Dec 2020. There is no previous formal data on feedback collection prior to this. There is also a reduced use of paper for obtaining feedback as a result of this initiative, as no paper feedback forms were printed for simulation sessions. Participants who did not have a mobile phone or adequate internet access had the feedback forms sent via email or WhatsApp to them. Finally, the use of an QR code and online feedback tool resulted in accurate data analysis with no loss of data due to illegible writing and an ease of data analysis using Microsoft Excel.

Conclusions The use of QR codes has resulted in an improvement in feedback response rate from participants, as well as an improvement in the completeness and legibility of the data. We also note a high level of satisfaction from the participants in terms of the ease in providing feedback. As a team, we believe that the use of QR code to direct participants towards online feedback forms will be a sustainable and lasting method for the department. This will also improve the ability of the simulation team to continually improve delivery of the simulation sessions through accurate analysis of the feedback received.

116 LOW FIDELITY IN SITU SIMULATIONS FOR SUPPORTING LEARNING

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Background Simulation training has steadily been gaining traction in the medical training curriculum. Trainees are exposed to it from medical school in a simulation suite through to resuscitation courses such as the Advanced Paediatric Life Support. Majority of post graduate simulation training occurs in an artificial environment such as simulation suites which attempts to replicate the actual clinical environment with limited success. The simulation team in North Middlesex University Hospital Emergency Department (ED) identified a need for increased simulation training to improve trainee confidence in managing a range of cases presenting to the ED, enhance inter-departmental team working and achieve core training competencies in a safe but realistic environment. In order to achieve this, a fully immersive simulation experience through low fidelity in situ simulation training is carried out in the department with participants performing their usual clinical roles.

Objectives

1. Provide a full immersive simulation experience for trainees, to enhance learning and improve clinical knowledge, skills and attitude.
2. Identification of latent errors within the working environment and the clinical processes.
3. Develop a more collaborative working relationship between ED and other departments through joint simulation exercises, fostering multidisciplinary teamwork.

Methods Low fidelity in situ simulation training is carried out weekly in the ED by the ED simulation faculty, usually comprising of the simulation fellow, a consultant and a senior staff nurse trained in providing feedback. Participants were identified at the start of the shift and given a pre-brief before commencement of the simulation. When the simulation concluded, the simulation faculty would facilitate the debrief, allowing for active discussion of any issues arising from the simulation. At the end of the session, feedback was then collected electronically on Survey Monkey and the data analysed to determine if the simulation session met its objectives.

Results

1. 93% of participants felt that it was relevant to their training
2. 94% of participants felt that it was a safe learning environment.
3. 85% of participants felt that they had achieved some clinical learning from the session.
4. Improved multidisciplinary team working was evident through the active participation of student nurses, nurses, doctors of different specialties in the sessions.
5. Identification of latent errors: It was noted from the simulation sessions that the anaesthetic team was unfamiliar with the anaesthetic equipment available to them in the new paediatric ED wing and work is currently being undertaken to support the anaesthetic team in familiarising with the new environment.

Conclusions Low fidelity in situ simulation training provides a cost effective, safe and realistic learning environment for trainees. It is also able to identify any latent errors within the clinical environment and/or pathways in the department and promotes a standardisation of practice because it was conducted in the actual clinical space. In addition, it fosters a more collaborative working relationship between departments who would otherwise not have the opportunity to develop this relationship. Therefore, through in situ stimulation trainings, it has a potential to improve clinical care and enhances patient safety; and should form an integral part of paediatric training.

118 EFFECTIVENESS OF ORAL SEDATION FOR MRI IN YOUNG CHILDREN- EXPERIENCE IN A DISTRICT HOSPITAL

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10.1136/bmjpo-2021-RCPCH.68

Background Elective MRI scans require a child to stay still, which is often achieved with either oral sedation or a general anaesthetic in a young child or those with cognitive or behavioural difficulties.

There is limited provision for use of general anaesthetic for elective MRIs within our DGH and majority of elective neuroimaging is done using oral sedation. The local protocol uses combination of Alimemazine Tartrate and Chloral Hydrate to achieve sedation in young children.

Objectives A service review was undertaken to assess effectiveness of oral sedation, complications and achievement of high quality MRI images.

Methods Elective appointments at paediatric day unit were evaluated retrospectively for 12 months from March 2019 to February 2020 (before the Covid-19 pandemic affected local services).

Data was analysed for 64 patients from electronic health records to look for effectiveness of sedation and outcomes.

Data was not evaluated for 8 children who were not brought for their appointment, 1 child who was not adequately fasted and 3 children who attended late so missed their MRI slot.

Majority (80%) of planned imaging was for Brain relating to epilepsy or other neurodevelopmental disorders; other scans were booked for spine, ears or hips.

Results 67.2% children were successfully sedated and completed MRI scans (43/64).

Failure of sedation was 44% in older children (11/25) compared to 25.6% of those under 4 years age (10/39).

2 children vomited and 1 refused the oral medication.

18 children were not adequately sedated, of which 12 were re-booked for imaging with oral sedation and others booked for MRI under general anaesthetic.

2 patients also received oral Midazolam, of which 1 achieved successful MRI.

18.6% of MRIs (8/43) were reported as poor quality or had movement artefacts, suggesting achievement of good quality imaging in 54.6% planned elective MRIs (35/64).

There were no major complications but 2 children had low oxygen saturations related to deep sedation during scan; of which 1 child was kept overnight due to desaturations.

Conclusions Oral sedation using combination of Alimemazine Tartrate and Chloral Hydrate is safe within district general hospitals where provision of general anaesthetic is limited.

The partially successful sedation is also reported by other centres, leading to poor utilisation of MRI slots.

Inadequate sedation further impacts the quality of neuroimaging affecting diagnostic yield in potentially significant underlying neurodevelopmental disorders.

120 COMPARING FAECAL TRANSMISSION PATHWAYS CONTRIBUTING TO ENTERIC INFECTIONS IN INFANTS IN RURAL INDIA

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Background In rural India, child stunting remains a pressing concern that is being targeted by national flagship programmes. Poor child hygiene and exposure to enteric pathogens are important drivers of child stunting. Enteric pathogens can be transmitted from contaminated faeces to infants via water, food, hands, objects, soil, and flies.

Objectives In this study, we compared the infants' risk of enteric infection from exposure to different faecal transmission pathways, so that hygiene interventions can prioritise efforts towards the most dominant risks for infants.

Methods We collected data from 42 households with at least one infant aged 0 to 2 years from the study villages in rural Rajasthan, India. Water samples from drinking and bathing water sources, soil samples from household floors where infants were seen playing, and swabs from infants' and caregivers' hands were analysed for faecal indicator bacteria (*E. coli*). Household observations and data from the literature on exposure assessments were used to determine the infant's frequency and level of exposure to these different faecal transmission pathways. Published ratios between *E. coli* and enteric pathogens were used to assess the risk of enteric infection from each different faecal transmission pathway analysed.

Results The transmission pathways analysed included: Mouthing of own infants' hands, mouthing caregivers' hands, direct ingestion of soil from the household floor, drinking household stored water, and involuntary ingestion of surface water during bathing events at local streams. Over 98% of all the samples tested were positive for faecal contamination. All of the surface water samples and household floor soil samples were highly contaminated with faecal bacteria (>2 Log_{10} CFU/100 mL and/g, respectively), and 93% of the drinking water samples were positive for *E. coli* (Geomean, SD 2.10 $\pm$0.76 Log_{10} CFU/100 mL). Over 90% of the infants' and caregivers' hand swabs were contaminated. The direct ingestion of soil was the transmission pathway that posed that highest daily risk of enteric infection to infants, followed by mouthing of own soiled hands. Ingestion of soil posed a 1.4-fold higher infection risk than drinking water. The involuntary ingestion of water while bathing at local streams and mouthing of caregivers' hands posed smaller infection risks, but still considerable after accumulating over time. After one year, the estimated risk of *Campylobacter* and enteropathogenic *E. coli* infection was 100% for all the analysed infection pathways.

Conclusions Water, sanitation and hygiene programmes have typically overlooked soil as a faecal exposure pathway, but results from this study highlight the need to prioritise reducing infants' exposure to faecally contaminated soil while crawling around the household floors and mouthing their own hands, as those pathways posed the highest infection risks. However, it is apparent that discrete hygiene interventions targeting individual pathways will not be enough to reduce the enteric infection burden, as all the transmission pathways analysed posed a high risk of infection over time. This study reinforces the need for transformative changes to address the overall widespread high levels of faecal contamination in the infants' living environment to reduce child stunting and achieve the Sustainable Development Goals.

123 ROTA INNOVATION AND E-ROSTERING IN GENERAL PAEDIATRIC DEPARTMENT IN A LARGE DISTRICT GENERAL HOSPITAL

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Background Junior Doctor rotas have gone through a number of iterations over the years. Rigid, rolling rotas with fixed annual and study leave have been opposed by trainees and the BMA1. They leave junior doctors unhappy, burnt out and disengaged. This has a negative effect on patient care [3] and serious consequences for retention and recruitment in Paediatrics and Healthcare at large.

Objectives To introduce a new electronic rota management (HealthRota) system which will facilitate self-rostering, improve adherence to the BMA and RCPCH Trainee Charter [2] recommendations and improve junior doctor wellbeing.

Methods Twelve Junior Doctors (and senior doctor equivalents) starting a General Paediatric Medicine post will complete a survey of fourteen questions about their experiences in their previous rota (Non-HealthRota). They will then be introduced to HealthRota and repeat the survey towards the end of their Paediatric post. The survey included questions on life: work balance, rota design, transparency, access, leave requesting, annual leave, study leave, clinics and flexibility.

Results Overall there was on average a 1.3 point improvement (on a 5 point Leichardt scale) across all questions, with the various Non-HealthRota experiences having a satisfaction score of 3.0, whilst e-HealthRota had a score of 4.3. There were