G194(P) VARIATIONS IN IMPLEMENTATION OF NICE GUIDELINE: ANTIBIOTICS FOR EARLY-ONSET NEONATAL INFECTION

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Background Variations between neonatal units in implementation of the Early Onset Neonatal Sepsis (EONS) National Institute for Health and Care Excellence (NICE) guideline CG149 were observed by trainees moving between units.

Aim To explore variations in implementation of the NICE EONS guideline within the region, and identify quality improvement steps to improve implementation within shared network guidelines.

Method Multicentre audit of compliance with the EONS NICE guideline was undertaken involving eight neonatal units within the two neonatal networks in the region. All neonates (≥34 weeks gestation), suspected of having EONS were prospectively audited over a consecutive four-week period between October 2016 – January 2017. Anonymised patient data was recorded on a standardised proforma.

Results 320 neonates had suspected EONS. 53% were male with a mean ±SD gestation of 38.4±2.1 weeks. 93 (29%) did not fulfil criteria for initiation of antibiotics. 313 (98%) received Benzylpenicillin and 310 (97%) Gentamicin. 305 (95%) had a second C-reactive protein (CRP) level, but only 203 (67%) taken at 18–24 hours. 203/303 (67%) received first antibiotic dose within 1 hour from decision to treat, this varied between units from 25.8% to 91.7%. Blood culture result was unavailable in 98 (30%) by the NICE 36 hour target, this varied from 0% to 96.8% being available at 36 hours. There was one significant positive blood culture for Group B Streptococcus.

Conclusions NICE EONS guideline is variably implemented. The units which performed better, have various toolkits, these include; use of an EONS proforma or electronic form within Badger.net, use of a drug chart with specific boxes for time of decision to treat, first dose of antibiotics administered and if greater than one hour then why, improved collaboration with microbiology laboratories to facilitate timely reporting of blood culture results and additional training on EONS. By implementing these changes then re-auditing we hope to see enhanced adherence to the EONS NICE guideline.

G195(P) TREATMENT OF EXTRAVASATION INJURIES IN INFANTS AND YOUNG CHILDREN: A SYSTEMATIC SCOPING REVIEW AND SURVEY OF NHS PRACTICE

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Objectives To identify which treatments may be best for treating extravasation injuries in infants and young children.

Methods In a systematic scoping review we searched twelve electronic bibliographic databases and clinical trial registries to identify published and unpublished studies in any language. Eligible studies were of children (aged <18 years) with an extravasation injury associated with central or peripheral intravenous access. Any interventions or comparators were eligible. The outcomes of interest included wound healing times, infection, pain, scarring, contractures, functional impairment, and requirement for surgery.

In a survey of practice, a questionnaire was piloted among colleagues and distributed to NHS staff at neonatal units, paediatric intensive care units and principal oncology/haematology units nationwide.

Results The evidence was mostly comprised of small, retrospective, uncontrolled group studies or case reports, covering a wide range of interventions including conservative management approaches, saline flush-out techniques with or without prior hyaluronidase, hyaluronidase (without flush-out), artificial skin treatments, debridement and plastic surgery. Few studies graded injury severity and the results sections and outcomes reported in most studies were limited. There was heterogeneity across study populations though most studies were in neonates. Some of the better evidence (in terms of study size and a prospective design) related to studies of saline flush-out techniques.

The NHS survey yielded 63 responses from hospital units across the UK. Results indicated that although most units had written treatment guidelines, few included an injury severity grading system. The most frequently used interventions were elevation of the affected area and analgesics. Warm or cold compresses were rarely used. Saline wash-out treatments were regularly used in about half of neonatal units. Most responders thought a randomised controlled trial might be viable, though results varied greatly by setting.

Conclusions There is uncertainty about which treatments are most promising, particularly with respect to treating earlier-stage injuries. Saline flush-out techniques and conservative management approaches are commonly used and may be suitable for evaluation in trials. Conventional randomised trials may be difficult to perform, although a randomised registry trial may be a suitable alternative.

G196(P) NEONATAL OUTCOME FOLLOWING MATERNAL ANTIDEPRESSANTS USE

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Aims The objectives of this study were to calculate mental health conditions prevalence in pregnancy, compare adverse neonatal outcomes in relation to mental health status and antidepressants use in pregnancy and evaluate maternal smoking association with mental health conditions.

Methods A retrospective cohort study of babies born between January 1 st and December 31 st, 2016 at Cwm Taf University Health Board. Data was extracted from Maternal Information Technology System (MITS) and Badgernet neonatal database.

Statistical analyses were performed using $p<0.05$ to indicate statistical significance. Odds ratios and 95% confidence intervals (CI) were calculated to compare outcome rates between study groups.