/downloads/MaternityCarePaymentReform2012.pdf
5	Center for Healthcare Quality and Payment Reform - Win –Win –Win Approaches to Maternity Care (slide deck)		•	http://www.chqpr.org/downloads/HaroldMiller_MaternityCarePayment_03-25-15.pdf



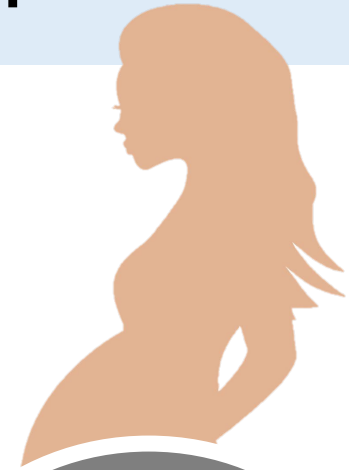
What about women who request a Primary Cesarean Birth?



It is important to communicate early and often during the prenatal period to alleviate any fears related to incomplete information



Fear of pain is a common concern. Work with her to identify good labor support personnel



Provider guidance is critical. Different approaches and attitudes reflect different rates

Incidence is less than
1%

Transforming Maternity Care



RECOGNITION AND PREVENTION

Key Strategies for Supporting Intended Vaginal Birth

Transforming Maternity Care

A Toolkit to Support Vaginal Birth and Reduce Primary Cesareans



Strategies to Support Intended Vaginal Birth

- Implement policies that reduce routine intervention and support normal processes
- Implement early labor management and supportive care policies for the early labor period
- Utilize other labor support personnel (e.g. doulas)
- Improve supportive care overall (RN labor support, infrastructure/equipment)
- Utilize best practices for regional anesthesia
- Implement protocols for intermittent monitoring
- Implement protocols for modifiable conditions like HSV and breech position



Examples of Recognition/Prevention Tools included in Toolkit

- Model policies for intermittent monitoring, freedom of movement, early labor support, etc.
- Recommendations and guidelines for supporting normal progress in labor
- Coping with labor algorithm
- Guidelines for working with doulas
- Patient education and decision guides

Over 30 tools/guides in this section alone



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AMERICAN COLLEGE
of NURSE-MIDWIVES

With women, for a lifetime™

American Academy
of Pediatrics



Association of Women's Health,
Obstetric and Neonatal Nurses

Quality Patient Care in Labor and Delivery: A Call to Action

“Pregnancy and birth are physiologic processes, unique for each woman, that usually proceed normally. Most women have normal conception, fetal growth, labor, and birth and require minimal-to-no intervention in the process.”

Transforming Maternity Care

A Toolkit to Support Vaginal Birth and Reduce Primary Cesareans



Why Support of Early Labor is Important

- Physiologic onset of labor is critical to the success in labor, and introduces moms and babies to protective hormonal pathways
- Women admitted in early labor are more likely to have a cesarean and more likely to have routine interventions e.g. oxytocin even if not clinically necessary
- Translation: Early labor at home. Let labor start on its own!



Tools and Recommendations for Early Labor Support included in the Toolkit

- Checklist/algorithm for spontaneous labor and recommendations for active labor admission policies
- Recommendations for latent labor support if admitted, and therapeutic rest as alternative to admission
- Patient education materials and specific guidance for partners and family members as to how to best support the woman in early labor



Toolkit contains weblinks to resources that support early labor and establish criteria for active labor admission

Safe Deliveries Roadmap

Advancing Safety for Mothers and Babies
A Roadmap from Pre-pregnancy to Postpartum



Topic 3b: Labor- First Stage: Consider Discharge Home or Further Observation

Note: For spontaneous labor only.

Recommendations

- Cervix 4-5 cm without change x 2 - 4 hours
- Less than 80% effacement
- Membranes intact
- Reactive NST/FHR category I (if uterine contractions present)
- Contractions less than 3/10 minutes



Many patient resources and decision aids for early labor

Recog/Prevent

Keep Calm and Labor On!

Know what to expect in early labor

Oh baby! You just had your first contraction. Is this it? Should you grab your birthing bag and head out? You may be in early labor – the phase that comes before active labor.

WHAT HAPPENS IN EARLY LABOR?¹

- Hormonal changes continue to prepare mom and baby for birth and breastfeeding
- Pre-labor (irregular on and off contractions that occur during the last weeks of pregnancy) gradually gives way to early labor
- Contractions may start and stop several times before developing a rhythm
- Contractions generally start off mild, may last 30-45 seconds and occur every 20 minutes or so apart, then become longer, stronger and closer together
- Cervix dilates to 6 cm to prepare for childbirth as the baby moves down into your pelvis²
- Early labor is most often the longest phase, more than half of the total labor time

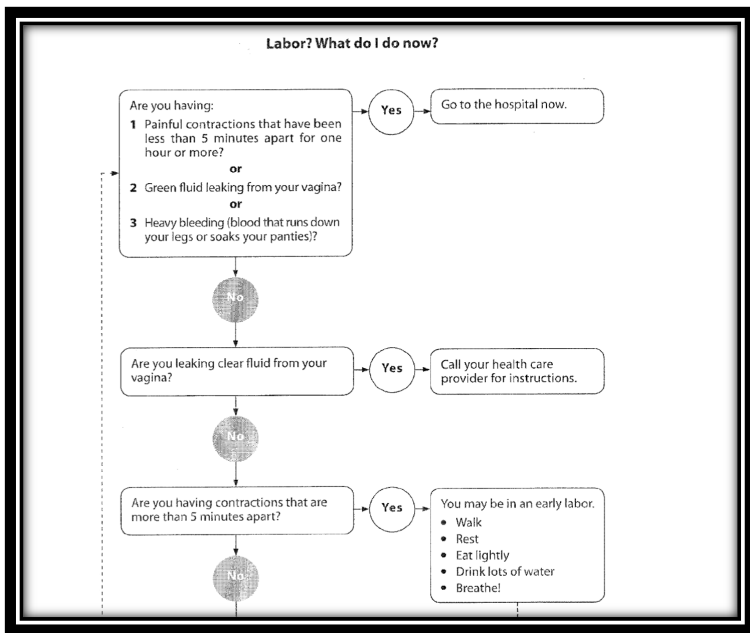
DID YOU KNOW?
The average length of early labor is 6-12 hours for first-time moms (early labor is usually shorter for experienced moms).³
It may even last 24 hours or more, which can be perfectly normal.

THERE ARE BENEFITS TO STAYING HOME DURING LABOR AS LONG AS POSSIBLE:

- Gives you more flexibility to move freely—which can reduce the risk of medical interventions²
- Helps increase the labor hormone, oxytocin—which allows the cervix to

HOW CAN YOUR PARTNER OR DOULA SUPPORT YOU?

- Offering comfort, emotional support
- Helping time contractions – Enhance's Progression
- Keeping your mind off labor with



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Provide Continuous Labor Support

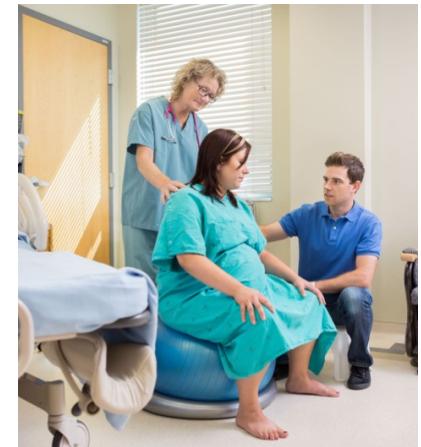
- **Less likely to have a cesarean birth**
- Slightly shorter labor
- Improved patient satisfaction
- Less likely to need vac/forceps
- Less likely to use pain medication
- Better Apgar scores





Key Components of Labor Support

- Freedom of movement
- Techniques and tools to facilitate fetal rotation, flexion, and descent
 - Know what your labor beds can do
 - Birthing balls / peanut balls
 - Upright and ambulatory positioning
 - Nonpharmacologic comfort measures
- Intermittent monitoring, or telemetry if continuous monitoring is necessary





Key Components of a Supportive Physical Environment

- Low lighting and privacy
- Comfortable space with adequate room for movement and walking
- Adequate availability of non-pharmacologic coping tools such as tubs or showers, rocking chairs, birthing balls, squat bars, and peanut balls
- Freely available snacks with high nutritional value



Peanut Ball

- Decreased length of labor
- Decreased CS rate in patients with epidurals



Tussey, C. M., Botsios, E., Gerkin, R. D., Kelly, L. A., Gamez, J., & Mensik, J. (2015). Reducing length of labor and cesarean surgery rate using a peanut ball for women laboring with an epidural. *The Journal of Perinatal Education*, 24(1), 16-24. <http://dx.doi.org/10.1891/1058-1243.24.L16>

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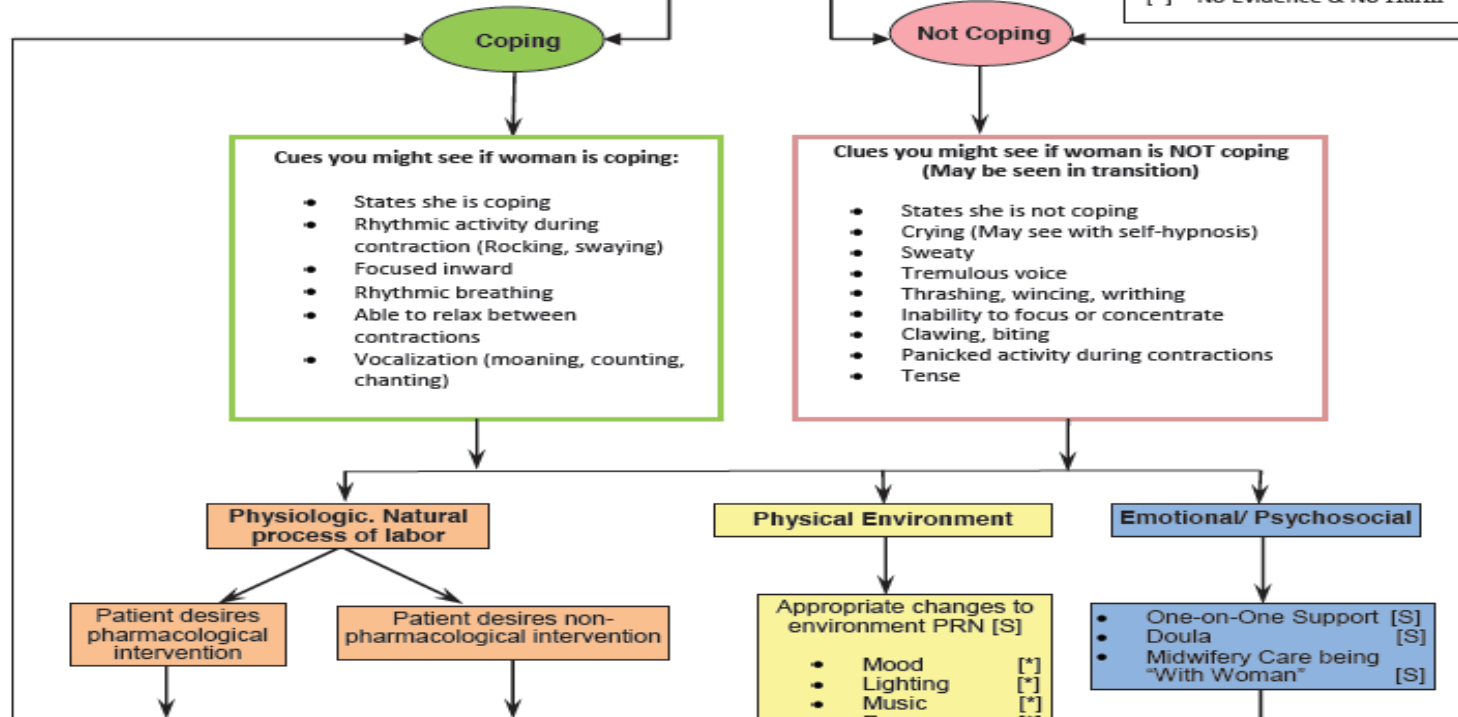
Coping with Labor Algorithm

Full size version in the toolkit

Coping with Labor Algorithm v2 ©

Observe for cues on admission and throughout labor.
Assessment per protocol:
Ask: "How are you coping with your labor?"
♦ Every shift ♦ PRN ♦ At signs of change.

Legend
[S] = Sufficient Evidence
[L] = Limited Evidence
[I] = Insufficient Evidence
[*] = No Evidence & No Harm



Recognize/Prevent

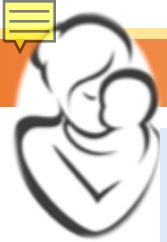


Doulas

Published data indicate that one of the most effective tools to improve labor and delivery outcomes is the continuous presence of support personnel, such as a doula...Given that there are no associated measurable harms, this resource is probably underutilized."

– ACOG/SMFM Obstetric Care Consensus on Safe Prevention of the Primary Cesarean Delivery (2014).³





Implement Intermittent Monitoring for Low-risk Patients

Continuous monitoring:

- Increases the likelihood of cesarean
- Has not been shown to improve neonatal outcomes e.g. reduce rates of CP
- Restricts movement (and normal physiologic processes and coping)
- Potentially reduces nursing interaction/ labor support





Components of Successful Implementation of Intermittent Fetal Monitoring

Policies should include a risk assessment tool or checklist with exclusion criteria to assist in identifying women for which intermittent auscultation or intermittent EFM is appropriate⁸⁵

Provide patient education for the use of intermittent methods of monitoring, including the risks and benefits of intermittent versus continuous methods, and engage in shared decision making in order to determine most appropriate method for each woman

Provide on-going assessments of women to determine appropriateness of continued intermittent methods versus conversion to continuous EFM⁸⁵

Engage in initial and ongoing training and education of all nurses and providers on intermittent auscultation or intermittent EFM procedures

Provide appropriate staffing, e.g. 1:1 nursing care as recommended by AWHONN for intermittent auscultation in low-risk women¹⁶⁰

Work with necessary committees and Information Technology (IT) to modify admission orders to reflect the use of intermittent EFM or auscultation as the default mode of monitoring for women who do not meet the exclusion criteria

Ensure that the appropriate equipment, such as Dopplers, are readily available in sufficient numbers

APPENDIX C: The Procedure of Fetal Monitoring

1. Intermittent Auscultation

- a. **Auscultation:** When using auscultation as a mode of intermittent monitoring, a Doppler is used. FHR baseline should be established between contractions. Auscultation should be performed before, during and continued for one minute after the completion of a contraction. Maternal pulse to be determined immediately prior to and during auscultation. If maternal pulse and FHR cannot be distinguished from one another consider electronic monitoring and/or use of maternal pulse oxymetry.
- b. Utilizing abdominal palpation, contraction frequency, duration and intensity will be assessed and documented with the same frequency as FHR.

Maternal Conditions

Chronic Disorders

- 1 Active drug use that may affect neonatal prognosis
- 2 Chronic HTN
- 3 SLE or antiphospholipid syndrome
- 4 Thyroid disease, if uncontrolled

Diabetes requiring insulin or uncontrolled gestational diabetes

- 1 History of IUFD
- 2 Previous cesarean birth

Current pregnancy

- 1 No prenatal care
- 2 Cholestasis
- 3 Diabetes that requires insulin or uncontrolled gestational diabetes
- 4 Gestational hypertension
- 5 Increased maternal serum AFP or HCG
- 6 Malpresentation
- 7 Twins
- 8 Oligohyramnios
- 9 Prolonged pregnancy >41 weeks
- 10 Pre-eclampsia
- 11 Prematurity (less than 36 weeks)
- 12 Preterm premature ROM (<36 weeks)

Labor

- 1 Chorioamnionitis
- 2 Epidural anesthesia
- 3 Meconium
- 4 Pitocin administration
- 5 Vaginal bleeding greater than bloody show
- 6 Misoprostol administration within two hours

Fetal Conditions

- 1 IUGR
- 2 Known congenital anomaly
- 3 Polyhydramnios
- 4 Red cell alloimmunization in the presence of erythroblastosis

Toolkit includes policies and guidelines for Intermittent Monitoring



RESPONSE

Management of Labor Abnormalities



Strategies for the Appropriate Management of Labor Abnormalities

- Create highly reliable teams and improve interdisciplinary communication
- Adopt standard definitions and approaches for labor and FHR abnormalities
- Utilize operative vaginal deliveries in appropriate cases
- Identify malposition and perform manual rotation
- Develop alternative coverage patterns such as hospitalist/midwives
- Develop systems that facilitate the safe transfer of care from the out-of-hospital environment
- Avoid defensive medicine: focus on quality and safety!

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Labor Management Tools included in the Toolkit

- Spontaneous labor algorithms/dystocia checklists
- Induction algorithms/checklists/policies for timing, scheduling, and proper selection
- Algorithms for standard intervention for FHR changes
- Model policies for oxytocin
- Tools for effective communication

Approximately 30 tools available in this section



Toolkit outlines Four Specific Areas of Standardization

- Diagnosis of labor dystocia
- Safe use of oxytocin
- Response to abnormal heart rate patterns
- Induction of labor



patience

Response

- “Slow but progressive labor” in the first stage is not an indication for cesarean
- “Prolonged latent phase” as defined by previously by Friedman is not an indication for cesarean
- 6 is the new 4 (Zhang/Consortium on Safe Labor)
- Longer pushing times may be necessary (epidural; malposition)



Example of ACOG/SMFM Labor Dystocia Checklist in toolkit

CMQCC Labor Dystocia Checklist (ACOG/SMFM Criteria)

1. Diagnosis of Dystocia/Arrest Disorder (all 3 should be present)

- Cervix 6 cm or greater
- Membranes ruptured, then
- No cervical change after at least 4 hours of adequate uterine activity (e.g. strong to palpation or MVUs > 200), or at least 6 hours of oxytocin administration with inadequate uterine activity

2. Diagnosis of Second Stage Arrest (only one needed)

No descent or rotation for:

- At least 4 hours of pushing in nulliparous woman with epidural
- At least 3 hours of pushing in nulliparous woman without epidural



Pre-Cesarean Checklist for Labor Dystocia available in Toolkit

Pre-cesarean Checklist for Labor Dystocia or Failed Induction

Patient Name: _____ MR#: _____

Gestational Age: _____ Date of C-section: _____;

Time: _____

Obstetrician: _____ ; Initial: _____

Bedside Nurse: _____ ; Initial: _____

Active Phase Arrest > 6 cm Dilation (must fulfill one of the two criteria)

Membranes ruptured (if possible), then:

Adequate uterine contractions (e.g. moderate or strong to palpation, or > 200 MVU, for ≥ 4 hours) without improvement in dilation, effacement, station or position

OR

Inadequate uterine contractions (e.g. < 200 MVU) for ≥ 6 hours of oxytocin administration without improvement in dilation, effacement, station or position

Second Stage Arrest (must fulfill any one of four criteria)

Nullipara with epidural pushing for at least 4 hours

OR

Nullipara without epidural pushing for at least 3 hours

OR

Multipara with epidural pushing for at least 3 hours

OR

Multipara without epidural pushing for at least 2 hours

Although not fulfilling contemporary criteria for labor dystocia as described above, my clinical judgment deems this cesarean delivery indicated

Indication for Primary Cesarean Delivery:

Failed Induction (must have both criteria if cervix unfavorable, Bishop Score < 8 for nullips and <6 for multips)

Cervical Ripening used (when starting with unfavorable Bishop scores as noted above). Ripening agent used: _____ Reason ripening not used if cervix unfavorable: _____

AND

Unable to generate regular contractions (every 3 minutes) and cervical change after oxytocin administered for at least 12-18 hours after membrane rupture.* *Note: at least 24 hours of oxytocin administration after membrane rupture is preferable if maternal and fetal statuses permit

Latent Phase Arrest <6 cm dilation (must fulfill one of the two criteria)

Failed Induction: Duration in hours: _____

Latent-Phase Arrest: Duration in hours: _____

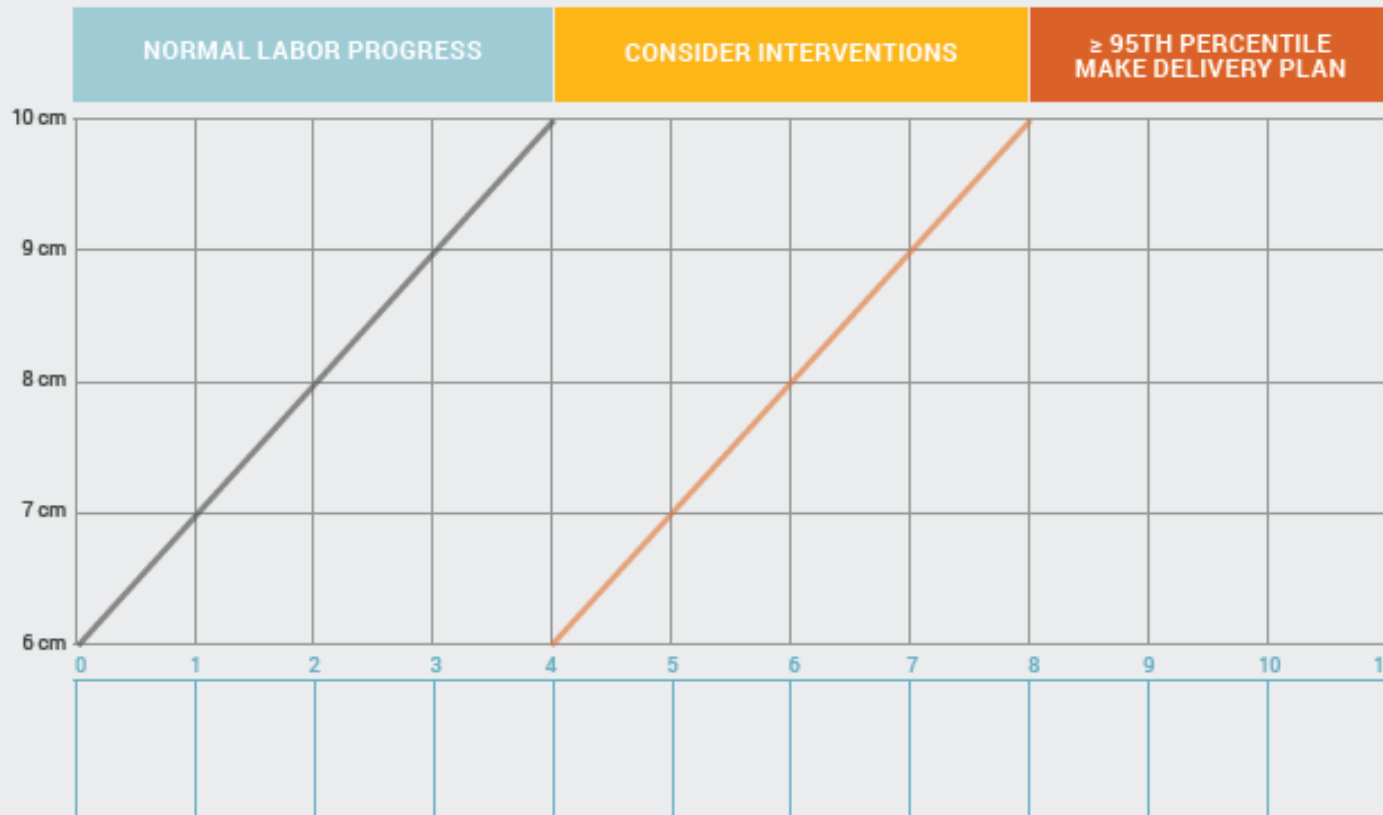


Active Labor Partogram Available in Toolkit

Response

ACTIVE LABOR PARTOGRAM

Term \geq 37 Weeks Gestation



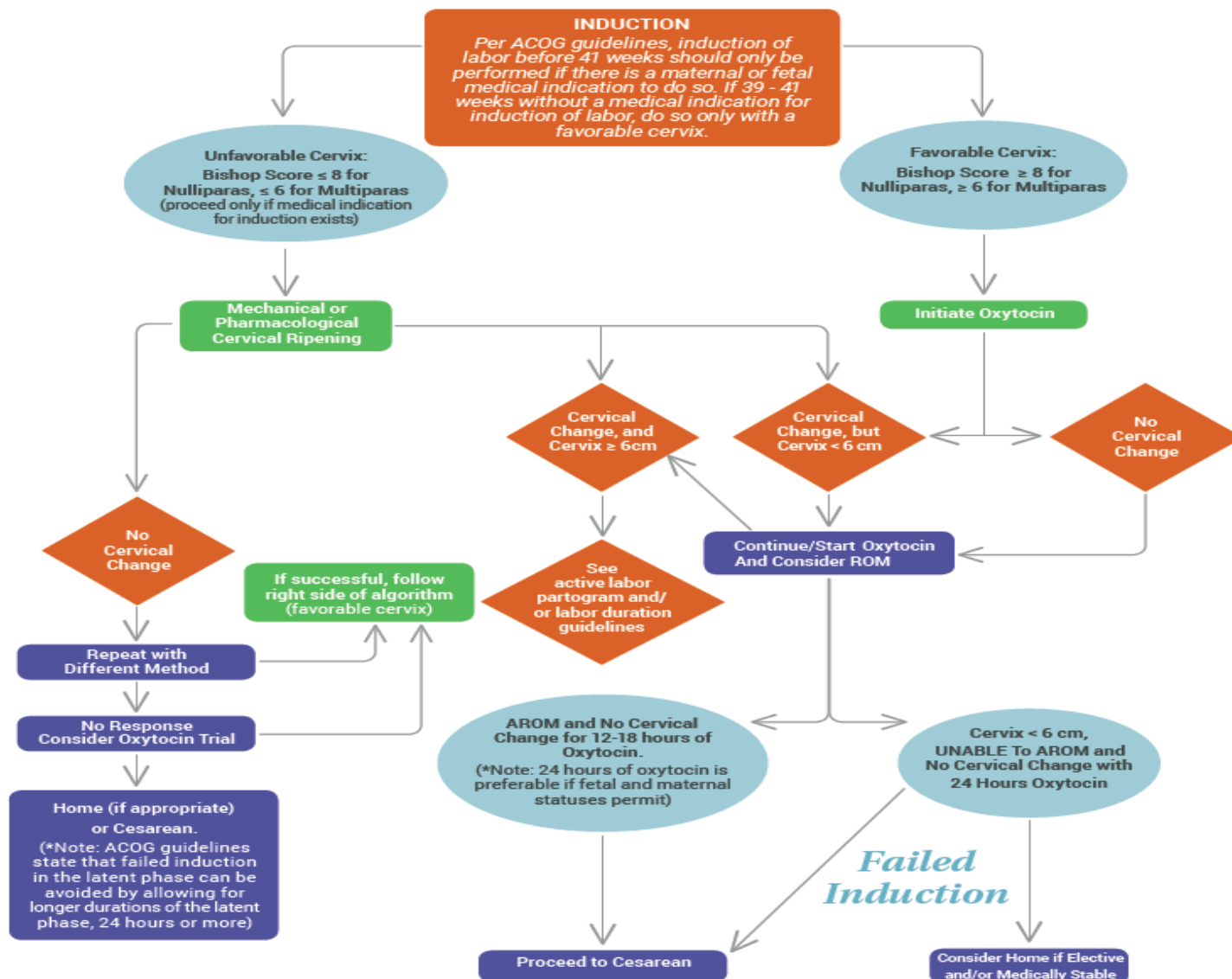
Refs: Zhang J. et al. *Obs Gynecol.* 2010; 116(6):1212-1287. Neal JL, Lowe NK. *Med Hypothesis.* 2012; 78(2):319-326. Hoppe K, et al. *Am J of Obstet Gynecol.* 2016; 214(1):S4



adapted with permission from Swedish Medical Center



Appendix R Induction of Labor Algorithm





Prevention and Management of Malposition

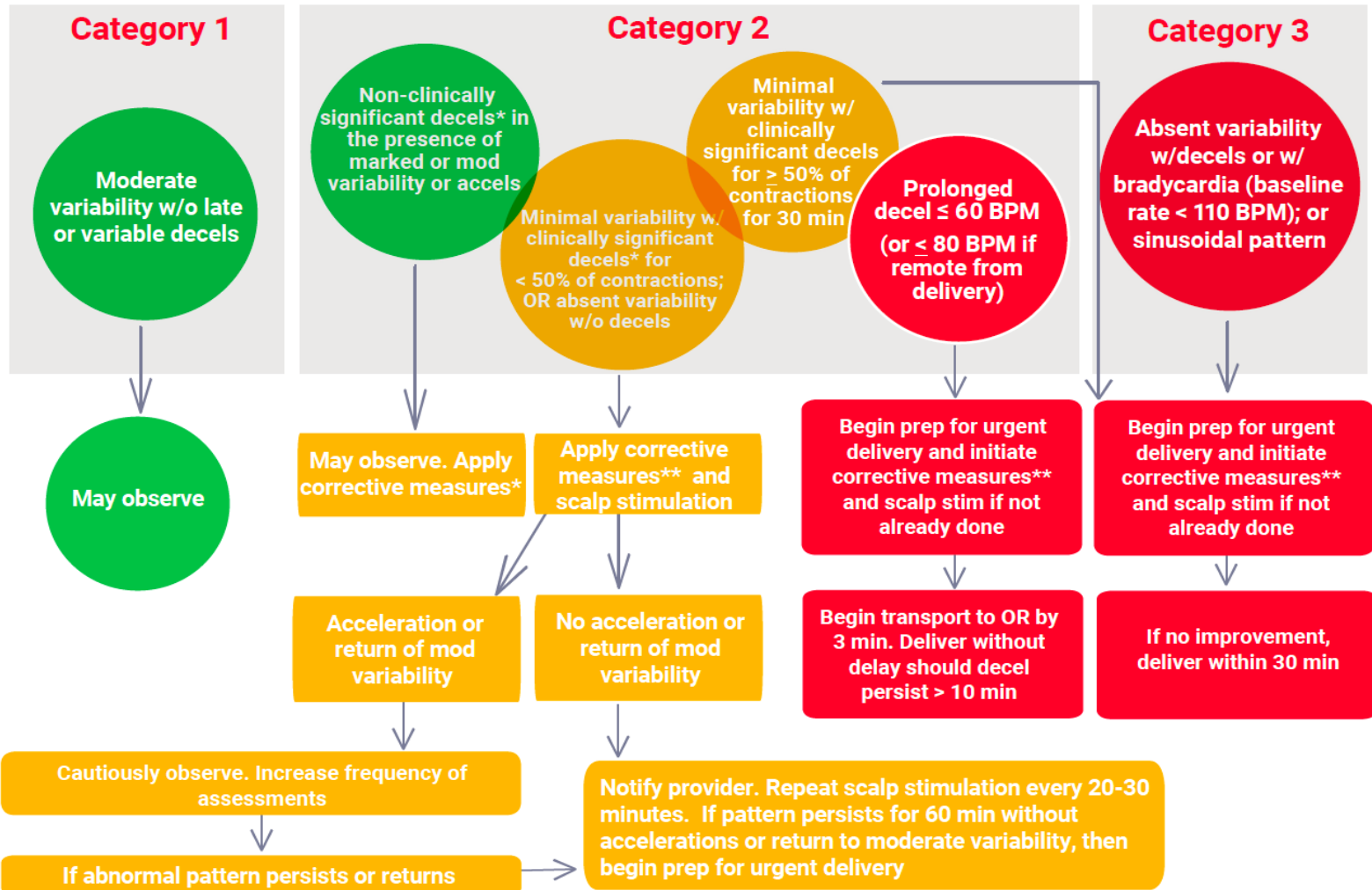
- Avoid routine early amniotomy
- Employ preventive measures for women with epidural anesthesia
- Intrapartum maternal/fetal positioning
- Consider pushing positions
- Support maternal psyche and body
- Manual rotation
- Patience, patience, patience!



Appendix Q

Example Algorithm for the Management of Intrapartum Fetal Heart Rate Tracings

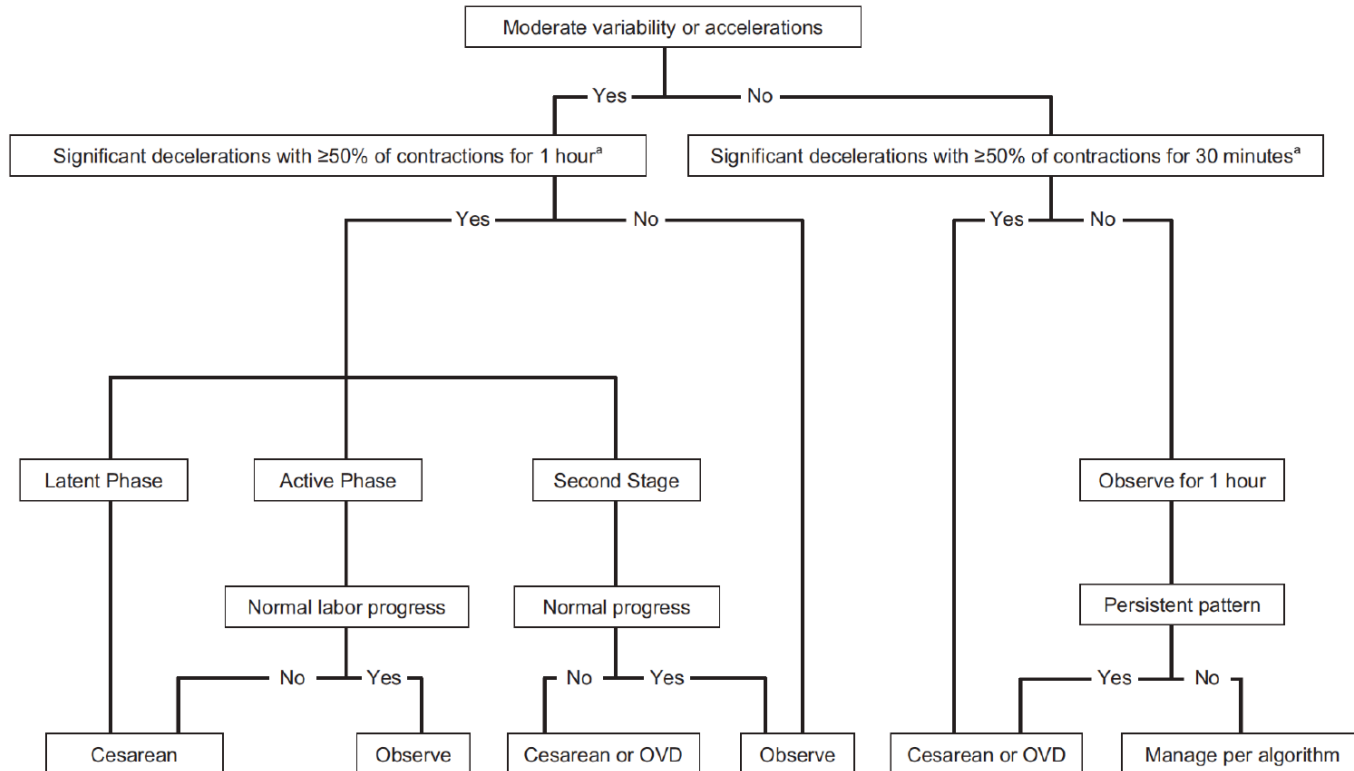
Response





Clark's Algorithm for Management of Cat II Tracings Available in Toolkit

Algorithm for management of category II fetal heart rate tracings



OVD, operative vaginal delivery.

^aThat have not resolved with appropriate conservative corrective measures, which may include supplemental oxygen, maternal position changes, intravenous fluid administration, correction of hypotension, reduction or discontinuation of uterine stimulation, administration of uterine relaxant, amnioinfusion, and/or changes in second stage breathing and pushing techniques.

Clark. *Category II FHRT. Am J Obstet Gynecol* 2013.

Response



Model Policies for Induction of Labor, Induction of Labor Scheduling, and Safe Use of Oxytocin

Response

Category: Patient Care Services	Ef
Owner: Labor and Delivery OR Manager	
Title: Cesarean Delivery / Induction of Labor Scheduling	

PURPOSE: To eliminate non-medically indicated (elective) deliveries prior to 39

To be completed by Chief of Maternal Fetal Medicine or OB Hospitalist

Procedure Scheduling Determination:

Schedule: Medically indicated and necessitates delivery < 39 weeks gestation

Schedule: Gestation age ≥ 39 weeks on scheduled date

Completed by: _____ Date/Time: _____
[Chief of Maternal Fetal Medicine/OB Hospitalist]



REPORTING/SYSTEMS

Using Data to Drive Improvement



Strategies for Using Data to Drive Improvement

- Provide timely feedback in persuasive manner
- Use comparative data which conveys a sense of urgency
- Present data for both hospital and providers
- Set achievable goals
- Tie descriptive “cold” data with patient stories and other successes



Use Strategies to Engage **Women, Employers** and the **General Public** in the Improvement Project

- Public release of selected hospital-level measures that have been well-vetted
- Provide a lay explanation of the measures
- Widely distribute these measures through multiple media channels to capture the greatest attention



3 Pilot Quality Improvement Projects Informed the Development of the Toolkit

- Hoag Hospital, Newport Beach CA
- Miller Children's and Women's Hospital, Long Beach CA
- Saddleback Memorial Medical Center, Laguna Hills CA





Pilot QI Project Components: 2014-15



Data Measurement
Support



Quality Improvement
Support



Payment
Reform



Impressive Results: within 6 months



24.2 %
Reduction

22.1%
Reduction

19.5%
Reduction

Baseline – 32.6%
After QI – 24.7%

Baseline – 31.2
After QI – 24.3%

Baseline – 27.2%
After QI – 21.9%

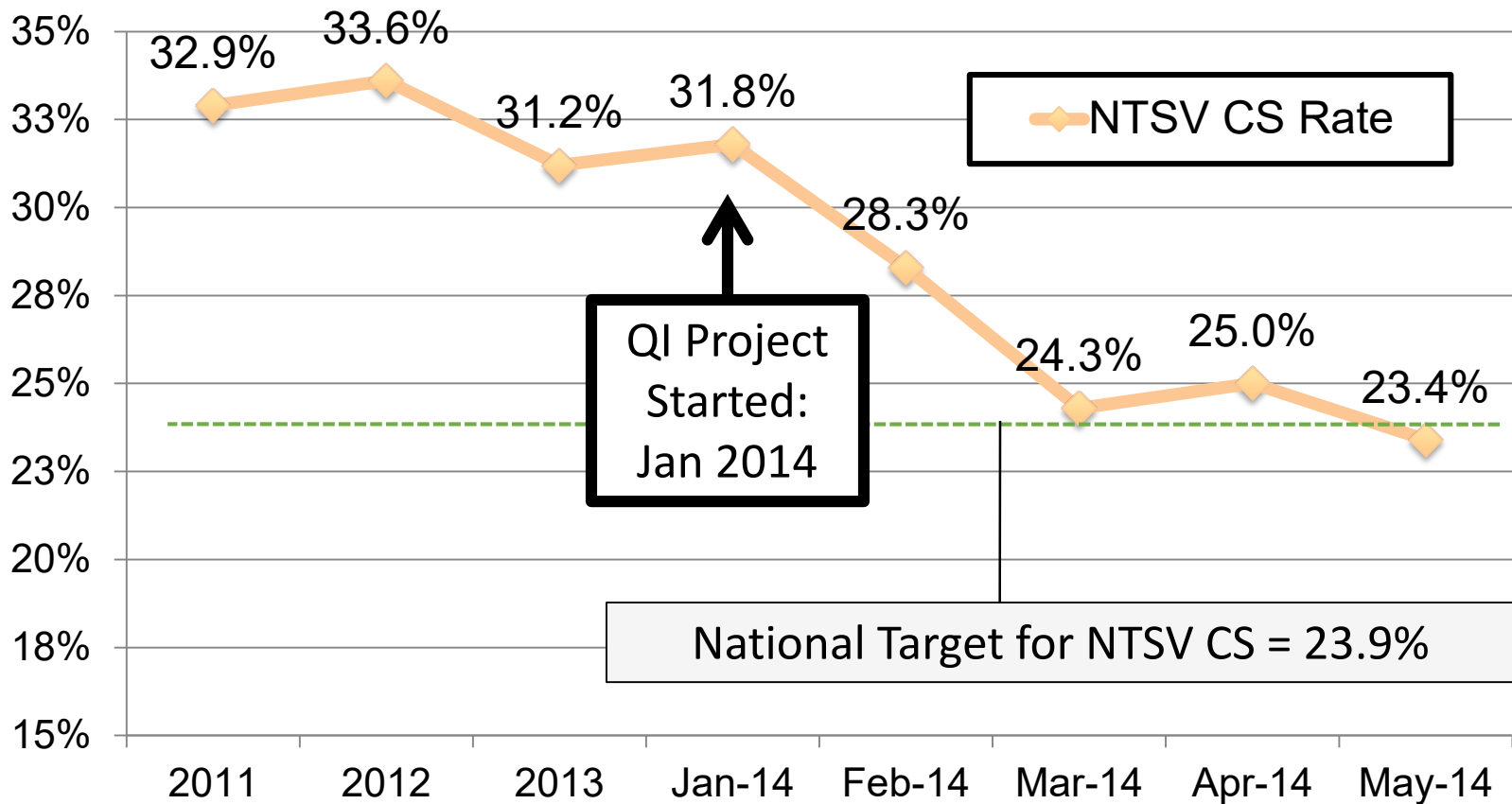
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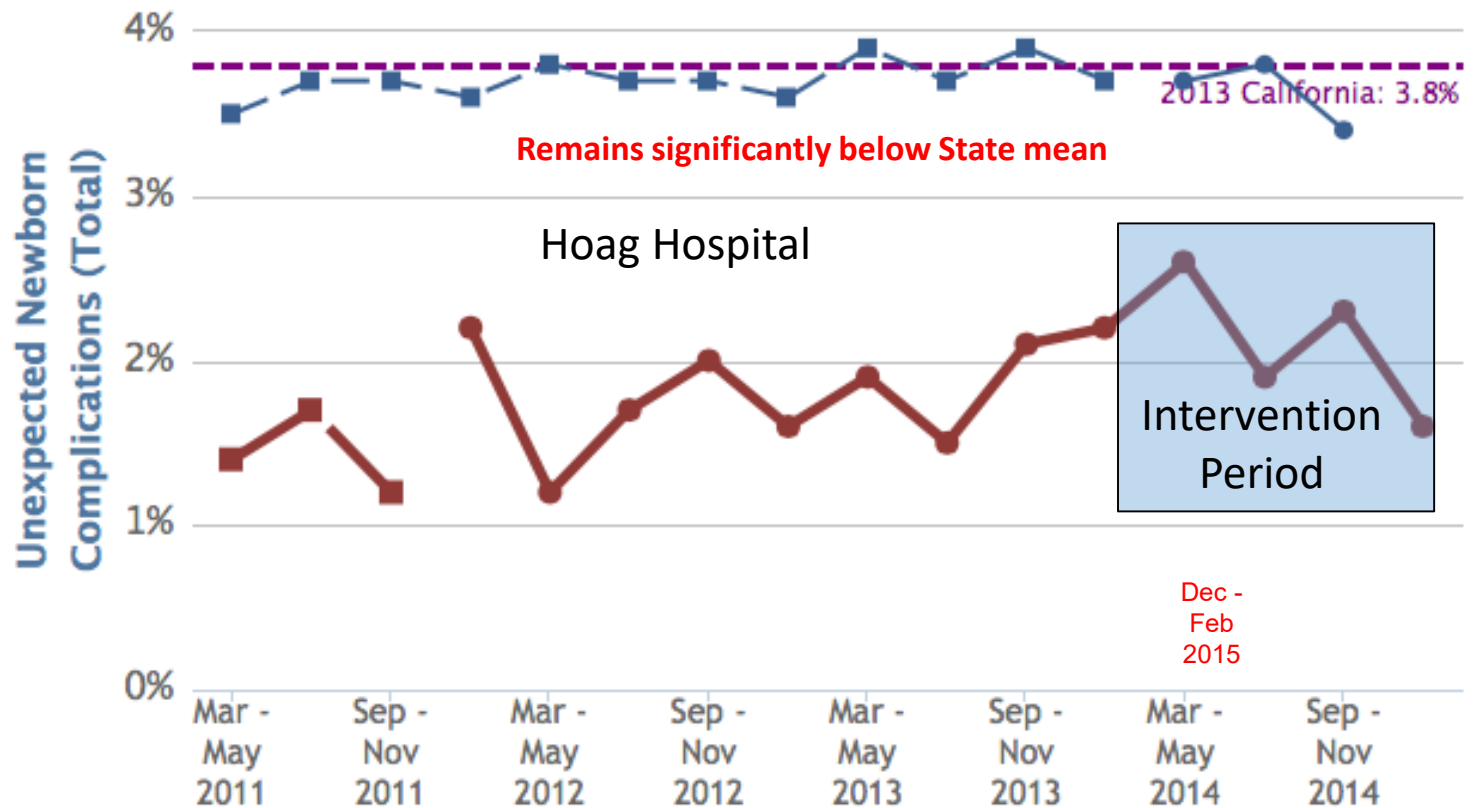
CMQCC Data-Driven QI: NTSV CS

Pilot Hospital: PBGH / RWJ CS Collaborative





No Change in Baby Outcomes: Rate of Unexpected Newborn Complications



Screen Shot from the CMQCC Maternal Data Center



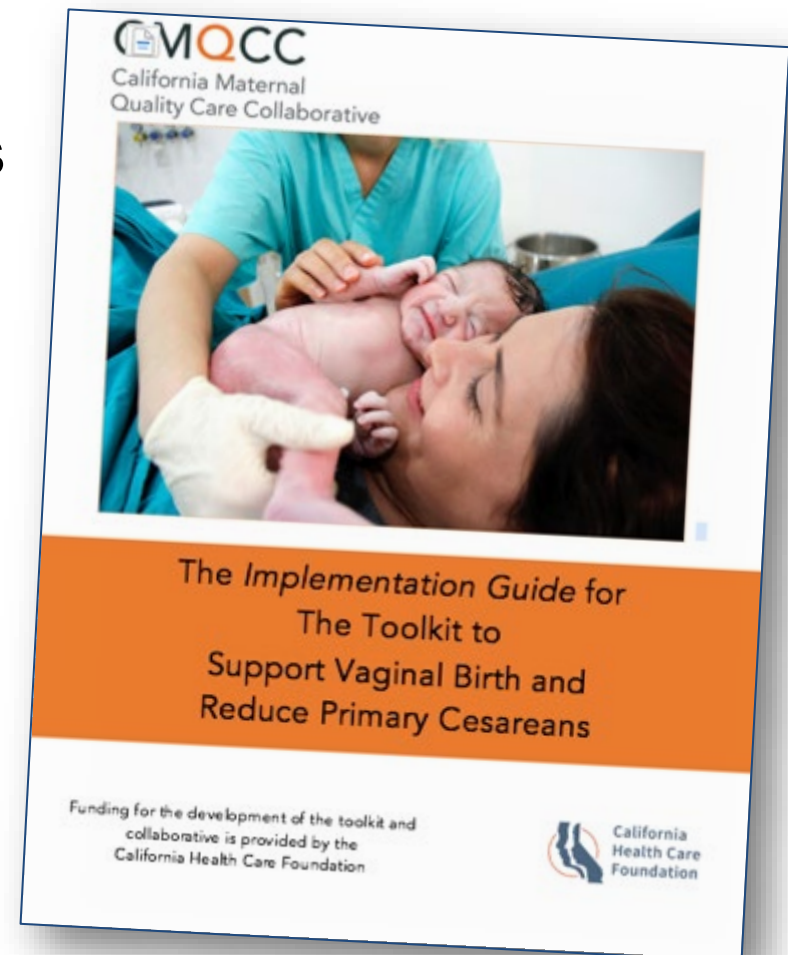
Take-home Lessons from the Pilot Hospitals

- The power of provider-level data! Was the single most important tool that finally started to “move the needle”
- Key role of nurses for leading the charge
- There needs to be a reason to change
- Use national guidelines as your playbook for safe care and to ease fears of liability
- Needs “constant gardening”
- Medical and nursing champions are essential for success of project



Implementation Guide

- “How-To Guide”
 - Translates recommendations from the toolkit into practical advice for implementation
- Provides methodology to identify:
 - Your key focus areas
 - Strategies to implement first
 - Process design for sustainability
 - Key QI principles





Available for Download

The screenshot shows the CMQCC website interface. At the top left is the CMQCC logo and the text 'California Maternal Quality Care Collaborative'. On the top right, there are links for 'Maternal Data Center Log in', 'Account', and 'Log Out'. A navigation menu contains four items: 'ABOUT US', 'FOCUS AREAS', 'PROJECTS', and 'RESOURCES & TOOLKITS'. The main content area features a sidebar on the left with a list of resources, including 'CA-PAMR (MATERNAL MORTALITY REVIEW)', 'TOOLKIT AND COLLABORATIVE TO SUPPORT VAGINAL BIRTH AND REDUCE PRIMARY CESAREANS', 'Collaborative Resources to Support Vaginal Birth and Reduce Primary Cesareans', 'FAQ Vaginal Birth Collaborative', and 'VENOUS THROMBOEMBOLISM IN PREGNANCY'. The main content area has a large yellow header for the selected resource, followed by 'View' and 'Edit' buttons. Below this, a paragraph states: 'Resources have been developed to help support the Collaborative efforts to reduce first birth cesarean sections.' Further down, there are links for 'The Implementation Guide' and 'Collaborative Resources', with a sub-link for 'Agenda Collaborative to Support Vaginal Birth and Reduce Primary Cesareans Kickoff'.

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A Toolkit to Support Vaginal Birth and Reduce Primary Cesareans



Readiness Assessment

Available in the Implementation Guide and on
www.cmqcc.org

Hospital Name:		
Project Contact:		
Focus	Readiness Questions	Y N
	Has your hospital previously participated in a formal data-driven OB QI Collaborative?	
	If yes:	
	Were there monthly chart reviews for process measures?	
	Were there monthly reports on outcome measures?	
	Were results shared with staff on an ongoing basis?	
	Have you identified current practices or policies that may be associated with increased cesarean rate?	
	Have you considered alternative policies/practices to reduce cesareans?	
	Do you have a multidisciplinary team?	
	If yes, have you started meeting?	
	If so, has your team considered strategies (practices, policies) that could serve to address and identified barriers?	
	Has your team discussed and understands the rationale for a standardized approach to the definition and management of labor dystocia?	



READINESS: Build a provider and maternity unit culture that values, promotes, and supports intended vaginal birth and optimally engages patients and families



Create a team of providers (e.g. obstetricians, midwives, family practitioners, and anesthesia providers), staff and administrators to lead the effort and cultivate maternity unit buy-in

Develop program for ongoing staff training for labor support techniques including caring for women regional anesthesia

Develop a program positive messaging to women and their families about intended vaginal birth strategies for use throughout pregnancy and birth



RECOGNITION AND PREVENTION: Develop unit-standard approaches for admission, labor support, pain management and freedom of movement



Implement protocols and support tools for women who present in latent (early) labor to safely encourage early labor at home

Implement Policies and protocols for encouraging movement in labor and intermittent monitoring for low-risk women



RESPONSE: Develop unit-standard approaches for prompt identification and treatment of abnormal labor and fetal heart patterns



Implement standard criteria for diagnosis and treatment of labor dystocia, arrest disorders and failed induction

Implement training/procedures for identification and appropriate interventions for malpositions (e.g. OP/OT)



REPORTING AND SYSTEMS LEARNING: Utilize local data and case reviews to present feedback and benchmarking for providers and to guide unit progress



Share provider level measures with department (may start with blinded data but quickly move to open release)

Perform monthly case reviews to identify consistency with dystocia and induction ACOG/SMFM checklists

Establish a project communications plan (at least monthly education and progress updates)



Next steps

- Participate in the CMQCC Maternal Data Center
 - If not already a member, please contact Anne Castles acastles@stanford.edu
- Download Implementation Guide
 - Evaluate your readiness – take the readiness assessment
- Evaluate your own process:
 - Audit 20 charts for women with NTSV for “labor dystocia” (audit tool available on www.cmqcc.org collaborative resources page)
- If interested in joining collaborative, contact Valerie Cape vcap@stanford.edu
- Questions about Toolkit, contact Valerie Cape (see above) or Holly Smith hsmith@cmqcc.org



Thank You!



Visit: [CMQCC.org](https://www.cmqcc.org)

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