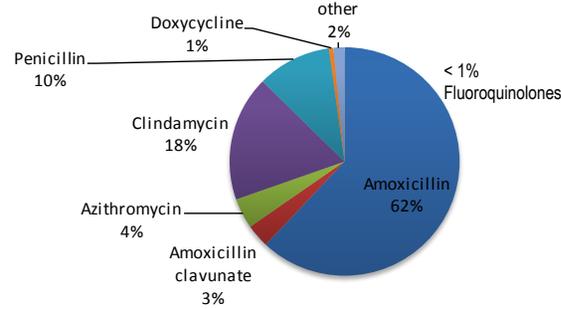




BACKGROUND

- An estimated 80-90% of the volume of human antibiotic use occurs in the outpatient setting (CDC get smart). At least 30% of antibiotic courses prescribed in the outpatient setting are unnecessary, meaning that no antibiotic is needed at all.
- Specialty areas such as dental clinic are a common place for antibiotic use. A recent study in Journal of the American Dental Association noted that dentists prescribe approximately 20% of outpatient antibiotics.
- The duration and indications for antibiotic use in dental clinics have not been clearly defined, except in the setting of endocarditis prophylaxis. Antibiotics are often used and sometimes indicated for endodontic, periodontal, implant and surgical procedures.
- Our goal was to measure antibiotic usage and duration in the dental clinic at a large VA hospital.

Outpatient Antibiotic Prescribed in Dental Clinics FY 2011-2016



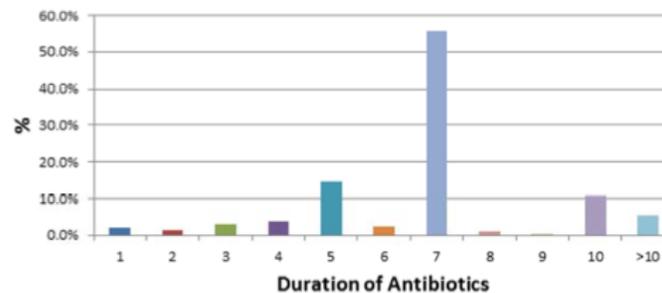
RESULTS

- Of 119,193 dental visits during the study period, 3.7% (4,358) were associated with a unique antibiotic prescription.
- CPT diagnoses included periodontal (17.1%), endodontic (5.1%), surgical (36.5%) and implant (26.2%) procedures.
- The antibiotics prescribed included amoxicillin (62.0%), clindamycin (17.7%), penicillin (10.5%), macrolides (4.3%), augmentin (3.4%), and in less than 1% other classes including fluoroquinolones FQ (0.2%).
- Mean days of antibiotics were 7.6 +/- SD 5.2 days (7.4 +/- SD 4.0 days for the above CPT codes).
- Duration did not vary by diagnostic code or by antibiotic class. There were no temporal trends over time.

METHODS

- Outpatient antibiotic prescriptions from 2011-2016 for VA Boston were extracted from the VA data warehouse.
- Oral Antibiotic prescriptions within 7 days +/- dental visit were classified by date, antibiotic by VA National Formulary and days supply.
- Antibiotics used to treat primarily UTIs and TB were excluded.
- The associated Clinical Procedural Terminology (CPT) codes were extracted for those visits that included an antibiotic prescription within 7 days +/- dental visit.
- CPT diagnoses included periodontal, endodontic, surgical and implant procedures.

Proportion of Dental Prescriptions by Duration of Antibiotics



CONCLUSIONS

- The majority of antibiotic use in dental clinic was for diagnostic codes that may warrant antibiotic use
- The spectrum of activity of agents is in general keeping with guidelines.
- However, the duration of antibiotics is longer than what might be anticipated for prophylaxis of dental procedures or treatment of dental infections.
- Limitations of this study include lack of manual chart review to identify specific indication and potential for missing prescriptions by non-dental providers.
- Guidelines could be developed by collaboration of infectious disease/medicine and dental practitioners to study and determine appropriate length of therapy if therapy is indicated.
- Surveillance and stewardship activities could optimize antibiotic use in dental clinic.