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Using Education, Collaboration, and Payment Reform to Reduce Early Elective Deliveries

A Case Study of South Carolina's
Birth Outcomes Initiative

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Catalyst for Payment Reform (CPR) is an independent, non-profit organization working on behalf of large employers and other health care purchasers to catalyze improvements in how we pay for health services and to promote better and higher-value care in the U.S.

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CATALYST FOR PAYMENT REFORM

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EXECUTIVE SUMMARY

Using methods to pay for health care that support the delivery of evidence-based, high-quality care, and discourage care that is unneeded or ill-advised, can help public and private payers improve the quality and affordability of health care. This case study examines how South Carolina used a policy of non-payment for early elective deliveries to underscore a multi-stakeholder commitment to improving birth outcomes. Through this comprehensive approach, the state reduced early elective deliveries and Neonatal Intensive Care Unit (NICU) stays, and saved millions of dollars. South Carolina was the first state in the nation to have its Medicaid program partner with the largest local commercial insurer to adopt such a non-payment policy.

This case study tells the story of how this key initiative came about to help others learn and potentially replicate South Carolina’s success. It begins with an examination of several statistics about early elective deliveries as well as the history of South Carolina’s multi-stakeholder Birth Outcomes Initiative. It then describes

how the key players arrived at and implemented the non-payment policy. The case study then discusses results to date, and why the Birth Outcomes Initiative does appear to be successfully changing provider practice patterns and health outcomes. The paper concludes with insights and advice for those interested in emulating the non-payment model to improve birth outcomes while reducing health care spending.

INTRODUCTION

How we pay for health care can influence how providers deliver care and the health outcomes of patients. Paying for a health care service that does not follow clinical guidelines can encourage providers — even unwittingly — to provide that service to patients. Changing how we pay for care so that we align the financial incentives we offer with the clinical outcomes we desire can be a powerful strategy to achieve the Triple Aim — better population health and better patient care at lower costs.

This case study examines how South Carolina used its multi-stakeholder Birth Outcomes Initiative (BOI) to reduce early-term,¹ elective inductions by 50 percent, improving birth outcomes while saving the state and the federal government \$6 million in Medicaid spending for the first quarter of fiscal year 2013.² It is likely that this effort reduced the incidence of early elective cesarean deliveries as well.³ The BOI contains a number of components; this case study focuses on the role of payment policies within the BOI and, in that context, specifically on the policy adopted by the South Carolina Department

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1 Early-term is defined as before 37 and 38 weeks. The American College of Obstetricians and Gynecologists (ACOG) issued an official Committee Opinion in November 2013 further clarifying this definition to define a “term pregnancy” as 39 weeks and beyond. American College of Obstetricians and Gynecologists, “Committee Opinion,” last modified October 2013, http://www.acog.org/About_ACOG/News_Room/News_Releases/2013/Ob-Gyns_Redefine_Meaning_of_Term_Pregnancy.

2 SCDHHS, “House Ways and Means Committee Budget Presentation January 17th, 2013” available at: www.scdhhs.gov/sites/default/files/BudgetHouseWaysAndMeansJanuary172013KEK.pdf.

3 As described later in this report, it is more difficult to measure whether cesarean deliveries are performed for evidence-based or elective reasons.

Early elective deliveries are associated with an increased risk of maternal and neonatal morbidity (and longer hospital stays) for both mothers and newborns, as compared with deliveries occurring between 39 and 40 weeks gestation.⁵

of Health and Human Services (DHHS) and South Carolina's largest commercial insurer, BlueCross BlueShield of South Carolina (BCBSSC), to stop paying for early elective deliveries (elective inductions and cesarean deliveries prior to 39 weeks gestation). While other states have, or are beginning to pursue, similar strategies, South Carolina is the only state to date that has adopted this policy across both public- and private-sector payers. A summary of strategies other states are pursuing is available in Appendix H.

This case study provides insights and advice to those interested in emulating the non-payment model to improve birth outcomes while reducing health care spending, including other states, employers, health care purchasers, and private payers.

EARLY ELECTIVE DELIVERIES: CAUSES

The rates of both early elective inductions and early elective cesarean deliveries are on the rise across the U.S.⁴ Providers and patients may choose to deliver a baby before a pregnancy reaches full term either by inducing labor or by scheduling a cesarean delivery. While in some cases early delivery may be evidence-based, in others cases it is done for non-medical reasons such as convenience for either or both the patient and provider, relief of the pregnant woman's discomfort in the final stages of pregnancy, and/or perceived liability concerns on the part of the provider. Providers can feel pressure from patients who are hoping to deliver in a certain time period.

EARLY ELECTIVE DELIVERIES: EFFECTS

Health consequences for infants and mothers

Early elective deliveries are associated with an increased risk of maternal and neonatal morbidity (and longer hospital stays) for both mothers and newborns, as compared with deliveries occurring between 39 and 40 weeks gestation.⁵ Infants born between 36 and 38 weeks may weigh as much and appear to be as healthy as those born later, but are more likely to have serious lung problems and other medical conditions resulting in admissions to the neonatal intensive care unit.⁶ Long-term effects in academic achievement, as measured by math and reading performance in third grade, are also evident with variations in gestational age at delivery.⁷

Despite the overwhelming evidence against early elective deliveries, an estimated 10 to 15 percent of babies in the U.S. continue to be delivered early without medical cause, according to a 2012 report by the U.S. Department of Health and Human Services.⁸ Beginning in 2014, hospitals participating in Medicare's Inpatient Quality Reporting system will be required to report on early elective deliveries, rates of which will be made public on Hospital Compare beginning in 2015.⁹

Some experts contend that the way we pay for health care today seems to condone early elective deliveries, and fails to send a signal to providers to adhere to evidence-based practices in labor and delivery.¹¹

4 Leapfrog, "Factsheet," last modified February 2013, <https://leapfroghospitalssurvey.org/web/wp-content/uploads/FSdeliveries.pdf> and Signore C. 2010. "No time for complacency: labor inductions, cesarean deliveries, and the definition of 'term.'" *Obstetrics & Gynecology*; 116(1):4-6.

5 Ashton DM. 2010. Elective delivery at less than 39 weeks. *Current Opinion in Obstetrics & Gynecology*. 22(6):506-510.

6 Centers for Medicare and Medicaid Services, "Reducing Early Electives in Medicaid and SCHIP," last modified November 2012, www.medicare.gov/Medicaid-CHIP-Program-Information/By-Topics/Quality-of-Care/Downloads/EED-Brief.pdf.

7 Noble KG, Fifer WP, Rauh VA, Nomura Y, and Andrews HF. 2012. Academic Achievement Varies With Gestational Age Among Children Born at Term. *Pediatrics*; 130:1-8.

8 Clark SL, Miller DD, Belfort MA, Dildy GA, Frye DK, Meyers JA. 2009. Neonatal and Maternal Outcomes Associated with Elective Term Delivery. *American Journal Obstetrics and Gynecology*; 156.

9 Centers for Medicare and Medicaid Services, "Reducing Early Electives in Medicaid and SCHIP," last modified November 2012, www.medicare.gov/Medicaid-CHIP-Program-Information/By-Topics/Quality-of-Care/Downloads/EED-Brief.pdf.

More expensive

Because they often result in the delivery of newborns who require additional medical interventions, early elective deliveries often generate higher medical costs compared with full-term, spontaneous births.¹⁰ For example, some infants delivered early without a medical indication are born with low birth weight, which may require a costly stay in the Neonatal Intensive Care Unit (NICU). Some experts contend that the way we pay for health care today seems to condone early elective deliveries, and fails to send a signal to providers to adhere to evidence-based practices in labor and delivery.¹¹

The induction of labor is associated with higher medical costs than spontaneous birth; for every 100 women induced, there is an average additional 88 days in the hospital.¹² The American Academy of Family Physicians notes that elective induction more than doubles the cesarean delivery rate, a procedure that carries health risks for infants and mothers and greater medical expenses.¹³ Whether they are performed early or at full term, cesarean deliveries are more expensive than spontaneous vaginal births. A 2012 report found that average total payments for maternal and newborn care with cesarean births were about 50 percent higher than average payments with vaginal births for both commercial payers (\$27,866 vs. \$18,329) and Medicaid (\$13,590 vs. \$9,131). Commercial payers paid an extra \$1,464 to clinicians and \$7,518 to facilities for cesarean versus vaginal births.¹⁴ It is important to note that South Carolina Medicaid pays the same for vaginal deliveries as it does for cesarean deliveries after labor; scheduled cesarean deliveries without labor are reimbursed at an even lower rate.¹⁵

However, even in cases where reimbursement rates for cesareans are not higher than for vaginal births, unscheduled cesarean deliveries may end up costing more. Once labor is induced, it is more likely to result in an unscheduled cesarean delivery, compounding the costs of a nurse supervising labor with the costs of the eventual surgery.

Regardless of the delivery mode, early elective deliveries are more likely to result in NICU admissions.¹⁶ Average payments for babies with stays in neonatal intensive care units far exceed average payments for all newborns (from 3.7- to 5.6-fold) for both types of payers (commercial and Medicaid) and both types of birth (vaginal and cesarean).¹⁷

Medicaid covers the costs of more births than any other payer, and thus may proportionately feel the impact of paying for the costs associated with early elective deliveries more than a commercial insurer.¹⁸

Experts recommend against early elective deliveries

For all the reasons listed above, both medical professional and national quality organizations recommend against early elective deliveries, and strive to reduce their numbers. Since 1979, the American College of Obstetricians and Gynecologists has recommended against deliveries before 39 weeks unless there is a medical indication, such as high blood pressure or diabetes in the mother, or signs that the fetus may be in

The Leapfrog Group, a national nonprofit organization committed to advancing hospital safety and quality, has set a standard that no more than five percent of all deliveries should be early on an elective basis.²⁰

10 Johnson, Elizabeth. (2013) "Elective Induction of Labor and Early Term Delivery." *Journal of Nursing*. Available at: <http://rnjournal.com/journal-of-nursing/elective-induction-of-labor-and-early-term-delivery>.

11 Huffington Post, "What You Need to Know About Early Electives," last modified April 2013, www.huffingtonpost.com/leah-binder/early-elective-deliveries_b_3009222.html.

12 University of Rochester Medical Center, "Scheduled Deliveries Raise Risks for Mothers, Do Not Benefit Newborns," last modified February 18, 2011, www.urmc.rochester.edu/news/story/index.cfm?id=3120.

13 Ehrenthal, D.B., Jiang, X. & Strobino, DM. (2010). Labor induction and the risk of a cesarean delivery of nulliparous women at term. *Obstetrics and Gynecology*, 116, 35-42 doi: 10.1097/AOG.0b013e3181e10c5c.

14 Childbirth Connection, "The Cost of Having a Baby," last modified January 2013, <http://transform.childbirthconnection.org/reports/cost/>

15 Information provided by Amy H. Picklesimer, MD, MSPH, South Carolina Birth Outcomes Initiative Clinical Lead, Division of Maternal-Fetal Medicine, Greenville Health System, via email October 14, 2013.

16 Hoffmire CA, Chess PR, Ben Saad T, Glantz JC. (2012). Elective delivery before 39 weeks: the risk of infant admission to the neonatal intensive care unit. *Maternal and Child Health Journal*.; 16(5):1053-62. doi: 10.1007/s10995-011-0830-9.

17 Childbirth Connection, "The Cost of Having a Baby," last modified January 2013, <http://transform.childbirthconnection.org/reports/cost/>

18 Markus AR, Andres E, West KD, Garro N, Pellegrini C (2013). Medicaid Covered Births 2008-2010, in the Context of the Implementation of Health Reform. *Women's Health Issues*.; 23(5):e272-e280.

Researchers estimate that eliminating the practice of early elective deliveries in South Carolina will save taxpayers more than \$1 million a year in delivery costs and an additional \$7 million in reduced hospitalizations for babies.²⁸

distress.¹⁹ The Leapfrog Group, a national nonprofit organization committed to advancing hospital safety and quality, has set a standard that no more than five percent of all deliveries should be early on an elective basis.²⁰ According to Leapfrog, in 2013, the U.S. had an early elective delivery rate of more than 11 percent.²¹ The five percent target was set because it seemed to be both realistic and achievable as a quality benchmark.²² The Joint Commission adopted a national quality metric on elective early-term delivery in 2010.²³

SOUTH CAROLINA'S BIRTH OUTCOMES

In 2011, South Carolina had the fourth highest percentage of babies born prematurely in the nation.²⁴ Data gathered over several years show that approximately one in every ten babies born in South Carolina will be admitted to a NICU.²⁵

In 2011, South Carolina's rate of early elective delivery was 9.62 percent — representing more than 6,000 births — much higher than Leapfrog's recommended five percent or less.^{26, 27} Researchers estimate that eliminating the practice of early elective deliveries in South Carolina will save taxpayers more than \$1 million a year in delivery costs and an additional \$7 million in reduced hospitalizations for babies.²⁸

OVERVIEW: THE BIRTH OUTCOMES INITIATIVE (BOI)

The South Carolina Birth Outcomes Initiative (BOI) is an effort by the South Carolina Department of Health and Human Services (SCDHHS), The South Carolina Hospital Association (SCHA), March of Dimes, BlueCross BlueShield of South Carolina (BCBSSC) and more than 100 other stakeholders to improve health outcomes for newborns in the Medicaid program and throughout the state. The initiative focuses on improving birth outcomes; in turn, this helps achieve the goals of the Triple Aim — better population health and better patient care at lower costs.

Launched in July 2011, the BOI has three interconnected goals that work together to improve birth outcomes throughout the state, including:

1. Reducing the number of low birth weight babies;
2. Reducing NICU admissions and stays; and,
3. Reducing racial disparities in birth outcomes.

The members of the BOI work to achieve the three core objectives through various initiatives and serve on a series of workgroups. Examples of initiatives include:

19 ACOG. "Nonmedically indicated early-term deliveries."

20 Leapfrog, "Factsheet," last modified February 2013, <https://leapfroghospitalsurvey.org/web/wp-content/uploads/FSdeliveries.pdf>.

21 Leapfrog, "New Data," last modified February 2013, www.leapfroggroup.org/policy_leadership/leapfrog_news/4976192.

22 Clark, S. et al. (2010) "Reduction in elective delivery at <39 weeks of gestation: comparative effectiveness of 3 approaches to change and the impact on neonatal intensive care admission and stillbirth" American Journal of Obstetrics and Gynecology. 1.e1-6. Available at: www.leapfroggroup.org/media/file/AJOGEffectivenessofApproaches.pdf.

23 The Joint Commission, "Perinatal Care" Topic Library Item, last updated February, 2011, www.jointcommission.org/perinatal_care.

24 Giese, Melanie. "South Carolina Department of Health and Human Services Perspective on Promoting Healthier Outcomes and Leveraging Partnerships with Key Stakeholders to Improve Birth Outcomes in South Carolina" (slides presented at Medicaid Innovations Forum, Orlando, Florida, February 8-9, 2012), available at: www.medicaidinnovations.com/pdf/2012-Speaker-Presentations/day-1/3.%20Case%20Study%20SC.pdf.

25 March of Dimes, "NICU Admissions in South Carolina," last modified 2013, www.marchofdimes.com/peristats/ViewSubtopic.aspxreg=45&top=18&stop=38&lev=1&slev=4&obj=35&dv=ms.

26 Statistic provided by Professor Ana López-DeFede as part of the BOI data workgroup presentation, August 14, 2013.

27 South Carolina Department of Health and Human Services, "Non-Payment Policy," last modified December 2012, www.scdhhs.gov/press-release/non-payment-policy-deliveries-prior-39-weeks-birth-outcomes-initiative.

28 Estimated savings were calculated by Professor Ana López-DeFede; the costs savings represent the first year of life and includes the following items: reduction of delivery costs (unnecessary cesarean deliveries) resulting in complications for mother and child; reduction of length of hospital stays for mother; reduction of NICU stays and the level of NICU care; reduction or elimination of costs associated with assistive technology and related services to address the needs of a premature infant; and specialty care (type and frequency to address complications); details provided by Professor Ana López-DeFede via email, October 28, 2013.

- End elective inductions for non-medically-indicated deliveries prior to 39 weeks gestational age (Patient Safety and Quality of Care workgroup).
- Implement a universal screening and referral tool (SBIRT) in the physician’s office to screen pregnant and postpartum women for tobacco use, substance abuse, alcohol, depression and domestic violence (Comprehensive Behavioral Health workgroup).
- Incentivize South Carolina hospitals to increase breast-feeding rates by achieving the Baby-Friendly USA designation (Baby Friendly workgroup).
- Expand access to Long Acting Reversible Contraceptives (LARCs) by allowing inpatient insertion following vaginal or cesarean delivery (Care Coordination workgroup).
- Expand access to CenteringPregnancy²⁹ group prenatal care, which has shown promise in reducing rates of pre-term birth and eliminating racial disparities in birth outcomes (Health Disparities workgroup).
- Improve care for infants exposed prenatally to narcotics by developing and disseminating best practices and coordinating referrals (Comprehensive Behavioral Health workgroup).

Please note that this case study focuses primarily on the BOI’s effort to reduce early elective deliveries through a policy of non-payment, though the other components of the BOI play a strong and supporting role in helping the state achieve its goal of reducing early elective deliveries to improve birth outcomes.

HISTORY OF THE BOI IN SOUTH CAROLINA: 2008 TO THE PRESENT

The March of Dimes campaign

The March of Dimes began issuing its premature birth report card in 2008, helping to call attention to the health problems associated with early elective deliveries, among other issues.³⁰ South Carolina has never received higher than a grade of D; as described previously, compared with other states, South Carolina has had higher-than-average rates of low birth weight babies, higher infant mortality, and higher rates of pre-term births.³¹

As part of its multi-faceted campaign to reduce pre-term birth, the March of Dimes began focusing on reducing early elective deliveries, focusing on inductions and cesarean deliveries at 37 and 38 weeks. From 2007-2009, March of Dimes rolled out a community-based campaign in Kentucky called “Healthy Babies are Worth the Wait.” The campaign had several components, including work with hospitals to change policies on early elective deliveries, as well as a broad-based consumer education campaign that would later be used nationwide.

Shortly thereafter, the March of Dimes, California Maternal Quality Care Collaborative (CMQCC), and the California Department of Health, Maternal Child and Adolescent Health Division collaborated on the development of a quality improvement toolkit. The toolkit, entitled “Elimination of Non-medically Indicated (Elective) Deliveries Before 39 Weeks Gestational Age,” includes: literature; an implementation guide for hospitals; data collection tips; clinician and patient education materials; and sample forms. A link to the toolkit and a short summary, along with a brochure for the companion Quality Improvement Service Package that March of Dimes offers to help hospitals implement the toolkit, is in Appendix A. The March of Dimes then used the toolkit to pilot a demonstration project with 25 hospitals in the the five states with the highest number of births (California, New York, Texas, Illinois and Florida), successfully reducing the rate of early elective deliveries by 83 percent

Louisiana’s Birth Outcomes Initiative engaged the state’s birthing hospitals in a voluntary collaborative to reduce elective deliveries prior to 39 weeks gestation using a combination of patient and provider education. The voluntary approach led to improvement — especially for those hospitals that participated in an Institute for Healthcare Improvement collaborative.

29 Centering Healthcare, “CenteringPregnancy,” <http://centeringhealthcare.org/pages/centering-model/pregnancy-overview.php>.

30 Interview with Scott Berns, MD, Senior Vice President & Deputy Medical Officer, March of Dimes, October 18, 2013.

31 America’s Health Rankings (UnitedHealth Foundation), “South Carolina,” last modified 2012, www.americashealthrankings.org/SC.

Medicaid pays for 50 percent of all births in South Carolina. Together, South Carolina Medicaid and BCSSC (the only private insurance plan headquartered in South Carolina) pay for almost 85 percent of births in the state.³⁷

in these hospitals.³² The effort proved that provider education, coupled with consumer education and hospital quality improvement efforts, can yield significant results.

The influence of Louisiana's experience

In November 2010, following the release of a March of Dimes report that assigned Louisiana an "F" in incidences of prematurity, the Louisiana Department of Health and Hospitals (DHH) declared that the situation demanded immediate attention. It helped launch a process improvement collaborative among the state's hospitals designed to improve birth outcomes and reduce premature births. Louisiana's Birth Outcomes Initiative engaged the state's birthing hospitals in a voluntary collaborative to reduce elective deliveries prior to 39 weeks gestation using a combination of patient and provider education. The voluntary approach led to improvement — especially for those hospitals that participated in an Institute for Healthcare

Improvement collaborative. Elective deliveries before 39 weeks have been reduced from an average of 15 percent of all deliveries, to 2 percent among hospitals participating in the collaborative.³³

South Carolina faces a financial crisis

In January 2011, Tony Keck, formerly with the Louisiana DHH, joined the Haley administration in South Carolina as the state's Director of Health and Human Services. The state faced a \$228 million budget deficit and needed to cut \$30 million from its Medicaid budget.³⁴ That financial pressure prompted a dialogue among the South Carolina Hospital Association, which represents the state's 89 hospitals, health plans, providers, and state leaders about what could be done to avoid another cut in Medicaid reimbursement rates.

South Carolina has almost one million Medicaid beneficiaries. Beneficiaries receive care in one of three ways: through traditional fee-for-service; through one of the state's four Managed Care Organizations; or, through one of the state's three Medical Home Networks. (Later in 2013, the three Medical Home Networks will become Managed Care Organizations). More than half of all beneficiaries are in managed care today; all new beneficiaries will be enrolled in managed care (unless they are part of a population covered by a waiver).³⁵

In 2009, Medicaid became the largest line item in South Carolina's budget. In 2011, Medicaid accounted for \$5.9 billion in total state expenditures, or 27 percent of the overall \$21.5 billion total state budget.³⁶ Medicaid pays for 50 percent of all births in South Carolina. Together, South Carolina Medicaid and BCSSC (the only private insurance plan headquartered in South Carolina) pay for almost 85 percent of births in the state.³⁷

Save babies, save money

Reducing NICU admissions and the percentage of babies born at low birth weight provided a major opportunity to improve maternal and child health and save money. In the succinct words of Health and Human Services' Deputy Director for Medical Services Melanie "BZ" Giese, "(The BOI) was an opportunity to save babies, save money."³⁸ Medicaid was paying for more than half the NICU admissions in the state, and covering almost two-thirds of the cost of babies born at a low

In the succinct words of Health and Human Services' Deputy Director for Medical Services Melanie "BZ" Giese, "(The BOI) was an opportunity to save babies, save money."

32 Oshiro, B et al (2013). A multi-state quality improvement program to decrease elective deliveries before 39 weeks of gestation. *Obstetrics & Gynecology*.; 121(5): 1025-31. doi: 10.1097/AOG.0b013e31828ca096.

33 The Commonwealth Fund, "Quality Matters Case Study: Louisiana's Poor Rankings Make Improving Birth Outcomes a State Imperative," last modified March 2013, www.commonwealthfund.org/Newsletters/Quality-Matters/2013/February-March/Case-Study.aspx.

34 Interview with Tony Keck, Director, Health and Human Services, South Carolina, August 5, 2013.

35 Interview with Melanie Giese, Deputy Director, Medical Services, Health and Human Services, South Carolina, August 13, 2013.

36 The Lucas Group, "South Carolina Department of Health and Human Services: Strategic Vision/Plan for Rebalancing Long Term Care" (presented to SCDHHS in May, 2012), available at: www.scdhhs.gov/sites/default/files/Lucas%20Group%20Final%20report_0.pdf.

37 Interview with Melanie Giese, Deputy Director, Medical Services, Health and Human Services, South Carolina, August 13, 2013.

38 Ibid.

birth weight.³⁹ Very low birth weight babies were costing Medicaid more than \$100 million each year.⁴⁰ Based on his experience leading the multi-stakeholder BOI initiative in Louisiana, Director Keck knew a collaborative approach was the best way to begin to address the problem of poor birth outcomes and unneeded spending.

Director Keck provided staff support for the initiative from DHHS’s regular staff and budget:

- Deputy Director Melanie “BZ” Giese devoted 35 percent of her time in the first year, and now spends 20 percent of her time on the effort.
- The DHHS project manager also devotes 20 percent of her time.
- Additionally, seven other internal staff contribute a smaller portion of their effort to the success of the BOI.

THE BOI TIMELINE

FALL 2011	JULY 2012	JANUARY 2013
The BOI vision team begins meeting regularly; all 43 birthing hospitals take the pledge to reduce early elective deliveries.	All claims submitted for early inductions must now contain a “modifier” so the state can begin tracking early elective rates with more detail.	Medicaid stops reimbursing for early elective deliveries without indication; BCBSSC follows suit.

Director Keck and Deputy Director Giese began by identifying the core leaders from the various stakeholder organizations focused on maternal and infant health. These leaders represented the hospital association, the provider community, BCBSSC, March of Dimes, the state’s Department of Health and Environmental Control (DHEC) and academic institutions. Listed in Appendix B, these leaders became the BOI “vision team,” the core leaders of the BOI.

Fall 2011

In the fall of 2011, the vision team began meeting every two weeks, either in person or by phone, and soon created a series of workgroups with designated chairs. Workgroups focus on the various elements required to improve birth outcomes, such as better care coordination, support for breast-feeding and improving care quality and safety. The goals the vision team set for itself and for the workgroups were directional and simple — decrease the number of low birth weight babies, NICU stays, and racial disparities in birth outcomes. These goals remain to this day. The vision team, workgroups, and the public continue to meet monthly to discuss progress and next steps. Meetings generally attract 80-100 people. The vision team sets an agenda for each meeting, always beginning by sharing a “success story” with the entire group that typically incorporates quantitative data (see Appendix C for an example of an agenda). Then each workgroup meets individually to develop action strategies and measures. DHHS provides a staff person to sit in on each workgroup and take minutes. Everyone then reconvenes to hear the workgroups report back on their discussions. DHHS staff also later distribute the workgroup minutes to all attendees.⁴¹

Physician engagement

Support for physicians — and their engagement — was especially critical in the early days of South Carolina’s BOI. This was particularly true with early elective

The goals the vision team set for itself and for the workgroups were directional and simple — decrease the number of low birth weight babies, NICU stays, and racial disparities in birth outcomes. These goals remain to this day.

BOI Workgroups

- Quality and Safety
- Data
- Behavioral Health
- Care Coordination
- Health Disparities
- Baby Friendly (breast-feeding promotion)

³⁹ Giese. “South Carolina Department of Health and Human Services Perspective.”

⁴⁰ Ibid.

⁴¹ Ibid.

Support for physicians — and their engagement — was especially critical in the early days of South Carolina’s BOI. This was particularly true with early elective deliveries because providers needed to change policies, practice patterns, and in essence make a cultural shift.

ACOG Examples of Medical Indications for Late Pre-term or Early-Term Deliveries

- Preeclampsia, eclampsia, gestational hypertension, or complicated chronic hypertension
- Oligohydramnios
- Prior classical cesarean delivery or prior myomectomy
- Placenta previa or placenta accreta
- Multiple gestations
- Fetal growth restriction
- Pre-gestational diabetes with vascular disease
- Pre-gestational or gestational diabetes – poorly controlled
- Placental abruption
- Chorioamnionitis
- Premature rupture of membranes
- Cholestasis of pregnancy
- Alloimmunization of pregnancy with known or suspected fetal effects
- Fetal congenital malformations

deliveries because providers needed to change policies, practice patterns, and in essence make a cultural shift. Laura Long, MD, Chief Medical Officer and VP of Clinical Innovation for BlueCross BlueShield South Carolina (BCBSSC) explains, “This was a time to engage providers and bring them to the table on a voluntary basis, to get their commitment.” Bringing the right providers together was relatively easy; a number of the state’s leading obstetrician-gynecologists had met regularly over the years as part of a task force assembled by the South Carolina Department of Health and Environmental Control (DHEC), so the right networks were in place and providers’ commitment and energy were able to be carried forward.⁴² Providers were very engaged in developing evidence-based indications for early deliveries. Two organizations — the South Carolina Obstetrical and Gynecological Society (a chapter of the American College of Obstetricians and Gynecologists, ACOG) and the state’s Maternal Fetal Medicine Consortium — developed the list of approved indications for an early delivery, based on guidance from the National Institute of Child Health and Development.⁴³ Later, ACOG would publish a practice bulletin about early elective deliveries using the same framework⁴⁴ (see Appendix D for an ACOG Checklist based on guidelines).

The BOI leveraged its existing perinatal regionalization model, a model proven to yield better health outcomes for infants and mothers.⁴⁵ South Carolina has five regional perinatal centers, and the leadership of each regional center was very involved in the BOI. In addition to the clinical services available in the tertiary care centers, such as comprehensive Level III NICU care, the regional centers have a history of offering provider education and training to hospitals in their community. According to Rick Foster, MD, SVP for Clinical Quality and Safety with the South Carolina Hospital Association (SCHA), “This hub and spoke model is very effective and the BOI continues to explore ways to build on the existing networks (to engage and educate providers).”⁴⁶

The South Carolina Hospital Association

The South Carolina Hospital Association (SCHA), representing 89 hospitals, 43 of which provide labor and delivery services, was equally engaged and supportive. According to several interviewees, the South Carolina Hospital Association is thought to be one of the more progressive hospital associations in the country, with the enthusiasm, commitment, and leadership shown by SCHA’s SVP Dr. Rick Foster as a key ingredient. Dr. Foster himself explains it was critical to be part of the conversation, especially against the backdrop of possible Medicaid rate cuts.⁴⁷ Providers trusted Dr. Foster’s leadership and vision. And it was especially helpful for them to be involved from the beginning, so they truly understood the goals of the BOI — that is was about improving the overall health of the population in South Carolina, not about

42 Interview with Amy H. Picklesimer, MD, MSPH, South Carolina Birth Outcomes Initiative Clinical Lead, Division of Maternal-Fetal Medicine, Greenville Health System, July 24, 2013.

43 Ibid.

44 ACOG. “Non-medically indicated early-term deliveries.” Box 1.

45 Association of Maternal and Child Health Programs, “Perinatal Regionalization,” accessed on October 28, 2013, www.amchp.org/programsandtopics/womens-health/Perinatal-Health/Perinatal-Regionalization/Pages/default.aspx.

46 Interview with Rick Foster, MD, Senior Vice President for Quality and Safety, South Carolina Hospital Association, August 21, 2013.

47 Interview with Rick Foster, MD, Senior Vice President for Quality and Safety, South Carolina Hospital Association, July 3, 2013.

rate cuts.⁴⁸ SCHA shares its meeting space so that the whole BOI can meet monthly, and provides lunch for workgroups.

March of Dimes

The South Carolina Chapter of the March of Dimes played an important role in supporting the effort by educating the public and providers. The organization's public education campaign, called "Healthy Babies are Worth the Wait," described above, helped raise public awareness using PSAs and radio print advertisements. The organization's 39-week toolkit provided resources to providers and other health care leaders. In partnership with the BOI, March of Dimes took the toolkit around the state for a series of workshops to engage and educate providers.⁴⁹ March of Dimes also funded the BOI's clinical lead, and still does so today.

South Carolina was at a significant advantage when it started collecting data for the BOI because the state has a legislative mandate to collect claims data from all hospitals.

The University of South Carolina and the critical role of data

The BOI was also supported by the diligent effort of its data workgroup, led by Ana Lòpez-DeFede, Ph.D., Research Professor, Director, Division of Policy and Research on Medicaid and Medicare, Institute for Families in Society, University of South Carolina, with participants from the Hospital Association, BCBSSC and the Department of Health and Environmental Control (DHEC). The University of South Carolina is one of a handful of universities across the U.S. that has a partnership with its state's Medicaid agency. The University has helped Medicaid collect and analyze data for more than a decade.

South Carolina was at a significant advantage when it started collecting data for the BOI because the state has a legislative mandate to collect claims data from all hospitals. While the University of South Carolina (under contract) collects Medicaid claims data, the State Office of Research and Statistics (ORS) collects claims data from all hospitals. The BOI data workgroup collects ORS data, Medicaid data, additional data from BCBSSC, and data from the State's Office of Vital Records (birth certificate data) and brings it all together to provide a comprehensive picture.

The Data workgroup then analyzes all this data to identify instances of early deliveries (and other key indicators, e.g., low birth weight babies, repeat cesarean deliveries, and NICU stays). Data can be compared to ICD-9 codes to determine when and why babies were delivered early. They then provide hospitals with individual reports, with baseline and quarterly updates, so they can see how they are faring with their elective delivery rates. This was and continues to be critical to keeping hospitals engaged, on track, and accountable.

South Carolina is one of only a handful of states with such a robust database. Having a state-mandated⁵⁰ claims database to build upon was a huge advantage, according to Dr. Foster of the SCHA. As Professor Ana Lòpez-DeFede explains, the BOI leveraged the strengths of the integrated data warehouse with content experts to examine birth outcomes across payers and providers. This model is now being used to examine statewide data for other health issues like obesity and chronic disease.⁵¹ A similar process is currently being developed to look at rates of cesarean delivery and related maternal and infant health outcomes.

Taking the pledge

In September 2011, through the Birth Outcomes Initiative and South Carolina Hospital Association (SCHA), all 43 birthing hospitals in South Carolina signed a pledge to stop early elective deliveries (see pledge letter in Appendix E). Each hospital signing the pledge designated two project "champions"—one clinical and one administrative.

48 Interview with Mike Riordan, CEO, Greenville Health System, August 16, 2013.

49 Interview with Breana Lipscomb, Director of Program Services and Government Affairs, March of Dimes South Carolina, September 11, 2013.

50 According to Professor Ana Lòpez-DeFede, in 1992 South Carolina established a state data warehouse in the State Budget and Control Board's Office of Research and Statistics (ORS) repository. A legislative proviso requires that all state agencies submit data to the warehouse for use in program evaluation and outcomes analysis. Each agency maintains control over its own data. In 1996, state law mandated the submission of all inpatient, emergency department, and outpatient claims meeting certain criteria to ORS with patient and provider identifiers. In 2006, these data assets were leveraged to build the SCHIE core technology platform (the state's electronic data system), via email, October 28, 2013).

51 Interview with Rick Foster, MD, Senior Vice President for Quality and Safety, South Carolina Hospital Association, October 7, 2013.

While it was not possible at the time to know if non-payment would bring the early elective delivery rates down further, there was a sense that progress may have plateaued; non-payment would provide stronger reinforcement to bring the rates down even lower.⁵⁴

“Getting everyone to sign on was key to making them committed and accountable,” explains Dr. Long of BCBSSC.

Getting to the finish line – an attainable goal of zero?

Over the next several months, Director Keck was clear that if the voluntary effort around the “39-week initiative” did not yield the improved birth outcomes and savings for Medicaid the state needed, he would need to cut provider reimbursement rates to close to the Medicaid deficit. Hospital leaders and the South Carolina Hospital Association (SCHA) understood these financial realities and began further conversations with Medicaid. As SCHA SVP Dr. Rick Foster explains, this was an opportunity to focus on improving health outcomes while trying to avoid a rate reduction. “We told Medicaid, continue to pay us for what works, and don’t pay us for what doesn’t work.”

Summer 2012

By summer of 2012, the voluntary effort had succeeded in reducing early elective inductions by 50 percent.⁵² (As described previously, the March of

Dimes and Institute for Healthcare Improvement experience of working closely and continuously with specific hospitals demonstrated that rates could be reduced even lower). Based on conversations with BCBSSC, the hospital association, the provider community, and other experts, Director Keck believed the BOI could bring the early elective delivery rate down even lower and generate even more savings for Medicaid, but that it might take more than a voluntary effort to do so. According to Professor Ana López-DeFede, “The data demonstrated that the policy goal of reaching an early elective delivery rate of zero for non-medically indicated inductions prior to 39 weeks was attainable.”⁵³ SCHA’s Dr. Rick Foster explains that pursuing a non-payment policy also helped underscore everyone’s commitment to ending early elective deliveries. While it was not possible at the time to know if non-payment would bring the early elective delivery rates down further, there was a sense that progress may have plateaued; non-payment would provide stronger reinforcement to bring the rates down even lower.⁵⁴

Director Keck decided the next step would be pursuing a policy of non-payment to both providers and hospitals that did not require federal approval.⁵⁵ South Carolina’s Medicaid Managed Care Organizations and Medical Home Networks adopt the same policies as fee-for-service Medicaid, so no contract amendments were required with the plans. Keck also realized partnering with BCBSSC could drive significant change in provider practice patterns, since together the two pay for 85 percent of births in the state.

Bringing BCBSSC into the initial phase of BOI efforts and into subsequent conversations about non-

payment took place with ease. BCBSSC’s SVP Dr. Laura Long was on the vision team, and South Carolina Medicaid had already partnered successfully with BCBSSC on a Patient-Centered Medical Home program. Moreover, as a state agency, Medicaid could discuss pursuing a joint non-payment policy with BCBSSC without raising concerns about conspiracy or anti-trust activity, as two private health plans might if they coordinated on payment.

Also, BCBSSC’s engagement sent an important message to providers about collaboration, explains March of Dimes Director of Program Services and Government Affairs Breana Lipscomb. Without BCBSSC, providers might see Medicaid’s non-payment policy as something the state was “doing to

Moreover, as a state agency, Medicaid could discuss pursuing a joint non-payment policy with BCBSSC without raising concerns about conspiracy or anti-trust activity, as two private health plans might if they coordinated on payment.

⁵² Based on data from Professor Ana López-DeFede presentation from the BOI data workgroup, August 14, 2013.
⁵³ Ibid.

⁵⁴ Interview with Rick Foster, MD, Senior Vice President for Quality and Safety, South Carolina Hospital Association, August 21, 2013.

⁵⁵ Interview with Tony Keck, Director, Health and Human Services, South Carolina, August 5, 2013.

them,” explains Lipscomb.⁵⁶ Over the past few years, South Carolina providers have come to view BCBSSC as “more of a collaborator and a resource, instead of as a source of frustration,” explains Dr. Laura Long. According to Dr. Long, about five years ago, her position was created with a focus on innovation and collaboration with providers — working on initiatives like pay-for-performance, patient-centered medical homes, and other alternative payment methods. Dr. Long worked closely with Dr. Foster and SCHA and the BCBSSC-provider partnerships grew from there. Dr. Long explains that the Affordable Care Act and changes at CMS have helped many providers realize health care is becoming more about “value” and competing based on quality, so they want to engage.⁵⁷ “By working collaboratively and focusing efforts on improving a few specific quality-based outcomes, BCBSSC and Medicaid achieved a greater impact synergistically without increasing administrative burden on providers,”⁵⁸ she said.

Dr. Rick Foster of the South Carolina Hospital Association provides this insight: “Having the state and the largest commercial payer in the room, engaged in a collaborative process, helped providers on two levels. The public-private alignment got their attention, while the forum provided them with an important opportunity to talk through their issues and concerns.”⁵⁹

However, SCDHHS did not move to a policy of non-payment immediately; providers were given a ramp-up period. In July 2012, physicians were notified by Medicaid that as of August 1, 2012, all claims submitted for deliveries and inductions had to contain a specific modifier, and in some cases be accompanied by a completed ACOG Patient Safety Checklist (or a comparable patient safety form) when scheduling an induction or planned cesarean delivery at less than 39 weeks gestation. See Appendix D for ACOG checklist.⁶⁰

According to BOI’s clinical lead, Amy Picklesimer, MD, this was a signal that DHHS was carefully tracking indications for deliveries between 37 and 39 weeks. Some physicians contended the rate of early elective deliveries was not that high. Medicaid gave providers “the benefit of the doubt” by issuing the notice in August and not moving to non-payment until the following January (a five-month delay in implementing the non-payment policy). Essentially, issuing the bulletin about modifiers and Medicaid’s effort to start tracking early elective delivery rates during the summer put the providers on notice that policy changes were coming. The bulletin stated: “This billing change will not affect payment for services related to deliveries for dates of service on or after August 1 through October 31, 2012. Based on the analysis of the claims data received during this 90-day period, SCDHHS will release a subsequent Bulletin indicating the next steps regarding non-payment or prior authorization of these services.”⁶¹

Later, when the non-payment policy took effect, the same process (checklist and modifiers) would be used to help with “hard stops” and also to identify the deliveries that would not receive reimbursement from Medicaid (see box below for a more detailed explanation).

January 2013

Effective January 1, 2013, the South Carolina Department of Health and Human Services (SCDHHS) stopped reimbursement for elective inductions and deliveries prior to 39 weeks for both hospitals and physicians. BlueCross BlueShield of South Carolina acted in tandem, issuing its notice in the fall and starting non-payment on January 1, 2013 as well, though there was a grace period through mid-February. (See Appendix F for

“Having the state and the largest commercial payer in the room, engaged in a collaborative process, helped providers on two levels. The public-private alignment got their attention, while the forum provided them with an important opportunity to talk through their issues and concerns.”⁵⁹

56 Interview with Breana Lipscomb, Director of Program Services and Government Affairs, March of Dimes South Carolina, September 11, 2013.

57 Information provided by Laura Long, MD, Chief Medical Officer and VP of Clinical Innovation, BlueCross BlueShield South Carolina via email, October 23, 2013.

58 Information provided by Laura Long, MD, Chief Medical Officer and VP of Clinical Innovation, BlueCross BlueShield South Carolina via email, September 3, 2013.

59 Interview with Rick Foster, MD, Senior Vice President for Quality and Safety, South Carolina Hospital Association, October 7, 2013.

60 South Carolina Department of Health and Human Services, “Birth Outcomes Initiative Modifiers,” last modified July 2012, www.scdhhs.gov/press-release/birth-outcomes-initiative-modifiers.

61 Ibid.

South Carolina was the first state in the nation where both public (Medicaid) and private (BCBSSC) entities implemented the same non-payment policy for early elective deliveries for both hospitals and physicians.

As of January 2013, the payment process works according to the following steps:

1. If physicians want to schedule an elective delivery, they send the ACOG checklist (or a comparable form) to the hospital, and if the nurse/scheduler/ clerk notices there is no medical indication for an early elective delivery, the procedure doesn't get scheduled (unless the physician comes back and provides a medically indicated reason) — a “hard stop.”⁶²
2. When a delivery occurs before 39 weeks with a medical indication, the physician completes a billing card with a “CG” modifier. This is then given to the people who handle coding and claims. If the “CG modifier” is included, the provider is paid for delivering the baby.
3. If there is no modifier, there is no payment for the early delivery (see Appendix F for the full list of modifiers).
4. Finally, if patients do not have one of the approved indications, but their providers feel that there is a reason why they must be delivered early, exemptions may be granted by the maternal-fetal medicine physicians at the regional tertiary care centers. This process was put in place to accommodate exceptions, but has been very rarely required in practice.⁶³

notice and modifiers). BCBSSC also conducted extensive outreach to its large employer customers so the policy change would not be a surprise.

On January 3, 2013, Medicaid and BCBSSC sent out a very public message — a press release about the new non-payment policy — with support from the South Carolina Hospital Association, the South Carolina Obstetrical and Gynecological Society, the South Carolina Chapter of the March of Dimes, and maternal-fetal medicine physicians from all five regional perinatal centers (see Appendix G). South Carolina was the first state in the nation where both public (Medicaid) and private (BCBSSC) entities implemented the same non-payment policy for early elective deliveries for both hospitals and physicians.

BCBSSC started using the same process and modifiers. The “checklist” can be submitted with the claim for early deliveries, and can also be used as evidence of an indicated delivery in case of an audit by DHHS. This process was built by SCDHHS in collaboration with the South Carolina Obstetrical and Gynecological Society and the South Carolina Hospital Association to support the changes to the claims process that were required by the new policy. Provider engagement proved critical to gaining their commitment and to ensuring the process would work for them.

Initial roll out of the non-payment policy and provider and public perception

Providers and patients generally accepted the roll-out of the new non-payment policy quite well, according to Dr. Picklesimer.⁶⁴ Almost all physician practices in South Carolina provide care for Medicaid mothers. About one-third of the state's physicians are in solo practice, one-third of physicians are employed by hospitals, and the final third are in multi-specialty groups.⁶⁵ Because BCBSSC and Medicaid had done extensive outreach prior to January 2013, providers were largely ready for the change. Both payers had the same modifiers for billing, which made it easier for providers to adapt to the policy change.⁶⁶

Moreover — and of critical importance — the payment change came as no surprise to providers who were given ample notice, including the ramp-up and “grace” period described above. This stands in contrast to the policy pursued in 2011 in Texas, where a budget bill was passed that included a provision regarding non-payment for early elective deliveries — it was implemented just two months later.⁶⁷

More than one interviewee for this case study indicated that more could have been done to educate patients. Due to budget cuts, Medicaid had stopped producing a newsletter for beneficiaries, a primary mode of communication. But for patients, having the backing of the physician community was key. “This wasn't perceived as something an insurer was ‘doing’ to members,” explains BCBSSC's Dr. Laura Long. Most patient

62 SCHA's SVP Dr. Rick Foster notes that while a hard stop policy is important, hospitals that work on quality improvements can often make greater strides than from relying on a hard stop policy alone.

63 Information provided by Amy H. Picklesimer, MD, MSPH, South Carolina Birth Outcomes Initiative Clinical Lead, Division of Maternal-Fetal Medicine, Greenville Health System, via email, October 14, 2013.

64 Interview with Amy H. Picklesimer, MD, MSPH, South Carolina Birth Outcomes Initiative Clinical Lead, Division of Maternal-Fetal Medicine, Greenville Health System, July 24, 2013.

65 Ibid.

66 Interview with Laura Long, MD, Chief Medical Officer and VP of Clinical Innovation, BlueCross BlueShield South Carolina, August 8, 2013.

67 State of Texas Open Government website, “House Bill 1983,” accessed on October 28, 2013, <http://tx.opengovernment.org/sessions/82/bills/hb-1983>.

education occurred in the doctor’s office. Medicaid Deputy Director Giese explains, “Many beneficiaries don’t realize an early elective delivery can be bad for the baby.” Today, BCBSSC is taking a second look at patient education materials and working with Medicaid to ensure it uses similar messaging and materials in its outreach.

The Medicaid Managed Care Organizations were very engaged as well. SCDHHS selected the medical director of the largest Medicaid managed care plan in the state (Select Health) to be on the vision team from the beginning. SCDHHS also encouraged and received excellent participation from the other health plans in monthly meetings/workgroups, so they knew what was happening all along.⁶⁸

STAFF AND FINANCIAL SUPPORT FOR THE BOI

The BOI was and continues to be supported almost entirely by existing resources. As described above, the BOI was a collaborative process, staffed and managed by DHHS, but “owned” by the many participating stakeholders.

- The major stakeholders each have a senior leader on the vision team, which meets monthly, with participants donating their time.
- For the monthly, in-person BOI meetings, SCHA provides meeting space and lunch, while DHHS commits staff time.
- March of Dimes funding made it possible for Dr. Amy Picklesimer, a maternal-fetal medicine specialist with the Greenville Health System, and medical director of Greenville Health System Obstetric Center, to become the BOI’s clinical leader for at least three years. The March of Dimes covers 20 percent of her salary.
- As part of her role in the University of South Carolina’s partnership with Medicaid, Professor Ana Lòpez-DeFede provides assistance collecting and analyzing data and leading the data workgroup.⁶⁹

While it did not have funds specifically to support the BOI, the Department of Health and Human Services had funding for another effort that provided indirect support. Director Keck budgeted a million dollars in incentive money for hospitals to encourage them to achieve the Baby-Friendly USA Hospital designation, which requires putting into place several policies to support breast-feeding.⁷⁰ Dr. Picklesimer believes this incentive money helped get hospitals —and their frontline staff who worked on breast-feeding initiatives — engaged in the BOI and motivated to change policies.

REDUCTION IN EARLY ELECTIVE DELIVERIES AND SAVINGS MEASURED TO DATE

At the time we write this case study — just two years into the BOI and just ten months after the non-payment policy took effect — data on the effects of the BOI are still incomplete and should be interpreted with caution. Data analysis generally runs at least three months behind the time of collection. Many of the parties involved in the BOI are still working to understand the significance of the data they have, its reliability, and its trends over time. Nonetheless, the early data do look promising, as the rates of early-term births and the rates of elective inductions appeared to have declined.

A decline in births occurring at 37 and 38 weeks (early term)

In the commercial population, there are fewer early-term births occurring at 37 and 38 weeks gestation. BCBSSC reports that when examining births in their covered population, there has been a 14 percent overall reduction in early deliveries (those occurring between 37 and 38 weeks). A similar increase in births occurring at 39 weeks suggests that more women are carrying babies to full (39 weeks) term.⁷¹

68 Information provided by Melanie Giese, Deputy Director, Medical Services, Health and Human Services, South Carolina, via email, October 15, 2013.

69 Interview with Melanie Giese, Deputy Director, Medical Services, Health and Human Services, South Carolina, August 13, 2013.

70 Baby-Friendly USA, accessed on October 28, 2013, www.babyfriendlyusa.org.

71 Data provided by Laura Long, MD, Chief Medical Officer and VP of Clinical Innovation, BlueCross BlueShield South Carolina, September 6, 2013.

In both the commercial and Medicaid populations, the rates of early elective inductions have fallen since the inception of the BOI.

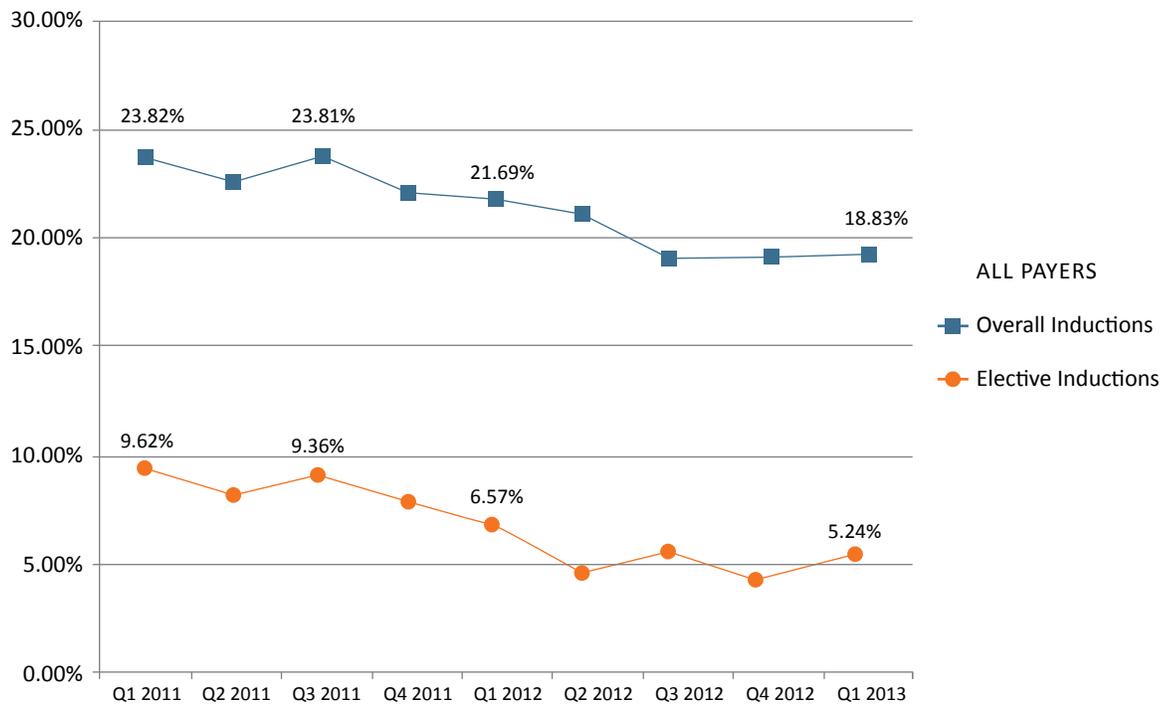
A decline in early elective inductions⁷²

In both the commercial and Medicaid populations, the rates of early elective inductions have fallen since the inception of the BOI. From Q1 2011 (before the start of the BOI) to Q4 2012 (well into the BOI) early elective inductions (at 37 and 38 weeks) dropped significantly for all payers and for Medicaid births. Across all payers the rate of overall inductions dropped from 23.8 percent to 18.8 percent. Across all payers, the early elective rate (percent of births that were electively induced) dropped from 9.62 percent to 5.24 percent. This represents an almost 50 percent decline in the rate of early elective inductions.⁷³ Rates of early elective inductions inched up just slightly in the

first quarter of 2013, but remained low. Without a formal study and a “control group,” it may not be possible to say definitively that the BOI reduced the rates of early elective inductions, but the data show a correlation.

The graph below (Figure 1) shows early elective inductions occurring from Q1 2011 through the end of Q1 2013. The blue line shows all inductions (some of these occurring for evidence-based reasons). The orange line shows the rate of early elective inductions. The chart below (Figure 1) shows data across all payers, whereas the second graph (Figure 2) shows the same trends in just the Medicaid population. Note, cesarean data are not included in these graphs.

FIGURE 1 Measures Indicating Early-Term Elective Deliveries at 37-38 Weeks Gestation: All Payers

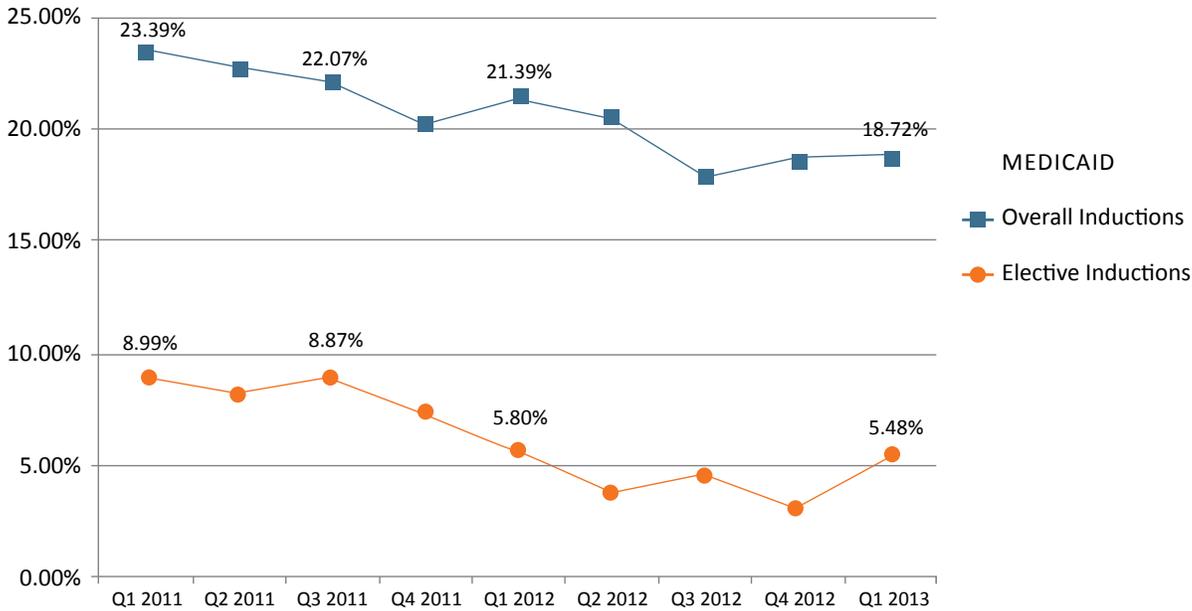


PAY SOURCE	MEASURE	DIFF Q1 2011 TO Q2 2013	RELATIVE DECREASE/INCREASE
All Payers	Overall Inductions	-4.99%	-20.95%
All Payers	Elective Inductions	-4.38%	-45.53%

72 Elective inductions, not overall elective deliveries, the latter of which include cesarean deliveries.

73 Data from Professor Ana López-DeFede, taken from BOI Data presentation, shared September 4, 2013.

FIGURE 2 Measures Indicating Early Elective Deliveries at 37-38 Weeks Gestation: Medicaid



PAY SOURCE	MEASURE	DIFF Q1 2011 TO Q2 2013	RELATIVE DECREASE/INCREASE
Medicaid	Overall Inductions	-4.67%	-49.97%
Medicaid	Elective Inductions	-3.51%	-39.04%

Dr. Rick Foster of the South Carolina Hospital Association explains that cesarean delivery data (for cesareans occurring at 37 and 38 weeks) are much more difficult to collect and interpret based on the data sources; it is difficult to determine which cesarean deliveries are primary (a mother’s first) versus repeat, and difficult to determine if the cesarean delivery resulted from induction. Professor Ana Lòpez-DeFede notes that the data oversight committee continues to refine the linking of disparate data sets to provide insight from the birth certificate on classifying cesarean deliveries by first-time versus repeat, based on inductions. The next iteration of the BOI data efforts will provide this information to all stakeholders.⁷⁴

A reduction in NICU admissions

Preliminary data gathered by the BOI also shows NICU admissions declined in early 2013. That graph is shown and explained in greater detail in Appendix I.

As SCHA’s SVP Dr. Rick Foster explains, “While hospitals and physicians have worked collaboratively with SCDHHS and BCBSSC to implement the non-payment policies for elective early deliveries, the reductions in both early elective delivery rates and NICU admissions/stays we are seeing through 2012 and 1st quarter 2013 are primarily due to our collaborative efforts to change practice behaviors with obstetricians and maternal/childcare staff in every birthing hospital. I believe the key message here is that payment — or even the threat of payment reform — when matched with an intensive, collective quality improvement program can produce meaningful and measurable improvements in the quality and safety of patient care.”⁷⁵

“I believe the key message here is that payment — or even the threat of payment reform — when matched with an intensive, collective quality improvement program can produce meaningful and measurable improvements in the quality and safety of patient care.”⁷⁵

74 Professor Ana Lòpez-DeFede, via email, October 28, 2013.
 75 Rick Foster, MD, Senior Vice President for Quality and Safety, South Carolina Hospital Association, via email, September 6, 2013.

Savings

A report issued by Milliman (excerpt below – Figure 3) documented the savings to the state resulting from the decline in NICU admissions as well as the savings resulting from reduced delivery-related expenses. For the first quarter of FY 2013, Milliman estimated that the 39-week initiative saved the state and the federal government a total of \$6 million dollars. This savings is due, in large part, to decreased NICU admissions and Average Length of Stay (ALOS) in the NICU among babies born at 37 and 38 weeks to mothers with Medicaid coverage. Figure 4 shows the total number of NICU admits in Q1 2013, a much lower number than the state projected.

FIGURE 3 Savings/(Cost) by Birth Outcome Initiative-Q1 SFY 2013

SAVINGS INITIATIVE	PROJECTED EXPENDITURES	ACTUAL EXPENDITURES	SAVINGS/(COST)
Delivery-related	\$39,686,000	\$38,181,000	\$1,505,000
NICU-related	\$15,758,000	\$11,187,000	\$4,571,000
TOTAL	\$55,444,000	\$49,368,000	\$6,076,000

FIGURE 4 State of South Carolina Department of Health and Human Services Savings Analysis-NICU admits

	PROJECTED Q1 SFY 2013	ACTUAL Q1 SFY 2013	ESTIMATED INCURRED SAVINGS/(COST)
Total Births	7,798	7,798	
Total NICU admits	624	443	
NICU admits as a % of Births	8%	6%	
Average paid per admit	\$25,253.07	\$25,253.07	
TOTAL PAID	\$15,758,000	\$11,187,000	\$4,571,000

A rise in cesarean deliveries at 39 weeks?

One possible and unintended consequence of the Birth Outcomes Initiative could be that more women are having cesarean deliveries at 39 and 40 weeks gestation. It is possible that physicians tell mothers that they advise against an early cesarean delivery at 37 or 38 weeks, but are willing to perform cesarean deliveries at 39 and 40 weeks.

Both BlueCross BlueShield of South Carolina and Medicaid are collecting and analyzing data for patterns. According to data the BOI Data Workgroup presented in August 2013, between Q4 2011 and Q4 2012 primary cesarean delivery rates at 39-40 weeks increased slightly from 29.95 percent to 32.77 percent.⁷⁶ However, all data are still new and this increase is small. They need to be interpreted with caution and it may be too early to indicate a trend.

One possible and unintended consequence of the Birth Outcomes Initiative could be that more women are having cesarean deliveries at 39 and 40 weeks gestation.

⁷⁶ Data provided by Professor Ana López-DeFede, taken from the BOI data workgroup presentation, August 14, 2013.

NEXT STEPS FOR THE BOI

Since data are only available (at the time this case study was written) for the first quarter of 2013, the next step for the BOI will be gathering more data to assess the longer-term impact of the non-payment policy on reducing early elective deliveries.

DHHS and the other BOI leaders know the next big policy step for the initiative is addressing non-evidence-based cesarean deliveries, which can result in worse health outcomes for infants and mothers and drive up costs, even when performed at full term.⁷⁷ According to Medicaid Deputy Director Giese, “In a way, early elective deliveries are the low hanging fruit— c-sections are complex.” According to Dr. Laura Long, the cesarean rate is 39 percent in South Carolina’s commercial population, while it is around 35 percent in the Medicaid population. This far exceeds the Healthy People 2020 goal of 23.9 percent, although South Carolina’s numbers are consistent with national averages.⁷⁸

Starting in the summer of 2013, the BOI vision team presented data about the state’s cesarean delivery rates and began the dialogue. However, arriving at a consensus is not easy, and there has been push-back from the physician community. Some physician leaders have suggested that rather than focus on cesarean deliveries, the BOI should look at utilization of 17P, a hormone medication to prevent pre-term labor (how many patients who are eligible are receiving the medication), or ensure all low birth weight infants are delivered in tertiary care centers (which are associated with higher rates of survival).⁷⁹

As they did with early elective deliveries, DHHS will pursue a voluntary, collaborative approach, working with hospitals and providers to bring cesarean rates down. Down the road, they will consider changing payment policy. DHHS staff are now in the early stages of developing a global payment for maternity care — one fee for the provider and one for the hospital, regardless of whether the infant is delivered vaginally or by cesarean.⁸⁰

Professor López-DeFede and the data workgroup will also look more closely at data on deliveries occurring at 39 and 40 weeks to see if the effort to cease early elective deliveries is having an impact on practice patterns and outcomes for babies delivered at full term. The data workgroup has developed a dashboard for all the hospitals in the state so they can understand their own performance.⁸¹

In addition, the DHHS and its BOI are working to secure adoption of the non-payment policy for early elective deliveries by the other commercial health plans. South Carolina’s large employers who use these plans may be able to help bring them along.⁸² The South Carolina Business Coalition on Health is

Challenges along the way and lessons learned

- 1. Getting billing systems to work with policy changes:** Providers had ample notice about the modifiers they needed to submit along with any claims for an early, induced delivery. But once the non-payment policy began, Medicaid’s system had some glitches and did not adequately identify claims where induction was evidence-based. The problems were fixed eventually, but there was some frustration and confusion in the provider community and a delay in paying some claims.
- 2. Collaborating with multiple organizations:** While implementation of the BOI “exceeded expectations,” according to Dr. Picklesimer, having a broad array of organizations and individuals involved in any initiative adds complexity. By comparison, the Louisiana Birth Outcomes Initiative was run only by the state’s Medicaid agency, making administration of the program simpler.
- 3. The political winds of change:** One of the biggest challenges and questions for the BOI is, will the initiative and the non-payment policy stand if the administration changes? The Medicaid Director is appointed by the governor and leadership, and agency staff can change quickly after an election. Interviewees hoped the BOI would endure whether or not Governor Haley is re-elected.
- 4. Understanding cesarean delivery rates — and reducing them:** Perhaps the biggest challenge and overall next step for the BOI is expanding its efforts to reduce non-evidence-based cesarean deliveries performed at term. However, as described above, it is possible that as a result of the BOI, some physicians will tell mothers they won’t perform a cesarean delivery at 37 or 38 weeks, but will do so at 39 or 40 weeks. The BOI experts are looking at the data and trying to decipher a pattern, but it is still very early in the data collection process.

77 Thomson Healthcare. (2007) “The Healthcare Costs of Having a Baby.” Public Policy Study funded by March of Dimes. Available at www.marchofdimes.com/glue/files/The_Healthcare_Costs_of_Having_a_Baby.pdf, and “Cesarean Fact Sheet” International Cesarean Awareness Network, Connecticut Chapter. Accessed October 28, 2013, <http://icanofconnecticut.webs.com/cesareanfactsheet.htm>, and World Health Organization, (1985). “Appropriate technology for birth.” *Lancet*, 2: 436-7.

78 “2020 Topics and Objectives : Maternal, Infant and Child Health,” U.S. Department of Health and Human Services, last modified August 28, 2013, www.healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicid=26.

79 Information provided by Amy H. Picklesimer, MD, MSPH, South Carolina Birth Outcomes Initiative Clinical Lead, Division of Maternal-Fetal Medicine, Greenville Health System, via email September 9, 2013.

80 Interview with Melanie Giese, Deputy Director, Medical Services, Health and Human Services, South Carolina, August 13, 2013.

81 Interview with Professor Ana López-DeFede, Ph.D., Research Professor, Director, Division of Policy and Research on Medicaid and Medicare, Institute for Families in Society, University of South Carolina.

82 Interview with Lisa Wear-Ellington, CEO, South Carolina Business Coalition on Health, August 14, 2013.

beginning to play a larger role in the BOI effort, with plans to educate large employers about maternity care costs and the BOI.

Over the next several months, the BOI will be expanding access to the CenteringPregnancy model, which brings small groups of pregnant women together for prenatal care, including patient education and preventive care. The model has been shown to improve health outcomes for infants and mothers.⁸³ The BOI is also focused on improving the cultural competency of providers and promoting drug and alcohol screening of expectant mothers. BCBSSC's Dr. Long is working to align its payment policy on drug and alcohol screening with that of Medicaid.⁸⁴

ADVICE FOR REPLICATION OF THE BOI

The experience of the South Carolina Birth Outcomes Initiative to date provides many lessons for how others might build on its accomplishments in their own states. What follows is advice for replication from the expert participants in South Carolina. Many of these recommendations likely apply to any system-wide initiative to improve health outcomes through changing the practices of health care providers.

1. **Designate one lead agency or organization that keeps everyone organized; a state agency is the best choice.** Director Keck's role was key, and his staff was fundamental to supporting the day-to-day progress of the BOI. Organizing meetings and agendas and bringing several dozen people together requires staff time. DHHS staff spent considerable hours developing agendas and presentations for every BOI meeting and taking and distributing minutes to participants. Moreover, a state agency often has the resources and gravitas to bring diverse stakeholders together, in a way that nonprofit and private organizations do not. Because they control the purse strings, they also command attention from providers.
2. **From the get-go, focus on health outcomes, not just health care delivery or the bottom line.** Several interviewees underscored that the BOI worked because all participants were committed to the Triple Aim and improving maternal and infant health. This focus helped the BOI get the right mix of participants "to the table," including front-line hospital administrators. It also helped participants feel strongly committed to the work they were doing. Focusing on several aspects of maternal and child health helped build strong networks and goodwill among participants that carried over when they faced difficult conversations and decision points about payment policy.
3. **Engage all stakeholders in the process and meet face to face.** Over time, the BOI built up a strong, collaborative group of stakeholders by inviting all the major players to the initial conversation, and by convening workgroups regularly and in person. Several interviewees emphasized that these regular face-to-face meetings contributed to good will, strong working relationships and kept stakeholders committed; they knew if they attended the BOI workgroup meetings, their peers and other colleagues would be there. Interviewees also emphasized how the physician leadership and networks already in place in the state contributed to the BOI's success.
4. **Enlist providers as early as possible and identify a provider cheerleader.** Having providers at the table early on, and tasking them with developing the clinical policies, was essential. It brought them into the process and led them to support the eventual decision to implement a non-payment policy. Dr. Picklesimer's role was key, and several interviewees described her as a tireless advocate and champion for the BOI in the provider community.
5. **With providers, use carrots and reserve sticks for those who don't respond.** While implementing the non-payment policy for early elective deliveries was important to bring all providers into the fold, the BOI began by involving providers in the process and offering them support. Medicaid's incentive

83 Baldwin K. (2006) Comparison of selected outcomes of CenteringPregnancy versus traditional prenatal care. *JMWH*, 51(4): 266-272.

84 Interview with Laura Long, MD, Chief Medical Officer and VP of Clinical Innovation, BlueCross BlueShield South Carolina, August 8, 2013.

money for hospitals that achieved Baby-Friendly USA status made it appealing for hospitals to participate and helped ensure the right mix of frontline staff attended the BOI workgroup meetings. While Medicaid did not specifically pay providers for reducing early elective deliveries, Medicaid Managed Care Organizations and Medical Home Networks could earn incentive payments for reducing the rates of pre-term deliveries and low birth weight babies. Medicaid also provided incentive money to support other aspects of the BOI, such as for CenteringPregnancy.

6. **Changing payment — or even just suggesting a change — can be powerful.** The experience in South Carolina (and in Louisiana) demonstrates that a voluntary effort to reduce early elective deliveries can have a significant impact, even without a change in payment policy. South Carolina was able to reduce the early elective induction rate by 50 percent before the non-payment policy officially took effect. However, it is possible the provider community was more engaged and more committed to the effort against the backdrop of conversations about non-payment — some interviews did suggest this. With data only available from the first quarter of 2013, it is too soon to tell if the non-payment policy will reduce the early elective delivery rate further. Some hospitals and health systems have been able to eliminate the practice all together. While it is too soon to know if it is possible to reach an early elective delivery rate of zero statewide, the data expert, Professor Lòpez-DeFede, believes the state can, at least, bring its early induction rate down to zero (as described previously, cesarean deliveries are more difficult to measure).
7. **But don't jump right into payment change.** When SCDHHS and BCSSC implemented the non-payment policy, it didn't catch most providers off guard. They had ample notice of the policy change and ample opportunities to learn about the policy. More importantly, they had opportunities to learn strategies for reducing early elective deliveries, thanks to organizations like March of Dimes and its work statewide. Unlike in South Carolina, Texas introduced legislation around non-payment that took effect just two months later.
8. **Multi-payer collaboration and public-private alignment is key.** For non-payment or other types of payment policies to work, there needs to be a strong, uniform signal to providers. Since Medicaid and BCSSC pay for 85 percent of births in South Carolina, their partnership in this effort was able to change provider behavior across the state. In states where Medicaid is a smaller player, or there isn't a single dominant health plan, the state may need to team up with several plans. In theory, two health plans with significant market share could implement an identical change in payment policy, but if they act together, it can raise anti-trust concerns. Having the state take the lead and then rope in other large payers helps ensure success and avoid anti-trust concerns. States can often create “safe harbors” from anti-trust liability for these types of discussions. If regulation legitimately furthers governmental interests, then federal antitrust law can be preempted by state regulation. To be protected by state-action exemption, the regulatory regime must be affirmatively expressed as state policy and any resulting anti-competitive arrangements must be actively supervised by the state.⁸⁵
9. **Private purchasers can help too.** While large employers were not actively involved in creating the BOI, they are now becoming more engaged. Employers can be valuable allies to Medicaid and health plan leaders when they want to change payment policy. For many large employers, maternity care comprises a significant portion of their health care spending⁸⁶ — early elective deliveries and elective cesarean deliveries (performed at term) drive those costs even higher. Large employers can ask health plans to align their payment policies with Medicaid to send a consistent message to providers that reducing early elective deliveries is important to them. In other states, such as Illinois,

85 Rubin, Jonathon. “Regulation-based Antitrust Quasi Immunity” (article prepared for the ABA Section of Antitrust Law 2005 Annual Spring Meeting, March 30, 2005). Available at: <http://apps.americanbar.org/antitrust/at-committees/at-exemc/pdf/05-course-materials.pdf>.

86 Catalyst for Payment Reform, “Maternity Care Action Brief,” last modified 2012, www.catalyzepaymentreform.org/images/documents/maternity.

business coalitions have partnered effectively with health care experts to educate providers, change payment policy, and educate employees to reduce the rate of early elective deliveries.⁸⁷

10. **Data is king — and so is a data workgroup.** Having the support of the University of South Carolina and a data workgroup involving all the stakeholders was essential to developing definitions and measuring and reporting outcomes. When each hospital receives a report about its early elective delivery rates, staff can really understand their progress. These data will be even more essential as the BOI tackles cesarean deliveries. The BOI had a significant head start because the state Office of Research and Statistics already collected hospital claims data by law. This meant the data workgroup had a much easier time gathering this information, combining it with Medicaid data and birth certificate data to identify early elective deliveries.
11. **Test and re-test payment systems before going live.** Despite efforts to test its systems, Medicaid still experienced technical problems when the non-payment policy took effect. “Having the systems staff in the room from the beginning would have helped,” explains Deputy Director Giese.
12. **Participating organizations — especially Medicaid and health plans — must involve many departments within their organizations.** Since changing birth outcomes requires provider and patient education and changing billing systems, as well as having public policy implications, participating organizations need to be prepared to involve myriad staff. Public affairs staff, IT and systems staff, and government relations staff should all participate in the process from the beginning.
13. **Finally — the steps outlined here are mutually reinforcing, and can’t stand alone.** One of the reasons the South Carolina BOI worked so well is because it was multi-stakeholder, multi-faceted, and rolled out in a logical sequence that encouraged stakeholder buy-in at every step. Cynthia Pellegrini, Senior Vice President for Public Policy and Government Affairs at March of Dimes, explained it with an excellent metaphor: “(The BOI) is like a tower of Jenga blocks — many pieces make it successful and it is difficult to remove too many pieces without the whole tower collapsing. There is a cumulative impact that occurs when you engage providers, state leaders, the hospital association, and the public.”

CONCLUSION

The South Carolina Birth Outcomes Initiative is a strong example of what committed individuals and organizations can do together to improve population health. However, any collaborative approach will enjoy greater success with a transparent structure, dedicated staff, and reliable data. When private and public sector payers team up and align payment policy with desired health outcomes, such a collaborative approach is even stronger.

⁸⁷ “Countering Early Elective Deliveries that Drive Up Health Costs” Society for Human Resource Management. Last Modified February 27, 2012, www.shrm.org/hrdisciplines/benefits/Articles/Pages/ElectiveDeliveries.aspx.

APPENDIX A March of Dimes Toolkit and Quality Brochure



Less than 39 weeks toolkit

In 2010, the Joint Commission established a new perinatal care core measure set that includes the number of elective deliveries (both vaginal and cesarean) performed at > 37 and < 39 weeks of gestation completed. In order to support hospitals in eliminating non-medically indicated deliveries before 39 weeks, March of Dimes, California Maternal Quality Care Collaborative (CMQCC), and the California Department of Health, Maternal Child and Adolescent Health Division collaborated on the development of a quality improvement toolkit. The new toolkit, entitled Elimination of Non-medically Indicated (Elective) Deliveries Before 39 Weeks Gestational Age; Quality Improvement Toolkit includes:

- **Making the Case:** A comprehensive literature review about the importance of eliminating elective deliveries before 39 weeks.
- **Implementation:** A step-by-step guide to assist hospital leaders with implementation efforts.
- **Data Collection and Quality Improvement:** A guide for measuring and tracking QI effectiveness over time.
- **Clinician and Patient Education:** Educational tools for clinicians and staff about consequences of early elective delivery; educational tools for patients about the importance of the last weeks of pregnancy.
- **Appendices:** Sample Forms, Hospital Case Studies, QI Implementation Tools, Plan-Do-Study-Act (PDSA) Methodology, Implementation Resources and References.

March of Dimes is pleased to make the toolkit available to all hospitals across the country. Interested clinicians, hospitals, insurers and regional collaboratives are invited to download this document to assist in the development of a comprehensive quality improvement program to address elective deliveries <39 weeks. If your hospital is interested in implementing the toolkit, please consider working with your March of Dimes chapter. To find your local chapter, visit our [directory](#).

Elimination of Non-medically Indicated (Elective) Deliveries Before 39 Weeks Gestational Age; Quality Improvement Toolkit was reviewed by the California Department of Public Health Maternal, Child and Adolescent Health Division and is a resource, but it does not define the standard of care in California. Readers are advised to adapt the guidelines and toolkit based on their local facility's level of care and patient populations and is not to rely solely on guidelines presented here.

Download a free copy of the toolkit at the [Prematurity Prevention Resource Center](#). Registration is required.

In this topic

- **Pocket facts:** Preconception and prenatal genetic screening
- **Toward Improving the Outcome of Pregnancy III**
- **Preterm labor assessment toolkit**
- **Healthy Babies are Worth the Wait**
- **Prematurity Prevention Resource Center**

Healthy Babies are Worth the Wait



Will my hospital be recognized?

Hospitals that complete the all of the implementation process points will:

- Be listed on the March of Dimes Prematurity Prevention Resource Center website at www.prematurityprevention.org
- Have the opportunity to purchase a co-branded March of Dimes banner highlighting their implementation of the Initiative
- Be provided with a 39+ Weeks website based banner to be posted on the Hospital's website reflecting their participation in the 39+ Weeks Quality Improvement Initiative

How does my hospital participate?

For more information, contact us at: 39WeeksQI@marchofdimes.com



39+ Weeks Quality Improvement Initiative



March of Dimes
National Office
1275 Mamaroneck Avenue
White Plains, New York 10605
marchofdimes.com

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Eliminating non-medically indicated deliveries before 39 weeks

As a leader in maternal and infant health for more than 70 years, with a proven track record in perinatal quality improvement, the March of Dimes is a trusted source of information for women, families, clinicians and hospitals. Efforts to improve the quality and safety of perinatal care have received increased focus during recent years and with the publication of *Toward Improving the Outcome of Pregnancy III* in 2010 (marchofdimes.com/tiop). Research has shown that early elective delivery without medical or obstetrical indication is linked to neonatal morbidities with no benefit to the mother or infant.

In 2010, The Joint Commission released a new set of perinatal quality measures that includes the reduction of non-medically indicated deliveries performed before 39 weeks gestational age. Concurrently, the March of Dimes, in partnership with the California Maternal Quality Care Collaborative (CMQCC) and the California Maternal Child and Adolescent Division within the state Department of Health, created a toolkit entitled *Elimination of Non-medically Indicated (Elective) Deliveries Before 39 Weeks Gestational Age*¹. This toolkit outlines steps that hospitals can take to begin a quality improvement initiative to eliminate elective deliveries prior to 39 weeks. Download the toolkit from the Prematurity Prevention Resource Center at prematernityprevention.org.

The toolkit

- Helps make the case for eliminating elective deliveries before 39 weeks
- Outlines an implementation strategy
- Describes suggested data collection and quality improvement measurement tools
- Provides recommendations for clinician and patient education tools, including March of Dimes materials
- Includes hospital case studies, a clinician slide presentation and references



The service package

The March of Dimes 39+ Weeks Quality Improvement Service Package supports your hospital in implementing a successful perinatal quality improvement initiative to eliminate non-medically indicated deliveries prior to 39 weeks. The service package complements the information in the toolkit and includes action-oriented guidance, data collection tools and other support services to maximize your hospital's success in attaining your quality improvement goals.

Get access to leading experts in the field who are well-versed on topics relevant to improving perinatal care quality and interact with other

providers working to eliminate non-medically indicated deliveries prior to 39 weeks.

A secure, confidential web-based data portal supports hospital data collection of scheduled inductions and cesarean deliveries through effective, user friendly tools. The data portal provides your hospital with timely reports on current and trend data that can be used to track and communicate progress back to staff and providers. Monthly data reports also help to highlight issues and concerns on an ongoing, timely basis.



The data portal

What's included?

Grand Rounds

- Access to a national speakers bureau that will present at a hospital Grand Rounds

Secure web-based data portal access

- Facilitates hospital data collection with user-friendly tools to monitor scheduled deliveries.
- Provides timely reports on counts and percent of scheduled inductions and cesarean deliveries that are non-medically indicated.
- Charts month-to-month progress, including comparisons to de-identified, aggregate data from other participating hospitals.

Webinars

- Step-by-step quality improvement implementation guidance is provided via archived webinars.

Educational Materials

- Access to Healthy Babies are Worth the Wait education materials for patients and professionals at a 10% discount.

Access to experts

- Opportunities for interaction with experts as well as providers and other hospitals participating in March of Dimes quality improvement initiatives.

Maria E. Oshiro, B. Chagolla, B. Bingham, D. Dang-Kilduff, L., and Kowalewski, L. Elimination of Non-medically Indicated (Elective) Deliveries Before 39 Weeks Gestational Age. California Maternal Quality Care Collaborative Toolkit to Transform Maternity Care) Developed under contract #018-83012 with the California Department of Public Health, Maternal, Child and Adolescent Health Division; First edition published by March of Dimes, July 2010.

APPENDIX B Participants on The BOI Vision Team

Dr. Rick Foster, South Carolina Hospital Association (SCHA)

Dr. Tom Gailey, Greenville Hospital System (GHS)

Ms. Melanie "BZ" Giese, RN, SCDHHS

Dr. Marion Burton, SCDHHS

Dr. Judy Burgis, USC Palmetto Health Richland

Dr. Donna Johnson, Medical University South Carolina (MUSC)

Dr. Laura Long, BlueCross BlueShield of South Carolina

Dr. Charles Rittenberg, MUSC

Dr. Scott Sullivan, MUSC

Dr. Amy Picklesimer, GHS

Dr. Fred Volkman, Select Health

Dr. Lisa Waddell, Department of Health and Environmental Control (DHEC)

Dr. Jennifer Hudson, GHS

Dr. Ana Lòpez-DeFede, Institute of Families and Society, University of South Carolina

Dr. Teresa Buschor, Tuomey Healthcare System

Ms. Mona Carter, March of Dimes

Dr. Sara Taylor, MUSC

APPENDIX C Sample agenda from a BOI meeting



Anthony E. Keck,
Director

Birth Outcomes Initiative

June 12, 2013

10:30 a.m. – 12:30 p.m.

1000 Center Point Road

Columbia, SC 29210 (803) 796-3080

Project Objective: Collaborating to reduce the number of low birth weight babies in South Carolina.

AGENDA

- I. Welcome
- II. More Success for SC: Baby Friendly Hospitals
- III. SBIRT Dashboard: Dr. Defede
- IV. SC Campaign to Prevent Teen Pregnancy: Doug Taylor
- V. Breakout Workgroups
- VI. Presentation by Workgroup Chairs
- VII. Closing Remarks
- VIII. Adjourn

Scheduled Birth Outcomes Initiative Meetings in 2013 – Future meetings are held at SCHA from 10:30-12:30

- Wednesday, July 10th
- Wednesday, August 14th
- Wednesday, September 11th
- Wednesday, October 9th
- Thursday, November 14th: BOI Symposium
- Wednesday, December 11th

Vision Team Meeting 12:30 PM

APPENDIX D ACOG Early Induction Checklist, based on guidelines

The American College of
Obstetricians and Gynecologists
Women's Health Care Physicians



Patient Safety Checklist

Number 5 • December 2011
(Replaces Patient Safety Checklist No. 1, November 2011)

SCHEDULING INDUCTION OF LABOR

Date _____ Patient _____ Date of birth _____ MR # _____
 Physician or certified nurse-midwife _____ Last menstrual period _____
 Gravidity/Parity _____
 Estimated date of delivery _____ Best estimated gestational age at delivery _____
 Proposed induction date _____ Proposed admission time _____

- Gestational age of 39 0/7 weeks or older confirmed by either of the following criteria (1):
- Ultrasound measurement at less than 20 weeks of gestation supports gestational age of 39 weeks or greater
 - Fetal heart tones have been documented as present for 30 weeks of gestation by Doppler ultrasonography

Indication for induction: (choose one)

- Medical complication or condition (1): Diagnosis: _____
- Nonmedically indicated (1-3): Circumstances: _____

Patient counseled about risks, benefits, and alternatives to induction of labor (1)

- Consent form signed as required by institution

Bishop Score (see below) (1): _____

Bishop Scoring System

Score	Factor				
	Dilation (cm)	Position of Cervix	Effacement (%)	Station*	Cervical Consistency
0	Closed	Posterior	0-30	-3	Firm
1	1-2	Midposition	40-50	-2	Medium
2	3-4	Anterior	60-70	-1, 0	Soft
3	5-6	—	80	+1, +2	—

*Station reflects a -3 to +3 scale.

Modified from Bishop EH. Pelvic scoring for elective induction. *Obstet Gynecol* 1964;24:266-8.

- Pertinent prenatal laboratory test results (eg, group B streptococci or hematocrit) available (4, 5)
- Special concerns (eg, allergies, medical problems, and special needs): _____

To be completed by reviewer:

- Approved induction after 39 0/7 weeks of gestation by aforementioned dating criteria
- Approved induction before 39 0/7 weeks of gestation (medical indication)
- HARD STOP** – gestational age, indication, consent, or other issues prevent initiating induction without further information or consultation with department chair

References

1. Induction of Labor. ACOG Practice Bulletin No. 107. American College of Obstetricians and Gynecologists. *Obstet Gynecol* 2009;114:386–97.
2. Caughey AB, Sundaram V, Kaimal AJ, Cheng YW, Gienger A, Little SE, et al. Maternal and neonatal outcomes of elective induction of labor. Evidence Report/Technology Assessment No. 176. (Prepared by the Stanford University-UCSF Evidence-based Practice Center under contract No. 290-02-0017.) AHRQ Publication No. 09-E—5. Rockville (MD): Agency for Healthcare Research and Quality; 2009.
3. Clark SL, Frye DR, Meyers JA, Belfort MA, Dildy GA, Kofford S, et al. Reduction in elective delivery <39 weeks of gestation: comparative effectiveness of 3 approaches to change and the impact on neonatal intensive care admission and stillbirth. *Am J Obstet Gynecol* 2010;203:449.e1–449.e6.
4. American Academy of Pediatrics, American College of Obstetricians and Gynecologists. Antepartum care. In: Guidelines for perinatal care. 6th ed. Elk Grove Village (IL): AAP; Washington, DC: ACOG; 2007. p. 83–137.
5. American Academy of Pediatrics, American College of Obstetricians and Gynecologists. Perinatal infections. In: Guidelines for perinatal care. 6th ed. Elk Grove Village (IL): AAP; Washington, DC: ACOG; 2007. p. 303–48.

Standardization of health care processes and reduced variation has been shown to improve outcomes and quality of care. The American College of Obstetricians and Gynecologists has developed a series of patient safety checklists to help facilitate the standardization process. This checklist 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 checklist may be adapted to local resources, standardization of checklists within an institution is strongly encouraged.

How to Use This Checklist

The Patient Safety Checklist on Scheduling Induction of Labor should be completed by the health care provider and submitted to the respective hospital to schedule an induction of labor. The hospital should establish procedures to review the appropriateness of the scheduling based on the information contained in the checklist. A hard stop should be called if there are questions that arise that require further information or consultation with the department chair.

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Scheduling induction of labor. Patient Safety Checklist No. 5. American College of Obstetricians and Gynecologists. *Obstet Gynecol* 2011;118:1473–4.

APPENDIX E Model pledge letter for hospitals



Anthony E. Keck, Director
Nikki R. Haley, Governor

Dear Chief Executive Officer,

The South Carolina Department of Health and Human Services is partnering with the South Carolina Hospital Association, other state agencies, private providers, payors, consumers and advocacy groups in an effort to reduce the number of low birth weight babies born in South Carolina. Our first step in working towards this goal is the elimination of non-medically necessary elective deliveries prior to 39 weeks gestation.

Nationally, there has been an increased focus on improving the quality and safety of perinatal care. Research has shown that early elective delivery without medical or obstetrical indication is linked to neonatal morbidities with no benefit to the mother or infant. (*March of Dimes "Elimination of Non-medically Indicated (Elective) Deliveries Before 39 Weeks Gestational Age" toolkit.*)

We are asking for your written commitment to actively participate in this initiative starting September 1, 2011. Please identify two physician champions, such as an OBGYN and Neonatologist or Pediatrician, who will be responsible for leading this effort in your hospital. Please fax the completed template by August 26th to the attention of Birth Outcomes Initiative at 803-255-8232. Or, if you prefer, you may email the completed form to martinml@scdhhs.gov.

Thank you in advance,

Handwritten signature of Ms. Bz Giese.

Ms. Bz Giese
Deputy Director Medical and Managed Care Services, SCDHHS

Handwritten signature of Dr. Rick Foster.

Dr. Rick Foster
Senior Vice President of Quality and Patient Safety, SCHA

Handwritten signature of Dr. Scott Sullivan.

Dr. Scott Sullivan
President, SC Obstetrical and Gynecological Society
Vice-Chair, SC Section of the American Congress of Obstetrics and Gynecology

Handwritten signature of Ms. Kathy Douglas.

Ms. Kathy Douglas
State Director, SC Chapter of March of Dimes

P.O. Box 8206 • Columbia, South Carolina 29202-8206

Beginning September 1, 2011 _____ affirms its
(hospital name)
commitment to the elimination of all non-medically necessary elective deliveries prior to
39 weeks gestation.

(Chief Executive Officer)

This initiative will be championed by: *(Please print name)*

(OBGYN)

(Neonatologist/Pediatrician)

South Carolina
DEPARTMENT OF HEALTH AND HUMAN SERVICES
Post Office Box 8206
Columbia, South Carolina 29202-8206
www.scdhhs.gov
December 12, 2012
MB# 12-062

MEDICAID BULLETIN

Phys
Hosp
MC

TO: Providers Indicated

SUBJECT: Non Payment Policy for Deliveries Prior to 39 weeks: Birth Outcomes Initiative

Effective for dates of service on or after January 1, 2013, the South Carolina Department of Health and Human Services (SCDHHS) will no longer provide reimbursement for elective inductions or non-medically indicated deliveries prior to 39 weeks to hospitals and to physicians. This change is a result of an extensive effort and partnership by SCDHHS, South Carolina Hospital Association, South Carolina Chapter of the American Congress of Obstetricians & Gynecologists, Maternal Fetal Medicine physicians, BlueCross BlueShield of SC and other stakeholders to reduce non-medically necessary deliveries.

In September of 2011, through the Birth Outcomes Initiative (BOI) and South Carolina Hospital Association (SCHA), all 43 birthing hospitals in South Carolina signed a pledge to stop early elective deliveries. In July of this year, physicians were notified that as of August 1, 2012, all claims submitted for deliveries and inductions had to contain a specific modifier (GB or CG). Please visit <http://www.scdhhs.gov/press-release/birth-outcomes-initiative-modifiers> to view the SCDHSS Medicaid bulletin released in July 2012.

All hospital claims that are associated with physician claims resulting from non-medically necessary deliveries and inductions prior to 39 weeks gestation will be audited and payment will be re-couped in its entirety through a retrospective review process.

Physicians must continue to append the following modifiers to all CPT surgical codes when billing for vaginal deliveries and cesarean sections or their claims will be automatically denied:

GB – 39 weeks gestation and or more

For all deliveries at 39 weeks gestation or more regardless of method (induction, cesarean section or spontaneous labor)

CG – Less than 39 weeks gestation

- For deliveries resulting from patients presenting in labor, or at risk of labor, and subsequently delivering before 39 weeks, or
- For inductions or cesarean sections that meet the ACOG guidelines, the appropriate ACOG Patient Safety Checklist must be completed and maintained for documentation in the patient's file, or
- For inductions or cesarean sections that do not meet the ACOG guidelines, the appropriate ACOG Patient Safety Checklist must be completed. Additionally, the physician must obtain and document approval from the regional perinatal center's maternal fetal medicine physician in the patients file and in the hospital record

No Modifier – Claims that do not have the GB/CG modifiers indicated will be denied

For elective deliveries less than 39 weeks gestation that do not meet ACOG approved guidelines or are not approved by the designated regional perinatal center's maternal fetal medicine physician

This bulletin applies to all fee-for-service, medical home networks and managed care organization participants. If you have any questions, please contact the Provider Service Center at (888)289-0709. Thank you for your continued support of the SC Medicaid program.

/s/
Anthony E. Keck
Director

Non Payment Policy for Deliveries Prior to 39 weeks: Birth Outcomes Initiative

Medicaid Agency to Stop Payment for Elective Early Deliveries

Aims to Improve Health of Newborns, Reduce Preterm Births in South Carolina

COLUMBIA, S.C. – Starting this month, the South Carolina Department of Health and Human Services (SCDHHS) will no longer provide reimbursement to hospitals and physicians for elective inductions or non-medically indicated deliveries prior to 39 weeks gestational age. This applies to both inductions of labor and cesarean sections. With broad support from the health care community, this policy implementation is championed by the South Carolina Birth Outcomes Initiative (BOI), a collaboration formed in 2011 among SCDHHS, the South Carolina Hospital Association, the South Carolina Obstetrical and Gynecological Society, the South Carolina Chapter of the March of Dimes, maternal fetal medicine physicians from all five regional perinatal centers, BlueCross BlueShield of South Carolina (BCBSSC) and other stakeholders.

The inclusion of BCBSSC, which has its own comprehensive programs for increasing healthy birth outcomes, is integral to the success of the state's efforts. Together SCDHHS and BCBSSC cover approximately 85 percent of all South Carolina births annually. Medically-indicated delivery reimbursement remains unchanged.

In the last year, non-medical inductions prior to 39 weeks have been reduced by half as a result of a BOI-sponsored commitment from all 43 birthing hospitals in South Carolina to end the practice.

"Together with hospitals, doctors and the private sector, we are serious about improving the health of babies in our state. We've already seen these deliveries reduced by half," said SCDHHS Director Tony Keck. "This first-of-its-kind collaborative effort between the State, the largest private payor and the healthcare community is an incredible step toward giving all South Carolina babies a healthy start."

Traditionally, public health efforts have focused on preventing preterm births prior to 37 weeks gestational age. Premature birth is the leading cause of newborn death. Babies who survive an early birth often face low birth weight and lengthy stays in a Neonatal Intensive Care Unit and are at a higher risk of corresponding lifelong health problems, such as breathing problems, cerebral palsy, intellectual disabilities and others. In 2011, 14 percent of live births in South Carolina were delivered preterm; a rate much higher than the national average of 11.7 percent.

But other infants are at risk as well. Early term births, delivered at 37 and 38 weeks gestational age, also pose serious risks to babies and represent a significant cost to the healthcare system. The American Congress of Obstetricians and Gynecologists (ACOG) advises against non-medically indicated elective deliveries prior to 39 weeks gestational age. Despite these guidelines, however, there has been a national trend toward elective early labor induction and cesarean section. South Carolina is no exception. There were more than 6,000 early elective deliveries in 2011 in South Carolina.

"The last few weeks of pregnancy are very important for the health of the baby," Said Dr. Amy Picklesimer, Maternal Fetal Medicine physician with Greenville Hospital System and the Clinical Lead for the BOI. "Infants who are electively delivered prior to 39 weeks have an increased risk of respiratory distress, admission to the NICU and prolonged hospitalization. There is no medical benefit to the mother. These deliveries are typically performed for scheduling convenience."

SCDHHS through the BOI is working on other initiatives to improve the health and healthcare for pregnant women and infants in South Carolina. In 2012, a program incentivizing doctors to screen pregnant women for risk factors such as substance abuse, domestic violence and depression was started. In 2013, incentive payments will be available for providers offering CenteringPregnancy, a group model of prenatal care shown to decrease rates of preterm birth by 40 percent. SCDHHS also recently announced the “Race to the Date” program which provides financial rewards to hospitals certified as “Baby Friendly” by September 30, 2013.

This SCDHHS policy applies to all fee-for-service, medical home networks and managed care organization participants.

The South Carolina Department of Health and Human Services provides health care benefits to more than 1.1 million South Carolinians and financially supports almost half of all births in the state. Its mission is to purchase the most health for our citizens in need at the least possible cost to the taxpayer.

Non Payment Policy for Deliveries Prior to 39 weeks: Birth Outcomes Initiative

Effective for dates of service on or after January 1, 2013, the South Carolina Department of Health and Human Services (SCDHHS) will no longer provide reimbursement for elective inductions or non-medically indicated deliveries prior to 39 weeks to hospitals and to physicians. This change is a result of an extensive effort and partnership by SCDHHS, South Carolina Hospital Association, South Carolina Chapter of the American Congress of Obstetricians & Gynecologists, Maternal Fetal Medicine physicians, BlueCross BlueShield of SC and other stakeholders to reduce non-medically necessary deliveries.

In September of 2011, through the Birth Outcomes Initiative (BOI) and South Carolina Hospital Association (SCHA), all 43 birthing hospitals in South Carolina signed a pledge to stop early elective deliveries. In July of this year, physicians were notified that as of August 1, 2012, all claims submitted for deliveries and inductions had to contain a specific modifier (GB or CG). Please visit <http://www.scdhhs.gov/press-release/birth-outcomes-initiative-modifiersto> view the SCDHSS Medicaid bulletin released in July 2012.

All hospital claims that are associated with physician claims resulting from non-medically necessary deliveries and inductions prior to 39 weeks gestation will be audited and payment will be re-couped in its entirety through a retrospective review process.

Physicians must continue to append the following modifiers to all CPT surgical codes when billing for vaginal deliveries and cesarean sections or their claims will be automatically denied:

GB – 39 weeks gestation and or more

For all deliveries at 39 weeks gestation or more regardless of method (induction, cesarean section or spontaneous labor)

CG – Less than 39 weeks gestation

- For deliveries resulting from patients presenting in labor, or at risk of labor, and subsequently delivering before 39 weeks, or
- For inductions or cesarean sections that meet the ACOG guidelines, the appropriate ACOG Patient Safety Checklist must be completed and maintained for documentation in the patient’s file, or
- For inductions or cesarean sections that do not meet the ACOG guidelines, the appropriate ACOG Patient Safety Checklist must be completed. Additionally, the physician must obtain and document approval from the regional perinatal center’s maternal fetal medicine physician in the patients file and in the hospital record.

No Modifier – Claims that do not have the GB/CG modifiers indicated will be denied

For elective deliveries less than 39 weeks gestation that do not meet ACOG approved guidelines or are not approved by the designated regional perinatal center’s maternal fetal medicine physician.

This bulletin applies to all fee-for-service, medical home networks and managed care organization participants. If you have any questions, please contact the Provider Service Center at (888)289-0709. Thank you for your continued support of the SC Medicaid program.

APPENDIX H Activity to Reduce Early Elective Deliveries in Other States

South Carolina is the only state as of fall 2013 to adopt a policy of non-payment for early elective inductions across both the private and public sector. However, several other states have implemented changes to Medicaid payment policies to discourage early elective deliveries. Meanwhile, these and other states have also joined or pursued collaborative approaches to track and reduce the rates of early elective deliveries. Brief summaries of these activities appear below. This list is not meant to be exhaustive, but to give the reader a flavor for other state activity. More extensive information is available at: www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Quality-of-Care/Downloads/EED-Brief.pdf.

1. States with a Medicaid non-payment policy for early elective deliveries (without indication): New York, New Mexico, Texas
2. States with policies that use Medicaid payment to discourage early elective deliveries/to encourage spontaneous vaginal births:
 - Arkansas, North Carolina and Louisiana offer provider incentives to decrease rates of early elective deliveries.
 - Tennessee reimburses for cesarean and vaginal deliveries at the same rate.
 - Washington offers incentives to reduce early elective deliveries and provides lower reimbursement for cesarean deliveries.
3. State Medicaid programs with “hard stop” policies (policies where hospitals can’t schedule a delivery if there is no paperwork citing a medically-indicated reason):
 - Michigan (in public comment period of implementation)
 - Minnesota (currently suspended)
 - Oregon (voluntary)
 - North Carolina (voluntary)
4. Other state activity: Meanwhile, some of the states listed above, along with others, are participating in a variety of voluntary collaboratives and initiatives that use data and education, but not payment policy, to try to reduce the rate of early elective deliveries. The examples listed below come from a July 2013 Paper issued by the National Governors Association, entitled Improving “Birth Outcomes in Medicaid,” which can be found at http://statepolicyoptions.nga.org/sites/default/files/casestudy/pdf/Improving_Birth_Outcomes_in_Medicaid.pdf.
 - **COIIN Collaborative Improvement and Innovation Network to Reduce Infant Mortality.** HRSA created a public-private partnership to support the 13 Southern states in DHHS Regions IV and VI in their efforts to improve birth outcomes. COIIN is organized around five strategies identified as priorities by participating states at the Infant Mortality Summit, which was convened by MCHB in January 2012: 1) Reduce elective deliveries before 39 weeks of pregnancy; 2) Expand access to inter-conception care (care between pregnancies) through Medicaid; 3) Promote smoking cessation among pregnant women; 4) Promote safe infant sleep practices; and 5) Improve perinatal regionalization (a geographically targeted approach to ensure risk-appropriate care for mothers and infants).

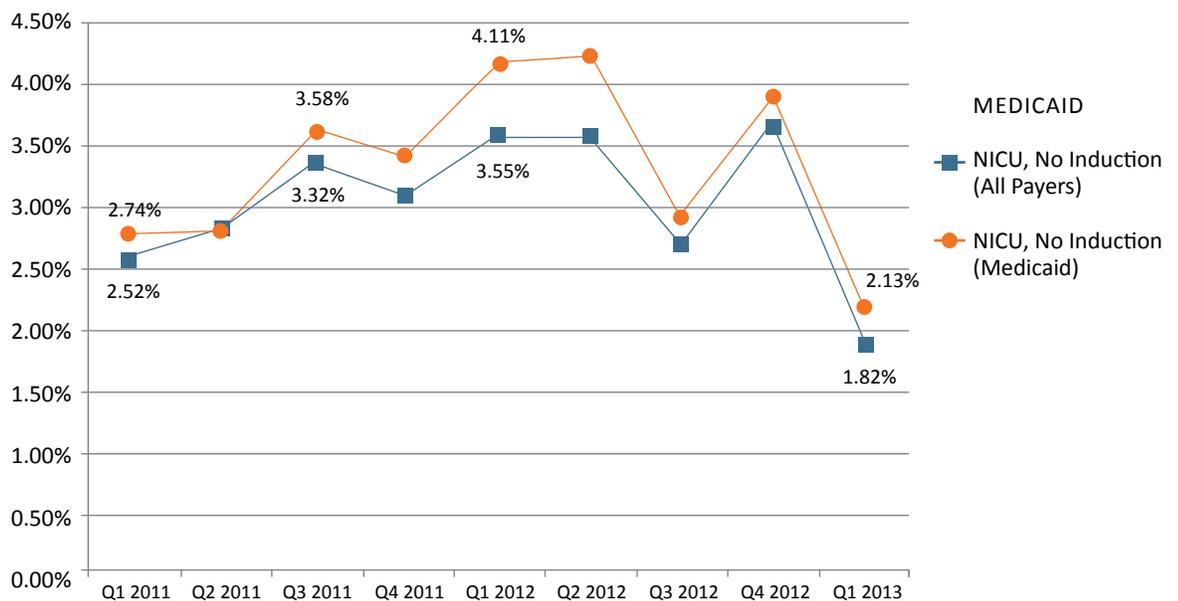
A number of other state, federal and nonprofit campaigns are engaging state leaders to improve birth outcomes by reducing early elective deliveries, among a number of critical strategies. These include efforts by:

- Association of State and Territorial Health Officials (ASTHO) to engage states to reduce pre-term birthrates via its Healthy Babies Initiative.
- The National Governors Association, which has a learning collaborative for states to improve birth outcomes.
- CMS's Strong Start campaign to reduce pre-39-week deliveries, which includes a Partnership for Patients component for engaging hospitals.
- March of Dimes continues to use its "Less than 39 Weeks" toolkit and is now working with 100 hospitals in 28 states.

APPENDIX H A reduction in NICU admissions

To measure the success of the BOI in meeting one of its core goals — reducing NICU stays — the BOI began measuring NICU admissions among babies born at 37 and 38 weeks. The graph below (Figure 3) shows the number of births occurring at 37 and 38 weeks that resulted in NICU stays. The data do not include births where labor was induced, so the graph lines are labeled “no induction.” However, these births could include early elective cesarean deliveries, evidence-based cesarean deliveries, as well as spontaneous early births. Data are shown for all payers (the blue line) and Medicaid only births (the orange line).

FIGURE 5 Percent of Births 37-38 Weeks Gestation with NICU Stays



A sharp decline is obvious in the first quarter of 2013. Because this data set does not include induced deliveries, Professor Ana Lòpez-DeFede interprets this graph to mean the following: rates of early, elective cesarean deliveries were likely falling for women at 37 and 38 weeks of pregnancy. A reduction in elective cesarean deliveries prior to 39 weeks reduced the number of low birth weight babies; a reduction in low birth weight babies reduced NICU admissions.⁸⁸

BCBSSC data also reveal a significant decrease in NICU admissions across the board (for infants born early and at full-term). BCBSSC data from 2011 through Q1 2013 show a 21 percent reduction in NICU admissions and a 27 percent reduction in NICU days (among all infants).⁸⁹ According to Dr. Long with BCBSSC, “Our decline began in Q4 2012. While we can’t prove causality without a control group and a randomized trial, I believe the BOI activities have impacted our overall rates since that was the major initiative with direct actions taken to reduce elective deliveries prior to 39 weeks.”⁹⁰

⁸⁸ Data from Professor Ana Lòpez-DeFede, and telephone interview, September 9, 2013.

⁸⁹ Data provided by Laura Long, MD, Chief Medical Officer and VP of Clinical Innovation, BlueCross BlueShield South Carolina, Sept 4, 2013.

⁹⁰ Ibid.

All data are new and need to be gathered for a more extended period of time before it is safe to make firm conclusions. And without a control group or other formal study, it is not possible to know if this decline is directly attributable to the BOI. But several factors suggest that it is. First, inductions of labor often end in cesarean deliveries.⁹¹ The BOI data gathered to date suggest an overall decline in early elective inductions (with a slight uptick in early 2013), which likely means rates of cesarean delivery decreased as well. Even though the rate of early elective inductions inched up slightly in Q1 2013, it is possible cesarean rates continued to fall during this time. In addition, it is likely some of the other components of the BOI affected the reduction in NICU admissions. For example, enhanced screening for drug and alcohol use and intervention during pregnancy can help reduce the number of low birth weight babies and thus, NICU admissions.

Dr. Picklesimer's view is that this graph (Figure 3) is evidence of the success of the BOI, as this was the population targeted by the 39-week initiative.⁹² The sharp decline occurring in Q1 2013 (after the non-payment policy officially took effect) is likely the result of multiple BOI efforts in the months prior, since changing provider practice patterns takes time.

91 Ehrenthal et al. (2010).

92 Information provided by Amy H. Picklesimer, MD, MSPH, South Carolina Birth Outcomes Initiative Clinical Lead, Division of Maternal-Fetal Medicine, Greenville Health System, via email September 6, 2013