teams, and after interventions by PDSA3 all night team doctors were taking breaks.

Discussion/Conclusion PDSA interventions were successful in increasing staff breaks, however sustainability of results in Junior Doctors will require a culture shift where doctors take personal responsibility for taking breaks. This is well-modelled by the PNPs who effectively arrange cross cover for breaks. A culture shift to improve patient safety overall can be aided by nominating a Junior Doctor break 'Champion'. Encouraging break taking in staff on night shifts will not only increase morale and wellness in the workplace but also contribute to improved patient care.

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G534(P) TRUST PROVIDED BREAKFAST FOR ALL NIGHT STAFF IN THE CHILDREN'S HOSPITAL

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Aims Staff wellness is a fundamental pillar of the modern service. In the current climate, staff are under increasing stress with the potential to feel undervalued. The overarching aim of this project was to try to give something back to the work force to recognise the incredible service they provide.

Methods Following a multi-disciplinary discussion, the option of a complimentary post night shift breakfast was trialled. We all acknowledging that post night shift staff can be tired, hungry, emotionally fatigued and stressed. This was available to all staff within RBHSC and not limited to medical or nursing staff. Promotion occurred in the form of posters, emails and word of mouth.

Results An emailed survey was distributed to all staff to gain feedback with 49 responders. 79% were aware of the project was running with 93% strongly agreeing or agreeing that this was a great policy. 92% felt the addition of a snack would be beneficial. When questioned if this helped staff get home safe, 50% agreed or strongly agreed, 38% neutral and 12% disagreeing. In the free text box comments included; 'I believe this would do some way of showing a caring work force they are cared for too', 'It's lovely for staff to bump into others post night and chat/de-stress', 'Kindness is magic' and 'I think it is a lovely gesture to show that management are trying to support all staff working overnight'. The project started with offering a hot beverage and following feedback was extended to include water, fruit juice, light snacks as well as hot beverages.

Conclusion The project was promoted on Twitter with excellent feedback and multiple re-tweets, generating a lot of positive dialogue. This project demonstrates how we can better look after our work force with small improvements aiming to improve morale, make staff feel more valued and prompting a positive culture in our work place. A key component was ensuring this was available to all staff who work nights, not just medical and nursing.

G535(P) DO TREATMENTS FOR PAEDIATRIC CHRONIC FATIGUE SYNDROME IMPROVE PAIN? A SYSTEMATIC REVIEW

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Aims Paediatric chronic fatigue syndrome/myalgic encephalomyelitis (CFS/ME) is common (prevalence 1–2%). Two thirds of children experience moderate or severe pain, and this is associated with increased fatigue and poorer physical function. However, current treatment approaches do not target pain.

This systematic review aims to identify whether specialist treatment of paediatric CFS/ME improves pain.

Methods We conducted a detailed search in MEDLINE, EMBASE, PsycINFO, and the Cochrane Library. Two researchers independently screened texts published since 1994 with no language restrictions. We searched trial registration websites for unpublished trials and hand searched reference lists of all included studies. Inclusion criteria were (1) RCTs & observational studies; (2) Participants aged <19 years with CFS/ME; (3) Measure of pain (quantitative, qualitative, or mixed methods) before and after an intervention.

Results Of 1898 papers screened, 27 studies investigated treatments in paediatric CFS/ME, 20 of which did not measure pain. Only 5 treatment studies measured pain at baseline and follow-up and were included in this review. Four of the studies investigated behavioural interventions and one study investigated a pharmacological intervention (low dose clonidine). None of the interventions were specifically targeted at treating pain.

Pain measures used were heterogenous and included a Visual Analogue Scale, CHQ-87 Bodily Pain Subscale, Brief Pain Inventory and a mean Daily Observed Pain score. Of the included studies 2 showed no improvement in pain scores with treatment, 1 small study described an improvement in pain in one subgroup, and 2 studies identified improvements in pain measures in 'recovered' patients compared to 'non-recovered patients'.

Conclusion Despite the prevalence and impact of pain in children with CFS/ME surprisingly few treatment studies measured pain. In those studies that did measure pain, there is limited evidence that treatment helps improve pain scores. However, patients who recover appear to have less pain than those who do not recover. More studies are needed to determine if pain in paediatric CFS/ME requires a specific treatment approach, with particular focus on patients who do not recover following initial treatment.

G536(P) SEAMLESS YOUNG PEOPLE'S SERVICES AND RARE DISEASES: THE BEST OF BOTH WORLDS?

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Transition from paediatric to adult services is a challenging process and developing rare, life-threatening, lifelong illness

around this time adds significant complexity. Sheffield has a seamless adolescent rheumatology service spanning both paediatric and adult hospitals, aiming to provide developmentally appropriate healthcare (DAH). To exemplify the benefits of this approach, we present two adolescents with the rare combination of large vessel vasculitis and inflammatory bowel disease. Case A was diagnosed in the Children's hospital and B in adult services, within 1 month of each other. Within the seamless service we were able to coordinate a patient-centred approach both for complex medicines management and ongoing clinical care.

A: 17 year-old male with complex inflammatory bowel disease since age 2. Treated with oral steroids with poor response to multiple DMARDs, biologics and elemental nutrition. Health professionals doubted good adherence and he needed extensive input. Vedolizumab was started in 2019 with improvement of gut symptoms but subsequent investigation of neck pain revealed stenotic large vessel vasculitis (LVV) and a diagnosis of Takayasu arteritis was made.

B: 17 year-old male with ulcerative colitis, diagnosed aged 14. Treated with infliximab and azathioprine when transferred to adult gastroenterology services. Atypical symptoms developed in 2019 and chest CT/PET-CT confirmed LVV (Takayasu arteritis).

LVV is a rare, life-threatening condition. Well-established team working enabled sharing of paediatric and adult rheumatology and gastroenterology experience. This enabled rational, tailored treatment plans to be devised through shared professional expertise – A has stopped vedolizumab and started tocilizumab, B has started adalimumab and both started methotrexate.

LVV needs lifetime monitoring. Planning for that monitoring (imaging, serology, biopsychosocial care) in adult services is therefore an important part of initial management. A and B are at different developmental stages. Our service enables DAH with A remaining in paediatrics, but with care planned to facilitate transition and ongoing management in adult services, B continues in adult services with the benefit of paediatric experience in managing Takayasu arteritis.

'Adolescent responsive services' are key in developmentally appropriate healthcare. The Sheffield Seamless Adolescent Rheumatology service is an example of this in practice.

G537(P) VITAMIN D PREPARATIONS: WHAT'S IN THE BOTTLE?

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Aims The UK incidence of vitamin D prescribing in children has increased by 26-fold in recent years. Public Health England recommends that children over 1 year take a daily vitamin D supplement. But the availability of over 200 different vitamin D products can be confusing for parents and clinicians. Our study aimed to assess the usage of licensed and unlicensed vitamin D only (VDO) preparations across primary care in England, and to compare measured and labelled

vitamin D content of VDO preparations marketed in England.

Methods

- Analysis of the vitamin D content of randomly selected VDO preparations using reversed-phase high performance liquid chromatography.
- Retrospective trend analysis of prescription reimbursement data for VDO prescriptions from 2008 to 2018.

Results Licensed and unlicensed VDO preparations were available in a wide range of dose strengths from 400 to 50,000 IU. The number of licensed VDO preparations increased from 4 to 32 between 2008 and 2018, along with an increase in the proportion of VDO prescriptions fulfilled by licensed preparations. However, prescriptions of unlicensed preparations remained high and accounted for 42% of the prescription items in 2018. The 11 unlicensed preparations analysed had vitamin D concentrations ranging from $41.2 \pm 10.6\%$ to $165.3 \pm 17.8\%$ of the declared content, with only one meeting the acceptable criteria of 90–125%. The 2 licensed preparations met the required standards. There was no association between the preparation dose strength and the magnitude of percentage difference between measured and labelled contents ($r=0.41$, $p=0.17$). Unlicensed liquid preparations in dropper bottles showed the greatest inter-sample variability suggesting there may be a lack of uniformity in drop volume delivered which could lead to dose variability.

Conclusion Despite the increasing availability of licensed preparations with assured quality, use of unlicensed preparations to fulfil VDO prescriptions has continued in primary care in England. Unlicensed VDO preparations marketed showed wide variations between measured and declared vitamin D contents. Younger children who are more vulnerable to harm are thus exposed to unnecessary risks of under- and over-supplementation.

G538(P) YOUTH VIOLENCE: HOW CAN WE INTERVENE?

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Introduction Interpersonal violence involving sharp instruments or firearms continues to rise in the UK. Recent evidence indicates an association between social deprivation and violence against youths, emphasising the importance of addressing psychosocial issues early in adolescence through appropriate assessment and delivery of psychosocial care. The HEEADSSS assessment is a valuable tool in helping clinicians identify areas of psychosocial concern. This study aims to identify the epidemiology of such assaults in London presenting to a local trauma centre, assess whether residence in a high-depravity area increases the risk of violent injury, and determine whether further psychosocial steps can be taken to reduce risk of reoccurrence in these individuals.

Methods Data from the emergency department of a major trauma centre in West London was retrospectively reviewed in those <25 years presenting in 2018 with injuries arising from assault with weapon. Gender, age, home postcode, data from