

Early Respiratory Care Workstream

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- Regional Mortality Summit held October 2019
- How should the early respiratory care of preterm infants be best managed?



Team Members

- *Jessop Wing: Anne Bean, Porus Bustani, Cath Smith*
 - *Leeds: Cath Harrison*
 - *Bradford: Catriona Firth*
 - *Hull: Nikki Mullins*
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What was done?

5 key areas of focus

Individual NICU feedback

*Identification of areas of
consensus and possible
adaptation/change*



Starting FiO₂

- *Should we start in FiO₂ 0.3 for all <28 weeks as per European consensus guidance?^{1,2}*
- *NLS guidance states 'For preterm infants, a low concentration of oxygen (21–30%) should be used initially for resuscitation at birth. If, despite effective ventilation, oxygenation (ideally guided by oximetry) remains unacceptable, use of a higher concentration of oxygen should be considered'*
- *Currently only Jessop Wing starts <28 weeks in FiO₂ 0.3; all other units start in air*


1. Sweet D, G, Carnielli V, Greisen G, Hallman M, Ozek E, te Pas A, Plavka R, Roehr C, C, Saugstad O, D, Simeoni U, Speer C, P, Vento M, Visser G, H, A, Halliday H, L: European Consensus Guidelines on the Management of Respiratory Distress Syndrome – 2019 Update. *Neonatology* 2019;115:432-450. doi: 10.1159/000499361

2. Welsford M, Nishiyama C, Shortt C, Weiner G, Roehr CC, Isayama T, et al.; International Liaison Committee on Resuscitation Neonatal Life Support Task Force. Initial oxygen use for preterm newborn resuscitation: a systematic review with meta-analysis. *Pediatrics*. 2019 Jan;143(1):e20181828.



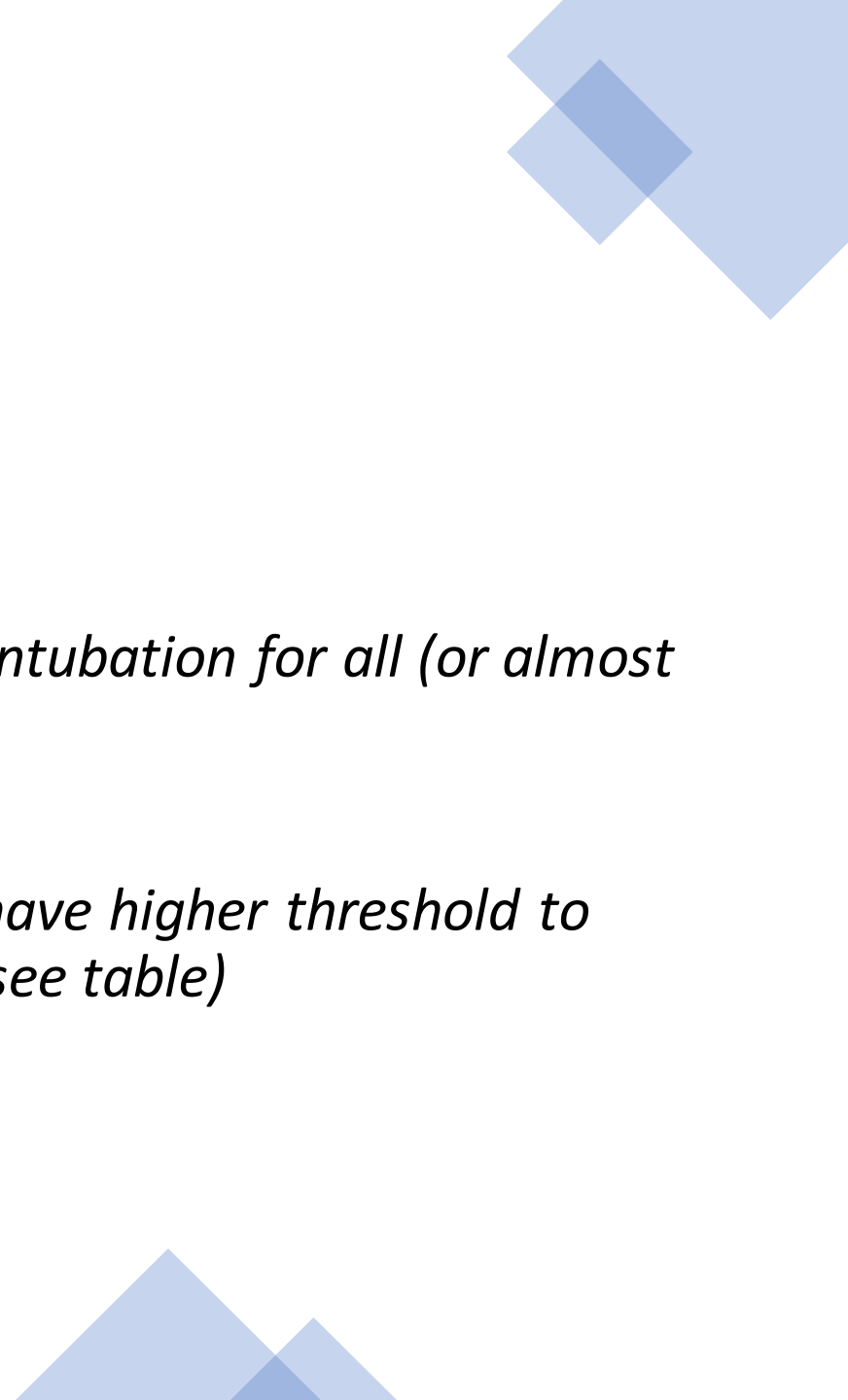
How to deliver CPAP

- *All units aim to give PEEP*

- *Dependent upon unit equipment; mixture of 'long prong' from cut ETT or face mask/other interface*
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Threshold for intubation

- *Variable*
 - *Leeds and Hull state intubation for all (or almost all) <26 weeks*
 - *Jessop wing-tend to have higher threshold to intubate <26 weeks (see table)*
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DISCUSS ANTICIPATED RESPIRATORY SUPPORT suggested criteria below

Risk factors for requiring increased support include < 25/40, incomplete or no antenatal steroids, growth restriction, male sex.

22 to 23 ⁺⁶	24 to 25 ⁺⁶	26-28 ⁺⁶	29-30 ⁺⁶	≥31/40
		If FiO ₂ ≥ 0.3 and not improving, at any time after initial stabilisation, then surfactant is usually indicated		
Intubate, give surfactant	CPAP/BiPAP+ LISA, low threshold for intubation and surfactant	CPAP/BiPAP +/- LISA on NNU	CPAP/BiPAP +/- LISA (consider INSURE)	CPAP/no respiratory support. Preferably INSURE if need surfactant




Respiratory Support during DCC

- *A pragmatic approach to this*
 - *Generally consensus to provide this if able to/feel necessary*
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LISA at delivery

- *Currently only considered at the Jessop Wing (although most done on NNU)*
 - *General move towards being able to give surfactant less invasively*
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Moving forwards.....

- *Covid-19 delays*
 - *Aiming to have further discussions*
 - *Review available evidence*
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