Background Cystic fibrosis (CF) is the commonest genetically inherited condition in white populations. It is a life-limiting condition, with no curative treatment. Respiratory impairment is the most significant cause of morbidity and mortality, with 90% of morbidity associated with lung disease and respiratory failure being the primary cause of death. Pulmonary exacerbations are important contributors to the progression of lung disease in CF leading to reduced survival. Significant drops in FEV1 are commonly associated with pulmonary exacerbations and therefore, surveillance and appropriate management of these drops seem cardinal to appropriately treat this disease. A leading CF centre have planned to implement a standardised approach to help manage these drops in lung function at clinic. This approach will be largely based on the approach outlined by in a previous study.

Objectives This study aims to determine the proportion of patients attending a leading CF centre, with a significant acute drop in lung function, and how these drops are being managed. This will help inform the development of the proposed standardised approach of the management of these patients.

Methods Patients were identified from the CF patient list. The electronic medical records of each patient were reviewed to determine whether a significant drop in lung function occurred, within a specific 12-month period. The management of this acute drop was then evaluated by reviewing the associated clinic notes. This data was entered into an excel spreadsheet and interpreted. Management strategies included follow-up plans, antibiotic use, admission to hospital, lung clearing therapies and steroid use. We reviewed whether: BL FEV1, the% drop which occurred, age and the varying consultants, affected the management of these patients. Furthermore, statistical analysis was conducted to determine whether there was statistical significance to the results.

Results 115 separate episodes of significant drops in FEV1 in 2019, associated with an outpatient clinic appointment, were highlighted. There was a clinical response to 70% of these episodes, in some way. However, no standardised approach to these episodes was recognised within or between clinicians. A clinical response was more likely to occur if the patient had a lower BL FEV1 (p=0.021) or a higher% drop in their FEV1 (p < 0.0001). 49% of patients who had a significant drop in their FEV1 had no significant improvement in their baseline lung function identified when they were followed up thereafter.

Conclusions This CF centre clinically responded to 70% of all episodes of children presenting to an outpatient clinic with a significant drop in their lung function however patients were less likely to be managed appropriately if they had a higher BL or smaller% drop. Research shows that loss of lung function can occur if these patients are not managed, even in patients with a higher baseline FEV1. Furthermore, drops in FEV1, regardless of% of BL, are commonly associated with exacerbations and therefore treatment is vital. This outcome of this study is the recommendation of a standardised management approach to all patients presenting with a significant drop in their lung function, both at this CF centre and elsewhere.

Quality Improvement and Patient Safety

881 ‘POSTNATAL GET ME OUT OF HERE!’ A QI PROJECT TO REDUCE UNWARRANTED ‘LATE-STAYS’ BY THE SHO POSTNATAL TEAM IN ANTRIM AREA HOSPITAL

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Background The postnatal ward is a very polarising place- you either love it or hate it! One of the ‘house-keeping chores’ is effective letter writing.

SHO team in Antrim Area Hospital is made up of paediatric trainees, GP trainees, FY2 doctors and locum SHOs. As a group they have reported a higher frequency of unwarranted ‘late-stays’ when working on the postnatal ward as compared to the general paediatric ward. This was deemed an inefficient use of valuable time.

Objectives The targeted aim of this project was to identify ways to reduce the number of unwarranted ‘late-stays’ experienced by the postnatal SHO teams by 50% by January 2021. It was planned to do this by establishing the underlying reasons for colleagues leaving the postnatal ward late and identifying solutions to remediate the issue.

Methods An online questionnaire was designed. It showed that SHOs stayed an average of 33mins past the end of their postnatal shift. The biggest contributing factor was ‘administration tasks’, with SHOs reported to writing more than 6 discharge letters per week.

Data collected for October 2020 showed of the 244 babies born in AAH 35% required at least 1 letter (discharge or referral) to be written prior to discharge home.

A series of standardised statements of the most common reasons for referral and discharge letters were drafted and uploaded to common a folder for colleagues to access like a comment bank, i.e. copy and paste into the current letter template. Additional computer access was provided so this comment bank could be readily accessed as required. These pre-designed statements were intended to save time but also to encourage standardisation and quality assure the information being shared.

Results A second questionnaire was posted 2 weeks later. The SHO team reported that they saved, on average, 30 minutes by using the pre-written templates, especially for discharge letters.

Additional statements have been added following feedback from colleagues. The general consensus is that the pre-written ‘phrases’ are very helpful.

Conclusions The key strategy derived from the survey results was the introduction of pre-written statements for letters. The use of agreed descriptors, and phrasing, ensures that there is consistency of message within letters. The phrases also acted as a ‘checklist’ for colleagues, often operating within tight time constraints. The use of a common format makes reading the information easier and reduces ambiguity.

The changes were intended to reduce the amount of time the SHO team were spending doing administration tasks of
letter writing without compromising the quality of the information required, especially in referral letters.

An extension of the project would be to audit the end users of the statements, i.e. GP or referral recipient to gauge how fit-for-purpose the statements are.

Paediatricians with Expertise in Cardiology Special Interest Group

Abstracts

VARIABILITY OF CARDIAC INVESTIGATIONS FOR NEONATES WITH SUSPECTED INNOCENT MURMURS ACROSS LONDON

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Background Every baby in the UK undergoes a newborn check within the first 72 hours of life, aiming to identify congenital anomalies and ensure appropriate management and follow-up can occur. Heart murmurs are one of the more common findings during these examinations and often prompt further investigation with the aim of excluding life threatening congenital cardiac disease. However, the majority of these infants are clinically well and are diagnosed with ‘innocent’ murmurs. Within London, there is currently a lack of consensus regarding the selection of investigations used in these babies, leading to wide variation in practice between different hospitals. The most common investigations are measurements of pre- and post-ductal oxygen saturations, four limb blood pressure readings and electrocardiograms (ECG). While oxygen saturations are widely regarded as being vital to aid detection of congenital cardiac disease, there is limited evidence to support four limb blood pressures and ECGs.

Objectives To identify current use of four limb blood pressures and ECGs in clinically well neonates with murmurs in London hospitals and look at the clarity and uptake of local guidelines.

Methods A retrospective study was undertaken to demonstrate the wide variability in practice regarding the investigation of clinical well infants with murmurs in London Hospitals. 26 neonatal units in London were contacted. This included 9 intensive care units, 13 local neonatal units and 4 special care baby units. A telephone survey was performed and the on call neonatal team was asked about the local practice in their unit. Specific questions included whether four limb blood pressures and ECGs were part of the routine workup of clinically well neonates identified as having a murmur. This was followed up with a review of their local guideline, where available.

Results Responses were received from 23 neonatal units across London, including 7 NICU, 11 LNU and 4 SCBU. Of these, 64% (14) units reported to routinely check four limb blood pressures in clinically well babies with murmurs and 4 of these units were subsequently found to not recommend this investigation based on their local guidelines. Further analysis found that 19% (4) units verbally reported that ECGs were performed routinely and 12% (3) reported to not have a local guideline for clinically well babies with murmurs.

Conclusions There is wide interdepartmental variability of investigation of neonates with suspected innocent murmurs. Four limb blood pressure use is particularly variable, even between reported practice and guidelines. In one case, two guidelines were identified for one hospital which contradicted each other in this regard. ECG was rarely included in routine management. Both four limb blood pressure readings and neonatal ECG are time consuming, require trained staff and do not have good supporting evidence for their use in detecting congenital cardiac disease. With wide variation in practice and limited evidence to support their use, it may be time to stop using these investigations in clinically well neonates with murmurs.

EFFECT OF COVID-19 PANDEMIC ON THE BLOOD PRESSURE OF CHILDREN AND ADOLESCENTS WITH ADHD: IMPLICATIONS FOR CLINICAL PRACTICE

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Background ADHD is one of the most common reasons for prescribing psychotropic medications for children and young people (CYP), and the efficacy is up to 70%. Three of the four medications licensed for ADHD in the UK (Methylphenidate, Dexamfetamine/Lisdexamfetamine, and Atomoxetine) are sympathomimetic amines that exert their beneficial effect by increasing levels of dopamine and norepinephrine in the prefrontal cortex. These sympathomimetic amines also stimulate adrenergic receptors in the heart and blood vessels; hence are associated with small but statistically significant increases in Blood Pressure (BP). Thus, while medications for ADHD are effective and generally well tolerated and safe, patients need to be monitored for cardiovascular and other side effects. Clinical guidelines recommend that if children and young people (CYP) taking medication for ADHD experience raised BP above cut-off for hypertension, dose reduction and cardiology referral should be made. However, guidelines do not specify the need to consider contextual factors.

Objectives We aimed to test the hypothesis that the most plausible explanation for elevated BP among CYP with ADHD during the Covid-19 lockdown was related to Covid-linked stress and the additional anxiety about coming to the clinic during the pandemic.

Methods We carried out a prospective cardiovascular assessment of a cohort of 41 CYP (88% males) attending routine medical reviews for ADHD treatment in the Borough district of Halton in North West England within the first 6 weeks of the UK-wide Covid-19 lockdown in March-May 2020. Mean age was 12 years (range 5–18 years), and 92.5% were on psycho-stimulants while 7.5% were on non-stimulants. All the medications were within the lower range of normally approved doses. Their Blood Pressures were measured with regularly calibrated electronic sphygmomanometers based on standard clinical procedures and compared to BP recorded within the previous one year. Definition of Hypertension (HT) or Pre-HT was based on the British reference charts for CYP. The