Table 3: *E. coli* susceptibility of antibiotics across all age groups

	(N=108) [A] n (%)	Ages 0-3 (N=14) n (%)	Ages 4-12 (N=27) [A] n (%)	Ages 13-21 (N=67) n (%)	p value
Cefazolin*	99 (91.7%)	14 (100%)	21 (77.8%)	64 (95.5%)	0.02
Sulfamethoxazole-Trimethoprim	80 (74.1%)	9 (64.3%)	21 (77.8%)	50 (74.6%)	0.64
Ampicillin	62 (57.4%)	6 (42.9%)	13 (48.2%)	43 (64.2%)	0.18
Ampicillin-Sulbactam	65 (60.2)	6 (42.9%)	14 (51.9%)	45 (67.2%)	0.14
Ceftriaxone	104 (96.3%)	14 (100%)	25 (92.6%)	65 (97%)	0.43
Ciprofloxacin	95 (88%)	13 (92.9%)	21 (77.8%)	61 (91%)	0.17
Gentamicin	93 (86.1%)	11 (78.6%)	23 (85.2%)	59 (88.1%)	0.64
Nitrofurantoin	107 (99.1%)	14 (100%)	27 (100%)	66 (98.5%)	0.73
Tetracycline	79 (73.1%)	7 (50%)	21 (77.8%)	51 (76.1%)	0.1

[A] One culture did not have reported susceptibilities
*Susceptibility refers to the new cefazolin breakpoint to treat *E.coli , K. pneumoniae and P. mirabilis* UTIs

Conclusion. Outpatient providers chose SXT as E/T for 34.3% of UTI though *E. coli* was susceptible at a rate of only 74.1%. Additionally, there was a trend toward fewer returns within 3 and 6 months of the initial visit when LEX was used as treatment. LEX should be considered for UTI E/T for ages 13–21 years, where SXT is currently the most common E/T.

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1519. Management and Outcomes of Children with Extended-Spectrum Cephalosporin-Resistant Urinary Tract Infections (ESC-R UTIs)

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Background. ESC-R UTIs often have limited oral antibiotic options with some children receiving a course of intravenous (IV) antibiotics. Our objectives were to determine predictors of long course IV therapy and the association between short-course therapy and UTI relapse.

Methods. We conducted a multicenter retrospective cohort study of children <18 years with ESC-R UTIs presenting to an acute care setting of 5 children's hospitals and a large managed care organization from 2012 to 2017. ESC-R UTI was defined as having a urinalysis with positive leukocyte esterase or >5 white cells per high power field and urine culture with ≥50,000 colony-forming units per milliliter of *E. coli* or *Klebsiella* spp. nonsusceptible to ceftriaxone. Children with urologic surgery, immunosuppression and nonrenal chronic conditions were excluded. Long course therapy was defined as ≥5 days and short course as 0–4 days of a concordant IV antibiotic (an agent to which the isolate was susceptible). Relapse was defined as UTI with the same organism within 30 days. Limited oral antibiotic options were defined as nonsusceptibility to amoxicillin–clavulanate, ciprofloxacin, and trimethoprim–sulfamethoxazole. Predictors of long course therapy were determined using mixed effects logistic regression with hospital site as a random effect. Since UTI relapse was a rare outcome, we evaluated the association between short-course therapy and UTI relapse using Fisher's exact test.

Results. Of 383 children with ESC-R UTIs, 80% were female, median age was 3 years (interquartile range 0.7–7.8), and 24% had a prior UTI. Forty-five children (12%) received long course therapy and 338 (87%) received short-course therapy. Predictors of long course therapy included age <2 months (adjusted odds ratio [AOR] 61.4, 95% confidence interval [CI] 12.5–302), male sex (AOR 3.0, 95% CI 1.2–7.8), and limited oral antibiotic options (AOR 5.3, 95% CI 2.2–12.6). UTI relapse occurred in 1/45 (2%) children treated with long course therapy and in 3/335 (0.9%) treated with short-course therapy ($P = 0.40$).

Conclusion. Long course IV therapy in children with ESC-R UTIs was more likely in infants <2 months, males and those with limited oral antibiotic options. UTI relapse was rare and not associated with short course/no IV therapy.

Disclosures. **All authors:** No reported disclosures.

1520. Determining the Management of Children with Acute UTI/Pyelonephritis Who Do Not Fit Current Management Recommendations

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Background. A 2014 Cochrane review of acute UTI/pyelonephritis in children reported no difference between intravenous (IV) and oral (PO) antibiotics and the AAP recommends the routes as equally efficacious. Despite this, many children continue to be treated with IV antibiotics, with the appropriateness of this unclear. The Cochrane review was based on studies that excluded children with features including vomiting, urological abnormality, previous UTI, or pre-treatment with antibiotics. We aimed to compare: PO vs. IV antibiotics; 1 vs. 2–3 days IV antibiotics; and all patients compared with those in the Cochrane review.

Methods. A prospective observational study of children presenting to the ED at a tertiary children's hospital in Australia with UTI/pyelonephritis from May 2016 to November 2017. Data included demographic, clinical features, microbiology, treatment and outcomes. Key features and outcomes were compared.

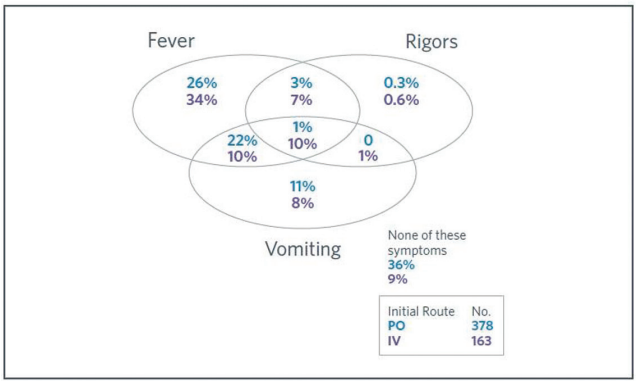
Results. Of 541 children, 378 (70%) received PO antibiotics and 163 (30%) IV/IM. Patients were significantly more likely to receive IV antibiotics if they presented with fever, vomiting, rigors or lethargy, had a history of previous UTI, or were pre-treated with PO antibiotics ($P < 0.05$). Of those treated with IV antibiotics, the majority received 1 (38%) or 2 (36%) days prior to PO switch. The only difference in those treated at with 1-day vs. 2–3 days of IV antibiotics was the proportion receiving maintenance IV fluids (table). A substantial number of our patients ($n = 390$, 72%) had a urological abnormality, vomiting, previous UTI or were pre-treated with PO antibiotics and therefore the Cochrane recommendations are not applicable.

Conclusion. Patients treated with initial IV appear different from those treated with PO antibiotics. However, 1 vs. 2–3 days IV appeared to be similar, suggesting an opportunity for shortening duration. We have provided the first prospective data since the Cochrane review in patients not included in it, showing the gap in evidence.

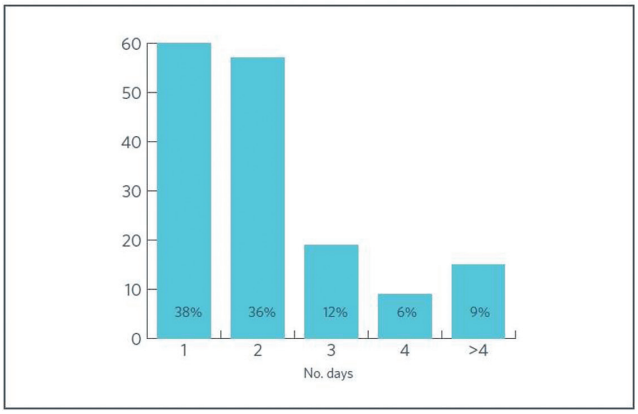
Table: 1 vs. 2–3 days IV antibiotics

	1 day IV	2–3 days IV	*P* values
	No. (%)	No. (%)	
Total patients	64 (39)	74 (45)	
Age Mean	4.8	4.3	0.55
Fever	52 (81)	61 (80)	0.88
Vomiting	29 (45)	45 (59)	0.10
Urological abnormality	9 (15)	19 (26)	0.12
Maintenance fluids	13 (21)	33 (45)	0.003
Readmission	5 (8)	3 (4)	0.47

Figure 1: Frequency of different combinations of symptoms in the **PO** and **IV** antibiotic groups



Graph 1: Length of IV antibiotic treatment



Disclosures. **All authors:** No reported disclosures.