Demographic and clinical information including presence of comorbidities, source of infection, number of repeat blood cultures collected, repeat blood culture positivity, planned duration of antibiotic therapy and recurrent bacteremia with the same organism within 30 days of discharge were collected by manual chart review.

**Results.** Fifty-three bacteremic UTIs were included during the study period. Nineteen (35.8%) patients were male with a median age of 47; 32 repeat blood cultures were drawn in 77% (41/53) of cases; however, only 7% (3/41) of repeats were positive, all with *Enterococcus faecalis*. Median duration of therapy was 14 days (IQR 14, 15), with a longer median duration in patients with repeat blood cultures as compared with not (15 vs. 12 days, P = 0.03). Two patients had recurrent bacteremia with the same organism within 30 days; both with negative repeat blood cultures at the time of initial bacteremia and undetected metastatic complications.

**Conclusion.** Patients with bacteremic UTIs are at low risk of persistent bacteremia. Repeat blood cultures are low utility, specifically with Gram-negative organisms, and may lead to prolonged durations of therapy. The impact of reducing repeat blood culture collection on outcomes, length of stay, and antibiotic durations warrants further evaluation.

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1128. Urinary Tract Infections After Combat-related Genitourinary Trauma

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**Background.** Genitourinary (GU) trauma accounted for 5% of combat-related injuries sustained by U.S. military personnel during Operations Enduring Freedom (OEF) and Iraqi Freedom (OIF). Incidence and risk factors for long-term infectious complications, including urinary tract infections (UTI), have not been described in this unique population.

**Methods.** Demographics, injury patterns, initial and long-term medical care, urologic complications, and infectious complications involving the urinary tract for survivors with the Trauma Infectious Disease Outcomes Study (TIDOS) were collected from the Department of Defense (DOD) and Department of Veterans Affairs (VA) data sources. Statistical analyses were conducted to identify candidate predictors for UTIs after GU trauma.

**Results.** Among the 530 TIDOS survivors who entered VA care, 90 (17%) sustained GU trauma (93.3%), injury during dismounted operations (56.7%), and lower extremity amputation (56.7%) were common characteristics among those with GU trauma. Higher median injury severity scores (ISS) were associated with GU trauma vs. non-GU trauma [33 (IQR: 21–48) vs. 17 (IQR: 9–26), P = 0.001]. Of those with GU trauma, 42 (24.2%) had 21 UTIs (range 1–44) during DOD-VA care. 42 unique UTI episodes were identified, with 11 (26.2%) occurring during initial DOD care, 19 (45.2%) during subsequent DOD care after initial hospital discharge, and 12 (28.6%) during VA care. The median time to first UTI episode was 49 days (IQR: 40.5–117.1). Having an UTI was associated with bladder (P = 0.002) and posterior urethral injury (P = 0.002), pelvic fracture (P < 0.001), urinary catheterization (P = 0.001), and urologic complications, including urinary retention or incontinence (P = 0.001) and stricture (P = 0.007). *Proteus mirabilis* (61.5%) was commonly isolated in urine cultures obtained within 6 months of the initial injury.

**Conclusion.** UTIs are a common infectious complication after combat genitourinary trauma, particularly in the setting of severe injury and urologic sequelae. Episodes of UTIs typically occur early on after the initial injury while in DOD care; however, recurrent infections may continue well into long-term VA care.

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1129. Case-control Study Evaluating Risk Factors and Treatment Outcomes for Community-Acquired Urinary Tract Infections (UTI) Caused by Extended-Spectrum B-Lactamase (ESBL) Producing Enterobacteriaceae

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**Background.** Community-acquired (CA) infections caused by ESBL-producing pathogens are becoming more common. Risk factors (RFs) for CA ESBLs have not been as extensively studied and remain relatively undefined. Recognition of patient-specific RFs for CA ESBL infections such as UTI can potentially improve patient outcomes through selection of more appropriate initial drug therapy. The objectives of this study were to identify RFs and associated treatment outcomes for CA UTI involving ESBLs.

**Methods.** Adult patients with CA ESBL UTI (cystitis) seen in the Emergency Department (ED) from 2009 through 2013 were retrospectively matched 1:1 with a control group of non-ESBL CA UTI based on age within 5 years, gender, and admission year. The primary outcome was identification of RFs predictive of CA ESBL UTI. Secondary outcomes included comparison of ESBLs and controls in risk of inappropriate initial antibiotic therapy and need for additional follow-up to healthcare facilities (clinics, EDs).

**Results.** Eighty-five patients were matched into each group. Compared with controls, CA ESBL UTI was associated with nursing home stay (P = 0.04), congestive heart failure (CHF, P = 0.04), hospitalization within the previous year (P = 0.04), and receipt of another antibiotic or antimicrobial, particularly fluoroquinolones within the previous year (P = 0.01) vs. controls. Multivariate logistic regression identified hospitalization within 1 year (OR 3.8, 95% CI 1.7–8.7; P < 0.001), antibiotics within 3 months (OR 3.5, 95% CI 1.7–7.6; P = 0.001), and CHF (OR 4.9, 95% CI 1.3–24.7; P = 0.02) as significant RFs for ESBL CA UTI. Patients with CA ESBL infection were more likely to receive inappropriate initial antibiotics (OR 8.9, 95% CI 4.2–18.6; P < 0.0001) and, if treated inappropriately, to require repeat visits to healthcare facilities within 14 days (OR 11.4, 95% CI 2.6–50.8).

**Conclusion.** Previous hospitalization, previous antibiotics, and CHF were RFs associated with CA ESBL UTI. These patients were significantly more likely to be treated inappropriately and to require additional healthcare follow-up. Recognition of RFs for CA ESBL UTI may facilitate appropriate ED-based management and avoid additional resource utilization.

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1130. Risk Factors for Community Acquired Extended-spectrum β-lactamase (ESBL) Producing Enterobacteriaceae Urinary Tract Infections (UTIs)

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**Background.** Community-acquired extended-spectrum β-lactamase (ESBL) producing Enterobacteriaceae infections pose unique treatment challenges. Identifying risk factors associated with ESBL Enterobacteriaceae infections outside of prior colonization is important for empiric management in this era of antimicrobial stewardship.

**Methods.** We randomly selected 251 adult inpatients admitted to an Intermountain healthcare facility in Utah with an ESBL Enterobacteriaceae urinary tract infection (UTI) between January 1, 2001 and January 1, 2016. 1:1 matched controls had UTI at admission with Enterobacteriaceae but did not produce ESBL. UTI at admission was defined as urine culture positive for > 100,000 colony forming units per milliliter (cfu/mL) of Enterobacteriaceae and positive symptoms within 7 days prior or 2 days after admission. Repeated UTI was defined as more than 3 episodes of UTI within 12 months preceding index hospitalization. Cases with prior history of ESBL Enterobacteriaceae UTIs or another hospitalization three months preceding the index admission were excluded. Univariate and multiple logistic regression techniques were used to identify the risk factors associated with first episode of ESBL Enterobacteriaceae UTI at the time of hospitalization.

**Results.** In univariate analysis, history of repeated UTIs, neurogenic bladder, presence of a urinary catheter at time of admission, and prior exposure to outpatient antibiotics within past one month were found to be significantly associated with ESBL Enterobacteriaceae UTIs. When controlling for age differences, severity of illness and co-morbid conditions, history of repeated UTIs (adjusted odds ratio (AOR) 6.76, 95% confidence interval (CI) 3.60–13.41), presence of a urinary catheter at admission (AOR 2.75, 95% CI 1.25 – 6.24) and prior antibiotic exposure (AOR 8.50, 95% CI: 3.09 – 20.13) remained significantly associated with development of new ESBL Enterobacteriaceae UTIs.

**Conclusion.** Patients in the community with urinary catheters, history of recurrent UTIs, or recent antimicrobial use can develop de novo ESBL Enterobacteriaceae UTIs.

**Disclosures.** All authors: No reported disclosures.
Background. Febrile UTI/pyelonephritis is a common diagnosis for children presenting to the Emergency Department (ED). A Cochrane review of the management of pyelonephritis in children showed no difference between intravenous (IV) and oral antibiotics. Despite this, many children are treated with at least initial IV antibiotics. The reasons are often unclear and it is uncertain whether this is appropriate as the Cochrane review excluded children at the worse end of the clinical spectrum. Our aim was to determine why physicians made these decisions as a first step in determining whether this is necessary.

Methods. A prospective observational study of children presenting to the ED at the Royal Children’s Hospital with UTI/pyelonephritis from Oct 2016 – Apr 2017. Data collection included demographic, clinical features, microbiology, treatment and outcomes. ED physicians were asked to record reasons for prescribing IV antibiotics and for treating the patient in hospital vs. in hospital-in-the-home (HITH).

Results. 170 children were included, 133 (72%) were treated with oral antibiotics, 43 (25%) IV and 4 (3%) intramuscular – these are now included in the IV group. In the IV group, 32 (19%) were admitted, 3 (2%) were transferred directly to HITH from ED and 13 had a single dose of IV antibiotics in ED and were discharged. A comparison of the clinically significant features between the two groups is outlined (Table 1). The commonest reasons cited for using IV antibiotics and for hospital admission vs. HITH is shown (fig 1 and 2).

Conclusion. This is the first study of decision-making for IV antibiotics and hospital admission for UTI/pyelonephritis in children. The fact that the reasons cited for IV antibiotics were often not evident on objective clinical data suggests that there may be overuse of IV antibiotics. We will present an assessment of appropriateness and suggest alternatives to the traditional IV and hospital admission route.

Table 1

| Oral Patient no. (%) | Intravenous Patient no. (%) | p value |
|----------------------|----------------------------|---------|
| Age(year), mean(range) | 4.8(0.3–17.9) | 5.4(0.3–16.5) | 0.68 |
| At presentation | | | |
| Prior antibiotics | 14(11%) | 12(26%) | 0.03 |
| History of resistant organism | 7(6%) | 9(19%) | 0.02 |
| Symptoms | | | |
| Fever | 63(51%) | 36(77%) | <0.01 |
| Rigors | 7(6%) | 9(19%) | 0.02 |

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113.2. Assessment of Reflex Urine Culture Criteria Changes and its Impact on Treatment of Asymptomatic Bacteriuria

Figure 1

Disclosures. All authors: No reported disclosures.

113.3. Susceptibility Trends of Urinary Tract Infections over a 15 Year Period on a University Campus

Figure 2

Disclosures. All authors: No reported disclosures.