

(by email communication from Dr Puopolo via VON about March 2018)

## Sepsis Risk Calculator: Guidance to Determine the Risk Estimate at Birth

Calculator Input	Value to be entered	Notes
<b>Incidence of Early-Onset Sepsis</b>	Local incidence if known If not, use 0.5/1000 live births (CDC national incidence)	
<b>Gestational Age</b>	Gestational age at birth, in weeks and days	“Weeks” value range 34-43 “Days” value range 0-6
<b>Highest Maternal Intrapartum Temperature</b>	Enter the value and remember to choose “Fahrenheit” or “Celsius” for the temperature unit.  <b>Note:</b> Maternal fever that occurs within 1 hour after delivery can be counted as the “highest intrapartum temperature” for the purpose of calculating the risk estimate at birth.	Value may be whole number or number with single decimal place  <b>Examples:</b> 101, 101.0 and 101.5 are all acceptable entry values
<b>ROM (hours)</b>	Duration of time between rupture of and birth, in hours	Value may be whole number rounded to the nearest hour OR number with single decimal place <b>Example:</b> ROM time 4 hours and 30 minutes should be entered as 4.5 hours. <b>Example:</b> ROM time 4 hours and 55 minutes can be entered as 4.9 hours or as 5 hours
<b>GBS</b>	Enter maternal GBS screening result	
<b>Type of Intrapartum Antibiotics</b>	Choice must include <b>type</b> of antibiotic given and <b>duration of time</b> prior to birth that first dose was given.  <b>GBS-specific antibiotics</b> are currently defined by CDC 2010 GBS guidelines as ONLY penicillin G; ampicillin; or cefazolin given for the purpose of GBS prophylaxis. This should apply only to mothers who are GBS positive or GBS unknown.  <ul style="list-style-type: none"> <li>• If erythromycin, clindamycin or vancomycin ALONE are given for GBS prophylaxis, choose “None or antibiotics given &lt; 2 hours prior to delivery.” These medications do not reliably provide neonatal protection from GBS infection, although they may provide some protection to the mother</li> <li>• <b>Timing</b> of administration of GBS-specific antibiotics is determined by subtracting the time of the first dose of antibiotic from the time of birth</li> </ul>	

**Broad-spectrum antibiotics** are defined as two more antibiotics given in combination when there is concern for the mother developing chorioamnionitis/intraamniotic infection\*\*. Usually this concern is prompted by maternal intrapartum fever.

**To determine the timing of broad-spectrum intrapartum antibiotic administration**, compare the time of the administration of the second antibiotic in the combination, to the time of birth.

- **Example:** ampicillin is given at 2:00 PM; gentamicin is given at 3:30 PM. Birth is at 4:30 PM. Because the second antibiotic of the combination was given 1 hour prior to delivery, choose “None or antibiotics given < 2 hours prior to birth.” One could consider choosing “GBS-specific > 2 hours prior to birth” but if that was not the **intent** of administering the antibiotics, and the actual intent was to administer ampicillin and gentamicin – the most conservative decision is to choose “None or antibiotics given < 2 hours prior to birth”
- **Example:** ampicillin is given at 1:00 PM; gentamicin is given at 2:00 PM. Birth is at 4:30 PM. Because the second antibiotic of the combination was given 2.5 hour prior to delivery, choose “Broad-spectrum antibiotics given 2-3.9 hours prior to birth.”
- **Example:** ampicillin is given at 10:00 AM; gentamicin is given at 11:00 AM. Birth is at 4:30 PM. Because the second antibiotic of the combination was given >4 hours prior to delivery, choose “Broad-spectrum antibiotics given < 4 hours prior to birth.”

**If a mother has been given BOTH GBS-specific antibiotics and broad-spectrum antibiotics due to concern for evolving chorioamnionitis/intraamniotic infection, record the most complete treatment.**

- **Example:** Mother is given ampicillin at 8:00 AM and 12:00 PM for GBS positive status. She develops a fever to 101°F at 2:00 PM, and gentamicin is given at 3:00 PM. Ampicillin is given at 4:00 PM. Birth is at 4:30 PM. In this case, GBS-specific antibiotics were given > 4 hours prior to delivery, but broad-spectrum antibiotics were given only 1 ½ hours prior to delivery. In the calculator, choose “GBS-specific antibiotics given > 2 hours prior to birth.”

\*\*ACOG has recently provided guidance for antibiotic choice when there is concern for developing intraamniotic infection. Broad-spectrum antibiotics should be defined per this document.

Heine RP, Puopolo KM, Beigi R, Silverman NS, El-Sayed YY. Committee on Obstetric Practice. American College of Obstetrics and Gynecology. Opinion No. 712: Intrapartum Management of Intraamniotic Infection. *Obstet Gynecol.* 2017;130(2):e95-e101.