FIRST BABY INITIATIVE

WEST VIRGINIA QUALITY COLLABORATIVE FOR REDUCING NULLIPAROUS CESAREAN SECTIONS

This report summarizes an effort undertaken in the State of West Virginia to reduce the number of Cesarean Sections among first-time mothers. In 2009, more than one-third (35.1%) of first-time births in West Virginia were delivered via C-section, and 41.2% of first-time mothers were induced.

The First Baby Initiative is a collaborative project of:

West Virginia Perinatal Partnership
West Virginia Community Voices, Inc.
424 Washington St. West, Charleston, WV 25302

March of Dimes, West Virginia Chapter
3508 Staunton Avenue SE, 2nd Floor, Charleston, WV 25304

West Virginia Health Care Authority
100 Dee Drive, Charleston, WV 25311

West Virginia Health Statistics Center
West Virginia Bureau for Public Health
350 Capitol Street, Room 165, Charleston, WV 25301

And 23 West Virginia Hospitals

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Funding for this project was provided by
West Virginia Health Care Authority
100 Dee Drive, Charleston, WV 25311

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BACKGROUND

Labor inductions and Cesarean sections (C-sections) have increased dramatically in the United States over the past two decades. Between 1990 and 2010, the rate of labor induction has more than doubled. In 2010, nearly 1 in 4 (23.4%) births in the United States were induced, compared to about 1 in 10 (9.5%) births in 1990.[1,2] The rate of C-section has increased 59% from the most recent low in 1996. Approximately 1 in 3 (32.9%) births were delivered via C-section in 2009, up from 1 in 5 births (20.7%) in 1996.[3] Recent data indicate that perhaps the increasing trend in C-section is changing in the United States. In 2010 and 2011, the C-section rate stabilized at 32.8% after 13 straight years of increases.[4]

West Virginia has higher rates than the national average for both inductions and C-sections. In 2008, 33.7% of births occurring in West Virginia resulted after an induced labor (up from 31.3% in 2001), compared to 23.1% nationwide.[5,6] During the same year, more than one-third (35.4%) of West Virginia births were delivered by C-section (up from 26.6% in 2001), compared to 32.3% nationwide .[5,6]

There is concern that many of these inductions and C-sections are not medically necessary and may be resulting in avoidable negative birth outcomes for babies and mothers. Guidelines of the American Congress of Obstetricians and Gynecologists (ACOG) indicate that births should not be induced or delivered via C-section prior to 39 weeks gestation, or 41 weeks for first-time (nulliparous) mothers, unless there is a medical indication that necessitates delivery. These elective births present both a clinical and economic challenge due to the increased risk for maternal and neonatal complications. In fact, elective induction prior to 39 weeks gestation has been found to increase the risk of breathing problems, infection, and admission to a neonatal intensive care unit (NICU) for babies at birth, as well as learning and behavioral problems in childhood.[7] Mothers, especially first-time mothers, that are induced electively before 41 weeks gestation have a greater chance of having a C-section if the cervix has not already softened and started to open on its own. [7]

Despite the ACOG guidelines and documented maternal and neonatal risks, 45.3% of inductions and 55.9% of C-sections in West Virginia in 2008 occurred prior to 39 weeks gestation, and more than half (58.4%) of the births that occurred prior to 39 weeks had no documented medical risk factor.[5]

In response to these facts, 14 West Virginia hospitals, representing 70% of total births in the state, participated in a collaborative quality initiative in 2009 to eliminate non-medically indicated elective deliveries prior to 39 weeks gestation.

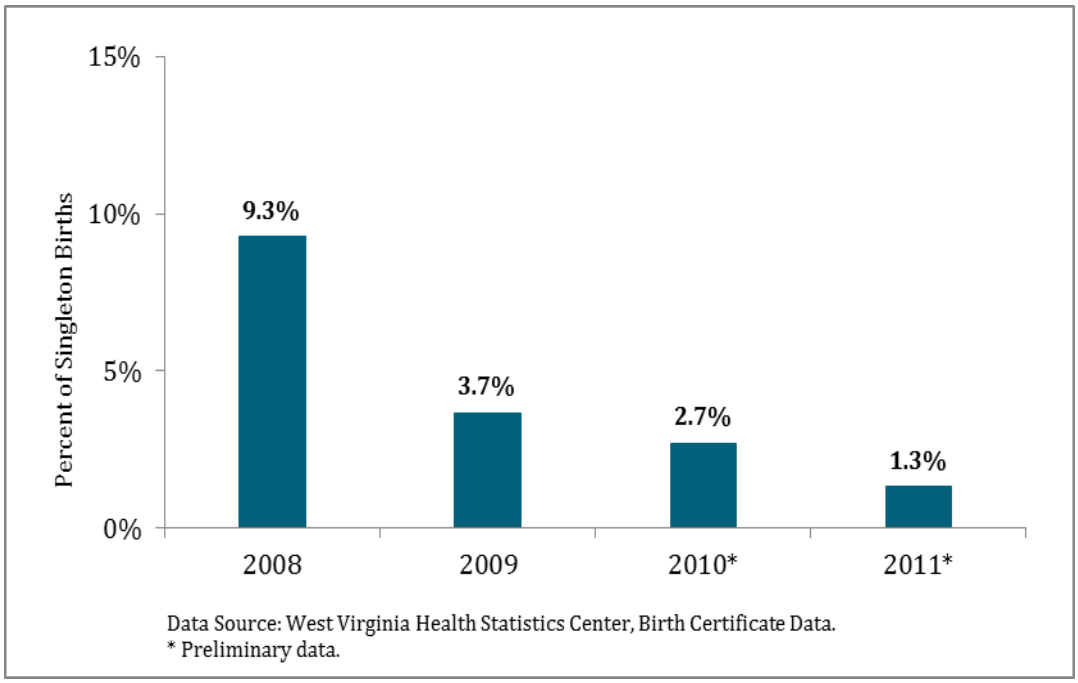
Both participating and non-participating hospitals experienced substantial declines in elective deliveries during the project period. Between January and June 2009, total elective deliveries prior to 39 weeks gestation decreased from 11.8% to 4.7% of all births occurring in West Virginia. This decrease was mostly attributable to a decline in elective inductions. Labor inductions prior to 39 weeks with no documented medical risk factor or congenital anomaly decreased significantly from

8.2% in January 2009 to 2.7% in June 2009. C-sections prior to 39 weeks with no documented medical risk factor, congenital anomaly, or complications decreased from 3.6% to 2.0% of births during the 6-month project period.

Further analysis indicates that elective pre-term inductions are continuing to decline (see Figure 1). In 2011, only 1.3% of births in West Virginia hospitals were electively induced prior to 39 weeks gestation, which represents an 86% decrease since 2008.

The momentum created by the success of the first initiative encouraged perinatal partners across the state to join together to continue and expand efforts to improve birth outcomes. In 2011, the "First Baby Initiative" was developed to reduce C-sections among West Virginia's first-time mothers.

Figure 1
Percent of Singleton Births that were Induced <39 Weeks Gestation with No Medical Risk Factor or Congenital Anomaly by Year, West Virginia, 2008-2011



First Baby Initiative

In 2011, the West Virginia Perinatal Partnership, in partnership with the West Virginia Chapter of the March of Dimes and with funding and support from the West Virginia Health Care Authority (HCA) and West Virginia Health Statistics Center (HSC), developed and implemented a collaborative project to study and address the growing rate of C-sections among West Virginia's first-time mothers. A review of birth certificate data, prepared by the HSC, showed the following:

- In 2009, more than one-third (35.1%) of West Virginia resident first-time mothers delivered via C-section, up from 31.9% between 2001-2005.
- In 2009, 41.2% of West Virginia first-time mothers had a labor induction, compared to 37% in 2005. First-time mothers are significantly more likely to have a C-section after an induction than after spontaneous labor. In 2010, 33.6% of first-time mothers that were induced were delivered via C-section, compared to 24.1% of first-time mothers in which labor began spontaneously.
- Between 2006-2010, approximately 21% of nulliparous singleton births were induced prior to 41 weeks gestation with no medical risk factors or congenital anomalies.
- In 2009, more than half of first-time mothers (50.9%) that were induced had no preexisting medical risk factor noted on the birth certificate.

PROJECT GOALS

With funding from the West Virginia Health Care Authority, leadership of the West Virginia Perinatal Partnership, and the collaboration and effort by the hospital participants and supporting organizations, the project focused on reducing the rate of C-sections in first-time mothers by reducing early inductions and by implementing other nursing strategies, such as increased labor support.

This report summarizes the activities and results of the First Baby Initiative.

METHODOLOGY

The methodology used in the First Baby Initiative was a modification of the Breakthrough Series (BTS) methodology utilized during the 2009 collaborative for eliminating non-medically indicated elective deliveries prior to 39 weeks gestation. The original BTS methodology was developed by the Institute for Healthcare Improvement and has been demonstrated to provide a successful approach to introducing and testing changes intended to improve aspects of the health care delivery system.

The methodology includes a community of interested parties working together to improve a common set of goals and measures. To this end, the Partnership established an Oversight Committee of 28 health care professionals who came together to identify the data needed to track progress and the approach to inviting hospital participation. The approach included a letter from the Health Care Authority encouraging participation.

A smaller Steering Committee worked directly with the Initiative and provided direction throughout. Three West Virginia physicians acted as Initiative champions and took part in the July meeting and many of the monthly teleconferences as well as serving on the Steering Committee and representing the Collaborative. The champions were: Luis Bracero, MD, FACOG, Professor of Maternal and Fetal Medicine, CAMC Women and Children's Hospital; William M. Holls, MD, Director of Labor and Delivery and MFM Outreach, West Virginia University Children's Hospital; and David Jude, MD, Chairman, Marshall University School of Medicine, Department of Obstetrics and

Gynecology. The complete Oversight Committee and Steering Committee membership list is included on page 19.

After review of the hospital-specific data, the Oversight Committee decided to invite all 29 hospitals with obstetrical services to participate in the Collaborative. Twenty-three hospitals responded to this invitation. Each was asked to identify an interdisciplinary team including Obstetrical Nurse Managers, labor nurses, NICU nurses, Obstetricians, Certified Nurse Midwives, hospital administrators, risk management staff, and community OB-GYN providers.

In July 2011, the participating hospital teams came together at a kick-off meeting where David Lagrew, MD, of the Saddleback Memorial Center in Laguna Hills, California, and Luis Bracero, MD, FACOG, of the Charleston Area Medical Center Women and Children's Hospital, discussed the goal of the initiative and potential tools for the hospitals. At this meeting, the hospitals participated in planning teams that developed strategies and practices that they felt would be effective in West Virginia.

Between September 2011 and May 2012, hospital participants joined with the Steering Committee in teleconferences on the second Wednesday of each month. These monthly meetings included a presentation on the most recent monthly data with opportunities for discussion, and periodic reports from the teams on initiatives, policies, and barriers. The hospital teams used these calls to share ideas and approaches. In addition, there were presentations on labor support, childbirth education class content, and the relationship between anesthesia and C-sections.

All participating hospitals had access to web-based technology for shared learning and for monthly posting of data that showed the progress of each hospital in meeting the goals for reducing labor inductions and unnecessary C-sections.

PARTICIPATION

Twenty-three of the State's 29 birthing hospitals, representing approximately 94% of the births in the state, contracted to participate in the project. The hospitals and communities participating in the Collaborative were:

PARTICIPATING HOSPITALS AND THEIR LOCATIONS

Cabell Huntington Hospital	Huntington
CAMC Women & Children's Hospital	Charleston
Camden Clark Memorial Hospital	Parkersburg
Davis Memorial Hospital	Elkins
Fairmont General Hospital	Fairmont
Grant Memorial Hospital	Petersburg
Greenbrier Valley Medical Center	Ronceverte
Logan Regional Medical Center	Logan
Monongalia General Hospital	Morgantown
Ohio Valley Medical Center	Wheeling
Pleasant Valley Hospital	Point Pleasant
Princeton Community Hospital	Princeton

Raleigh General Hospital	Beckley
St. Joseph's Hospital	Buckhannon
St. Mary's Hospital	Huntington
Stonewall Jackson Memorial Hospital	Weston
Thomas Memorial Hospital	South Charleston
United Hospital Center	Bridgeport
Weirton Medical Center	Weirton
Wheeling Hospital	Wheeling
WVUH - Children's Hospital	Morgantown
WVUH East – City Hospital	Martinsburg
WVUH East – Jefferson Memorial Hospital	Ranson

MEASUREMENT

The primary goal of the First Baby Initiative was to reduce C-sections among nulliparous women. Birth certificate data, as reported by hospitals to the West Virginia Health Statistic Center's Office of Vital Statistics, was the primary data source used to monitor progress toward meeting the project goal. A participant survey, the results of which may be found on page 9, was administered at the end of the project to collect information on many of the strategies implemented by hospitals to reduce nulliparous C-sections that could not be measured by the birth certificate, such as delaying hospital admission until the onset of active labor, or providing increased labor support.

The following two indicators were measured using birth certificate data and were provided monthly to the hospitals and Oversight Committee via the First Baby Initiative participants' portal on the Perinatal Partnership's website:

1) Primary C-sections among nulliparous singleton births with vertex presentation.

2) Inductions prior to 41 weeks gestation with no documented medical risk factor or congenital anomaly among nulliparous singleton births.

To assess the impact of this initiative, these indicators were calculated by calendar year and for a pre-post project time period. Data from January – June 2011 was aggregated as the pre-project time period and was compared to aggregated data from the last six months of the project (January – June 2012).

RESULTS

The rate of C-sections among nulliparous women in West Virginia has remained stable over the past six years. Between 2006 and 2011, nearly one-third of first time mothers in West Virginia delivered their baby via C-section (see Figure 2). There was no statistically significant change in the statewide C-section rate among nulliparous women before and after this collaborative (31.6% pre-project vs. 32.4% post-project). Although no hospitals experienced a significant decline during the project, 13 of the participating hospitals did reduce the percentage of nulliparous births that were delivered via C-section. In 2011, two birthing hospitals had a C-section rate among nulliparous singleton

births that was less than 16% (i.e., half of the statewide rate of 32%): Greenbrier Valley Medical Center and St. Joseph's Hospital – Buckhannon.

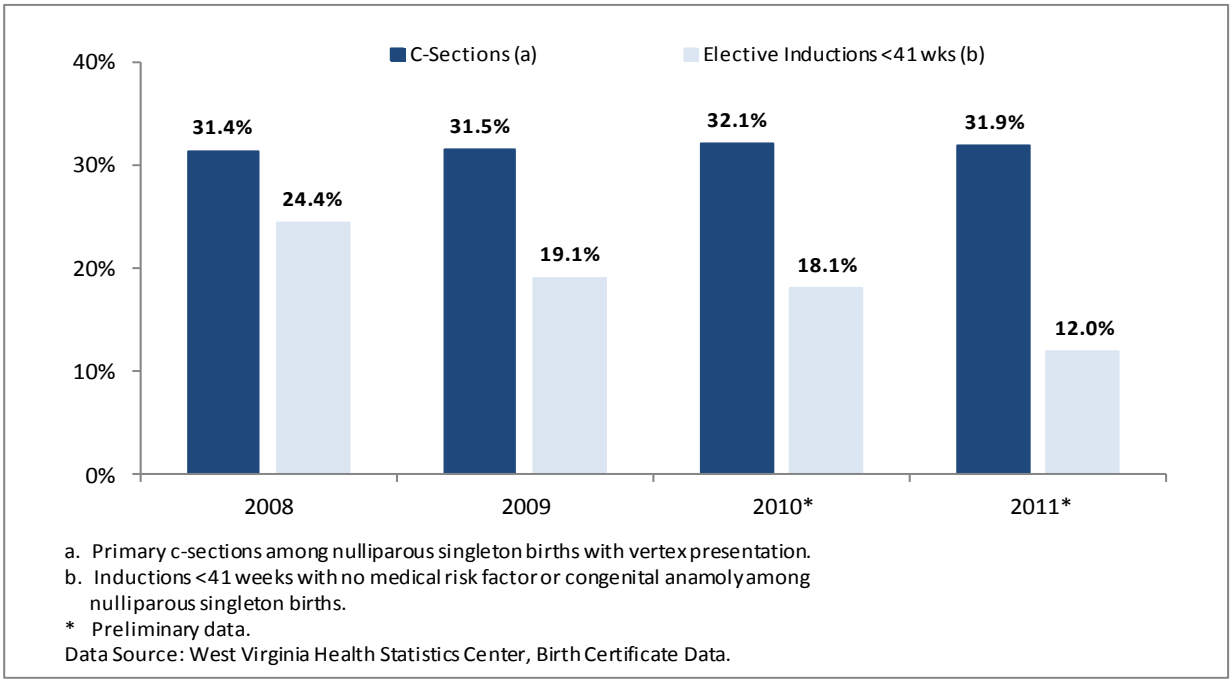
Inductions prior to 41 weeks gestation among nulliparous singleton births with no documented medical risk factor or congenital anomaly have significantly decreased since 2008. In fact, these elective inductions decreased 50% statewide, from 24% in 2008 to 12% in 2011 (see Figure 2). This decline is most likely attributable to the success achieved in the 2009 quality collaborative to reduce elective deliveries prior to 39 weeks gestation.

Although there was no statistically significant decrease in elective inductions prior to 41 weeks gestation among nulliparous mothers during the project period (11.5% pre-project vs. 12.8% post-project), eleven of the participating hospitals showed a decline. During this collaborative, three hospitals did significantly reduce the percentage of nulliparous births electively induced prior to 41 weeks gestation: United Hospital Center (88.0% decline), Weirton Medical Center (62.7% decline), and Grant Memorial Hospital (58.5% decline).

In 2011, five birthing hospitals had a rate of elective inductions prior to 41 weeks gestation among nulliparous births that was less than 6.0% (i.e., half of the statewide rate of 12.0%): Monongalia General Hospital, Raleigh General Hospital, St. Joseph's Hospital – Buckhannon, WVU East - Jefferson Memorial Hospital, and Wheeling Hospital.

Further study may be useful in assessing not only the economic impact of this reduction, but the change in the number of infants being treated in a neonatal intensive care unit (NICU) due to early delivery, and the impact that the reduction may have had on the State's infant mortality rate.

Figure 2
Primary C-sections and Elective Inductions <41 Weeks among Nulliparous Births
West Virginia, 2008-2011



a. Primary c-sections among nulliparous singleton births with vertex presentation.
b. Inductions <41 weeks with no medical risk factor or congenital anamoly among nulliparous singleton births.
* Preliminary data.
Data Source: West Virginia Health Statistics Center, Birth Certificate Data.

SURVEY OF PARTICIPANTS

During the fall of 2012, the West Virginia Perinatal Partnership conducted a survey of the First Baby Initiative participating hospitals in order to gain additional information regarding the Initiative. The primary intent was to help analyze which strategies were employed by hospitals and whether the hospitals viewed their efforts as successful. The survey was also intended to provide information about the value of support activities conducted by the West Virginia Perinatal Partnership and to identify the elements that hospitals considered helpful during this initiative.

The survey contained eleven questions, nine of which related to specific strategies that have been found to help reduce C-sections among nulliparous women, and two questions were information-gathering to identify hospitals responding, and to identify helpful support activities.

Strategy questions addressed the following:

- Strategies employed by the hospital to reduce C-sections of first-time mothers prior to arriving at the hospital, during pre-labor, and during active labor;
- Strategies the hospital would continue to employ post-initiative;
- How helpful certain supportive activities of the West Virginia Perinatal Partnership were to the participating hospitals.

Information gathering questions were:

- What should the West Virginia Perinatal Partnership do to help support hospitals in their continued efforts to reduce C-sections among first-time mothers?
- Do respondents believe their hospitals have been successful?

The results of this survey provide information that may be useful during the upcoming years as hospitals continue their attempts to reduce primary C-sections among first-time mothers. Successful experiences of other hospitals may offer solutions.

Twenty-two of the 23 participating West Virginia hospitals responded to the survey. The hospital team lead person was asked to respond, and most often the nurse manager responded for the hospital team. In a couple of cases, the person occupying the nurse manager position changed during the course of the Initiative but the new nurse manager was able to respond to the survey for the team. All hospitals responded to every question. Listed below are the key survey questions and a summary of the responses.

1. ***Please identify the amount of participation each of team member of the First Baby Initiative Hospital Teams. (Suggested team members are: Hospital Administration, Hospital Attorney, Physician, OB Nurse Manager, Labor/OB Nurse, NICU Nurse, Anesthesiology, Childbirth Educator, Newborn Nursery Nurse)***

   Findings:
   - All hospitals reported that the OB Nurse Manager was a member of the team.
   - No hospitals reported that a Hospital Attorney was a member of the team.

- All team members except NICU nurses and anesthesiology were represented at the start up meeting and some (1-5) monthly conference calls.
- Hospitals reported their teams also included the following professionals and their participation.
    - Risk Management Director attended start up meeting
    - Risk Management Nurse attended all
    - OB clinician

2: Please identify how your team functions in making decisions regarding strategies for the First Baby Initiative.

Findings:

- 18% (4 hospital teams) met monthly to identify strategies and review C-section data.
- 54% (12 hospital teams) met together two to four times during the project to review C-section data and discuss how strategies were working.
- 18% (4 hospital teams) met fewer than two times to review data and discuss strategies.
- 9% (2 hospital teams) did not meet at all to discuss data and strategies.

Respondents also provided the following additional description of their team functions.

- Quarterly physician meetings reviewed C-section data;
- Developed our own In-House Multidisciplinary Perinatal Improvement Workgroup to address many of the First Baby Initiatives within our L&D Service and have been meeting approximately every two weeks - committee reports back to the Department of OB/GYN;
- Discussed monthly in OB Department and Resident Collaborative Practice Meetings.

3. Please identify the strategies employed by your hospital team to reduce C-sections among first-time mothers. Check all that apply.

Findings:

- The most frequently employed strategy was to review data and report feedback to medical and nursing staff. 17 hospitals reported utilizing this strategy.
- 12 hospitals promoted active labor support.
- 11 hospitals encouraged activity during labor.
- 10 hospitals identified physician leadership/ownership as local champions of the initiative. 10 hospitals determined active labor prior to admission criteria/triage.
- No hospital reported utilizing walking epidurals or employing hospitalist/laborist for support during labor.

Other nursing initiatives played an important role for some hospitals:

- 32% (7 hospitals) provided staff nurses with labor support training with Michele Ondeck, RN, from Magee Women's Hospital.
- 27% (6 hospitals) increased the ratio of labor nurses to women in active labor.
- 27% (6 hospitals) employed therapeutic rest.

Respondents made the following comments regarding strategies employed:

- Educated nurses on labor support training by the perinatal educator here at our hospital.
- Transforming Care Together Initiatives on labor support coaching and perinatal core measures, including no elective C-sections before 39 weeks and documentation of Bishop's score prior to induction of labor
- Developed an Elective Delivery Policy.

4. ***PRE LABOR: Identify specific pre-labor strategies employed to reduce unnecessary C-sections for first-time mothers.***

Findings: Listed here are the strategies that were employed by hospitals and were found to be most successful, very successful, or somewhat successful strategies in reducing C-sections among first-time mothers.

- **Elective Inductions:** Reducing elective inductions prior to 39 weeks gestation was reported by 18 hospital teams. One hospital did not employ this strategy, and three hospitals employed it but did not find it to be the most effective strategy. The three hospitals that reported reducing elective inductions prior to 41 weeks found this strategy to be one of the most effective strategies in reducing C-sections. 13 hospitals did not employ this strategy. 5 hospitals did not employ the Bishop Score method of determining readiness for labor induction, but seven hospitals that did employ the Bishop Score method found it to be one of the most successful strategies employed in reducing C-sections.
- **Childbirth Education Classes:** 8 hospitals reported that explaining labor support techniques within childbirth classes was an effective strategy. 4 hospitals initiated childbirth classes, and 3 hospitals enhanced their existing childbirth classes. 5 hospitals reported promoting the philosophy of letting labor start on its own was a strategy they employed and they considered it one of the most successful strategies.
- **Medical Criteria**: 7 hospitals reported breech detection and version was effective in reducing C-sections among the target population. 3 hospitals applied the strategy for no admissions prior to 3 cm and other labor evaluation techniques, and found this strategy to be one of the more or most successful strategies applied. 15 hospitals did not apply this strategy.

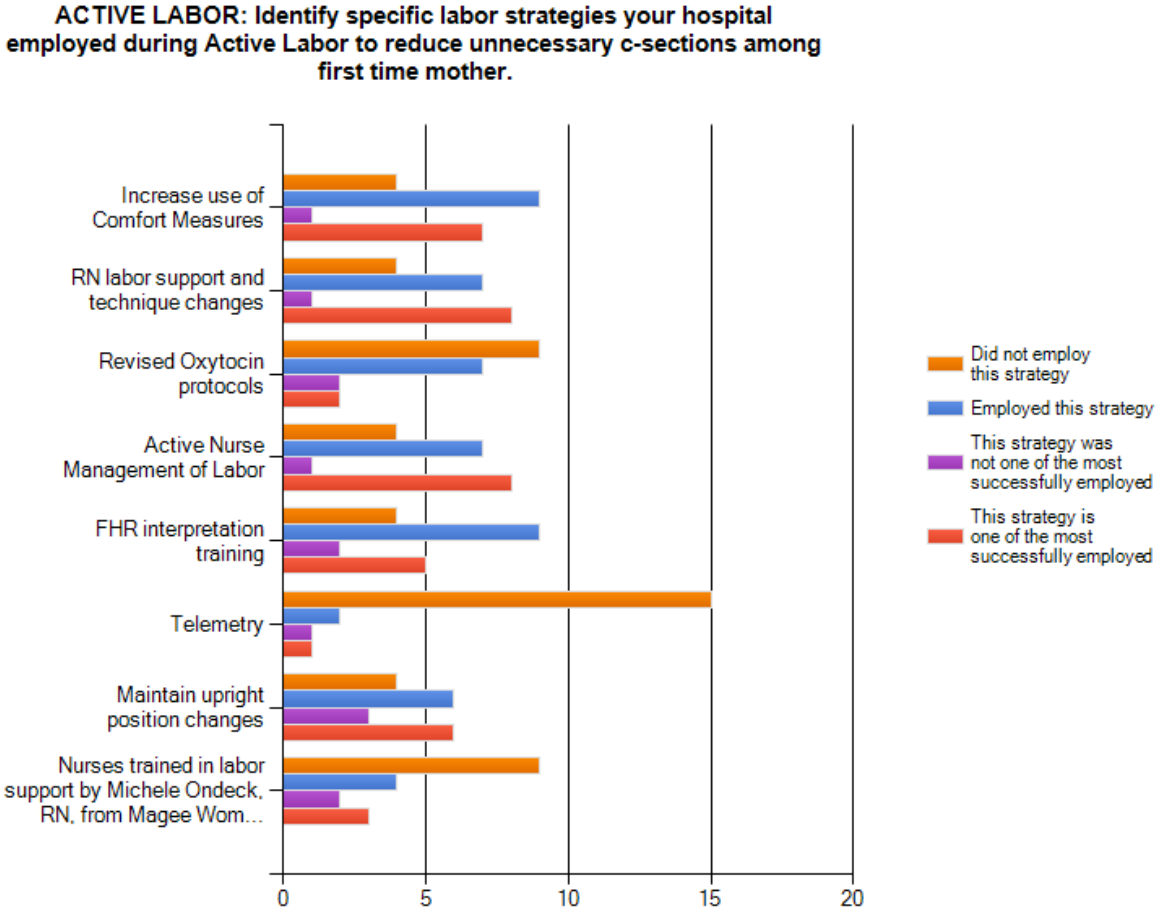
Respondents provided the following comments regarding additional strategies they applied during the initiative or plan to apply, and changes occurring during that period.

- Used Pre-Oxytocin Checklist;
- Will be participating with the VHA/March of Dimes initiative;
- Childbirth Educator resigned during this time frame.

5. ***ACTIVE LABOR: Identify specific labor strategies your hospital employed during active labor to reduce unnecessary C-sections among first-time mothers.***

Findings: Once active labor began, the strategies employed and considered successful were primarily those initiated by the labor nurses.

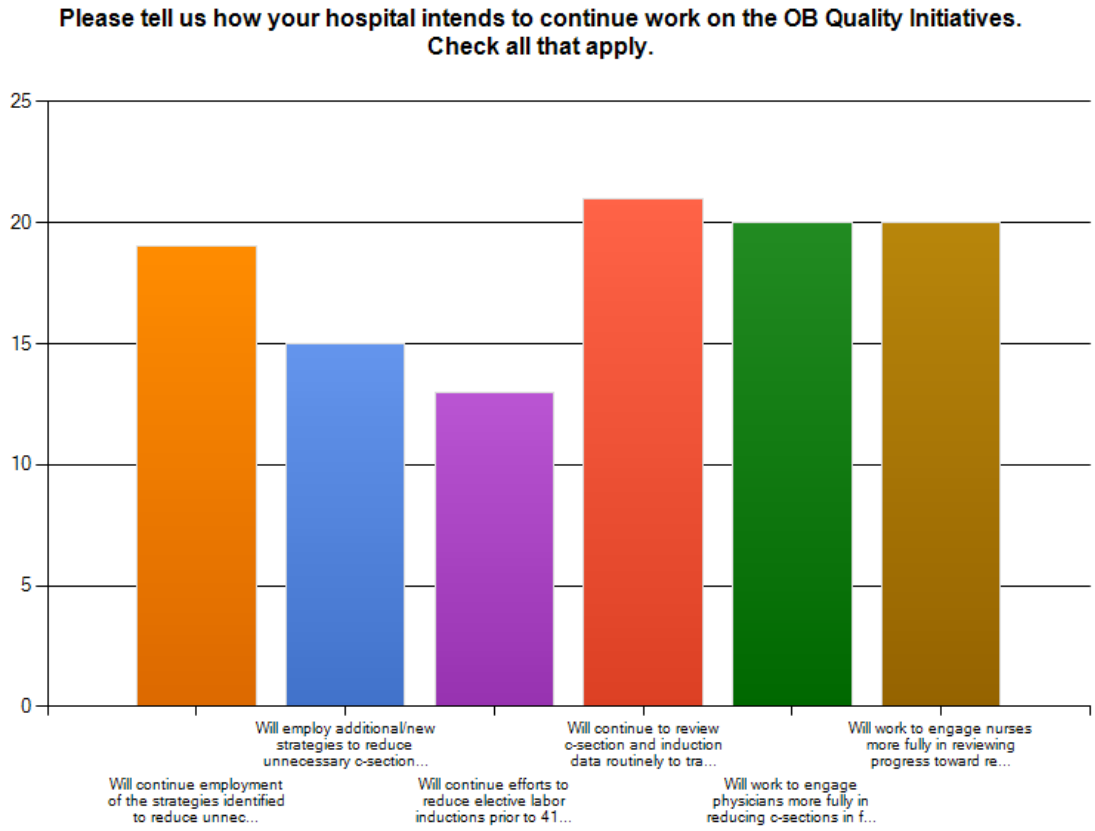
- RN labor support and technique have been identified as the most effective strategies utilized to reduce C-sections. Other effective strategies were increased use of comfort measures, active nurse management of labor, maintaining an upright position changes, nurse training for labor support by Michele Ondeck, RN from Magee Women's Hospital and fetal heart rate interpretation training, and no pushing until descent and rotation.
- No hospitals employed acupuncture or walking epidurals.
- Epidurals: 3 hospitals employed the strategy not to place an epidural until after 4 cm and two of those hospitals found this to be one of the most effective strategies.
- One hospital commented: We also purchased new L&D EMR/FHR software (PeriGen) that contains new FHR analytic technology.
- And another hospital commented that "many of above listed as did not implement is because they were already being done within the institution, e.g., FHR interpretation training."



6. ***Please tell us how your hospital intends to continue work on the OB Quality Initiatives. Check all that apply.***

Findings:

- All hospitals (22) reported they would continue their work to reduce C-sections for nulliparous women with vertex presentations.
- 95% (21 hospitals) will continue to review C-section and induction data routinely to track progress.
- Two strategies were identified by 91% (20 hospitals) as ways they will continue their efforts: Will work to engage nurses more fully in reviewing progress toward reducing C-sections in first-time mothers;Will work to engage physicians more fully in reducing C-sections in first-time mothers.
- 85% (19 hospitals) said they would continue employment of the strategies identified to reduce unnecessary C-sections among first-time mothers.
- 68% (15 hospitals) said they would employ additional/new strategies to reduce unnecessary C-sections among first-time mothers.
- 59% (13 hospitals) will continue efforts to reduce elective labor inductions prior to 41 weeks for nulliparous women.
- One hospital commented that they will use a combination of the Multidisciplinary Perinatal Improvement Workgroup and the VHA/March of Dimes Initiative to continue progress.



7. ***How helpful were the following First Baby Initiative methods to you and your team? If something was not helpful, please comment in the "comment" box why it was not helpful.***

Findings:

- The most helpful aspect of this initiative was the monthly data reports. All 22 reporting hospitals indicated this was somewhat, very, or most helpful.
- 91% (20 hospitals) reported the July 2011 First Baby Initiative kick-off meeting was helpful.
- 91% (20 hospitals) reported that hearing other hospitals' ideas and suggestions was helpful.
- 81% (18 hospitals) reported the Bishop Score Method presentation by Dr. Luis Bracero was helpful.

8. ***Please tell us what the West Virginia Perinatal Partnership can do to assist your hospital team to continue reduction of C-sections for first-time mothers.***

Findings: The following are comments made by respondents regarding what support the Perinatal Partnership might continue to offer.

- Continued education and involvement of physicians.
- Continue to provide information and education materials that will enhance current practices in community settings.
- "I have only been in West Virginia for 3 months, so I would like to learn more about the program."
- Continue to work with ACOG state level of physicians and make it a focus of that organization.
- Continue providing education and feedback on new processes that have been proven to decrease PCA in first-time mothers.
- Nurse education related to labor support and fetal monitoring interpretation.
- Physician education related to elective inductions of labor
- Continue to offer labor support education opportunities for nursing.
- Consider hosting a childbirth educator training program in our State.
- Continue to report data and share initiatives.
- Continue to provide educational opportunities.
- Continue self-assessments and communication with hospitals.
- Continue to educate.
- Keep up the good work.
- Continue to provide EBP/Best Practices information to members of the Perinatal Partnership - as well as support that will encourage our physician providers to be change agents - needed to impact the goals of the first baby imitative.
- Talk to physicians regarding inductions before 39 weeks.
- Look at the reimbursement changes that were made in terms of delivery vs. prenatal care if physician isn't present at delivery. I have been in this field for many decades and that change is what created this massive induction issue before 39 weeks.

- More education to the public about alternatives to epidural.
- Four individuals reported they are unsure at the present time of what the Perinatal Partnership can do to support this initiative.

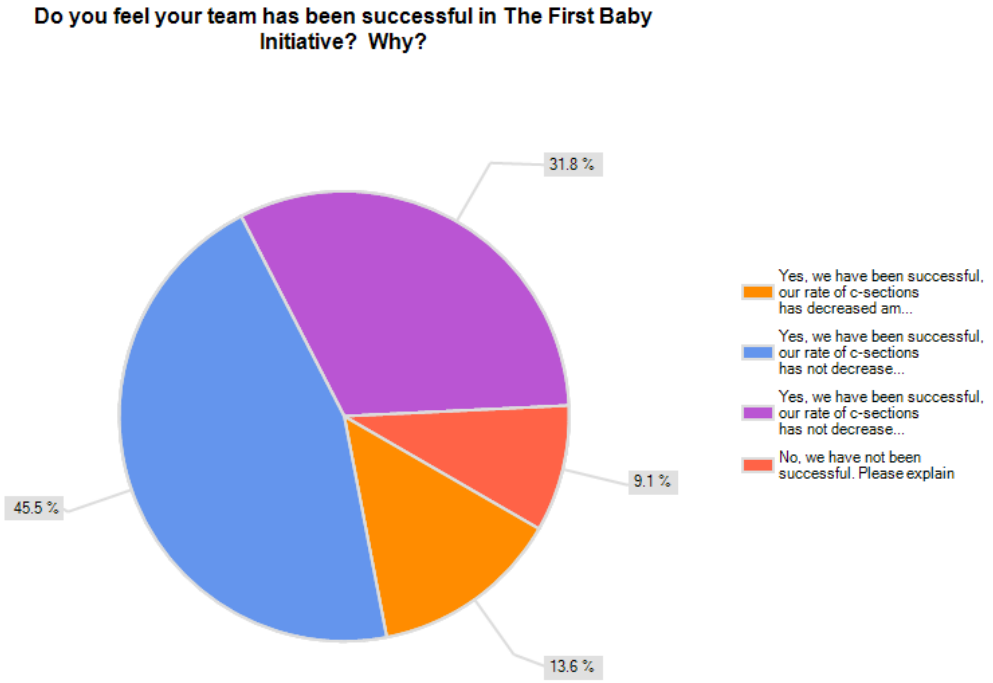
9. *Do you feel your team has been successful in The First Baby Initiative? Why?*

Findings:

- 14% (3 hospitals) reported being successful and having a reduction in the C-section rates.
- 45% (10 hospitals) reported "yes, we have been successful, our rate of C-sections has not decreased sufficiently but we have implemented strategies that will allow the rate to be reduced."
- 32% (7 hospitals) reported, "yes, we have been successful. Our rate of C-sections has not decreased at all, but we are employing strategies which will allow for a reduction over time."
- 9% (2 hospitals) reported, "no, we have not been successful."

Other Comments:

- Our rate was already one of the lowest in the state, so it didn't change much.
- C-section rate is about the same.
- We have had changes in leadership and the team that have affected our outcomes.
- This initiative helped address this particular issue at our facility.



Future Steps

The progress made during the collaborative period was significant and it is important to assure that these gains are not lost. The Oversight Committee met on October 17, 2012, to review project progress and recommended the following future steps:

- Publish information regarding successful hospital strategies for reducing C-sections.
- Develop a brochure to promote reduction of induced labor prior to 41 weeks for first-time mothers.
- Maintain monthly updates on C-section and induction rates, by hospital, for nulliparous women with vertex position of singleton births.
- Make calls and visits to hospitals to offer assistance.
- Continue phone meetings quarterly or twice a year.
- Maintain communication among participating hospitals on successful strategies to overcoming barriers through periodic meetings, phone conferences, website posting, and listserv.
- Provide offerings of nurse training on labor support techniques
- Encourage use of patient educators with families
- Initiate training on walking epidural techniques for anesthesiologists
- Encourage use of "Text 4 Baby"
- Reach out to nonparticipating hospitals
- Emphasize approaches that are clear and are not subject to varying interpretations.
- A review of reimbursement policies for C-sections and for vaginal deliveries may be helpful for determining whether the current reimbursement rates and or methods of payment for services might influence the State's C-section rates.

At the West Virginia Perinatal and Child Health Summit on December 13, 2012, a panel of project participants discussed successes and failures of the hospital teams' work on reducing C-sections for first time mothers over the year. The panel, led by Dr. David Lagrew, included representatives from West Virginia University-East City Hospital, Stonewall Jackson Hospital, CAMC Women and Children's Hospital, and Marshall University School of Medicine. Their recommendations for future progress were:

- The effort must be institution-wide and cannot rely solely on the doctors or the nurses and requires administrative buy-in.
- Each hospital needs a champion, and the team must be collaborative.
- Patient education must start with the first prenatal visit and include the patient's family.
- Third party payers should find a way to reward patients for attending prenatal classes.

Project analysis to gain further information regarding the effects of this obstetrical quality initiative should include the following.

- Further analysis of the survey responses comparing success in reducing C-section rates with the specific strategies applied.
- Economic impact and outcomes analysis of the decline in elective deliveries prior to 39 weeks gestation that was observed during the first collaborative. This analysis should determine any change in the number of infants being treated in a neonatal intensive care unit (NICU) and the State's infant mortality rate as a result of the reduction in elective deliveries.
- Economic impact and outcomes analysis of the First Baby Initiative.
- Study of payment for services strategies that other states with lower C-section rates have implemented.

References

1. Martin JA, Hamilton BE, Ventura SJ, et al. Births: Final data for 2010. National vital statistics reports; vol 61 no 1. Hyattsville, MD: National Center for Health Statistics. 2012.
2. Martin JA, Hamilton BE, Sutton PD, et al. Births: Final data for 2007. National vital statistics reports; vol 58 no 24. Hyattsville, MD: National Center for Health Statistics. 2010.
3. Kochanek KD, Xu J, Murphy SL, et al. Deaths: Final Data for 2009. National vital statistics reports; vol 60 no 3. Hyattsville, MD: National Center for Health Statistics. 2012.
4. Hamilton BE, Martin JA, Ventura SJ. Births: Preliminary data for 2011. National vital statistics reports; vol 61 no 5. Hyattsville, MD: National Center for Health Statistics. 2012.
5. Birth Certificate Data. West Virginia Health Statistics Center. West Virginia Department of Health and Human Resources.
6. Martin JA, Hamilton BE, Sutton PD, et al. Births: Final data for 2008. National vital statistics reports; vol 59 no 1. Hyattsville, MD: National Center for Health Statistics. 2010.
7. Childbirth Connection. Best Evidence: Induction of Labor. Available at: www.childbirthconnection.org/article.asp?ck=10652. Accessed on January 9, 2013.
8. Hodnett E. D, Gates S, Hofmeyr G. J, Sakala C. Continuous support for women during childbirth. *Cochrane Database of Systematic Reviews (Online : Update Software)* 2007;(Issue 3):CD003766. 10.1002/14651858.CD003766.pub2.
9. Payant L, Davies B, Graham I. D, Peterson W. E, Clinch J. Nurses' intentions to provide continuous labor support to women. *Journal of Obstetric, Gynecologic, and Neonatal Nursing.* 2008;37:405–414.
10. Romano A, Lothian J. Promoting, protecting, and supporting normal birth: A look at the evidence. *Journal of Obstetric, Gynecologic, and Neonatal Nursing.* 2008;37:94–105.

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First Baby Initiative

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