Early perinatal interventions to improve neonatal outcomes in NHS Ayrshire & Arran

Dr A. Ansary (project lead), Dr D. Black, Dr D. Couchman, Dr K. Elliott, Dr S. Kinmond,
Mrs J. Welsh (project adviser)
Neonatal Unit, Ayrshire Maternity Unit. NHS Ayrshire and Arran

Poster No: EF - 22

Introduction
Six early perinatal interventions proven to improve neonatal outcomes in preterm babies were chosen following a literature review. A retrospective audit of babies <28 weeks (2016) showed not all eligible infants were receiving all evidence-based interventions (EBIs). Infants who received more interventions had better neonatal outcomes. The interventions that were studied are:

1. Antenatal steroids
2. Antenatal magnesium sulphate
3. Delayed cord clamping
4. Thermoregulation at admission
5. Initial stabilisation within 2hrs
6. Early breast milk feeds

Aims/Objectives
Our aim is to achieve delivery of at least four EBIs in all eligible infants by identifying and removing the barriers in the processes of delivering these to strive for the best neonatal outcomes.

Methodology

Results/Outcomes
2016 - 14 infants were included in the study in 2016. The median gestational age was 26 weeks and median birth weight was 860g. The neonatal outcomes of this cohort are presented in Table 1.

Conclusion:

• Infants who received ≥4 EBI had better outcomes than those with <4, including lower mortality. This finding is similar in both cohorts.
• Larger sample size needed to determine if perceived improvements are statistically significant
• Long-term follow-up is required to assess neuro-developmental outcomes
• In the time between the two cohorts, quality improvement measures were introduced which culminated in improved compliance to EBI and better outcomes in 2017/18 cohort
• This project has led to significant improvement in the collaborative working of neonatal and maternity multidisciplinary team members in NHS Ayrshire & Arran

Next steps:
• Continue collaborative working to ensure all eligible infants are identified and appropriately managed, ensuring mothers and infants are given all six EBIs to maximise their chance of achieving the best outcomes
• Modify our improvement work in alignment with the national SPSP MCoIC neonatal initiative (Preterm Perinatal Package) introduced in March 2018. (seen here)