recorded at the Newborn & Infant Physical Examination (NIPE) by paediatricians or midwives.

Methods Using electronic systems (Cerner, Smart4NIPE, BadgerNet), data was prospectively analysed for all babies born at the trust in a 2-week study period in May 2020 (pre-intervention phase). Simultaneously, anonymised questionnaires were distributed to all staff trained in performing the NIPE, assessing their understanding and current practice of pulse oximetry (surveillance phase). A four-pronged intervention was subsequently carried out over a 1-month period (intervention phase). The results of the interventions were studied for all babies born in a 1-week period in August 2020, assessing the performance of pulse oximetry and its short-term outcomes (post-intervention phase).

Results During the 2-week pre-intervention phase, 32/298 babies (10.7%) had pulse oximetry recorded at the NIPE; approximately half of these were performed only due to clinical concerns (murmur, tachypnoea or abnormal fetal echocardiogram). Of all NIPEs performed by paediatricians, 6.9% (6/86) included pulse oximetry, compared with 12.2% (26/212) by midwives. This inconsistent performance correlated with the questionnaire results; 7/55 (12%) practitioners reported performing pre/post-ductal saturations routinely, with less than half correctly stating the acceptable saturation threshold and pre/post-ductal gap, according to local guidelines. Based on the responses, four key areas of improvement were postulated, and changes implemented altogether: these included upgrading ICT facilities for documentation, re-writing trust guidelines, widening multidisciplinary education, and improving the availability of neonatal pulse oximeters. In the 1-week post-intervention phase, 151/151 babies (100%) had routine pulse oximetry throughout the trust. One baby in this cohort was admitted to NICU for 48 hours because of post-ductal hypoxaemia; he was diagnosed with mild PPHN, required oxygen therapy and an echocardiogram showed a structurally normal heart.

Conclusions This project has demonstrated an effective implementation strategy for routine pulse oximetry at a large NHS maternity trust, through multi-disciplinary collaboration and careful QI planning. Future directions are to ensure this is maintained over a prolonged period of study, as well as assessing outcomes of babies with 'positive' pulse oximetry screening and its impacts on long-term CHD detection rates.

British Paediatric Neurology Association

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VESTIBULAR MIGRAINE IN CHILDREN

¹Rosa Crunkhorn, ²Sudhira Ratnayake, ²Soumit Dasgupta. ¹Royal Derby Hospital; ²Alder Hey Children's Hospital

10.1136/archdischild-2021-rcpch.826

Background Vestibular Migraine (VM) and the migraine variant Benign Paroxysmal Vertigo of childhood (BPV) are the commonest causes of vertigo in childhood (Langhagen et al., 2016). Studies suggest VM and BPV are the cause in between 24–56% of childhood vertigo (Brodsky et al., 2016). Between 2–10.6% of school age children are affected by VM/BPV (O'Reilly et al, 2012).

VM is a clinical diagnosis with no specific vestibular diagnostic features or other biomarkers (Langhagen et al, 2016).

Whilst there are numerous studies on VM in adult patients, there is a paucity of evidence in paediatric patients, particularly on clinical characterisation. Currently diagnosis and management strategies are largely based on evidence from adult populations (Kacperski and Bazarsky, 2017).

Objectives This study aims to describe a large cohort of patients diagnosed with VM at a tertiary Audiovestibular Medicine unit, describing clinical presentation, examination, diagnosis, and management. We hope to raise awareness of this common and treatable condition in children and young adults.

Methods This is a retrospective electronic case note review of all patients presenting to Audiovestibular Medicine clinics in a tertiary unit between January and December 2018. All patients who were given a diagnosis of vestibular migraine/migraine variant during this time, or who were patients being followed up with a known diagnosis of vestibular migraine/migraine variant, were identified. Clinical letters were reviewed looking specifically at: presenting symptoms (including headache and vertigo, other symptoms, medical comorbidities and impact of symptoms); clinical examination findings; diagnostic test findings (including vestibular diagnostics, blood tests and neuroimaging); treatment and overall outcome.

Results 81 children were identified with a mean age at presentation of 10.3 ± 3.8 years (range 2–17). 53% were female. 65% reported episodes beginning ≥ 2 years ago. No headache was reported in 29 children, however photophobia and phonophobia were common (68 and 54 children respectively). Otological symptoms were not uncommon with tinnitus present in 22 children. Comorbidities often included neurodevelopmental difficulties. Impact on schooling and extra-curricular activities was high for a subgroup of children. 31 children had episodes weekly or more frequently.

Clinical examination showed abnormal oculomotor signs in 5/77 children tested (2 central and 3 peripheral) and abnormal neuro-vestibular findings in 14/78 children tested. Videonystagmography showed abnormalities in 30/75 patients tested (8 central and 8 peripheral oculomotor; 28 neuro-vestibular). Video Head Impulse Test showed significant saccades in 11/94 tests. 37% of children showed normal examination and diagnostic findings.

Treatment included lifestyle measures, medication (for acute treatment or for migraine prophylaxis) and vestibular rehabilitation. The most commonly used medications in this cohort were Pizotifen (44), Propranolol (29) and Topiramate (10). Symptoms fully resolved or improved in most patients (79%) with treatment.

Conclusions VM and migraine variants are a common diagnosis in children. Early recognition of clinical symptoms, appropriate diagnosis and treatment are important for effective management of these children.

Children's Cancer and Leukaemia Group

1748

ELECTRONIC PATIENT REPORTED OUTCOME MEASURES – NEXT GENERATION CANCER PATIENT MONITORING?

¹Lee Aaron Shipman, ²Corinne Fivare-Finn. ¹University of Manchester; ²The Christie NHS Foundation Trust

10.1136/archdischild-2021-rcpch.827

Background Electronic Patient Reported Outcome Measures (ePROMs) are validated, digitalised health questionnaires with roots in clinical trials, created as a way of re-establishing and empowering the patient voice. ePROMs are now utilised in over 30 different medical specialties, and it is recognised that their unique abilities for detecting symptomology and other quality of life (QOL) issues directly from the patient make them highly suitable as an adjunct in routine clinical care. Their use, particularly in adult Oncology, has brought a number of benefits to light, however use of ePROMs in child and young adult groups remains limited.

Objectives The literature review is part of a service evaluation at The Christie NHS Foundation Trust, Manchester, to better understand the benefits ePROMs bring to patients, as well as the barriers and facilitators of implementing such a service.

Methods We searched PubMed for the terms: 'Patient Reported Outcome Measure' or 'PROM' or 'PRO' AND 'cancer' or 'carcinoma' or 'onco*' and selected papers relevant to the implementation of ePROM services into clinical care. There were 100 relevant titles.

Results Improved communication:

Improvements have been seen in the quantity and type of symptoms/QOL issues reported, better prioritisation and focussing of the consultation, shared decision-making and treatment goals, patient involvement in care, and as a facilitator of open dialogue and discussion of sensitive topics.

Acceptability:

Patients find ePROM services highly acceptable, tend to prefer electronic over paper questionnaires, and most patients report that ePROMs are a good way to communicate with their medical team.

Symptom Detection and Management:

Evidence suggests that practitioners frequently underestimate patients' experience of symptoms. ePROMs have been shown to consistently improve symptom discussions and onward management, as well as detection of therapy-related adverse events (particularly chemotherapy)

Improved Healthcare Process:

Studies have shown that ePROMs can reduce A&E attendance, unplanned hospital admissions or unnecessary hospital appointments. ePROM completion has been used to tailor the follow-up of patients and also to report symptoms in real-time, enabling the acute medical team to action the outcomes as necessary.

Better QOL:

Several studies have demonstrated improvement in symptom scores as well as global QOL with ePROM use.

Better Overall Survival:

In an oncology population, it has now been shown that successful ePROM services can improve patient survival due to their unique benefits in symptom detection and management.

Barriers and Facilitators to ePROM use: A number of barriers to ePROM use are discussed at the level of the patient, the practitioner and the organisation, as well as approaches to mitigate these.

Conclusions Digitalised personal healthcare is the next generation in patient monitoring; ePROM services are being rolled out across a number of adult specialties but their use in child and young adult groups is limited. Here we present a multitude of benefits that ePROMs are known to have, and share some of the barriers and facilitators when considering establishing a new ePROMs service. The benefits of ePROMs should (and can) be shared by adults and children alike, and

should particularly be considered in paediatric haematology and oncology populations.

Association of Paediatric Emergency Medicine

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ASSESSING MENTAL HEALTH PRESENTATIONS TO THE PAEDIATRIC EMERGENCY DEPARTMENT : AN INCONSISTENT PROCESS. EVALUATING STAFF AGREEMENT USING VIDEO VIGNETTES

¹Michael Malley, ²Matthew Hall, ³Megan Costelloe, ³Hannah Sutton, ²Aimee Falla, ²Cassia Swift, ²Jasmine Wright, ²Lucy Everson, ²Sam Copson, ²Bianca Cuellar. ¹West Middlesex university hospital; ²Bristol Royal Hospital for Children; ³Bristol University Medical School

10.1136/archdischild-2021-rcpch.827

Background The rise in mental health presentations to Paediatric Emergency Departments (PED) during the Covid pandemic has been well documented. Whilst it has never been more important to accurately assess the mental health risk posed to young people on their arrival in PED, staff undertaking these assessments often have little formal training or oversight. Whilst physical presentations can be quantified by clinical parameters and evidenced investigations, the accurate assessment of mental health cases is inherently subjective, yet just as crucial.

Objectives To assess the level of agreement between professionals routinely assessing undifferentiated mental health presentations in PED using video vignettes.

Methods We identified mental health-related presentations to a tertiary PED over a one-month period. We selected six cases by random number generation, carefully altered/anonymised the details and engaged actors to re-create the presentations. Using an existing assessment matrix, participating PED and CAMHS (child and adolescent mental health service) staff watched the video vignettes and allocated presentations to 'green', 'amber' or 'red' risk categories. A free marginal multi-rater Kappa was used to assess the level of agreement between responses (0 indicating no agreement and 1 perfect agreement). Staff were asked to rate their confidence in assessing the vignettes on a modified likert scale numbered 1-5 (5 = very confident). This was undertaken as a service evaluation project after discussion with relevant Trust R&D teams.

Results The Kappa for all responses was $K_{free}=0.21$ (95%CI 0.04-0.38). Table 1 outlines Kappa values and self-reported confidence within each staff category.

Conclusions When assessing the severity of mental health presentations on a simple traffic-light system, the agreement between PED staff was very low. This was lowest amongst nursing staff, who may be less familiar with the assessment matrix. Concordance was high amongst CAMHS staff, admittedly with few participants. This likely reflects their greater exposure and training.

Despite the wide variation in responses, each staff group reported their collective confidence in assessing the cases similarly. This may point to a lack of standardised training and staff awareness.

In order to best support young people during mental health difficulties, an accurate, objective and standardised assessment