association was maintained even after adjustments. A cutoff value of 17 for the B-lines score has a sensibility of 73,91% and a specificity of 69, 23% in identifying patients with $\text{PaO}_2/\text{FiO}_2 < 300$.

Conclusion LU can be used for functional lung evaluation and identification of pediatric patients with increase pulmonary water content and decrease $\text{PaO}_2/\text{FiO}_2$ ratio.

P267 EVALUATION OF A FOCUSED CARDIAC ULTRASOUND PROTOCOL A PEDIATRIC EMERGENCY DEPARTMENT IN VINNITSA REGIONAL CHILDREN HOSPITAL

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The objective of this study was to evaluate the implementation of a focused cardiac ultrasound (FoCUS) protocol in a pediatric emergency department (PED).

Methods We conducted a cross-sectional, observational, quality improvement project in a PED of an urban tertiary care Vinnitsa region children hospital. A FoCUS protocol was collaboratively developed by pediatric intensive care and pediatric emergency medicine. This included a reference document with definitions, indications, image acquisition guidelines, and interpretation expectations. We measured physician-emergency pediatric doctors performance against pediatric cardiologist interpretation of stored cine clips as our reference standard. Focused cardiac ultrasound interpretation was dichotomized for the presence or absence of pericardial effusion, depressed left ventricular function, and chamber size abnormalities.

Results 243 FoCUSs were performed by 5 different emergency doctors from January 218 to December 2019. The prevalence of FoCUS abnormalities was 19.4%. For pericardial effusion, sensitivity was 99,2% (95% confidence interval [CI], 48%–100%) and specificity was 94% (95% CI, 90–100%). For depressed function, sensitivity was 99,4% (95% CI, 56%–100%) and specificity was 98% (95% CI, 94%–100%). For chamber size abnormalities, sensitivity was 97% (95% CI, 50%–100%) and specificity was 95% (95% CI, 88%–98%). The median number of monthly FoCUS increased from 3 (preprotocol) to 7 (postprotocol), and the median rate of adequate studies increased from 0% to 55%.

Conclusions We report the collaborative development and successful implementation of a PED FoCUS protocol. Physician-emergency doctors interpretation of FoCUS yielded acceptable results.

P268 INTRODUCTION OF THE LOW RISK ANKLE RULE TO A PAEDIATRIC EMERGENCY DEPARTMENT: A QUALITY IMPROVEMENT INITIATIVE

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Introduction Ankle injuries are common in children (~ 2% of presentations to PEDs) ¹ X-rays are ordered for 85–95% of patients but only 12% of x-rays reveal a fracture.¹ Clinical

prediction rules such as The Low Risk Ankle Rule (LRAR) exist to help clinicians safely reduce the frequency of radiography in these injuries. The LRAR has been shown to reduce imaging by up to 60% without missing any clinically significant fractures.¹

Aim To introduce the LRAR to our department and study its effect on our rate of radiography and length of stay (LOS). We also sought to identify complications related to its use, such as missed fractures and representations.

Methods A baseline audit was performed to determine our baseline rate of radiography. The implementation strategy involved: staff education sessions, distribution of study information and visual reminders throughout the department, introduction of mandatory prompts into the x-ray ordering system and a 3 week pilot period.

Results The baseline ankle x-ray rate was 879/969 (90.7%). This reduced to 40/92 (43.4%) using the LRAR, a reduction of 47.3%. The average LOS decreased from 132 minutes before the implementation to 123 minutes after. There were no re-presentations with missed fractures.

Further 12 month follow up data after the initial implementation period showed a persistent 46% reduction in the frequency of ankle x-rays performed, compared with the baseline data.

Conclusions The LRAR has been shown to safely reduce the frequency of radiography in ankle injuries.^{1,2} Other studies have demonstrated a reduction in x-ray frequency of 22–60%.^{1,2} Our study was in keeping with these previous studies, while also not missing any fractures, further supporting the use of The LRAR in paediatric emergency departments. The LRAR continues to be used effectively in our department. Follow on data showed an annual saving of € 28, 247.

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P269 IMPROVING THE EMERGENCY DEPARTMENT JOURNEY FOR CHILDREN WITH AUTISM AND COMPLEX NEEDS

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Background Children with autism and complex needs are frequently seen in the Emergency Department (ED). This can be extremely distressing experience for them. This experience can be improved by several measures, including: staff who are experienced in looking after children with autism/complex needs, minimising their time in ED, providing a quiet, relaxing space for them to wait and the use of social stories and play therapists. However, many ED's remain ill-prepared to manage these children.

Aims

- To ascertain staff (paediatric and emergency physicians/nurses) comfort and experience levels in managing children with autism or complex needs in the emergency department.

- To understand parental concerns and obtain their opinion on visits to the Emergency Department- including the most stressful parts and suggestions for change.
- To affect change within the Emergency Department in order to improve patient and parent experience.

Methods Following ethical approval from the local Clinical Research Ethics Committee, parent questionnaires were distributed. Staff questionnaires will be distributed prior to educational sessions. These will be roughly 1 hour in length and included; Definition of Autism, understanding autism and children with complex needs, a parent discussing their experience and an open question session. Separate study sessions will be held for Paediatric and ED colleagues (doctors and nurses) to maximise attendance.

Parental questionnaires were posted to patients of children with moderate to severe autism; intellectual disability or complex needs. These patients were selected from the Community Neurodevelopmental Consultants patient cohort.

Results In total 315 parental questionnaires were distributed. At the time of writing this there have been 40 responses. The results thus far are demonstrating recurring areas which cause the most stress. These areas are: waiting times, small cramped waiting rooms and getting blood tests performed.

Staff will be surveyed and education sessions are planned for the next month.

Conclusion The Emergency Department is a stressful environment for everyone but this is particularly true for those with complex needs and autism. Simple measures can be instituted to improve patient and parental experience. We will truly endeavour to implement simple changes, such as educating staff further and a patient alert sticker, to improve the experience of these patients.

P270 SNAKEBITES IN AL- BAHU DISTRICT, SAUDI ARABIA (EPIDEMIOLOGY, CLINICAL PRESENTATIONS, MANAGEMENT AND PREVENTION)

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Introduction and Aim of the Work

Exposure to a variety of venomous animals, including snakes and scorpions, represents an environmental health risk in Saudi Arabia during the last few years. High incidence rates have been reported in Al-Baha region.

The objective of this paper is to study the epidemiology, clinical presentations, management of snakebites among children in Al- Baha region, Saudi Arabia and to establish a prevention plan.

Patients and Methods Surveillance of all cases (up to 15 years old from both sexes) presented with snakebites during the period from May 2017 to May 2018. Data obtained for each case, included personal details, clinical presentations, details of the bite itself, laboratory findings and treatment lines used for every case. Envenomation was graded as 0, 1, 2 or 3 according to local, systematic and laboratory presentations.

Results Study population consisted of 83 cases with male to female ratio 2.2:1, Saudi to non Saudi ratio 2.4:1, a peak age

group was 10-< 15 years and more in rural areas (81.9%). The results showed that the peak incidence occurred outdoor (79.5%), more in lower limbs (83.1%), during summer (57.8%), at night (73.5%) and mainly due to bare feet (91.6%) and darkness (73.5%). Type or the snake could not be identified in 71.1% of cases, and *Echis coloratus* was commonest identified type (10.8%). Envenomation was graded as nil (0) in 15.7% of the cases (1) in 39.7% of the cases, moderate (2) in 33.7% of the cases and severe (3) in only 10.8% of the cases. No mortalities were reported.

Most cases (48.2%) presented > 4 hours after the bite, all were hospitalized. First aid treatment including wound cleansing was done in 95.2%, antitetanic serum was injected in all cases and dopamine was infused to 7.2% of the cases. Main specific treatment was the polyvalent snake antivenom which was infused as early as possible to cases graded as 2 and 3 (44.5%). Antibiotics were used in 86.7% of the cases. Fresh frozen plasma and/or platelets transfusion was given to in 20.5% of cases.

Conclusion Health education in PHCs and of school children was shown to be useful in the prevention of snakebite. It should include the importance of preventive measures such as wearing protective clothing while in the snake environment and not reaching blindly into areas where snakes may hide especially during summer months.

P271 HOW CAN WE IMPROVE PAEDIATRIC SIMULATION TRAINING IN A MIXED ED?

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Introduction The high-risk, low-volume nature of paediatric emergencies can result in a lack of physician comfort and confidence in dealing with sick children.¹ Simulation training can help improve caregiver confidence and team communication and performance in paediatric emergencies.¹

Aims Weekly, multi-disciplinary simulation sessions are held in the ED in UCHG. We sought to identify the baseline experience and confidence levels of those attending and to identify areas whereby the sessions could be improved. We then re-surveyed participants after 15 simulation sessions to identify how useful they found the sessions and to identify means of further improvement.

Methods Surveys were distributed to staff attending the weekly simulation sessions before and after 15 simulation sessions.

Results 17 baseline and follow up surveys were returned.

The initial comfort level of respondents participating in simulations were: very uncomfortable (4), slightly uncomfortable (4), neither comfortable nor uncomfortable (6), comfortable (3), very comfortable (0). 10/17 respondents felt they learned more by participating in simulations and 7/17 felt that they learn more by observing. 15/17 found the scenarios 'helpful' or 'very helpful'. Suggestions to improve the sessions included: more consultant involvement (5), a registrar leading the scenario (4), longer, more complicated scenarios (6), involvement of more participants (8) and receiving the topic and study materials earlier in the week (7). We sought to implement these recommendations and then performed the follow up survey.