completed across 16 months. Each audit comprised of a pharmacist visiting each ward on a single day and asking nurses which patients were receiving oxygen. The electronic prescription for each patient was then reviewed to determine whether oxygen was prescribed or not. Data was recorded and then analysed using descriptive statistics. Medical and nursing staff on the wards at the time of data collection were also asked for their views about the prescribing of oxygen.

Following the baseline audit, a variety of actions were introduced in order to improve the rate of prescribing including: a) Circulation of a hospital-wide Patient Safety Alert b) Highlighting oxygen prescribing at Ward Managers Meetings and Doctor Handovers c) Reminding all new doctors, nurses and pharmacists that oxygen must be prescribed and that prescribers should be challenged when oxygen isn't prescribed d) Inclusion of oxygen prescribing in the Trust's Medication Safety mandatory training

Results The baseline audit (November 2019) found 4.9% compliance with oxygen prescribed. At this point doctors described oxygen prescribing as 'unnecessary work'. Junior nurses knew oxygen should be prescribed but did not believe it was their responsibility to chase prescribers. Following the introduction of remedial action (February 2020) compliance with oxygen increased to 39.1%. Repeat audits (December 2020 and April 2021) found compliance to be 53.8% and 42.1% respectively.

Conclusion Whilst compliance with oxygen prescribing has improved since the baseline audit, the Trust has not achieved the target of 80% compliance with oxygen prescribing. Contributing factors to this are the rapid turnover of medical and nursing staff and an apparent culture change is required to highlight the importance of oxygen prescribing amongst multidisciplinary teams.

If an impactful change is to be made, it needs to be made clear to all groups that this is an important task. The key seems to be continual communication so that oxygen prescribing becomes routine across the Trust.

Action to be taken includes ensuring all relevant staff are aware of the need to prescribe oxygen; regular re-audit and sharing of the results with senior nursing, medical and pharmacy staff. The process for prescribing oxygen is now demonstrated during the introduction to electronic prescribing and we have started a Quality Improvement Project in conjunction with senior nurses on the ward who performed the worst across our audits.

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P26 COULD THE FORMULATION AND/OR METHOD OF ADMINISTRATION OF ORAL NADOLOL HAVE A CLINICALLY SIGNIFICANT IMPACT ON THE DOSE DELIVERED TO THE PATIENT

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3-year-old girl requiring oral nadolol 100mg twice daily. The only UK licensed formulation available was 80mg tablets. Family had been instructed by another hospital to disperse 2 x 80mg nadolol tablets in 10ml water and administer 6.25ml. However, tablets did not disperse well with concerns about dose accuracy and consistency. Possible alternative formulations were an 'in-house' extemporaneous suspension (10mg in 5ml) or an unlicensed 'special' suspension (40mg in 5ml). Latter sourced and supplied. However, the family subsequently reported an increase in ectopy and child reverted to use of dispersed tablets. Could the change in formulation have a clinically significant effect? How accurate is the dose delivered via these formulations?

Method We asked regional QC to investigate (using Corgard (R) 80mg tablets):

- Accuracy and uniformity of nadolol tablet breaking
- Uniformity of nadolol distribution within the tablets
- Nadolol assay by HPLC of
  - nadolol 80mg and 160mg in 10ml distilled water
  - nadolol 40mg and 20mg segments (of 80mg tablets)
  - nadolol 10mg in 5ml suspension ('in-house' extemporaneous suspension)
  - nadolol 40mg in 5ml suspension (unlicensed special)

Results Whilst the distribution of nadolol in Corgard(R) 80mg tablets was demonstrated to be uniform, the process of breaking Corgard(R) 80mg tablets into halves and quarters demonstrated variability with segment weights.

Nadolol formulations of dispersed tablets in water 80mg in 10ml and 160mg in 10ml suggest nadolol is not fully soluble as supernatant assay concentration was lower than the initial concentration (after initial dilution and shaking) for both strengths. The solubility limit of nadolol in water estimated to be ~8mg/ml.

Nadolol 10mg in 5ml suspension assay concentration was 112% of the expected concentration demonstrating a suitable manufacturing process for the 'in-house' 10mg in 5ml extemporaneous formulation.

Nadolol 40mg in 5ml (unlicensed special) assay concentration was only 79.9% of the expected concentration. However, the low assay result could have been due to the analytical method used for analysis which may require further validation for testing of this suspension type. Of note, only a single sample was tested.

Conclusion In this case, the patient was complex and unstable, and her clinical condition may well have contributed to the increase in ectopy experienced. However, the work done by regional QC identified the risk of inaccuracy and/or variation in the dose of nadolol delivered using different formulations and/or methods of administration.

The solubility limit of nadolol in water is estimated to be ~8mg/ml. Dispersed oral solutions must be thoroughly mixed prior to patient use especially if a proportional dose is required. Inconsistency of the dose of nadolol delivered should be considered when using this method.

Further, the change in formulation to the oral suspension could, unintentionally, have resulted in a difference in the dose delivered to the patient.

A consistent method for administration should be followed and, if a change in formulation is considered necessary, the patient monitored for any sign of reduction in efficacy and/or increase in adverse effects.

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P28 PAEDIATRIC COVID TOES AND THE RECOMMENDED CARE MANAGEMENT

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Aim To define COVID toes and fingers in paediatrics, and to explain the aetiology, the assessment and investigation management, the diagnosis, the clinical presentation and the care management including the use of oral nifedipine in this newly found disease during the COVID-19 pandemic. In addition, we will illustrate the process using the multi-disciplinary approach to prepare the Paediatric COVID toes guideline in our Trust, and to cite some examples of the related patient cases seen in our hospital as well as to summarise the total number of patient cases seen to date.

Method To carry out a literature search to find out the latest related articles and clinical studies, and to summarise the findings to prepare for the drafting of the clinical guideline. This guideline was initially prepared by the medical team and was then reviewed using multi-disciplinary team (MDT) approach including the paediatric pharmacists and the consultation from the tertiary paediatric centre. We also summarised the number of paediatric patient cases that were seen in our Trust and categorised them into different age groups, ethics background, and referral systems.

Results A number of related articles were found after the literature search. The first draft of the Paediatric COVID-toes guideline was prepared in March 2021 and it was then reviewed by the MDT in the Paediatric Clinical Guideline Group of our Trust. The paediatric pharmacist expressed her comments including the drug of choice such as oral nifedipine, the dosages below and above 2 years of age, the evidence to support the dosage recommendations, the different formulations available in the market for oral nifedipine such as oral suspension, capsule, tablet and modified-released (MR) tablet, recommended effective method for oral administration, side effects profile, monitoring such as blood pressure, patient counselling and education, and provision of patient leaflet and video-link to aid patient compliance.

Conclusion The final version of the Paediatric COVID toes guideline was prepared by the multi-disciplinary team in July, 2021, and it was uploaded in the Trust intranet in August 2021. In view of the literature search, there is limited evidence to support the use of oral nifedipine under 2 years of age for this indication. In our guideline, we recommend the dose of nifedipine to be 2.5–10 mg 2–4 times a day for children age 2 to 17 years old, starting with low doses at night and increase gradually by closely monitoring blood pressure and other side effects. The use of oral nifedipine is unlicensed for this indication in children. In our guideline, we recommend the use of oral MR nifedipine tablet after the consultation with the tertiary centre. Oral suspension is not routinely used. During counselling session, the pharmacist will advise the parent/carer to crush and dissolve the MR tablet in water and give appropriate dose accordingly. To date, 15 patients diagnosed with this disease were seen in our clinic. They are mainly referred to the clinic via the Accident and Emergency Department. The patient ages are all above 8 years old and they are mainly of Asian ethical background.

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P29 MEDICINE PRESCRIBING ACROSS PRIMARY, SECONDARY AND TERTIARY CARE INTERFACES IN PAEDIATRICS: A RETROSPECTIVE COHORT STUDY

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Aim Shared care agreements, commissioned by local clinical commissioning groups, are formal agreements that set out prescribing arrangements to provide a safe and cost-effective service that covers the prescribing requirements and to allow for the continued involvement of a hospital consultant alongside the provision of care in primary care settings.[1–3] However, primary care prescribers have often expressed hesitancy to accept responsibility for prescribing in paediatrics, leaving secondary and tertiary care providers to prescribe these medications instead,[1] resulting in inappropriate pressures on hospital pharmacies and often leaves families with difficulties in securing ongoing supply. This study aimed to investigate the volume, cost and type of hospital outpatient paediatric prescribing associated with items for which prescribing responsibility could be transferred to primary care. As well as to identify whether the current shared care agreements; traffic light rating (TLR) system and associated guidelines, encompass these medications.

Method A retrospective cohort study, involving descriptive and inferential statistical analysis, was conducted on prescription items prescribed and dispensed for paediatric patients. Prescriptions were identified by dispensary staff over a six-month period (October 2019-March 2020), at one tertiary care level hospital in southeast London. The prescription items were classified according to the TLR system defined in the South East London Joint Medicines formulary[4] as red (specialist/hospital prescribing only); amber-1 (primary care initiation after a recommendation from a specialist); amber-2 (specialist initiation followed by maintenance prescribing in primary care); amber-3 (specialist initiation with ongoing monitoring using shared care agreement documentation); green (specialist or non-specialist prescribing).

Data were analysed using Statistical Package for the Social Sciences (IBM SPSS) Software (V27).

Results In total 217 prescribed items prescribed and dispensed for 35 children were included in the study, and all of them had the potential to be prescribed in primary care. Of these, 93.1% (202/217) were rated 'green' with most of them prescribed for children aged 6-11 years (32.2%, 65/202).

Only 3.2% (7/217) items had an 'amber-3' rating and required shared care agreements to initiate prescribing in primary care, many of them (85.7%, 6/7) had shared care