outcome/survival is not significantly different between the two groups. Using a SAD may not be worth doing as it takes time to insert, meaning there is no ventilation in that time. However, in children with difficult airways who intubation poses a problem, it is worth bearing in mind the use of a SAD. Over time the effectiveness of BVM decreases, hence a more definitive airway should always be planned.

Clinical bottom line A bag valve mask with oropharyngeal airway should be used initially to oxygenate and ventilate a child in cardiopulmonary arrest. A supraglottic airway should be considered in children with a difficult airway or if there is going to be delay in establishing a definitive airway (endotracheal intubation).

SAD – supraglottic airway device. LMA – laryngeal mask airway. OPA – oropharyngeal airway. BVM – bag-valve-mask. ALS – advanced life support.

British Association of Perinatal Medicine

G109   RESTRICTING VISITORS TO THE NICU SIGNIFICANTLY REDUCES NOSOCOMIAL VIRAL RESPIRATORY TRACT INFECTIONS IN BABIES

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Introduction Recent data suggest 8–52% of babies on the NICU have evidence of a viral respiratory tract infection (VRTI) (Ronchi 2014, Bennett 2012). These studies, and our own data, indicate babies with VRTIs spend twice as long in hospital and have significantly worse respiratory outcomes such as chronic lung disease and the need for home oxygen. There is little evidence exploring ways of reducing these infections in the NICU. Our recent survey demonstrates significant variation in UK NICU visiting practices and isolation policies for babies with RVTIs.

Aim To establish the impact of visitor restriction on the incidence of NICU VRTIs.

Methods We performed a retrospective study of all admissions between 2007 and 2013 at two large UK tertiary NICUs (~13,300 bed days/year). Normal visiting policy included parents, family and friends. During the periods November to April of 2009, 2010 and 2011, in response to the H1N1 pandemic, we restricted visiting to parents/carers only. No other variations in practice occurred. We identified all babies positive for VRTIs. We used a Poisson generalised additive model (GAM), factoring in workload intensity and incidence of community VRTIs, to calculate the impact of these 3 winter restriction periods compared with normal visiting.

Results There were 100 PCR proven VRTIs in 93 babies during this period (~16/yr). Rhinovirus (n = 71), RSV (n = 8) and H1N1 (n = 5) were the most common. The median gestation of infected babies was 29 weeks (IQR 26–34 Weeks) and 46% required an escalation of respiratory support. Two of five H1N1 positive babies died. The results from the GAM suggest there was a 39% reduction (P < 0.05) in VRTIs during restricted visiting periods compared to normal visiting (Incident Rate Ratio 0.61, 95% CI 0.38–0.99). Extrapolating this to the UK, based

on the NHS NICU tariff, the extra bed days associated with VRTIs cost between £7M and £25M/year.

Conclusion This is the first study demonstrating a significant reduction in NICU VRTIs through restricting visiting practices. VRTIs are associated with significant neonatal respiratory morbidity and have short and long-term resource implications. We need to explore better ways of minimising the impact of VRTIs in this vulnerable population.

G110   THE VALIDITY OF STANDARDISED TWO-YEAR NEURODEVELOPMENTAL STATUS ASSESSED DURING ROUTINE NHS FOLLOW-UP OF CHILDREN BORN <30 WEEKS' GESTATION

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Aim To determine the validity of standardised, routinely recorded NHS assessments in identifying neurodevelopmental impairments at age two years in children born <30 weeks' gestation.

Methods Children born <30 weeks' gestation, attending a routine NHS follow-up assessment at age 20–28 months from term, in 13 participating hospitals were invited to join the study. Data on neurodevelopmental outcome were recorded in a standardised format developed by the Thames Regional Perinatal Outcomes Group and entered into the electronic clinical record on the Badgernet platform. Data were extracted quarterly and held in the National Neonatal Research Database at the Neonatal Data Analysis Unit. Based on a predefined algorithm, each participant was classified as having 'no', 'mild-moderate' or 'severe' neurodevelopmental impairment in cognitive, language and motor domains. Participants also received a formal neurodevelopmental assessment conducted to research standards by a single assessor using the 3rd edition of the Bayley Scales (Bayley-III). The sensitivity and specificity of NHS assessments in identifying children with any impairment (Bayley-III scores <85) or severe impairment (Bayley-III scores <70) in each of the 3 domains were calculated.

Results One hundred and ninety children born at a median (IQR) gestational age of 27 (26–29) weeks participated. The validity of routine assessment in identifying children with no impairment was high across all domains (specificities 83.9–100.0% for no impairment; 96.6–100.0% for no severe impairment). The sensitivity of routine assessment in identifying gross motor impairment was also high, particularly for severe impairment. However, the identification of cognitive impairments (sensitivities (95% CI) were 69.7% (55.1–84.3%) for any impairment; 28.6% (5.0–52.2%) for severe impairment) and language impairment (53.2% (42.0–64.5%) for any impairment; 42.9% (14.2–71.5%) for severe impairment) were poor.

Conclusions Routine NHS assessments identify children with severe motor impairment with good specificity but lack adequate sensitivity in cognitive and language domains, areas where early intervention improves educational and social outcomes. About 7000 children are born ≤30 weeks' gestation each year in the UK. This study emphasised that follow-up assessments should performed by appropriately trained personnel using sensitive and