Taking Home a Healthy Baby

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Chief Nursing Officer
PeriGen

For more information about PeriGen, please visit PeriGen.com
About PeriGen

- Comprehensive labor and delivery patient safety platform incorporating PeriGen’s NICHD-validated Artificial Intelligence decision support tools.


- **PeriWatch Vigilance™** is an early warning system that works with an existing EFM to **quickly & consistently** identify patients who may be developing a potentially worsening condition.

- 330 clients nationally
This presentation includes information from The Joint Commission, CDC, CMQCC and other sources (designated on the slides). The following studies were not conducted by PeriGen and all of the details on the Perinatal Care performance measures were provided by The Joint Commission.
Our Presenter

Dr. Alana McGolrick
DNP, RNC-OB, C-EFM
PeriGen Chief Nursing Officer

With significant perinatal experience, Dr. McGolrick leads PeriGen's efforts to expand and enhance clinical training, customer outcomes reporting and publishing.

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Agenda

Introduction
Objectives
Background
Significance
The Problem
The Metric
Conclusion

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Objectives

Following conclusion of today’s presentation, participants will be able to:

Discuss background and significance of maternal and infant morbidity and mortality in the United States.

Demonstrate knowledge and understanding of PC-06.

Discuss the applicability of PC-06 to current clinical practice.

Identify the gap in evaluation of term newborn outcomes.
“Despite access to the world’s leading healthcare, the US has not made a significant impact on obstetric patient safety. The maternal-fetal dyad is an intricate design of invisible complexities that require astute care. These invisible complexities have lead to poorer outcomes, in part to not fully appreciating their impact on maternal-fetal wellbeing.”

Background

Infant morbidity and mortality

Maternal morbidity and mortality
Significance

Exploration of possible solutions to address obstetric patient safety
(Arora et al., 2016; Mhyre et al., 2014; Shields et al., 2016)

Failure to standardize a national approach to obstetric patient safety
(Mhyre et al., 2014)

Medical complexity of the pregnant patient – diabetes, hypertension, obesity, cardiac disease
(Clark et al., 2013)

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The Problem

Inaccurate assessment

Misinterpretation

Poor communication

Multiple co-morbidities

Poor predictive tools

Lack of standardization

“Potentially preventable maternal-infant morbidity & mortality

“The Joint Commission RCA data reveals that delayed response to clinical warning signs is the 5th leading cause of death for hospitalized patients. The literature has shown that 50% of maternal poor outcomes are PREVENTABLE. The delay of treatment leading to potentially preventable maternal-fetal deaths, can be further broken down into two pathways; the first being people causative factors, the second being process causative factors.”

“Failure to recognize the signs and symptoms of a patient’s worsening condition can lead to:
• Complicated delivery scenarios
• Emergent rescue of the fetus
• Increased risk of maternal morbidity and mortality”
Changing Patient Complexity

- Severe preclampsia per 1000 births
- Birth rate in 40-45 y/o per 1000
- Extreme obesity %

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Fingar et. al., 2017; National Vital Statistics Reports, 2019; Flegal et al., 2016; Ogden et al., 2006)
Severe Maternal Morbidity

https://www.cdc.gov/reproductivehealth/maternalinfanthealth/severematernalmorbidity.html
Maternal Mortality

https://www.cdc.gov/reproductivehealth/maternalinfanthealth/severematernalmorbidity.html
USA Today – Deadly Deliveries

- Highest maternal death rate among the world’s developed nations
- 2 women die almost everyday in childbirth
- 137 women per day suffer severe complications in childbirth
- Data indicates that almost half of the deaths could have been prevented

“Health People 2020 has set the goal of reducing the rate of fetal and infant deaths during the perinatal period per 1000 live births at 4.1. According to the most recent CDC data, our average national rate is 5.9. The slide provides a view of performance at the state level. In order to reduce this rate, it requires public health agencies working together with health care providers, and our vendor partners to reduce infant mortality in the United States. This joint approach can help address the social, behavioral, and health risk factors that contribute to infant mortality and affect birth outcomes.”

https://www.cdc.gov/reproductivehealth/maternalinfanthealth/infantmortality.htm
Improving the Birthing Experience

REQUIRES COLLABORATION
ADDRESS MULTI-FACTORIAL RISK FACTORS
LEGISLATIVE CHANGES
CLINICAL PRACTICE POLICY REVISIONS

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The Joint Commission Perinatal Care Measures

<table>
<thead>
<tr>
<th>Measure Number</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>PC.01</td>
<td>Elective Delivery</td>
</tr>
<tr>
<td>PC.02</td>
<td>Cesarean Birth</td>
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<tr>
<td>PC.03</td>
<td>Antenatal Steroids</td>
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<tr>
<td>PC.04</td>
<td>Health Care-Associated Bloodstream Infections in Newborns</td>
</tr>
<tr>
<td>PC.05</td>
<td>Exclusive Breast Milk Feeding</td>
</tr>
<tr>
<td>PC.06</td>
<td>Unexpected Complications in Term Newborns</td>
</tr>
</tbody>
</table>

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California Maternal Quality Care Collaborative

Quality Measure

- Babies born at term, excluding preexisting conditions, with normal growth pattern, *not exposed to maternal drug use*
- Measure the percentage of those admitted to NICU with severe or moderate neonatal complications

https://www.cmqcc.org/focus-areas/quality-measures

https://www.cmqcc.org/focus-areas/quality-metrics/unexpected-complications-term-newborns
“The new Perinatal Care performance measure requires hospitals to report the percent of infants born with unexpected newborn complications among full-term newborns with no preexisting conditions. According to The Joint Commission, although we measure clinical outcomes and care in the preterm population, there is a lack of metrics that assess the health outcomes of term infants. PC-06 aims to address this gap and assess adverse outcomes resulting in severe or moderate morbidity in otherwise healthy term newborns without pre-existing conditions. The measure is required for all hospitals with greater than 300 annual births and/or any hospital or health system seeking Perinatal Care Certification regardless of birth volume.”
PC.06 Unexpected Complications in Term Newborn

**Denominator**
Liveborn single term newborns whose birth weight is *equal to or greater than 2500 gm*

**Numerator**
Newborns with severe complications and moderate complications

https://manual.jointcommission.org/releases/TJC2018B/
## Denominator Population

<table>
<thead>
<tr>
<th>Included</th>
<th>Excluded</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Singleton liveborn newborn</td>
<td>• Born outside of hospital</td>
</tr>
<tr>
<td></td>
<td>• Multiple gestation pregnancy</td>
</tr>
<tr>
<td></td>
<td>• <em>Birth weight</em> $\leq 2499$ gm</td>
</tr>
<tr>
<td></td>
<td>• Not term or with $&lt;37$ weeks gestation completed</td>
</tr>
<tr>
<td></td>
<td>• Congenital malformations</td>
</tr>
<tr>
<td></td>
<td>• Genetic diseases</td>
</tr>
<tr>
<td></td>
<td>• Pre-existing fetal conditions</td>
</tr>
<tr>
<td></td>
<td>• Maternal drug use exposure in-utero</td>
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</tbody>
</table>

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Numerator Population

Severe complications
• Death
• Transfer to another acute care facility
• Diagnosis Code or Procedure Code for Severe Morbidities
  • Severe birth trauma
  • Severe hypoxia/asphyxia
  • Severe shock and resuscitation
  • Severe respiratory complications
  • Severe infection
  • Severe neurological complications
• LOS greater than 4 days and sepsis

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Numerator Population continued

Moderate complications

- Diagnosis or procedure codes for moderate complications
  - Moderate birth trauma
  - Moderate respiratory complications
  - Moderate respiratory complications procedures
- Patients with LOS greater than 5 days and NO jaundice or social indications

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Numerator Population continued

- Vaginal delivery and LOS greater than 2 days

**OR**

- Cesarean delivery and LOS greater than 4 days

**AND** any of the following:

- Diagnosis code or other procedure code for moderate complications
  - Moderate birth trauma with LOS
  - Moderate respiratory complications with LOS
  - Moderate neurological complications with LOS procedures
  - Moderate respiratory complications with LOS procedures
  - Moderate infection with LOS

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**PC.06 Measurement**

- Reported as aggregate data
- Per 1000 live births
- 3 rates will be reported

<table>
<thead>
<tr>
<th>Set Measure ID</th>
<th>Performance Measure Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC-06.0</td>
<td>Unexpected Complications in Term Newborn - Overall Rate</td>
</tr>
<tr>
<td>PC-06.01</td>
<td>Unexpected complications in Term Newborn - Severe Rate</td>
</tr>
<tr>
<td>PC-06.02</td>
<td>Unexpected complications in Term Newborn - Moderate Rate</td>
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</tbody>
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Data Collection

“For PC-06 where it is documented is just as important as that it is physically documented. The Joint Commission recommends the use of eCQM data abstraction methods to prepare for the future need to submit data electronically. With eCQMs, the clinician must document in a structured (mapped) field in the Electronic Health Record (EHR), at the point-of-care, that the action was appropriately taken and therefore, the patient passed the measure.”

Non-chart abstracted data sources encouraged (think eCQMs)

Sampling is not permitted

Vital records  Delivery logs  Electronic health record
How do I measure up?

Data from The Joint Commission will not be available until 2020

California aggregate data

**California Median Rate**

<table>
<thead>
<tr>
<th>Total Unexpected Newborn Complications</th>
<th>Per 1000 births</th>
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<tbody>
<tr>
<td>Overall Rate</td>
<td>27.4</td>
</tr>
<tr>
<td>Severe Complications</td>
<td>15.9</td>
</tr>
<tr>
<td>Moderate Complications</td>
<td>9.6</td>
</tr>
</tbody>
</table>

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The Joint Commission Addendum

• Correcting birth weight
• Amendments to ICD-10 codes (recent updates 10/1/18)
• Edits to algorithm (reflecting birth weight)
• Access measure specifications:
• FAQ available
  • Access requires registration (to receive log in and password)
Summary

• Relevant to assess clinical practice
• Provide better insight of term newborn outcomes
• Collaborate with our partners to achieve safe maternal and newborn care
• Continue to advocate for vigilant assessment and care of our most vulnerable patients

“It is paramount that we address the staggering statistic that 50% of maternal poor outcomes are preventable. Be an advocate, and collaborate with our partners to strive to make perinatal care of our most vulnerable patients the safest it can be. Thank you for being on the frontline, providing a wonderful birthing experience to our mommies and babies”
Vigilance – Made You Look!

- Early warning solution to *quickly and consistently* identify patients who may be developing a potentially worsening condition
- Works with your existing EMR/EFM systems, *no need for costly software replacement*
- Uses proprietary artificial intelligence methods to continuously analyze fetal heart rate patterns and labor progress

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Thank you

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