SOMC Antibiotic Prescriptions for Targeted Encounters (Exclusion Criteria Applied)

SOMC Antibiotic Prescribing for Targeted Conditions by Provider Type (Inappropriate Use)

Disclosures. All authors: No reported disclosures.

2070. Assessing Primary Care Physicians' Attitudes and Perceptions Toward Antibiotic Resistance and Outpatient Antibiotic Stewardship: A National Survey

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Background. At least 30% of outpatient antibiotic prescriptions are unnecessary. Outpatient antibiotic stewardship can improve prescribing and minimize the threat of antibiotic resistance. We assessed primary care physicians' (PCPs) perceptions of antibiotic resistance, inappropriate antibiotic use, and the need for and impact of antibiotic stewardship activities.

Methods. We conducted a national survey of 1,550 internal and family medicine physicians and pediatricians recruited from a medical market research panel. Quotas were established to recruit participants by geographic region and specialty. For sample representativeness, survey weights were generated according to these characteristics using the American Medical Association's Masterfile.

Results. Among respondents, 94% agreed that resistance is a problem in the United States, but only 55% felt it was a problem for their practice; 65% of respondents agreed they had seen an increase in resistant infections in their patients over the past 5 years. Responses about inappropriate antibiotic use were similar: 91% agreed that it was a problem, but 37% agreed that it is a problem in their practice. Additionally, 60% felt they prescribed antibiotics more appropriately than their peers. For antibiotic stewardship, 91% felt it was appropriate for office-based practices, but 53% believed that discussions with patients on the appropriate use of antibiotics is sufficient to address the problem. The majority of respondents indicated they were likely, very likely, or extremely likely to implement stewardship interventions in response to feedback or incentives from payers or health departments. The activities with the strongest likelihood to spur stewardship adoption included the state health department publishing local resistance patterns (82%), a payer creating a stand-alone incentive program for stewardship (80%), or a payer including it in a broader quality incentive program (76%).

Conclusion. PCPs feel that antibiotic resistance, inappropriate prescribing, and stewardship are important in the United States, but not for their own practices. This disconnect poses a challenge for the success of outpatient stewardship programs. Incentive or data feedback activities may help encourage stewardship uptake.

Disclosures. All authors: No reported disclosures.

2071. A Survey of Antibiotic Prescribing Practices Among Adult Primary Care Physicians in Idaho

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Background. Prescribing an antibiotic is a complex process involving an interplay of prescriber's knowledge, diagnostic acumen and patient factors. Understanding the prescriber rationale is key to provide feedback which might improve appropriateness of antibiotic prescribing. Currently, there are limited data on prescribing and test ordering practices among primary care physicians.

Methods. We surveyed primary care physicians taking care of adults (age 18 years and above). Physicians were contacted through the Idaho State Medical Board by a one-time email containing the survey link. The survey consisted of 25 questions under 2 major themes of diagnostic and antimicrobial stewardship (AS). It assessed physicians' practice setting, ordering of diagnostic tests and antibiotics for common infections, delivery of patient education regarding antibiotics, availability of antibiogram and antimicrobial stewardship services, and assessment of penicillin allergy. Two infectious diseases physicians independently reviewed the results for appropriateness of testing and antibiotic prescribing per IDSA guidelines.

Results. Of 929 physicians surveyed, 157 (17%) responded. Of the respondents, 95 (61%) were male, the mean age was 50 years, and 72% worked in outpatient settings and were family medicine specialists. Only 55% of physicians reported having an AS program at their healthcare facility. Test-of-cure for *C. difficile* infection (24%) and UTI (13%) and use of superficial culture data to guide the treatment of osteomyelitis (27%) were the most common reasons for inappropriate testing. Longer than recommended duration, antibiotic combinations with overlap of spectrum, and guideline-discordant indications for prescribing antibiotics were the main reasons for inappropriate antibiotic use. The main factors influencing the decision to prescribe an antibiotic were diagnostic uncertainty (42%), being unsure of patient follow-up (23%) and cost of testing (21%).

Conclusion. The survey results highlight the need for prescriber education for decreasing inappropriate test ordering and antibiotic prescribing. Additional studies involving a review of patient records, lab and prescription data are needed to confirm these practices.

Disclosures. All authors: No reported disclosures.

2072. Do ID and Non-ID Clinicians Agree on IV to PO Switch Criteria? Results from Phase I of the INForming IV to ORal MEdication Report (INFORMER) Project

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Background. Converting intravenous (IV) antibiotics to an oral (PO) route is an important stewardship activity to reduce patient harm, including extravasation, thrombophlebitis, and catheter-related infections. The INFORMER Project aims to develop a "smart" electronic tool to streamline IV to PO conversion in eligible patients using an algorithm derived from patient-level data. In designing the algorithm, we noted significant clinician subjectivity in reviewing PO eligibility criteria. To support algorithm development and frontline clinician buy in for future e-tool use, an initial step of our project explored agreement level for IV to PO switch between general internal medicine (GIM) vs. ID clinicians.

Methods. A convenience sample of GIM patients (tertiary teaching hospital) were reviewed in a 4-month pilot. Patients were still on the ward and received a target IV antibiotic (fluoroquinolone, sulfamethoxazole/trimethoprim, clindamycin, metronidazole, linezolid, fluconazole, voriconazole, azithromycin). To mimic real-time decision-making, clinicians (MD and PharmDs) retrospectively assessed IV to PO eligibility of the last IV antibiotic dose on admission for (1) GI/absorption, (2) clinical stability and (3) global review (but not given specific thresholds/criteria). Agreement level was compared for ID vs. non-ID reviews.

Results. Overall, 52 patients' IV to PO eligibility was assessed by multiple clinicians; 5 GIM teams and 6 ID MDs or PharmDs participated. ID vs. GIM respective assessment of Global eligibility was 61% vs. 48% (agreement in 71% of cases). ID vs. GIM assessment of acceptable absorption was 82% vs. 67%; acceptable clinical stability was 64% vs. 62% (Fig 1). Clinician comments were reviewed to identify algorithm improvements and areas for frontline education.

Conclusion. Our results are consistent with prior data suggesting up to 40–50% of patients may be eligible for IV to PO conversion, even at institutions that have IV to PO protocols. Our data also shows that overall, ID clinicians were more likely to assess a patient as ready for PO antibiotics vs. non-ID clinicians. Our findings are important as understanding

cases of non-agreement and obtaining GIM consensus for tool utility are important for our next step, assessing INFORMER implementation on realtime IV to PO conversion rates.
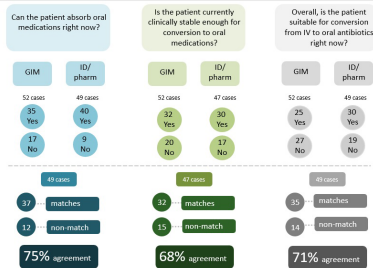
Disclosures. **All authors:** No reported disclosures.

2073. Apples and Oranges: Comparing Toolkits to Track Antimicrobial Prescribing in Ambulatory Care Settings

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Background. Between 15–50% of patients seen in ambulatory settings are prescribed an antibiotic. At least one-third of this usage is considered unnecessary. Multiple tools have emerged to evaluate antibiotic prescribing in ambulatory settings. The toolkits, MITIGATE and Choosing Wisely, have been funded by the Centers for Disease Control and Prevention and promoted by the American Board of Internal Medicine, respectively, but use different reporting criteria. Notably, the target rate of antibiotic prescribing in the MITIGATE framework is zero, whereas the target rate for Choosing Wisely is not zero because it includes diagnoses for which an antibiotic may be appropriate. We compared both to evaluate prescribing in primary care and specialty clinics, urgent care, and the emergency department.

Methods. This was a single-center observational study. Electronic medical record data were accessed to determine antibiotic prescribing and diagnosis codes. The primary outcome was rate of inappropriate antibiotic prescribing overall and in each of the individual settings.

Results. Between March 2018 and April 2019, 42,650 patient visits met MITIGATE inclusion criteria and 11% received an antibiotic unnecessarily. In the same time-period, 23,366 patient visits met Choosing Wisely inclusion criteria and 17% received an antibiotic unnecessarily. Within the MITIGATE framework, inappropriate prescribing was highest in the ED (17%), followed by primary care (12%), urgent care (10%), and specialty care (5%). Choosing Wisely, inappropriate prescribing was highest in primary care (23%), followed by urgent care (15%), and specialty care (8%). The ED was not included in the Choosing Wisely technical specifications. The top coded diagnosis in both frameworks was acute respiratory infection, unspecified.

Conclusion. Rates of inappropriate antibiotic prescribing varied widely depending upon the toolkit used. Inappropriate antibiotic prescribing in primary care by Choosing Wisely framework was double that of MITIGATE. Careful consideration of the differences and goals of using these toolkits is needed both on the local level for individual provider feedback and more broadly, when comparing prescribing rates between institutions.

Disclosures. **All authors:** No reported disclosures.

2074. A Successful Acute Respiratory Tract Infection Campaign to Improve Antibiotic Prescribing in Outpatient Clinics and an Emergency Department

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Maria Virginia Romero Alvarez, MD[1]; Karl Madaras-Kelly, PharmD, MPH[3];
Paola Lichtenberger, MD[4]; [1]Jackson Memorial Hospital, Miami, Florida; [2]Miami Veterans Affairs Healthcare System, Miami, Florida; [3]Idaho State University, Boise, Idaho; [4]University of Miami Miller School of Medicine and the Miami VA Healthcare System and University of Miami, Miami, Florida

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Background. Acute Respiratory tract infections (ARI) are infections involving the upper respiratory tract. Most ARIs are viral in nature and self-limited in which most of the times antibiotic treatment is unnecessary. A recent VA medication utilization evaluation conducted in 28 medical centers identified high rates of unnecessary antibiotic prescribing for ARI. Based on these analyses the VA National Academic Detailing Service (VANADS) created the ARI campaign, providing materials for VA systems to employ as the seek to improve ARI management. Our project consists of

implementation of the ARI Campaign in a South Florida Veteran Affairs HealthCare System (Miami VAHS).

Methods. We utilized VANADS resources for our campaign. Activities included assessing ARI prescribing patterns, garnering stakeholder support, identifying pharmacist and physician champions, providing targeted academic detailing, handing out provider ARI guidance documents (in paper and electronically), disseminating provider-specific feedback with peer comparison, order-set development with advertisement, promoting appropriate coding, and reporting to the Miami VAHS antimicrobial stewardship program (ASP) subcommittee. Campaign activities were initiated in October 2017. The ARI Campaign was selected as the priority item for FY-2019, from our annual ASP risk assessment with a goal of reducing antibiotic prescribing for ARI diagnosis to below 40%. We present the data up to March 2019.

Results. Baseline data from October 2015 through September 2017 revealed an antibiotic was prescribed to 1,651 of 2,843 (58%) encounters in which an ARI diagnosis was made in our system. In the months following ARI Campaign initiation, a decline in antibiotic prescribing for ARI diagnosis was found. In the most recent quarter (January–March 2019), the prescribing rate was 39%. Figure 1 shows system-wide vs. Florida region prescribing rates. Table 1 provides data by major site and for the top 10 priority providers we identified.

Conclusion. Implementation of a multifaceted ARI Campaign at a single-center resulted in a substantial reduction in antibiotic prescriptions. Future work is warranted investigating which activities are most impactful for reducing unnecessary antibiotic prescribing for ARI.

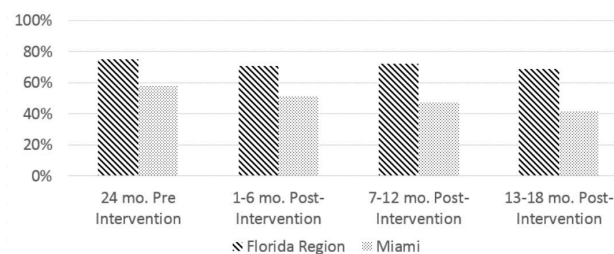**Figure 1.** Antibiotic prescribed for acute respiratory tract infection diagnosis

Table 2. Site-specific and top 10 priority provider antibiotic prescribing rates for acute respiratory tract infection diagnosis

Provider	Practice Location	24 mo. Pre-Intervention	1-6 mo. Post-Intervention	7-12 mo. Post-Intervention	13-18 mo. Post-Intervention
All Providers	Emergency Department	1199 of 1670 (72%)	345 of 526 (66%)	196 of 339 (58%)	249 of 493 (51%)
All Providers	Medical Center Clinics	439 of 1076 (41%)	95 of 332 (29%)	69 of 221 (31%)	81 of 306 (26%)
All Providers	Major Satellite Clinic	1004 of 1321 (76%)	379 of 500 (76%)	185 of 306 (60%)	235 of 385 (61%)
Provider #1	Major Satellite Clinic	165 of 211 (78%)	52 of 67 (78%)	21 of 30 (70%)	25 of 40 (63%)
Provider #2	Emergency Department	160 of 254 (63%)	42 of 80 (53%)	10 of 32 (31%)	26 of 73 (36%)
Provider #3	Emergency Department	136 of 160 (85%)	53 of 69 (77%)	34 of 57 (60%)	26 of 57 (46%)
Provider #4	Major Satellite Clinic	133 of 159 (84%)	53 of 58 (91%)	12 of 23 (52%)	17 of 28 (61%)
Provider #5	Emergency Department	114 of 166 (69%)	36 of 57 (63%)	21 of 37 (57)	17 of 46 (40%)
Provider #6	Emergency Department	107 of 128 (84%)	42 of 46 (91%)	19 of 24 (79%)	28 of 30 (93%)
Provider #7	Major Satellite Clinic	80 of 86 (93%)	30 of 31 (97%)	8 of 12 (67%)	4 of 5 (80%)
Provider #8	Emergency Department	69 of 73 (95%)	6 of 10 (60%)	5 of 8 (63%)	No data
Provider #9	Emergency Department	68 of 91 (75%)	24 of 33 (73%)	16 of 24 (67%)	2 of 16 (13%)
Provider #10	Medical Center Clinic	55 of 110 (50%)	10 of 23 (43%)	5 of 11 (45%)	No data

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2075. Transforming Outpatient Antimicrobial Stewardship Through a Clinical Surveillance System

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Background. Multiple studies have highlighted the predominance of inappropriate antibiotic prescribing in the outpatient setting, thus making an area ripe for antimicrobial stewardship interventions. One way to identify intervention opportunities and monitor performance metrics is through utilization of a clinical surveillance system (CSS).

Methods. In October 2017, TheraDoc (DSS Inc.) was obtained which serves as a CSS. Upon installation, the antimicrobial stewardship committee designed the alerts found in Figure 1 that would be utilized to identify potential interventions. Alerts that were deemed to be of high value or time sensitive were