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Your Hospital can Reduce Primary Cesareans Using the Healthy Birth Initiative! Lessons from Midwifery Leaders

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President American College of Nurse Midwives

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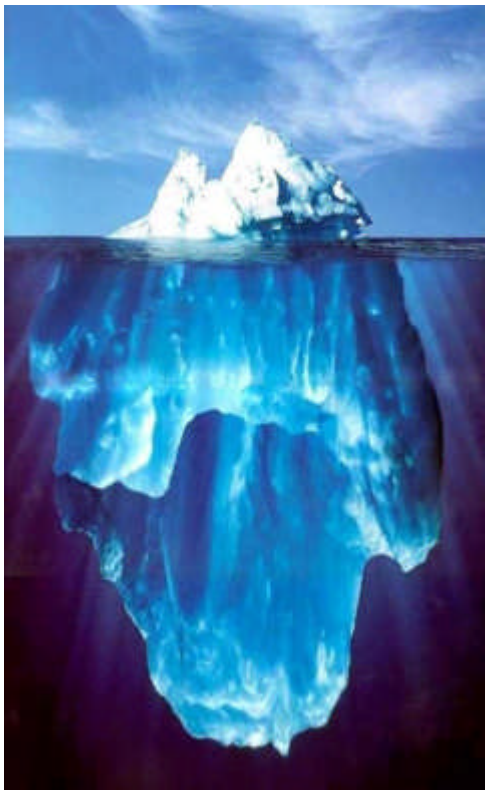
The Burden of Maternal Morbidity

- Reviewed Nationwide Inpatient Sample (ICD-9) for 1998-2009
- Severe morbidity 12.9 per 1000 deliveries
  - Increased by 75% and 114% for delivery and postpartum from 1998/99 to 2008/09
  - Increase in shock, ARF, PE, RDS, Acute MI, blood transfusion, aneurysm, cardiac surgery
- Overall mortality in postpartum period increased by 66%
- Impacts **>50,000** women each **year**



Callaghan WM et al. Obstet Gynaecol 2012

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ACOOG

AWHONN
Association of Women's Health, Obstetric and Neonatal Nurses

Society for Maternal-Fetal Medicine

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

Introduction
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. Women and their families hold different views about childbearing based on their knowledge, experiences, belief systems, culture, and social and family backgrounds.

As representatives of professional societies whose members care for pregnant and laboring women, we agree that patient-centered and safe care of the mother and child enhance quality and is our primary priority. Optimal maternal health outcomes can best be achieved in an atmosphere of effective communication, shared decision-making, and teamwork, and data-driven quality improvement initiatives.

"Patient-centered" means that health care providers, and the system they practice within, accept that the values, culture, choices, and preferences of a woman and her family are relevant within the context of promoting optimal health outcomes. The overarching principles involved include treating all childbearing women with kindness, respect, dignity, and cultural sensitivity, throughout their maternity care experiences. Patient-centered care is enhanced when women are provided supportive resources such as education and skilled attendants. Specifically, patient-centered care requires the balance between maternal-child safety and well being with the woman's needs and desires.

Communication
The childbirth experience is dynamic and includes not only the woman and her family, but a host of other members of the health care team. Effective communication between the caregiver and the laboring woman and her family, as well as among the members of the care team, is critical to ensuring safety. Each team member should possess the skills necessary to promote effective communication, and should be aware of the concepts and skills involved in leadership, situational awareness, and mutual support.

Quality patient care in labor and delivery: A call to action. J Midwifery Womens Health. 2012;57(2):112-113.

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123(5):973-977, May 2014
OBSTETRICS & GYNECOLOGY

Current Commentary

The National Partnership for Maternal Safety

Mary E. D'Alton, MD, Elliott K. Main, MD, M. Kathryn Menard, MD, and Barbara S. Levy, MD

National commitment and approach to decrease maternal mortality and morbidity in the US

- Define and monitor morbidity
- Bundles: Hemorrhage, Htn, VTE prevention, cardiac and infection, obesity
- Equip all obstetric care providers with education and resources needed (58% of births in US occur in hospitals with fewer than 1000 deliveries)
- Identify women at highest risk for maternal morbidity and ensure access to risk appropriate care

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A shared culture of dialogue, collaboration, and teamwork

Journal of Midwifery & Women's Health
www.jmwh.org
American College of Nurse-Midwives

Supporting Healthy and Normal Physiologic Childbirth:
A Consensus Statement by the American College of Nurse-Midwives, Midwives Alliance of North America, and the National Association of Certified Professional Midwives

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Midwives Alliance NORTH AMERICA

National Association of Certified Professional Midwives

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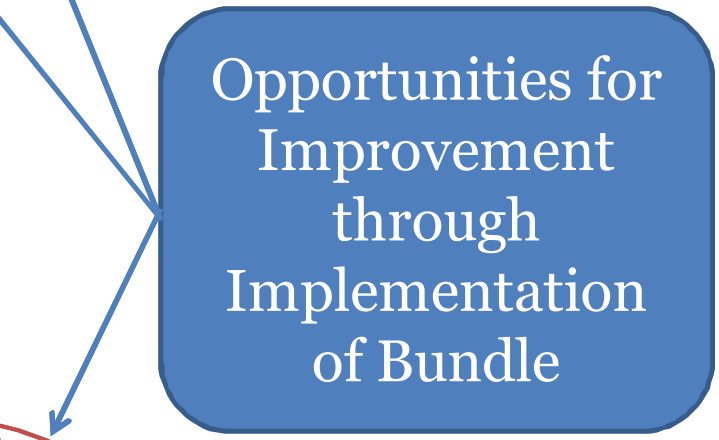
Image: Michael Davis

What Is Physiologic Birth?

- is characterized by **spontaneous onset and progression of labor**
- includes **biological and psychological conditions** that promote effective labor
- results in the **vaginal birth** of the infant and placenta
- results in **physiological blood loss**
- facilitates optimal newborn transition through skin-to-skin contact and **keeping the mother and infant together** during the postpartum period
- supports **early initiation of breastfeeding**

Joint Commission: Perinatal Care Core Measure Set

- PC-01 Elective Delivery
- PC-02 Cesarean Section
- PC-03 Antenatal Steroids
- PC-04 Health Care- Assoc. Bloodstream Infections in Newborns
- PC-05 Exclusive Breast Milk Feeding



Promote Physiologic Birth vs Reduce Primary Cesarean

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

Society for Maternal-Fetal Medicine

OBSTETRIC CARE CONSENSUS

Number 1 • March 2014

Safe Prevention of the Primary Cesarean Delivery

Groundbreaking statement replacing traditional maternity care practices with evidence-based approaches to labor management

Recommendations from ACOG/SMFM

- **Slow but progressive labor in the first stage of labor should not be an indication for cesarean**
- **Adverse neonatal outcomes have not been associated with the duration of the second stage of labor.**
- **Instrument delivery can reduce the need for cesarean.**
- **Recurrent variable decelerations appear to be physiologic response to repetitive compressions of the umbilical cord and are not pathologic.**
- **Induction of labor can increase the risk of cesarean.**
- **An induction should only be considered "a failure" after 24 hours of oxytocin administration and ruptured membranes.**

ACOG/SMFM Recommendations Cont

- **Ultrasound done late in pregnancy is associated with an increase in cesareans with no evidence of neonatal benefit. Macrosomia is not an indication for cesarean.**
- **Continuous labor support, including support provided by doulas, is one of the most effective ways to decrease the cesarean rate.**
- **Before a vaginal breech birth is considered, women need to be informed that there is an increased risk of perinatal or neonatal mortality and morbidity and provide informed consent for the procedure.**
- **Perinatal outcomes for twin gestations in which the first twin is in cephalic presentation are not improved by cesarean delivery.**

  – **Lothian, J. Sense and Sensibility Feb. 19, 2014**


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


AMERICAN ACADEMY OF
FAMILY PHYSICIANS
STRONG MEDICINE FOR AMERICA


AANA
AMERICAN ASSOCIATION OF NURSE ANESTHETISTS


ABOG
The American Board of
Obstetrics & Gynecology


AMERICAN COLLEGE
of NURSE-MIDWIVES


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


ACOOG
1934


American Society of
Anesthesiologists


AMERICAN SOCIETY FOR
REPRODUCTIVE MEDICINE


AUGS
Advancing Female Pelvic Medicine
and Reconstructive Surgery


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IN WOMEN'S HEALTH
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PULSE
of New York


SGO
Society of Gynecologic Oncologists


Society for
Maternal·Fetal
Medicine


SOAP
Society for Obstetric
Anesthesia and Perinatology


SOCIETY FOR
REPRODUCTIVE
ENDOCRINOLOGY
AND INFERTILITY

- AIM Core Partners
- **Professional Organizations**
  - ACNM, ACOG, AWHONN, SMFM
- **Policy Organizations**
  - Association of Maternal and Child Health Programs (AMCHP)
  - Association of State and Territorial Health Officials (ASTHO)
  - California Maternal Quality Care Collaborative (CMQCC)
  - Health Resources and Services Administration Maternal and Child Health Bureau (HRSA-MCHB)

Two Key Approaches

- Develop and Implement Safety Bundles
- Create State Wide Perinatal Collaboratives to Promote and Support Implementation
- Michigan is one of the states that is part of AIM

IHI Evidence-Based Care Bundles

- Concept of bundles developed by Institute for Healthcare Improvement (IHI)
- Goal: to help health care providers more reliably deliver the best care for patients
- Provides a structured way of improving processes of care
- Includes a straightforward set of evidence-based practices
- When performed correctly and consistently there is a noted improvement in patient outcomes
- *Collection of 10-13 best practices for improving safety in maternity care that have been vetted in large quality improvement collaboratives*

Institute for Healthcare Improvement

IHI. Evidence–Based Care Bundles. Available at: http://www.ihi.org/topics/bundles/

Components: The "4 R's"

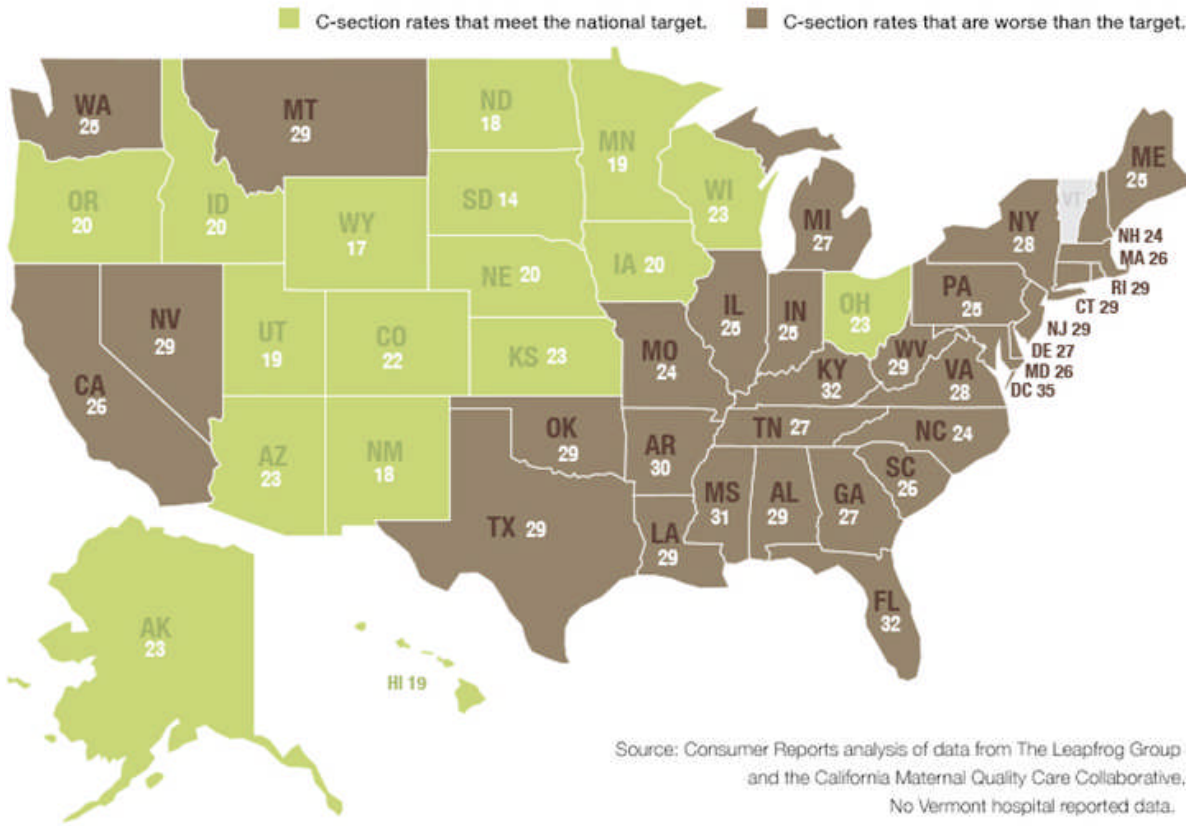
- Readiness – Every unit
  - Is your team ready for an emergency?
- Recognition – Every patient
  - How does your team recognize patients at risk or experiencing deterioration?
- Response – Every emergency
  - What is your team's response to an emergency?
- Reporting – Every unit
  - How does your team improve and learn?

Safety Bundles

- Obstetric Hemorrhage
- Severe Hypertension in Pregnancy
- Prevention of Venous Thromboembolism in Pregnancy
- Safe Reduction of Primary Cesarean Birth
- Protocols and Resources to Support Patients, Families, and Staff
- Postpartum Care Basics for Maternal Safety
- Reduction of Peripartum Racial Disparities
- Patient, Family, and Staff Support after a Severe Maternal Event

MOST STATES HAVE C-SECTION RATES THAT ARE TOO HIGH

32 states and the District of Columbia have C-section rates for first-time mothers with low-risk deliveries that are above the national target of 23.9 percent or lower.



Source: Consumer Reports analysis of data from The Leapfrog Group and the California Maternal Quality Care Collaborative. No Vermont hospital reported data.

"Your Biggest CS Risk may be your Hospital"

Consumer Reports 2016

Primary Cesarean Workgroup

Chair: David Lagrew, MD	Memorial Health Care | California Maternal Quality Care Collaborative Laguna Hills, CA
Rita Brennan, DNP, RNC-NIC, APN-CNS	Association of Women's Health, Obstetric and Neonatal Nurses Central DuPage Hospital - Winfield, Illinois
Maureen Corry, MPH	National Partnership for Women and Families Marshfield, MA
James deVente MD, PhD	North Carolina Perinatal Quality Collaborative East Carolina University - Greenville, SC
Joyce Edmonds, PhD, MPH, RN	Association of Women's Health, Obstetric and Neonatal Nurses Boston College - Boston, MA
Jennifer Frost, MD, MPH	American Academy of Family Physicians Leawood, KS
Brian Gilpin, MD	OB Hospitalist MemorialCare - Phoenix, AZ
Lisa Kane Low, PhD, CNM	American College of Nurse-Midwives University of Michigan - Ann Arbor, MI
Dale Reisner, MD	OBGYN Swedish Health - Seattle, WA
Whitney Pinger, CNM, MSN	American College of Nurse-Midwives George Washington University - Washington, DC

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PATIENT SAFETY BUNDLE

Safe Reduction of Primary Cesarean Births

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.

Click here for Readiness Resources

- Birth Tools (ACNM)
- Hormonal Physiology of Childbearing: Fact Sheets on Core Topics for Maternity Care Providers (Childbirth Connection)
- Maternal preference for Cesarean delivery. Do women get what they want? - Available until 10/1/17
- Low-risk, Primary Cesarean Births in Medicaid: NAMD/AMCHP Issue Brief 2015

Click here for a downloadable PDF of the bundle.

Click here for a complete resource listing.

http://www.safehealthcareforeverywoman.org

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.

Readiness *Continued*

- Adopt provider education and training techniques that develop knowledge and skills on approaches which maximize the likelihood of vaginal birth

Recognition and Prevention – Every Patient

- Implement standardized admission criteria, triage management and 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.

Recognition and Prevention
continued

- 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.

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.

Response *continued*

- Uphold standardized induction scheduling to ensure proper selection and preparation of women undergoing induction.

Reporting/ Systems Learning – Every birth facility

- Track and report labor and cesarean measures in sufficient detail to:
  - Compare to similar institutions
  - Conduct case review and system analysis to-drive care improvement
  - Assess individual provider performance

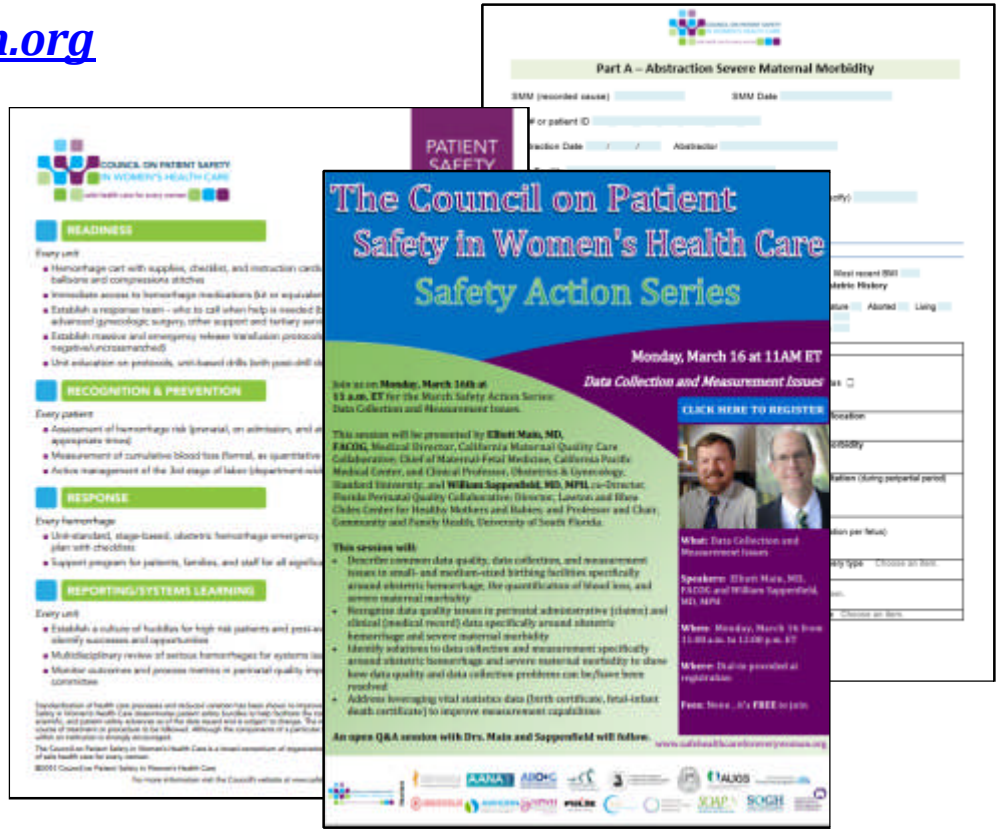
Reporting/Systems Learning

- Track appropriate metrics and balancing measures which assess maternal and newborn outcomes resulting from changes in labor management strategies to ensure safety.

Resources Currently Available

www.safehealthcareforeverywoman.org

- Patient Safety Bundles
- Severe Maternal Morbidity Reporting Forms
- Safety Action Series – Free Educational Sessions



Click each resource for direct link

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CMQCC
California Maternal
Quality Care Collaborative

This collaborative project was developed by CMQCC with funding from California Health Care Foundation.

Toolkit to Support Vaginal Birth and Reduce Primary Cesareans

A Quality Improvement Toolkit

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

COMMITTEE OPINION

Number 687 • February 2017

Committee on Obstetric Practice

The American College of Nurse–Midwives and the Association of Women's Health, Obstetric and Neonatal Nurses endorse this document. This Committee Opinion was developed by the American College of Obstetricians and Gynecologists' Committee on Obstetric Practice, in collaboration with American College of Nurse–Midwives' liaison member Tekoa L. King, CNM, MPH, and College committee members Kurt R. Wharton, MD, Jeffrey L. Ecker, MD, and Joseph R. Wax, MD.

This document reflects emerging clinical and scientific 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.

Approaches to Limit Intervention During Labor and Birth

ABSTRACT: Obstetrician–gynecologists, in collaboration with midwives, nurses, patients, and those who support them in labor, can help women meet their goals for labor and birth by using techniques that are associated with minimal interventions and high rates of patient satisfaction. Many common obstetric practices are of limited or uncertain benefit for low-risk women in spontaneous labor. For women who are in latent labor and are not

Journal of Midwifery & Women's Health www.jmwh.org
Original Review

Evidence-Based Practice for Intrapartum Care: The Pearls of Midwifery

CEU

Tekoa L. King, CNM, MPH, Whitney Pinger, CNM, MSN

Care for women in labor in the United States is in a period of significant transition. Many intrapartum care practices that are standard policies in hospitals today were instituted in the 20th century without strong evidence for their effect on the laboring woman, labor progress, or newborn outcomes. Contemporary research has shown that many common practices, such as routine intravenous fluids, electronic fetal monitoring, and routine episiotomies, do more harm than good. In 2010, the American College of Nurse-Midwives released a PowerPoint presentation titled Evidence-Based Practice: Pearls of Midwifery. This presentation reviews 13 intrapartum-care strategies that promote normal physiologic vaginal birth and are associated with a lower cesarean rate. They are also practices long associated with midwifery care. This article reviews the history of intrapartum practices that are now changing, the evidence that supports these changes, and the practical applications for the 13 Pearls of Midwifery.
J Midwifery Womens Health 2014;59:572–585

Keywords: amniotomy, cesarean, delayed cord clamping, delayed pushing, doula care episiotomy, duration of labor, labor support, midwifery, normal birth, second stage labor, skin-to-skin care

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The American College of Nurse-Midwives

Healthy Birth

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The American College of Nurse-Midwives

Healthy Birth INITIATIVE™

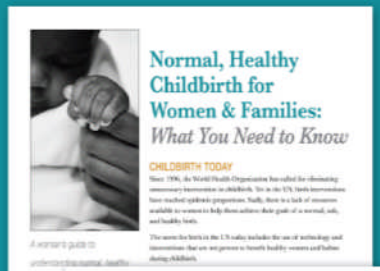
Resources & tools to help women, families & health care professionals achieve healthy childbirth.

FOR WOMEN: *Normal, Healthy Childbirth for Women & Families: What You Need to Know* is a free handout that explains what parents and their babies can expect from a normal, healthy birth and what they can do to maximize their chances of having a healthy, physiologic birth while minimizing their chances of experiencing unnecessary medical interventions during childbirth. Available in both ENGLISH and SPANISH language versions as free PDF downloads from midwife.org, or as professionally printed copies for purchase from ShopACNM.com.

FOR HOSPITAL POLICYMAKERS, PAYERS AND OTHER ORGANIZATIONS: *Birth Matters* is a handout for quality administrators that explains how implementing an evidence-based strategy focused on physiologic birth increases the well-being of families and prevents rare, adverse outcomes for hospital systems. Available as a free PDF download from midwife.org, or as professionally printed copies for purchase from ShopACNM.com.

FOR MATERNITY CARE PROVIDERS: BirthTOOLS.org, which stands for Tools for Optimizing the Outcomes of Labor Safely, is an interactive online toolkit that presents the evidence and offers targeted resources, protocols, and other materials to assist clinicians and health care systems in implementing best practices that promote physiologic birth. A PDF handout that can be shared with others to introduce them to the BirthTOOLS.org website and its resources can be downloaded for free.

#YesToHealthyBirth



Learn more at www.midwife.org/ACNM-Healthy-Birth-Initiative

Initially Three Pronged Approach

A Web-based Tool Kit to support hospital based health care professionals in implementing physiologic birth care practices.

A Menu of Change

Assessing and Promoting the Progress of First Stage Labor

Failure to progress is the primary cause of nearly half (47.1%) of all intrapartum cesarean deliveries.[1] Despite widespread use of interventions to speed labor progress, including use of oxytocin and artificial rupture of membranes, the diagnosis of disorders of labor progress appears to account for a large proportion of the increase in cesarean rates over time[2] and the variation in cesarean rates across geographic regions.[3,4]

Obstetric practice has been based on standards of labor progress that have proven to be too stringent and lead to unnecessary cesarean birth.[5] Emerging evidence suggests the following changes to traditional standards that were based on Friedman criteria from the 1960s:

TOOLBOX

Click here to view the Resources and Tools for Promoting Progress of First Stage Labor

- expecting longer mean times for cervical dilation,
- anticipating slower labor progress in the earlier part of active labor (5-7cm),
- observing greater variability in the progress of labor among women, and

/www.birthtools.org/MOC-Promoting-Progress-In-First-Stage-Labor-Toolbox hase of labor before diagnosing disorders of labor

Credit: AAN– Awaiting permissions

A Focus on Physiologic Birth

A Framework for Quality Improvement

A Menu of Change

Improvement Stories

Identification and Manual Rotation of the Occiput Posterior Fetus
Oregon Health and Science University (OHSU) introduces manual rotation of the occiput posterior fetus to improve vaginal birth rates and decrease complications related to persistent OP position.

Close

Audit Tools

First Stage of Labor Audit Tool
Measure and track your progress using evidence-based process and outcome measures with this audit tool.

Close

Clinical Education/Staff Training Resources

Partograph for Low-risk Nulliparous Women in Spontaneous Labor

Close

Related Guidelines/Toolkits

Intermittent Ausculation for Intrapartum FHR Clinical Bulletin (ACNM)
Link to PDF of the ACNM Clinical Bulletin: Intermittent Auscultation for Intrapartum Fetal Heart Rate Surveillance. This clinical bulletin reviews how to perform and interpret intermittent auscultation and provides evidence-based information about patient selection for IA.

Close

A Focus on Physiologic Birth
A Framework for Quality Improvement
A Menu of Change
Unit Culture
Browse All Resources & Tools
Browse All Improvement Stories

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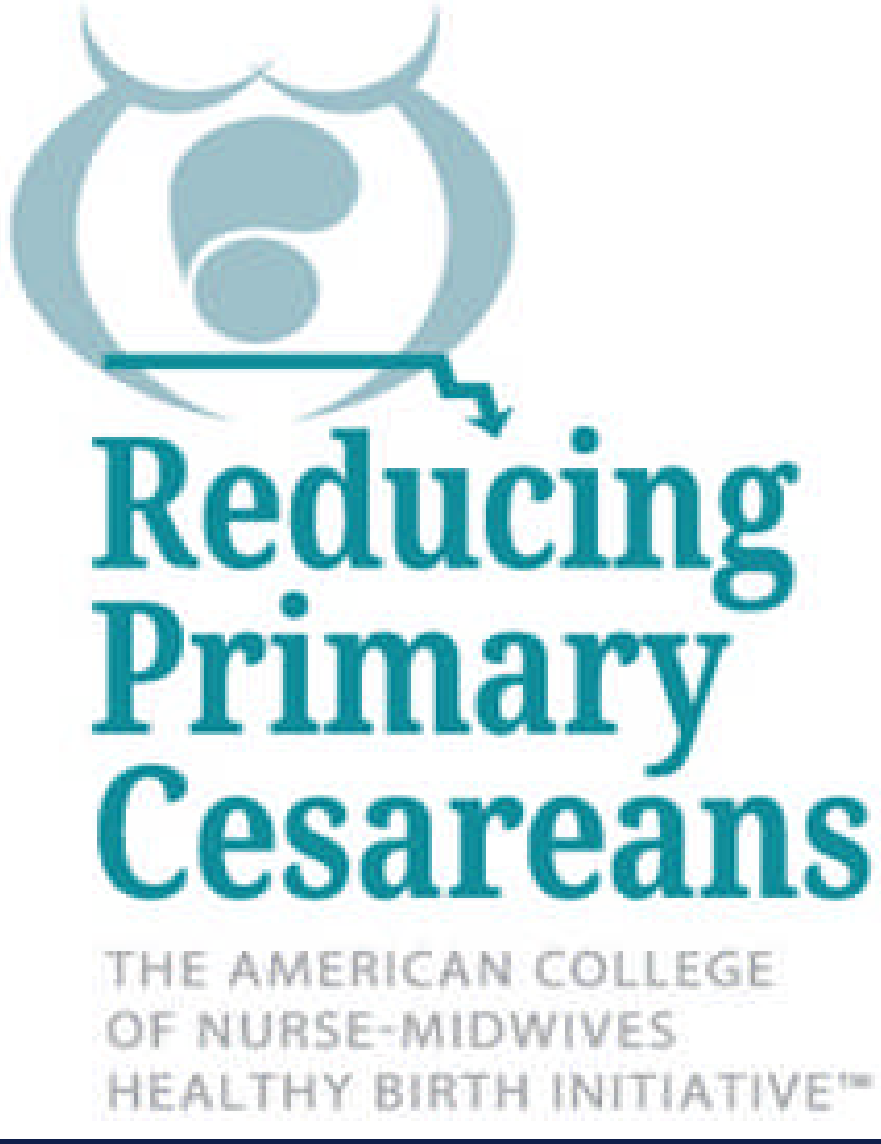

Fourth Prong: RPC

Modeled after California Maternal Quality Care Collaborative

Institute for Healthcare Improvement

Funded by Transforming Birth Fund


BirthTOOLS.ORG
TOOLS FOR OPTIMIZING THE OUTCOMES OF LABOR SAFELY
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CLICK HERE to learn more about the Reducing Primary Cesareans Learning Collaborative.
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2
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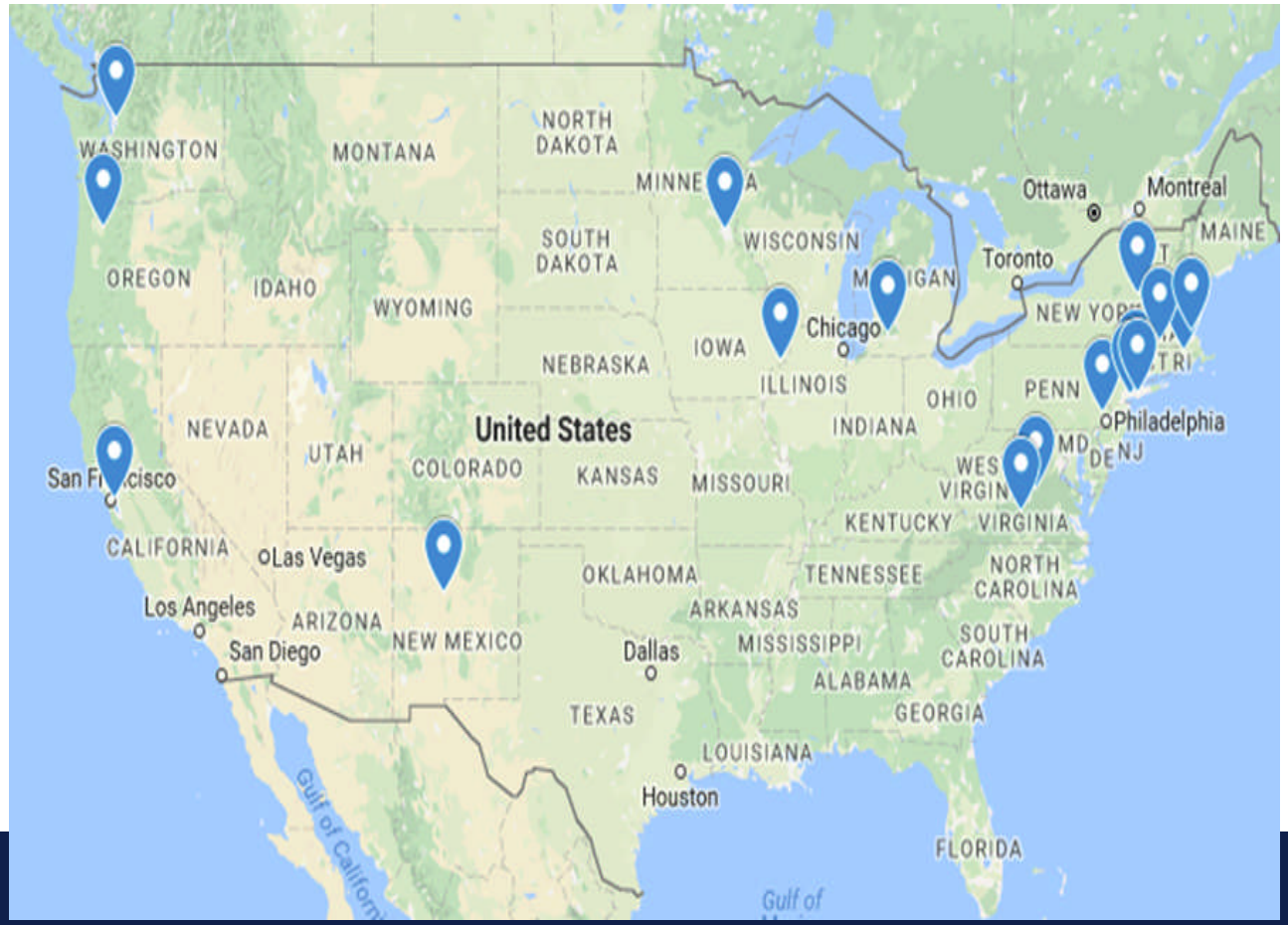
Reducing Primary Cesareans
A Multi-hospital QI Collaborative

- **Goals:**
  - To develop **midwifery leadership in perinatal quality improvement** in order to advance physiologic birth practices beyond midwifery-led care
  - Implement evidence based care practices that **encourage physiologic birth and reduce the NTSV* cesarean rate in participating hospitals**
  - **Engage all members of the maternity care team in the process of reducing the NTSV-CS rate**

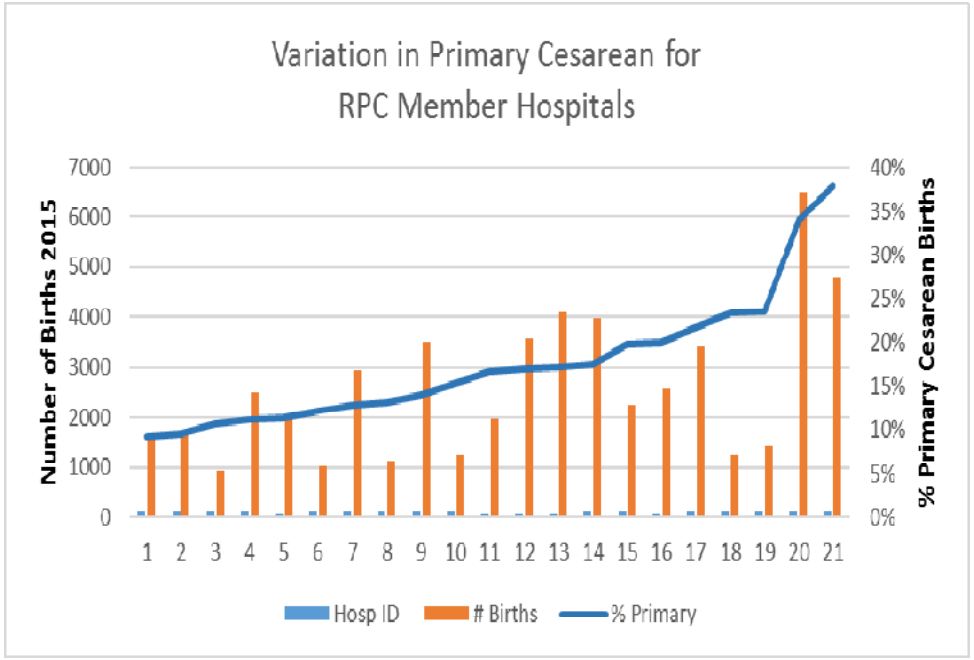
*Nulliparous Term, Singleton Vertex

Location of Hospital Participants
2017



RPC Approach

- Focused on eliminating unwarranted variation in NTSV rates by improving management of the drivers of cesarean birth in first time mothers
- Interdisciplinary approach
- Informed by the midwifery model, emphasis on physiologic birth
- Curriculum supported by webinars, written materials and active coaching model
- Change measured by RPC Data Center



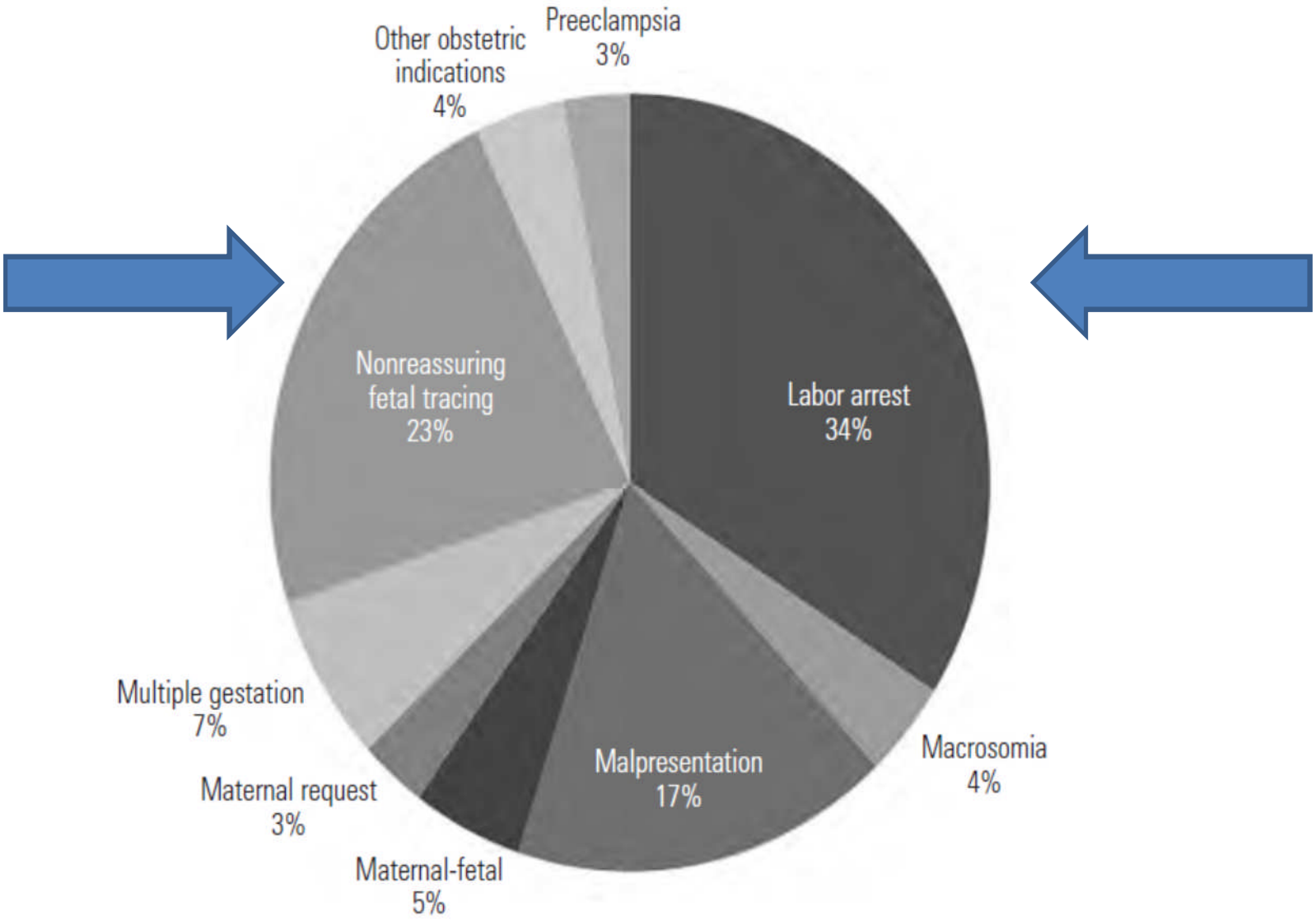


Fig. 3. Indications for primary cesarean delivery. (Data from Barber EL, Lundsberg LS, Belanger K, Pettker CM, Funai EF, Illuzzi JL. Indications contributing to the increasing cesarean delivery rate. Obstet Gynecol 2011;118:29–38.) ⇦

Bundles which drill down on specific bundle elements from the large Safe Reduction of CS AIM Bundle

Reducing Primary Cesareans

THE AMERICAN COLLEGE OF NURSE-MIDWIVES HEALTHY BIRTH INITIATIVE™

- Promoting Progress in Labor
- Supporting Comfort and Coping in Labor
- Intermittent Auscultation

Intermittent Auscultation

Summary of RCTs Comparing IA to EFM During Labor[1]

- Multiple RCTs have been performed since adoption of EFM as the standard of care during labor
- 2006 first meta-analysis of 11 RCTs
  - >33,000 women
- 2013 Updated 2013; 13 RCTs

  > 37,000 women

  – No change to conclusions

Alfirevic, Devane, & Gyte, CDSR, Issue 3, CD006066 (2006)
Alfirevic, Devane & Gyte, CDSR, ,Issue 5, CD006066 (2013)

Summary of RCTs Comparing IA to EFM During Labor[2]

- Compared with IA, EFM:
  - Showed no significant improvement in overall perinatal death rate
  - Associated with a halving of neonatal seizures*
  - No significant difference in the cerebal palsy rates
  - Showed significant increase in CD rate
  - Showed slight increase in instrumental delivery rate

Alfirevic, Devane & Gyte, CDSR, ,Issue 5, CD006066 (2013)

Continuous EFM

"Randomized controlled trials of electronic fetal monitoring compared with intermittent auscultation reveal that electronic fetal monitoring statistically significantly increases instrumental and cesarean deliveries for women but provides no long-term benefits for children."

Grimes & Peipert. 2010. Electronic Fetal Monitoring as a Public Health Screening Program

The Arithmetic of Failure. *Obstetrics and Gynecolgy 116 (6).*

JOGNN

AWHONN POSITION STATEMENT

Fetal Heart Monitoring

An official position statement of the Association of Women's Health, Obstetric and Neonatal Nurses

Approved by the AWHONN Board of Directors, 1988; revised 1992; reaffirmed 1994; revised and re-titled

Position

The Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN) asserts that the availability of registered nurses (RNs) and other health care professionals who are skilled in fetal heart monitoring (FHM) techniques, including auscultation and electronic fetal monitoring (EFM), is essential to maternal and fetal well-being dur-ing antepartum care, labor, and birth. Fetal heart

The Role of the Nurse

Health care facilities should ensure RN staffing levels meet the changing needs and acuity of the laboring woman and her fetus through-out the intrapartum period. Electronic fetal heart monitoring is not a substitute for appropri-ate professional nursing care and support of women in labor. Perinatal nurses are most of-ten the primary health care professionals respon-

ACOG PRACTICE BULLETIN

CLINICAL MANAGEMENT GUIDELINES FOR OBSTETRICIAN–GYNECOLOGISTS

NUMBER 106, JULY 2009

Replaces Practice Bulletin Number 70, December 2005

Intrapartum Fetal Heart Rate Monitoring: Nomenclature, Interpretation, and General Management Principles

Bulletin was devel-
COG Committee on
tins with the assis-
ge A. Macones, MD.
on is designed to aid
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ourse of treatment or
riations in practice

In the most recent year for which data are available, approximately 3.4 million fetuses (8.5% of approximately 4 million live births) in the United States were assessed with electronic fetal monitoring (EFM), making it the most common obstetric procedure (1). Despite its widespread use, there is controversy about the efficacy of EFM, interobserver and intraobserver variability, nomenclature, systems for interpretation, and management algorithms. Moreover, there is evidence that the use of EFM increases the rate of cesarean deliveries and operative vaginal deliveries. The purpose of this document is to review nomenclature for fetal heart rate assessment, review the data on the efficacy of EFM, delineate the strengths and shortcomings of EFM, and describe a system for EFM

American College of Nurse-Midwives Clinical Bulletin

Number 60, September/October 2015

(Replaces ACNM Clinical Bulletin Number 11, March 2010)

Intermittent Auscultation for Intrapartum Fetal Heart Rate Surveillance

American College of Nurse-Midwives

Fetal heart rate surveillance is a standard component of intrapartum care. The fetal heart rate can be evaluated using intermittent auscultation or electronic fetal monitoring. Research that has compared these 2 strategies found them to be equivalent with respect to long-term neonatal outcomes. The purpose of this clinical bulletin by the American College of Nurse-Midwives is to review the evidence for use of intermittent auscultation and provide recommendations for intermittent auscultation technique, interpretation, and documentation.

J Midwifery Womens Health 2015;60:626–632

Keywords: fetal heart rate, intermittent auscultation, electronic fetal monitoring, intrapartum fetal surveillance

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Choosing Wisely®

An initiative of the ABIM Foundation

ConsumerReportsHealth

American Academy of Nursing

ABIM FOUNDATION

Monitoring your baby's heartbeat during labor

There are two ways to do it, and most women have a choice

Doctors, nurses, and midwives check your baby during labor and birth with a "fetal heart rate monitor." There are two ways to do this:

- **Continuous monitoring (CM):** Records your baby's heartbeat throughout labor.
- **Intermittent auscultation (IA):** Checks your baby's heartbeat at certain times during labor.

IA is often a better choice. You may want to ask for it if you have a low risk for problems during labor. Here's why.

Low-risk women don't need CM.
There's no evidence that CM is better than IA for low-risk pregnancies. The two methods have been compared in many studies. A review of these studies found that:

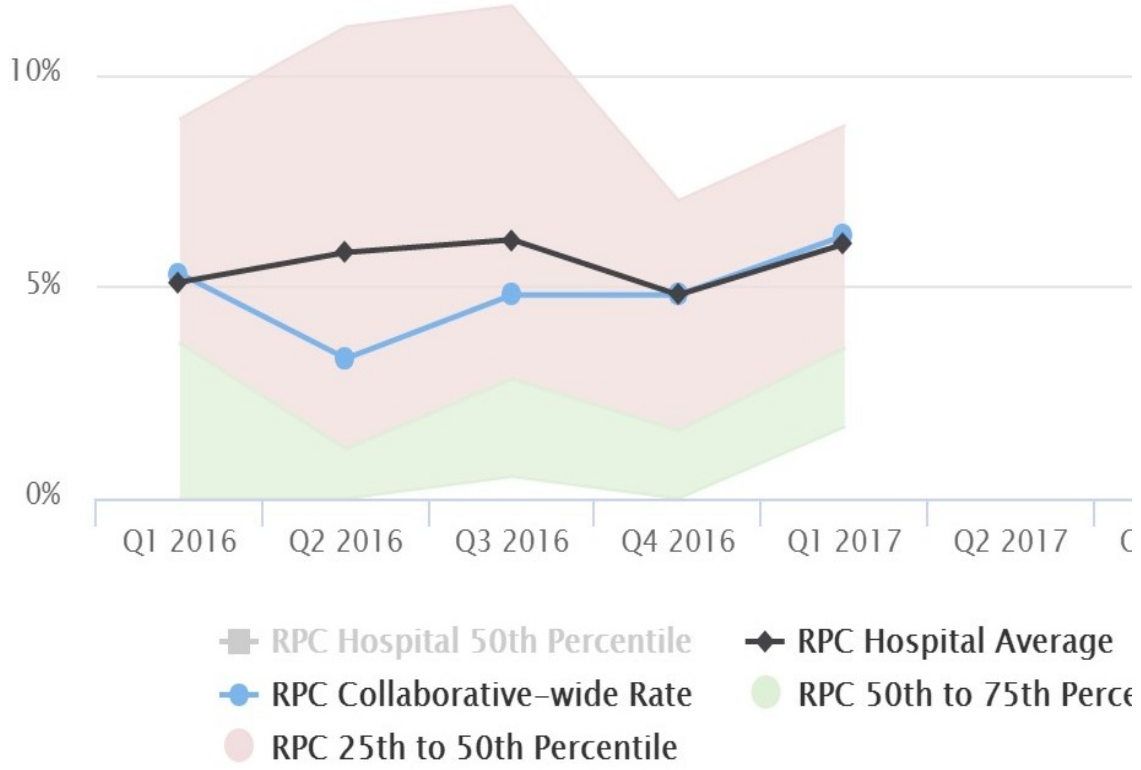
- Compared with IA, CM didn't reduce the baby's risk of cerebral palsy, admission to a newborn intensive care unit, or death.
- There was no difference between the groups in Apgar scores. These show if the baby is having problems after birth.
- Newborns who were continuously monitored had fewer seizures. But this type of seizure does not appear to be harmful to babies.

CM limits your movement during labor.
With CM, you are attached to a machine that records the information. This limits your movement. It can also be uncomfortable.

IA lets you move around during labor.
With IA, your doctor uses a handheld device to check the baby's heartbeat at certain times during labor. That allows you to move freely and walk where you please. Studies show that women who are upright or walking have shorter labors and fewer C-sections. They also use less epidural pain relief.

I A Success

All hospitals implementing IA bundle have seen Reduction of NTSV Cesarean Rate!



Rate of Use of IA in First Stage of Labor Collaborative-Wide

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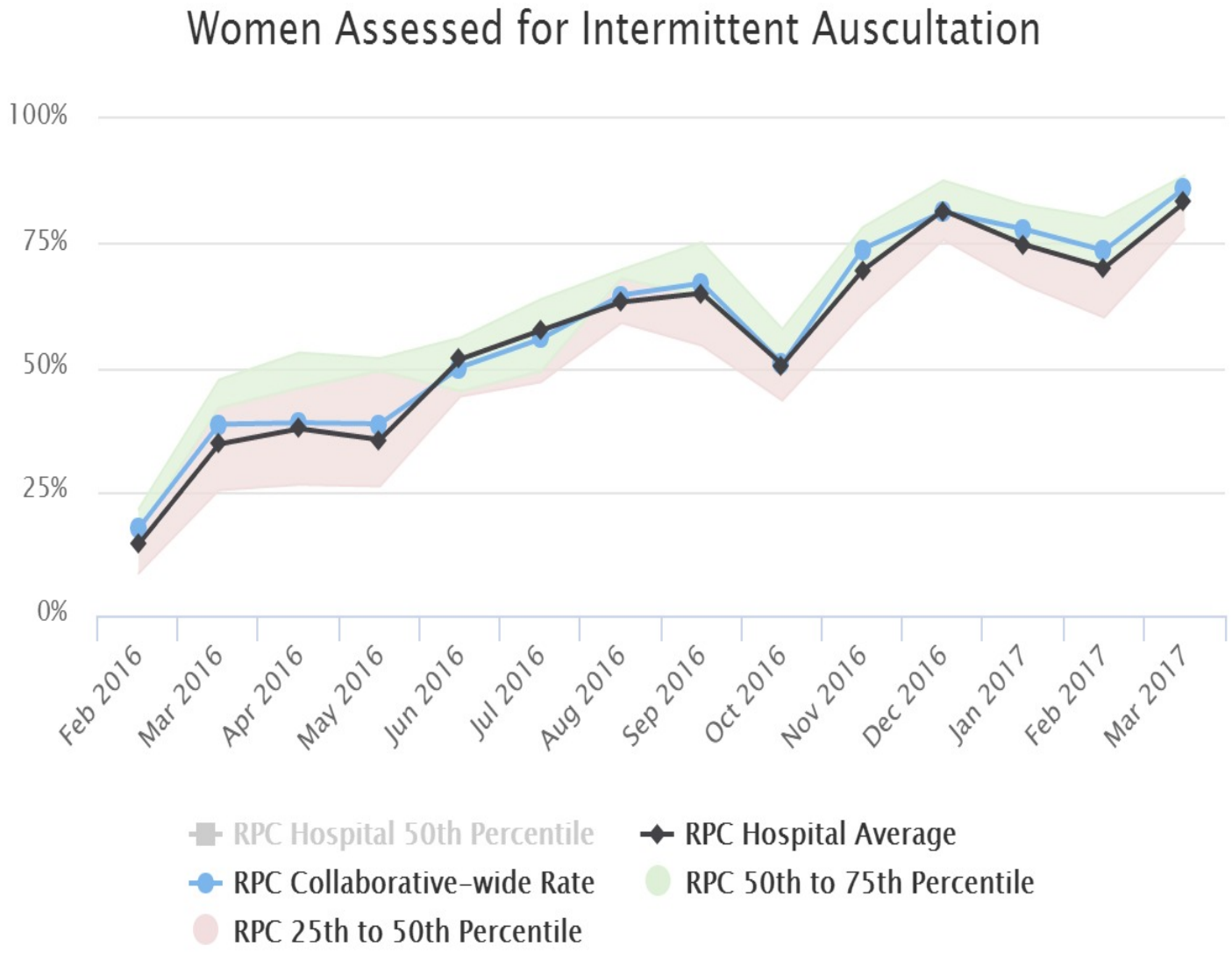
4 Hospitals Implementing IA Bundle



THE AMERICAN COLLEGE OF NURSE-MIDWIVES HEALTHY BIRTH INITIATIVE™

Reducing Primary Cesareans

Bundle Name: Promoting Spontaneous Progress in Labor

Readiness

Every unit

- Has a unit policy that provides a plan of care, including allocation of space, to enable women in early labor to receive comfort measures and support and to return home prior to active labor admission when safety criteria are met and shared decision making is used to determine acceptability of plan.[1,2]
- Provides initial and ongoing training and skill development for all maternity care professionals about evidence-based care practices that support maternal choice and promote spontaneous labor progress with no known risk, eg, mobility, upright positioning, continuous labor support, passive second stage descent, and physiologic pushing.[3-7]
- Ensures access to equipment and facilities that support maternal choice and comfort and promote spontaneous labor progress with no known risk, eg, areas for walking during labor, showers and labor tubs for hydrotherapy, music, birthing balls, birthing and squat bars.
- Establishes a common, interprofessional policy for labor care that specifies objective and evidence-based criteria for diagnosing active labor, describes the system of communication to signal that physiologic parameters of labor duration have been exceeded, and indicates triggers for considering interventions to accelerate labor, e.g., oxytocin augmentation or artificial rupture of membranes.[8]

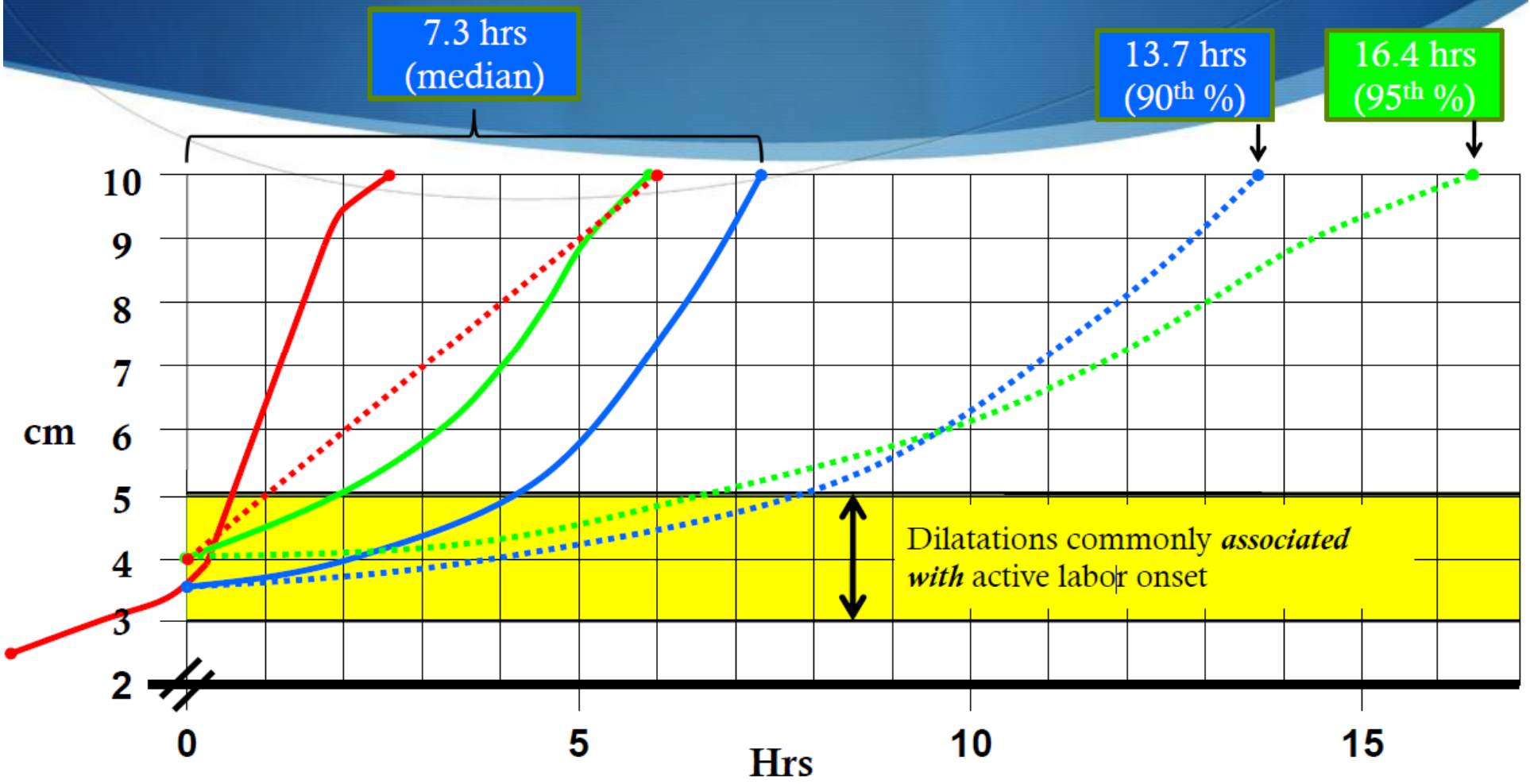
Risk and Appropriateness Assessment

Every woman who may be in labor

When does active labor begin?

- 62,415 women with singleton gestation, spontaneous onset of labor, vtx presentation, vaginal birth with healthy outcome
- Key Insights:
  - Active labor progress more consistent at 6cm
  - Labor may take over 6 hours to progress from 4-5cm
  - Nulliparous and multiparas are similar before 6cm
  - Greater time in labor before 6cm reduces c/s
    - Zhang et al 2010

Nulliparous Labor Curves from Dilatations often associated with Active Labor Onset



(Friedman, 1955, 1971, 1978)

(Zhang, Troendle et al, 2002) (n = 1162)

(Zhang, Landy et al, 2010) (n = 27,170)

Definitions of Labor Progress

- Slow but progressive labor in the 1st stage should not be indication for c/s
- Cervical dilation of 6cm is threshold for active labor and standards of active labor progress should not be applied before then
- C/S for active phase arrest in 1st stage should be reserved for women
  - beyond 6cm with ROM who FTP despite 4 hours of adequate ctx
  - Or 6 hours of oxytocin administration.

Safe prevention of the primary cesarean delivery. Obstetric Care Consensus No. 1. American College of Obstetricians and Gynecologists. *Obstet Gynecol* 2014; 123:693-711.

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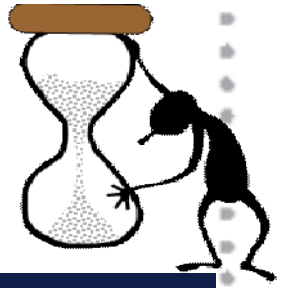
Summary of Evidence Supporting New Definitions of Labor Progress

Spong et al 2012 NICHD



BOX 29-4 Definition of Prolonged Second-Stage Labor

No progress in descent or rotation for:

- 4 hours or more in nulliparous women with an epidural
- 3 hours or more in nulliparous women without an epidural
- 3 hours or more in multiparous women with an epidural
- 2 hours or more in multiparous women without an epidural

Source: Adapted from Spong CY, Berghella V, Wenstrom KD, Mercer BM, Saade GR. Preventing the first cesarean delivery: summary of a joint Eunice Kennedy Shriver National Institute of Child Health and Human Development, Society for Maternal–Fetal Medicine, and American College of Obstetricians and Gynecologists Workshop. *Obstet Gynecol.* 2012;120(5):1181-1193.

Second Stage Labor

- At least 2 hours for multiparous women
- At least 3 hours for nulliparous women
- Longer durations may be appropriate on an individualized basis…e.g. epidural, fetal malposition

Safe prevention of the primary cesarean delivery. Obstetric Care Consensus No. 1. American College of Obstetricians and Gynecologists. *Obstet Gynecol* 2014; 123:693-711.

Immediate Compared With Delayed Pushing in the Second Stage of Labor

A Systematic Review and Meta-Analysis

Methodius G. Tuuli, MD, MPH, Heather A. Frey, MD, Anthony O. Odibo, MD, MSCE, George A. Macones, MD, MSCE, and Alison G. Cahill, MD, MSCI

- Inc vaginal delivery rate in delayed group
- But…When only "High level studies" included difference was less and no longer significant
- No difference in instrument deliveries
- Inc duration of second stage total time, dec active
- Maternal and Fetal outcomes remain unclear…….

and now this…….

Original Research

Maternal and Neonatal Outcomes With Early Compared With Delayed Pushing Among Nulliparous Women

Lynn M. Yee, MD, MPH, Grecio Sandoval, MA, Jennifer Bailit, MD, MPH, Uma M. Reddy, MD, MPH, Ronald J. Wapner, MD, Michael W. Varner, MD, Steve N. Caritis, MD, Mona Prasad, DO, MPH, Alan T. N. Tita, MD, PhD, George Saade, MD, Yoram Sorokin, MD, Dwight J. Rouse, MD, Sean C. Blackwell, MD, and Jorge E. Tolosa, MD, MSCE, for the Eunice Kennedy Shriver *National Institute of Child Health and Human Development (NICHD) Maternal-Fetal Medicine Units (MFMU) Network**

Observational, cohort study, differences between groups

Table 2. Labor Characteristics Associated With Use of Delayed Pushing

Characteristic	Delayed Pushing (n=3,870)	Early Pushing (n=17,164)	*P*
Labor type			<.001
Spontaneous	937 (24.2)	4,980 (29.0)	
Augmented	1,612 (41.7)	6,530 (38.0)	
Induced	1,321 (34.1)	5,654 (32.9)	
Date of delivery			.27
Weekday (Monday–Friday)	2,873 (74.2)	12,594 (73.4)	
Weekend (Saturday–Sunday)	997 (25.8)	4,570 (26.6)	
Time of day that second stage of labor began			<.001
Day (7 AM–7 PM)	2,195 (56.7)	9,233 (53.8)	
Night (7 PM–7 AM)	1,675 (43.3)	7,931 (46.2)	
Length of first stage (h)	11.4±0.14	11.0±0.06	.05
Neuraxial analgesia or anesthesia	3,466 (89.6)	13,571 (79.1)	<.001
Meconium	873 (22.6)	3,346 (19.5)	<.001
Birth weight (g)	3,400±6.95	3,311±3.23	<.001
Treated for chorioamnionitis	346 (8.9)	1,081 (6.3)	<.001

Data are mean±standard error or n (%) unless otherwise specified.

Table 3. Delivery Outcomes Associated With Delayed Pushing

Outcome	Delayed Pushing (n=3,870)	Early Pushing (n=17,164)	Unadjusted OR (95% CI)	*P*	Adjusted OR (95% CI)*	*P**
Cesarean delivery	432 (11.2)	878 (5.1)	2.33 (2.07–2.63)	<.001	1.86 (1.63–2.12)	<.001
Operative vaginal delivery	627 (16.2)	1,923 (11.2)	1.53 (1.39–1.69)	<.001	1.26 (1.14–1.40)	<.001
Episiotomy	763 (19.7)	2,867 (16.7)	1.22 (1.12–1.34)	<.001	1.01 (0.92–1.11)	.87
3rd- or 4th-degree perineal laceration	340 (8.8)	1,198 (7.0)	1.28 (1.13–1.46)	<.001	1.11 (0.97–1.27)	.13
Postpartum hemorrhage	62 (1.6)	220 (1.3)	1.25 (0.94–1.67)	.12	1.43 (1.05–1.95)	.02
Blood transfusion	44 (1.1)	163 (0.9)	1.20 (0.86–1.68)	.29	1.51 (1.04–2.17)	.03
Maternal ICU admission†	11 (0.3)	64 (0.4)	0.79 (0.42–1.48)	.46	1.21 (0.65–2.23)	.55
5-min Apgar score less than 5	14 (0.4)	45 (0.3)	1.38 (0.76–2.52)	.29	1.28 (0.68–2.40)	.44
Cord umbilical artery pH 7.0 or less†	10 (0.3)	39 (0.2)	1.18 (0.60–2.33)	.64	1.33 (0.70–2.52)	.39
Shoulder dystocia	107 (2.8)	429 (2.5)	1.11 (0.89–1.37)	.34	0.85 (0.67–1.06)	.15
NICU admission	340 (8.8)	1,172 (6.8)	1.31 (1.16–1.49)	<.001	1.10 (0.96–1.26)	.15

OR, odds ratio; CI, confidence interval; ICU, intensive care unit; NICU, neonatal intensive care unit.

Data are n (%) unless otherwise specified.

Number of missing values: episiotomy, 9; 3rd- or 4th-degree laceration, 10; postpartum hemorrhage, 680; 5-minute Apgar score, 7; cord gases, 1; shoulder dystocia, 1.

* Adjusted for center, maternal age, gestational age, body mass index, race and ethnicity, insurance, gestational diabetes, labor augmentation or induction, neuraxial analgesia or anesthesia, birth weight, and treatment for chorioamnionitis.

† Firth's adjustment used as a result of separation of values.

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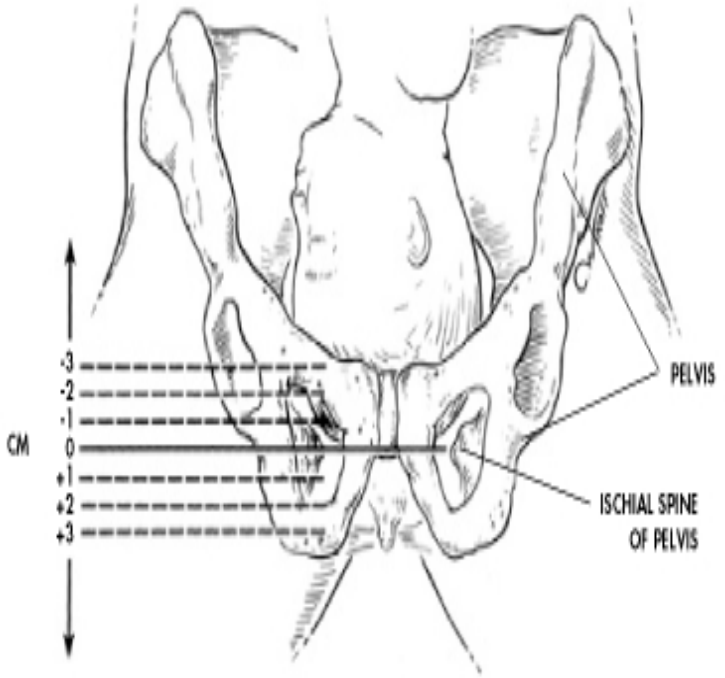
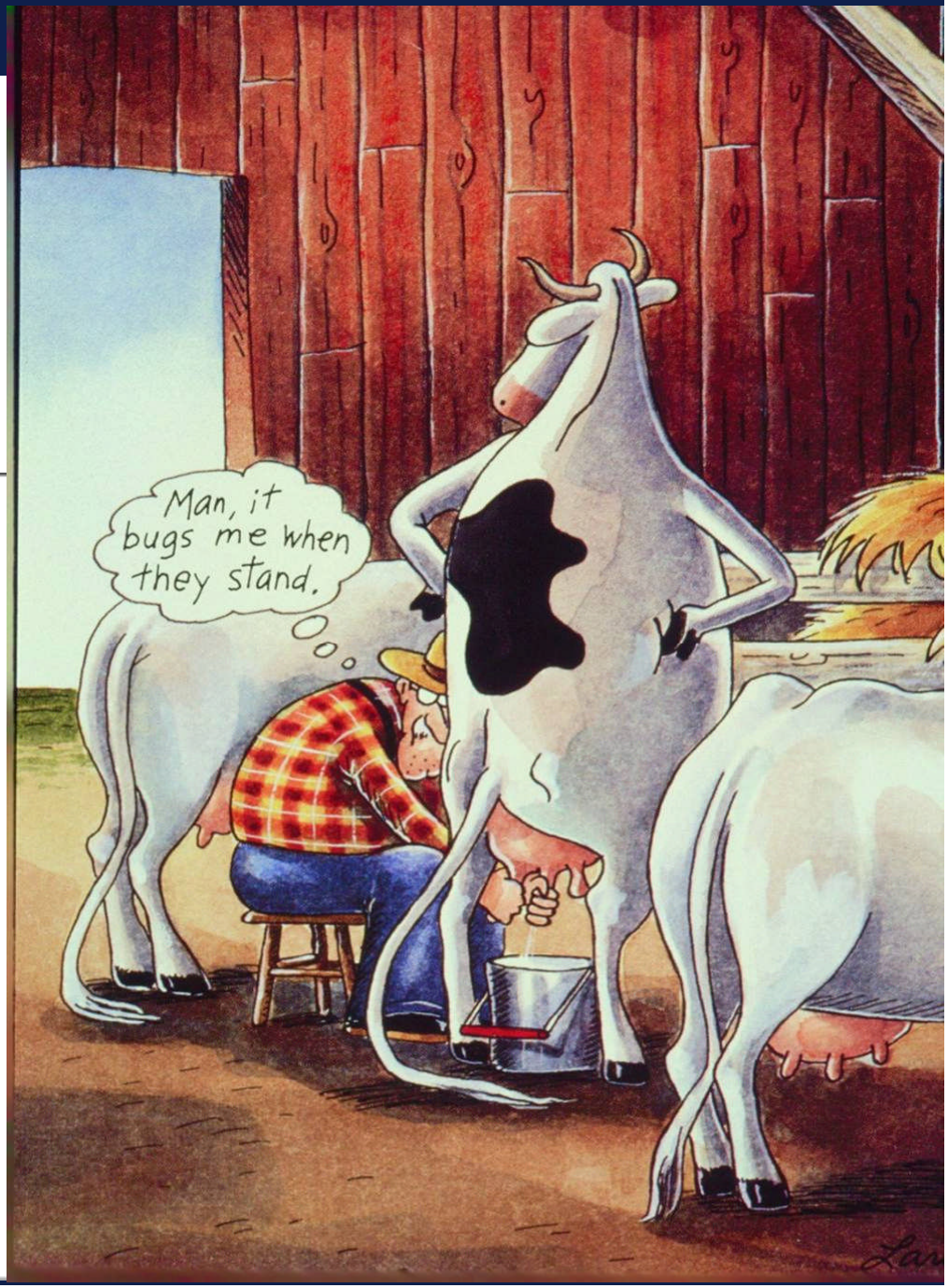
Positions to overcome pelvic constraints





Open Glottis, Self Directed Pushing

Supported as the Best Practice method of pushing

Education regarding strategy in CBE classes

QI method of managing second stage labor

AWHONN Guidelines for Nursing Care during Second Stage

Comfort in Labor

THE AMERICAN COLLEGE OF NURSE-MIDWIVES HEALTHY BIRTH INITIATIVE™

Reducing Primary Cesareans

Bundle Name: Promoting Comfort in Labor

Readiness

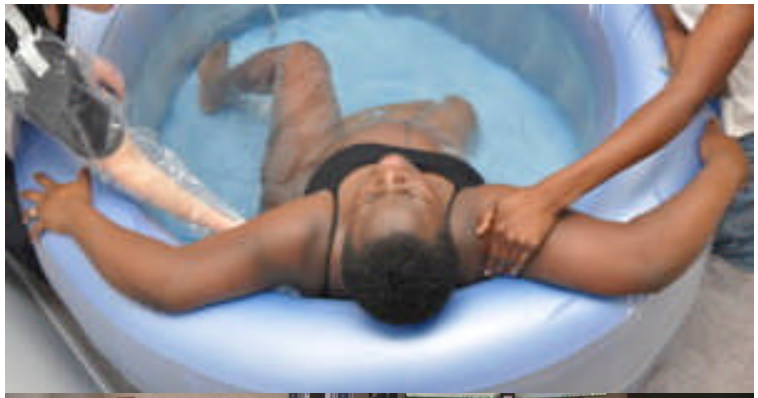
Every unit

- Incorporates into its maternity services midwifery care that is responsive to women's needs and preferences.[1]
- Provides specific training for all intrapartum nurses on providing labor support in 4 recognized categories: physical support, emotional support, advocacy, and informational support.[2]
- Provides a policy, clinical protocol, or guideline that outlines the uniqueness of the experience of labor and emphasizes that ongoing assessment and caring activities should focus on support and comfort measures to assist a woman to cope with labor, e.g., freedom of movement, hydrotherapy, nutrition and hydration in labor, and use of non-pharmacologic pain management techniques.[3,4]
- Adopt guidelines that promote continuous one-to-one supportive care for women in active labor by a trained individual such as a doula or registered nurse.[5,6]
- Assure availability of equipment and an environment that promotes non-pharmacologic methods of coping with and comfort in labor, such as dim lighting, birth/exercise balls, rocking chairs, squat bars, birthing stools, heat packs, hydrotherapy, etc.[7]
- Assure availability of evidence-based, prenatal preparation in pharmacologic and non-pharmacologic methods of coping in labor and birth.[8]

Risk and Appropriateness Assessment

Every woman in labor

- Is assessed for comfort and coping (rather than pain) upon admission and per unit policy throughout the labor and birth process.[3,4]
- Receives information about non-pharmacologic pain management and assistance with comfort and coping.
- Is assessed for preferences related to comfort and coping, including intended use or nonuse of pharmacologic pain management.
- Engages in shared decision making about whether and when to use pharmacologic pain management based on possible harms and benefits and the woman's conditions, values, and preferences.[9-11]



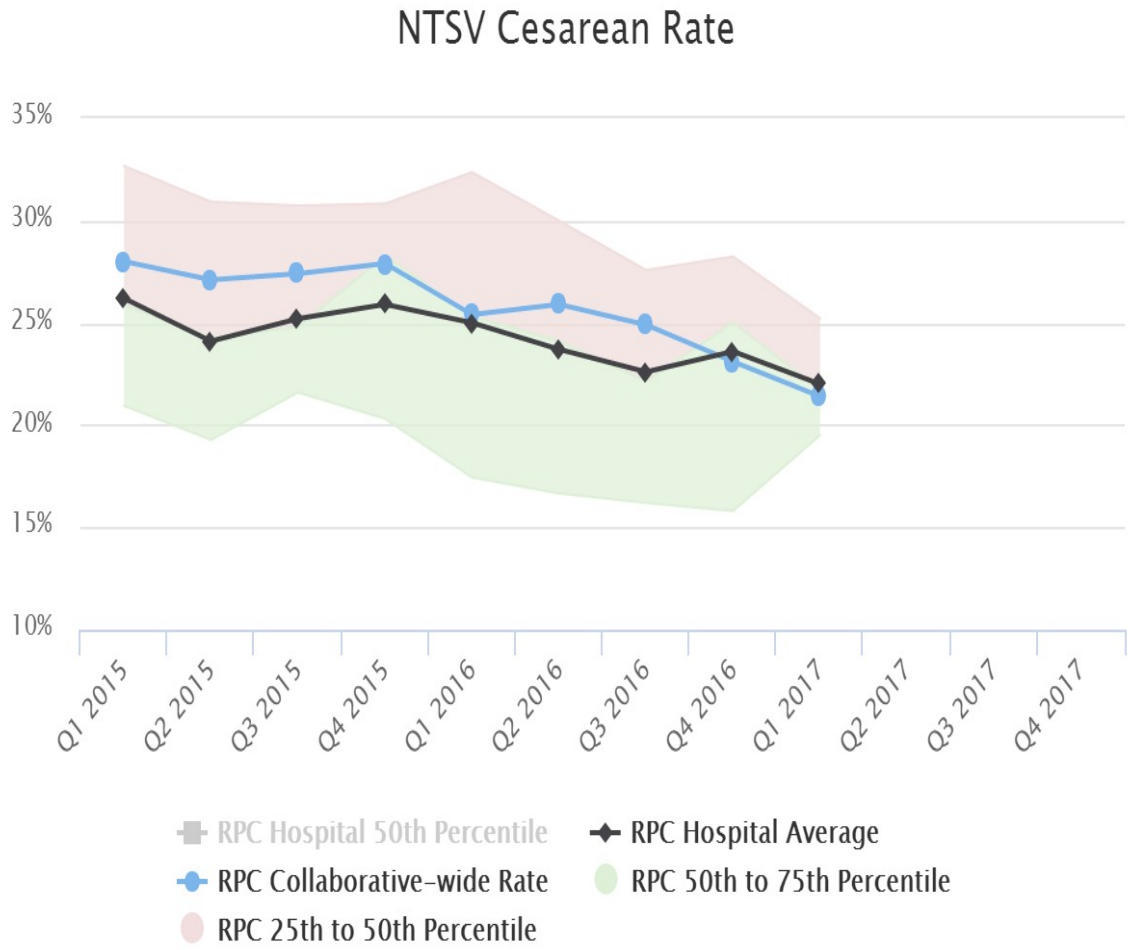
Reliable Delivery of Care: Every woman whose current intention is to labor without pharmacologic pain management

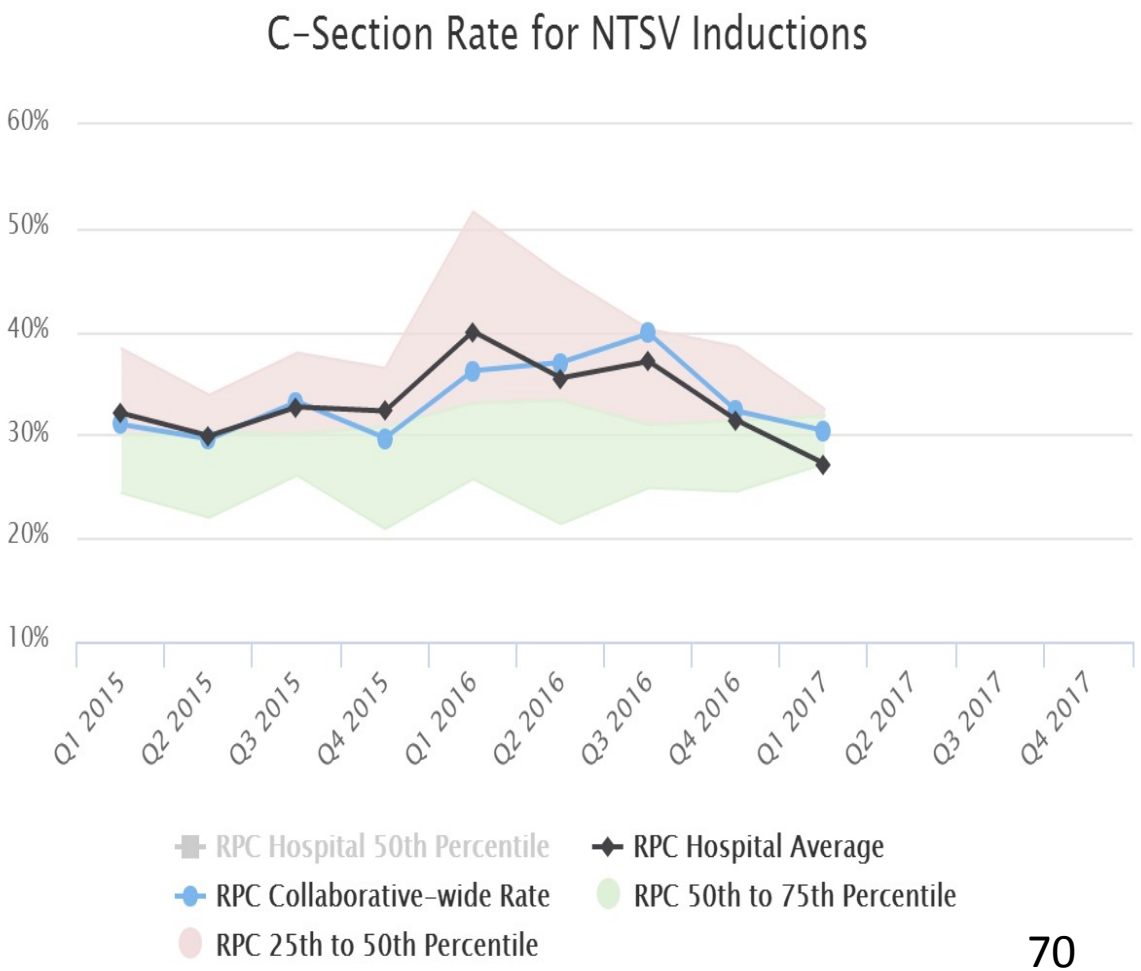
- Receives encouragement to remain upright during labor and birth as desired and is encouraged to ambulate and change positions without restriction during labor.[13,14]
- In active labor receives continuous labor support by a midwife or nurse, and doula .[1,5-7]

Reliable delivery of care continues

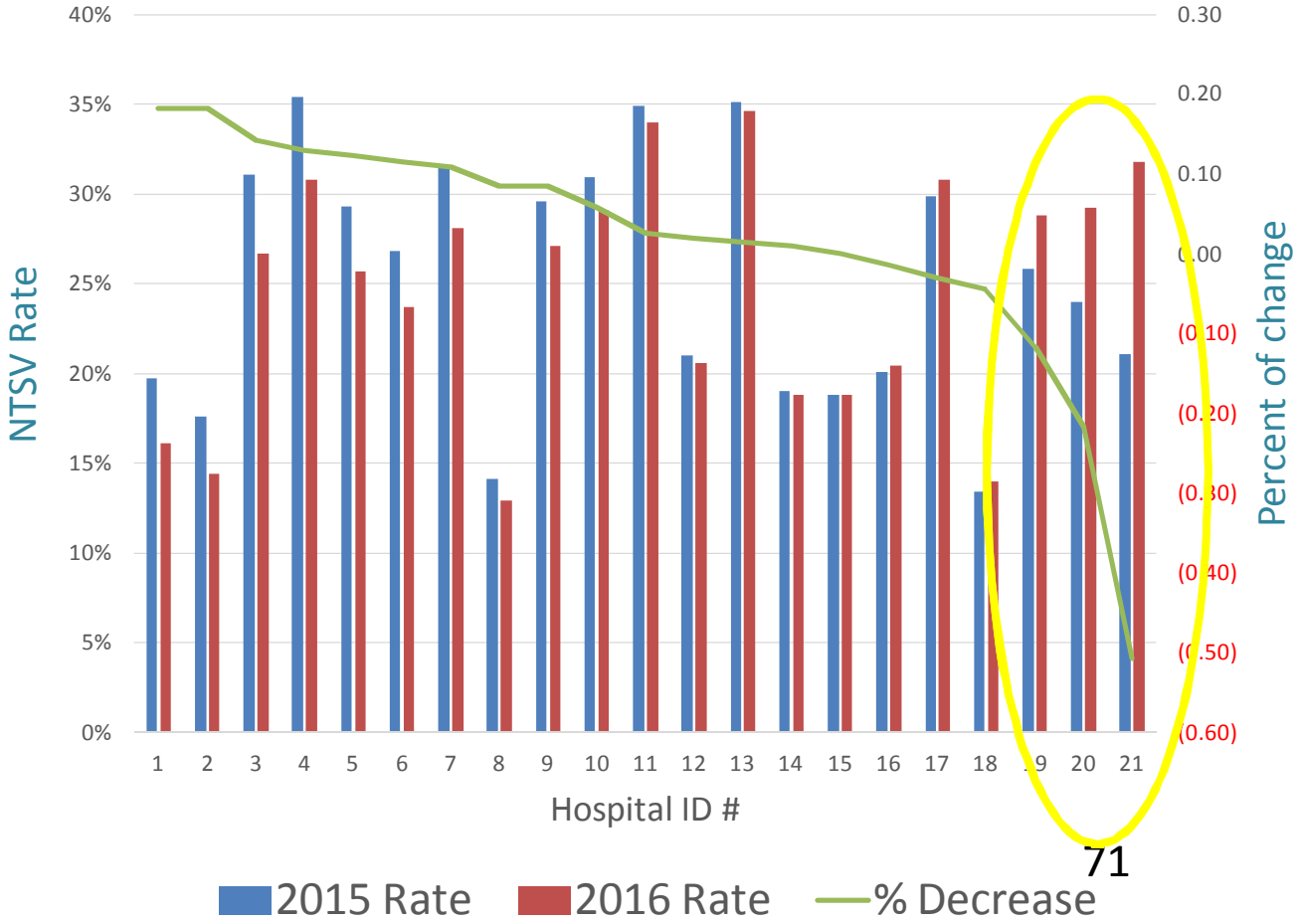
- Has access to a range of non-pharmacologic comfort measure options, including hydrotherapy, transcutaneous electrical nerve stimulation (TENS), massage, birth balls, and relaxation techniques.[7]
- Receives clear communication that includes her partner and family in the process of shared decision making.[9,10]

Reduction


NTSV Cesarean Rate
35%
30%
25%
20%
15%
10%
Q1 2015
Q2 2015
Q3 2015
Q4 2015
Q1 2016
Q2 2016
Q3 2016
Q4 2016
Q1 2017
Q2 2017
Q3 2017
Q4 2017
RPC Hospital 50th Percentile
RPC Hospital Average
RPC Collaborative-wide Rate
RPC 50th to 75th Percentile
RPC 25th to 50th Percentile


C-Section Rate for NTSV Inductions
60%
50%
40%
30%
20%
10%
Q1 2015
Q2 2015
Q3 2015
Q4 2015
Q1 2016
Q2 2016
Q3 2016
Q4 2016
Q1 2017
Q2 2017
Q3 2017
Q4 2017
RPC Hospital 50th Percentile
RPC Hospital Average
RPC Collaborative-wide Rate
RPC 50th to 75th Percentile
RPC 25th to 50th Percentile

NTSV Cesarean Rates with % of Change Over Baseline Rates



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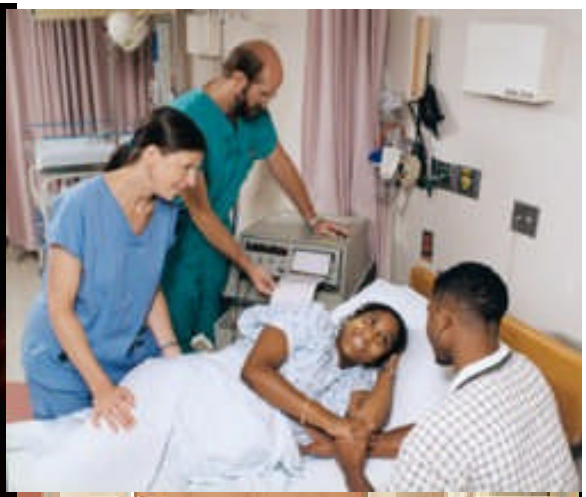
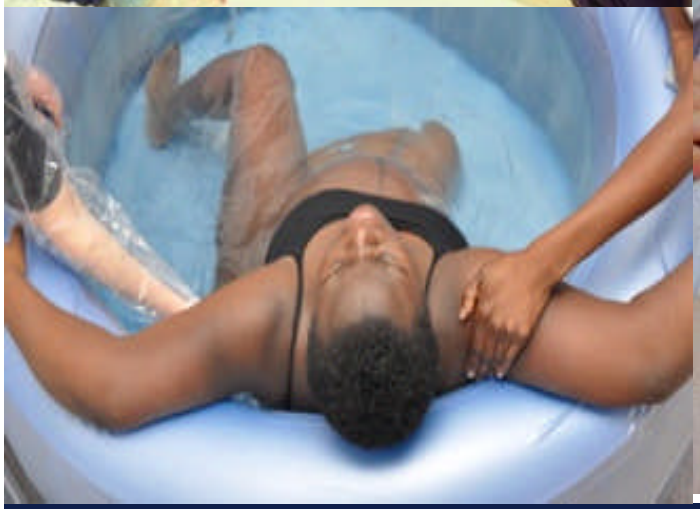
Nothing is Simple




Interprofessional Collaboration: Creating the Village

- Interprofessional maternity care practice promotes optimal outcomes
- Low risk, low income women in CNM/OB collaborative practices vs traditional models have
  - More spontaneous vaginal births
  - Access care appointments more efficiently
  - Have lower use of resources
  - Spent more time with providers per visit
  - Receive more health information
    - Shaw Batista 2011, Jackson 2003

Optimal Models of Care:

- Prospective cohort study of 3684 NTSV deliveries and 1375 with prior CD

Table: NTSV CD and VBAC rates before and after the adoption of midwifery and OB hospitalist model

	Privately Insured (subject to change in care model)	p value	Publicly Insured (no change in care model)	p value
NTSV CD rates before change	32.2%	0.002	15.7%	0.96
NTSV CD rates after change	25.0%		15.8%	
Adjusted OR* for NTSV CD	0.61 (0.43-0.87)	0.007	0.84 (0.57 - 1.23)	0.36
VBAC rate before change	13.5%	0.001	33.9%	0.12
VBAC rate after change	22.9%		27.9%	
Adjusted OR* for VBAC	1.94 (1.05 – 3.60)	0.035	0.76 (0.42 - 1.37)	0.36

*Adjusted for maternal age, race/ethnicity, induction, epidural use, birth weight, gestational age, maternal medical problems, and birth year

"This research demonstrates that changing from the traditional model of obstetric care to one that expands access to midwives and to OB/GYN doctors whose schedule is structured to allow them dedicated time spent delivering babies, without having to come in from the office or from home, is an intervention that can successfully lower cesarean delivery rates and make childbirth safer."

What makes Collaborative Practice Work?

- Familiarity with and respect for each other's ideologies, values, and practice (can be facilitated by interdisciplinary education)
- Professional competence
- Clear and honest communication, including active listening
- Willingness to discuss differences and to negotiate options
- Equality and shared power
- United front and mutual support

"Playing in the same sandbox"
Dr. Tim Johnson

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Our team is here for you!

Questions?

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