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

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

The product of multi-disciplinary collaboration and is aligned with key ACOG documents:
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National Cesarean Reduction Bundle

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.

**RESPONSE**

*To Every Labor Challenge*
- Have available an in-house maternity care provider or alternative coverage which guarantees timely and effective responses to labor problems.
- Uphold standardized induction scheduling to ensure proper selection and preparation of women undergoing induction.
- Utilize standardized evidence-based labor algorithms, policies, and techniques, which allow for prompt recognition and treatment of dystocia.
- Adopt policies that outline standard responses to abnormal fetal heart rate patterns and uterine activity.
- Make available special expertise and techniques to lessen the need for abdominal delivery, such as breech version, instrumented delivery, and twin delivery protocols.

**REPORTING/SYSTEMS LEARNING**

*Every birth facility*
- Track and report labor and cesarean measures in sufficient detail to: 1) compare to similar institutions, 2) conduct case review and system analysis to drive care improvement, and 3) assess individual provider performance.
- Track appropriate metrics and balancing measures, which assess maternal and newborn outcomes resulting from changes in labor management strategies to ensure safety.

Used as model for the CMQCC toolkit
READINESS

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

- Improve access and quality to modern childbirth education
- Improved shared decision making at critical points
- Bridge provider knowledge and skills gap
- Transition to value based payments
Examples

- Sources of best childbirth education tools
- Tools/policies/concepts of “mother friendly” hospital
- Approaches to shared decision making and training aspects
- Payment models for value based results
# Available Childbirth Education Tools

## TOOLS FOR PART I OF TOOLKIT - FOR WOMEN

<table>
<thead>
<tr>
<th>Strategy#</th>
<th>Name of Tool</th>
<th>CMQCC Tool</th>
<th>External Tool</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Childbirth Connection – What Every Pregnant Woman Needs to Know about Cesarean Section</td>
<td></td>
<td></td>
<td><a href="http://www.childbirthconnection.org/pdfs/cesareanbooklet.pdf">http://www.childbirthconnection.org/pdfs/cesareanbooklet.pdf</a></td>
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<td>1</td>
<td>Lamaze International - Online Parent Education Courses</td>
<td></td>
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<td><a href="http://www.lamaze.org/ParentOnlineEducation">http://www.lamaze.org/ParentOnlineEducation</a></td>
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<td>1</td>
<td>Lamaze International – Healthy Birth Practices</td>
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<td><a href="http://www.lamazeinternational.org/d/do/653">http://www.lamazeinternational.org/d/do/653</a></td>
</tr>
<tr>
<td>1</td>
<td>ACNM - Share With Women (printable consumer education series from the Journal of Midwifery and Women’s Health)</td>
<td></td>
<td></td>
<td><a href="http://www.midwife.org/Share-With-Women">http://www.midwife.org/Share-With-Women</a></td>
</tr>
<tr>
<td>2</td>
<td>CMQCC Birth Preferences Guide (Birth Plan)</td>
<td></td>
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<td>Appendix E</td>
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</tbody>
</table>
Birth Preferences Worksheet

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

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): 

Environment:
Which option will make you most comfortable?
- [ ] I would like to limit the number of guests in my room while I am in labor by having a sign posted on the door to my labor and delivery room
- [ ] I would like to have the lights dimmed during labor
- [ ] I plan to bring in music from home (my own MP3 player, CD player, etc.)
- [ ] I plan to bring in essential oils/ aromatherapy (inc. names, please)
- [ ] I plan to bring in a "focal point" from home

Preferences for Food and Fluids:
- [ ] I prefer to keep myself hydrated by drinking fluids. I would like to avoid intravenous fluids unless it is medically necessary
- [ ] I do not mind receiving intravenous hydration during labor
- [ ] If it is safe for me to do so, I would like to eat lightly during labor

Labor Preferences:
- [ ] If safe to do so, I prefer to labor at home during the early phase of labor and be admitted to the hospital when I am in active labor
- [ ] I would like to have freedom of movement while I am in labor (walking, standing, sitting, leaning using the birth ball, etc...)
- [ ] If safe and possible
- [ ] I prefer to move around or change positions to improve my labor progress before trying "position to increase my labor progress"
- [ ] If labor is progressing slowly, I prefer to receive and let it

Some of your decisions before and during childbirth may affect your risk of cesarean. These decisions are best made in collaboration with your provider during prenatal care visits, well in advance of the time of birth. Here are some common decision points:
- Whether to wait for labor to begin on its own (induction of labor may increase your risk of cesarean)
- Whether to be admitted to the hospital in early labor or to wait until active labor (being admitted in active labor improves your chances of having a vaginal birth)
- How to monitor your baby’s fetal heart rate (low-risk women who are continuously monitored may be more likely to have a cesarean)
- Whether to have continuous labor support by a trained caregiver like a doula (continuous labor support improves your chances of having a vaginal birth)
- How to help manage labor pain and labor progress

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.
Sharing in decision making

The SHARE Model

- Seek: Seek the patient’s participation
- Help: Help her explore each option and the corresponding risks and benefits
- Assess: Assess what matters most to her
- Reach: Reach a decision together and arrange for a follow up conversation
- Evaluate: Evaluate her decision (revisit the decision and assess whether it has been implemented as planned)

RECOGNITION AND PREVENTION

Key Strategies for Supporting Intended Vaginal Birth
Strategies

- Implement institutional policies which support vaginal birth
- Early labor management and supportive care
- Labor support personnel (e.g. doulas)
- Infrastructure/equipment
- Best practices for regional anesthesia
- Protocols for intermittent auscultation
- Protocols for modifiable conditions like HSV and breech position
Examples

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

In fact, there are over 27 Tools in this section alone
Transforming Maternity Care
A Toolkit to Support Vaginal Birth and Reduce Primary Cesareans
Promoting mobility in labor/birth

- For both patients with and without regional anesthesia/analgesia
- Know your labor beds and what they can do
- Use of birthing balls and peanut balls
- Posters in labor rooms of labor positions
- Use of telemetry EFM
Peanut Ball

- Decrease length of labor
- Decreasing CS rate in patients with epidurals

RESPONSE

Management of Labor Abnormalities
Strategies

- Create highly reliable teams and improve interdisciplinary communication
- Adopt standard measures 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
Examples

- Spontaneous labor algorithms/dystocia checklists
- Induction algorithms/checklists/policies for timing, scheduling, proper selection
- Algorithms for standard intervention for FHR changes
- Model policies for oxytocin
- Tools for effective communication
<table>
<thead>
<tr>
<th>CMQCC Labor Dystocia Checklist (ACOG/SMFM Criteria)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Diagnosis of Dystocia/Arrest Disorder</strong> (all 3 should be present)</td>
</tr>
<tr>
<td>□ Cervix 6 cm or greater</td>
</tr>
<tr>
<td>□ Membranes ruptured, then</td>
</tr>
<tr>
<td>□ No cervical change after at least 4 hours of adequate uterine activity (e.g. strong to palpation or MVUs &gt; 200), or at least 6 hours of oxytocin administration with inadequate uterine activity</td>
</tr>
<tr>
<td><strong>2. Diagnosis of Second Stage Arrest</strong> (only one needed)</td>
</tr>
<tr>
<td>No descent or rotation for:</td>
</tr>
<tr>
<td>□ At least 4 hours of pushing in nulliparous woman with epidural</td>
</tr>
<tr>
<td>□ At least 3 hours of pushing in nulliparous woman without epidural</td>
</tr>
<tr>
<td>□ At least 3 hours of pushing in multiparous woman with epidural</td>
</tr>
<tr>
<td>□ At least 2 hour of pushing in multiparous woman without epidural</td>
</tr>
<tr>
<td><strong>3. Diagnosis of Failed Induction</strong> (both needed)</td>
</tr>
<tr>
<td>□ Bishop score ≥6 for multiparous women and ≥8 for nulliparous women, before the start of induction (for non-medically indicated/elective induction of labor only)</td>
</tr>
<tr>
<td>□ Oxytocin administered for at least 12-18 hours after membrane rupture, without achieving cervical change and regular contractions. *Note: At least 24 hours of oxytocin administration after membrane rupture is preferable if maternal and fetal statuses permit</td>
</tr>
</tbody>
</table>
**Induction of Labor Algorithm**

1. **Unfavorable Cervix:** Bishop Score < 8 for Nulliparas, ≤ 6 for Multiparas (proceed only if medical indication for induction exists)
   - Mechanical or Pharmacological Cervical Ripening
     - If successful, follow right side of algorithm (favorable cervix)
       - Repeat with Different Method
       - No Response Consider Oxytocin Trial
       - Home (if appropriate) or Cesarean. (*Note: ACOG guidelines state that failed induction in the latent phase can be avoided by allowing for longer durations of the latent phase, 24 hours or more)
   - Unfavorable Cervix
     - See active labor partogram and/or labor duration guidelines
   - Cervical Change, but Cervix ≤ 5 cm
     - Cervical Change and Cervix ≥ 5 cm
     - Continue/Start Oxytocin And Consider ROM
   - No Cervical Change

2. **Favorable Cervix:** Bishop Score ≥ 8 for Nulliparas, ≥ 6 for Multiparas
   - Initiate Oxytocin
   - Cervix < 6 cm, UNABLE To AROM and No Cervical Change with 24 Hours Oxytocin
     - Proceed to Cesarean
   - No Cervical Change

*Per ACOG guidelines, induction of labor before 41 weeks should only be performed if there is a maternal or fetal medical indication to do so. If 39-41 weeks without a medical indication for induction of labor, do so only with a favorable cervix.*
Active Labor Partogram

ACTIVE LABOR PARTOGRAM
Term ≥ 37 Weeks Gestation

NORMAL LABOR PROGRESS  |  CONSIDER INTERVENTIONS  |  ≥ 95TH PERCENTILE MAKE DELIVERY PLAN


SWEDISH
adapted with permission from Swedish Medical Center

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A Toolkit to Support Vaginal Birth and Reduce Primary Cesareans
Example Algorithm: Management of Intrapartum FHR Tracings

Appendix Q
Example Algorithm for the Management of Intrapartum Fetal Heart Rate Tracings

Category 1
- Moderate variability w/o late or variable decelerations or w/o tachycardia
  - May observe

Category 2
- Marked variability or moderate variability w/ decelerations or w/ tachycardia ≥ 20 min
  - ABCD

Category 3
- Absent variability w/o decelerations and w/ or w/o tachycardia ≥ 20 min
  - Prolonged decel ≤ 60 BPM (or ≤ 80 BPM if remote from delivery)
  - Absent variability w/ decelerations or w/ bradycardia (baseline rate < 110 BPM; or sinusoidal pattern)
  - Scalp stimulation
  - Begin prep for urgent delivery and initiate resuscitative measures & scalp stim.
  - Begin transport to OR by 3 min.
  - Delirious, w/ delay should decel persist >10 min

Tracings Associated with Significant Acidemia
- Minimal or absent variability for ≥ 60 min w/o accelerations or w/ recurrent late or variable decelerations
- Cat III for ≥ 20 min w/o response to acoustic/scalp stim
- Bradycardia ≤ 60 BPM

If no acceleration or return of moderate variability, then evaluate evolution of tracing
- If preceding tracing not associated with significant acidemia, then ABCD
- If preceding tracing associated with significant acidemia, then proceed to urgent delivery

If acceleration or return of moderate variability, then ABCD
- Repeat testing if minimal or absent variability persists for 20 min
- If minimal or absent variability persists for 60 min w/o accelerations or return of moderate variability with scalp stim, then proceed to urgent delivery

Transforming Maternity Care
A Toolkit to Support Vaginal Birth and Reduce Primary Cesareans
REPORTING/SYSTEMS

Using Data to Drive Improvement
Key Strategies for Using Data to Reduce Cesareans

- Make data compelling to Providers
- Assist organizations to understand data associated with their hospital
- Assist providers to understand their CS rates
- Engage women, employers, and the general public in the improvement process
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
Success Stories/Lessons Learned
Example Hospitals With Sustained Success
John Muir – Walnut Creek
(Non-profit Private Practice Hospital with ~2,800 annual births)

- Turning point – embedded practices in the culture
  - Patience with length of labor
  - External Cephalic version
  - Skilled attendants in singleton vaginal breech births

- A safe oxytocin use policy
- Non-medically indicated induction elimination
- Intermittent monitoring for low-risk women
  - With telemetry
  - Delayed pushing in second stage
- Delivery in OR not necessarily cesarean
  - Be prepared, but not committed to cesarean

NTSV Rate 17.4%
Kaiser Permanente – Roseville (Staff-Model HMO Hospital with ~5,300 annual births)

- 24/7 staffing with OB Hospitalist
- Utilizes midwives
- Adherence to quality improvement principles
- Early adopters of Preventing the First Cesarean Delivery
- Recognition of the team contribution – nurses are key
- Data frequently shared
- Tailored messaging to different disciplines
- OB Medical Director

Challenges:
- 23% Obese/Morbidly Obese (pre-pregnant)
- 19% over 35yrs of age
Take-home Lessons from the Pilot Hospitals

- Power of provider-level data
- Key role of nurses
- Need a reason to change
- National guidelines very helpful
- Needs “constant gardening”
- Medical and Nursing leadership important
Thank You!

Visit: CMQCC.org