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TRANSFERRING INFANTS < 32 WEEKS´ GESTATION FROM THE DELIVERY ROOM TO THE NICU. HOW VIGILANT ARE WE IN AVOIDING HYPOXIA/HYPEROXIA DURING THE FIRST "GOLDEN HOUR"?

M. Thio[1], L. Simionato[2], A. Saraswat[2], J.A. Dawson[1,3], P.G. Davis[1,2,3]

[1]Neonatal Services, The Royal Women's Hospital, [2]Dept of Obstetrics & Gynaecology, University of Melbourne, [3]Murdoch Childrens Research Institute, Melbourne, VIC, Australia

Background: Clinicians know about the dangers of hyperoxia and hypoxia in the delivery room and NICU. Less attention is paid to the period of transport and early stabilisation in the NICU. We aimed to investigate the time spent with SpO_2 85-94% during the first hour after birth.

Method: A prospective observational study of clinical practice was undertaken. Infants < 32 weeks gestation were enrolled. A pulse oximeter (PO) sensor was applied to the right hand after birth, remaining connected until 60 minutes after birth. Clinical interventions were recorded during this time and matched with PO SpO_2 data for analysis. Hyperoxic periods were only analysed when FiO_2>0.21. Clinicians were unaware of the aims of the study.

Results: 32 infants were studied, mean (SD) birth weight 1101(330)g, gestational age 29(2) weeks. Median(IQR) time spent in the transport cot and NICU were 9(7-11)min and 30(27-33)min respectively, and time babies spent with SpO_2>94% if receiving supplemental oxygen was 2.6(1.5-4.6)min and 5.4(2.1-9.1)min respectively.

FiO_2 >0.21	SpO_2 85-94%	SpO_2 >94%	SpO_2 >94% in babies on CPAP	SpO_2 >94% in intubated babies
Transport	37(12-67) %	45(8-67) %	60(16-67)% n=21	18(2-76)% n=9
NICU	46(29-68) %	44(18-62) %	50(19-66)% n=22	28(9-46)% n=9

[Proportion of time an SpO2 ranges, median(IQR)]

The proportion of time with SpO_2>94% during Transport and NICU was similar. Babies managed with CPAP compared to intubated infants had a greater proportion of time with SpO_2>94% in transport and the NICU setting.

Conclusions: SpO_2 measurements often fell outside the target range during the early postnatal period. Clinicians tolerate saturations higher than the "safe" range during the first hour after birth.