Louisiana Birth Outcomes Initiative: Improving Quality, Care and Cost

By Michelle Alletto and Sue Gullo

Wednesday, December 12th @ 0930 and 1115

Session Objectives

- Describe the Louisiana Birth Outcomes Initiative (BOI) and its goals- including creating a culture of continuous quality improvement in the states hospitals.

- Discuss engaging hospitals at the state level in a shared goal to eliminate elective deliveries as the first step in a plan to improve quality and safety and reduce cost.
Opportunities Together- IHI and LA BOI

- Began with the shared interest in eliminating elective term delivery.

- Currently is also carried through with HRSA Regions IV and VI Infant Mortality COIIN.

- Vision of our work together- creating new learning using quality improvement techniques to improve care for women and children, developing prototypes, testing those prototypes in a variety of settings that will enable us to spread and sustain long term change.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>US</th>
<th>Louisiana</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preterm birth (&lt; 37 weeks gestation, %)</td>
<td>12.2</td>
<td>14.7</td>
<td>48th</td>
</tr>
<tr>
<td>Low Birth Weight (&lt; 2,500 grams, %)</td>
<td>8.2</td>
<td>10.6</td>
<td>49th</td>
</tr>
<tr>
<td>Very Low Birth Weight (&lt; 1,500 grams, %)</td>
<td>1.5</td>
<td>2.1</td>
<td>49th</td>
</tr>
<tr>
<td>C-section rate (%)</td>
<td>32.9</td>
<td>39.6</td>
<td>50th</td>
</tr>
<tr>
<td>Infant Mortality (&lt;1 year old, per 1000 live births)</td>
<td>6.77</td>
<td>10.04</td>
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Opportunity for Impact

In Louisiana, Medicaid pays for almost 70% of all births; the second highest Medicaid birth rate in the Nation.

<table>
<thead>
<tr>
<th>Race</th>
<th>Medicaid</th>
<th>Total Births</th>
<th>%</th>
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<tbody>
<tr>
<td>White</td>
<td>20464</td>
<td>37271</td>
<td>55.0</td>
</tr>
<tr>
<td>Black</td>
<td>22717</td>
<td>25037</td>
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<tr>
<td>Other</td>
<td>1895</td>
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<tr>
<td>All races</td>
<td>45076</td>
<td>65109</td>
<td>69.2</td>
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</tbody>
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Source: 2009 Louisiana DHH Maternal and Child Health Birth Data

LA BOI Organizational Structure

- Louisiana DHH Secretary, Bruce Greenstein
- Birth Outcomes Initiative (BOI)
  - Director, Deputy Director, Coordinator
- Louisiana Perinatal Commission
  - Authorized in 2006, 16 member commission appointed by Governor Jindal
- Blue Ribbon Panel
Building Consensus

*Birth Outcomes State Wide Action Teams*

- Five action teams which represent community partners, consumers, advocates, public health professionals, clinicians, hospital administrators, and insurers
  - Care Coordination
  - Health Disparities
  - Patient Safety and Quality
  - Behavioral Health
  - Data and Measurement

Lifecourse

*Takes into account the complex interplay of social, behavioral, biological, and genetic factors across the entire life course or life span*

From Kay Johnson, Preconception Health across the Lifespan: Its good for women, babies, and families, March 2010
Interventions to Improve Birth Outcomes

- Increase use of smoking cessation treatment
- Increase use of 17P
- Reduce preterm & repeat C-section
- New indicators for hospital quality monitoring
- FIMR
- Family planning
- Intensive care coordination/case management
- Chronic disease management
- Screening and treatment for behavioral health
- Home Visitation (Healthy Start, NFP)
- Early and Adequate Prenatal Care
- Risk assessment and care plan for women with adverse outcome
- Infant
- Prenatal
- Birth
- Postpartum & Interconception

Birth Outcomes Priorities

- Institute statewide comprehensive Behavioral Health screening and brief intervention for pregnant women in Medicaid
- Pilot and expand access to Care Coordination
- Increase Data Capacity and Performance Measurement
- Increase Patient Safety and Quality of Care
Behavioral Health

Ensure that all women in Medicaid receive a behavioral health screen, brief intervention referral and treatment for substance use, depression and violence
Care Coordination

To provide care coordination for every woman in Louisiana Medicaid who has had an adverse pregnancy outcome.

To reduce Louisiana’s low birth weight rates; number of unintended pregnancies and Medicaid costs and increase child spacing intervals by providing interconception care for women with a prior poor birth outcome.

- Assessed priorities for intervention – preconception, interconception care
- Defined high risk population as those with a prior poor birth outcome (low birth weight, preterm, infant death)
- Pilot in Medicaid for Interconception Care
  - Greater New Orleans Community Health Connection
Bayou Health – Managed Care

- Better quality and improved health outcomes
- More focus on prevention
- Better coordination of care (specialists, dental, behavioral health)
- Interventions to actively manage chronic illnesses
- Comprehensive patient-centered medical home
- Incentives for compliance with care recommendations
- Incentives for healthy behaviors
- Plans must provide interconception care

Data and Measurement

Create transparency, accountability and quality improvement infrastructure for perinatal quality improvement measurement and reporting.
Perinatal Quality Scores

- Pre-term births
- VLBW by level NICU
- Nulliparous term singleton vertex C-sections (NTSV)
- Elective deliveries < 39 weeks gestation

Measuring 39 Week Deliveries

Louisiana has modified* its electronic birth certificate form to include measurement of reasons deliveries are done prior to 39 weeks:

- Delivery is single and gestational age is less than 39 weeks
- Must select medical reason, fill in medical reason, or state “no medical reason”
- Data will help monitor elective, but also reasons for preterm births

- Consensus from national experts, quality experts, LA State Registrar, hospital staff, OB/GYNs on selection of medical indications list
- Worksheet will be included in Vital Records package for charting and documentation

*Modification expected to go live in March 2012
To create a culture of continuous quality improvement and safety in Louisiana’s birthing hospitals.

- Institute for Healthcare Improvement (IHI) to conduct a 12 month, statewide perinatal quality collaborative with major birthing hospitals.
- The Secretary and partners at LHA, LSMS, and LA ACOG have signed a letter encouraging all birthing hospitals to pledge voluntary policy implementation by January 2012 to end elective deliveries prior to 39 weeks.
- Agreement with LAMMICO to reduce malpractice rates with participation in a professional training on perinatal quality.
- NICU Quality Collaborative
Earlier this year, we accepted a challenge from the March of Dimes to reduce prematurity rates 8% by 2014.
IHI Perinatal Improvement Community

*Louisiana Cohort*

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**Mindful Practice**

- It is not enough to do your best, you must know what to do and then do your best

  - W. Edwards Deming
IHI Perinatal Improvement Community

LA Cohort

Year 1 2011-2012:
• 15 Hospitals
• Joint sponsorship agreement between LA DHHS and Individual Hospitals
• Hospitals delivering over 1000 babies

Year 2 2012-2013:
• 26+ Hospitals
• Joint sponsorship LHA and Individual Hospital, continued support and involvement of LA DHHS

Perinatal Improvement Community

Measurement Strategy

Collaborative Perinatal Goals
Reduce harm to 5 or less per 100 live births
Zero incidence of elective deliveries prior to confirmation of fetal maturity (39 weeks)
Augmentation Bundle(s) Composite or Compliance great than 90%
1 Improve organizational culture of safety survey scores in Perinatal units by 25%
100% of the participating teams will have documentation of Patient & Family Centered Care
# IHI Perinatal Care Community Measurement Strategy

<table>
<thead>
<tr>
<th>Annual / Bi-annual Structure Assessments</th>
<th>Required Measures</th>
<th>Optional Measures</th>
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<tbody>
<tr>
<td><strong>Oxytocin Deep Dive</strong>*</td>
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<tr>
<td>Perinatal Harm*</td>
<td>Augmentation Bundle Composite / Compliance* (Oxytocin)</td>
<td>Vacuum Bundle Composite/Compliance*</td>
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<tr>
<td>Patient and Family Centered Care</td>
<td>Elective Induction Bundle Composite / Compliance* (Oxytocin)</td>
<td>Advanced Augmentation Bundle Composite/Compliance*</td>
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<tr>
<td>(Structure/Narrative)</td>
<td>Augmentation Induction Monthly Bundle Compliance (Oxytocin)</td>
<td>Advanced Elective Induction Bundle Composite / Compliance*</td>
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<tr>
<td><strong>Labor Deep Dive</strong>*</td>
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<tr>
<td>Elective Delivery prior to 39 weeks</td>
<td>Advanced Indicated Induction Bundle Composite / Compliance*</td>
<td>Patient and Family Satisfaction Time Between Decision to Incision</td>
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<tr>
<td>Rate (Initial) / Time Between (Rare Event) (TJC PC-01)</td>
<td>Monthly Advanced Bundle Compliance (Vacuum, Adv. Aug. Adv. EI, Adv II)</td>
<td>(Test Measure) Transfer to: Higher Level of Care: Term Delivery</td>
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<tr>
<td>Cesarean Rate for low risk first birth women (TJC PC-02)</td>
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<td>(Test Measure) Gestational Age Reliability</td>
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<tr>
<td>Neoponate Transfer to Higher Level of Care: Elective Delivery</td>
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## IHI Perinatal Community Care Bundle Sequencing

### Elective Induction Bundle (Initial-Oxytocin)
- GA-39 weeks
- Pelvic Assessment
- Recognition and management of tachysystole
- Recognition and management of FHR Status (Category I-normal)

### Augmentation Bundle (Initial-Oxytocin)
- EFW documented
- Pelvic Assessment
- Recognition and management of tachysystole
- Recognition and management of FHR Status (Exclusion of Category III)

### IHI Oxytocin Bundles (2004)
- Basic Oxytocin Bundles Defined as patient who receives Oxytocin for elective induction or augmentation. Focus on eliminating elective delivery prior to 39 weeks. Adoption of team definition and reliable execution of component indicators.

### Advanced Elective Induction Bundle
- Defined: Patient without a medical indication for delivery between 30 and 40+6 weeks gestational age
  - GA-39 weeks
  - Pelvic Assessment
  - Favorable Bishop Score *(locally defined)*
  - Recognition and management of complications of induction method (including tachysystole)
  - Recognition and management of FHR Status (Category I-normal)

### Advanced Indicated Induction Bundle
- Defined: Patient with a medical indication for induction
  - Acceptable medical indication for labor induction documented (locally defined)
  - Pelvic Assessment
  - Recognition and management of complications of induction method (including tachysystole)
  - Recognition and management of FHR Status (Exclusion of Category III)

### Advanced Augmentation Bundle (2010)
- Defined:
  - EFW documented
  - Pelvic Assessment
  - Recognition and management of tachysystole
  - Recognition and management of FHR Status (Category I-normal) (Exclusion of Category III)
  - Recognition and management of FHR Status (Exclusion of Category III)

### IHI Advanced Bundles
- Accept 39 weeks as minimal GA for elective delivery.
- Focus moves to pharmacologic or mechanical initiation of labor—no longer focused on (just) Oxytocin.
- Evidence Based: Gestational dating is core**

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*Source: Institute for Healthcare Improvement, 2010*
Adopter Categories

LA Cohort 1

<table>
<thead>
<tr>
<th>Innovators</th>
<th>Early Adopters</th>
<th>Early Majority</th>
<th>Late Majority</th>
<th>Laggards</th>
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<tbody>
<tr>
<td>2.5%</td>
<td>13.5%</td>
<td>34%</td>
<td>34%</td>
<td>16%</td>
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TJC PC01 LA Cohort
Elective Delivery Rate prior to 39 weeks

Monthly Weighted Average Run Chart

Notes:
There is a clear signal of improvement in these data using statistical process control P chart
The basis for the aggregate graph:
- Self reported data from 14 LA hospitals.
- Not all hospitals report every month
- December value of 6.8% is with all hospitals reporting

- D = denominator for that month (sum of all reporting hospitals denominator)
- N = numerator for that month (sum of all reporting hospitals numerator)
- n = number of hospitals reporting that month

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11/29/2012
LA Cohort:
Elective Delivery Rate Prior to 39 weeks

Jan 2012 - June 2012
- Self reported data from 14 LA hospitals.
- Not all hospitals report every month (range from 5 to 14).
- Months of Dec 2011 and Jan 2012 all hospitals reporting.
- Using Run Chart Rules clear signal of improvement.
- Reduction to less than 5% for last 6 months from greater than 15% rate first 6 months.

15 Hospitals…..14 stories of improvement
15 Hospitals.....14 stories of improvement

Woman’s Hospital Baton Rouge-
Our journey since 2006

- Gestational Age $\geq$ 39 weeks
- Use of Oxytocin
- Operative vaginal deliveries
- Second stage labor management
- Postpartum hemorrhage
- Team Training
- Family centered care

See their story at multiple sessions at the Forum including (L22) The Right Start: Eliminate OB Adverse Events
The North Oaks Journey
To Improve Perinatal Care

Perinatal Community Spring Meeting
May 16-18, 2012
New Orleans, Louisiana
UPDATED July 2012

North Oaks Medical Center
15790 Paul Vega M.D. Drive
Hammond, LA 70403

FRONT LINE STAFF ENGAGED IN IMPLEMENTATION OF CHANGES
TEAM GOAL PHASE I

End elective deliveries greater than or equal to 37 weeks and less than 39 weeks gestation

ACTIONS TAKEN DURING PHASE I

- Daily L&D Schedule Revised
- Limited number of personnel allowed to schedule
- Scheduling HARD STOPS implemented (proof of gestational age, patient records must be submitted prior to scheduling)
- Observation of clinic patients for 1.5 hours to validate labor implemented
- L&D Physician Note Standardized to Document Justification for any Deliveries >= 37 or less than 39 weeks gestation
- Concurrent review of 100% of scheduled inductions/c-sections to assure ACOG criteria met (in reality as well as paperwork)
- Ongoing staff and medical staff education
SUSTAINED RESULTS FOR PHASE I

🌟 ZERO NON-MEDICALLY INDICATED INDUCTIONS SINCE DECEMBER, 2011 (217 DAYS AT TIME OF REPORT)

🌟 GESTATIONAL AGE APPROPRIATELY CALCULATED FOR 100% OF SCHEDULED INDUCTIONS AND C-SECTIONS

🌟 NO TRANSFERS TO NICU OF 37 TO 39 WEEK INFANTS, RESULTING IN APPROXIMATE 14% DECREASE IN NICU ADMISSIONS

NORTH OAKS OUTCOMES

% Elective Delivery Rate \( \geq 37 \text{ to } 39 \text{ weeks} \) Gestation (Target Zero)

North Oaks
Louisiana Cohort

NOMC PERINATAL PROJECT TEAM PHASE II GOALS

1) Complete the IHI Oxytocin (High Alert Medication) Deep Dive

2) Implement Trigger tools to identify adverse events during deliveries
DRIVERS OF SUCCESS SO FAR

- Physician Champions
- Committed and accountable front line staff
- IHI map for improving care
- Idea sharing and feedback within the hospital, at conferences, and with Louisiana Cohort
- Medical staff peer pressure
- Education to Physician Offices
- Staff education monthly, including education given by Physician Champions
- Sharing data with staff
- Staff support from North Oaks Administration and Medical Staff Leadership

How-to Guide: Prevent Obstetrical Adverse Events

Prevent obstetrical adverse events by implementing the components of care recommended in this guide.

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http://www.ihi.org/knowledge/Pages/Tools/HowtoGuidePreventObstetricalAdverseEvents.aspx