

91 **A RETROSPECTIVE REVIEW OF CLINICAL PRACTICE TO IMPLEMENT A TUBE FEED WITH FOOD-DERIVED INGREDIENTS (TF-FDI) IN A SPECIALIST CHILDREN'S HOSPITAL**

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Background Blended diets (BD) are increasingly used by parents to feed their tube-dependent children (1). In an acute clinical setting, a BD may not be suitable due to post-pyloric feeding and fluid restrictions (3).

Methods The aim of this single-centre retrospective study was to evaluate the use and effectiveness of children who commenced a TF-FDI Compleat® Paediatric (1.2kcal/ml), that contains 14% rehydrated food (1g fibre in 100ml). Demographic and feeding related data were collected from electronic medical records between December 2022 to July 2023.

Results Data was collected on 59 children, median age six years (IQR 2, 12). The mean feed volume: 824ml (270 SD); 8.5g fibre (1.4SD). Most children received FBF via gastrostomy 33/59 (56%), followed by 22/59 (37%) via nasogastric; and 4 via jejunum 4/59 (7%). Twelve (20%) of children commenced FBF due to families requesting a blended diet and 14/59 (24%) started FBF as a First-line formula. Prior to implementing a FBF the most common reason dietitians changed formula was to improve gastrointestinal symptoms 33/59 (56%): diarrhoea 19/33 (57%); Constipation 8/33 (24%) and upper GI complaints 6/33 (18%). Dietitians reported a significant improvement in gastrointestinal symptoms after implementing FBF: diarrhoea improved in 17/19 (89%) children; constipation in 6/8 (75%), and upper GI in 5/6 (83%). Prior to dietitians implementing an FBF 19/33 (57%) children were receiving a standard whole protein formula; 5/33 (15%) children were receiving an amino acid-based formula and 9/33 (27%) a peptide-based formula. 31 children were discharged in to the community on FBF.

Conclusion A TF-FDI is a suitable alternative to BD in an acute clinical setting. Furthermore, TF-FDI can be considered in children who are experiencing gastrointestinal symptoms on a hydrolysed or amino acid feed. TF-FDI was well tolerated as a bolus or continuous feed.

93 **IMPROVEMENTS MADE TO THE TIMELINESS OF RECORDING NURSING OBSERVATIONS ON ELEPHANT WARD**

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Background This project aimed to reduce the length of time it was taking for nurses to record their observations onto the patient's electronic health record. Delays in recording nursing observations might mean the clinical condition of the child is not escalated as quickly as it could be, therefore, placing our patients at unnecessary risk. We wanted more patients to have uneventful journeys. The project looked at behaviours contributing to these delays in documentation.

Methods Changes in behaviour were brought about through continuous improvement and through ward-based improvement meetings. Identifying ward champions and teaching staff

about why they were making changes was essential to the process.

We started by learning from other wards about inserting the exact time of doing the observations rather than the automatically generated time. I continually met with staff to discuss barriers. The majority had experienced equipment and technology failure which cost time. A future improvement which they wanted to work towards was getting better at reporting ICT problems.

Results We started this work in July 2022. We were at a baseline of 61% of observations being recorded within 30 minutes. When observations were being entered for the correct time, we moved to 66% and with the ICT changes we have been sustaining 72% since the beginning of 2023.

This work became important to staff because they associated it with patient safety and the impact was wider than their individual workload. I witnessed a transformation in their attitudes as they began to display genuine curiosity about what they could do about the issues identified.

Conclusion I will adopt Quality Improvement methodology in the future because the results of this project reinforced how useful it is to understand why something is happening. Sharing the 'why' is helpful for staff to be able to make improvements to their behaviour.

94 **IMPACT OF EARLY EDUCATION IN CHILDREN COMMENCING ALL TREATMENT ON PHYSIOTHERAPY REFERRALS; A FOLLOW UP AUDIT**

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Background An increase in the number of outpatient physiotherapy referrals for patients with Acute Lymphoblastic Leukaemia (ALL) was noticed between 2019 and 2021; a significant number of these were due to expected side-effects of steroid induction treatment.

An audit was carried out in 2022 to look at the impact of early education provision in children following ALL diagnosis. The aim to see whether this reduced the impact of Induction chemotherapy side effects, and/or increase understanding for parents of expected side effects of treatment, thereby reducing the number of physiotherapy referrals and improving staffing resources. This concluded that there was a small reduction in the number of referrals. Positive feedback from Physiotherapists and families involved was received, however, timing of information delivery at diagnosis was suboptimal.

An audit was repeated to determine whether providing education 2 weeks post-diagnosis was a more suitable time to families, thereby having a more significant impact to the number of physiotherapy referrals.

Method Our treatment group was all children with newly diagnosed ALL between Induction and Consolidation chemotherapy treatment blocks from April 2022 – July 2023. Education was provided to these group 2 weeks post-diagnosis and the number of physiotherapy referrals audited. Comparison was made to the number of referrals with no intervention group (January 2021 -September 2021) and with intervention at diagnosis group (September 2021-April 2022).

Results 61% of no intervention group were referred to physiotherapy, compared to 52% who were provided early education

information at diagnosis, and 38% who were provided information 2 weeks post-diagnosis; this audit revealed a 23% reduction in referrals compared to the no intervention group. Positive feedback was received from families and Physiotherapists involved regarding content and timing of education delivery.

Conclusion Providing early education 2 weeks post-diagnosis reduced the number of physiotherapy referrals between Induction and end of Consolidation.

95 PICTURE – COMPARISON OF OUTCOMES IN PATIENTS DIAGNOSED WITH EMPYEMA WITH AND WITHOUT GROUP A STREPTOCOCCUS

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Introduction Group A Streptococcus (GAS) causes severe infections in children. Winter 2022-2023 saw an unusually high number of admissions for Paediatric pleural empyema in the UK and an association with GAS infection was noted. An analysis of outcomes including length of hospital stay in patients with empyema with or without GAS would help clinicians counsel families and support planning care.

Methods We collaborated with clinicians and implemented a proof-of-concept analysis using the clinical informatics platform PICTURE developed at Great Ormond Street Hospital. The analysis was based on Electronic Health Record (EHR) data from 01/05/2019 to 31/03/2023, extracted using Digital Research Environment processes.

We used PICTURE's flexible cohort builder to define the two patient cohorts, empyema with GAS and empyema without GAS, by searching the ICD-10 diagnosis data for 'empyema' and 'pyothorax' and the microbiology test data for GAS positive results. We used PICTURE's analytics components including Kruskal-Wallis tests to compare the distributions of four outcomes: days on intravenous antibiotics, days with a documented fever (temperature greater than or equal to 38 degrees Celsius), length of stay (days) in the Paediatric Intensive Care Unit (PICU), and length of stay (days) in hospital, with alpha 0.05.

Results We identified seven patients with empyema with GAS positive result and 124 patients with empyema without GAS. Median number of days on intravenous antibiotics was 16 vs 11, number of days with fever 11 vs 4, number of days in PICU 4.6 vs 6.3, number of days at hospital 19 vs 12.5. None of the comparisons were statistically significant.

Conclusions This proof-of-concept study demonstrates that we can use PICTURE's flexible cohort builder and analytics components to efficiently generate insights to support clinical care, as well as to inform patients and families.

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96 PICTURE LOCATION – USING HOME LOCATION DATA FROM THE ELECTRONIC HEALTH RECORD FOR RESEARCH AND IMPROVED CLINICAL CARE

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Introduction Home location data analyses can support research and help improve patient experience. The home location of Great Ormond Street Hospital (GOSH) patients, stored in the Electronic Health Record (EHR), can be used to generate the geographical distribution of disease and symptoms, and explore associations between cohorts and external data such as the Index of Multiple Deprivation (IMD).

Methods We have made home location data available to PICTURE, the GOSH DRIVE clinical informatics platform, and have linked it to IMD data. We used the cohort builder and analytics capabilities of PICTURE to generate location maps and summarise and visualise the IMD distribution and the time and distance between the patients' home and GOSH.

The standard EHR data extraction processes developed by the GOSH Digital Research Environment (DRE) and used by PICTURE as well as PICTURE's generalisable components allowed us to generate location-based analyses for a wide range of cohorts.

We present a proof-of-concept (POC) application using a cohort of patients seen at the Nephrology specialty. The POC version was developed in R and Shiny using Leaflet and the OpenStreetMap-Based Routing Service OSRM.

Results In the GOSH nephrology cohort, the median (Q1-Q3) travel distance and travel time between patients' home district and GOSH was 64km (23-125) and 60 minutes (31-99), respectively. Out of 779 patients with home location data that could be mapped to the IMD data, 138 (17.7%) lived in regions that fall within the 3rd IMD decile (1st being the most deprived), the most common decile in this cohort.

Conclusion This POC application of the PICTURE Location component demonstrates that we can use PICTURE to generate reproducible location-based analyses and potentially insightful outputs. Further work will focus on a wider range of applications and on linking the home location to more external data sources including air quality data.

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98 WHAT IS NEXT? PAEDIATRIC PATIENT'S RESEARCH TRANSITION ON CLINICAL TRIALS

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Background The NHS and its partners are involved in cutting edge research and clinical trials. But what does it mean for a patient when a clinical trial comes to end? This poster will highlight the areas of transition involved in clinical trials, discuss options for when a trial ends and lastly outline future processes for developing and educating the wider research community.