G392(P) INTRAVENOUS ANTIBIOTIC USE FOR SUSPECTED EARLY-ONSET BACTERIAL INFECTION IN HEALTHY NEONATES: A SINGLE-CENTRE CLOSED LOOP AUDIT

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Aims We aimed to identify and reduce the number of healthy neonates started on intravenous antibiotics for suspected early-onset bacterial infection in a district general hospital, and ensure that practice was commensurate with that set out in the relevant NICE (National Institute for Health and Care Excellence) guidance (CG149).

Methods A retrospective audit was performed using the clinical notes, drug charts and pathology reports of neonates who had been started on antibiotics in two 3 week periods, before and after intervention. The intervention was multifaceted and included the introduction of a neonatal sepsis pro forma and decision aid, (P)s in relevant clinical areas, and teaching for junior and senior paediatricians.

Results The number of neonates commenced on antibiotics for suspected infection fell by 43% from 42 to 24 neonates, and compliance with absolute NICE criteria for commencement of antibiotics improved from 69% to 93%. 76% of neonates in cycle 1 met NICE guidance for consideration of cessation of antibiotics at 36 hours but 77% of these neonates received more than 48 hours of antibiotics; similarly, in cycle 2, 73% of neonates warranted consideration of cessation of antibiotics at 36 hours, but 91% of these received more than 48 hours of antibiotic treatment in total. In 77% of cases in cycle 1 and 82% of cases in cycle 2, the documented rationale for continuing antibiotics past 36 hours in these healthy neonates was that blood culture results had not yet been reported.

Conclusion Our intervention was effective in reducing the number of healthy neonates started on intravenous antibiotics and improving compliance with NICE guidance for commencement of antibiotics. The proportion of neonates meriting a short duration of antibiotics was high despite improvement in following approved criteria, suggesting that there may be room for these criteria to be revised to capture fewer healthy neonates. However, our intervention was not successful in reducing duration of antibiotic use in healthy neonates. Establishing processes to accelerate pathology reporting could be the focus of further interventions to improve compliance with national guidelines and minimise unnecessary antibiotic exposure to healthy neonates.

G393(P) JUST A 'SPOON FULL OF SUGAR' HELPS THE BREASTFEEDING RATES GO UP

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Aim A quality improvement initiative to improve the breastfeeding rates in the Trust to impact on the low breastfeeding rates in Northern Ireland.

Method Northern Ireland currently has the lowest breastfeeding rates in the UK. Only 64% of mothers begin breastfeeding here, compared to 83% in England, 74% in Scotland and 71% in Wales. Mothers in Northern Ireland, who choose to breastfeed, also do so for a shorter period than breastfeeding

mothers elsewhere in the UK. As a quality improvement (QI) strategy the areas of point of care that could be improved in order to advocate breastfeeding and optimise not only uptake but also the longevity of breastfeeding at point of discharge from hospital were analysed. The focus of the QI was to change the neonatal hypoglycaemia protocol to eliminate the use of milk formula as a substitute for breastmilk for infants with transient hypoglycaemia. Through critical analysis of the evidence the Trust guideline was replaced with a guideline that replace milk formula with 40% Glucose gel in combination with breastmilk/breastfeeding to improve neonatal hypoglycaemia management.

Results With the removal of milk formula as the option to treat neonatal hypoglycaemia, mothers were not made to feel inadequate when trying to establish breastfeeding. The use of the 40% glucose gel and its ease of use and administration has been well received by midwives, doctors and parents. Breastfeeding rates have increased at the point of discharge from hospital. There has been significant savings within the Trust due to the reduction in milk formula consumption. Parents reported feelings of being 'supported' and 'empowered' when commencing and continuing breastfeeding. A reduction in neonatal admission for neonatal hypoglycaemia was apparent as a secondary outcome due to the change in guideline and intervention.

Conclusion Glucose gel use in combination with breastfeeding improves the support provided to breastfeeding mothers, leading to an increase of breastfeeding rates at the point of discharge from hospital. The successful quality improvement intervention has seen an improvement across two health directorates, Women and Child Health and Paediatrics. There was a reduction in neonatal admissions for neonatal hypoglycaemia with improvement outcomes for infants as breastfeeding rates improve.

G394(P) LEARNING FROM PICU TRANSFERS FROM A PAEDIATRIC EMERGENCY DEPARTMENT AND PAEDIATRIC WARD

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Aims Local hospital Paediatricians often rely on updates from retrieval services for information about their patients transferred to Paediatric intensive care units (PICU). This quality improvement project aimed to increase local hospital knowledge about their PICU transfers and identify areas for improvement to enhance patient safety and clinical care.

Methods In November 2016 a new incident log was implemented to collect data on PICU transfers from the Emergency Department and Paediatric ward of one district general hospital. Between January and September 2017, a multi-disciplinary team met monthly to review the Electronic Document and Records Management (EDRM) system of all patients transferred to PICU in the previous month(s). The multidisciplinary team included medical and nursing representation from Paediatric, Emergency and Anaesthetic departments and the outreach resuscitation team. EDRM was reviewed using an adapted RECALL (Rapid Evaluation Cardiorespiratory Arrest with Lessons for Learning) tool. The RECALL tool provided a structured template for retrospective case note review of

patient management, including monitoring, escalation and medical reviews, in addition to staffing issues, debriefs and parental feedback. Areas for improvement were shared across services by monthly newsletters and updates at teaching sessions and departmental risk meetings.

Results Between November 2016 and September 2017, 26 children aged 2 days to 15 years were transferred to PICU, of which 69% were from the Emergency Department. The primary problem was respiratory failure in 50% of cases.

In the first 6 months many cases had incomplete Paediatric Early Warning Score (PEWS) monitoring and/or poor escalation of care documentation. Shared learning and teaching on PEWS resulted in recent cases of exemplary practice. Initially EDRM was incomplete for patients moved to theatre from the emergency department for intubation. Recommendation to scan notes prior to moving resulted in complete EDRM records in all subsequent reviews. The multidisciplinary team recognised that parental views remained unheard and so initiated parents being offered the Friends and Family feedback card post-PICU repatriation.

Conclusion Shared learning from regular structured multidisciplinary case note reviews of PICU transfers results in improvements in the management, safety and documentation of children presenting with critical illness.

G395(P) AN INNOVATIVE APP DESIGNED TO REDUCE HEALTHCARE-RELATED ANXIETY IN YOUNG CHILDREN

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Aims To create an interactive App that reduces healthcare associated anxiety in young children through education and play.

Method A significant number of children have contact with healthcare in the UK every year, with 3 million children attending A and E, and 1 in 10–15 children being admitted to hospital. The literature suggests that 20% of children admitted to hospital suffer some form of emotional or behavioural disturbance. Play is key to childhood development and learning, and is practiced across healthcare settings. Psychological preparation for healthcare experiences has been shown to help reduce patient and parental anxiety. With ever-increasing budget restrictions within the NHS, innovative ideas are required to tackle this problem alongside invaluable play therapy resources.

We created an interactive App for children aged 4–8 years designed to ameliorate distress and improve paediatric healthcare experiences. It familiarises children with hospital environments and the common scenarios they may encounter through interactive stories, games and animations.

A patient and carer survey was undertaken following Phase 1 development of the app (a single character story with animations and games). Twenty children aged 4–8 years were selected at random to play on the App (for up to 20 min) with carer supervision. Following this standardised questionnaires were completed by the child (visual rating scales) and carer to assess educational value and usability.

Results The overall feedback from study participants was good with 100% reporting that they would download the final product and 95% believing that the completed App would be useful for educating children about hospitals.

Since the release of the App there has been 350 downloads within the first two weeks and positive feedback received via App ratings, social media messages and emails.

Conclusions New and innovative ideas are imperative to develop NHS services for the future. This is an illustration of how digital technology using play, can help to improve Paediatric healthcare experiences and potentially increase the efficiency of a service. A larger study of the beneficial effects of this App is planned following its wider distribution within the NHS.

G396(P) NEONATAL 'VIRTUAL' CLINIC: A QUALITY IMPROVEMENT PROJECT

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Aims To improve the follow up of outstanding jobs from the neonatal unit and post-natal ward. Outstanding jobs were often being left for prolonged periods with no dedicated person to follow up and with no record of jobs having been completed. This resulted in poor patient care, inadequate communication and potential for clinical risk.

Methods A quality improvement project was initiated and a plan, study, do, act cycle was used. Initial review showed that outstanding jobs were put onto the bottom of the clinical handover list and random junior doctors were irregularly asked to review it during their clinical time. Some jobs had been present for more than a 3 month period with most jobs having inadequate information detailing reasons required for follow up. A number of jobs were inappropriate for junior doctor follow up thereby identifying a lack of education and under utilisation of pathways already in place. We set up a weekly neonatal 'virtual' clinic and amended the rota in conjunction with management and previously allocated admin time for the registrars. Aims and rules of the list were created and the junior doctors were educated as to the changes. A registrar was assigned during their admin time to run a 'virtual' phone clinic, once a week, where they would chase results and contact parents and/or other health professionals whilst documenting their actions on electronic patient records.

Results After a 12 month period, there were significantly fewer outstanding jobs with no jobs waiting longer than 3 months and all jobs deemed appropriate for 'virtual' clinic follow up. There were no clinical risk incidents. Families have informally expressed their satisfaction with having direct hospital contact and promises made as an inpatient fulfilled. This implementation has become a permanent change within the neonatal department.

Conclusion This quality improvement initiative shows that patients can be safely followed up 'virtually.' Communication and documentation between health professionals needs to be sound and of high quality. This can improve the quality of care delivered and improve satisfaction amongst our patients and families.