*Figure 2. A three-page antibiotic education leaflet informed by themes*



could provide tailored content to help improve their knowledge and prepare for future conversations with healthcare staff. From this feedback we developed an educational leaflet (Figure 2). **Conclusions:** Involving patients/caregivers in antibiotic treatment decisions represents an opportunity to intervene before patients experience antibiotic overuse. Our findings offer important insights on patient/caregiver' educational needs and preferences as well as perceived barriers to engaging in antibiotic treatment decisions for UTI. We used these insights to inform the development of educational materials about UTIs, ASB, and antibiotics for patients/caregivers and plan to test their use through multiple mediums with tailoring for unique patient needs, experiences, and backgrounds.

**Presentation Type:**
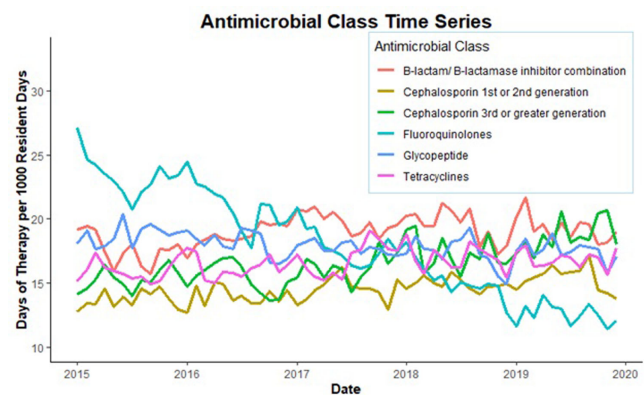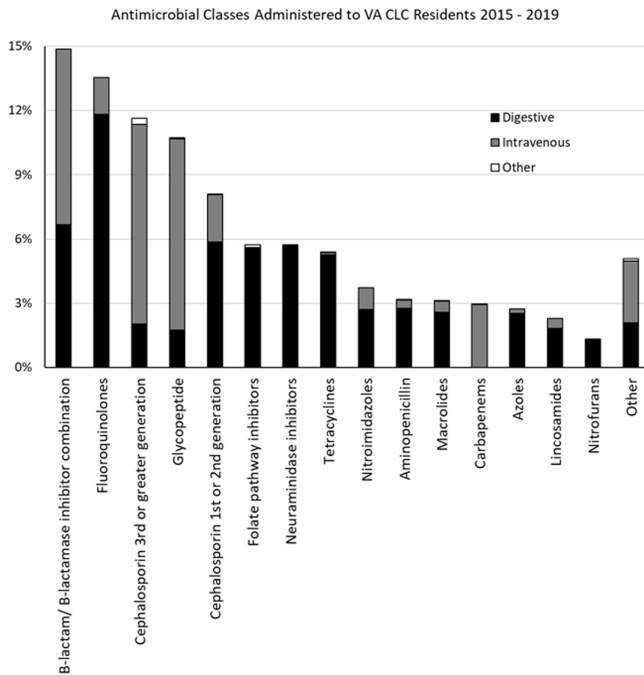Poster Presentation - Top Poster Abstract
**Subject Category:** Antibiotic Stewardship
**Antimicrobial Use in Veterans Affairs Community Living Centers, 2015 - 2019**

Christian Dalton, University of Utah; Tina Willson, University of Utah Division of Epidemiology; Brigid Wilson, Northeast Ohio VA Healthcare System; Taissa Bej, Northeast Ohio VA Healthcare System; Nadim El Chakhtoura, Institute for Computational Biology; Sunah Song, Institute for Computational Biology; Oteshia Hicks, Louis Stokes Cleveland VA Medical Center; Corinne Kowal, Department of Veteran Affairs; Makoto Jones, VA Pittsburgh Healthcare System; Steven Handler, VA Pittsburgh Healthcare System; Robin Jump, VA Pittsburgh Healthcare System and Vanessa Stevens, US Dept Veterans Affairs

**Background:** Optimizing antimicrobial use (AU) among post-acute and long-term care (PALTC) residents is fundamental to reducing the morbidity and mortality associated with multidrug-resistant organism (MDROs), as well as unintended social consequences related to infection prevention. Data on AU in PALTC settings remains limited. The U.S. Department of Veteran Affairs (VA) provides PALTC to over 23,000 residents at 134 community living centers (CLCs) across the United States annually. Here, we describe AU in VA CLCs, assessing both class and length of therapy. **Methods:** Monthly AU between January 1, 2015 and December 31, 2019 was extracted from the VA Corporate Data Warehouse across 134 VA CLCs. Antimicrobials and administration routes were based on the National Healthcare Safety Network AU Option protocol for hospitals. Rates of AU were measured as the days of therapy (DOT) per 1,000 resident-days. An antimicrobial course was defined as the same drug and route administered to the same resident with a gap of ≤ three days between administrations. Course duration was measured in days. AU Rates were measured as the days of therapy (DOT) per 1,000 resident-days. **Results:** The most common class of antimicrobial course administered during the study period was beta-lactam/beta-lactamase inhibitor combinations (15%) followed by fluroquinolones (14%), extended-spectrum cephalosporins (12%) and glycopeptides (11%; Figure 1). Neuraminidase inhibitors had the longest median (IQR) course duration (10 (IQR 8) days), followed by tetracyclines (8 (IQR 8) days), and then folate pathway inhibitors, nitrofurans and 1st/2nd generation cephalosporins (7 (IQR 7) days). Overall, 60% of antimicrobial courses were administered orally, with fluroquinolones the most frequently administered orally (20%). From 2015 – 2019, the annual rate of total antimicrobial use across VA CLCs decreased slightly from 213.6 to 202.5 DOT/1,000 resident-days. During the 5-year study period, fluroquinolone use decreased from 27.47 to 13.36 DOTs/1,000 resident-days. First and 2nd generation cephalosporin use remained relatively stable, but 3rd or greater generation cephalosporin use increased from 14.70 to 19.21 DOTs/1,000 resident-days (Figure 2). **Conclusion:** The marked decrease in the use of fluroquinolones at VA CLCs from 2015-2019 is similar to patterns observed for VA hospitals and for non-VA PALTC facilities. The overall use of antibacterial agents at VA CLCs decreased slightly during the study period, but other broad-spectrum agents such as 3rd or greater generation cephalosporins increased over the same period. The strategies used to decrease

### Antimicrobial Classes Administered to VA CLC Residents 2015 - 2019



### Antimicrobial Class Time Series



assess antibiotic prescribing patterns in urology offices over a four-year period, providing insights for potential stewardship interventions. **Methods:** The analysis focused on antibiotic prescribing trends in adults between 2018 and 2021 during both visit and non-visit (e.g. telephone and chart messages) encounters across 15 ambulatory Urology clinics in an academic medical center in Western New York. Exclusions were made for antivirals, antiparasitics, antifungals, oral suspensions, selected non-UTI antibiotics, duplicate orders on the same day or week, and prescriptions exceeding 28 days. Prescriptions were categorized into single doses administered in the clinic and those prescribed for 2-28 days, with descriptive statistics and trend analyses conducted using SAS v9.14. **Results:** Over the four-year period, 54,282 prescriptions were analyzed. Of these, 26,944 (49.7%) were single doses administered in the clinic, predominantly for pre-procedure prophylaxis. The most commonly prescribed antibiotics for prophylaxis were fluoroquinolones (FQ) (47.5%), followed by ceftriaxone (19.2%), nitrofurantoin (13.2%), trimethoprim/sulfamethoxazole (8.6%), and gentamicin (4.2%). Among the 27,288 prescriptions for 2-28 days, 72.3% were from non-visit encounters, with 61.6% prescribed by advanced practice providers (APPs) (Figure 1). The mean number of prescriptions per patient was 2.07, with women receiving more prescriptions than men (2.39 vs. 1.88, P < 0.001). FQ remained the most commonly prescribed antibiotics during all encounters (23.7%), followed by nitrofurantoin (23.0%) (Figure 2). The antibiotic duration was longer for visit-based compared to non-visit-based prescriptions (mean 10 vs. 7 days, P < 0.001). Notably, there was a significant decrease in fluoroquinolone use between Q1 2018 and Q4 2019 for both male and female patients, followed by insignificant changes thereafter. **Conclusions:** Antibiotic use in urology outpatient settings is substantially underestimated if only prescriptions made during visit encounters are considered. More than two-thirds of prescriptions for 2-28 days were from non-visit encounters, with the majority originating from APPs. The average therapy duration exceeded guideline recommendations. Moreover, approximately half of the

fluroquinolone use may have application for other antibiotic classes, both in VA and non-VA PALTC settings.

**Disclosure:** Robin Jump: Research support to my institution from Merck and Pfizer; Advisory boards for Pfizer

**Presentation Type:**
Poster Presentation - Top Poster Abstract
**Subject Category:** Antibiotic Stewardship
**The Uncharted Patterns of Antibiotic Prescribing in Urology Ambulatory Practices: A Four-Year Analysis**

Sonal Munsiff, University of Rochester; Kathleen Holt, Staff; Sucharu Ghosh, University of the Pacific and Ghinwa Dumyati, University of Rochester Medical Center

**Background:** Urinary tract infections (UTIs) represent a prevalent indication for outpatient antibiotic usage, yet limited data exist regarding antibiotic prescriptions within urology specialties. This study aimed to

## Figure 1: Comparing Antibiotics prescribed during visit vs. non-visit encounters

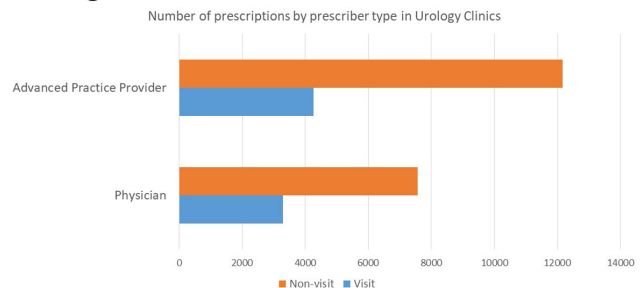Number of prescriptions by prescriber type in Urology Clinics



## Figure 2: Comparing Antibiotics prescribed during visit vs. non-visit encounters

Antibiotics prescribed during visit vs. non-visit encounters in Urology Clinics