

Figure 1.

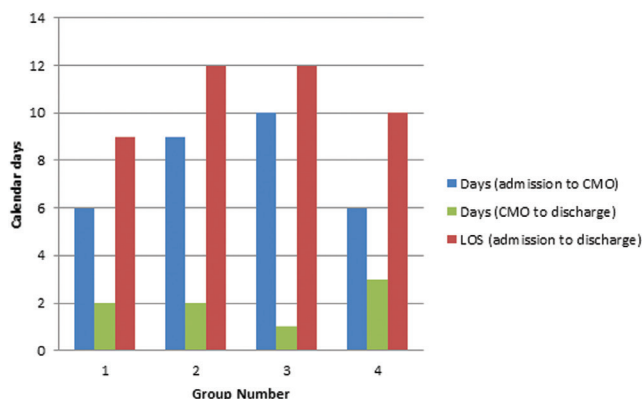


Table 1. Predictors of Length of Stay.

Characteristics	Estimate (95% CI)	P value
Age	-0.07 (-0.16, 0.02)	0.14
Male gender	0.15 (-1.14, 1.43)	0.82
Cancer type		
Lung	0.25 (-1.66, 2.17)	0.80
Gastrointestinal	0.28 (-1.64, 2.20)	0.78
Solid tumor, other	2.24 (0.47, 4.00)	0.01
Liquid tumor	Reference	
Rothman index ^a	0.06 (0.03, 0.09)	<0.0001
Antibiotic density ^b	1.17 (1.10, 1.25)	<0.0001

^aMarker for clinical severity.

^bThe use of oral and IV antibiotics by calendar days.

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255. Evaluation of Antibiotic Prescribing at University-Affiliated Dental Clinics
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Session: 52. Antimicrobial Stewardship: Special Populations

Thursday, October 4, 2018: 12:30 PM

Background. Dentists prescribe 10% of outpatient antibiotics, yet aside from guidelines for infective endocarditis prophylaxis and against prosthetic joint infection prophylaxis, little is known about appropriate antibiotic use in dentistry. We aimed to describe antibiotic prescribing in dentistry to identify targets for improving prescribing.

Methods. We performed a cross-sectional study of patients receiving antibiotics between October 1, 2014 and September 30, 2016 at one of three University of Utah (UU) Dentistry clinics. Antibiotic prescriptions entered through the dental practice management software (Dentrix) were pulled from the UU data warehouse and linked with medical records. We assessed antibiotic prescribing rates, most commonly prescribed agents, frequency of documented β -lactam allergies, and duration of therapy. Prescriptions were categorized as for prophylaxis based on administration directions or antibiotics administered as one-time doses in the clinic. Finally, we measured the frequency of cardiac indications for preprocedure antibiotic prophylaxis and indicators that may be drivers of unnecessary antibiotic use (e.g., prosthetic joint).

Results. A total of 1,718 antibiotic prescriptions occurred in the study period, with a prescribing rate of 48/1,000 dental visits. Penicillins were the most commonly prescribed class [81% (1,399/1,718)]. Six percent (96/1,718) of prescriptions were consistent with infection prophylaxis. Thirty percent (29/96) of those receiving prophylaxis had a cardiac indication for dental prophylaxis, and 23% (22/96) had prosthetic joints. Mean nonprophylactic antibiotic duration was 8 days (standard deviation 3.9 days). Ten percent (180/1,718) of prescriptions were in patients with a documented β -lactam allergy. The majority of these patients [62% (111/180)] received clindamycin.

Conclusion. The majority of prescriptions evaluated were not consistent with preprocedure prophylaxis. Prophylaxis was frequently prescribed in patients without prophylactic indications. While improving prophylactic use of antibiotics for dental

procedures is an important antibiotic stewardship target, a better understanding of the use of treatment courses could have more significant implications for dental antibiotic stewardship efforts.

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256. A Cross-Disciplinary Educational Approach: Antibiotic Prescribing Practices and the Use of Prophylactic Antibiotics Prior to Dental Procedures

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Session: 52. Antimicrobial Stewardship: Special Populations

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Background. Antibiotics are frequently prescribed for prophylaxis prior to dental procedures. Little is known about the influences and beliefs among medical and dental practitioners regarding prophylactic antibiotic prescription prior to dental procedures among patients with prosthetic joints and those at risk for endocarditis.

Methods. A cross-sectional electronic survey was designed and distributed among medical practitioners (physicians, APRNs and PAs in Primary Care, Cardiology, and Orthopedics), and dentists. The survey addressed the frequency of prophylactic antibiotic prescribing, factors influencing prophylactic antibiotic use, perceived responsibility for antibiotic prescribing and interest in further antibiotic-related education.

Results. Among 336 survey recipients, 156 responded (response rate 46%), including 84 dentists and 72 medical practitioners. A higher proportion of dentists reported ≥ 1 prophylactic antibiotic prescriptions in the prior year compared with medical providers (79% vs. 58%). Most dentists (68%) believed that the dentist was responsible for prescribing the prophylactic antibiotic, whereas medical practitioners attributed this responsibility to the dentist (35%), the medical or surgical specialist (26%), or the primary care physician (38%). Dentists were more likely than medical practitioners to identify the following as indications for prophylactic antibiotics: poorly controlled diabetes mellitus (26% vs. 3%, $P = 0.000$), chronic kidney disease (8% vs. 0%, $P = 0.041$), cardiac transplant with valvopathy (61% vs. 40%, $P = 0.023$), and previous endocarditis (85% vs. 65% $P = 0.005$). Most medical providers (65%) and dentists (74%) reported interest in more education on prescribing antibiotics, with educational modules either online modules or email communications (58% and 54% of interested providers, respectively).

Conclusion. Medical providers and dentists frequently prescribe antibiotics prior to dental procedures. Beliefs regarding the responsibility and indications for prescribing varied by group and may not be consistent with published guidelines. Additional education, particularly through online or email, would be an opportunity to address the needs of these prescribers.

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257. A Whole of Country Analysis of Antimicrobial Stewardship Resources, Activities, and Barriers for Children in Hospitals in Australia

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Session: 53. Pediatric Antimicrobial and Diagnostic Stewardship

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Background. We aimed to assess antimicrobial stewardship (AMS) resources and activities for children in hospitals throughout Australia, to identify gaps in services.

Methods. Every public hospital in Australia with paediatric beds was identified via the Australian Institute of Health and Welfare. The director of pharmacy or most senior paediatrician was asked to complete an online evaluation in 2017 regarding their AMS resources and activities. For analysis, tertiary (7) and major metropolitan hospitals (50) were combined (metropolitan) and compared with hospitals in regional (42) and rural towns (7) combined (rural).

Results. We identified 106 hospitals and received 106 (100%) responses. Paediatric bed numbers ranged from 3 to 360. In metropolitan hospitals, 17 (35%) had a paediatric AMS team or representation, compared with 5 (9%) for rural ($P = 0.001$). There was an AMS pharmacist in 42 (86%) metropolitan hospitals compared with 37 (65%) rural ($P = 0.1$) although the majority of these were not paediatric. Fifty-one (48%) hospitals had locally adapted empirical antibiotic prescribing guidelines (metropolitan 28 (57%) vs. rural 23 (40%)($P = 0.06$)), although fewer had specialty-specific guidelines (figure). One hundred two (96%) hospitals had restrictions on broad-spectrum antimicrobials, but formal approval systems were fewer: metropolitan 44 (90%) vs. rural 35 (66%) ($P = 0.004$). Auditing methods differed but were mostly ad hoc, with results fed back in an untargeted way with only 22 (34%) providing direct physician feedback. There was a paucity of AMS education: only 25 (24%) provided education for senior medical staff, and 24 (23%) had no education for any staff (metropolitan 8 (17%)