1. 1st degree family history of DDH: mother, father, brother, sister only

Use the UK DDH screening programme question: ‘Is there anyone in the baby’s close family, i.e. mother, father, brother or sister, who has had a hip problem that started when they were a baby or young child that needed treatment with a splint, harness or operation?’

2. The baby has been a breech presentation:
   • Babies who are breech presentation at or after 36 weeks gestation, regardless of the presentation at birth or final mode of delivery
   • In multiple births all babies should be screened if any one of the babies is a breech presentation

Additional Factors from local guidelines
• Packaging deformity: Torticollis, Congenital Talipes Equinovarus
• T21 and other congenital syndromes
• Consultant decision

Methods
• Retrospective review of a convenient sample of 100 charts on the Postnatal ward in Nov 2021, examined documentation of the 4 aforementioned DDH risk factors: family history, presentation at 36+ gestation (including if twin of breech), presence of packaging deformity and presence of a congenital syndrome.
• A simple Excel Spreadsheet on a hospital PC was used to analyse the data. No unique patient identifiers were included in the audit sheet, and thus no coding was required.

Results
100 Charts on PNW:
• FHx: 58%
• Presentation at 36+: 8%
• Packaging deformities: 0%
• Congenital Syndromes: 0%
• A sticker was designed to serve as a checklist for the risk factors and made available to the team to streamline proper documentation (figure 1).
• A teaching session was conducted via zoom and the recommendations were also distributed in the NCHD messaging group.

Reaudit in Jan 2022, further 100 charts surveyed showed improvement in documentation of all risk factors as below:
- FHx: 89%
- Presentation at 36+: 76%
- Packaging deformities: 66%
- Congenital Syndromes: 66%

Reaudit in Jan 2022, further 100 charts surveyed showed improvement in documentation of all risk factors as below (see figure 2):

Abstract 619 Figure 1 Sticker containing the risk factor checklist, to be applied to the baby check page of each chart

Abstract 619 Figure 2 Percentages of documentation of individual risk factor during the first and second cycles of the audit

Conclusion
• Proper documentation of DDH risk factors was poor prior to this intervention; this may be due to limited space on the page and inadequate understanding of the individual factors.
• Simple improvement measures such as designing a checklist and raising awareness through a virtual teaching session as well the messaging group have significantly improved the quality of documentation in the postnatal ward.
• Providing individual teaching may improve documentation further if a 3rd cycle is to be undertaken.

Abstracts

IMPROVED RESPIRATORY PARAMETERS WITH SKIN-TO-SKIN CONTACT IN EXTREMELY PREMATURE INFANTS

Ana Serrano-Llop, Laura de Rooy, Peter Cornuaud, Donovan Duffy, Anay Kulkarni, Sandeep Shetty.

1 Neonatal Unit, St George’s Hospital NHS Foundation Trust, London, UK; 2 St George’s University of London, London

Aims
During neurally adjusted ventilatory assist (NAVA)/non-invasive (NIV)-NAVA, a modified nasogastric feeding tube with electrodes monitors the electrical activity of the diaphragm (Edi). The Edi waveform determines the delivered pressure from the ventilator. Skin-to-skin contact (SSC) is widely recommended and is part of standard neonatal care worldwide.

Our aim was to determine if SSC improved respiratory parameters in premature infants with evolving or established Bronchopulmonary Dysplasia (BPD).

Methods
Prospective observational study was undertaken in the Neonatal Unit at St George’s Hospital, London. All infants born premature (less than 32 weeks of gestation) who had an indwelling Edi catheter to deliver NAVA mode of ventilation were included in the study. SSC was offered to parents as per standard practice on the neonatal unit. Data were downloaded from the ventilator and respiratory parameters pre-SSC (when baby in the incubator) were compared to best SSC (baby noted to be completely/most settled/asleep by the parent or by the bedside nurse) and end SSC (just before end of SSC). Data compared were an average of five minutes continuous readings obtained from Edi catheter for pre, best and end SSC. All infants received respiratory support using SERVO-n neonatal ventilator, Getinge. Respiratory parameters compared were peak electrical activity of the diaphragm (peak Edi),
Achieving Therapeutic Vancomycin Levels in Neonates: A Quality Improvement Initiative

Aims Background. Vancomycin is commonly used antibiotic in the neonatal unit. Its efficacy correlates directly with the duration of bacterial exposure at therapeutic levels. In our unit, we found a very low proportion (29.5%) of vancomycin levels in target therapeutic levels (TTL). Continuous vancomycin infusion has been reported to achieve a higher proportion of TTL in the literature.

Objectives. The primary objective of this quality improvement project was to improve the proportion of neonates reaching the vancomycin TTL. Our secondary objectives were to identify factors associated with high or low vancomycin levels and the incidence of renal failure in infants receiving vancomycin.

Methods. Quality Improvement Interventions. A retrospective audit (September 2017-September 2018) was undertaken to define the baseline TTL with intermittent vancomycin dosing regimen (Pre-intervention). Following this, in July 2019, a continuous infusion vancomycin regimen using 20 mg/kg (high dose) loading followed by maintenance dose was introduced in clinical practice using quality improvement (QI) methods (post-intervention phase 1). The data was reaudited (July 2019-April 2020) and found to have higher proportion of infants had levels above TTL. Following this, continuous vancomycin loading dose was decreased to 10 mg/kg (low dose) subsequently in May 2020 (Post-intervention phase 2). The vancomycin TTL were again reaudited (May 2020-April 2021). We introduced the following key QI strategies: literature review, adapting guidelines from other trusts, staff education, monthly vancomycin Kardex audits, on-site pharmacy support and development of easy access unit guidelines.

Results. 135 infants received vancomycin treatment during the QI period, providing 328 vancomycin samples. Seventy-two of these infants received intermittent dosing, and 63 infants received continuous vancomycin infusions. Table 1 presents the clinical and demographic factors for infants who received vancomycin during the QI period. There were 38 blood culture-positive cases. Coagulase-negative staphylococcus (74%) is the most common organism grown in blood culture, followed by E. coli (11%) and other organisms (15%). Table 2 compares vancomycin levels between all intermittent versus continuous vancomycin regimens (post-intervention phase 1+2, phase 1, phase 2). Consistently continuous vancomycin levels achieved a higher proportion of vancomycin TTL (approximately 50%).

Conclusion. Using QI methodology, we successfully integrated continuous vancomycin regimen into our practice. We achieved a higher proportion of vancomycin levels in the therapeutic range using continuous vancomycin infusion. With a low loading dose (10mg/kg) continuous vancomycin infusion regimen, a higher proportion of samples are achieving target therapeutic levels. Also, with the same regime, proportions of the sample below the target therapeutic range were lower, and

Abstract 634 Table 1 Clinical and demographic factors for infants who received vancomycin the QI period

Abstract 634 Table 2 Comparison of vancomycin levels between all intermittent versus continuous (high and low loading dose) regimen