the Opioid Risk Tool (ORT), in the waiting room of an emergency department and assessed the risk of opioid abuse among an emergency department (ED) population.

Methods: The study was conducted over a 3-week period in the waiting room of an academic emergency department with an annual census of approximately 115,000 visits per year. All adults presenting to the emergency department were eligible. Individuals were approached while in the waiting room and chosen randomly based on their seat in the waiting room. The ORT was self-administered via an electronic tablet in the waiting room. The results of the survey were anonymous, and were not shared with clinician providers. A research coordinator was available while the individual completed the survey to assist with completion of the survey if necessary. Any difficulties completing the survey were recorded by the research coordinator. Descriptive statistics were used to analyze the data.

Results: A total of 212 individuals were enrolled out of 253 persons invited to participate yielding a response rate of 84%. All completed the survey without difficulty. Males represented 34% of the participants. Overall 40% of the total sample reported a family history of alcohol abuse, 36% reported a family history of illicit drug abuse, and 21% reported a family history of prescription drug misuse. There were no significant differences between the family history of alcohol abuse, illicit drug abuse, or prescription drug misuse between males and females. Males were significantly more likely to report a personal history of ethanol abuse (74% vs 51%) and illicit drug abuse (53% vs 34%). Females were significantly more likely to report a history of depression (44% vs 23%). Seventy-two percent of individuals had a moderate or high opioid risk score. Males had a significantly higher opioid risk score than females (8.9 vs 7.1) and the overall average opioid risk score was 7.69, which is considered moderate opioid risk. Forty-two percent of individuals had a high opioid risk score, which has been associated with a 91% risk of aberrant drug behavior.

Conclusion: In our study greater than 70% of the emergency department population was at increased risk of abusing opioids. Future studies should be performed to assess the impact integrating opioid risk scoring tools into clinical practice has on provider prescribing patterns in the emergency department.

Table 1. Opioid Risk Score of individuals in the emergency department by gender.

	MALE (73)	FEMALE (139)	TOTAL (212)	P VALUE
AGE				
18-45 years	45 (62%)	74 (53%)	119 (55%)	0.249
46-54 years	13 (18%)	17 (12%)	30 (14%)	0.302
≥55 years	15 (21%)	48 (35%)	63 (29%)	0.040
FH				
ETOH ABUSE	30 (41%)	54 (39%)	84 (40%)	0.769
ILLICIT DRUGS	28 (38%)	48 (35%)	76 (36%)	0.652
PRX DRUG MISUSE	16 (22%)	28 (20%)	44 (21%)	0.859
PERSONAL HX				
ETOH	54 (74%)	71 (51%)	125 (59%)	0.001
ILLICIT DRUGS	39 (53%)	47 (34%)	86 (41%)	0.008
PRX DRUG MISUSE	12 (16%)	18 (13%)	30 (14%)	0.536
DEPRESSION	17 (23%)	61 (44%)	78 (37%)	0.004
PSYCH (OTHER)	12 (16%)	14 (10%)	26 (12%)	0.192
PREADOLESCENT SEXUAL ABUSE	9 (12%)	27 (20%)	36 (17%)	0.249
Opioid Risk Score				
LOW (0-3)	17 (23%)	43 (31%)	60 (28%)	0.034
MODERATE (4-7)	22 (30%)	41 (29%)	63 (30%)	
HIGH (8 OR MORE)	34 (47%)	55 (40%)	89 (42%)	
AVG	8.9	7.1	7.69	

210 A Retrospective Institutional Review of Vessel Loops for Incision and Drainage of Abscesses in the Pediatric Emergency Department

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Study Objectives: Subcutaneous abscesses frequently present to the pediatric emergency department (PED). The gold standard for abscess management is incision and drainage (I&D) with packing. Abscesses that have been packed may be painful; and repeat packing procedures are also distressing. An alternative management is I&D with placement of a vessel loop. Currently, there is little data available regarding its use in the PED. The primary objective of this study was to evaluate the practice change in abscess drainage from I&D with packing to vessel loops over a 6-year period. The secondary objective was to compare return visits and complication rates among the pre- and post-vessel loops implementation groups.

Methods: This was a retrospective cross-sectional descriptive study of abscess management in a single tertiary care PED before and after introduction of vessel loops. Patients > 28 days-17 years were included if presenting with a subcutaneous abscess requiring an I&D in the PED. Patients were excluded if immunocompromised, the abscess was drained manually or by needle aspiration, or if a subspecialist performed the drainage. ICD-9 codes for "cellulitis" and "abscess" and a procedure code for "incision and drainage" were used to screen patients from November 2008-November 2014. Included patients were divided into an 18-month pre-vessel loop group and an 18-month post-vessel loop group. The 3-year time frame when vessel loop technique was implemented was excluded. Demographics, abscess characteristics and management, and return visits/complications were collected. Complications were defined as: return visit, repacking of abscess, repeat I&D, or return visit with admission.

Results: 224 patients were included in the pre-vessel loop group and 194 patients in the post-vessel loop group. The pre-vessel loop group had a mean age of 4.8 years, 40% male, and 42% buttocks abscess, and the post-vessel loop had a mean age of 4.9 years, 42% male, and 45% buttock abscesses. In the pre-vessel loop group, 81.6% had I&D with packing, 18.4% had I&D without packing, and none had vessel loop placement. In the post-vessel loop group 14.4% underwent I&D with packing, 28.9% underwent I&D without packing, and 56.7% had vessel loop placement. There were 54 (24%) return visits for the pre-vessel loops group and 18 (9.3%) return visits for the post-vessel loops group, 14.7% difference in rates, 95% CI of 7.5% to 22%. $p < 0.001$. Abscesses were repacked 22 times (10%) in the pre-vessel loop group and none in the post-vessel loop group ($p<0.001$). The groups demonstrated no difference between return visits with admission (2.7% vs 2.1%, $p=0.26$) or repeat I&D (2.74% vs 1.5%, $p= 0.68$).

Conclusions: During the study, provider use of I&D with packing decreased and vessel loops increased. There was no increase in complication/treatment failures, and return PED visits for abscess re-packing significantly decreased.

211 Pediatric Appendicitis: Trends in Emergency Department Imaging and Outcomes in the Community Setting, 2010-2015

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Study Objective: Imaging studies in emergency department (ED) evaluation of pediatric appendicitis are obtained not only for diagnosis but to identify perforation and avoid negative appendectomy (NA). While imaging rates increased over the last decade in adults and children, perforation rates decreased only among adults. We sought to describe trends in imaging and to identify predictors of NA and perforation in pediatric ED patients with acute appendicitis.

Methods: This retrospective cohort study included ED patients aged 2-17 years who underwent non-incidental appendectomy in a 21-hospital health care system from 2010-2015. Patients with appendicitis, appendectomy, NA and perforation were identified using ICD-9 codes. We evaluated patient characteristics associated with imaging (ultrasound [US] or CT) for patients with a single study. Demographics, laboratory data and facility level variables were included. Proportions were compared using the chi-squared test; continuous values with the Wilcoxon-Mann-Whitney nonparametric test. To identify predictors of NA and perforation, we performed bivariate analysis of patient characteristics then constructed three age-stratified multivariable models (age 2-5 yrs, 6-10 yrs, and 11-17 yrs) for each outcome.

Results: Overall, 4320 patients met inclusion criteria. The proportion without imaging decreased from 29% in 2010 to 6% in 2015 and with multiple studies (CT and US) increased from 8% to 24%. The proportion with CT decreased from 47% to 30%, and US increased from 16% to 40%. Increased CT utilization was associated with ED arrival between 12am-8am, body weight $\geq 90^{th}$ percentile, older age and higher white blood cell (WBC) count, while US was associated with clinic visit >72 hrs

before ED visit and shorter ED length of stay (LOS), see Table. Facility capacity for pediatric surgery was not associated with imaging choice.

The NA rate ranged from 4.5% to 7.8%, while perforation rate ranged from 16%-18% over the study period. Race did not alter odds of perforation or NA. In the three multivariable regression models, NA odds decreased for WBC count> 10,000, referent WBC count ≤10,000 (2-5 yrs adjusted odds ratio [AOR] 0.2, 95% CI 0.1-0.6; 6-10 yrs AOR 0.4, 95% CI 0.2-0.9; and 11-17 yrs AOR 0.3, 95% CI 0.2-0.5), while odds of perforation increased for WBC count> 10,000 only in 6-10 yrs (AOR 1.9, 95% CI 1.0-3.4) and 11-17 yrs (AOR 4.2, 95% CI 2.5-7.2).

Conclusion: Fewer pediatric patients underwent appendectomy without imaging, but NA and perforation rates did not change over the study period.

In a community ED setting, age, weight and ED arrival time were predictive of CT utilization for diagnosing appendicitis, although US was associated with shorter LOS. Elevated WBC count increased odds of perforation among older children, and decreased odds of NA among all age groups. Race did not alter odds of perforation, unlike other studies, perhaps due to differences in access, as all patients in our cohort were part of the healthcare system. Our results support the use of WBC count as a candidate predictor for outcomes in appendicitis, adding to its current use in appendicitis risk scores.

Patient Characteristics by Imaging Type

Characteristic	CT only (n=1393)	US only (n=1556)	p-value*
Female	32%	35%	0.652
Male	32%	37%	
Median age, yrs (IQR)	15 (12-16)	11 (8-14)	<>
Weight >=90th percentile1	30%	22%	<>
ED admission 12a-8a	23%	12%	<>
Prior clinic visit < 72="" hrs="" before="" index="" ed="">	21%	33%	<>
White Blood Cell count	14.6 (11.6-17.4)	14.2 (10.9-17.3)	0.017
Median ED LOS, hrs (IQR)	6.5 (5.0-8.4)	4.9 (3.6-6.5)	<>
Facility pediatric capacity	0.13 (0.11-0.13)	0.13 (0.11-0.13)	0.595

1There were 12 subjects having missing weight values.

212 Missing Pediatric Appendicitis: Does Chief Complaint Contribute?

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Study Objectives: Emergency department (ED) triage chief complaint may result in anchoring bias, leading the physician to miss or fail to synthesize relevant historical or physical exam information. We evaluated the association between the pediatric ED triage chief complaint and rate of missed appendicitis in children.

Methods: We performed a retrospective chart review of patients who presented to a pediatric ED and were diagnosed with appendicitis over a five-year period. We reviewed the medical record for any additional pediatric ED visits in the week preceding the diagnosis of appendicitis. We noted triage chief complaint at the time of the initial ED visit. We classified the triage chief complaint as "strongly suggestive of appendicitis" ("abdominal pain," "right lower quadrant pain," "rule out appendicitis") or "less suggestive of appendicitis" ("fever," "vomiting," "dehydration," etc.). We evaluated the association between the type of triage chief complaint and missed diagnosis of appendicitis at the initial pediatric ED visit.

Results: We reviewed 1680 patients with appendicitis over the five-year study period. In 67 cases (4%), patients had at least one additional pediatric ED visit during the week preceding the diagnosis of appendicitis. Of patients with a triage chief complaint which was strongly suggestive of appendicitis, 96.4% were diagnosed with appendicitis at their initial pediatric ED visit versus 87.5% of those with a triage chief complaint less suggestive of appendicitis ($p<0.001$). Patients who had a chief complaint which was less suggestive of appendicitis were much more likely to have a missed diagnosis of appendicitis at the initial pediatric ED visit (odds ratio=3.87, 95% confidence interval=1.89-7.89). When comparing those diagnosed with appendicitis at their initial pediatric ED visit to those diagnosed after multiple visits, we found no difference in average age (9.9 versus 10.1 years, $p=0.665$), sex (55.7% male versus 49.3%, $p=0.291$), or the presence of fever (19.9% versus 19.4%, $p=0.920$).

Conclusion: A triage chief complaint which was less suggestive of appendicitis was associated with a higher rate of missed appendicitis in a pediatric ED. Our findings further confirm the potential impact of anchoring bias and ED chief complaint.

213 Impact of Ondansetron Prescription on Return Emergency Department Visits Among Children With Acute Gastroenteritis

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Study Objectives: A single dose of oral ondansetron given in the ED for children with acute gastroenteritis (AGE) decreases vomiting and hospitalization. The objective of this study was to determine if providing ondansetron prescription to children seen in the ED with AGE is associated with reduced unscheduled ED revisits.

Methods: Retrospective cohort comparative study of children 6 months to 18 years who presented to a tertiary pediatric ED between 2010 and 2015. ICD-9 codes identified eligible patients discharged home with AGE diagnosis. Patients with complex chronic conditions and those with comorbidity identified during the initial ED visit were excluded. Illness severity was determined using the institutional dehydration score, emergency severity index (ESI), and presenting symptoms. Medical records of all returning patients were reviewed for clinical history, interventions and diagnostic studies, and final diagnosis.

The primary outcome was the incidence of unscheduled ED revisit within 7 days among patients discharged home initially with ondansetron prescription compared with those without a prescription. Secondary outcomes included rate of hospitalization at second presentation and alternative diagnoses.

Results: 11,785 eligible patients were seen and discharged home from the initial ED visit. 35.5% (N=4,187) of patients were discharged home with an ondansetron prescription. 48% were female, and median age was 3.5 years (IQR 1.7, 7.0). 6.0% (N=707) of patients returned to the ED within 7 days; of these, 40 were unrelated visits, 186 were related but not AGE-specific encounters, and 23 resulted in alternative diagnoses.

Median duration between initial ED encounter and revisit was 2 days (IQR: 1, 3). Patients were more likely to return to the ED if they were discharged with an ondansetron prescription, after adjustment for ESI, both in the full sample (6.6% vs 5.1%; aOR [95% CI] = 1.30 [1.11, 1.52]) and when restricted to return visits for AGE-specific diagnoses (5% vs 3.3%, aOR = 1.55 [1.29, 1.87]). They were also at increased risk for admission following revisit (1.7% vs 1.2%, respectively; aOR = 1.45 [1.07, 1.98]), including when the analysis was restricted to AGE-specific diagnoses (1.3% vs 0.8%, respectively; aOR = 1.59 [1.10, 2.30].

Among patients returning to the ED, no difference was found in the proportion of alternative diagnoses among patients with versus without an ondansetron prescription (2% vs 4.1%, respectively; aOR = 0.51 [0.20, 1.31]).

Conclusion: Providing an ondansetron prescription for children seen in the ED with suspected AGE was associated with an increased risk for return ED visits and admission following revisit.

214 The Impact of a Telepresent Team Leader on Pediatric Resuscitation: A Randomized Controlled Trial

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Study Objectives: Telepresence, the use of technology for providers to actively participate in care when they are not physically present, has been employed to provide specialty care to critically ill patients in rural and community hospital settings. The primary objective of this study is to evaluate the effect of a telepresent team leader on the quality of care during a simulated pediatric resuscitation. The secondary objective is to explore emergency medicine provider perspectives on the utility, effectiveness, and acceptability of telemedicine consultations during resuscitation. We hypothesize that telepresent team leadership will result in improved teamwork/communication, decreased team leader workload, and improved adherence to AHA guidelines.

Methods: This prospective randomized simulation-based study recruited twenty teams of providers. Teams were standardized to include a team leader (PGY-3/4 MD), a bedside physician (PGY-1/2), and two confederate nurses; a scripted parent actor was also present. Teams were randomized to have a telepresent or an in-person leader.