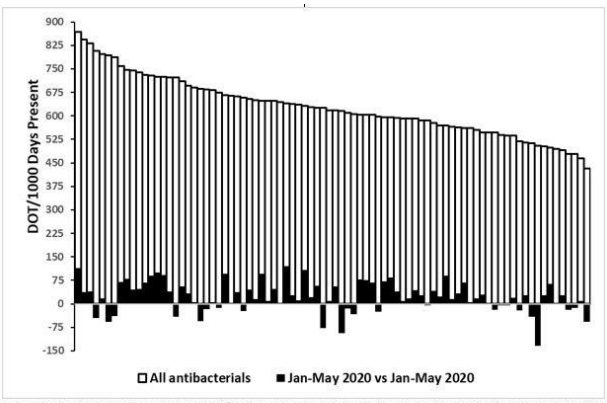

Each column represents a separate VA facility. The open bars indicate antibiotic use from Jan-May 2019 and the blue bars indicate the change in the rate of therapy in 2020 vs 2019. The solid bars extending above and below the x axis respectively represent increased and decreased use in January to May 2020 versus January to May 2019.

Conclusion: We observed a broad increase in antibacterial use during the initial surge of COVID-19 cases in VA facilities that abruptly reversed steady reductions in use over the prior 4 years. The degree to which this increase reflects potentially appropriate use in the setting of increased patient vulnerability and provider uncertainty, inappropriately decreased provider thresholds for initiating or continuing therapy, or stresses on the structure and staffing of antimicrobial stewardship programs requires further study.

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182. increasing Odds of Resistance for Subsequent Urinary *e. Coli* Isolates

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Background: Annual cumulative antibiograms are routinely used by clinicians to guide selection of empirical antibiotic therapies. CLSI guidelines recommend that these antibiograms to analyze data yearly, include only final, verified results, include bacterial species with > 30 isolates and to include only the first isolate for each species/patient instance per analysis period. Handling multiple isolates from individual patients in cumulative antibiograms is a controversial topic within the antimicrobial stewardship community. Current practice favors removing subsequent isolates, thereby discarding data reflecting impact of selective antibiotic pressure on resistance patterns in recurring urinary tract infection (UTI).

In this study we analyzed a five-year data set of deidentified outpatient antibiotic results from a commercial laboratory to determine whether there were significant differences in resistance patterns between first and subsequent isolates from the same patient.

Methods: The 5-year antibiotic susceptibility data was restricted to urinary *Escherichia coli* (EC) isolates. Patient occurrence(s) of urinary EC were categorized by frequency: 1st occurrence, 2nd occurrence, 3rd occurrence, and 4th or greater occurrence. A logistic regression analysis using a binary outcome for resistance and independent variable of patient isolate occurrence was run for amoxicillin-clavulanate, ampicillin, ceftriaxone, ciprofloxacin, gentamicin, levofloxacin, nitrofurantoin, and trimethoprim-sulfa.

Results: From a logistic regression analysis, we estimate that for each occurrence in the data, an isolate's odds of resistance were higher for every increase in a patient's number of occurrences in the data for all antibiotics reported with p values < 0.0001.

Table 1: Odds ratios (OR) of resistance for each subsequent urinary EC isolate occurrence over 5 years

Antibiotic	OR	95% CI	P-value
Amoxicillin-clavulnate	1.091	(1.063 - 1.12)	<0.0001
Ampicillin	1.125	(1.101 - 1.149)	<0.0001
Ceftriaxone	1.233	(1.192 - 1.276)	<0.0001
Ciprofloxacin	1.319	(1.284 - 1.354)	<0.0001
Ertapenem	1.19	(0.954 - 1.486)	NS
Gentamicin	1.092	(1.059 - 1.126)	<0.0001
Imipenem	0.965	(0.718 - 1.298)	NS
Levofloxacin	1.316	(1.282 - 1.352)	<0.0001
Nitrofurantoin	1.159	(1.117 - 1.203)	<0.0001
Trimethoprim-sulfa	1.149	(1.124 - 1.176)	<0.0001

Conclusion: Our findings suggest that individuals with higher numbers of urinary EC occurrences have more resistant EC than the first EC occurrence, with effects that vary by antibiotic class. Although traditional antibiograms include only the first occurrence of urinary EC from a single patient, this approach may underestimate levels of reservoir resistance in a community. Such an underestimation likely impacts efficacy of empiric therapeutic choice, healthcare outcomes, and cost.

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183. *chlamydia Trachomatis* Seroprevalence with a pgp3 Serologic Assay and Association with Pelvic Inflammatory Disease Among Women, United States, 2013–2016

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Background: *Chlamydia trachomatis* (CT) causes pelvic inflammatory disease (PID) and other sequelae; however, these associations are not fully characterized. CT serologic assays including Pgp3 ELISA may detect prior CT infection and may better elucidate these associations. We used a serologic Pgp3 multiplex bead array assay (Pgp3MBA) to measure CT seroprevalence in reproductive-age US women and assess the association with PID.

Methods: We performed CT Pgp3MBA on sera collected from women 18–39 years old during the 2013–2016 cycles of the National Health and Nutrition Examination Survey (NHANES) who had available urine CT nucleic acid amplification test results. Weighted Pgp3MBA CT seroprevalence and 95% confidence intervals (95% CI) were calculated. We also determined weighted prevalence ratios (PRs) and 95% CIs of self-reported lifetime PID among women with and without detectable Pgp3MBA and other characteristics to estimate these US national statistics.

Results: Among 2,339 women, 1,725 (73.7%) had available sera. Of these women, 1,425 (or 93.4% of those with data) were sexually experienced and had a CT seroprevalence of 35.9% (95% CI 33.4–38.4). When weighted for US women, CT seroprevalence was 30.5% (95% CI 26.6–34.4%), ranging from 16.9% (95% CI 11.0–22.8%) among non-Hispanic Asian women to 70.2% (95% CI 62.4–78.0%) among non-Hispanic black women.

PID was reported by 4.2% (95% CI 3.1–5.2) of 1,413 sexually-experienced women with PID data or an estimated 3.8% (95% CI 2.6–5.0) of US women. Among US women, estimated PID varied by Pgp3MBA status; 7.3% (95% CI 4.3–10.2) of Pgp3MBA-positive women were estimated to report PID versus 2.3% (95% CI 1.3–3.4) of Pgp3MBA-negative women (PR 3.1; 95% CI 1.7–5.9). PID prevalence did not vary by age, nor self-reported recent sexually transmitted disease among US women, but was higher among non-Hispanic black women compared to non-Hispanic white women (PR 2.2; 95% CI 1.4–3.5).

Conclusion: Nearly one-third of US women have had CT by Pgp3MBA, with differences by race/ethnicity. Women with prior CT had three times the reported PID prevalence of women without CT. Further serologic research may refine the population-level impact of CT prevention activities, such as recommended annual CT screening, on PID incidence, particularly among non-Hispanic black women.

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184. Seven vs. 14 Days Treatment Duration for Afebrile Men with Urinary Tract Infections; A Randomized Clinical Trial

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Background: Trials show that shorter-duration therapy is effective for many infectious diseases, but the optimal duration for UTI in men is unknown. Observational data suggests shorter-duration performs as well as longer-duration therapy, but trial data shows men with febrile UTI (a small but important subset of patients) do worse with 7 vs. 14 days of therapy. We performed a randomized controlled trial of afebrile men with UTI to determine whether 7 days of treatment was non-inferior to 14 days.

Methods: Men with symptomatic UTI at 2 VA hospitals were enrolled. Inclusion criteria included male gender, outpatient treatment, prescribed 7 to 14 days of ciprofloxacin or trimethoprim/sulfamethoxazole, and new onset of at least 1 of: dysuria, frequency, urgency, hematuria, costovertebral angle tenderness, and perineal, flank, or suprapubic pain. Exclusion criteria included UTI treatment in the past 14 days, symptoms due to a non-UTI diagnosis, and inadequate empiric treatment. Enrolled subjects took their clinically-prescribed medications days 1–7, then study medication days 8–14. Study medications were placebo or the originally prescribed antimicrobial, different in appearance from the original medication. The primary outcome was percentage of subjects with symptom resolution 14 days after completion of active therapy. Secondary outcomes included recurrence of UTI and adverse events. A pre-specified minimally clinically significant difference of 10% was selected, with a P value of 0.05 considered to be significant. Primary analysis was per-protocol; intention-to-treat performed as secondary analysis.