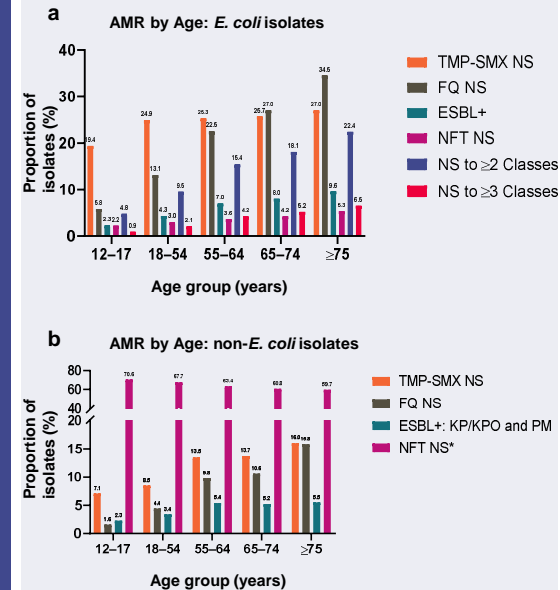




Results

Figure 2. Prevalence of AMR Among Enterobacteriales Outpatient Isolates from US Females Increases with Age



*High NFT resistance was expected due to intrinsic resistance among non-*E. coli* isolates and given the notably higher proportion of NFT NS isolates versus other isolate groups, a y-axis break has been used to enhance data readability; ESBL+ defined as confirmed as ESBL+ or not-susceptible to ceftaxime, cefotaxime, ceftazidime, or cefepime
 KP/KPO, *K. pneumoniae/oxytoca*; PM, *P. mirabilis*; Non-*E. coli* Enterobacteriales isolates included *K. pneumoniae*, *K. oxytoca*, *E. cloacae*, *E. aerogenes*, *P. mirabilis*, *M. morgani*, *C. freundii*, and *S. marcescens*

Disclosures
 AM, NES, O, JAV, and FSM-G are employees of, and hold shares in, GlaxoSmithKline plc; VG, GY, and KY are employees of Becton, Dickinson and Company, which received funding from GlaxoSmithKline plc, to conduct this study. VG and KY also hold shares in Becton, Dickinson and Company; KSK reports no conflicts of interest.

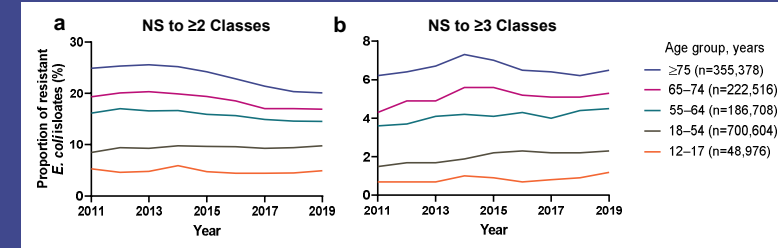
Editorial support (in the form of writing assistance, assembling tables and figures, collating author comments, grammatical editing, and referencing) was provided by Fraser Shearer, MSc, of Gardiner-Caldwell Communications, a United Healthcare (Glasgow, UK), and was funded by GlaxoSmithKline plc.

References
 1. Foxman B, et al. *Ann Epidemiol* 2000; 10:501-15.
 2. Gupta V, et al. *BMC Infect Dis* 2019; 19:742.

The prevalence of antimicrobial resistance in Enterobacteriales increased with age among US females, with the greatest difference observed for fluoroquinolone NS *E. coli*: 5.8% (≥12 to <18 years) vs 34.5% (≥75 years)

- With increasing age, the prevalence of ≥2 and ≥3 drug NS *E. coli* isolates was higher during the study period (2011 to 2019)

Figure 1. Multi-Drug Resistance Trends in *E. coli* Isolates by Age (2011–2019), a) NS to ≥2 Classes and b) NS to ≥3 Classes



Please find the online version of this poster, accompanying audio, and summary slides by scanning the QR code or via <http://tago.ca/IDWeek4>



Variation of Antimicrobial Resistance by Age Groups for Outpatient UTI Isolates in US Females: A Multicenter Evaluation From 2011 to 2019

Keith S. Kaye¹; Vikas Gupta²; Aruni Mulgirigama³; Ashish V. Joshi⁴; Nicole E. Scangarella-Oman⁴; Kalvin Yu²; Gang Ye²; Fanny S. Mitrani-Gold⁴

¹University of Michigan, Ann Arbor, MI, USA; ²Becton, Dickinson and Company (BD), Franklin Lakes, NJ, USA; ³GlaxoSmithKline plc, Surrey, UK; ⁴GlaxoSmithKline plc, Collegeville, PA, USA

Introduction

- Approximately 12% of women in the US experience ≥1 episode of uncomplicated urinary tract infection (uUTI) annually¹
- Previous studies suggest the prevalence of antimicrobial resistance (AMR) in UTI is rising in the US²

Methods

- A retrospective, multicenter, cohort study of AMR among non-duplicate outpatient (from an ambulatory clinic setting with no subsequent associated inpatient admission) uropathogens in US females (≥12 years of age) from 296 institutions across the US between 2011 and 2019
- The frequency distribution of key uropathogens and their AMR phenotypes were evaluated overall and by patient age (≥12 to <18, ≥18 to <55, ≥55 to <65, ≥65 to <75, ≥75 years)
- Eligible subjects' cultures contained ≥1 clinically relevant uropathogen and were non-duplicate representing each susceptibility pattern within 30 days of index urine.
- Isolates (same genus/species or same susceptibility within 30 days of index urine) were not eligible for inclusion
- Enterobacteriales were characterized into the following phenotypes: extended spectrum β-lactamase positive (ESBL+; confirmed as ESBL+ or not-susceptible to ceftaxime, cefotaxime, ceftazidime, or cefepime); nitrofurantoin (NFT) not-susceptible (NS); fluoroquinolone (FQ) NS; trimethoprim-sulfamethoxazole (TMP-SMX) NS; and NS to ≥2 or ≥3 drug classes

Data analysis/statistics

- Descriptive statistics were used to estimate AMR (%) for each key uropathogen over time
- Generalized estimating equations (GEE) were used to evaluate the patterns of resistance by age group and account for autocorrelation of data

