# CMQCC
## California Maternal Quality Care Collaborative



## The *Implementation Guide* for The Toolkit to Support Vaginal Birth and Reduce Primary Cesareans

## California Health Care Foundation

# CMQCC
California Maternal
Quality Care Collaborative

## THE TOOLKIT AND COLLABORATIVE TO SUPPORT VAGINAL BIRTH AND REDUCE PRIMARY CESAREANS IMPLEMENTATION GUIDE

CMQCC's mission is to end preventable morbidity, mortality and racial disparity in California maternity care. To achieve this goal, we will:

- Identify, define and implement best practices for public health, communities and women with quality, safety and social justice as the clear priorities of every decision and action.
- Promote communication and collaboration between all maternity stakeholders.
- Gather, review and organize maternity data and statistics into actionable information.
- Build the next generation of maternal health leaders to continue the growth and scope of CMQCC.

We are devoted to eliminating preventable maternal death and injury through the promotion of equitable maternity care in California by bringing resources, tools, measures and quality improvement strategies to providers, administrators and public health leaders.

## INTRODUCTION

Prior to beginning any quality improvement project, it is important review and understand some basic components of quality improvement, change and sustainability. The California Maternal Quality Care Collaborative has hosted and led several, successful quality improvement collaboratives and has identified several characteristics to success. In addition to these concepts, this Implementation Guide can be used to direct your quality improvement efforts to implement the key elements of the patient safety bundle related to Supporting Vaginal Birth and Reducing Primary Cesareans along with other elements of the Toolkit to Support Vaginal Birth and Reduce Primary Cesareans.

## MAKING A CASE FOR CHANGE
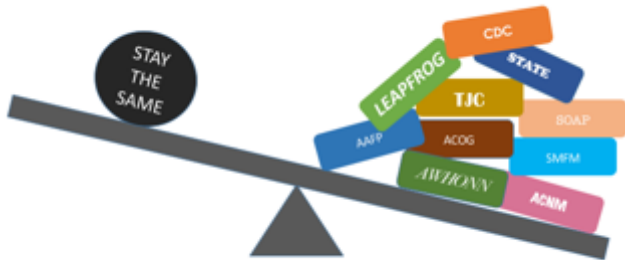


Cesarean birth is a lifesaving procedure, with obvious benefits to mother and baby when vaginal birth is no longer the safest option. Nonetheless, the extraordinary rise and remarkable variation in rates of cesarean create concern for both the quality and cost of maternity care. More information can be found in the toolkit.

## LESSONS FROM THE FIELD

Valuable lessons have been learned through previous work that builds on concepts associated with success in implementing new clinical practices.

### It takes a broad team to implement systematic change

Hospitals with the greatest success in implementing recommended practices have recognized the need to engage all stakeholders in the project. It is important to think through who the stakeholders are in each institution. After these leaders are identified, it will be important to engage them in planning and implementation of evidence based practice changes.

### Easy wins matter

Demonstrating some early, straightforward successes builds confidence and enthusiasm for continued improvement. What constitutes an easy win will vary by hospital, birth center, or labor and delivery unit.

### Goals and timelines are very useful

An internal review of the experiences of prior collaborative participants revealed that highly motivated teams developed implementation plans with specific goals and timelines. Structuring their work in this way and assigning deliverables gave teams a sense of progress and momentum that was encouraging. An example timeline/plan is **here.**

| Multi-disciplinary Implementation Team | |
|---|---|
| **Disciplines & Departments** | **Needed?** |
| Obstetric Providers | Y E S |
| Nursing | |
| Anesthesia | |
| Laboratory | |
| Operating Room | |
| Quality | |
| IT/EMR | |
| Others unique to your hospital setting? | |

## Small tests of change matter

A key principle of implementation science is that fit between intervention and context is crucial. The exact manner in which bundle elements are deployed in each hospital needs to be adapted to each unit. While all improvement requires change, not all change results in an improvement. It is important that the improvement team be willing to test multiple ideas while searching for the changes that result in improved care at the local level. In the Model for Improvement, these multiple small tests of change are referred to as the PDSA, or Plan Do Study Act cycle. PDSA cycles should be run among smaller groups (for example, one nurse, one physician, and during one shift to start) before gradually expanding to a larger population within the system or organization if the change is determined to be successful.

## PDSA Cycle



The PDSA cycle is an improvement tool which promotes improvement via the implementation of rapid-cycle tests among an increasingly larger population and a wider range of conditions. The "**Plan**" step in the cycle involves identifying and planning the change to be tested. Plans should be as specific as possible and include information about where the test will take place, who will participate, resources needed and how the effectiveness of the change will be measured. The "**Do**" portion of the cycle is the actual act of carrying out the test. Initial tests should be small and local. For example, an initial test of a new form could be performed with one nurse and one patient on one nursing unit. If the test proves successful, the new form can be tested with several nurses and several patients in several different units. The "**Study**" phase of the PDSA cycle involves rapid data collection that is done during testing through a "huddle" or "debrief" with the staff or patients involved in the newly designed process. The results of testing will be analyzed and will help to determine whether a change process will be abandoned, adapted, or adopted. Testing periods should not last more than a month and can usually be completed within a few days, allowing for multiple testing cycles if needed. Finally, the "**Act**" portion of the cycle occurs when the decision to Adapt, Abandon or Adopt is made, based on the analysis of rapidly-collected information. If revisions and changes are indicated, the process is revised or "adapted," and a new testing cycle is instituted.  If the trials have been unsuccessful, the change idea may be "abandoned." The decision to "adopt" a new process occurs after it has been tested broadly under various circumstances and settings. For more information and tools related to PDSA cycles and other QI processes, see the Institute for Health Care Improvement's Toolkit of QI Essentials.

## Data matter

Data are needed to define baseline, test changes, provide feedback, and answer the essential question, "How do we know the change was an improvement?" Participation in the CMQCC Maternal Data Center provides the framework to streamline measurement yet provide current data related to quality improvement projects.

## Administrative support matters

Teams that made the greatest progress had high-level administrative support. Successful bundle implementation requires staff time and budgetary resources for equipment/supplies, education/training, and data collection. Implementation teams may need administrative support in identifying organizational stakeholders and resources, purchasing supplies, moving order sets and policies through committees, and obtaining integration of best practices. Facilities also need to provide resources and staff support for entering and analyzing data collection. This will often involve working collaboratively with information technology and quality departments. Staff need release time or additional support to complete these activities successfully.

## It takes time and persistence to get systems running smoothly

The scope of full implementation of the Supporting Vaginal Birth and Reducing Primary Cesareans toolkit and bundle elements involves the careful coordination of multiple clinicians and departments. Therefore, everyone should realize that, while there will be some "quick wins", overall success will often take significant time. In addition, we recognize that developing and refining systems are always works in progress. Sustainability requires steady effort and attention by committed leaders and front line staff.

## Champions are essential

Formal leaders, opinion leaders and early adopters and important to overall success since the changes can be uncomfortable and take a long time. Champions, however, are essential. Champions are individuals who actively associate with the project and dedicate themselves incorporating best practices within the structure of each unit. Both nursing and physician champions are core components of successful implementation and especially with leading culture change associated

with Supporting Vaginal Birth and Reducing Primary Cesareans. Nursing champions typically play a central role in testing, implementing, coordinating, and disseminating clinical practice refinement and changes. Physicians and midwife champions are particularly important since they make the definitive diagnostic and treatment decisions, and are particularly visible stakeholders.

## Sustainability

Long term fidelity of changes made within a unit are dependent on a commitment to sustainability of the new or altered clinical practice. It is important to start your quality improvement project with the end in mind. This means to be sure to include all relevant stakeholders, plan processes that make sense, and adequately educate and train staff – from the beginning. Successful sustainable efforts are based in the foundation provided in the initial phases of the project. More information on sustainability can be found here.

## GETTING STARTED

A basic principle to Quality Improvement is an understanding to "start where you are". In order to begin, each team will need to determine "where they are" by performing a baseline assessment of both quality improvement readiness as well as clinical readiness. A QI readiness assessment will prepare your team for the implementation work to begin. The QI Readiness Assessment is found on page 23 of this document. A clinical readiness assessment helps your team to analyze the processes you may have in place and what clinical elements need your teams' focus. The Structure Measures below will help to analyze your clinical readiness.

| Structure Measures (Clinical Checklist) | Toolkit location |
|---|---|
| ☐ Has your hospital implemented updated labor protocols for a unit-standard approach for providing labor support, and freedom of movement? | P. 29, 44, 45, 75, 78, 95 |
| ☐ Has your hospital implemented standard criteria for diagnosis and treatment of labor dystocia, arrest disorders and failed induction? | P. 15, 51, 52, 55, 57, 74, 110, 111 |
| ☐ Has your hospital implemented protocols and support tools for women who present in latent (early) labor to safely encourage early labor at home? | P. 14, 39, 43, 95, 107 |
| ☐ Has your hospital developed a policy to implement intermittent monitoring policies for low-risk women? | P. 14, 29, 41 |
| ☐ Has your hospital developed OB specific resources and protocols to support patients, and family through an unexpected/traumatic Cesarean? | |
| ☐ Have you shared provider level measures with department members (may start with blinded data but quickly move to open release)? | P. 68-75<br>Also see "Guidance for Understanding and Unblinding Provider-Level NTSV Rates" on page 29 of this document |
| ☐ Were some of the recommended tools for the Safe Reduction of Primary C/S bundle (i.e. dystocia checklist, order sets, and other tracking tools) integrated into your hospital's Electronic Health Record system? | |
| ☐ Has your hospital implemented training/procedures for identification and appropriate interventions for malpositions (e.g. OP/OT)? | P. 47, 55, 56, 58, 63, 64, 65, 80, |
| ☐ Has your hospital developed a policy to integrate doulas into the birth care team? | P.14, 27, 31, 40, 42, 46, 67, 88, 95, 98, 100, 101, |

## Looking at the Data: Taking a Deep Dive

Our pilot hospitals in reducing Nulliparous Term Singleton Vertex (NTSV) delivery rates, found data to be one of the most important drivers of change. This includes overall NTSV rate as well as NTSV rate by provider. Some hospitals have found that sharing provider data is a motivator for commitment to changing practice and hospital unit culture to support vaginal birth.

Initial "deep dive" efforts can be focused on identifying a number of NTSV patient charts and applying the principles of the checklist found below. Findings can help inform initial focus areas for improvement. A simple audit tool for this chart review is located on of this document.

| Criteria 1 | | | Criteria 2 | | Criteria 3 |
|---|---|---|---|---|---|
| Diagnosis of Dystocia/Arrest Disorder (all three should be present) | | | Diagnosis of Failed Induction before 6 cm dilation (both should be present) | | Diagnosis of failed induction after 6 cm dilation (see criteria 1) |
| Cervix ≥ 6 cm | Membranes ruptured, then | No change x 4 hrs with adequate uterine activity ( or 6 hrs with oxytocin) | Bishop score ≥ 6 before elective induction | Oxytocin used for a minimum of 12 hours after ROM | |

## Gathering Your Team

There is no standard for your quality improvement team composition or size; effective teams include members that represent system-wide leadership, day-to-day (local) leadership, and technical and professional expertise. Effective team composition includes a team leader to serve as the key contact/project manager, one or more clinical champions to provide support and represent the clinical disciplines that will be affected by the change in process, frontline staff members, a quality improvement expert to assist the team, and an executive sponsor from the hospital leadership team

to ensure the team has the resources necessary for improvement.

## Announcing the Change

A planned change in practice or implementation project should be announced and shared well in advance of the intended start date. This will provide staff the opportunity to share in the planning of the proposed change and rollout. Additionally, this will afford ample time to make sure all affected parties to have heard of the change. Make sure to include all departments impacted by the change. It is always better to over communicate than under communicate the intended message.
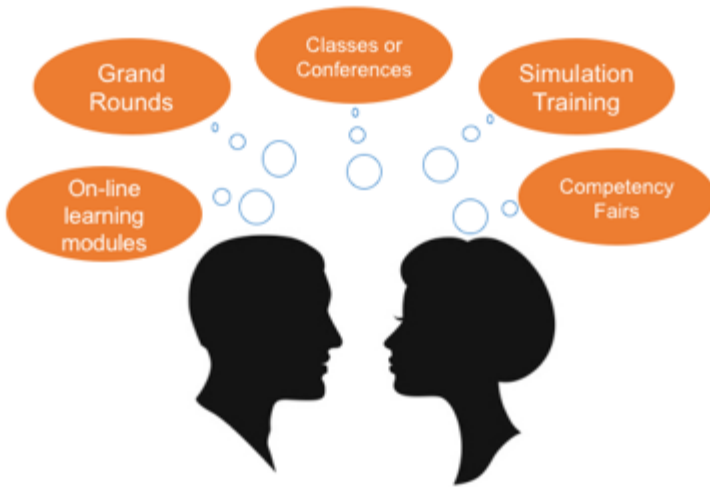
**(continued next page)**

## Provide an Educational Foundation

As mentioned elsewhere in the Implementation Guide, providing the "why" is key to successful implementation and sustainability of any clinical practice or unit culture change. The CMQCC Toolkit to Support Vaginal Birth and Reduce Primary Cesareans is full of great ideas and tools for use and individualization for your unit. Additional, the toolkit is associated with a slide deck for teaching staff and can be found here.



## Make it easy to do the right thing



A unit culture that makes it easy to perform the change makes it more appealing to the staff (Brewster et al., 2015). When a new process is liked by the staff, it may make it easier to modify practice to accommodate the proposed change. Encourage staff involvement in the process and planning for implementation. Organizations that sponsor a culture of learning and involvement are also conducive to change – which can be obtained through shared decision making (Rycroft-Malone, 2004). Workflow is also efficient and makes the "right thing" the *easiest* to do.

## Mentoring

A mentor model is used to facilitate progress through the collaborative by sharing successes, challenges and barriers. Collaborative mentors share best practices through evidence based toolkits and evidence based updates. This same model can be applied at the local level. Evidence based facilitators can be identified within the labor and delivery units to be mentored by unit leadership and, in turn, serve as mentors to fellow front line staff (Melnyk, 2012).
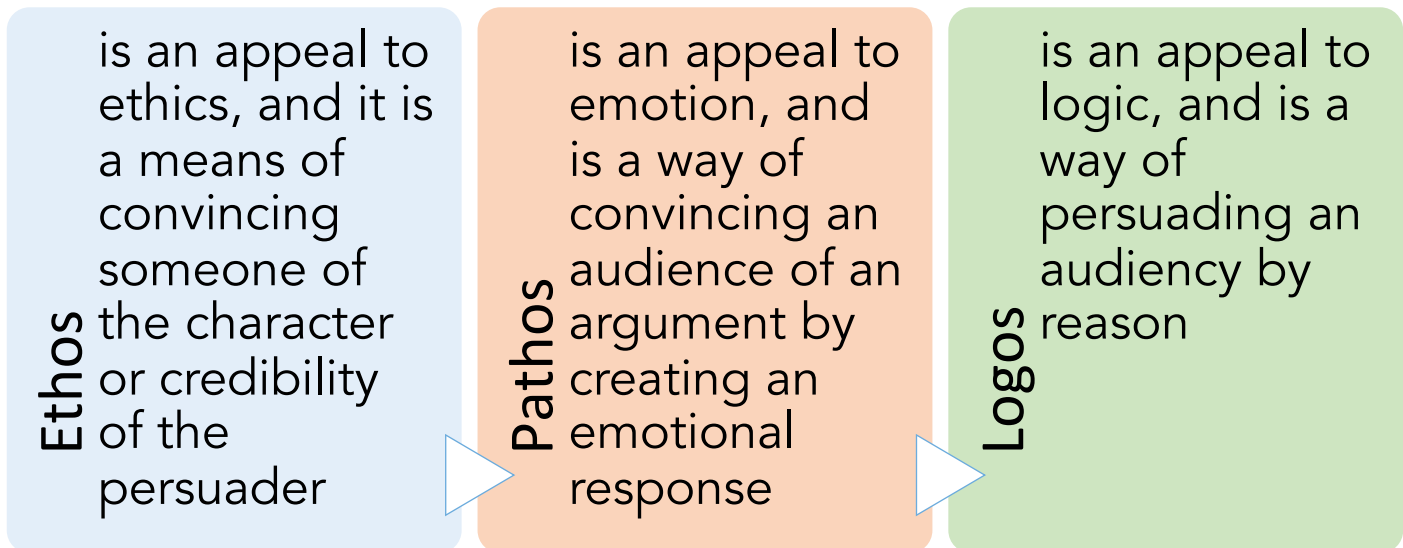
## Creating a Culture Ready for Change

- ♦ Must be a multidisciplinary effort with all members of the team's needs respected
- ♦ Team must meet regularly
- ♦ Ability to provide a safe environment for:
  - o Listening
  - o Questioning
  - o Persuading
  - o Respecting
  - o Helping
  - o Sharing
  - o Participating
- ♦ Successful teams will soon learn to have "system-wide" view rather than just their own view of their area

## Being Persuasive

Aristotle's ingredients for persuasion.

| Ethos | Pathos | Logos |
|---|---|---|
| is an appeal to ethics, and it is a means of convincing someone of the character or credibility of the persuader | is an appeal to emotion, and is a way of convincing an audience of an argument by creating an emotional response | is an appeal to logic, and is a way of persuading an audiency by reason |

Examples of persuasion in healthcare:

| Ethos | Pathos | Logos |
|---|---|---|
| "patients deserve the best care"<br><br>"patiet safety must come first" | "we went into healthcare to help patients"<br><br>"it feels good to improve our care"<br><br>Sharing a patient story | "statistics show better long term outcomes"<br><br>"reduced complications" |
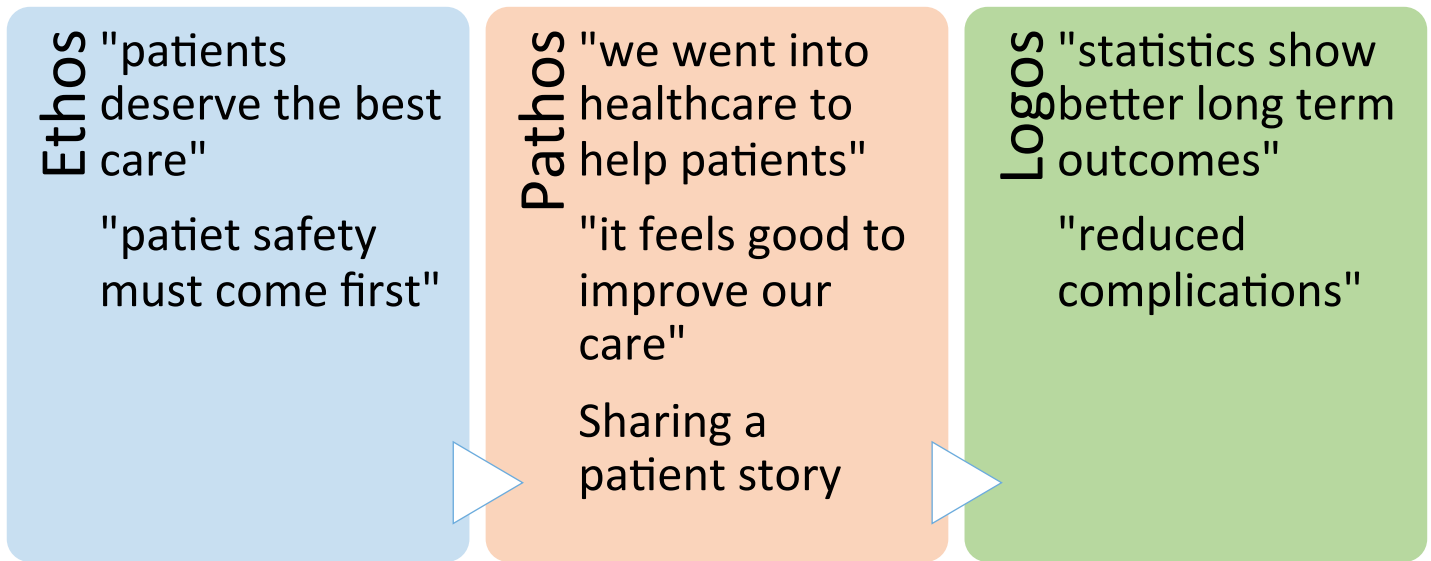
## DRIVER DIAGRAM

What is a driver diagram?

A Driver diagram is a tool commonly used by quality improvement teams to highlight and understand the key elements that need to be changed to improve a process. They are a visual demonstration of the pathway to improvement that shows the causal relationship between ideas for change and an outcome. Driver diagrams are a type of structured logic chart with three or more levels that include:

- The overall goal (AIM)
- Systems-level factors that must be addressed in order to achieve the goal (Primary Drivers)
- Specific activities that drive the systems-level factors (Secondary Drivers)
- Specific changes to a process or changes that can be rolled out in the ongoing improvement work (Change Ideas)

Driver diagrams provide a pathway for change that can help a team determine the factors that need to be addressed to achieve the overall goal, show how those factors are interconnected and provide the framework for improvement work. Driver diagrams are best used when an improvement team needs to determine which actions should be undertaken to achieve a goal. The working team begins with the specific goal or outcome and works backward to identify both the primary drivers and secondary drivers needed to attain that outcome.

## TOP 10 DRIVER DIAGRAM TO SUPPORT VAGINAL BIRTH AND REDUCE PRIMARY CESAREANS

**The overall AIM to support vaginal birth and reduce primary cesareans to reach the Healthy People goal for low risk cesarean section target rate of 23.9%.** This reduction in cesarean rate is to also make sure there are continued good out comes for infant and maternal measures. The top ten list of steps shown in the first table were chosen for their immediate impact and their ability to be quickly implemented by hospitals. Timing of implementation will be determined by each facility.



### TOP 10 DRIVER DIAGRAM

| Aim | Primary Drivers | Top Ten First Steps (not to downplay other activities!) |
|---|---|---|
| **Improve Support for Intended Vaginal Birth and Reduce Primary Cesareans**<br><br>**Target: NTSV\* CS rate <24%**<br><br>**With continued good outcomes for infant and perineal measures** | **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 with 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, | • Implement protocols and support tools for women who present in latent (early) labor to safely encourage early labor at home |

| | labor support, pain management and freedom of movement | • Implement Policies and protocols for encouraging movement in labor and intermittent monitoring for low-risk women |
|---|---|---|
| *NTSV= Nulliparous, Term, Singleton Vertex | **Response**: Develop unit-standard approaches for prompt identification and treatment of abnormal conditions | • 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 checklists (derived from the ACOG/SMFM guidelines) |
| | | • Establish a project communications plan (at least monthly education and progress updates |

## NEXT NINE

The top ten list of steps shown in the first table were chosen for their immediate impact and their ability to be quickly implemented by hospitals.  Additional recommended steps, that are important but not the easiest to accomplish immediately are listed below.  Timing of implementation will be determined by each facility.

| **Primary Drivers** | **"Next" Nine Steps** (not to downplay other activities!) |
|---|---|
| **Readiness:** Build a provider and maternity unit culture that values, promotes, and supports intended vaginal birth and optimally engages patients and families | • Implement a policy to integrate doulas into the birth care team* |
| | • Introduce principles of shared decision-making |
| | • Develop OB specific resources and protocols to support patients, and family through an unexpected or traumatic Cesarean  birth* |
| | |

| Recognition and Prevention:  Develop unit-standard approaches for admission, labor support, pain management and freedom of movement | • Make available special expertise and techniques to lessen the need for abdominal delivery, such as breech version, instrumented delivery, and twin delivery protocols |
| | • Establish an in-house maternity care provider or alternative coverage program (e.g. Laborist Model or MD/CNM Collaborative Practice Models which guarantees timely , effective and supportive responses to labor problems |
| | • Implement anesthesia best practice recommendations for laboring women with regional neuraxial anesthesia |
| | |
| Response:  Develop unit-standard approaches for prompt identification and treatment | • Implement standard criteria for diagnosis and treatment of fetal heart rate abnormalities |
| | • Ensure initial training and ongoing physician competency in forceps and vacuum extraction |
| | |
| Reporting and Systems Learning:  Change information systems to support effort | • Integrate some of the recommended tools for the Safe Reduction of Primary C/S bundle (i.e. order sets, tracking tools) into your hospital's Electronic Health Record system |

## MEASURES ASSOCIATED WITH THE IMPLEMENTATION COLLABORATIVE

The structure measures can be found here along with correlation to resources within the toolkit. The structure measures are a checklist of recommended policies, protocols, processes and tools. These are one time measures to be documented as complete once implemented. Check status of implementation quarterly until complete.

| Performance or Outcome Measures |
| --- |
| **Nulliparous Term Singleton Vertex (NTSV) Cesarean rate** |
| **Cesarean for Labor Arrest/CPD among NTSV spontaneous labors** |
| **Cesarean among induced NTSV births** |
| Rates calculated using administrative data and chart review to validate inductions |

| Process Measures |
| --- |
| **NTSV Spontaneous Labor Arrest / CPD: Consistency with Guidelines**<br><br>▪ Review *of sample of NTSV CS women with spontaneous labor and a dystocia code, for analysis of consistency with ACOG/SMFM guideline. Fallout cases include those who did not meet the criteria of the dystocia guideline:*<br>    ○ *If <6cm dilated,*<br>    ○ *If 6-10cm dilated, was there at least 4h with adequate uterine activity or at least 6h with inadequate uterine activity and with oxytocin?*<br>    ○ *If completely dilated, was there 3h or more in Second Stage?*<br>*Denominator: all NTSV CS women without a fetal intolerance code and with a dystocia code,*<br>*Numerator: those who were consistent with bundle* |
| **NTSV Induced Labor Management: Consistency with Guidelines**<br><br>▪ *Review of sample of NTSV CS women with induced labor and a dystocia code, for analysis of consistency with the ACOG/SMFM guideline. Fallout cases include those who did not meet the criteria of the dystocia guideline:*<br>    ○ *If <6cm dilated at time of CS, were there at least 12 hours of oxytocin after rupture of membranes?*<br>    ○ *If 6-10cm dilated, was there at least 4h with adequate uterine activity or at least 6h with inadequate uterine activity and with oxytocin?*<br>    ○ *If completely dilated, was there 3h or more in Second Stage?*<br>*Denominator: Induced NTSV women without a fetal intolerance diagnosis*<br>*Numerator: those who were consistent with bundle* |

| Balancing Measures |
| --- |
| Unexpected Newborn Complications (UNC) among NTSV births |
| 3rd & 4th Degree Lacerations among NTSV births |
| 5 minute APGAR ≤5 among NTSV births (test measure) |
| Using administrative data |

| Optional Process Measures - Education |
|---|
| At the end of this quarter, what cumulative proportion of _OB physicians and midwives_ has completed an education program on the ACOG/SMFM Consensus Statement for labor management guidelines reflected in the unit-standard protocol?  (Estimated in 10% steps by nurse manager or designee) |
| At the end of this quarter, what cumulative proportion of _labor nurses_ has completed an education program on the ACOG/SMFM Consensus Statement for labor management guidelines and labor support techniques reflected in the unit-standard protocol? (Estimated in 10% steps by nurse manager or designee) |

| Data Quality Measures |
|---|
| Birth Certificate Induction Coding Errors among NTSV women<br>    o _Denominator: all NTSV CS women with codes for induction on the BC_<br>    o _Numerator those with documented induction_ on chart review |
| ICD-10 Induction Coding Errors among NTSV women<br>    o _Denominator: all NTSV CS women with ICD-10 codes for oxytocin, misoprostol or failed induction_<br>    o _Numerator those with documented induction_ on chart review |
| These are "by-products" of the induction confirmation efforts |

Identification of potential barriers to your project are important to consider and solve prior to sharing with staff. It is possible that additional challenges may occur during implementation, but it will be in your favor to remove as many barriers prior to the start.

| Potential Implementation Barriers & Strategies to Overcome | |
| --- | --- |
| **Potential Barrier Drivers** | **Strategies to Overcome** |
| Clinician<br>• Resistance to change<br>• Don't see the need for change<br>• Lack of understanding and/or knowledge deficit | • Build compelling story with respected peer leader to speak to the importance of initiating proposed changes<br>• Provide peer based education to all clinicians with education on the initiative and goals<br>• Provide peer-reviewed evidence to support change<br>• Share goals of the proposed QI project/change<br>• Provide opportunities to answer questions and/or concerns |
| Upper management<br>• Lack of knowledge of Perinatal QI<br>• Lack of resource support | • Share data on outcomes of facility in relation to like facilities<br>• Provide high quality peer-reviewed research and evidence to support change<br>• Instill the importance of resource (people, financial) support for project to ensure success<br>• Share plan for implementation and sustainability |
| Time limitations | • Utilize efforts of many staff members – consider use of nurse clinical ladder to support project<br>• Make sure meetings are organized and succinct to decrease the impact on available time<br>• Offer meetings at multiple times; consider web based meetings for those who may be off site<br>• Utilize regularly scheduled department to highlight project and results – succinct<br>    o Be prepared to answer questions |
| Resource limitations | Connect with other hospitals or QI leaders for potential solutions; or sharing resources through collaborative work |
| Bingham, D., & Main, E. (2010). Effective implementation strategies and tactics for leading change on maternity units. Journal of Perinatal and Neonatal Nursing. 24(1) 32-42. | |

## AS THE PROJECT CONTINUES

### Celebrate successes along the way



Take the time to celebrate milestones of completion all along the journey. Don't wait until implementation is complete. Engaged labor and delivery units are always in some state of change, so it is important to take opportunities along the way. Use your implementation timeline to set goals – when these milestones are met, celebrate with your team and your staff.

### Display data – keep it current AND interesting!

Unit bulletin boards provide a great way to share the results of the work of improvement. Regularly display your unit's progress or lack of progress to provide feedback. Simple numbers and graphs may not be as interesting to your staff as they are to you – so be creative in your data display. There are many ideas to display data on the internet. Often, visual representations of data stimulate conversation and interest.



### Making it stick

The theory of planned behavior speculates that a person is more likely to carry out the desired behavior change once a clear understanding of the rationale for such change is understood. Additionally, Rogers' Diffusion of Innovation theory suggests that in order to move forward or change practice, an *individual must see the benefit or understand the advantage* of such a change over the practice it is replacing (Van Patter Gale & Schaffer, 2009). It is important to lay the foundation for staff to foster a spirit of understanding and rationale for the proposed change and empower staff to withstand opposition to change.

"*Routinization*" is one behavior or a compilation of staff behaviors that occur consistently as part of every day practice (Brewster et al., 2015). New processes or skills integrated as "part of the way things are done" is an important, yet often overlooked, piece of the implementation process. A *lack of integration undermines the new practice* and decreases the potential for sustainability. As practice patterns become embedded as part of the routine, the new practice has a better chance to be sustained long term.



One strategy to improve "routinization" is to engage project champions in continuing to reinforce desired behaviors beyond the official project implementation period (Brewster, et al, 2015). This process is also a product of the use of mentors as discussed above. Mentoring improves adherence to changes as staff feel a higher level of unity (Melnyk, 2010). A staff member or small number of key staff who were involved in the implementation, continue to devote time and effort to *hold the new practice in place* through reminders and regular reporting. The effectiveness of the implemented practice change should be reviewed often to stave off drift and to maintain recommended practice, rather than simply relapsing into old patterns (Brewster, et al.).

Ensuring that the new changes and processes become part of normal unit functioning may also require "passing the baton" to the appropriate perinatal safety or quality committee, or other designated work group within the department. Often these formal committees are better equipped to continue the review and implementation of the tools and processes developed during the collaborative, and to assign responsibility for regular performance tracking and transparent presentation of the data. Such formal structures make returning to old practice patterns far more difficult. Creation of this type of committee or task force should be considered in facilities where such an entity does not yet exist. Membership in this group should be interprofessional and include representatives from perinatal safety, risk management, OB education, quality improvement, perinatal clinical nurse specialists, midwifery, anesthesia, and the nurse and obstetric champions originally participating in the collaborative implementation. Other departmental leadership should also be considered.

## SAMPLE SUSTAINABILITY REVIEW AUDIT PLAN

Use the chart on page 28 to track unit QI projects after initial implementation is complete (sample shown below). Determine appropriate intervals for review. Recommend frequent reviews for newer projects and those that have sustained a significant level of practice drift. Use outcome measures along with other methods to review improvement. Create a "deep dive" plan for those areas with drift, along with corrective activities once these areas are identified.

| OBSTETRICS QUALITY IMPROVEMENT SUSTAINABILITY REVIEW PLAN | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Project Name | Project Start/ Review Date | Scheduled Review Frequency | Nurse Leaders Project Champ | Bedside RN Project Champ | Med Staff Champ | Audit Review Method | Outcome of Review | Other departments involved in project | Notes: Outcome data changes, practice variation |
| QBL/OB Hem | 2/2015 2/2016 | ☐ Annual X Bi-Annual ☐ Quarterly | Smith | Jones | Main | X Chart Review X Observation ☐ Data Review | X Corrective action ☐ Continue regular review | None | Discovered QBL is done about 50% of the time for vaginal births; 75% for C/S |
| Deeper Dive Indicated? | Yes – submit call to staff members to determine the barriers to practice, and their thoughts on solutions. | | | | | Corrective Action Plan | Once suggestions received, form sub taskforce to focus on barriers and recommendations. Next step – re-kick off QBL campaign with various incentives. See meeting minutes. | | |
| Preeclampsia – Timely treatment | 6/2015 1/2016 | ☐ Annual ☐ Bi-Annual X Quarterly | Brewer | Franks | Smith | X Chart Review ☐ Observation X Data Review | ☐ Corrective action X Continue regular review | Pharmacy | Encouraged by results – women identified with severe level HTN, 93% received within 60 min |
| Deeper Dive Indicated? | NO | | | | | Corrective Action Plan | Continue to support staff, celebrate this SUCCESS!!!!! | | |
| Hand Hygiene | 1/1999 2/2016 | X Annual ☐ Bi-Annual ☐ Quarterly | Smith | Johnson | None | ☐ Chart Review X Observation ☐ Data Review | ☐ Corrective action X Continue regular review | INF Ctrl | "Secret shopper" auditor found about 75% compliance with visible hand washing after leaving patient room |
| Deeper Dive Indicated? | No – nurses state they wash hands at sink by door prior to leaving the room. Follow up with review. | | | | | Corrective Action Plan | None | | |

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## Readiness Assessment to Support Vaginal Birth and Reduce Primary Cesareans

| 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? | |
| **The Top Ten tasks are identified as ones that have the greatest value for the project** | | |
| Top 10 | Created a team of providers (e.g. obstetricians, midwives, family practitioners, and anesthesia providers), staff, quality dept. and administrators to lead the effort and cultivate maternity unit buy-in? | |
| Top 10 Process measure | Developed a program for ongoing staff training for labor support techniques including caring for women with regional anesthesia? | |
| Top 10 | Developed a program with positive messaging to women and their families about intended vaginal birth strategies for use throughout pregnancy and birth? | |

| Focus | Readiness Questions | Y  N | Date completed |
|---|---|---|---|
| For Structure Measures—please enter the date of completion | | | |
| Structure Measure | Implemented standard criteria for diagnosis and treatment of labor dystocia, arrest of disorders and failed induction? | | |
| Structure Measure | Implemented training/procedures for identification and appropriate interventions for malpositions (OT/OP?) | | |
| Structure Measure | Implemented protocols and support tools for women who present in latent (early) labor to safely encourage early labor at home? | | |
| Structure Measure | Implemented policies and protocols for encouraging movement in labor and intermittent monitoring for low-risk women? | | |
| Structure Measure | Shared provider level measures with department (may start with blinded data but quickly move to open release? | | |
| Process measure | 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) | | |
| Structure Measure | Has your hospital developed OB specific resources and protocols to support patients, and family through an unexpected/traumatic cesarean? | | |
| Structure Measure | Are some of the recommended tools for the Safe Reduction of Primary C/S bundle integrated into your hospital's electronic health record system? | | |
| Structure Measure | Has your hospital developed a policy to integrate doulas into the birth care team? | | |

| The Collaborative to Support Vaginal Birth and Reduce Primary Cesareans Timeline for Progression | | | | | |
|---|---|---|---|---|---|
| **Pre-work** | **Month 1** | **Month 2** | **Month 3** | **Month 4** | **Month 5** |
| ☐ Assemble multidisciplinary team | ☐ Attend In person kick off meeting | ☐ Attend monthly team mentor meeting | ☐ Attend monthly team mentor meeting | ☐ Attend monthly team mentor meeting | ☐ Attend monthly team mentor meeting |
| ☐ Schedule site visit with Mentors | ☐ | ☐ | ☐ Site visit by Month 3; email mentors and schedule ASAP if not already done | ☐ | ☐ |
| ☐ Obtain access to Maternal Data Center<br>☐ Review, revise, and update the MDC users for your hospital to ensure all team members are listed as users | ☐ Share information from kick off meeting with staff, administration<br>☐ Review your data in the MDC for NTSV (PC-02) | ☐ Schedule an MDC refresher webinar with your team (contact MDC to schedule as needed<br>☐ Enter data (if available) | ☐ Enter data | ☐ Enter data | ☐ Enter data |
| ☐ Review and understand baseline data for NTSV Cesarean Rates (PC-02)<br>☐ Review 20 cases of CPD compare against ACOG guidelines | ☐ Provide confidential baseline NTSV cesarean provider rates to each provider<br>☐ Post baseline department data for staff, administration to review<br>☐ Begin process for unblinding provider data (see guidance | ☐ Share progress through data | ☐ Share progress through data | ☐ Share progress through data | ☐ Share progress through data |

| | | | | | |
|---|---|---|---|---|---|
| | document) | | | | |
| ☐ Prepare to educate all providers and staff on NTSV rate | ☐ *Provide education on NTSV rate and HP 2020 goals* <br> ☐ Reinforce with visual reminders | | | | |
| ☐ Complete Readiness for QI assessment | ☐ Begin work on areas of need as identified by Structure Measures and TOP 10 | ☐ Keep all staff, providers, administration apprised of progress and barriers. Actively seek solutions | | | |
| ☐ Complete Clinical Checklist Assessment (Structure Measures in CMQCC MDC) | ☐ Meet with multidisciplinary planning group meeting to prioritize areas to work on for next three (3) months | ☐ Keep all staff, providers, administration apprised of progress and barriers. Actively seek solutions | | ☐ Evaluate bundle completion and consistently update structure measure status in MDC as project continues | |
| ☐ Complete Labor Culture Survey (online) | ☐ Plan for staff education on labor support | ☐ Begin staff education on labor support | ☐ Maintain education practicum for new hires or for those who have not previously attended | | |
| ☐ Education for providers and facility leadership on the importance of facility wide standards | ☐ Continue education on standards as needed | ☐ Require basic education on facility wide standards for all new staff nurses and providers | | | |

| | | | | | |
|---|---|---|---|---|---|
| ☐ Meet with administration <br> ☐ Obtain administrative support | ☐ Keep administration abreast of progress and needs | | | | |
| ☐ Determine other (ancillary) departments that may be impacted by work | ☐ Engage all departments in new initiative <br> ☐ Solicit ideas from affected departments | | | | |
| ☐ Introduce project to staff <br> ☐ Bulletin boards <br> ☐ Staff meetings <br> ☐ Staff huddles <br> ☐ Invitations | ☐ Continue to reinforce project activities with nursing/support staff | | | | |
| ☐ Plan for unit kick off meeting <br> ☐ Register team members for kick-off meeting | ☐ Celebrate project beginning –kick off | | | | |
| ☐ Verify the contact information submitted on your application is still correct for your team (to CMQCC) <br> ☐ Provide additional members names and contact information as needed | ☐ Provide additional members names and contact information as needed | ☐ Provide additional members names and contact information as needed | ☐ Provide additional members names and contact information as needed | ☐ Provide additional members names and contact information as needed | ☐ Provide additional members names and contact information as needed |

CMQCC
California Maternal
Quality Care Collaborative

## OBSTETRICS QUALITY IMPROVEMENT SUSTAINABILITY REVIEW PLAN

| Project Name | Project Start/ Review Date | Scheduled Review Frequency | Nurse Leaders Project Champ | Bedside RN Project Champ | Med Staff Champ | Audit Review Method | Outcome of Review | Other departments involved in project | Notes: Outcome data changes, practice variation |
|---|---|---|---|---|---|---|---|---|---|
| | | ☐ Annual<br>☐ Bi-Annual<br>☐ Quarterly | | | | ☐ Chart Review<br>☐ Observation<br>☐ Data Review | ☐ Corrective action<br>☐ Continue regular review | | |
| Deeper Dive Indicated? | | | | | | Corrective Action Plan | | | |
| | | ☐ Annual<br>☐ Bi-Annual<br>☐ Quarterly | | | | ☐ Chart Review<br>☐ Observation<br>☐ Data Review | ☐ Corrective action<br>☐ Continue regular review | | |
| Deeper Dive Indicated? | | | | | | Corrective Action Plan | | | |
| | | ☐ Annual<br>☐ Bi-Annual<br>☐ Quarterly | | | | ☐ Chart Review<br>☐ Observation<br>☐ Data Review | ☐ Corrective action<br>☐ Continue regular review | | |
| Deeper Dive Indicated? | | | | | | Corrective Action Plan | | | |

Use chart to track unit QI projects after initial implementation complete. Determine appropriate intervals for review. Recommend frequent reviews for newer projects and those that have sustained a significant level of practice drift. Use outcome measures along with other methods to review improvement. Create a "deep dive" plan for those areas with drift, along with corrective activities once these areas are identified.

## Guidance for Understanding and Unblinding Provider-Level NTSV Cesarean Rates at Start of Project

*Before the process of unblinding NTSV cesarean rates begins, it is important for teams to have a baseline understanding of their underlying practices. This can be determined through an examination of the drivers for primary cesarean rates, followed by a chart review of a sample to assess how well the providers follow the national ACOG guidelines for Failure to Progress and other key primary cesarean indications. Ongoing monthly review for consistency with guidelines is also quite useful (recognizing that not every case will follow the guidelines perfectly). The Readiness Assessment and Structure Measures Checklist will assist with this baseline review. Success of the project hinges upon system improvements that support providers in reducing individual rates.*

*The Readiness Assessment, Structure Measures Checklist (both are found in the Implementation Guide), and Chart Audit Tool are all located on the collaborative resources page at https://www.cmqcc.org/projects/toolkit-and-collaborative-support-vaginal-birth-and-reduce-primarycesareans/*
*collaborative*

1. Educate & Inform:
   - Confirm physician champion on board and that he/she will be notifying other physicians of the plan to reveal rates
   - Reveal BLINDED baseline rates to each physician e.g. via letter, email, etc
   - Physician champion to notify physicians, e.g. at Quality or Department meeting, special cesarean reduction info session, or via email, of future intent to share unmasked individual NTSV cesarean rates (provide timeline!)
   - Key discussion points to include in letter, email, or at info session:
       - ✓ Each physician has an individual responsibility to the success of the project
       - ✓ This aspect of the project has proven to be one of the most important steps and will yield the most results
       - ✓ The process is not meant to be punitive, e.g. will not be used for "profiling" or credentialing. Rather, the data will foster improvement. Though when other steps have been less productive, some hospitals have used these data for the Joint Commission mandated: Ongoing Physician Performance Evaluation (OPPE).
       - ✓ The project's goal is not only to target specific changes in practice, but also to improve the systems that support each physician in being successful
       - ✓ Physicians should discuss with the project leader if they are opposed to unblinding of physician rates
       - ✓ Reiterate factors that will be considered when interpreting physician data (see Table 1 below)

**Table 1: Common Considerations with Provider-Level Rates**

| Problem | Effect | Solution |
|---|---|---|
| Low Volume | Low volume often leads to an increase in variation of the results, possibly causing significant swings in the individual provider rates | Point out these concerns with low volume leading to possibly wrong conclusions, consider making the sampling interval longer (e.g. 12 months instead of 3 to 6 months) |
| Provider backing up other types of providers who cannot perform cesareans | Many care systems require OBGYNs to backup midwives, Family Practice, etc. which inflates the individual OB's cesarean rates. | There are a couple of approaches to correct this issue: 1) a new feature in the Data Center is the identification of the Labor Provider for all births. Hospitals can now recalculate all the provider stats using the labor provider rather than the delivery provider. This is a relatively easy process but requires manual entry on case-by-case basis. 2) Otherwise, consider "group rates" (combining the OB with the midwife practice, if that makes sense) for a collective evaluation. |
| Provider is held responsible for decisions of others: long labors that are held over from the prior shift or where counselling in the office precludes the current provider from achieving vaginal delivery (elective cesarean; lowered expectations on the part of the patient as to length of labor etc) | This can raise the rate of an individual OB where there are cases they feel could have potentially avoided cesarean. | This is part and parcel of group practice. Most of the time, this can be ameliorated by providers in the group discussing their practice differences and these data can jumpstart that process. Cases often balance out between shift changes over the long haul. Emphasize the use of "group rates" (easily set up) so that the individual provider doesn't bear the full responsibility. |
| Clerical entry errors in the birth certificate data or coding leading to wrong procedure or attributed provider. | Fortunately, these are uncommon and random, however with small denominators can be significant to individual providers. | Provide feedback loop for detected errors to correct the data (or reassign the provider). The Data Center has easy tools to accomplish this. |

2. Identify and activate champions
  • Current physician champion should seek out like-minded physicians who will co-carry the torch and speak up in support of unblinded data at the scheduled information session. These should
include:
  ✓ Structural leaders such as OB Dept Chair, Medical Directors, Chair of Patient Safety Committee, other relevant committee Chairs
  ✓ Early adopter MDs who are well-respected and trusted

Month 2

1.  Share BLINDED rates of all physicians e.g. via chart at department meeting, via email, or post in doctor's lounge

2.  Distribute personal rates (or personal key) to each individual physician to allow comparison to the BLINDED rates of entire cohort

3.  Identify and work with the outliers
    ✓  Chart review for outliers to determine: How consistent are they with ACOG dystocia guidelines? What can they work on? What tools could they benefit from?
    ✓  Physician Champion to meet with and review this information with outlier physicians

4. Identify and work with resistant physicians
    ✓  Physician Champion to communicate candidly and honestly to build trust: What is the resistant physician worried about? How can you as the champion and team make this process easier?
    ✓  Are there resistant physicians who would benefit from a discussion with a CMQCC MD mentor? If so, contact your team mentors or clinical lead

Month 3

1.  Share BLINDED rates of all physicians (2nd time)

2.  Distribute personal rates to each individual physician with a comparison to the BLINDED rates of entire cohort (2nd time)

3.  Expect lots of questions and concerns about validity of individual rates. Be sure to reiterate the factors that should be considered when interpreting physician data (see Table 1 above)

Month 4

1. Share in writing UNBLINDED rates of all physician GROUPS in a Department meeting. Make it low key initially.

4.  There is often great variation within groups. At this point, UNBLINDED individual rates would be shared only within each group, with the expectation that next time individual rates will be unblinded between groups for all to see and compare

4.  If "group rates" do not apply to your facility where only individual practitioners practice, you would now UNBLIND individual physician rates for those physicians open to individual unblinding (for this to be successful, Physician Champion, Department Chairs, and Early Adopters must vocalize support for unblinding)

Month 5-6

1. If not already done, share UNBLINDED rates of individual physicians. This is done after trust has been built with the data. After a round or two, the individual rates can be shared more openly but not truly publicly. Share via department meeting, posted in doctor's lounge, and/or send via email etc. They should not be shared publicly as the data is not perfect. Providers do not like to be outliers (useful for us to help drive change) but they also do not like to be publically "shamed." It is only respectful to provide plenty of notice and opportunity to improve.

## Troubleshooting / FAQs

### 1. What do we do if we are at the point of unblinding the data and we still have one or a few adamantly against it?

ANSWER: In general, this is actually rare in occurrence, but at some point it is necessary to proceed. Physician leaders should have firm conversations that unblinding is going to occur and that the rates will stay within the department. Often it is helpful to remind the providers that current public pressure is progressing to the point where, as these provider rates are derived from publically reported data, sooner or later these rates will be publically available to patients and payers. Therefore it is better to go along with this semi-public openness and work on obtaining appropriate rates (and improving the quality of the data).

### 2. What about the Kaiser model (or other laborist models), where some physician rates don't reflect true attribution?

ANSWER: In models where providers work as a team, often better to have them consider improvement as a team and have open discussions about solutions at their department meetings. For example: Is everyone supporting breech version? Is someone consistently delaying the cesarean section to the next shift or admitting patients in latent phase?

The Maternal Data Center now also has the ability to track "labor provider." This requires a little extra manual data entry on a case-by-case basis (and close tracking by each hospital as to who was the actual "labor provider" for each patient), but will greatly improve the ability to track NTSV rates in institutions where attribution is difficult to sort out.

Additionally, the hospitals in the collaborative have the ability to track consistency with ACOG guidelines for diagnosis of labor dystocia. For those who desire a proxy measure for provider improvement, provider-level data for "consistency with guidelines" is available through the data center, but does take some additional chart review and sorting. To do this:

- From the hospital landing page, click on the measure "NTSV Spontaneous Labor Arrest/CPD: Consistency with Guidelines." This will display the hospital trend via a run chart.
- Use the drop-down menu to adjust the time period, and then click on the data point in the run chart to drill-down to the patient level. This will give a list of cases.
- Click on Provider ID to sort.

### 3. How frequently should we share provider level data?

ANSWER: There is a balance to be had here. Monthly data analysis rarely provides providers with sufficient sample size to be meaningful (and can "numb" the providers to the data) but annual data release removes the immediacy of the issue. A good medium is to provide quarterly provider level data with annual un-blinded release. Department level data can be shared monthly unless the facility is quite small, as you would do in any QI project.

## 5. Don't forget to pair the NTSV Rates and progress with the Balancing Measures!

ANSWER: The pairing has been very helpful with advancing acceptance of the project. But be careful about sample sizes here as well! Small samples (a doctor or even a single month for the entire department) can be misleading. We recommend reporting these quarterly unless you work in a very large department. Trend lines and comparisons are easily found in the Data Center.

Reference:  Institute for Health Care Improvement. *Engaging Physicians in a Shared Quality Agenda*. Retrieved from:
http://www.ihi.org/resources/Pages/IHIWhitePapers/EngagingPhysiciansWhitePaper.asp

## Audit Worksheet for Consistency with ACOG Guidelines for Diagnosis of Labor Dystocia or Failed Induction

Name of Auditor: _____     Audit completed on (date) _____

| Directions: Review 20 Nulliparous Term Singleton Vertex Cesarean cases to determine correct use of dystocia diagnosis. Place √ if criteria met in each category. | | | | | | |
|---|---|---|---|---|---|---|
| **1** | | | | **2** | | **3** |
| For diagnosis of Dystocia/Arrest Disorder (all three should be present) | | | | For diagnosis of Failed Induction before 6 cm dilation (both should be present) | | For Dx of failed induction after 6 cm dilation (see criteria 1) |
| Identifier (MRN, Other) | Cervix ≥ 6cm | Membranes ruptured, then | No change x 4 hrs with adequate uterine activity (or 6 hrs on oxytocin w/inadequate uterine activity) | Bishop score ≥ 8 before elective induction | Oxytocin used for a minimum of 12 hours after ROM | |
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To calculate "percent consistency with ACOG guidelines for diagnosis of labor dystocia or failed induction"-- divide the number of cases that were 100% consistent with guidelines (meaning the cases that checked all boxes) by the number of cases reviewed.

**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**

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

## 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.

**PATIENT SAFETY BUNDLE**

**Safe Reduction of Primary Cesarean Births**

Standardization of health care processes and reduced variation has been shown to improve outcomes and quality of care. The Council on Patient Safety in Women's Health Care disseminates patient safety bundles to help facilitate the standardization process. This bundle reflects emerging clinical, scientific, and patient safety advances as of the date issued and is subject to change. The information should not be construed as dictating an exclusive course of treatment or procedure to be followed. Although the components of a particular bundle may be adapted to local resources, standardization within an institution is strongly encouraged.

The Council on Patient Safety in Women's Health Care is a broad consortium of organizations across the spectrum of women's health for the promotion of safe health care for every woman.

October 2015

For more information visit the Council's website at www.safehealthcareforeverywoman.org

## WEB RESOURCES

**AHRQ Team Stepps Implementation Guide**
[http://www.ahrq.gov/professionals/education/curriculum-tools/teamstepps/instructor/essentials/implguide.html](http://www.ahrq.gov/professionals/education/curriculum-tools/teamstepps/instructor/essentials/implguide.html)

**California Maternal Quality Care Collaborative**
[www.cmqcc.org](www.cmqcc.org)

**Institute for Health Care Improvement**
[http://www.ihi.org/resources/Pages/HowtoImprove/default.aspx](http://www.ihi.org/resources/Pages/HowtoImprove/default.aspx)

**Institute for Health Care Improvement – Physician Engagement**
[http://www.ihi.org/resources/Pages/IHIWhitePapers/EngagingPhysiciansWhitePaper.aspx](http://www.ihi.org/resources/Pages/IHIWhitePapers/EngagingPhysiciansWhitePaper.aspx)

**National Council on Patient Safety in Women's Health Care**
[http://www.safehealthcareforeverywoman.org/default.php](http://www.safehealthcareforeverywoman.org/default.php)

**Institute for Health Care Improvement – QI Essentials Toolkit**
[http://www.ihi.org/resources/Pages/Tools/Quality-Improvement-Essentials-Toolkit.aspx](http://www.ihi.org/resources/Pages/Tools/Quality-Improvement-Essentials-Toolkit.aspx)

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