689. Antibiotic Prescribing and Stewardship Opportunities within a Veterans Affairs Dental Care Practice

Kimberly Y. Grady, DDS, MPH1; Nathan Shively, MD2; Cornelius J. Clancy, MD3 and Brooke K. Decker, MD, CIC1; 1Veterans Administration Hospital, Pittsburgh, Pennsylvania; 2University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania; 3University of Illinois at Chicago School of Public Health, Chicago, Illinois.

Session: 74. Stewardship: Data and Program Planning
Thursday, October 5, 2017: 12:30 PM

Background. Antibiotic overuse is a major healthcare problem worldwide. Dental providers prescribe approximately 10% of outpatient antibiotics nationally. As a part of a larger quality improvement initiative, the prescribing habits of the Veterans Affairs Pittsburgh Dental Providers were reviewed.

Methods. Outpatient antibiotic prescriptions by dental providers at the Veterans Affairs Pittsburgh Dental Clinic from June 2015 - May 2016 were identified. A random sample of all prescriptions were reviewed for antibiotic prescribed, type of visit during which the prescription occurred, procedure associated with prescription, and indication. Available American Dental Association (ADA) guidelines were used to define appropriateness.

Results. Over the period reviewed, 15111 total outpatient prescriptions were filled at VA Pittsburgh, of which 1505 (10%) were prescribed by 21 dental providers. Antibiotics most commonly prescribed by dentists were amoxicillin (78%), clindamycin (13%), penicillin VK (4%), and amoxicillin/clavulinate (3%). Antibiotic prescriptions were randomly selected for chart review. Seventy-eight percent (142/182) visits were labeled as routine, and 22% (40/182) were acute. The most common procedures performed at visits where antibiotics were prescribed were exams 24% (43/182), extractions 42% (77/182) and cleanings 9% (17/182). The most common reasons for antibiotic prescriptions were post-operative complications 52% (96/182), prophylaxis 19% (34/182) and abscess 13% (23/182). Seventy-four percent (135/182) of antibiotic prescriptions were concordant with existing ADA guidelines. Of non-concordant prescriptions, 43% (21/48) were written for antibiotic prophylaxis.

Conclusion. Dental providers are active prescribers of outpatient antibiotics, and current dental guidelines are weak in antibiotic restriction. Opportunities for prescribing improvement exist, in particular with prophylaxis. Dental providers represent a potentially overlooked target for antimicrobial stewardship intervention.

Disclosures. All authors: No reported disclosures.

690. Antibiotic Prescribing by Dentists and Geographic Variability in the Veterans Affairs (VA) Health System

Kathlyn Acosta, PharmD1; Ursula C. Patel, PharmD, BCPS AQ-ID2; Charlesmiik Evans, PhD, MPH1; Michael Woelewski, MPH1; Gretchen Gibson, DDS, MPH1; Marianne Jurassic, DMD, MPH1; Margaret Fitzpatrick, MD, M.S.3; Scott Miskevics, M.S4; Sweetha Ramanathan, MPH5 and Katie J. Suda, PharmD, M.S.6; 1Veterans Affairs Pittsburgh Healthcare System, Pittsburgh, Pennsylvania; 2Veterans Affairs Arizona Healthcare System, Phoenix, Arizona; 3University of Illinois at Chicago, Chicago, Illinois; 4Veterans Affairs Pennsylvania Healthcare System, Pittsburgh, Pennsylvania; 5University of Arkansas for Medical Sciences, Little Rock, Arkansas; 6Veterans Affairs Pittsburgh Healthcare System, Pittsburgh, Pennsylvania.

Session: 74. Stewardship: Data and Program Planning
Thursday, October 5, 2017: 12:30 PM

Background. In the private sector, dentists prescribe approximately 1 out of every 10 antibiotics and are the top specialty prescriber. However, it is difficult to distinguish antibiotic prophylaxis vs. treatment because dentists generally code using procedure codes (CDT), rarely using diagnostic codes (ICD). In VA, dentists use CDT and ICD codes allowing for analyses of prescription (RX) indication. Therefore, the study purpose was to determine prescribing rates and indication for antibiotics prescribed by dentists.

Methods. Cross-sectional study of 476,451 patients with 1,741,708 visits in 205 VA dental clinics in 2013. Dentist RXs within 7 days of a dental visit were associated for ICD/CDT. The antibiotic indication (treatment vs. prophylaxis) was determined using RX days supply and dental visit ICD. SAS was used for all analyses; P ≤ 0.05 was significant.

Results. In 2013, there were 119,773 antibiotic RXs for 77,305 patients for a visit-based prescribing rate of 68.8/1000 visits. The most common antibiotic was amoxicillin (64.3%), followed by clindamycin (19.6%). Less than 2% of RX were broad-spectrum agents. The mean duration was 7.81 ± 8.52 days; 35% were >10 days. The majority (69.9%) of antibiotics were prescribed for prophylaxis, with 30.1% prescribed for treatment of an oral infection. There was geographic variability in prescribing (P < 0.01) with the highest prescribing rate in the West (74.9/1000 visits) and the lowest in the Northeast (57.2/1000 visits). By state, Arkansas (100.7/1000 visits) and North Dakota (33.5/1000 visits) had the highest and lowest rates, respectively (Figure). As compared with other regions, dentists in the Northeast were more likely to prescribe broad-spectrum antibiotics (RR = 1.80; 95% CI: 1.57-2.08), but less likely to prescribe clindamycin as compared with B-lactams (RR = 0.86; 95% CI: 0.82-0.90; P < 0.01 for all).

Conclusion. This is the first US study to determine indications and prescribing rates of antibiotics prescribed by dentists. Antibiotic dental prescribing varies geographically and differs as compared with prescribing patterns of medical providers. Dentistry may provide a novel opportunity for future stewardship efforts.

Disclosures. All authors: No reported disclosures.

691. Antibiotic Use Metrics to Guide Antibiotic Stewardship Priorities: Dental Antibiotic Prescribing in the U.S. Veterans Affairs (VA) System

K K. Suda, PharmD, M.S.1; Margaret Fitzpatrick, MD, M.S.2; Gretchen Gibson, DDS, MPH1; Marianne Jurassic, DMD, MPH1; Scott Miskevics, M.S3; Sweetha Ramanathan, MPH4 and Tessica C. McGregor, PhD5; Angela C. Taylor, MPH5; Charlesakis Evans, MPH6; University of Illinois at Chicago, Chicago, Illinois; 1VA Center of Innovation for Complex Chronic Healthcare, Chicago, Illinois; 2Veterans Health Care System of the Ozarks, Fayetteville, Arkansas; 3University of California, San Francisco, California; 4Veterans Health Care System of the Northeast, Hines, Illinois; 5Veterans Health Care System of the Pacific, Portland, Oregon; 6Veterans Health Care System of the Central Pacifi

Session: 74. Stewardship: Data and Program Planning
Thursday, October 5, 2017: 12:30 PM

Background. In the private sector, dentists prescribe approximately 1 out of every 10 antibiotics and are the top specialty prescriber. However, antibiotic prescribing practices of VA dentists have not been reported. Standardized metrics of antibiotic consumption (ie, antibiotic days) are useful to guide stewardship efforts, but have not been reported for dentistry. Thus, the purpose of this study was to report antibiotic use metrics in the VA with an emphasis on antibiotics prescribed by dentists.

Methods. Cross-sectional study of all Veteran users of VA dental care from all dental clinics (n = 205) in 2013. Antibiotic data were collected at the patient-level where ≥1 day and/or ≥1 dose of a systemic antibiotic was ordered and dispensed. Metrics included: antibiotic days (AD; average number of days/patient where any antibiotic was administered) and days of therapy (DOT; average number of days/patient where a unique agent was administered). Dentists were identified by VA personnel files with the professional designation of ‘Dentistry’. Antibiotics in the carbapenem, quinolone, anti-pseudomonal penicillin, third-/fourth-generation cephalosporin, macrolide, tetracycline, and aminoglycoside classes were considered to be broad spectrum. Student’s t-test was used for statistical analysis; P < 0.05 was considered significant.