

To determine impact on PA utilization, mean PA hours/month were plotted on a control chart before and after EDWIN use. We also compared total daily number of PED visits, inpatient admissions, patients left without being seen (LWBS), and patient elopement for days with and without PA initiation to confirm that PA correlated with high ED utilization

Results: During the study period, the PA policy was activated a total of 124 times; 32 times after EDWIN implementation. Mean EDWIN score was 2.4 (SD 0.5, min 1.5, max 3.8) at PA initiation. There were no PA occurrences for EDWIN scores <1.5 and 7 PA occurrences for scores <2 (mean 1.8 [SD 0.1, min 1.5, max 1.9]). There was no statistically significant difference for mean PA hours/month before and after EDWIN was instituted (21.4 vs 20.2, $p=0.08$). Number of PED visits, inpatient admissions, LWBS, and elopement were significantly higher on days with PA activation ($p<0.01$)

Conclusion: The EDWIN score correlated with PED busyness and extreme overcrowding during PA activation but did not change overall monthly PA hours. PA activation correlated with high PED utilization. Future studies include implementing a real-time web-based EDWIN score as a prediction tool to prevent overcrowding and verifying EDWIN generalizability in other PED sites.

616 Caregiver Motives for Patients Revisiting the Pediatric Emergency Department Within 72 Hours of Discharge

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Background and Objectives: In the US, approximately 2.8-5% of children discharged from the emergency department (ED) will return <72 hours. There is limited literature examining the caretaker's reasons for return to the ED, specifically among Hispanics

Methods: Validated surveys were prospectively administered in English or Spanish to caregivers returning to a freestanding children's hospital ED <72 hours of discharge between 07/10/2019-12/15/2019. The survey collected data on demographics, previous ED discharge process, and reasons for return to the ED. The Fisher exact test compared reasons for return and prior ED discharge instructions by Hispanic ethnicity and Spanish language

Results: Among the total 278 surveys with consent and data on return reasons, patients included 146 (53%) males with mean (SD) age of 6.2 (6.0) years. While 171 (62%) patients were identified as Hispanic, 51 (19%) caregivers preferred Spanish, and 28 (10%) completed the survey in Spanish. Reported reasons for return included: no symptom improvement (58%), child was sicker (29%), advised to return to the ED (18%), new problem (11%), and unsure what was wrong with the child (6%). During previous ED discharge, 208 (84%) caregivers acknowledged being informed of the reasons to return to the ED, however only 123 (50%) were informed how long it would take for the child to get better. Caregivers were significantly less likely to be advised to return to the ED if preference was Spanish (6%) vs English (23%) ($p=0.006$). Recall of being informed of time to improvement was significantly higher among Hispanics (61%) vs non-Hispanics (47%) ($p=0.04$), and for Spanish (72%) vs English (53%) ($p=0.03$)

Conclusion: Caregivers returned primarily due to no improvement or worsening in the patient's condition. Half of caregivers did not recall being informed how long it would take to get better. Improving the discharge process to ensure understanding of illness progression and resolution of symptoms, especially among non-Hispanics and English speakers may reduce the rate of return visits. Additional surveys will be collected following submission of this abstract for 500 total responses.

617 Telemedicine Medical Screening Exam: An Innovative Approach to Expedite Care in a Pediatric Emergency Department

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Background and Objectives: Telemedicine is a rapidly expanding subsector of medicine that uses communications technology to deliver healthcare. Prior studies show that staffing a physician at triage expedites care in the emergency department (ED). Our objective was to assess the effect of a Telemedicine-Medical Screening Exam (Tele-MSE) on the initiation of care in a pediatric ED (PED)

Methods: We conducted a retrospective cohort study of patients presenting to the PED from Dec 2017 to Jun 2019, when a Tele-MSE provider was available (6pm-12am daily). Our Tele-MSE providers are pediatric emergency medicine trained academic faculty. With the triage nurse, the Tele-MSE provider evaluates the patient, asks focused questions, and performs a brief virtual physical exam. Care is initiated immediately, and may consist of ordering medications, radiology or laboratory studies, and consults. We analyzed four diagnostic cohorts (psychiatry evaluation, gastroenteritis, burn injury, fracture) to illustrate the effect of telemedicine on timeliness to intervention. We matched subjects with patients from the prior year who did not undergo Tele-MSE by age, diagnosis, season, and weekday vs. weekend. Outcome measures included time to provider evaluation, time to intervention order (medication, imaging, consult), and ED length of stay (LOS)

Results: Of 930 Tele-MSE patients who met diagnostic criteria during the study period, we included 296 cases matched with controls. The study cohort had a median age of 8.7 years (IQR 3.5, 13.9); 52% were male. Tele-MSE significantly improved time to provider for all diagnoses by a median of 7.6 mins (IQR -27.2, 0.6); time to psychiatry evaluation improved by 8.2 mins (IQR -28.2, 2.1), gastroenteritis, 13.2 mins (IQR -34.2, 0.0), burn injury, 1.5 mins (IQR -9.5, 2.1), and fracture, 4.2 mins (IQR -12.3, 2.1). Significant reductions in interventions included time to consult the burn service by 5.4 mins (IQR -15.1, 2.0) and time to medication order for patients with gastroenteritis and burn injury by 32.8 mins (IQR -68.1, -6.7) and 21.7 mins (IQR -43.6, -7.3), respectively. ED LOS was significantly reduced by 36 mins (IQR -139.2, 54.0) for patients with gastroenteritis and by 42 mins (IQR -156.0, 82.8) for the pooled study cohort

Conclusion: Tele-MSE is effective to expedite the care of many pediatric patients in the ED who require immediate interventions, and may reduce ED LOS for all patients.

618 Retrospective Review of Young Children with Food-Induced Anaphylaxis Presenting to the Emergency Department

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Background and Objectives: Food allergy (FA) affects 8% of children in the US and leads to approximately 50% of anaphylaxis cases presenting to the emergency department (ED). Epinephrine is considered first-line treatment for anaphylaxis. There has been a paucity of studies on presentation, management, and outcomes in young children under age 5 years treated in the ED for food-induced anaphylaxis (FIA), and in particular data on use of epinephrine in this age group is limited

Methods: Retrospective cohort study within an integrated health care system between 2016 and 2018 with patients aged 0-4 years. Visits were identified if they had a FA-specific or non-specific allergy ICD-10 code. FA ED visits and anaphylaxis diagnoses were confirmed by chart review on a weighted sample of patients from the initial cohort. We assessed presentation, treatment, and short-term outcomes among patients with FIA. We used propensity scores to account for differences in patient characteristics between those who did and did not receive prehospital epinephrine, and multivariable logistic regression to assess associations between prehospital epinephrine and need for prolonged observation

Results: Out of 1518 children with FA ED visits, 538 (35.4%) met criteria for FIA. Among children with FIA, 145 (27.0%) were age <1 year, 229 (42.6%) were of Asian descent, and 356 (66.2%) were male. The most common organ systems involved were skin (99.1%), gastrointestinal (68.0%), and respiratory (42.4%). We found 64 (11.9%) received pre-hospital epinephrine, 152 (28.3%) received ED epinephrine (a total of 208 [38.7%] children received any epinephrine), and 339 (63.0%) received a prescription for an epinephrine autoinjector at discharge. In addition, 437 (81.2%) received anti-histamines and 405 (75.3%) received steroids in the ED. Among patients with FIA, 13 (2.4%) were observed in a clinical decision unit, and 16 (3.0%) were admitted to the hospital. Only two patients had a repeat ED visit within 24 hours

Conclusion: While 538 children met criteria for anaphylaxis, only 208 (38.7%) received treatment with epinephrine. The majority of patients were discharged from ED with an epinephrine autoinjector prescription and without need for further observation or hospitalization.

619 Pediatric Emergency Medicine Physician Point-of-Care Ultrasound vs Radiology Ultrasound for Recognition of Perforated Appendicitis

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Background and Objectives: Abdominal ultrasound (US) is frequently performed to diagnose appendicitis in children presenting to the emergency department (ED) with acute abdominal pain. Early accurate diagnosis of perforated or non-perforated appendicitis will determine the need for immediate surgical intervention versus medical management. The aim of this study was to compare pediatric emergency physician Point-Of-Care Ultrasound (POCUS) to radiology performed ultrasound (RUS) in the recognition of perforated appendicitis in children

Methods: We performed a retrospective chart review of patients age 2 to 18 years diagnosed in the pediatric emergency department (PED) with perforated appendicitis from January 2010 to December 2018. All patient data were obtained via the electronic medical record (EMR). An in-depth chart review was performed, and all data collection points were transcribed into a spreadsheet by the investigators. We included all patients with a POCUS and/or RUS done. We excluded patients who did not have any US as part of their appendicitis work-up. The CT scan or surgical/pathology reports were used as the reference standard for determining if the appendix was truly perforated. The sensitivity and specificity of both POCUS and RUS findings were determined, and groups were compared

Results: A total of 321 patients with the diagnosis of perforated appendicitis in the PED met the study criteria (72 had a POCUS performed, 249 had a RUS performed, and 36 patients had both performed). POCUS had a sensitivity of 17.9% (5 of 28), a specificity of 93.2% (41 of 44), a positive predictive value of 62.5% (5 of 8), and a negative predictive value of 64.1% (41 of 64). In the RUS group, sensitivity of 17.0% (17 of 100), a specificity of 98.7% (147 of 149), a positive predictive value of 89.5% (17 of 19), and a negative predictive value of 63.9% (147 of 230) was found

Conclusion: Our abdominal POCUS sensitivity and specificity were in line with previously published studies of RUS performed to diagnose perforation from non-perforated appendicitis and also in line with in house RUS. This study provides support for the ability of POCUS to recognize perforated appendicitis as compared to RUS.

620 Emergency Visits for Autistic Children With a Psychiatric Disorder: Is There a Disparity of Care?

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Background and Objectives: Children with autism spectrum disorder (ASD) have high rates of co-occurring mental health problems, and are more likely to visit the emergency department (ED) than their peers. Our objective is to compare ED care for children with ASD and a psychiatric complaint to children with a psychiatric complaint without ASD

Methods: Retrospective electronic chart review from January 2012 to January 2018 was performed for pediatric ED visits, ages five through seventeen years old, who presented with a psychiatric complaint. LOS, use of non-home sedation medications, use of restraints during stay, and demographics were collected. The SAS System for Windows version 9.4 was used to obtain descriptive summaries

Results: 5461 visits met inclusion criteria: 480 with ASD and 4981 visits non-ASD. ASD group: 27.7% were females. Non-ASD patients: 55.1% were females Median age was 11.6 years for ASD group and 15 years for non-ASD group. ADHD, anxiety, and aggression were the top three psychiatric complaints for the ASD patients whereas depression, suicidality, and anxiety were for the non-ASD patients. The odds of needing a sedating medication or being physically restrained during the visit were much higher for the group with ASD, ranging from almost twice to more than six times as likely. Specifically, for needing Ketamine if having ASD and psychiatric problem, the odds were 6.7(95% CI 4.2-10.7; p <0.0001).The OR for Lorazepam was 4.3(95% CI 3.6-5.3; p <0.0001), for Midazolam the OR was 4.5(3.3-6.3; p <0.0001);for Haloperidol the OR was 3.3(95% CI 2.4-4.5;p <0.0001), and for use of restraints was 1.95(95% CI 1.2-3.1; p= 0.0039)

Conclusion: Psychiatric ED care for patients with ASD and psychiatric complaint were more likely to be restrained or medicated during their ED stay.This is a disparity of care.Emergency Departments need to focus on the ASD pediatric population to figure out ways of de-escalation and better management ASD and for child psychiatry.Future studies need to be done to determine the best way to care for this vulnerable patient population

621 Observation Units May Reduce Disparities in Medication-Assisted Treatment Enrollment for Opioid Use Disorder

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Background and Objectives: Medication-assisted therapy (MAT) is considered the standard of care in the treatment of opioid use disorder (OUD); however, black and female patients are less likely to receive treatment with MAT. Little research exists to investigate gender- and race-based enrollment disparities from emergency department referrals to these clinics. Emergency Department Observation Units (EDOU) are protocol-driven patient care areas suitable for patients