

Background

- Community-onset urinary tract infections (coUTIs) are a leading indicator of antibiotic prescribing, and pathogens associated with coUTIs are often also associated with antibiotic resistance.
- Our goals are to understand the microbiology of coUTIs and evaluate patient and healthcare facility characteristics associated with particular microbiological etiologies of coUTIs.

Empiric treatment recommendations and antibiotic stewardship plans could consider care setting, sex, and age as predictors of coUTI microbiology

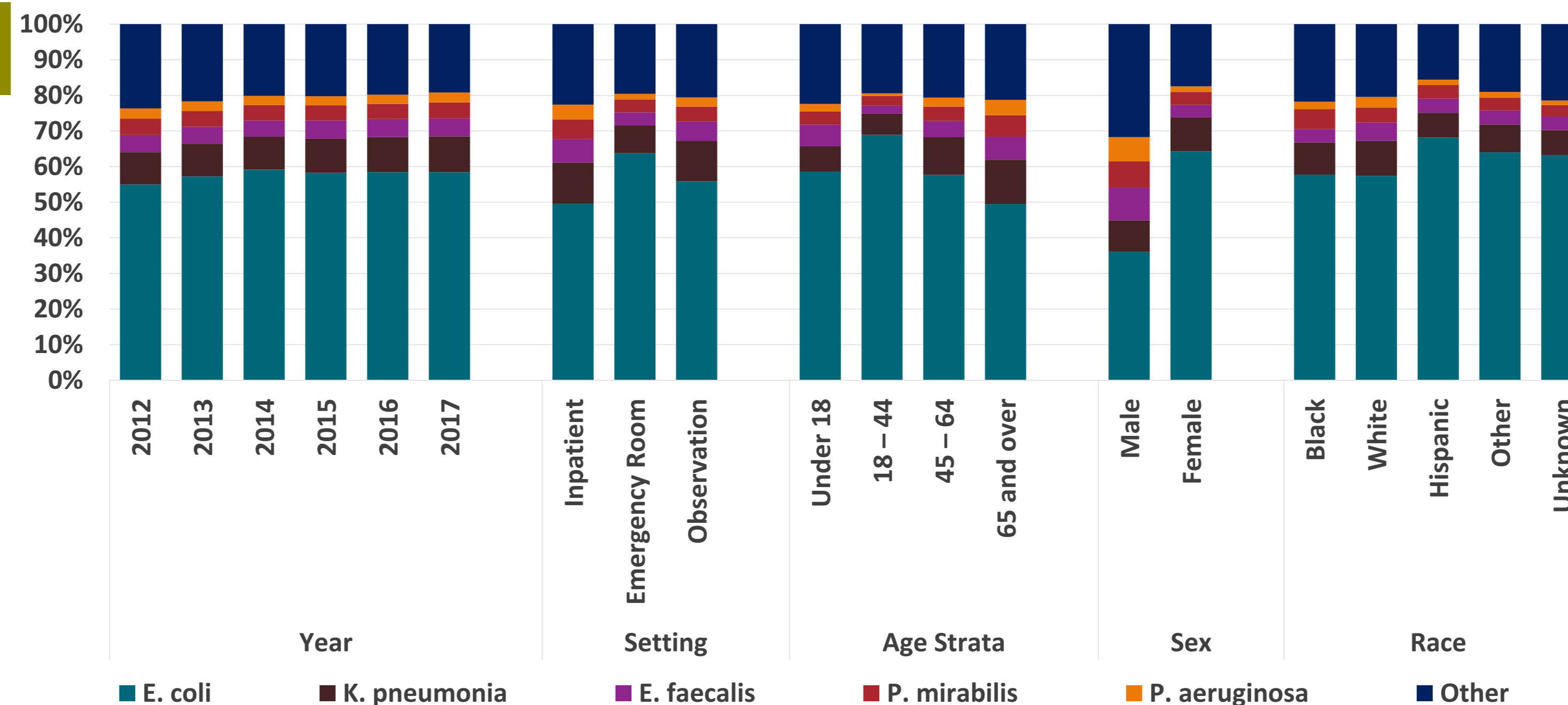
Results

- The top five pathogens:
 - Escherichia coli* (57.8%)
 - Klebsiella pneumoniae* (9.5%)
 - Enterococcus faecalis* (4.9%)
 - Proteus mirabilis* (4.4%)
 - Pseudomonas aeruginosa* (2.7%)
- Female sex, age 18-44 years, and emergency room settings were associated with higher relative frequency of *E. coli*.
- Male sex, inpatient setting, and age > 65 years of age were associated with higher relative frequency of *P. aeruginosa*, *P. mirabilis*, and *E. faecalis*.
- Inpatient and observation settings, and age > 65 years were associated with higher relative frequency of *K. pneumoniae*.

Methods

- Data Source: 637 acute care hospitals contributing to Premier Healthcare Database and Cerner Health Facts, 2012–2017
- Care Settings: inpatient (within first 3 days of hospitalization), emergency department, and observation encounters at acute care hospitals
- Outcome: descriptive analysis of the top five pathogens identified from urine cultures

Distribution of pathogens most frequently associated with community onset urinary tract infections, United States, 2012-2017



Conclusions

- Several patient factors are associated with the microbiology of coUTIs.
- Knowledge of these factors is an important step to developing empiric treatment recommendations and antibiotic stewardship plans.

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