



System – Department / Single Discipline Policy: Management of Early Onset Sepsis (EOS) for the Newborn - SCL Health (Women & Children Services)	
Document Owner: Heather Goodall (Mgr-Clinical)	
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Purpose:

To provide evaluation and treatment guidelines for newborns 35 weeks and older at risk for neonatal Early Onset Sepsis.

Scope:

This policy applies to specific roles/functions including RNs, NNPs, MDs in Women and Children’s Services.

Care Site Exceptions:

Caritas Clinics - Saint Vincent & Duchesne, Lutheran Hospice, Mount Saint Vincent, SCL Health Medical Group, SCL Home Health, System Services, West Pines Behavioral Health

Definitions:

Early Onset Sepsis (EOS) — invasive bacterial infection of the blood or cerebrospinal fluid (CSF) of the newborn, that occurs in the first week after birth. Neonatal Early Onset Sepsis occurs in approximately 0.3 to 0.5 cases per 1000 live births. Neonatal bacterial sepsis is the 6th leading cause of infant mortality in the United States.

Group B Streptococcus (GBS) — a gram positive organism known to colonize the lower gastrointestinal tract of a mother which has the potential to spread and transmit to the fetus.

Intraamniotic Infection — also known as chorioamnionitis, an infection with resultant inflammation of any combination of the amniotic fluid, placenta, fetus, fetal membranes, or decidua. Symptoms of maternal fever and one or more of the following: maternal leukocytosis, purulent cervical drainage, sustain fetal tachycardia.

Neonatal Sepsis Risk Calculator — a tool that calculates an individual neonate’s risk of developing EOS. It is based on a multivariate analysis of five risk factors for EOS from data on over 600,000 live births with a gestational age greater than (>) 34 weeks, at 14 hospitals in the USA, between 1993-2007. This model has an advantage over standard algorithms as it takes away the possible subjectivity of the physician in diagnosing Intraamniotic Infection and instead uses objective measurements including highest maternal temperature as a continuous variable, duration of rupture of membranes (ROM), gestational age, GBS status and intrapartum antibiotics to identify those infants who are at risk. This predictive model has been shown to reduce the number of newborn invasive procedures and the unnecessary exposure to antibiotics without missing those who are infected.

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Procedure: Management of EOS for the Newborn – Assessment – SCL Health (Women & Children Services)

#	Required Action Step (step by step process)	Performed By	Supplemental Guidance
1	Review maternal history/ intrapartum course to determine maternal and perinatal risk factors predisposing newborns to EOS.	RN	Risk factors: <ul style="list-style-type: none"> • Gestational age • Highest maternal temperature • Rupture of membranes duration • GBS status of mother • Intrapartum antibiotics/timing prior to delivery
2	Assess newborn for signs of neonatal sepsis.	RN	Including: <ul style="list-style-type: none"> • Temperature instability • Vital signs • Respiratory, gastrointestinal, and neurological abnormalities
3	Utilize the Neonatal Sepsis Risk Calculator tool in the electronic medical record (EMR) as the standard of care for evaluating the infant's risk for EOS by 2-4 hours of life for all infants at least 35 weeks gestation.	RN	A provider shall be notified for any newborn that meets criteria for obtaining labs, administering antibiotics, has an equivocal exam, has clinical signs of illness or if any concerns exist. The calculator tool shall not take the place of clinical judgment. If at any time the RN has any concerns, a provider shall be notified immediately.
4	The Neonatal Sepsis Risk Calculator shall not be used after four (4) hours of life. Clinical judgment by the provider will be used to guide management of care.	MD, NNP, NP	

Procedure: Management of EOS for the Newborn – Process – SCL Health (Women & Children Services)

#	Required Action Step (step by step process)	Performed By	Supplemental Guidance
1	Calculate the EOS risk by 2-4 hours of life for all newborns 35 weeks and older. Perform	RN	Note:

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	<p>assessment after skin to skin contact of mom and newborn, first feeding and examination of newborn.</p> <p>Enter data into the Neonatal Sepsis Risk Calculator on the 'Neonatal Sepsis Flowsheet' in eSummit:</p> <ol style="list-style-type: none"> Incidence of EOS: choose 0.5 Gestational age Highest maternal temperature during labor until delivery ROM (hours) Maternal GBS status Type of intrapartum antibiotics and timing 		<ul style="list-style-type: none"> Ampicillin, Cefazolin and Penicillin are GBS-specific antibiotics. Clindamycin is a GBS-specific antibiotic IF culture sensitivities were obtained on the maternal specimen and indicate adequate sensitivity. If sensitivities were not obtained on the specimen, Clindamycin should be considered “no antibiotics.” Broad Spectrum Antibiotics: Vancomycin, Ampicillin/Gentamicin, Ampicillin/Sulbactam and Ceftriaxone. If unsure of type of intrapartum antibiotic to choose for the Neonatal Sepsis Risk Calculator, consult with a provider for further clarification. For reference, the Neonatal Sepsis Risk Calculator may be accessed through web links in EMR or https://neonatalesepsiscalculator.kaiserpermanente.org/
2	Place infant in one (1) of three (3) categories in the Neonatal Sepsis Risk Calculator based on clinical assessment for completion.	RN	Refer to the Management of EOS for the Newborn - Classification of Clinical Presentation (Women & Children Services) - Supporting Document .
3	Based on populated information in the Neonatal Sepsis Flowsheet in eSummit, refer to the Management of EOS for the Newborn - Neonatal Sepsis Risk Form - SCL Health (Women & Children Services) - Supporting Document to determine recommended plan of care.	RN	
4	Ensure the Neonatal Sepsis Risk Calculator information is included in shift report.	RN	If not all fields can be completed within the flowsheet, the RN shall notify a medical provider.
5	Notify provider if: <ol style="list-style-type: none"> The clinical recommendation suggested by the Neonatal Sepsis Risk Calculator is to 	RN	<p>If the clinical recommendation for vital signs states “Vitals per NICU,” these shall be done every 4 hours.</p> <p>If needing to draw blood for culture, minimum of 1ml is needed.</p>

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	obtain labs and/or initiate antibiotics b. The infant has an equivocal exam at greater than or equal to (\geq) 2 hours of life c. The infant has clinical signs of illness d. The RN provider has any concerns or questions at any time after birth		
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Procedure: Management of EOS for the Newborn - Parent Education			
#	Required Action Step (step by step process)	Performed By	Supplemental Guidance
1	Provide consistent education with families throughout the hospital stay, regarding probable length of stay.	RN	A 48 hour stay is recommended for the following newborns: <ul style="list-style-type: none"> • Maternal fever > 100.4 x 2 or 102.2 • Maternal diagnosis of chorioamnionitis or Intraamniotic Infection • Neonatal Sepsis Risk Calculator recommends labs and/or antibiotics • GBS+ or unknown GBS with inadequate treatment <ul style="list-style-type: none"> ○ GBS specific antibiotic given less than (<) 4 hours prior to delivery ○ Treated with antibiotic not specific to GBS (Penicillin, Ampicillin or Ancef preferred)
2	Educate parents about the implication of EOS.	RN	Including: <ul style="list-style-type: none"> • Plan of care • Treatments, interventions • GBS status and perinatal risks to newborn

References:

- ACOG Committee Opinion (2017). Intrapartum Management of Intramniotic Infection. American College of Obstetricians and Gynecologists. August 2017, Number 712.

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- Kersete.M et al. (2016). Application of Sepsis Calculator in Newborns with Suspected Infection. *J Matern Fetal Neonatal Med* 29(23), 3860-3865.
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Other Related Policies:

- None

Supporting Documents:

- [Management of EOS for the Newborn - Classification of Clinical Presentation \(Women & Children Services\) - Supporting Document](#)
- [Management of EOS for the Newborn - Neonatal Sepsis Risk Form - SCL Health \(Women & Children Services\) - Supporting Document](#)

Monitoring:

Women's and Children's staff will monitor policy compliance.