a pathway activated in mild traumatic brain injury and to correlate with previous exposure to head injury.

Methods Whole blood was sampled from children with mild TBI at presentation with injury and compared to healthy paediatric controls at baseline. RNA was isolated and cDNA was synthesized. Gene Expression of IL-1 β via rtPCR was recorded in 18 patients 5 controls at baseline. Of 18 patients, 10 had previously suffered concussion.

Results Mechanisms of injury included sporting and school yard clashes, falls from bikes and falls from bed. GCS was 14 – 15/15 in all. Inflammation was upregulated via IL-1 β expression in children with previous episodes of mTBI compared to those with no previous history. ($p = 0.08$) The highest IL-1 β , 8000 fold that of baseline. This was recorded in a child who had previously had rehabilitation following a road traffic accident 7 years previously.

Conclusion Inflammation is altered in TBI compared to controls. IL-1 β gene transcription was higher in those with previous episodes of concussion. Immune memory may be a factor in the clinically evident burden of symptoms following repetitive head trauma, and this warrants further exploration.

GP99

IMPROVING PAEDIATRIC TEAM HANDOVER: A QUALITY IMPROVEMENT PROJECT

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Introduction The importance of good communication during transition of care is well recognized. Poor handover has been linked to serious patient harm. Paediatric team handover at shift change was identified as an area in need of improvement. Therefore, a project was designed to look at the current Paediatric team morning handover practices and to improve the overall quality of clinical handover.

Aims The objective of this quality improvement project is three-fold: 1) To assess the quality of current handover practices, 2) To improve handover using 'ISBAR' standardized handover tool, and 3) To re-audit clinical handover after implementing changes.

Methods An assessment was performed to establish current handover practices. Paediatric team handovers at shift change from 01/08/2018 to 31/08/2018 were assessed. Daily handover sheets and attendance log-books were reviewed to determine the number of admissions, number of handover sheets and handover duration in minutes. The primary intervention involved education on the 'ISBAR' communication tool. Formal training was provided for consultants and non-consultant hospital doctors (NCHDs) explaining the 'ISBAR' handover communication tool. An 'ISBAR' handover performativa was implemented. Handover was re-audited from 01/09/2018 to 30/09/2018 to assess changes in practice. A prospective daily log of the number of hospital admissions, number of handover sheets and handover duration was recorded.

Results A baseline assessment of the paediatric team handover pre-intervention in August 2018 showed that the median number of admissions overnight was 5, the median duration of verbal handover was 23 minutes and written handover involved a median of 3 A4 landscape pages. Following

implementation of changes to current handover practices, the median number of admissions overnight in September 2018 was 5, the median duration of verbal handover was 14 minutes and written handover involved a median of 2 A4 landscape pages.

Discussion The initial assessment revealed the paediatric team handover failed to comply with national clinical guidelines. There was no use of a standardized template, handover content was variable, important information was often omitted and irrelevant information was included. In summary, this study improved the quality of clinical handover by incorporating a standardized template and by providing NCHDs formal training in handover communication skills.

Conclusion Introducing the 'ISBAR' communication tool improved the quality of paediatric morning handover and overall efficiency of communication. Identified areas for ongoing improvement include reducing interruptions, ongoing training/education, incorporating a multidisciplinary approach and regular re-auditing.

GP100

TODDLERS, TEENS AND EVERYTHING IN BETWEEN. SHOULD ALL CHILDREN BE ADMITTED TO THE SAME WARD?

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Aims To define the adolescent population admitted to the Paediatric Ward in Sligo University Hospital. To determine the attitude of adolescents and all parents towards room sharing between children of different age groups and to examine the use of recreational facilities on the Paediatric Ward.

Methods A retrospective review of patients admitted to the Paediatric Ward from October 2018 to December 2018 was performed. We defined adolescents as patients ≥ 13 years of age (yoa). Three separate questionnaires were designed for three defined groups (adolescents aged ≥ 13 yoa, parents of adolescents ≥ 13 yoa, parents of children < 13 yoa). Questionnaires were distributed to each of these three groups admitted to the Paediatric Ward.

Results 529 patients were identified. 158, 192 and 179 in October, November and December respectively. In October 27/158 (17%) of admissions were adolescents. In November 36/192 (19%) of admissions were adolescents. In December 16/179 (9%) of admissions were adolescents. During time of questionnaire distribution participants were admitted to single rooms and shared rooms with patient's ages ranging from 4 months to 17 yoa. All those surveyed, including patients > 16 yoa (our normal age cut-off for admission to Paediatric Ward) expected to be admitted to the 'Children's Ward'. Most adolescents and their parents were 'not bothered' by the ages of children sharing the same room as them. Most adolescents and their parents claimed that they would be happy to share a room with older adolescents, i. e. 16 to 17-year olds. However, parents of younger children (< 13 yoa) generally did mind adolescents sharing the same room as their children and would prefer if children within the same age bracket only were sharing the room. No adolescents used the Playroom during their stay. More children

<13 yoa tended to use the Playroom. Most of the adolescents and their parents felt that their recreational needs were not met. Parents generally advocated for the presence of a 'Teen Den' as opposed to Playroom. All adolescents either preferred the idea of a Teen Den or were indifferent towards it. Some parents of children <13 yoa were 'bothered' that adolescents could have use of the same Playroom as their children.

Conclusion The establishment of an adolescent-specific recreational area for adolescents admitted to the Paediatric Ward in Sligo University Hospital should be established to cater for their recreational needs and well-being. Adolescents on the Paediatric Ward should have different accommodation to younger children.

GP101 THE IMPACT OF AN INFORMATION LEAFLET ON PARENTAL KNOWLEDGE, ANXIETY AND SATISFACTION IN AN IRISH PAEDIATRIC COMPUTED TOMOGRAPHY DEPARTMENT

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Background There is little research into the impact of information in the radiology setting.

In the surgical setting written information has demonstrated many strengths in educating parents, improving outcomes and reducing parental and patient anxiety.

Aims and objectives The aim of this work was to evaluate the impact of an information leaflet on parental knowledge, anxiety and satisfaction in a paediatric CT Department.

It also aimed to identify parental information seeking behaviours.

Methods/Intervention A prospective, mixed-methods study was performed. Routine verbal information was provided to a Control group while a Study group received an information leaflet. Both groups completed two questionnaires. One employed multi-choice questions to evaluate parental knowledge, information seeking behaviours and causes of anxiety. The second assessed anxiety and satisfaction using visual analogue scales.

Results/Findings For parental knowledge of CT, the Study group demonstrated higher results

(mean=5.71, median=6) compared with the Control group (mean=4.67; median=4) for correct answers. They also scored marginally lower for the number of incorrect responses.

The mean rank for anxiety in the Study group (9.93) was much lower in comparison with the Control group (19.73) while satisfaction amongst the

Study group was higher (18.68 vs. 11.57). These differences were statistically significant ($p=0.002$; $p=0.023$; $p<0.05$).

More of the Study group (36% vs. 7%) sought further information prior to attending for the appointment suggesting that the leaflet encouraged parents to ask more questions. Furthermore, when participants were asked if they would've preferred further information before the appointment, more from the Control group (40% vs. 14%) answered positively.

Conclusions This study has demonstrated that the information leaflet did have a positive impact on parental anxiety and satisfaction but not parental knowledge.

(An electronic poster on this project will be presented at the European Congress of Radiology March 2019).

GP102 PAEDIATRIC ABDOMINAL X-RAYS: APPROPRIATE OR UNNECESSARY REQUESTS?

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Introduction Paediatricians play a significant role in preventive healthcare¹. There is a strong link between radiation exposure and the development of cancer². The typical dose of radiation required for an abdominal x-ray (AXR) is 0.46 mSv, which is the equivalent approximate dose to 35 chest x-rays³. AXRs are frequently ordered for children in our hospital by staff in paediatric, surgical and Emergency Departments (ED) who may be unaware of the guidelines surrounding clinical indications for AXRs.

Aims To review the indications for paediatric AXRs requested in our hospital and compare them to the Royal Children's Hospital, Melbourne (RCHM) Guidelines⁴, which are considered the gold standard.

Methods AXRs performed in University Hospital Galway from 1st June - 30th November 2018, on children ≤ 14 years old, were identified. Those ordered from the Neonatal Intensive Care Unit and those ordered directly by the patient's General Practitioner were excluded. Details including patient age, clinical indication, requesting specialty, existing diagnoses and previous presentations with the same complaint were collected from the online radiology system.

Results A total of 132 AXRs were identified, 83 of which were included in the analysis. In accordance with RCHM guidance, 49.4% ($n=41$) of requests were appropriate. Bowel obstruction and foreign body ingestion were the commonest indications for appropriate requests; constipation and non-specific abdominal pain were the commonest inappropriate requests. The paediatric department requested 55 AXRs, 49% ($n=27$) considered appropriate; the surgical department requested 9, zero considered appropriate. The ED requested 17 AXRs, 70.5% ($n=12$) considered appropriate.

Conclusion During the 6-month period, over half of the AXR requests were deemed inappropriate and may have been avoided. Further education concerning AXR indications should be directed at paediatric and surgical teams primarily to minimise unnecessary investigations and limit radiation exposure.

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