Session: P-81 UTIs

Background. Uropathogen resistance, Fluoroquinolone-resistance (FQR) and Extended spectrum beta-lactamase (ESBL) have been observed to be emerging worldwide with prevalences above recommended thresholds for routine empirical treatment. We sought to determine recent resistance prevalence from a geographically diverse sample of US Emergency Departments (ED).

Methods. We conducted a multi-center, observational study utilizing a network of 15 geographically diverse US EDs. Patients ≥18 years of age with the primary international classification of diseases (ICD-10) diagnosis code of cystitis, pyelonephritis, or urinary tract infection (UTI) and were discharged home from the ED from March 1 to June 30, 2019. Adult women were prescribed an oral FQ for acute uncomplicated cystitis at a primary care clinic were included. Men, pregnant or breastfeeding women, and patients with pyelonephritis, uroligic abnormality, or antibiotic use in the past 30 days were excluded. The primary outcome was the incidence of IDSA guideline concordant empiric FQ therapy was defined as correct first drug, dose, duration and frequency per IDSA guidelines when no first line drug is indicated due to allergy, adverse effect, previous treatment failure or most recent previous urine culture showing bacterial resistance. Secondary outcomes were mean dose (mg), mean duration (days) and incidence of adverse effects.

Results. Of 95 FQ prescriptions included, none met the primary outcome definition. Rates of guideline concordance for each component of the primary outcome definition were 6% for drug selection, 38% for dose, 37% for duration, and 99% for frequency. Mean daily doses exceeded guideline recommended doses by 62% and 100% for ciprofloxacin and levofloxacin, respectively. Mean duration was 5 days, 66% longer than 3 days recommended by IDSA guidelines. Of 66 patients with documented follow-up within 30 days, 3% experienced an adverse effect, and none developed C. difficile infection.

Conclusion. Current outpatient FQ prescribing for acute uncomplicated cystitis dose not align with current guidelines. Interpreted antibiotic stewardship initiatives are required to improve appropriate FQ use.

Disclosures. All Authors: No reported disclosures

1422. Real-World Study of the Effects of Inappropriate or Suboptimal Treatment on the Burden of Illness Among Patients with Uncomplicated Urinary Tract Infection and High-Risk Comorbid Conditions in the United States

Madison T. Preib, MPH1; Aien Marijam, MS2; Fanny S. Mitrain-Gold, MPH1; Daniel C. Gibbons, PhD3; Xiaoxi Sun, MA4; Christopher Adams, MPH4; Ashish V. Joshi, PhD5; STAInMED Research, Ann Arbor, MI, USA, Ann Arbor, Michigan; 6GlossxSmithKline plc., Collegeville, PA, USA, Cambridge, MA, Massachusetts; 7GlossxSmithKline plc., Collegeville, PA, USA, Chicago, Illinois; 8GlascollSmithKline plc., Brentford, Middlesex, UK, Brentford, England, United Kingdom

Session: P-81 UTIs

Background. Urinary tract infections (UTIs) are associated with significant morbidity and economic burden. Nitrofurantoin (NTF) and fosfomycin are among the first-line treatments for uncomplicated UTI (uUTI) recommended by Infectious Diseases Society of America (IDSA) 2011 guidance. We used real-world data (RWD) to assess patterns of appropriate and optimal (AP&OP) and inappropriate (IA/SO) antibiotic (AB) prescribing (RX), and related healthcare resource use (HRU) and costs in US uUTI patients with high-risk comorbid conditions.

Methods. This was a retrospective cohort study of RWD (IBM MarketScan, commercial/Medicare Supplemental claims January 1, 2014–December 31, 2017) in females ≥12 years of age with uUTI, who had an oral AB prescription ± 5 days of uUTI diagnosis (index date) and continuous health-plan enrollment ≥ 1 year pre-/post-index date. Patients were stratified into high-risk cohorts (Table 1) and by AB RX (AP&OP and IA/SO) during first uUTI episode (within 28 days of index). AP&OP RX followed IDSA guidance, IA RX did not; SO RX was considered a proxy for treatment failure (e.g., AB switch or a second UTI diagnosis [acute care setting] in index episode). Sample size was balanced via random match selection. AP&OP/IA/SO ratio 1.5 (age and region), uUTI related HRU and costs were compared between cohorts (at index episode and 1-year follow-up) via multivariable analysis.

Table 1. High-risk cohorts identified in the study

| High-risk condition | Case definition |
|---------------------|-----------------|
| T2D | Patients with uUTI and a diagnosis of controlled T2D in the baseline period |
| CKD* | Patients with uUTI and a diagnosis of mild/moderate CKD in the baseline period |
| rUTI | Patients with uUTI in the baseline period (≤ 2 UTI episodes in 12 months or 1 episode in 6 months prior to index date) |
| ELD | Patients with uUTI ≥ 65 years of age at index date |
| PMP† | Patients with uUTI ≥ 50 years of age at index date |

High-risk cohorts were not mutually exclusive.

*The CKD cohort (n=1044) had an insufficient sample size and so was not considered for further analysis; by definition, the PMP cohort included all patients identified as ELD.

CKD, chronic kidney disease; ELD, elderly; PMP, postmenopausal; rUTI, recurrent urinary tract infection; T2D, type 2 diabetes; UTI, urinary tract infection; uUTI, uncomplicated urinary tract infection

Results. IA/SO AB RX was highest in the elderly cohort (94.3%, likely influenced by renal impairment/no NFT RX in this group) and >90% in other cohorts; AP&OP AB RX was highest in the postmenopausal cohort (92.6%). IA/SO AB RX in all cohorts was associated with significantly higher uUTI-related HRU (outpatient visits and pharmacy

S794 • OFID 2021:8 (Suppl I) • Abstracts