acute wheeze, the pathway states 'consider steroids'. This peer review examined the use of prednisolone in this group of patients.

Methods Two paediatric registrars and two paediatric consultants independently performed a retrospective review of the notes of all pre-school children presenting with moderate severity acute wheeze over one month (n=23). In each case reviewers were asked to document whether or not they would give steroids and the justification for their decision.

Results Of the 23 decisions made whether or not to give steroids, 9 children received steroids and 14 did not. The reviewers were in complete agreement with only 11 decisions (48%): 1 case where steroids were given, 10 when it was not. However, this value rose to 61% (14/23) where the majority of reviewers (3/4) agreed.

Of the 9 who received steroids, in 4 of these cases reviewers felt steroids should not have been given. The steroids were prescribed within 15 minutes of the 1st chest assessment, and in one case steroids were even given before salbutamol. There was significant clinical improvement between 1st and 2nd chest assessments (approximately 20 mins time interval) more likely due to bronchodilator administration rather than the steroid.

In the 14 children not receiving steroids, all reviewers agreed with 10 decisions (71%) not to give. In 1 instance all felt the child should have in fact received steroids due to the history of allergies and atopy, use of regular steroid inhaler, frequent admissions within the last year and poor response to bronchodilators. The remaining 3 decisions were split depending on the significance given to atopy by the reviewer and the impact of temperature on observations.

Overall, the reviewers were less likely to give steroids than the clinicians who saw the patients 9% (2/23) vs 39% (9/23). Factors that impacted this discordance included timing of steroid dose (prior to reassessment after initial salbutamol), inaccurate scoring of severity, incomplete history taken and history of atopy.

Conclusions This peer review illustrates that there is a potential overuse of steroids in acute pre-school wheeze in our emergency department. It is limited by retrospective bias contributed to by the accuracy of documentation in the medical records and any prior knowledge of the patient's outcome by a reviewer. However, the grade of reviewer did not influence our findings. Appropriate prescribing of oral steroids in acute pre-school wheeze can be improved with ongoing education on emergency management of acute presentations. Clinical wheeze pathways should avoid vague statements and provide clearer guidance with regard to when steroids are indicated.

Paediatric Clinical Leaders: Service Planning, Provision and Best Practice

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ESTABLISHING PAEDIATRIC TRAINEE CLINICS DURING THE COVID-19 PANDEMIC

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Background Paediatric trainees delivering outpatient clinics provides a valuable learning opportunity and forms part of

the Royal College of Paediatrics and Child Health (RCPCH) postgraduate paediatric training curriculum. Due to the current COVID-19 pandemic at Birmingham Children's Hospital it was identified that 2 months into the current post 83% ST4–8 trainees had attended 0 or only 1 clinic. Consequently, outpatient clinics were redesigned to incorporate telephone and video consults as well as continuing some face-to-face consultations.

Objectives The aims developed during this quality improvement project included:

1. In a 6-month post, trainees should aim to attend a minimum of 5 clinics.
2. To devise trainee clinics such that it provides a useful learning opportunity with adequate time built in for consultant supervision and to enable supervised learning events (SLEs) to be undertaken.
3. To develop trainee confidence in doing telephone or video clinics.

Methods An initial 2-week pilot was commenced with involvement of 5 supervising consultants which was subsequently extended. The standard operating procedure (SOP) for how to run a registrar clinic was distributed to trainees along with a clinic rota and supervising consultant. The SOP included:

- Step by step instructions regarding what to prepare before clinic.
- How to conduct telephone and video calls using the AccuRx NHS digital accredited system as well as face to face consultations.
- How to dictate letters and order investigations.

We organised regular monthly virtual meetings with consultants, management and the rota co-ordinator to facilitate clinic set up and address any issues. Questionnaires were sent to trainees and patients. Feedback from consultants took the form of a semi-structured interview. Details are available on the RCPCH website <https://qicentral.rcpch.ac.uk/projects/systems-of-care/establishing-paediatric-trainee-clinics-during-the-covid-19-pandemic/>.

Results 19 phone clinics and 12 face to face clinics were undertaken by trainees during the 4-month period generating a possible 106 appointments. The number of trainee clinics occurring monthly increased from an average of 2 to 8. All the trainees that completed the rotation had achieved 5 or more clinic attendances even being less than full time (LTFT). 2 trainees did not complete the rotation due to change of job or redeployment back to community. There were improvements in learning with consultant supervision as 14 requests for SLEs were submitted. A trainee survey conducted after clinics revealed confidence in doing a telephone or video consult increased to 8/10 on a rating scale from 5/10. When trainees were asked about advantages or disadvantages some of the comments included 'different way of working and gaining experience in an outpatient setting', 'ease of patient/family to attend but missing out on interaction that face to face clinics may provide', 'found completing SLEs easier during clinic'. A patient satisfaction survey revealed 100% felt the doctor listened and concerns were adequately addressed. Consultant feedback via semi structured interview included 'found watching the trainee do a video consult interesting/enjoyable', 'some trainees still feel nervous doing video consults', 'supervising trainee clinics remotely easier and not too much added work'.

Conclusions There was positive feedback received from trainees, consultants and patients. Trainee led induction using the AccuRx NHS digital accredited system has improved uptake. Clearer appointment letters explaining video consultation will also encourage patient participation. During each rotation managing trainee clinics will be given as a task to a trainee. This will help to ensure sustainability so trainees will continue to deliver clinics remotely with one-to-one consultant engagement, supervision and learning. Birmingham Children's Hospital is looking at redesigning the whole outpatient service to incorporate telemedicine.

Association of Paediatric Emergency Medicine

612 PAEDIATRIC ED ATTENDANCES VIEWED THROUGH THE COVID LENS – PERSPECTIVE FROM AN EMERGENCY DEPARTMENT

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Background The COVID-19 pandemic has resulted in significant changes in the healthcare system. Whilst adult services were overwhelmed with sick patients there was an unprecedented decline in paediatric attendances.

Objectives The objective is to monitor the trends and understand change in PED attendances so that we can make decisions regarding any planned restructuring post COVID-19.

Methods Data from PED attendances and admissions from March 2020 to date was extracted and compared to the same period in 2019. Case notes of children who presented with sepsis/serious illness were analysed to learn if there was a delay in presentation.

Results The noticeable difference in 2020 was the 65- 75% reduction in PED attendances for minor acuity illness (URTI, tonsillitis, otitis media, gastroenteritis)

Injury visits fell to 65% below normal just after lockdown was announced, increasing to 50% below normal by July and August falling to less than 50% during the second lockdown. Fractures, likely include a significant number of playground injuries, fell to 70% below normal. The 60 - 70% reduction in PED attendances in soft tissue injuries was consistent with both lockdowns and children no longer attending school and possibly reduced participation in sporting activities.

There was an initial decrease(20% in April 2020 compared to 2019) followed by an increase in children to the same numbers as seen in 2020 August and September presenting to PED with mental illness as the pandemic progressed with an increasing proportion of children who had not presented to PED before the onset of the pandemic.

Dramatic (80%) reduction in respiratory illness(bronchiolitis, pneumonia, croup) was noted in the winter months. December is normally peak season for bronchiolitis and asthma/viral induced wheeze, for the first time such a dramatic reduction in attendance and admissions were noted in winter.

The children who presented to PED in 2020 with a serious illness and sepsis presented in a timely manner. Analysis of the timeline of events showed that parents had tried to

manage them at home with the help of 111 and virtual GP clinics. When they could not be successfully managed at home, parents were able to correctly identify this and brought them to PED.

Conclusions Over the years it has been observed that many children present to the emergency department with minor acuity illness that can be managed at home or by primary care. The pandemic data provides a unique opportunity to view this data, insights from this can be translated into planning services resulting in a sustained reduction in PED visits for minor acuity and self limiting illness. Social distancing to combat COVID-19 and universal precautions appear to have prevented circulation of communicable diseases. Improved compliance with home asthma medication, reduced air pollution levels, and reduced exposure to viral triggers and allergens likely contributed to the reduced number of children with wheeze or asthma.

Parents know that hospitals are open and ready to care for their children when they need them, but also feel confident to manage minor ailments at home with watchful waiting.

British Association of General Paediatrics

613 A CROSS SECTIONAL STUDY IN CHILDREN WITH IRON DEFICIENCY ATTENDING A REGIONAL SPECIALIST HEALTH CARE SERVICE

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Background Iron deficiency (ID) is the most common nutrition deficiency and a public health problem worldwide. WHO describes ID as ferritin values <12 ug/L among children <5 years and <15ug/L in children >5 years. In UK, there is no national consensus however, a serum ferritin <12ug/L is widely accepted as iron deficient state.

Objectives To study the iron deficient cohort of patients presenting to a regional healthcare setting in UK in terms of demography, deprivation, ethnicity and clinical problem.

Methods It is a retrospective study. A list of all serum ferritin values <12ug/L, done between August2018 and August2019 in patients aged 6 months to 16 years, was obtained from the regional laboratory. Data was collected from electronic health record systems. Statistical analysis was done using SAS version 9.4.

Results The total number of samples were 730, out of which 116 were repeat samples. The 614 patients were sub-grouped into 3 categories; patients with underlying chronic health conditions were excluded from further analysis (speciality group, numbers 158), patients with autism, developmental delay or syndromes categorized as 'community group' (numbers 125) and patients with no chronic conditions as 'No Background (NB) group' (numbers 331).

The following only includes results from the NB group. SIMD (Scottish Index of Multiple Deprivation) is differentially represented in this group ($\chi^2(9)=177.17$, $p<0.0001$). Looking at the deviation plot, the SIMD categories of 1 and 2 are overrepresented, with relative deviations above 0. Age is differentially represented ($\chi^2(16)=235.86$, $p<0.0001$). The age groups of 1 to 4 years are overrepresented, with relative