

Impact of adopting a Neonatal Sepsis Risk Calculator in a diverse urban population in Birmingham, UK

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Background

- The Kaiser-Permanente Sepsis Risk Calculator (KP-SRC) has been shown to significantly and safely reduce antibiotic use for the management of Early Onset Sepsis (EOS) in the US, however its evidence-base in the UK is limited.
- The updated national guidance in the UK (NICE) has recommended KP-SRC use with prospective audits due to uncertainty regarding its safety in the UK.

Aim



To assess the safety and efficacy of a modified KP-SRC in three neonatal units (NNUs) in a diverse urban and higher risk population in Birmingham, UK.

Setting



UNIT A: Neonatal intensive care unit (NICU)
UNIT B: Special care unit (SCU) and
UNIT C: NICU with cardiac/ surgical care

Drivers for change

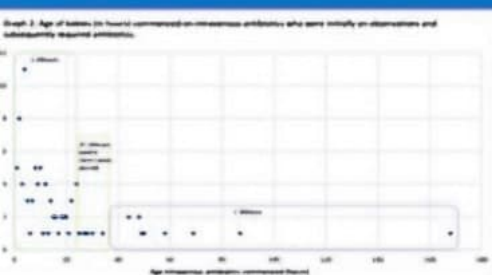
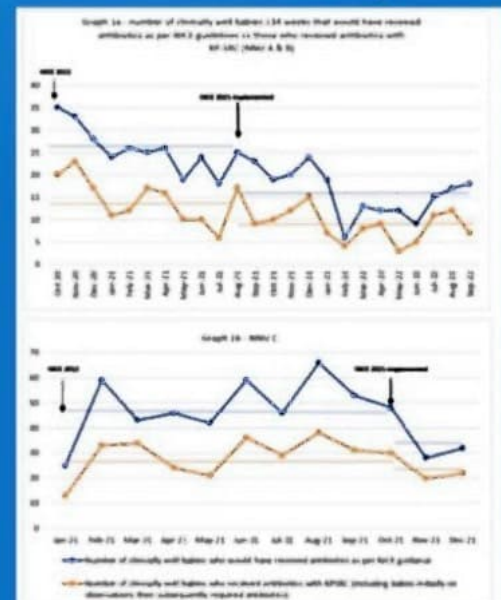
- Pre-implementation audit in Jan-Feb 2020 (PRAM Network) demonstrated that 10.1% of live-births born ≥ 34 weeks gestation (who were not directly admitted after birth to NICU/SCU), were given antibiotics as per NICE.
- Reduce unnecessary antibiotic use in well infants.

Methods



Results

- 4 culture positive EONS (3 blood and 1 CSF culture) - all received timely antibiotics
- 85% of babies with CRP ≥ 60 mg/L were recommended culture/antibiotics. 6 presented on observations (Nil had positive cultures or adverse outcome).
- 74 babies were admitted to NNU. 36 on antibiotics. 38 on observations.
- KPSRC still reduced antibiotics by 44.6% once NICE 2021 implemented.
- 1 readmission.



Discussion



- KP-SRC safely reduced antibiotic exposure in post-natal ward babies by 41.3% in our diverse higher risk population.
- More prospective studies are needed to further establish the safety of KP-SRC.
- It is a positive step towards antibiotic stewardship.

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