

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

<sup>1</sup>Eleni Pissaridou, <sup>1</sup>Stuart A Bowyer, <sup>1</sup>Ewart J Sheldon, <sup>1</sup>John Booth, <sup>1</sup>Daniel Key, <sup>1</sup>Neil J Sebire, <sup>2</sup>Rossa Brugh. <sup>1</sup>DRIVE, Great Ormond Street Hospital for Children NHS Foundation Trust, UK; <sup>2</sup>DRIVE, Great Ormond Street Hospital for Children NHS Foundation Trust, UK and Respiratory Medicine, Great Ormond Street Hospital for Children NHS Foundation Trust, UK

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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

Eleni Pissaridou, Stuart A Bowyer, Ewart J Sheldon, John Booth, Daniel Key, Neil J Sebire. DRIVE, Great Ormond Street Hospital for Children NHS Foundation Trust, UK

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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

Waffa Girshab. Great Ormond Street Hospital for Children NHS Foundation Trust, UK

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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.