

# Clinical Pearl: The Clinical Utility of the Kaiser Sepsis Calculator (KSC)

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It is interesting to talk with my colleagues in the neonatal intensive care unit (NICU) re their feelings about the clinical utility of the KSC. I am clinically retired as the NICU Quality Improvement (QI) neonatologist. However, I have reviewed over 1000 babies who received antibiotics in the first 72 hours of their postnatal life between October 2020 and December 2022 in our Illinois Perinatal Quality Collaborative (ILPQC) BASIC Antibiotic Stewardship initiative (1). The KSC was only used in about 1/2 dozen babies thus far in our baseline period out of 1098 babies (J Hageman, personal communication 1/9/2023). However, after my most recent presentation at our Thursday conference, our new QI neonatologist, Dr. Wally Hussain, who has had a lot of experience using the KSC, will start the part of the initiative with a KSC presentation. We will encourage our clinical providers, including our neonatal nurse practitioners and residents, neonatal fellows, and attending neonatologists, to begin to use the KSC in the evaluation of early-onset sepsis (EOS).

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This is a good segue way to summarize the results of a paper by Hadfield and colleagues in a recent issue of *Hospital Pediatrics* about a nurse-initiated QI project. The venue was a level I nursery and level IV NICU at a County hospital. The KSC was implemented in 53 infants born  $\geq 35$  weeks gestation, preinterven-

tion and 51 infants post-intervention, whose mothers had chorioamnionitis (2). The pre-intervention time was six months (August 2020-January 2021), and the protocol implementation period was seven months (March 2021-September 2021) (2). While comparing these periods, complete blood count (CBC) utilization decreased from 96% to 27%, blood culture utilization dropped from 98% to 37%, and antibiotic usage decreased from 25% to 16% (2). In addition, no antibiotics were used against the KSC, and no early onset sepsis was missed, according to the investigators (2).

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The KSC is a validated tool that has been successfully utilized in many studies and is recommended as a potential EOS risk assessment tool along with categorical risk assessment and enhanced observation (2). As a result of the utilization of these approaches, there is a significant decrease in broad-spectrum antibiotic utilization, which decreases the separation of the mother-baby dyad, decreased dysbiosis, and decreases antibiotic resistance in newborn infants (2).

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## References

1. [www.ILPQC.org](http://www.ILPQC.org).
2. Hadfield BR, Rowley J, Puyol F, Johnson MA, et al. Quality improvement through nurse-initiated Kaiser Sepsis Calculator at a County hospital. *Hospital Pediatrics* 2023; 13(1):

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## SKIN-TO-SKIN CARE DURING COVID-19



**GET INFORMED ABOUT THE RISKS + BENEFITS**

work with your medical team to create a plan

**GET CLEAN WASH YOUR HANDS, ARMS, and CHEST**

with soap and water for 20+ seconds. Dry well.



**PUT ON FRESH CLOTHES**

change into a clean gown or shirt.

**IF COVID-19 + WEAR A MASK**

and ask others to hold your baby when you can't be there



[nicuparentnetwork.org](http://nicuparentnetwork.org)  
[nationalperinatal.org/skin-to-skin](http://nationalperinatal.org/skin-to-skin)

