



PEDIATRIC NEWBORN MEDICINE CLINICAL PRACTICE GUIDELINES

**Guideline for Management of
Asymptomatic Infants Born at ≥ 35
weeks Gestation at Risk of Early-
Onset Sepsis: Using the Sepsis
Risk Calculator**



PEDIATRIC NEWBORN MEDICINE CLINICAL PRACTICE
GUIDELINES



Clinical Guideline Name	Clinical Practice Guideline
Effective Date	June 1, 2022
Approved By	Department of Pediatric Newborn Medicine Clinical Practice Council _____ CWN PPG _____ BWH SPP Steering _____ Nurse Executive Board/CNO _____ DUE FOR REVIEW June 2025

I. Purpose: To provide an updated guideline for the evaluation and treatment of asymptomatic newborns \geq 35 weeks gestation using the Neonatal Sepsis Risk Calculator.

II. All CPGs will rely on the [NICU Nursing Standards of Care](#). All relevant nursing PPGs are listed below.

-CLB I.2 Care of the Newborn Infant in the Center for Labor and Birth
<https://hospitalpolicies.ellucid.com/documents/view/3168/active/>

-NICU/SCN B.1 Arterial and Venous Blood Drawing
<https://hospitalpolicies.ellucid.com/documents/view/3191/active/>

- NICU/SCN I.2 Intravenous Angiocatheter Placement
<https://hospitalpolicies.ellucid.com/documents/view/3210/active/>

-WNH I.2 Care of the Term Infant
<https://hospitalpolicies.ellucid.com/documents/view/3286/active/>

-WNH I.6 Care of the Late Preterm Infant and Infant less than 2500 grams
<https://hospitalpolicies.ellucid.com/documents/view/3289/active/>

-WNH M.1 Administration of medications to Infants



<https://hospitalpolicies.ellucid.com/documents/view/3292/active/>

-WNH T.4 Infant Transport

<https://hospitalpolicies.ellucid.com/documents/view/3317/active/>

-Rapid Response CPG contains how to contact DR 1/NICU triage RN.

https://www.bwhpikenotes.org/Departments_Centers/NewbornMedicine_NICU/documents/RRS.CPG.12.10.18_FINAL.pdf

III. Scope

- a. Indication: These guidelines apply to all **asymptomatic** infants born at a gestational age ≥ 35 weeks at Brigham & Women's Hospital
- b. Contraindications to using the calculator
 - i. GA < 35 weeks
 - ii. Symptomatic or ill-appearing infants
 1. Respiratory:
 - a. Respiratory rate persistently < 30 or > 70 .
 - b. Oxygen saturation $< 95\%$ in room air.
 - c. Dusky spell(s).
 - d. Apnea/bradycardia.
 - e. Respiratory distress (grunting, flaring, retractions).
 2. Neurologic:
 - a. Seizures or seizure like activity.
 - b. Lethargy/hypotonia/floppiness.
 - c. New/unexplained focal weakness.
 3. Cardiovascular:
 - a. Heart rate (HR) persistently < 75 or > 210 .
 4. Other:
 - a. Diffuse petechiae/vesicular eruptions.
 - b. Unexplained pain, e.g., irritable persistent cry.

IV. Guidelines: Kaiser Newborn Sepsis Risk Calculator Overview

- a. An online tool which utilizes a multivariate risk prediction model to calculate the probability of early onset sepsis (EOS) in well-appearing newborns ≥ 35 weeks gestation. <https://neonatalespsiscalculator.kaiserpermanente.org/>
- b. Definition of well-appearing, equivocal vs. ill-appearing on Kaiser Calculator



Neonatal Early-Onset Sepsis Calculator

Home Classification References

Classification of Infant's Clinical Presentation

Clinical Exam	Description
Clinical Illness	<ol style="list-style-type: none"> Persistent need for NCPAP / HFNC / mechanical ventilation (outside of the delivery room) Hemodynamic instability requiring vasoactive drugs Neonatal encephalopathy /Perinatal depression <ul style="list-style-type: none"> Seizure Apgar Score @ 5 minutes < 5 Need for supplemental O₂ ≥ 2 hours to maintain oxygen saturations > 90% (outside of the delivery room)
Equivocal	<ol style="list-style-type: none"> Persistent physiologic abnormality ≥ 4 hrs <ul style="list-style-type: none"> Tachycardia (HR ≥ 160) Tachypnea (RR ≥ 60) Temperature instability (≥ 100.4°F or < 97.5°F) Respiratory distress (grunting, flaring, or retracting) not requiring supplemental O₂ Two or more physiologic abnormalities lasting for ≥ 2 hrs <ul style="list-style-type: none"> Tachycardia (HR ≥ 160) Tachypnea (RR ≥ 60) Temperature instability (≥ 100.4°F or < 97.5°F) Respiratory distress (grunting, flaring, or retracting) not requiring supplemental O₂ <p>Note: abnormality can be intermittent</p>
Well Appearing	No persistent physiologic abnormalities

- ALL** infants born at Brigham & Women’s Hospital with a **gestational age ≥ 35 0/7 weeks** will have the Neonatal Early-Onset Sepsis Calculator performed by Labor and Delivery RN.
- Infants with the following the following criteria are at higher risk of having an elevated EOS score.
 - Any infant with a gestational age between 35 0/7 – 36 6/7 weeks must have sepsis risk score performed regardless of presence or absence of any other risk criteria as listed in ii – vii.
 - PROM ≥ 18 hours
 - Significant maternal fever (≥ 100.4) or intrauterine infection as determined by Obstetrical Providers
 - Maternal GBS positive status and inadequate intrapartum antibiotics
 - ADEQUATE GBS PROPHYLAXIS: Penicillin G, ampicillin, or cefazolin given ≥ 4 hours prior to delivery
 - INADEQUATE GBS PROPHYLAXIS: any antibiotic given < 4 hours prior to delivery **OR** any other antibiotic for any duration (e.g., vancomycin, clindamycin) regardless of sensitivities



- v. GBS unknown
- vi. Maternal fever within one hour of delivery
- vii. ADDITIONAL NOTES:
 - 1. Maternal fever that occurs within one hour of delivery should be treated like intrapartum fever and the infant should be evaluated via the sepsis risk calculator.
 - 2. Women with a previous infant with GBS disease should receive intrapartum GBS prophylaxis.
 - 3. Blood cultures should be obtained per unit protocol.
 - 4. To facilitate family bonding and initiation of breastfeeding, the sepsis evaluation (if indicated by the calculator) can be delayed for up to one hour after birth, at the discretion of the obstetrical and neonatal caregivers.
- e. Personnel: Sepsis Calculator screening will primarily be performed by L&D nursing staff; however, NICU staff and/or WBN staff may also run calculator if needed.
- f. Baseline Incidence of EOS:
 - i. BWH-specific for January 2018 – November 2018: 1 positive blood culture in 6533 live births for a rate of 0.153 per 1000 live births
 - ii. CDC reports a national incidence of 0.5 per 1000 live births
 - iii. Conservative approach → Use CDC estimate (**0.5 per 1000 live births**)

II. How to Use the Neonatal Sepsis Risk Calculator (SEE PAGES 15 - 25: EPIC TIP SHEET)

- a. **NURSING:** Calculator
 - i. Access EOS (Early Onset Sepsis) Calculator from the **Newborn** or **NICU Assessment** Flowsheets



- ii. Within the EOS Calculator group, there is an **EOS Assessment** row
 - 1. 2 options: Linked mom/Pull data or Manual override
 - 2. Use **Linked Mom/Pull Data** (only in rare situations will manual override be indicated)
- iii. Within the EOS Screening, the Gestational age (in weeks), highest maternal antepartum temperature (in Centigrade), Rupture of Membranes (in hours, always rounded UP – e.g., if ROM occurred for 6 hours, 3 minutes → EMR rounds to 7 hours), and type of Intrapartum Antibiotics **automatically** files into chart. Of note, for incidence of EOS, the CDC risk of 0.5/1000 live births is the automatic default.



Flowsheets

File | Add Rows | LDDAvatar | Cascade | Add Col | Insert Col | Data Va

Newborn Vitals | **Newborn Assessment** | Newborn I/O | CCHD Screen | Car Seat Challen

Search (Alt+Comma) 🔍

Hide All Show All

- ADL Rehabilitative...
- Neuro
- Skin
- Head and Neck
- Musculoskeletal
- Chest
- Respiratory
- Cardiovascular
- Abdomen
- Genitourinary
- Psychosocial
- Fall Occurrence
- Provider Notificati...
- EOS (Early Onset S...

Accordion Expanded **View All**

🔍 1m 5m 10m

	8/2
	1900
Provider Role	
Method of Communication	
Response	
Notification Time	

EOS (Early Onset Sepsis) Calculator

EOS Assessment 1-Linked mom/...

EOS Screening	
Gestational Age (Weeks)	37
Gestational Age (Days)	0
Highest Maternal Antepartum Temp	38
Rupture of Membranes (Hours)	4
Type of Intrapartum Antibiotics	No antibiotics ...
Maternal Group B Strep Status	



- iv. Maternal GBS status must be **MANUALLY** entered (positive, negative, unknown).

Flowsheets

File | Add Rows | LDAAvatar | Cascade | Add Col | Insert Col | Data Vali

Newborn Vitals | **Newborn Assessment** | Newborn I/O | CCHD Screen | Car Seat Challenge

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Hide All Show All

- Neuro ^
- Skin
- Head and Neck
- Musculoskeletal
- Chest
- Respiratory
- Cardiovascular
- Abdomen
- Genitourinary
- Psychosocial

Accordion Expanded **View All** 📄

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8/22/19

1900

EOS (Early Onset Sepsis) Calculator

EOS Assessment	1-Linked mom/...
----------------	------------------

EOS Screening

Gestational Age (Weeks)	37
Gestational Age (Days)	0
Highest Maternal Antepartum Temp	38
Rupture of Membranes (Hours)	4
Type of Intrapartum Antibiotics	No antibiotics ...
Maternal Group B Strep Status	1



08/22/19 1900

Maternal Group B Strep Status ↑ ↓

1

Select Single Option: (F5)

0=Unknown

1=Positive

2=Neqative

Comment (F6)

Flowsheet/Delivery Summary:							
<p>Maternal GBS Status (from Mom labs):</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: left;">Recent Labs</th> </tr> </thead> <tbody> <tr> <td style="width: 70%;"></td> <td style="text-align: right;">08/15/19</td> </tr> <tr> <td>GBS GROUP B STREP ANTIGEN EXTERNAL</td> <td style="text-align: right;">Pos</td> </tr> </tbody> </table>	Recent Labs			08/15/19	GBS GROUP B STREP ANTIGEN EXTERNAL	Pos
Recent Labs							
	08/15/19						
GBS GROUP B STREP ANTIGEN EXTERNAL	Pos						
<p>General Intrapartum Antibiotic Guidelines:</p>	<p><i>Broad Spectrum = ampicillin and gentamicin or any antibiotic plus gentamicin given for concern for</i></p>						

- v. Once all rows have documentation/been completed, the EOS score will populate within the **EOS Calculated Risk** section.



Flowsheets

File | Add Rows | LDAAvatar | Cascade | Add Col | Insert Col | Data Val

Newborn Vitals | **Newborn Assessment** | Newborn I/O | CCHD Screen | Car Seat Challenge

Search (Alt+Comma) [magnifying glass icon]

Hide All Show All

Neuro	<input checked="" type="checkbox"/>
Skin	<input checked="" type="checkbox"/>
Head and Neck	<input checked="" type="checkbox"/>
Musculoskeletal	<input checked="" type="checkbox"/>
Chest	<input checked="" type="checkbox"/>
Respiratory	<input checked="" type="checkbox"/>
Cardiovascular	<input checked="" type="checkbox"/>
Abdomen	<input checked="" type="checkbox"/>
Genitourinary	<input checked="" type="checkbox"/>
Psychosocial	<input checked="" type="checkbox"/>

Accordion Expanded View All [copy icon]

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8/22/19

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Type of Intrapartum Antibiotics

Maternal Group B Strep Status

EOS Exam Findings

Exam Findings

EOS Calculated Risk	
Risk at Birth	1.46
Risk - Well Appearing	0.6
Risk - Equivocal	7.25
Risk - Clinical Illness	30.02

- vi. If the baseline “EOS risk @ birth” is < 0.7 and infant is well-appearing, then the following is to occur.
 - 1. Infant to receive q4 hr vital signs for a minimum of the first 24 hrs of life.
 - 2. Nursing assessments per protocol
 - 3. Physician assessments per protocol
- vii. **If the baseline “EOS risk @ birth” is ≥ 0.7 , notify DR1.**
- viii. **The newborn must have an exam performed by 1 hour of age. This exam may occur in the delivery room, so as to not separate the mother/newborn dyad.**
- ix. DR1 in conjunction with an attending, fellow, or APP team member will examine infant to determine the further classification of infant’s clinical presentation: well- appearing, equivocal, or clinical illness



- x. If it is determined that the infant with “EOS risk at birth” ≥ 0.7 is well-appearing, then:
 - 1. Follow clinical suggestions of calculator
 - 2. Vitals per NB policy should be followed (q4 hrs x 24 hrs as a minimum)
 - 3. Nursing assessments per protocol
 - 4. Physician assessments per protocol
 - xi. If it is determined that the infant with EOS risk at birth ≥ 0.7 is equivocal-appearing, infant will be brought to NICU triage for monitoring and assessment or admitted to NICU as deemed clinically indicated. Automatic sepsis evaluation is not immediately mandated. Observation and assessment over time is needed to determine if findings on clinical exam are secondary to issues unrelated to sepsis (e.g., TTN)
 - xii. If it is determined that infant with EOS risk at birth ≥ 0.7 is clinically ill-appearing, immediate admission to the NICU is indicated. Antibiotics should be strongly considered in this case.
 - xiii. In the scenario of a maternal fever within one hour of delivery with a well-appearing infant, LDR will re-calculate score on EOS calculator.
- b. **PROVIDER:** Calculator
- i. Open **Admission Navigator** → click on **EOS (Early Onset Sepsis) calculator** section.
 - ii. There is an **EOS Assessment** row
 - 1. 2 options: Linked mom/Pull data or Manual override
 - 2. Use **Linked Mom/Pull Data** (only in rare situations will manual override be indicated)
 - iii. Within the EOS Screening, the Gestational age (in weeks), highest maternal antepartum temperature (in Centigrade), Rupture of Membranes (in hours, always rounded UP – e.g., if ROM occurred for 6 hours, 3



- minutes → EMR rounds to 7 hours), and type of Intrapartum Antibiotics **automatically** files into chart. Of note, for incidence of EOS, the CDC risk of 0.5/1000 live births is the automatic default.
- iv. Maternal GBS status must be **MANUALLY** entered (positive, negative, unknown).
 - v. Once all rows have documentation/been completed, **open the Sidebar and search for Early Onset Sepsis Sidebar.**
 - vi. This report shows an EOS chart that pulls in data for clinical review.
 - vii. In **Exam Findings**, enter **well-appearing**. Then **close** the Navigator section. (If patient is equivocal or ill-appearing, infant should be brought to NICU triage for further monitoring and evaluation).
 - viii. The EOS risk score will be calculated and displayed.
 - ix. If the baseline “EOS risk @ birth” is < 0.7 and infant is well-appearing, then the following is to occur.
 1. Infant to receive q4 hr vital signs for a minimum of the first 24 hrs of life.
 2. Nursing assessments per protocol
 3. Physician assessments per protocol
 - x. **If the baseline “EOS risk @ birth” is ≥ 0.7 , newborn exam must be performed and documented.**
 - xi. Initial exam may be performed in the delivery room.
 - xii. DR1 in conjunction with an attending, fellow, or APP team member will examine infant to determine the further classification of infant’s clinical presentation: well- appearing, equivocal, or clinical illness
 - xiii. If it is determined that the infant with “EOS risk at birth” ≥ 0.7 is well-appearing, then:
 1. Follow clinical suggestions of calculator
 2. Vitals per NB policy should be followed (q4 hrs x 24 hrs as a minimum)
 3. Nursing assessments per protocol
 4. Physician assessments per protocol
 - xiv. If it is determined the infant with EOS risk at birth ≥ 0.7 is equivocal-appearing, infant will be brought to NICU triage for monitoring and assessment or admitted to NICU as clinically indicated.



Automatic sepsis evaluation is not immediately mandated. Observation and assessment over time is needed to determine if findings on clinical exam are secondary to issues unrelated to sepsis (e.g., TTN)

- xv. If it is determined that infant with EOS risk at birth ≥ 0.7 is clinically ill-appearing, immediate admission to the NICU is indicated. Antibiotics should be strongly considered in this case.

III. Documentation

- a. The EOS score is automatically populated into the flowsheet.
- b. If score ≥ 0.7 , L&D nursing should document DR1 was notified.
- c. If score ≥ 0.7 and infant is well-appearing, initial NB exam needs to be documented in EMR by MD/NNP/PA via a progress note.
- d. If score is ≥ 0.7 and newborn's clinical status is equivocal or ill-appearing, standard Triage or NICU documentation is indicated.

IV. Antibiotic Usage: **If** it is determined a newborn will receive antibiotics STAT, ampicillin and gentamicin will be ordered by NICU LIP. Please refer to NICU DAG for administration guidelines.

a. Ampicillin:

http://www.bwhpikenotes.org/Departments_Centers/NewbornMedicine_NICU/documents/Ampicillin.pdf

b. Gentamicin:

http://www.bwhpikenotes.org/Departments_Centers/NewbornMedicine_NICU/documents/Gentamicin.pdf

V. Communication: DR1 will communicate all evaluations for infants with EOS ≥ 0.7

VI. Reasoning for Utilization of the Neonatal Sepsis Risk Calculator: Reduction in Antibiotics Usage in Well-Appearing Newborns ≥ 35 weeks gestation.

- a. Past BWH data \rightarrow 2008/2009 BWH treated 8% of well-appearing infants ≥ 34 weeks gestation with antibiotics, while the incidence of EOS in those cases was 0.4/1000 live births.



-
- b. BWH January 2018 – November 2018, 8.3% of well-appearing babies \geq 35 weeks gestation were treated with antibiotics. The incidence of EOS in these cases was 0.153/1000 live births.
 - c. Early antibiotic exposure in neonates (even 48 hours) has been associated with:
 - i. Increased asthma
 - ii. Allergic/autoimmune disease (IBD, arthritis, and multiple sclerosis)
 - iii. Obesity
 - iv. Neurodevelopmental sequelae (in mice models, longer antibiotic exposure increased aggression behaviors as well as impaired anxiety and social behaviors)



References

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- Benitz WE, Wynn JL, Polin RA. Reappraisal of Guidelines for Management of Neonates with Suspected Early-Onset Sepsis. *JPediatr* 2016;166:1070-1074.
- Carola D, Vasconcellos M, Sloane A. et al. Utility of Early-Onset Risk Calculator for Neonates Born to Mothers with Chorioamnionitis. *JPediatr* 2017;195:48-52.
- Puopolo KM, Benitez WE, Zaoutis TE, AAP COMMITTEE ON FETUS AND NEWBORN, AAP COMMITTEE ON INFECTIOUS DISEASES. Management of Neonates Born at $\geq 35 0/7$ weeks' Gestation With Suspected or Proven Early-Onset Bacterial Sepsis. *Pediatrics* 2018;142(6):e20182894.
- Kuzniewicz MW, Walsh EM, Li S, Fischer A, Escobar GJ. Development and Implementation of an Early-Onset Sepsis Calculator to guide Antibiotic Management in Late Preterm and Term Neonates. *Jt Comm J Qual Patient Saf* 2016;42(5):232-239.
- Turta O, Rautava S. Antibiotics, obesity and the link to microbes – what are we doing to our children? *BMC Medicine* 2016;14:57-62.
- Schulfer A, Blaser M. Risks of Antibiotic Exposures Early in Life on the Developing Microbiome. *PLoS Pathog* 11(7):e1004903.
- Cotton CM. Adverse Consequences of Neonatal Antibiotic Exposure. *Curr Opin Pediatr* 2016 April;28(2):141-149.
- Leclercq S et al. Low-dose penicillin in early life induces long-term changes in murine gut microbiota, brain cytokines and behavior. *Nat Commun* 8,15062 doi:10.1038/ncomms15062(2017)
- Puopolo KM, Lynfield R, Cummings JJ, AAP COMMITTEE ON FETUS AND NEWBORN, AAP COMMITTEE ON INFECTIOUS DISEASES, Management of Infants at Risk for Group B Streptococcal Disease. *Pediatrics*. 2019;144(2):e20191881



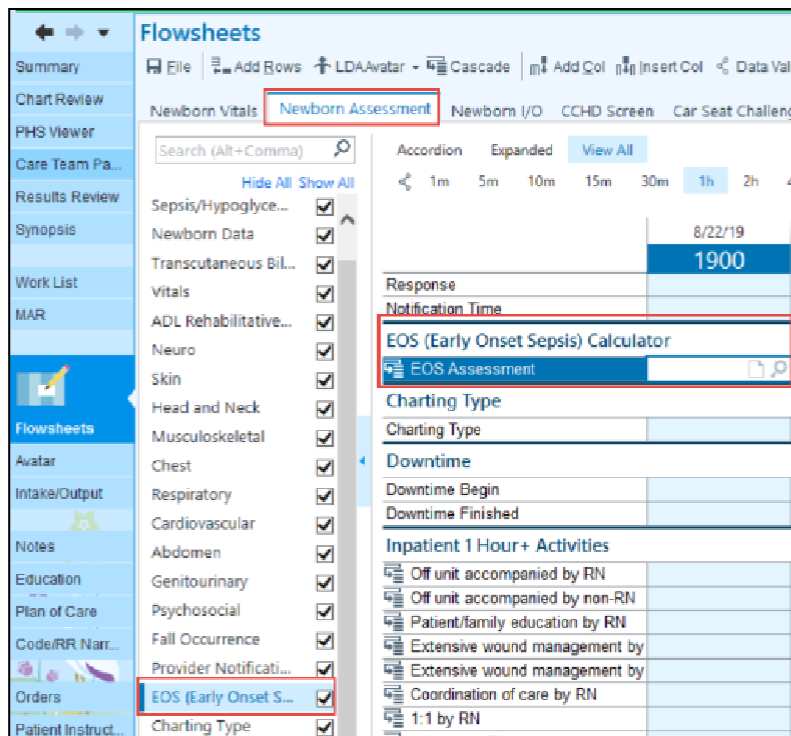


Neonatal Early-Onset Sepsis (EOS)

This tip sheet is for clinicians using the Early-Onset Sepsis workflow in Epic.

EOS Assessment and Screening

The nurse can complete EOS documentation from the Newborn and NICU Assessment Flowsheets.



EOS Assessment

Within the EOS (Early Onset Sepsis) Calculator group, there is an EOS Assessment row.

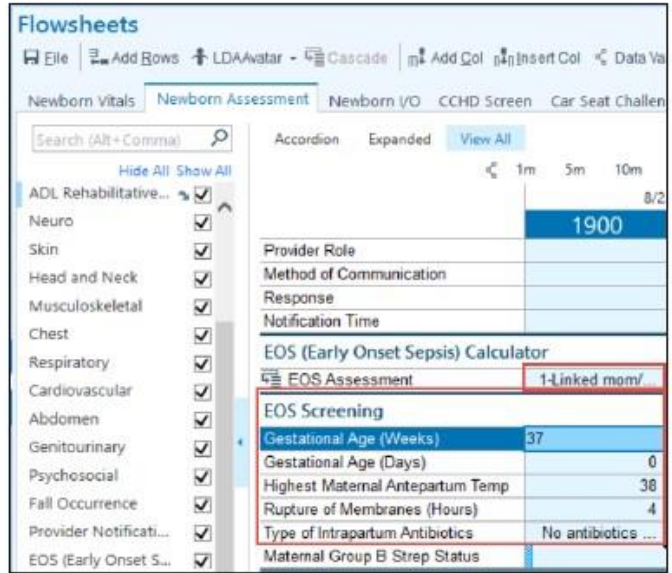
1. Document either Linked mom/Pull data or Manual override.
NOTE: You will likely always use **Linked Mom/Pull data** and only in rare situations use **Manual override** if mom is not admitted.
2. After documenting Linked mom/Pull data, the EOS Screening and EOS Override Screening groups cascade into the flowsheet.

EOS Screening

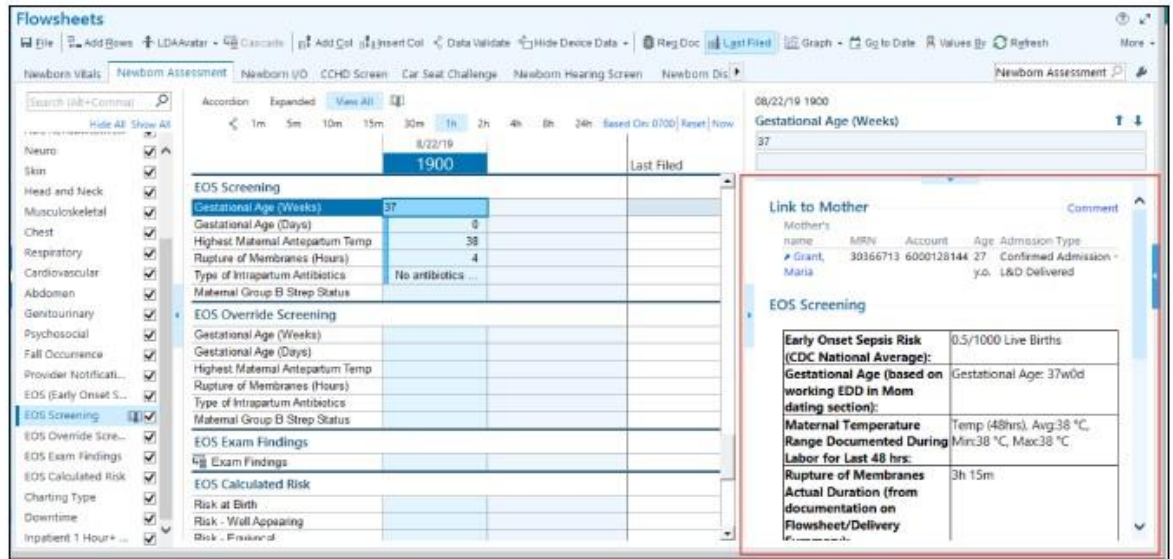
1. Within the EOS Screening group, Gestational Age (Weeks), Highest Maternal Antepartum Temp, Rupture of Membranes (Hours), and Type of Intrapartum Antibiotics automatically file from the patient's chart:



Partners eCare **TIP SHEET**



2. Within the Details Pane, the Row Information shows an EOS Grid that pulls in info for the clinician to review:



Keep in Mind...

- The GA is pulled from the Working EDD within the mother’s Dating section.
- The Highest Maternal Antepartum Temp will pull the highest temperature up to 1-hour post birth. It will file in Celsius.
- Rupture of Membranes will round up to the nearest hour (Ex: Screenshot above: Actual ROM from details pane shows 1 hour 43 mins but flowsheet row rounds to 2).
- Antibiotics are pulled from mom’s MAR and looks at type, time given and birth time.





- ⚠ The only field that does not populate is the **Maternal Group B Strep Status**. Manually document the Maternal Group B Strep Status.

NOTE: The GBS section of the EOS Grid shows the last lab resulted Group B Strep result, date, and time:

Risk Category	Score
Risk at Birth	1.46
Risk - Well Appearing	0.6
Risk - Equivocal	7.25
Risk - Clinical Illness	30.02

- Once all rows have documentation, the scores are populated within the EOS Calculated Risk group:

Risk Category	Score
Risk at Birth	1.46
Risk - Well Appearing	0.6
Risk - Equivocal	7.25
Risk - Clinical Illness	30.02

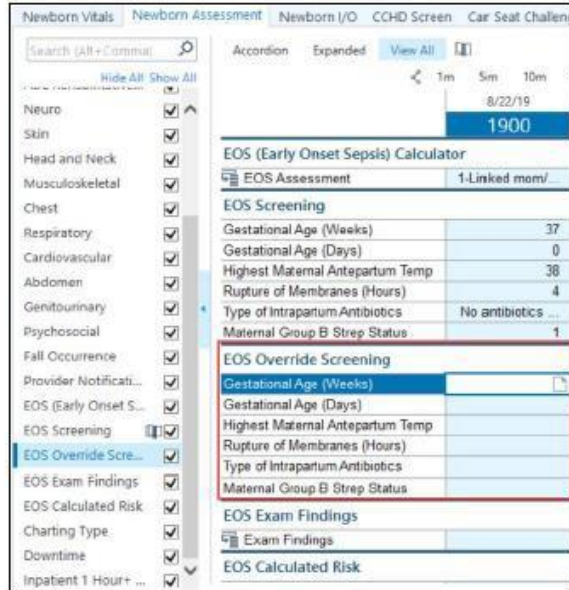
NOTE: These scores do **Not** file to the Grease Board view column. The Grease Board view is populated based on the Actual Risk and EOS Exam Findings.

EOS Override Screening

- If you need to override a value after all rows are documented, document the value in the EOS Override Screening group:



Partners eCare TIP SHEET



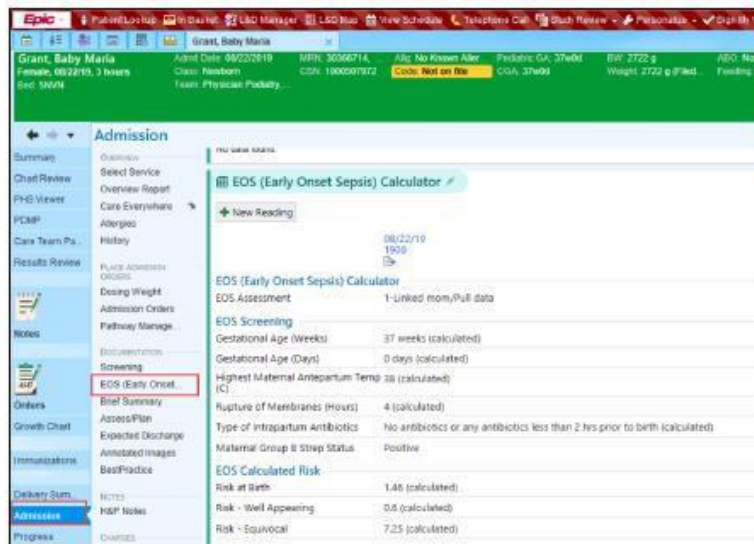
2. The EOS Calculated Risk will then update based on the override screening.

NOTE: You will need to document all values, including override, within a singular time column on the flowsheet for the Calculated Risk scores to populate.

EOS Exam Findings and Actual Risk

! NOTE: If the nurse documents EOS exam findings at your hospital, skip this section and Go to page 8: "Per Policy...Exam Findings (Nurse)."

1. The Provider can open the Admission navigator > EOS (Early Onset Sepsis) Calculator section to document exam findings and view calculated Actual Risk.

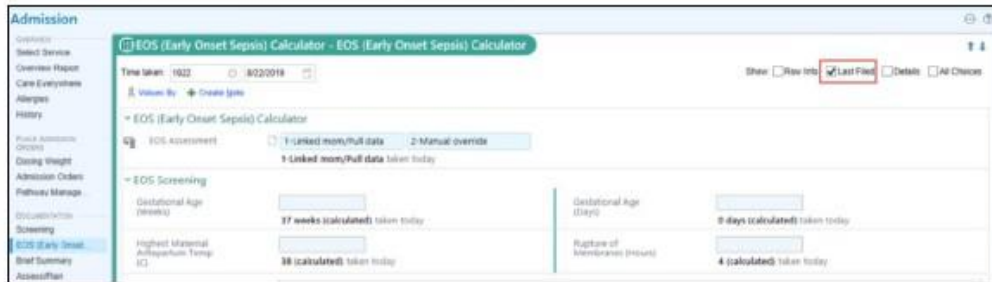




Partners eCare **TIP SHEET**

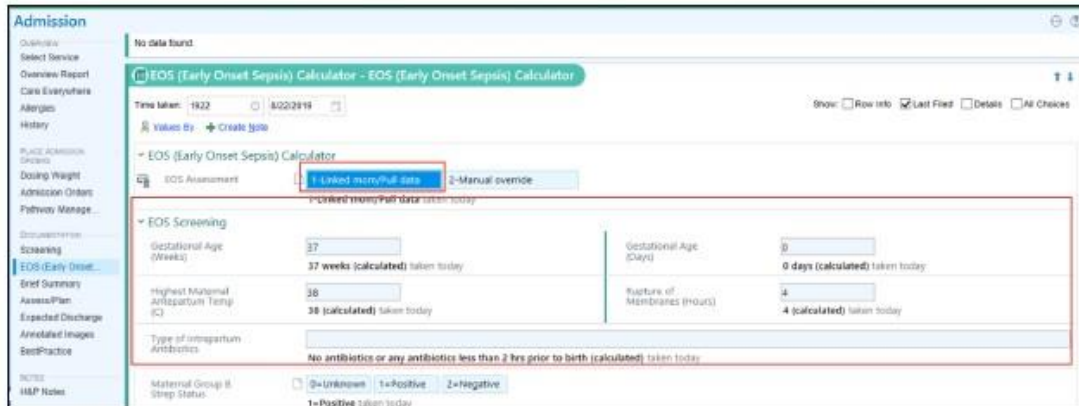
NOTE: All rows need to have documentation in order to calculate Actual Risk.

2. Click to open the Section. Verify **Last Filed** is selected to view nurse's previous documentation.



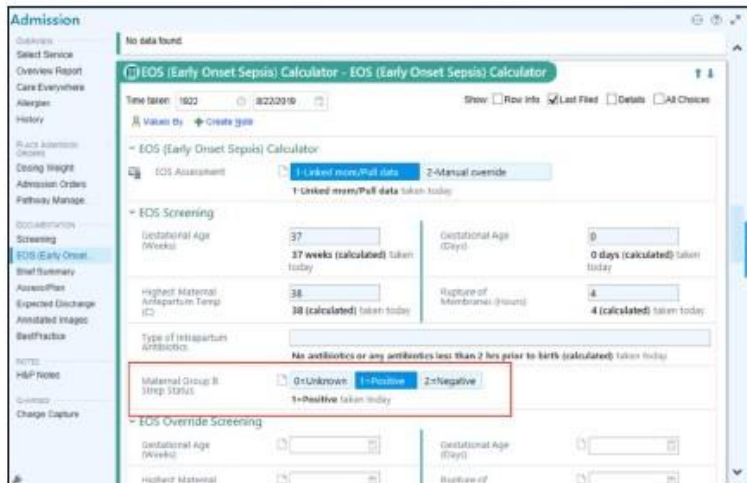
3. Click **Linked mom/Pull data** (or rarely, **Manual override** if necessary).

a. Notice values for **GA, Highest Maternal Temp, and Rupture of Membranes** pull in automatically based off documentation in chart.



4. Document **Maternal Group B Strep Status**.

a. Hint: can use nurse's previous documentation.

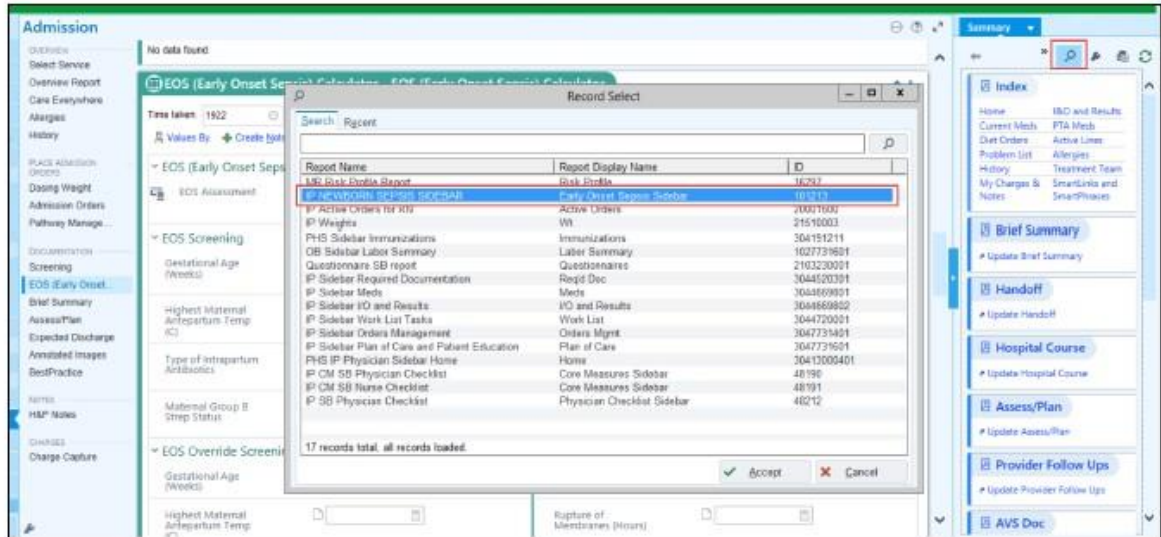


5. Enter any **Override** values, if necessary.

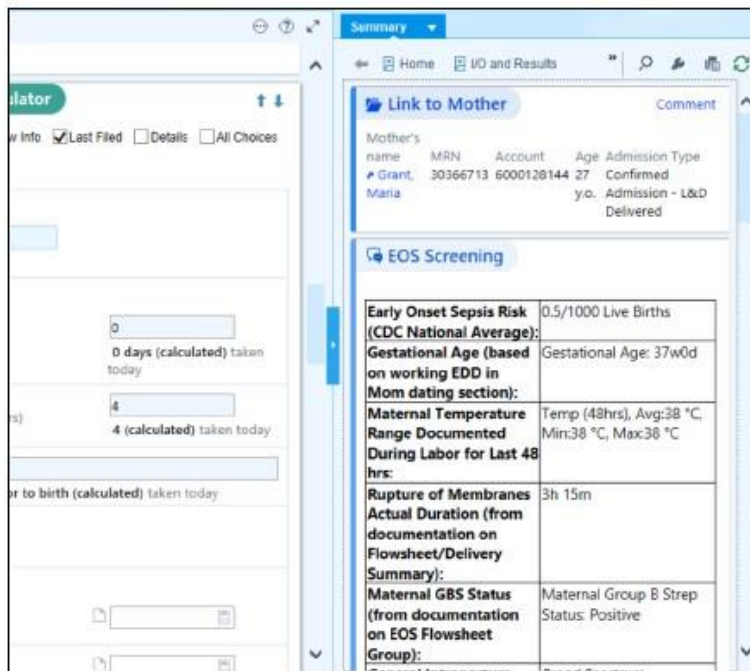


Partners eCare **TIP SHEET**

6. Open the Sidebar and Search for the Early Onset Sepsis Sidebar:



7. This report shows an EOS Grid that pulls in patient info for the clinician to review:



Exam Findings and Actual Risk

1. In the Exam Findings section, enter Well Appearing, Equivocal or Clinical Illness:





Partners eCare **TIP SHEET**

2. Close the navigator section. The Actual Risk based on Exam is calculated.

Restore
Close
Cancel

Admission

OVERVIEW

Select Service

Overview Report

Care Everywhere

Allergies

History

PLACE ADMISSION ORDERS

Dosing Weight

Admission Orders

Pathway Manage...

DOCUMENTATION

Screening

EOS (Early Onset...

Brief Summary

Assess/Plan

Expected Discharge

Annotated Images

BestPractice

NOTES

H&P Notes

CHARGES

Charge Capture

No data found.

EOS (Early Onset Sepsis) Calculator

+ New Reading

	08/22/19 1900	08/22/19 1922
EOS (Early Onset Sepsis) Calculator		
EOS Assessment	1-Linked mom/Pull data	1-Linked mom/Pull data
EOS Screening		
Gestational Age (Weeks)	37 weeks (calculated)	37 weeks (calculated)
Gestational Age (Days)	0 days (calculated)	0 days (calculated)
Highest Maternal Antepartum Temp (C)	38 (calculated)	38 (calculated)
Rupture of Membranes (Hours)	4 (calculated)	4 (calculated)
Type of Intrapartum Antibiotics	No antibiotics or any antibiotics less than 2 hrs prior to birth (calculated)	No antibiotics or any antibiotics less than 2 hrs prior to birth (calculated)
Maternal Group B Strep Status	Positive	Positive
EOS Calculated Risk		
Risk at Birth	1.46 (calculated)	1.46 (calculated)
Risk - Well Appearing	0.6 (calculated)	0.6 (calculated)
Risk - Equivocal	7.25 (calculated)	7.25 (calculated)
Risk - Clinical Illness	30.02 (calculated)	30.02 (calculated)
EOS Exam Findings		
Exam Findings		Equivocal
Risk - Equivocal (Exam Based)		7.25 (calculated)

You Can Also...

Use the Flowsheets link within the Report view to document on the EOS flowsheet.

1. With the navigator section closed, click the Flowsheets link:

Admission

OVERVIEW

Select Service

Overview Report

Care Everywhere

Allergies

History

PLACE ADMISSION ORDERS

Dosing Weight

Admission Orders

Pathway Manage...

DOCUMENTATION

Screening

EOS (Early Onset...

Brief Summary

No data found.

EOS (Early Onset Sepsis) Calculator

+ New Reading

	08/22/19 1900	Last Filed Value
EOS (Early Onset Sepsis) Calculator		
EOS Assessment	1-Linked mom/pull data	1-Linked mom/pull data
EOS Screening		
Gestational Age (Weeks)	37 weeks (calculated)	37 weeks (calculated)
Gestational Age (Days)	0 days (calculated)	0 days (calculated)
Highest Maternal Antepartum Temp (C)	38 (calculated)	38 (calculated)
Rupture of Membranes (Hours)	4 (calculated)	4 (calculated)

2. This opens the EOS (Early Onset Sepsis) Calculator Flowsheet.

3. Here you can document Linked Mom/Pull Data, enter Maternal Group B Strep Status, and EOS Exam Findings. Click File to view calculations.



Partners eCare **TIP SHEET**

EOS (Early Onset Sepsis) Data:

Parameter	8/22/19	1922
Gestational Age (Days)	0	0
Highest Maternal Antepartum Temp	38	38
Rupture of Membranes (Hours)	4	4
Type of Intrapartum Antibiotics	No antibiotics	No antibiotics
Maternal Group B Strep Status	1	1

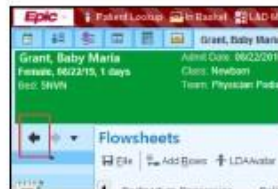
EOS Calculated Risk:

Risk at Birth	1.46	1.46
Risk - Well Appearing	0.6	0.6
Risk - Equivocal	7.25	7.25
Risk - Clinical Illness	30.02	30.02

EOS Exam Findings:

Exam Findings	Equivocal	7.25
Risk - Equivocal (Exam Based)		7.25

4. Use the back arrow under the Patient Header to go back to the Admission Navigator, if necessary:



Per Policy...Exam Findings (Nurse)

If it is site policy that a nurse document exam findings, the nurse can use the EOS Exam Findings group within the Flowsheets.

NOTE: The Details Pane>Row Information will show descriptions for the terms, Clinical Illness, Equivocal, and Well appearing.

EOS Exam Findings Data:

Exam Findings	Equivocal	7.25
Risk - Equivocal (Exam Based)		7.25

Row Information - Clinical Illness:

- Persistent need for NCPAP / HFNC / mechanical ventilation (outside of the delivery room)
- Hemodynamic instability requiring vasoactive drugs
- Neonatal encephalopathy / Perinatal depression
 - Seizure
 - Apgar Score @ 5 minutes < 5
- Need for supplemental O2 ≥ 2 hours to maintain oxygen saturations > 90% (outside of the delivery room)

Row Information - Equivocal:

- Persistent physiologic abnormality ≥ 4 hrs
 - Tachycardia (HR ≥ 160)
 - Tachypnea (RR ≥ 60)
 - Temperature instability (≥ 100.4°F or < 97.5°F)
 - Respiratory distress (grunting, flaring, or retracting) not requiring supplemental O2
- Two or more physiologic abnormalities lasting for ≥ 2 hrs
 - Tachycardia (HR ≥ 160)
 - Tachypnea (RR > 60)



Partners eCare **TIP SHEET**

L&D Grease Board

This Exam based Finding and Risk score populate the Exam Finding/Risk Score column of the Grease Board views:

Name	Sex	Age	Birth Wgt Appars	Initial Hep E Attending	Provider RN	Ped Noti GA	Blood Notes	Unact Resul SBH Delivery	Delivery DAT	Hyz Sep	Exam Finding/Risk S
Bardot, Baby Brigitte	F	72 days	3311 g B / 9		PEDIATRICS		3.	1255	8/11		Equivalent / 8.21
Grant, Baby Maria	F	3 hours	2722 g B B / ..		PODIATRY, P		3.	1800	8/22		Equivalent / 7.25
Grant, BabyB Maria	F	3 hours	2722 g B B / ..		PODIATRY, P		3.	1805	8/22		

Smartlink

1. Use .eos within any note to pull in the Neonatal Sepsis Onset Findings: Exam findings and Exam calculated risk:

My Note
 Type: Progress Notes Service: Obstetrics
 Date of Service: 8/27/2019 11:02 AM
 Cosign Required

Early Onset Sepsis Risk
 Exam Findings: Clinical Illness
 Risk - Well Appearing (Exam Based): 0.34

Early Onset Sepsis Report and Clinical Recommendations

The Early Onset Sepsis Sidebar (IP NEWBORN SEPSIS SIDEBAR) report will show Calculated Risks and Recommendations in red, orange, and white.

1. Search for the Early Onset Sepsis Sidebar using the selection tool of the sidebar
HINT: Search using the word "sepsis" to make it easier to find.

Admission
 Overview
 Select Service
 Overview Report
 Care Everywhere
 Allergies
 History

EOS (Early Onset Sepsis) Sidebar

Report Name	Report Display Name	ID
MR Risk Profile Report	Risk Profile	162081
EOS (Early Onset Sepsis) Sidebar	EOS (Early Onset Sepsis) Sidebar	131511
IP Active Utilers for Not	Active Utilers	20391900
IP Weights	Wt	21510003
PHS Sidebar Immunizations	Immunizations	304191211
OB Sidebar Labor Summary	Labor Summary	1927731601



Partners eCare TIP SHEET

2. The Early Onset Sepsis Sidebar shows calculated risks and color-coded recommendations:

Summary | Edit Note

← Early Onset Sepsis Sidebar | Labor Summary

Average of 1000 Live Births

Well Appearing
Admission (Current) from 8/27/2019 in BWH CWN 5 Nursery
Well Appearing 0.05 @ 08/28/2019 1400

No cultures, no antibiotics, routine vitals

Equivocal
Admission (Current) from 8/27/2019 in BWH CWN 5 Nursery
Equivocal 0.55 @ 08/28/2019 1400

No cultures, no antibiotics, vital signs (every 4 hours for 48 hours)

Clinical Illness
Admission (Current) from 8/27/2019 in BWH CWN 5 Nursery
Clinical Illness 2.33 @ 08/28/2019 1400

Vitals per NICU/SCN, consider antibiotics

3. Nurses can also view this information from within the Details Report Pane within the Flowsheet group.

Flowsheets

Summary | Chart Review | PHS Viewer | Care Team Pa... | Results Review | Synopsis | Work List | MAR | Flowsheets | Avitar | Intake/Output | Notes | Education | Plan of Care | Code/RR Nam... | Orders | Patient Instruct... | More

Newborn Vitals | Newborn Assessment | Newborn I/O | CCHD Screen | Car Seat Challenge | New

Accordian | Expanded | View All | 8/22/19 | Last Filed

Maternal Group B Strep Status

EOS Exam Findings

EOS Calculated Risk

Risk at Birth	1.46	1.46 (calculat...)
Risk - Well Appearing	0.6	0.6 (calculat...)
Risk - Equivocal	7.25	7.25 (calculat...)
Risk - Clinical Illness	30.02	30.02 (calcula...)

Charting Type

Downtime

Inpatient 1 Hour + Activities

Off unit accompanied by RN

Off unit accompanied by non-RN

Patient/family education by RN

Extensive wound management by

Extensive wound management by

08/22/19 1900

Maternal Group B Strep Status

Select Single Option: (F5)

0=Unknown
1=Positive
2=Negative

Comment (F6)

Admission (Current) from 8/22/2019 in NWH 5 NORTH NURSERY

Risk @ Birth Early 1.46
Onset Sepsis Risk (CDC National Average) 0.5/1000 Live Births

Well Appearing
Admission (Current) from 8/22/2019 in NWH 5 NORTH NURSERY
Well Appearing 0.6 @ 08/22/2019 1900

Equivocal
Admission (Current) from 8/22/2019 in NWH 5 NORTH NURSERY
Equivocal 7.25 @ 08/22/2019 1900

Frequent vital signs (every 4 hours for 48 hours), no blood cultures, no antibiotics

Blood cultures, amp. gent and frequent vital signs (every 4 hours)



Partners eCare **TIP SHEET**

Newborn Summary and Newborn Patient Story

1. The EOS Screening results can also be found within the **Newborn Summary** and **Newborn/NICU Patient Story** reports:

The screenshot shows a clinical report interface with several sections:

- Maternal Information:** Mother: Grant, Maria #30386713. Birth Date: 08/22/92, Age (as of 08/22/19): 27. History: G1P0, Estimated Date of Delivery: 09/12/19, Gestational Age: 37w0d.
- PCP Information:** Primary Care Provider: Physician Pediatrics, MO. Phone: 555-555-5555. Location: None.
- Delivery Information:** Birth date/time: 8/22/2019 4:00 PM. Newborn: Female. Delivery type: Vaginal, Spontaneous.
- Newborn Delivery:** ROM - Delivery: 3h 10m.
- EOS (Early Onset Sepsis) Screening (since admission):** (Highlighted with a red box)

Date/Time	Exam Findings	Risk - Equivalent (Exam Based)
06/22/19 10:22	Equivalent	7.25
- Medical Problems:** Hospital Problem List table with one entry: Normal intrauterine pregnancy, antepartum. ICD-10-CM: Z34.90, Priority: Class, Noted: 8/22/2019, POA: Not Applicable.