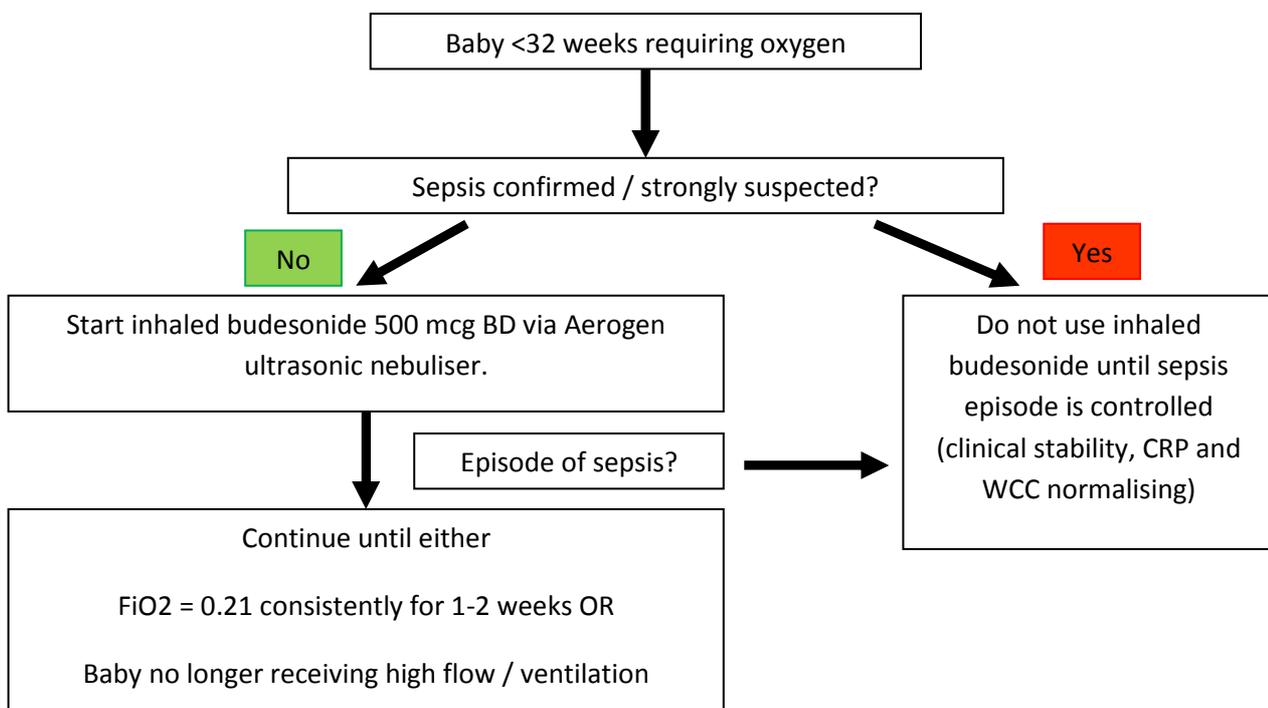


## Inhaled Budesonide in Preterm Babies

There is evidence that inhaled steroids reduce BPD in preterm babies, and despite a recent large study raising concerns about a slight (non-significant) increase in mortality, the latest meta-analysis data of 17 studies in 1807 babies shows no significant change in mortality and a RR of BPD of 0.79  $p=0.0002$  (1). A 20% reduction in risk of BPD is significant. BPD is a multifactorial disease, and whilst lung damage is a clear risk factor, others such as PDA may need to be simultaneously addressed. Care of the preterm lung is paramount, so early use of surfactant and non-invasive ventilation are important co-strategies. Minimising sepsis is also critical. Inhaled budesonide is generally considered to be safe in children, with minimal systemic absorption anticipated. For example we have not seen any blood glucose derangements from using inhaled budesonide.

Start nebulised budesonide in non-septic babies in oxygen  $<32$  weeks. In the majority this will be delivered via the ultrasonic nebulised attachment for the Vapotherm Precision Flow, but in ventilated babies should be administered via the inspiratory ventilator tubing. Budesonide is continued until the baby has been in air for 1-2 weeks or comes off the High Flow. The decision to stop is a clinical one.

If a baby has inhaled steroids stopped and then develops an oxygen requirement, it may be reasonable to restart them at the discretion of the attending/baby's consultant. If a baby develops sepsis, then inhaled steroids should be discontinued for 24-48 hours until the episode is settling/under control.



We will audit the rates of measured BPD in response to this practice change as well as recording complications.

Author

Dr. Peter Reynolds, Consultant Neonatologist

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(1) Shinwell ES. Are inhaled steroids safe and effective for prevention or treatment of bronchopulmonary dysplasia? *Acta Paediatr.* 2018 Apr;107(4):554-556.