

# CLINICAL PATHWAY

## Women & Children



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TIME: "Triple I to  
Manage Early  
onset sepsis

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**CHRISTIANA CARE**  
HEALTH SYSTEM

# **TIME: "Triple I to Manage Early onset sepsis**

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## INTRODUCTION

A definitive and timely diagnosis of maternal chorioamnionitis (Chorio) implies the mother and fetus are at increased risk for developing serious infectious consequences. The clinical diagnosis of "Chorio" is inconsistent, resulting in variation in clinical practice and subsequently unnecessary interventions and treatment of mothers and newborns. A new classification system referred to as the "Triple I" uses criteria that takes into account Intrauterine Infection, Inflammation, or both to reduce variation in diagnosis and treatment. Currently the newborn of a mother diagnosed with "Chorio" is admitted to the NICU to r/o early onset sepsis (EOS). The Kaiser Permanente Sepsis Calculator utilizes maternal risk factors and the newborn's clinical presentation to produce the probability of EOS per 1000 babies. Use of the "Triple I" classification system and "sepsis calculator" can reduce unnecessary testing, treatment and separation of the mother-baby dyad.

## Scope of this Pathway

All mothers presenting for delivery at Christiana Care with a 35 week or greater pregnancy who exhibit an elevated temperature of  $>$  or  $=$  38 C and her newborn(s).



# Pathway Contacts

The content of this pathway is developed and maintained by the Women & Children line of Christiana Care Health System. Questions or feedback about the content may be directed to:

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## CLINICAL PATHWAY

### TIME - Recognition and Treatment

Assess maternal vital signs, specifically temperature on admission and every 2 hours while in labor. One elevated fever of 39 C or two consecutive temperatures of 38C take 1/2 hour apart meets criteria of a documented fever. If documented fever, assess for any of the following symptoms:

- » Fetal tachycardia (>160 bpm for 10 minutes)
- » Purulent discharge from the cervical os
- » Elevated WBC > 15,000

A documented fever in combination with any one of the aforementioned symptoms meets criteria for a diagnosis of suspected Triple I and maternal antibiotics are ordered and administered to reduce the risk of early onset sepsis (EOS) in the newborn. As of August, 2017 ACOG recommends intrapartum antibiotic be considered in the setting of an isolated maternal fever unless a source other than intra-amniotic infection is identified and documented.

### Early Onset Sepsis - Calculating Risk to the Newborn

After delivery, maternal risk factors (gestational age, highest maternal antepartum temperature, # of hours with ruptured membranes, GBS status, and intrapartum antibiotic administration) are to be entered into the Kaiser Permanente Sepsis Calculator at:

(<https://www.dor.kaiser.org/external/DORExternal/research/InfectionProbabilityCalculator.aspx>)

Follow the calculated clinical recommendations based on the newborn's physical exam.

Well appearing and equivocal (transitioning) newborns not requiring empiric antibiotics are to be observed and evaluated every 30 minutes for four hours after delivery. Clinically ill newborns and newborns requiring empiric antibiotics will be stabilized as needed and transferred to the NICU.



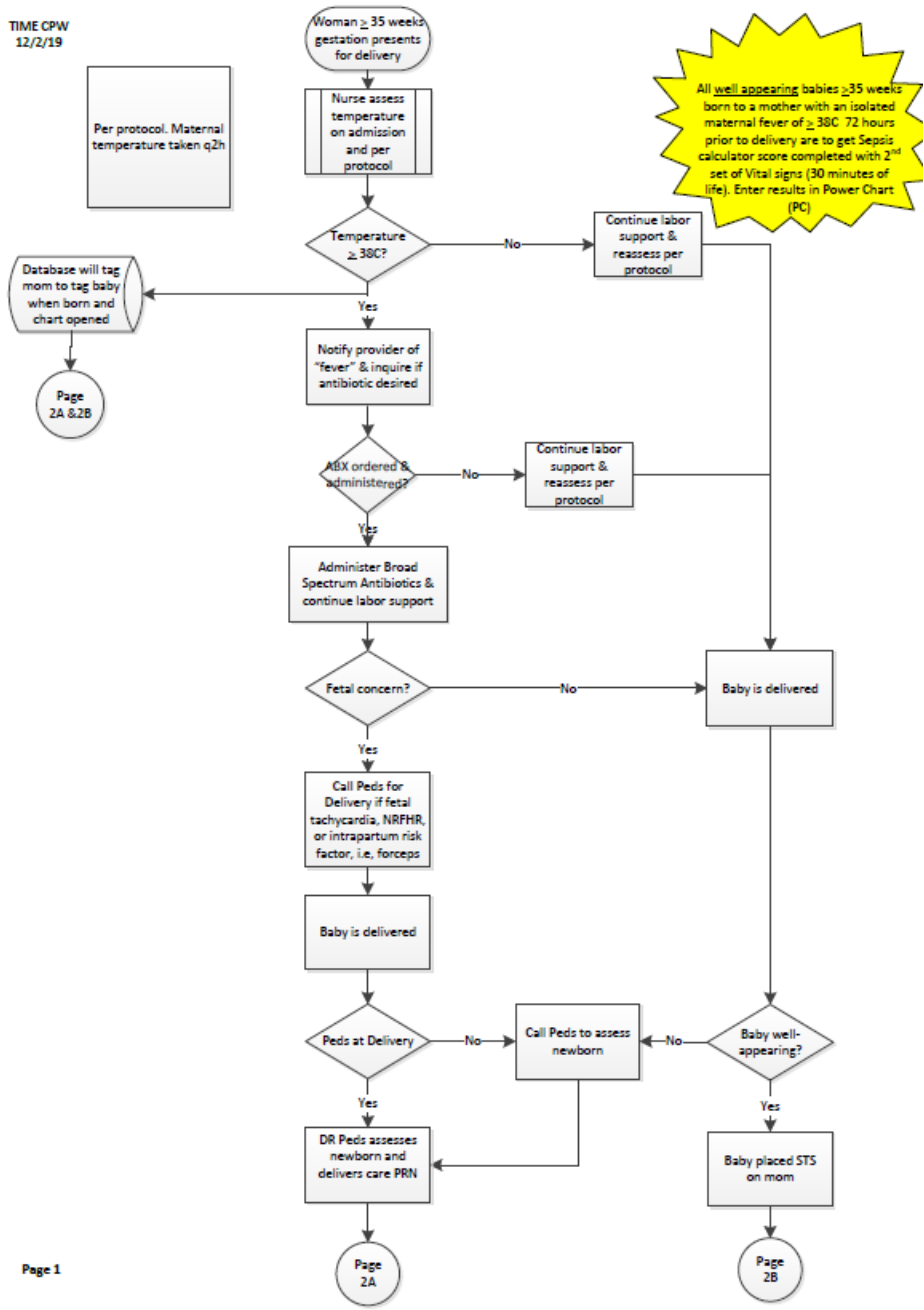
# PATHWAY ALGORITHMS



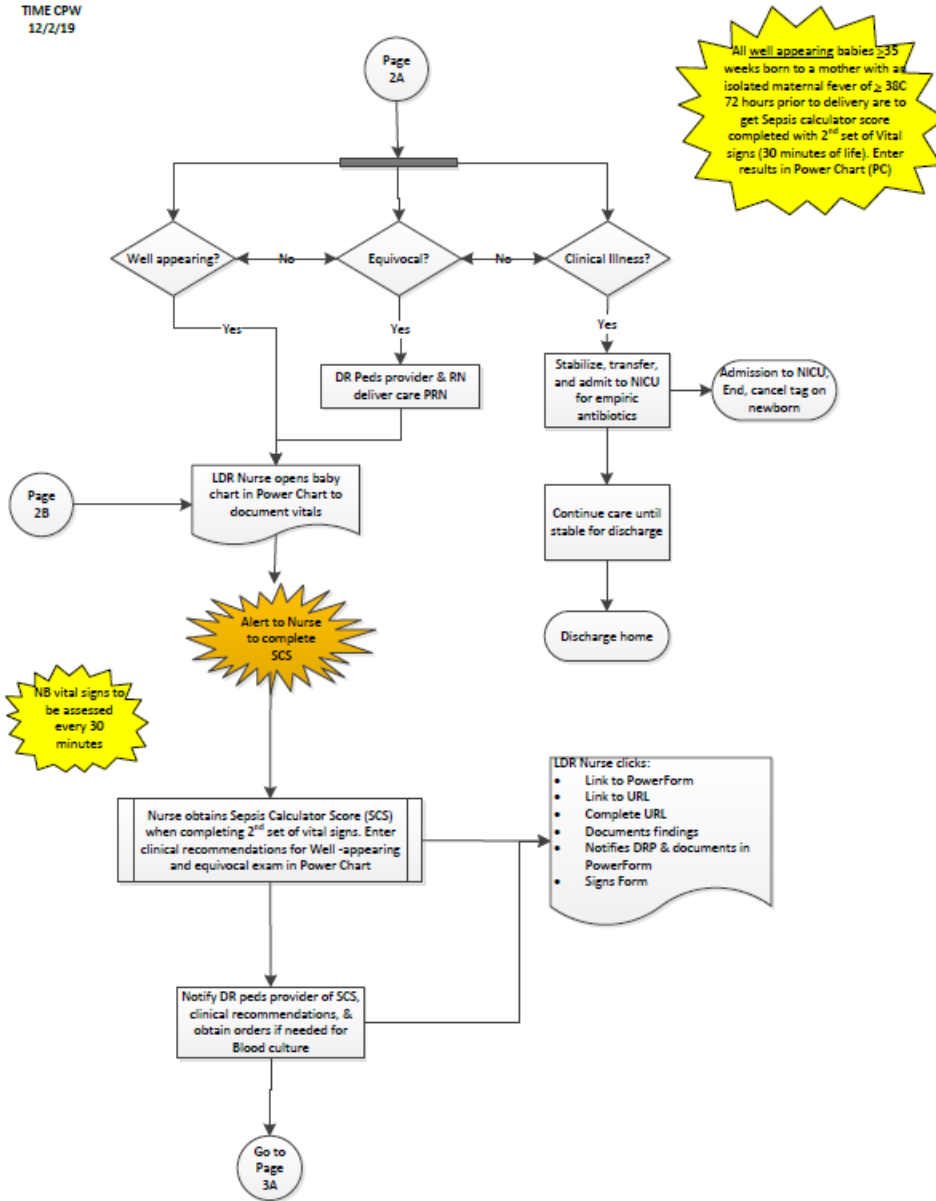
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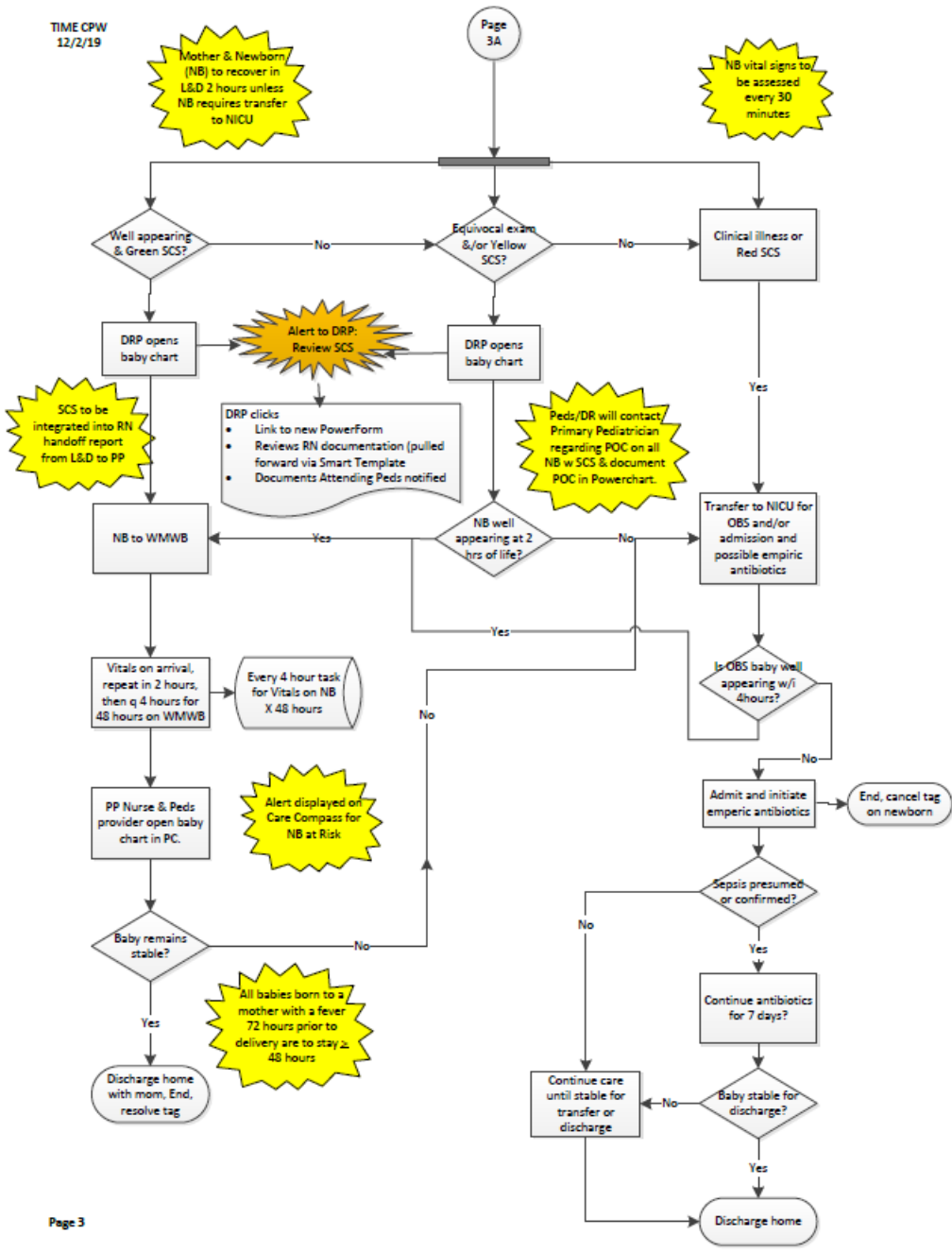
TIME CPW  
12/2/19



TIME CPW  
12/2/19







Clinical Exam	Description
Clinical Illness	<ol style="list-style-type: none"> <li>1. Persistent need for NCPAP / HFNC / mechanical ventilation (outside of the delivery room)</li> <li>2. Hemodynamic instability requiring vasoactive drugs</li> <li>3. Neonatal encephalopathy / Perinatal depression <ul style="list-style-type: none"> <li>▪ Seizure</li> <li>▪ Apgar Score @ 5 minutes &lt; 5</li> </ul> </li> <li>4. Need for supplemental O<sub>2</sub> ≥ 2 hours to maintain oxygen saturations &gt; 90% (outside of the delivery room)</li> </ol>
Equivocal	<ol style="list-style-type: none"> <li>1. Persistent physiologic abnormality ≥ 4 hrs <ul style="list-style-type: none"> <li>▪ Tachycardia (HR ≥ 160)</li> <li>▪ Tachypnea (RR ≥ 60)</li> <li>▪ Temperature instability (≥ 100.4°F or &lt; 97.5°F)</li> <li>▪ Respiratory distress (grunting, flaring, or retracting) not requiring supplemental O<sub>2</sub></li> </ul> </li> <li>2. Two or more physiologic abnormalities lasting for ≥ 2 hrs <ul style="list-style-type: none"> <li>▪ Tachycardia (HR ≥ 160)</li> <li>▪ Tachypnea (RR ≥ 60)</li> <li>▪ Temperature instability (≥ 100.4°F or &lt; 97.5°F)</li> <li>▪ Respiratory distress (grunting, flaring, or retracting) not requiring supplemental O<sub>2</sub></li> </ul> </li> </ol> <p>Note: abnormality can be intermittent</p>
Well Appearing	No persistent physiologic abnormalities



## HEALTH EQUITY CONSIDERATIONS

Low Health Literacy will be addressed individually when communicating with the mother and significant other(s).



## PATIENT EDUCATION MATERIALS

Upon meeting with the focused patient advisory group, it was learned that there are varying degrees of desired information. Some want to know everything and others just wanted to know the basics. It was decided that information will be conveyed with patients verbally based on their desired level of detail. The patient advisory group shared that this information can be conveyed by the nurse as well as the provider. The mother (and significant others) will be integrally included as part of the care team with the caregivers. Parents are to be empowered and included as part of the team to build and foster trust.



# CLINICAL EDUCATION MATERIALS



Sepsis Calculator  
Education Presentatic



Triple I - Private  
provider Training.ppt:



Triple I TIME  
Pathway LDR Nursing



PP TIME Pathway  
Education.pptx



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# THE CHRISTIANA CARE WAY

We serve our neighbors as respectful, expert, caring partners in their health. We do this by creating innovative, effective, affordable systems of care that our neighbors value.



**CHRISTIANA CARE**  
**HEALTH SYSTEM**

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