Delivering Safe Care: Building and Sustaining an OB Patient Safety Program

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Yale-New Haven Hospital
Yale School of Medicine
Disclosures

I have no conflicts of interest to report
Objectives

• Discuss aspects of a comprehensive effort to reduce OB adverse outcomes

• Review ways to evaluate and measure an OB patient safety program

• Identify strategies to sustain an OB patient safety program
<table>
<thead>
<tr>
<th>Days Since Yale-New Haven Hospital’s Last Serious Safety Event</th>
<th>Days Since YNHH Women’s Services’ Last Serious Safety Event</th>
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Safety Story
Building A Culture of Safety and Quality

The Yale Experience
2003: The Foundation

Quality and Patient Safety Review: Obstetrical Services

Clinical Risk Management
Site Visit Report

Yale-New Haven Hospital
New Haven, Connecticut

G. Eric Knox, MD
Kathleen R. Simpson, PhD, RNC, FAAN

Challenges/Vulnerabilities/Weaknesses in the Patient Safety Net

Residency Program
- The residency program is reported to be in compliance with all rules and regulations of the Residency Review Committee (RRC).

Clinical Service Plan for Obstetrics and Neonatal Service Plan
- The physicians and administrative leadership teams from the obstetric and neonatal departments have not jointly developed a current or future perinatal operations plan. Rather, there exist separate obstetrical and neonatal departmental plans that are incompatible with one another. The chair of the department of OB-GYN has plans to increase the volume to 7,000 women including a significant increase in the number of women with complications of pregnancy. The neonatal department is only preparing for increased capacity necessary to care for NICU babies based on the current volume and complexity/risk status of 4,000.

Neonatal Intensive Care Unit
- The census in the NICU frequently exceeds the number of licensed beds as well as that which can be safely handled from a nursing staffing perspective.

Exceeding NICU safe capacity creates conditions which will promote medical accidents and/or neonatal harm
- Adequate personnel to coordinate/allocate NICU discharge planning does not currently exist.

Maternal Special Care Unit
- The Maternal Special Care Unit (MSCU) is remote from the labor and delivery (L&D) unit, does not have adequate resident physician coverage and often demonstrates two different standards of care when clinical rounds on the MSCU and the L&D unit are compared.

Admission and/or discharge criteria for the MSCU do not exist. Nor are there criteria in place to help the nursing staff determine which admissions should go directly to the labor floor and, alternatively, which could be admitted to the MSCU without being screened on the labor floor.

Women are admitted to the MSCU without the full admission screening process and physician attention that occurs on the L&D unit.

Misoprostol is administered on the MSCU for cervical ripening/labor induction. Physicians use the MSCU to begin labor induction when L&D capacity is full, thus negating the effectiveness of the induction rate policy (cited earlier under strengths).

Misoprostol is given to women with a fetal demise who are attempting VBAC.

Intravenous magnesium sulfate is administered on the MSCU without adequate nursing assessment/staffing.

Nurses on the MSCU are expected to interpret ECG tracings without having had formal education/training in ECG monitoring.

Unlicensed personnel apply electronic fetal monitors to women on the MSCU.

There is no designated charge nurse for the MSCU.

Inadequate communication exists between the L&D unit and the MSCU.

Fetal Monitoring Language
- A consistent EFM language describing fetal heart rate patterns does not exist among providers.

There are parallel EFM educational structures for physicians and nurses.

Physicians and nurses do not attend educational programs or EFM together.

Induction of Labor
- Induction of labor practices are not universally consistent with ACOG guidelines.

Accurate tracking mechanisms to differentiate between medically indicated and elective induction of labor are not present.

Intermittent potential clinical risk and liability exposure is created when oxytocin is used in a manner inconsistent with published standards (i.e., hyperstimulation of uterine activity with and without nonreassuring fetal heart rate patterns).

“STRENGTHS”

- Long standing, acknowledged reputation for excellence in Obstetrical clinical practice and innovation in Maternal-Fetal Medicine
- A professional nursing staff characterized by loyalty and longevity
- One-to-one nursing care for women in active labor as much as reasonably possible
- 24/7 in-house coverage by anesthetists
- 24/7 in-house coverage by neonatologists (fellows or attendings)
- Administrative leadership committed to quality care for mothers and babies
- Comparatively low instrumentation rate for vaginal birth
- Comparatively low induction of labor rate
- Apparently effective clinical triage system of women scheduled for induction of labor
- A majority of written policies and procedures based on and referenced to national standards and evidence
- Certified nurse midwives on staff
- Availability of hydrotherapy during labor
- Sufficient volume of births to provide resident education
- LDR rooms and OB unit recently renovated

“CHALLENGES”

- Adequate personnel to coordinate/allocate NICU discharge planning does not currently exist.
- Maternal Special Care Unit (MSCU) is remote from the labor and delivery (L&D) unit, does not have adequate resident physician coverage and often demonstrates two different standards of care when clinical rounds on the MSCU and the L&D unit are compared.

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  - Intermittent potential clinical risk and liability exposure is created when oxytocin is used in a manner inconsistent with published standards (i.e., hyperstimulation of uterine activity with and without nonreassuring fetal heart rate patterns).
Building It

- Outside expert review
- Standardization of Protocols and Guidelines
- OB Patient Safety Nurse Coordinator
- Anonymous event reporting
- Yale On-Call Attending
- OB Patient Safety Committee
- Safety attitude survey/questionnaire
- Team training
- Electronic fetal monitoring certification

Impact of a comprehensive patient safety strategy on obstetric adverse events

Christian M. Pettner, MD; Stephen F. Thung, MD; Errol R. Norwitz, MD, PhD; Catalin S. Buhimschi, MD; Cheryl A. Raah, RNC; Joshua A. Coped, MD; Edward Kuczynski, MA; Charles J. Lockwood, MD; Edmund F. Funai, MD

OBJECTIVE: We implemented a comprehensive strategy to track and reduce adverse events.

STUDY DESIGN: We incrementally introduced multiple patient safety interventions from September 2004 through November 2006 at a university-based obstetrics service. This initiative included outside expert review, protocol standardization, the creation of a patient safety nurse position and patient safety committee, and training in bar codes and fetal heart monitoring interpretation. We prospectively tracked 10 obstetrics-specific outcomes. The Adverse Outcome Index, an expression of the number of deliveries with at least 1 of the 10 adverse outcomes per total deliveries, was analyzed for trend.

RESULTS: Our interventions significantly reduced the Adverse Outcome Index (linear regression, F = 0.50; P = .01) (overall mean, 2.50%). Concurrent with these improvements, we saw clinically significant improvements in safety climate as measured by validated safety attitude surveys.

CONCLUSION: A systematic strategy to decrease obstetric adverse events can have a significant impact on patient safety.

Key words: crew resource management, medical errors, obstetric adverse outcomes, patient safety

From the Department of Obstetrics, Gynecology, and Reproductive Science, Yale University School of Medicine (Dr. Pettner, Thung, Norwitz, Buhimschi, Coped, Lockwood, and Funai and Mr Kuczynski), and Yale-New Haven Hospital (Ms Raah), New Haven, CT.

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Editors’ Choice

Each year as a result of medical errors, we conclude that a majority of medical errors are caused by preventable faults, this report was a “call to arms” to deliver care more safely. Since then, improvements in safety have been documented in cardiology, critical care, and anesthesia, although there is a relative paucity of literature regarding monitoring and preventing obstetric adverse events. This is notable given that childbirth accounts for 4 million hospitalizations each year, ranking second only to cardiovascular disease, and obstetrics is considered to be in a liability crisis. The individual impact of an obstetric adverse outcome is considerable: 2 patients are often injured (mother and neonate) and neonatal insulin may result in significant long-term consequences for families, including the effort and cost of lifelong care. In obstetrics, good outcomes are expected while adverse outcomes are often considered unavoidable because trends and causes may be difficult to discern without a formal tracking program. With the hypothesis that a multifaceted approach to enhance the overall safety climate would reduce the rate of adverse outcomes, we partnered with our hospital (Yale-New Haven Hospital [YNHH], New Haven, CT) and our malpractice carrier (MIC Vermicor, Inc, New York, NY) (Appendix A) to assess and improve our patient safety climate. The goal of this program was to improve patient safety, decrease patient injury, and decrease liability. In this program, the identified and initiated specific risk-reduction clinical practices and created a comprehensive culture of safety.

Materials and Methods

YNHH is a tertiary-level academic center serving a diverse urban and suburban population and is the preeminent referral center within a 50-mile radius. Our service averages approximately 5500 obstetric admissions per year, of which 4800 are for delivery. The mean age of the women delivering at YNHH is 29.5 years (SD ± 6.2) and our obstetric population is 31.5% white, 19% African American, 19% Hispanic, and 6% Asian. Community providers care for approximately two-thirds of all patients; the remainder are the responsibility of the full-time faculty of Yale University School of Medicine, New Haven, CT. Dedicated obstetric anesthesiologists are available 24 hours a day and our nursery is designated as a level 3C newborn intensive care unit (ICU).
## OB Adverse Outcome Index (AOI)

<table>
<thead>
<tr>
<th>Adverse Outcome Index Indicators</th>
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<tbody>
<tr>
<td>Blood transfusion</td>
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<tr>
<td>Maternal death</td>
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<tr>
<td>Maternal ICU admission</td>
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<tr>
<td>Maternal return to OR or labor &amp; delivery</td>
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<tr>
<td>Uterine rupture</td>
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<td>3\textsuperscript{rd} or 4\textsuperscript{th} degree laceration</td>
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<td>Apgar &lt;7 at 5 minutes</td>
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<td>Fetal traumatic birth injury</td>
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<tr>
<td>Intrapartum or neonatal death &gt;2500g</td>
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<tr>
<td>Unexpected admission to neonatal ICU &gt;2500g &amp; for &gt;24 hrs</td>
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</tbody>
</table>

**AOI:** % of mothers with at least one adverse outcome indicator
Decreased Adverse Outcomes

**Composite Adverse Events (AOI)**

- **Mean AOI**
  - 1st half: 2.90%
  - 2nd half: 2.09%
  - P=0.04


**Graph:**
- R² = 0.50
- p=0.01

**Legend:**
- Pt. Safety Nurse
- Protocols
- Team Training
- EFM Certification
- Pt. Safety Committee

**Y-axis:** AOI
- 0.00%
- 0.50%
- 1.00%
- 1.50%
- 2.00%
- 2.50%
- 3.00%
- 3.50%
- 4.00%

**X-axis:** Quarter
- 0
- 2
- 4
- 6
- 8
- 10
- 12
Composite AOI Run/Control Chart
In 18 Months:

- 15 fewer 3<sup>rd</sup>/4<sup>th</sup> degree vaginal lacerations
- 19 fewer transfusions
- 15 fewer maternal ICU admissions
- 5 fewer birth injuries
Q: Do MDs and RNs work as a well coordinated team?

Improved Perception of Safety
Safety Attitude Questionnaire

Percent in Agreement with Positive Environment

OB
Resident
RN

Safety
Teamwork
Before
After

## Yale New Haven Health Safety Culture Survey 2011

### Highlight Table by Department

#### NHH: Attending/Staff Physician

<table>
<thead>
<tr>
<th>Domain Summary</th>
<th>Yale New Haven Hospital</th>
<th>Feedback and Communication about Error</th>
<th>Organizational Learning &amp; Continuous Improvement</th>
<th>Hospital Management Support for Patient Safety</th>
<th>Overall Perceptions of Safety</th>
<th>Frequency of Event Reporting</th>
<th>Openness and Communication</th>
<th>Staffing</th>
<th>Non-Punitive Response to Error</th>
<th>Teamwork Across the Hospital</th>
<th>Supervisor/Manager Expectations &amp; Actions Promoting Safety</th>
<th>Hospital Handoffs and Transitions</th>
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### Obstetrics

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## Liability Experience: Before vs. After

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<td>Deliveries; n</td>
<td>23,499</td>
<td>23,372</td>
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<td>Total cases; n</td>
<td>30</td>
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<tr>
<td>Total cases per 1000 deliveries; n</td>
<td>1.28</td>
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<tr>
<td>Annual cases; median (range)</td>
<td>6</td>
<td>3</td>
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<tr>
<td>Annual cases per 1000 deliv.; median (range)</td>
<td>1.31</td>
<td>0.64</td>
<td>0.02</td>
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Annual Liability Claims * Per 1000 deliveries

Before during

Fewer Liability Claims

## Closed claims analysis

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<td>Total payments ($)</td>
<td>50,721,033</td>
<td>2,239,173</td>
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<tr>
<td>Total payments per 1000 deliveries ($)</td>
<td>2,158,434</td>
<td>95,806</td>
<td>-</td>
</tr>
<tr>
<td>Annual payments; median (range) ($)</td>
<td>632,262 (2,293-15,421,842)</td>
<td>81,714 (13,505-1,579,496)</td>
<td>0.03</td>
</tr>
<tr>
<td>Annual payments per 1000 deliv.; median (range) ($)</td>
<td>1,141,638 (264,352-4,536,653)</td>
<td>63,470 (0-335,349)</td>
<td>0.01</td>
</tr>
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$48 million difference

Sustaining a Culture of Safety and Quality
Five Thoughts for Sustaining A Safety Effort

1. Understand what safety is.
2. Be transparent.
3. Think of safety as a social movement.
4. Rules and tools don’t create safety.
5. Eliminating error is impossible; work to mitigate it.
Five Thoughts for Sustaining A Safety Effort

1. **Understand what safety is.**

2. Be transparent.

3. Think of safety as a social movement.

4. Rules and tools don’t create safety.

5. Eliminating error is impossible; work to mitigate it.
Safety vs. Quality

Possible Outcomes

Best Possible Outcome

Acceptable Outcomes
(health, experience, satisfaction)

Least Acceptable Outcome

Worst Possible Outcome

Possible Outcomes

safety projects

quality improvement projects
Safety & Quality

• Safety
  – Preventing errors and harm

• Quality
  – Achieving best possible outcomes/experience

• Safety & Quality share:
  – Improving health
  – Going beyond physiology and pathophysiology
  – Optimizing medical care through the non-medical
    • Enhanced technologies
    • Systems engineering
    • Social tools
## Safety vs. Quality

<table>
<thead>
<tr>
<th>SAFETY</th>
<th>QUALITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shoulder dystocia simulation drills</td>
<td>Preoperative antibiotic project (dosing/timing)</td>
</tr>
<tr>
<td>Preoperative time outs</td>
<td>Enhancing flow through ED</td>
</tr>
<tr>
<td>Team training</td>
<td>Cesarean delivery review process to lower cesarean rates</td>
</tr>
<tr>
<td>24/7 MFM Supervision of L&amp;B</td>
<td>Inpatient iPad patient education tool</td>
</tr>
<tr>
<td>Postpartum hemorrhage emergency bundle</td>
<td>Improving breastfeeding rates in postpartum mothers</td>
</tr>
<tr>
<td>Reducing elective deliveries before 39 weeks</td>
<td>Reducing length of stay after cesarean deliveries</td>
</tr>
</tbody>
</table>

**Reducing harm & errors**  
**Improving outcomes/experience**
How to Track

• Outcome, process, culture measures
• Adverse Outcomes Index (AOI)
• Perinatal Core Measures (NQF/TJC)
  – Cesarean delivery, elective delivery <39w, antenatal steroids, breastfeeding
• APEX Study
  – VTE, PPH, peripartum infection, severe lacerations, composite neonatal outcome
• “Event” reporting and event rates
Yale-New Haven Hospital Event Reporting Trends

High Reliability Organization Training

Fig 2
Safety Event Classification (HPI)

A deviation from generally accepted performance standards (GAPS) that...

**Serious Safety Event**
- Reaches the patient
- Results in moderate to severe harm or death

**Precursor Safety Event**
- Reaches the patient
- Results in minimal harm or no detectable harm

**Near Miss Safety Event**
- Does not reach the patient
- Error is caught by a detection barrier or by chance

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Event Reports by Classification (FY ‘15)

- Serious Safety Event (SSE): 3
- Precursor Safety Event (PSE): 435
- Near Miss Events (NME): 119
- Not a Safety Event: 459
- Total: 1016

Bar chart showing the distribution of event reports by classification:

- Not classified
- Insufficient Information
- Not a safety event
- NMW 3-Early Barrier Catch
- NME 2-Last Strong Barrier Catch
- NME 1-Unplanned Barrier Catch
- PSE 4-No Harm
- PSE 3-No Detectable Harm
- PSE 2-Minimal Temp Harm
- PSE 1-Min Perm Harm
- SSE 5-Mod Temp Harm
- SSE 4-Severe Temp Harm
- SSE 3-Mod Perm Harm
- SSE 2-Severe Perm Harm
- SSE 1-Death
# 2014-2016 OB/GYN Serious Safety Events

<table>
<thead>
<tr>
<th>Serious Safety Event</th>
<th>Date</th>
<th>Campus</th>
</tr>
</thead>
<tbody>
<tr>
<td>XXX with ICU admission</td>
<td>XXX</td>
<td>XXX</td>
</tr>
<tr>
<td>Perinatal Death</td>
<td>XXX</td>
<td>XXX</td>
</tr>
<tr>
<td>Misplaced XXX biopsy</td>
<td>XXX</td>
<td>XXX</td>
</tr>
<tr>
<td>Retained foreign body</td>
<td>XXX</td>
<td>XXX</td>
</tr>
<tr>
<td>Newborn unexpectedly admitted to NNICU</td>
<td>XXX</td>
<td>XXX</td>
</tr>
<tr>
<td>Newborn unexpectedly admitted to NNICU</td>
<td>XXX</td>
<td>XXX</td>
</tr>
</tbody>
</table>

Days since last safety event: 110

Intervals between SSE:
- Mean **133 days 2016** (last report: 100d)
- Median **120 days 2016** (last report: 111d)

(details censored to respect confidentiality)
Yale-New Haven Hospital
"Days Since Last Serious Safety Event"

Mean

FY'14
FY'15
FY'16

Median

Mean
FY'14
FY'15
FY'16

Median
Serious Safety Event Rates

![Graph of Serious Safety Event Rates]

- **Jan-05 to Nov-09**: The graph shows the Serious Safety Event Rate (SSER) for Northwest Hospital. The SSER is plotted against the timeline from January 2005 to November 2009.
- **Key Points**:
  - *Baseline SSER*: Illustrated by a horizontal line.
  - *Serious Safety Events (SSE)*: Shown as vertical bars.
  - *SSER*: Represented by a red line.

- **Baseline SSER**: Stabilized at the baseline level throughout the period.
- **SSE**: Fluctuations observed, with notable increases and decreases.

This chart illustrates the trend and rate of serious safety events at Northwest Hospital, with a focus on managing and monitoring safety event rates.
Five Thoughts for Sustaining A Safety Effort

1. Understand what safety is.

2. Be transparent.

3. Think of safety as a social movement.

4. Rules and tools don’t create safety.

5. Eliminating error is impossible; work to mitigate it.
Show the Harm
<table>
<thead>
<tr>
<th>Days Since Yale-New Haven Hospital’s Last Serious Safety Event</th>
<th>Days Since YNHH Women’s Services’ Last Serious Safety Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>XX</td>
<td>XXX</td>
</tr>
</tbody>
</table>
Safety Story
## Joint Commission Perinatal Care Core Measures

<table>
<thead>
<tr>
<th>Core Measure</th>
<th>Name</th>
<th>Description</th>
<th>US 2015</th>
<th>YNHH 2014</th>
<th>YNHH 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC-01</td>
<td>Elective Delivery</td>
<td>Rate of deliveries 37 0/7 to 38 6/7 weeks’ gestation without labor or a medical indication</td>
<td>2.3%</td>
<td>0%</td>
<td>2.5%</td>
</tr>
<tr>
<td>PC-02</td>
<td>Cesarean Section</td>
<td>Cesarean rate in nulliparous, singleton patients with cephalic presentation without contraindication to vaginal delivery</td>
<td>26.2%</td>
<td>23.0%</td>
<td>27.0%</td>
</tr>
<tr>
<td>PC-03</td>
<td>Antenatal Steroids</td>
<td>Rate of steroid initiation in patients delivering 24 0/7 to 31 6/7 weeks’ gestation</td>
<td>97.6%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>PC-05</td>
<td>Exclusive breast milk feeding</td>
<td>Percentage of newborns that are fed breast milk only since birth</td>
<td>51.8%</td>
<td>53.5%</td>
<td>52.9%</td>
</tr>
<tr>
<td>Composite</td>
<td>Composite</td>
<td>PC-01 &amp; PC-03</td>
<td>97.6%</td>
<td>100%</td>
<td>98.2%</td>
</tr>
</tbody>
</table>

* lower is better
MOST U.S. HOSPITALS HAVE C-SECTION RATES THAT ARE TOO HIGH

40% of U.S. hospitals meet the national target

60% percent of U.S. hospitals need to improve

MORE THAN 1,200 HOSPITALS ACROSS THE U.S. - EACH BAR REPRESENTS ROUGHLY 20 HOSPITALS

Click here to find your hospital's C-section rate

Source: Consumer Reports analysis of data from the Leapfrog Group and the California Maternal Quality Care Collaborative.

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Disclosure

- Complete and honest communication with patients after an unexpected medical event

- Patients want to know:
  - An explicit statement that an error occurred
  - What the error was
  - Why the error happened
  - How recurrences will be prevented
  - An apology

Barriers

- Unease, Fear of litigation, Culture of blame

CLEAR program: Communication Leads to EARly Resolution
Five Thoughts for Sustaining A Safety Effort

1. Understand what safety is.
2. Be transparent.
3. **Think of safety as a social movement.**
4. Rules and tools don’t create safety.
5. Eliminating error is impossible; work to mitigate it.
Patient Safety Culture

The way safety is perceived, valued and prioritized in an organization. It reflects the real commitment to safety at all levels in the organization.

CULTURE OF BLAME ➔➔➔ CULTURE OF SAFETY
Donuts Are Not a Strategy
Communication

The Joint Commission (TJC) has found that communication failure is a leading root cause of sentinel events.

Definition: Oral, written, electronic, among staff, with/among physicians, with administration, with patient or family
Root Causes of Perinatal Events 2004-2014

- Human Factors
- Communication
- Assessment
- Leadership
- Information Management
- Physical Environment
- Care Planning
- Medication Use
- Continuum of Care
- Patient Education

n=291

The Joint Commission
Root Causes of Maternal Events 2004-2014

- Human Factors
- Communication
- Assessment
- Leadership
- Information Management
- Physical Environment
- Continuum of Care
- Care Planning
- Medication Use

n=125
Chain of Command (Consultation)
Building a Movement
“Framing”

• You cannot impose initiatives and expect them to be committed to it.
• Treat everyone like they are a volunteer.
• Effective framing
  – Tell a story
  – Make it personal
  – Be authentic
  – Create a sense of ‘us’
  – Build in a call for urgent action

Helen Bevan (NHS)
Building a Movement

“Engaging”

- Assume everyone involved is a volunteer
- Imposing something is not a pathway to commitment
- Consensus is better than agreement
- Cesar Millan’s backpack
HRO Training

– We spend time identifying activities we do not want to go wrong
– We discuss what to look out for when giving report to an oncoming shift
– We take time to attend to important details

Communicate Clearly
• Repeat Backs / Read Backs with Clarifying Questions
• Phonetic and Numeric Clarifications

Handoff Effectively
• Situation, Background, Assessment, Recommendation (SBAR)

Attention to Detail
• Self-check using Stop, Think, Act, Review (STAR)

Mentor Each Other – 200% Accountability
• Cross-Check and Coach teammates
• Speak up for Safety: “I have a Concern”

Practice and Accept a Questioning Attitude
• Validate and Verify
• Stop the Line – “I heed C:arity!”
“Right” Leadership

• Inadequate leadership contributing factor in 50% of sentinel events
  – Available, affable, able

• Post-event response (“Just Culture”)
  – Culture of blame → Culture of safety
  – Rehabilitation/Restoration (vs. retribution)
  – Intolerance for recklessness or misconduct
Just Culture

Individual Behavior

- Human Error (inadvertent action, lapse, slip, mistake)
- Risky (behavioral choice that increases risk; risk unrecognized or believed to be justified)
- Reckless (conscious disregard of substantial and unjustifiable risk)

Console/Learn
Coach/Learn
Corrective Action

Based on: Marx & Swenson
“Charitable Assumption”

Assume the best intentions of others.
Critical Event Debriefing

- Critical incident stress management (CISM)
  - Diffusing (immediately)
    - informal, to address immediate needs
    - normalize feelings
    - extend lines of assistance
  - Debriefing (within 72 hours)
    - more official gathering; formal model
  - Follow-up (one week later)
    - check-in (often 1:1)

- Separate from root cause or event analysis
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Following Rules is Hard

• People break rules
• People forget rules
• People don’t pay attention to the rules
• People can’t find the rules

• Respect human limitations in systems design; use human capabilities to mitigate:
  – create social moments
  – Unit huddles
  – HRO: Reinforce and respond to ARCC
    • Ask a question, Request a change, express a Concern, use the Chain of command
HUDDLES—The YNHH Model

- “Morning Safety Report”
  - Hospital-wide status, events of past 24-hours
- “Morning snapshot” (providers, nurses)
  - High acuity OB patients
- Post-report “Board Meeting”
  - Team status, resource status
- Patient “Bedside Rounds”
  - Patient status
- “Pre-operative time-out, post-operative debrief”
  - Patient status, event status
- “Afternoon Safety Huddle”
  - Service-line status, prepare for Morning Safety Report
- “Midnight Huddle”
  - Team status, resource status
- Second Stage Huddle”
  - All labors in second stage for >2.5 hours; patient status
- “Huddle-4-Safety”
  - Patient status, L&B unit status
Tools Don’t Create Safety
Innovation or Improvement?

- **Innovation:**
  - Doing something entirely new

- **Improvement:**
  - Doing something we already do, better

Advances in safety do not require innovation, but rather require re-working current processes to make them better.
Electronic Fetal Monitoring

Innovation
- ST segment analysis
- Fetal pulse oximetry
- Computer-based interpretation

Improvement
- Unit Huddles Every 4 Hours
- Knowledge & judgment competency testing
- Management algorithms for ‘borderline’ tracings
- Oxytocin Review Group
You have assumed care of a healthy 18-year-old G1P0000 at 41.3 weeks' gestation, who is being induced for a post-term pregnancy. Three days ago in the office, she had a reactive FHR tracing and an AFI of 9 cm.

Overnight, she was given two doses of misoprostol for cervical ripening and artificial rupture of membranes was performed this morning. Oxytocin was started and has been titrated up to 18 mU/min over the past several hours. Her most recent cervical exam is 8/9/0/0.

Your management plan is...

Continue oxytocin

...and then you learn the following additional information:

The tracing below

How does this additional information affect your thinking about the management plan?

- Strongly invalidates
- Could invalidate
- No impact
- Could support
- Strongly supports

Drag scrollbar to the left or right to view entire tracing.
The Personal Proficiency Module

Answering Judgment Questions using the Likert Scale

Answering judgment questions using a Likert scale is novel to many clinicians. An effective approach to choosing a response is to think about how this new information (often an Electronic Fetal Monitoring strip) might affect the assessment or management plan provided in the initial question.

<table>
<thead>
<tr>
<th>Strongly Invalidates</th>
<th>Could Invalidate</th>
<th>No Impact</th>
<th>Could Support</th>
<th>Strongly Supports</th>
</tr>
</thead>
<tbody>
<tr>
<td>You feel certain that the new piece of information should change the initial management plan or assessment.</td>
<td>You are leaning towards changing the initial management plan or assessment provided, but there are variables within the context of the case that give you pause.</td>
<td>This new information does not change your initial management plan or assessment, as it does not inform the original decision.</td>
<td>You are leaning towards continuing the initial management plan or assessment provided, but there are variables within the context of the case that give you pause.</td>
<td>You feel certain that the new piece of information reinforces the initial management plan or assessment provided.</td>
</tr>
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Preoccupation with Failure

...it is inevitable.
Mitigate Error

- Building systems:
  - Resilient
  - Tolerant
  - Predictable
  - Predicting

- Teams:
  - Crew resource management
  - Chain of command (ARCC)
  - Emphasis on the ‘dyad’
Huddle 4 Safety

- **Purpose** – increase situational awareness of entire L&B team
- **When** – 2A, 6A, 10A, 2P, 6P, 10P
- **Where** – L&B charting room
- **Who** – led by Charge RN & Chief Resident; all available staff and providers should attend
- **How** – structured synopsis of each patient on L&B
  1. G’s & P’s, Gestational Age, Reason for Admission
  2. Fetal Monitoring: Continuous? IA? FSE needed?
  3. Fetal Monitoring Status: Category, Last 30 minutes; Accels or Reactive?
  8. Other Concerns: Peds? Delivery in OR?
- **Safe environment to practice a questioning attitude**
– *We spend time identifying activities we do not want to go wrong*
– *We discuss what to look out for when giving report to an oncoming shift*
– *We take time to attend to important details*

**Yale-New Haven Hospital**

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Thank you.