

was not described. Pelvic CT revealed PAs in all patients; 14 (64%) were solitary and 16 (73%) were >2 cm in greatest diameter. The median abscess size was 3.2 cm. Urine cultures were positive in 11/18 (61%) patients with 6/11 (55%) growing *S. aureus* (MRSA 3); 9/16 (56%) patients had positive blood cultures (*S. aureus* 7 with MRSA 3) and 5/5 had positive PA cultures (*S. aureus* 1). Nine patients (41%) were managed with antibiotics alone whereas 13 (59%) underwent abscess drainage. The median duration of antibiotic therapy was 34.5 days. All-cause mortality at 4 weeks was 9.1%. No relapses were documented at 6 months. When comparing patients with *S. aureus* PA to those with other causes, *S. aureus* patients more often had diabetes (86% vs. 33%,  $P = 0.06$ ) and a longer median duration of antibiotic therapy (35 days vs. 31 days,  $P = 0.04$ ) but age, abscess size, and mortality did not differ between groups.

**Conclusion.** PA is relatively uncommon and may be difficult to distinguish clinically from acute prostatitis. CT is critical to an accurate diagnosis. Optimal management usually requires both antibiotics and drainage. Given the frequent occurrence of *S. aureus* as a cause, coverage for MRSA should be a component of empiric treatment for PA.

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

### 1449. Antibiotic Choice, Duration, and Outcome in Community-Acquired Urinary Tract Infections (UTI) in Male Patients

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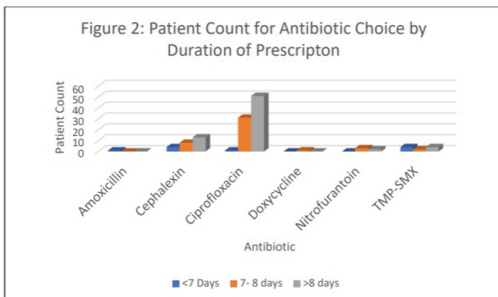
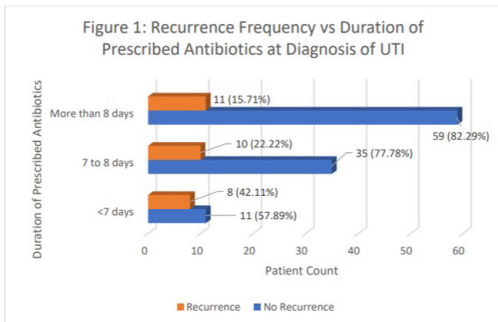
**Session:** 157. Urinary Tract Infections  
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**Background.** It is common medical practice for all urinary tract infections (UTIs) in males to be diagnosed as "complicated" UTIs. Current guidelines recommend 7 to 14 days of antibiotics for complicated UTIs. Longer duration of antibiotics potentially exposes a patient to harm without sufficient evidence for benefit. This research will attempt to determine the optimal antibiotic and duration of treatment for males diagnosed with a UTI.

**Methods.** This study is a retrospective cohort study that utilized the electronic health record for Kaiser Permanente Southern California to search for male patients with a diagnosis of cystitis or UTI in the outpatient setting from 2011 to 2016. Only patients with confirmed bacteriuria >100,000 CFU/mL of a gram-negative organism were included. Exclusion criteria included Foley catheterization, intermittent self-catheterization, prostatitis and Pseudomonas infection. There were 10,662 patients in our database who fit these criteria, but only 134 patients were reviewed for preliminary analysis for this abstract. Outcomes included recurrence of UTI within 30 days of finishing treatment.

**Results.** A total of 134 patients were included. Most patients were prescribed Ciprofloxacin (69%) or Cephalexin (19%). The prescription duration was >8 days for 52%, 7-8 days for 34% and <7 days for 14% of all the patients. There was a statistically significant difference in recurrence by antibiotic duration (Figure 1). The odds of recurrence were 3.9 times higher for people with <7 days prescription compared with those with >8 days (95% CI, 1.28-11.89,  $P = .017$ ) (Table 1). The odds of recurrence were 1.5 times higher for those with a prescription of 7-8 days compared with those with a prescription of >8 days, but the difference was not statistically significant (95% CI: 0.59, 3.7,  $P = .38$ ).

**Conclusion.** Male patients diagnosed with a UTI who were treated with a course of antibiotics for >7 days were less likely to have a UTI recurrence than patients who were treated for <7 days. However, there was no statistically significant difference between 7 to 8 days vs. >8 days of antibiotics in terms of recurrence. This study will be continued to increase study power. Determining the best treatment course will reduce healthcare cost and patient morbidity from UTI recurrences.



**TABLE 2 : Odds ratios of recurrence by antibiotic prescription duration**

	Odds Ratio	P value	[95% Conf. Interval]
< 7 DAYS	3.9	0.02	1.29-11.90
7-8 days	1 (ref)		
> 8 DAYS	1.5	0.38	0.59-3.97

### Antibiotic Choice, Duration, and Outcome in Community Acquired Urinary Tract Infection (UTI) in Male Patients

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**Introduction**

- It is common medical practice for all UTIs in males to be diagnosed as "complicated" urinary tract infections. Current guidelines recommend 7-14 days of antibiotics for complicated UTIs. Longer duration of antibiotics potentially exposes a patient to harm without sufficient evidence for benefit.

**Methods**

Retrospective cohort study of male patients with a diagnosis of cystitis or UTI in the outpatient setting from 2011 to 2016.

- Data source: Electronic health record for Kaiser Permanente Southern California
- Inclusion: Patients with confirmed bacteriuria >100,000 CFU/mL of a gram-negative organism were included
- Exclusion: Foley catheterization, intermittent self-catheterization, Prostatitis, Pseudomonas infection

**Results**

- Prescription duration was >8 days for 52%, 7-8 days for 34% and <7 days for 14%
- Longer courses of antibiotic significantly reduced the risk of recurrence compared to shorter ones ( $p = 0.04$ ). Of the patients selected, 22% had a recurrence. (See Figure 1)
- Ciprofloxacin (69%) or cephalexin (19%) were the most often prescribed antibiotics.
- Antibiotic choice was not associated with prescription duration ( $p = 0.09$ ) (See Figure 2)
- Odds of recurrence were 3.9 times higher for patients with prescription duration <7 days vs. >8 days (95% CI) (See Table 1)
- There was no difference in odds of recurrence for patients with prescription duration 7-8 days vs. >8 days (95% CI)

**Conclusion**

- Our findings suggest that longer courses of antibiotics may not be necessary for all patients with UTI. However, antibiotic courses <7 days are already associated with higher rates of recurrence.
- There is no significant difference between >8 days vs. >7 days of antibiotics in terms of recurrence. This supports current practice that antibiotic courses >8 days may not be significantly superior to shorter courses (e.g. 7 to 8 days)
- Finding the optimal course of antibiotic would decrease patient morbidity from having a recurrent UTI and reduce health care expenditure on antibiotic therapy

**Future Goals of this Study:**

- Test for associations between antibiotic choice and duration and adverse drug reactions (e.g. CIP, clind, vancomycin, carbapenem, colistin)
- Subgroup analysis on patients treated with penicillins/cyclins

**References**

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### 1450. Risk Factors for Antibiotic Resistance of Escherichia coli Urinary Isolates in Outpatients

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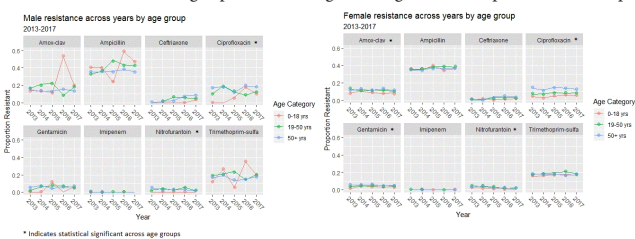
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**Background.** Antibiotic-resistant *E. coli* infections represent a major cause of morbidity and mortality, and pose a challenge to antibiotic stewardship. Patient age has been suggested as a key determinant of resistance patterns in studies based in the United States and Europe, although local antibiotic use patterns may affect this relationship. We analyzed results from clinical antibiotic susceptibility tests performed at a large reference laboratory to further examine the association of age with *E. coli* urinary tract resistance patterns in WA State.

**Methods.** We analyzed 5 years of *E. coli* antibiotic susceptibility data for outpatient urinary tract infections in WA State from a national clinical reference laboratory. We included only the first isolate recorded for each patient and calculated crude rates of resistance to antibiotics for the age groups of 50 years. In a multivariate logistic model, we tested the effect of patient age, year of antimicrobial susceptibility test submission, and sex on antibiotic resistance.

**Results.** Univariate analyses indicated that resistance rates differed significantly across patient age groups for ciprofloxacin and nitrofurantoin. Among females, resistance rates also differed significantly across patient age groups for amoxicillin-clavulanate and gentamicin. Logistic regression using data from male patients found the odds of resistance to be significantly greater in older individuals for ciprofloxacin (OR 2.59) and lower in older individuals for amoxicillin-clavulanate (OR 0.56). For females, logistic regression found the odds of resistance to be significantly greater for older individuals for amoxicillin-clavulanate (OR 1.43), ciprofloxacin (OR 3.04), ceftiraxone (OR 2.58), nitrofurantoin (OR 2.20), and gentamicin (OR 1.62).

**Conclusion.** In WA State, the distribution of antibiotic resistance in *E. coli* urinary isolates varies with age, sex and the antibiotic of interest. Greater and more timely use of databases of susceptibility testing of clinical isolates from outpatient settings can allow for the creation of age-specific antibiograms to guide and improve stewardship.



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