to TPA, MVPA, RS, ST and Sleep time recommendations were 53%, 84%, 84%, 53% and 65% respectively. The mean MVPA and TPA durations were longer in boys ($p=0.001$ and $p=0.046$). Girls adhered to screen time more than boys ($p=0.007$). Children from rural areas complied with sleep time more than urban areas ($p=0.048$). Only 18% complied with all the guidelines. There was no association between adhering to individual or combined recommendations and BMI, gross and fine motor scores or executive functions.

Conclusions Less than a fifth of pre-schoolers met all the recommendations. Future work should focus on reducing screen time and increasing physical activity.

Association of Paediatric Emergency Medicine

313 IMPROVING EDUCATION IN THE CHILDREN'S EMERGENCY DEPARTMENT THROUGH THE IMPLEMENTATION OF A JOURNAL CLUB

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Background Anecdotally from discussion with staff in the children's emergency department; it was suspected that staff were infrequently engaging in CPD, in particular reading journal articles. Much of the CPD that the team were participating in was mandatory and with the emergence of the pandemic much of this training was stopped.

It was decided to set up a journal club in order to improve this.

Objectives To improve the rate in which staff are reading journal articles through the implementation of a journal club in a children's emergency department.

Methods This was a service improvement audit project which used some short surveys to ascertain staff exposure to journals prior to the implementation of the journal club and 3 months following its implementation.

The survey was distributed to the whole team via social media and email and the whole team were encouraged to complete, with 54% of the team completing each time.

Journal club was implemented via teams once a month for an hour where 2 papers were presented and discussed. The plan was to initially keep it basic to encourage multidisciplinary engagement but then to build up the amount of critical appraisal over time; 'tell us what your article is, what your article is about and why you like it.'

Results Attendance at journal club has ranged from 4 per session to 10 per session and is dependant on shifts to enable participation. The participants have been from medical and nursing background and a variety of grades and roles; including health care assistants, nurses and medical team members.

The initial audit showed that 22% of staff were never reading journal articles and a further 17% only read once per year.

44% were reading at least monthly.

The reasons for not reading articles included the following; not knowing where to search, not having time, finding credible articles, the length of the article, lots of statistics.

The results from the second survey showed that 18% of staff were never reading articles and 12% reading yearly.

64% of staff are reading at least monthly since the implementation of journal club.

100% of respondents were keen for journal club to continue. 1 respondent wanted some teaching in the use of technology and in order to enable better access the team wanted the whole year dates published in order to request shifts in enable attendance. Articles have also not only been shared electronically but have been made available in hard copy to enable access to all.

Conclusions The implementation of a journal club has been well received and participated in with 100% of respondents suggesting it continues. 20% more staff have read articles at least monthly since its implementation. However there has only been a 3% improvement in those that are never reading articles. It is necessary to further address this starting with the production of an infographic further reinforcing what journal club is about and how it works and some further auditing later down the line.

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332 RECOGNITION OF LEG PAIN AS A RED FLAG SYMPTOM FOR MENINGOCOCCAL SEPTICAEMIA IN CHILDREN

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Background The mortality and morbidity of meningococcal septicaemia, a leading cause of septic shock in children, can be reduced by early recognition and diagnosis. NICE guidance [CG102] identifies leg/limb pain as a high-risk symptom of meningococcal septicaemia. Recently, the Petechiae in Children (PiC) study found that limb pain is one of only four independent risk factors for meningococcal septicaemia. Therefore, leg pain should be recognised a 'red flag' symptom that has predictive value for meningococcal septicaemia by all paediatric nurses and clinicians.

Objectives The study aimed to explore the knowledge of members of the multidisciplinary team training and working in paediatrics in Wales regarding clinical features associated with meningococcal disease, particularly whether leg pain was understood to be a high-risk 'red flag' symptom.

Methods An online survey was completed by a convenience sample of paediatric nurses, doctors and final-year medical students. Demographic data was collected including job role (sub-specialty where applicable), level of training and graduation date. Participants were asked about the estimated number of meningococcal septicaemia cases they encountered in their career.

Participants were asked to select whether a particular symptom or clinical sign was associated with meningococcal septicaemia or was alternatively non-specific. The signs and symptoms, listed in table 1, were selected from the NICE clinical practice guideline [CG102] which lists specific signs of

both meningococcal septicaemia and meningitis. Five symptoms that may be non-specific signs of febrile illness in children were also included as 'red herrings'.

Results The survey had 41 participants: 28 doctors, 2 nurses and 11 final-year medical students (with exposure to paediatrics). The most common subspecialty amongst respondents was general paediatrics (19), followed by paediatric emergency medicine (8). 90% of participants had seen less than 10 meningococcal cases, while 4.9% had seen more than 20.

Table 1. lists each clinical symptom/sign and the percentage of participants that selected its association with meningococcal septicaemia.

Leg pain was selected as a 'red flag for meningococcal septicaemia' by only 4 participants (9.8%). All participants that did not identify it as a red flag had seen <10 cases in their career, including senior specialty registrars.

Abstract 332 Table 1

Symptoms/Signs	Selected as a Sign/Symptom of Meningococcal Septicaemia (%)	Selected as a Non-specific Sign (%)
Specific for Meningococcal Septicaemia		
Non-blanching rash	92.7	7.3
Unconsciousness	85.4	14.6
Shock	82.9	17.1
Altered mental state	80.5	19.5
Hypotension	73.2	26.8
Significant cold hands/feet	60.9	39.1
Capillary refill time > 2 seconds	51.2	48.9
Leg Pain	9.8	90.3
Symptoms/Signs more specific for Meningitis		
Stiff neck	87.8	12.2
Photophobia	85.4	14.6
Brudzinski's sign	75.6	24.4
Kernig's sign	75.6	24.4
Back rigidity	58.5	41.5
Non-specific Symptoms/Signs		
Headache	24.4	75.6
Fever	17.1	82.9
Coryzal symptoms	0	100
Conjunctivitis	0	100
Cough	0	100

Conclusions This survey highlights the limited awareness of leg pain as a sign of meningococcal septicaemia amongst final-year medical students, clinicians and paediatric nurses. Education is necessary to ensure all healthcare professionals working in acute and emergency paediatrics, including primary care, are aware of the predictive value of this symptom to enable appropriate suspicion and timely diagnosis.

British Association of Perinatal Medicine and Neonatal Society

340

OESOPHAGEAL PERFORATION IN VLBW INFANTS IS ASSOCIATED WITH AIR LEAK SYNDROME AND COMBINED MORTALITY WITH MODERATE-SEVERE IVH

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Background Oesophageal perforation in neonates is rare and usually iatrogenic in origin, unlike in adults where causes include iatrogenic, spontaneous, foreign body ingestion, trauma and malignancy. Oesophageal perforation in neonates has been attributed to procedures including intubation, gastric tube insertion, pharyngeal suctioning, and traumatic delivery. Historically, oesophageal perforation has been surgically managed. Recent case series suggest a shift toward conservative management which includes keeping the baby nil by mouth, provision of parenteral nutrition, and empiric antibiotic coverage to prevent mediastinitis. The purpose of our study was to summarise the clinical presentation, course, treatment, and outcome of very low birth weight (VLBW) infant with oesophageal perforation (OP), and to identify potential risk factors.

Objectives OP is rare but associated with high risk of complications. Prevention by identifying risk factors and early diagnosis through a high index of suspicion are important to improve outcomes. A review of the clinical presentation, course, treatment, and outcomes of VLBW infant with OP compared to matched gestation controls.

Methods Retrospective case control study of VLBW infants admitted between 2005 and 2020 and diagnosed with OP at a tertiary neonatal unit in Singapore. Four controls per case was matched by gestational age and the month of birth. Data on baseline characteristic (maternal age and medical history, gestational age, birth weight, size for gestation, mode of delivery, Apgar score), morbidities (occurrence of air leak, intraventricular haemorrhage, patent ductus arteriosus, necrotising enterocolitis, retinopathy of prematurity, bronchopulmonary dysplasia, osteopenia of prematurity, TPN cholestasis), mortality, and time to attain full feeds were collected for each neonate.

Results The incidence of OP was 3.8 per 10,000 livebirths. 12 cases of OP and 48 matched controls were included. Comparing OP with controls, median gestation was 26 compared to 26.5 weeks, median birthweight 692.5g compared to 827.5g and median Apgar scores at 5 minutes were 8 for both. There were no significant differences in these baseline characteristics. There were no significant differences in terms of SGA incidence or caesarean section incidence. However, all patients with OP were male (OR 1.51, $p < 0.01$). Besides male gender, maternal pre-eclampsia was a risk factor (OR 3.55, $p < 0.05$).

The commonest clinical presentation was air leak syndrome (83.3%) followed by misplaced orogastric tube (67%) or inability to insert orogastric tube (33). Most of them (58%) presented on day 1 of life and were associated with intubation and orogastric tube insertion. Among those with available notes of resuscitation available, 42% was associated with difficult intubation. All infants were managed conservatively.