Methods This was a longitudinal hospital based study of 338 children aged 1 month to 18 years admitted to the Jos University Teaching Hospital, Plateau state via the Emergency Paediatric Unit (EPU), from August to November 2018. All children were screened for AKI using the 'Paediatric Risk, Injury, Failure, Loss, End stage renal disease' (pRIFLE) diagnosis criteria after obtaining the estimated Creatinine Clearance (eCCL) and urine output. The participants were assessed daily on admission until discharge or death. Normative values for eCCL reference were used for all children.

Data were stored on Microsoft excel spreadsheet then transported to Statistical Package for Social Sciences (SPSS) for analysis. Mean and frequencies were computed and association of risk factors for AKI occurrence and output were calculated using chi-square and odds ratio.

Significant risk factors were further subjected multiple logistic regressions. P-value of less than 0.5 was significant.

Results The prevalence of AKI from the study was 21.30%. The study diagnosed more participants (50%) in the least severe 'R' stage.

Independent risk factors for the development of AKI identified include, sepsis, (p-value <0.001, OR 5.56, CI 2.57–12.05), primary kidney disease (Nephrotic syndrome and Acute Glomerulonephritis) (p-value <0.001, OR 15.04, CI 5.37–42.13), heart failure (p-value <0.001, OR 8.14, CI 3.38–19.59), and chronic kidney disease (p-value 0.021, OR 14.38, CI 1.49–138.69).

The mortality rate from AKI was 20.83%. Among discharges, 82.46% of the discharged recovered fully from AKI while 17.54% had residual kidney injury.

Sepsis (p-value <0.001, OR 8.36, CI 2.38–29.46) and severe stage of AKI (p-value <0.001, OR 14.93, CI 3.64–76.92) were the most important risk factors for poor outcome in children with AKI.

Conclusions From this study therefore it can be said that AKI is a disease that is commonly associated with hospital admission (21.3%), though it is preventable and treatable when recognised early due to the high recovery rate with earlier stages of the disease. More worrisome is the high mortality rate 20.83% which contributed to 78.95% of total hospital mortality in the admitted children. Screening for risk factors early at the point of admission will prevent development of the disease and progression to severe stage.

British Association of Perinatal Medicine and Neonatal Society

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A DGH EXPERIENCE OF COOLING IN HYPOXIC ISCHEMIC ENCEPHALOPATHY

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Background Hypoxic ischaemic encephalopathy (HIE) is a serious complication arising from impaired cerebral oxygenation in the perinatal period, which confers a high rate of mortality, morbidity and developmental delay. The Total Body Cooling (TOBY) Trial showed that moderate-induced hypothermia improves survival and neurological outcomes, and provides national criteria for patient cooling. We have been managing babies with therapeutic hypothermia in our unit since 2009.

Here we report our single-centre District General Hospital experience of managing HIE over an 8-year period with two year follow up data.

Objectives To examine the 2 year developmental outcomes for our cohort of patients with HIE, since cooling was introduced at our centre in 2009.

Methods A retrospective review of patients with a coded diagnosis of HIE managed at St. Helier Hospital was performed via electronic healthcare records. All patients treated between 1/10/2009 and 1/10/2017 were included for analysis. Non electronic records were then used to obtain detailed information about each patient at the time of HIE diagnosis and follow up at 2 years of age.

Results After manual exclusion of non-HIE cases (n=12), 55 patients with a coded diagnosis of HIE were identified and included in the analysis. The mean gestational age was 39.3 weeks (range 32–42), and most were born at our centre (76%). At the time of review, 47 (85%) were alive and 8 (16%) had died. 28 patients (51%) received cooling, 25 of which were cooled at our centre. In this latter group, 24 (96%) met both TOBY criteria A and B. The mean pH of cooled babies was 7.001 (range 6.53–7.38), and the median Apgar Score at 1 minute was 2 (range 0–9), at 5 minutes was 4 (range 0–10) and 10 minute was 6 (range 0–10). Of the 18 patients who were cooled in our trust with local follow-up data available, 8 (44%) had normal motor, speech and language development at 2 years, and 10 (55%) had abnormal development in one or both domains which reflects the original TOBY data (where survival without a neurologic abnormality was 44% at 18 months in the cooled group). Of patients who did not meet criteria, were not cooled and had local follow up (n=19), 6 (31%) had abnormal developmental outcomes at 2 years with 3 (15.7%) of children demonstrating both motor and speech delay.

Conclusions Looking back at our decade of experience since the introduction of cooling, our analysis shows that the outcomes from the original TOBY trial translate well to a DGH setting. Although we were compliant with TOBY criteria and had similar outcomes for our cooled babies, we found that over 8 years, 33% of patients who were appropriately not cooled had abnormal developmental outcomes at 2 years. Is there a case for cooling babies below the threshold set by the TOBY trial?

Association of Paediatric Emergency Medicine

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UNDERSTANDING RESPONSES OF PAEDIATRIC EMERGENCY DEPARTMENTS TO THE FIRST WAVE OF THE COVID-19 PANDEMIC – A PAN-EUROPEAN PERSPECTIVE

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Background The year 2020 saw unparalleled global health care service upheaval in response to the CoVID-19 pandemic. Insights into the European Paediatric Emergency Department (PED) approach to organising health care for children with acute illness in response to infectious pandemics and global disasters are lacking.

Objectives This study aimed to understand the types of changes in PED service structure and care delivery which were implemented in response to the first wave of CoVID-19.

Methods This multinational, cross sectional European survey was distributed online via the Research Electronic Data Capture (REDCap) platform as part of the EPISODES (the epidemiology, severity and outcomes of children presenting to emergency departments across Europe during the initial wave of the SARS-COV-2 pandemic) study.

The survey explored baseline hospital demographics and pre and during CoVID-19 changes; focussing predominantly on service provision and referral pathways.

Results There were 39 study sites in 18 countries; 97% (n=38) of sites remained open during the pandemic. There were 6 UK based sites in 5 cities, the largest represented country within the survey. The capacity of 18/28 (68%) short-stay units (SSU) decreased, in contrast 2 units increased their capacity. All UK sites had SSUs with 5 (83%) reporting decreased or no availability during the pandemic period. As a result of restructuring of local healthcare services 12/39 (31%) sites acted as referral units from other hospitals which treated paediatric patients in non-Covid times.

There was minimal change to the availability of consultant telephone advice services, direct or indirect consultant supervision or responsible specialists within the emergency departments. There was an overall decrease of 8% (n=3) in redirection of children with underlying co-morbidities away from ED during the pandemic.

The number of changes implemented in the department was not directly related to the peak 14 day incidence of SARS-CoV-2 reported nationally during the first wave.

Conclusions Overall, there was minimal change to service organisation or delivery across PEDs during the first wave of the CoVID-19 pandemic. Combining the small changes made by some and learning from large scale changes adopted by a few may be essential in future disaster management.

British Paediatric Allergy Immunity and Infection Group

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A RETROSPECTIVE STUDY EXAMINING THE CLINICAL SIGNIFICANCE OF TESTING RESPIRATORY PANELS IN CHILDREN WHO PRESENTED TO THE PEDIATRIC SERVICES IN 2019

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Background Respiratory tract infections are a leading cause of hospital visits in the pediatric population and carry significant associated morbidity and mortality in this population. They also may pose a challenge to treating physicians, in terms of differentiating viral from bacterial and hence subsequent treatment. The introduction of respiratory panel testing has been said to guide clinicians in the overall management of patients.

Objectives In this study, we examine the use of respiratory panels in our hospital and the impact it had on our clinical practice.

Methods We conducted a retrospective study examining all respiratory panels carried out in our hospital between February 2019 and December 2019 on pediatric patients (all children below 14 years of age). All patients were consented on admission for use of their clinical and demographic information on admission while maintaining confidentiality. Patients included were those who had symptoms indicative of respiratory infections who presented acutely, including those with chronic respiratory conditions.

A total of 188 respiratory panel results were obtained along with collected patient data. These were analyzed using SPSS V. 25.0 to get the below mentioned results.

Results The majority (76.6%) of our patients fell within the age group of less than 3 years with 59% of total population being males. The majority (80.9%) had mild clinical severity score.

The most common pathogen that was detected on the respiratory panel was Human Rhinovirus, followed by the Influenza viruses. Only 4 cases were positive for bacterial pathogens (2 *Mycoplasma pneumoniae*, 1 *Bordetella pertussis* and 1 *Chlamydia Pneumoniae*), which accounts for 2.1% of all panels analyzed.

The significance of respiratory panels in influencing treatment were analyzed in the forms of change of management plans before and after results of respiratory panels. This was observed in 14.4% of patients who were not on any empiric medication and then based on panel results were started on medications, as well as 11.7% who were on medications already, and the medications were altered based on the result of the panel (Chi square $P=0.057$). This was mainly seen with cases of H1N1 patients and to a lesser extent, mycoplasma pneumonia.

Conclusions The use of respiratory panels in our hospital had little impact on patient care and management. The main organisms that influenced clinician decision in treatment were Influenza viruses and bacterial organisms (*Mycoplasma*, *Chlamydia* and *Pertussis*). Other than that, the use of clinical judgment proved more beneficial. We recommend use of specific testing for these organisms rather than the whole panel as case to case bases, which would be more cost-effective and consistent with patient management.