Results. 39,785 patients were identified including 2897 (7%) with BLA. The prevalence of BLA increased with age (Figure 1). 2459 (85%) patients with BLA were matched to a control. Patients with BLA had higher odds of receiving broader-spectrum antibiotics (OR 2.35, 95% CI: 2.07–2.67) and had greater antimicrobial costs (1.21-fold increase, 95% CI: 1.08–1.35) than nonallergic patients (Figure 2). There were no differences in LOS, total antimicrobial days, or 30-day readmission (Figure 2).

Conclusion. Pediatric patients with BLA are more likely to receive broader-spectrum antibiotics and incur higher antimicrobial costs than matched controls. De-labeling interventions could reduce unnecessary exposure to these agents and lower costs.

Fig 1. Prevalence of Beta Lactam Allergy by Age

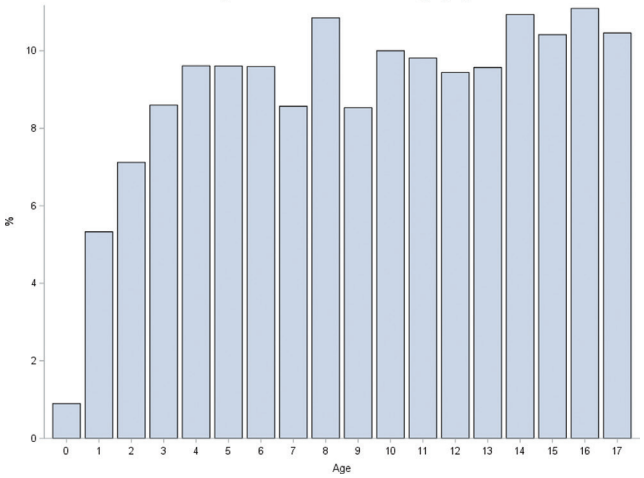
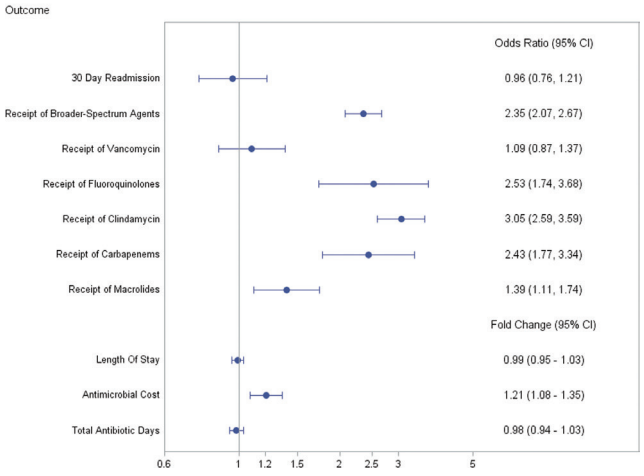


Fig 2. Impact of Beta Lactam Allergy on Study Outcomes



Disclosures. **All Authors:** No reported Disclosures.

1958. Assessment of Guideline-Concordant Antimicrobial Prescribing in Urgent Care Centers

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Session: 228. Pediatric Stewardship
Saturday, October 5, 2019: 11:00 AM

Background. In the United States in 2014, 266 million outpatient antibiotic prescriptions were dispensed. The Center for Disease Control and Prevention estimates that 30% of outpatient antibiotic prescriptions are inappropriate. These inappropriate prescriptions contribute to increased resistance, adverse events, and healthcare costs.

Methods. This was a retrospective study of patients presenting to 22 urgent care centers within a large healthcare system between September 1, 2018 and February 28, 2019. Data were collected from a dashboard designed to track antimicrobial prescribing data by indication, location, and provider. ICD-9 and -10 codes associated with otitis media, pharyngitis, sinusitis, cystitis, and upper respiratory infections (URI) were included. Guideline-concordant antimicrobial prescribing was determined based on compliance with national guideline recommendations, after taking patient allergies into account. The URI category includes disease states in which antimicrobials are rarely appropriate (e.g., acute rhinitis, nasopharyngitis, and acute bronchitis).

Results. A total of 57,799 encounters were included in this analysis (19,242 pediatric and 38,557 adult) and 60% of patients received an antibiotic prescription. Overall antimicrobial guideline concordance was higher in pediatrics (84%) than adults (62%). Rates of guideline-concordant antimicrobial selection are shown in Table 1. The most common guideline-discordant prescriptions were tetracyclines (39%), amoxicillin/clavulanate (26%), and macrolides (17%) in adult patients with sinusitis, pharyngitis, or otitis media. In pediatric patients, the most common discordant prescriptions were macrolides (32%), third-generation cephalosporins (30%), and amoxicillin/clavulanate (19%). Unnecessary antimicrobial prescribing for URI occurred in 23% of pediatric patients and 36% of adult patients.

Conclusion. Guideline-discordant antimicrobial prescribing is common in urgent care centers, particularly in adult patients. In addition to encouraging utilization of order sets, emphasis on education and feedback may be important to improve and sustain guideline-concordant prescribing rates and reduce prescribing for URI.

Table 1: Guideline-Concordant Antimicrobial Selection

Diagnosis	Pediatric	Adult
Otitis Media	4045/4727 (86%)	1674/3040 (55%)
Pharyngitis	3553/4151 (86%)	2182/3828 (57%)
Sinusitis	969/1166 (83%)	8778/11715 (75%)
Cystitis	223/281 (79%)	1954/3012 (65%)
Upper Respiratory Infection	1067/4600 (23%)	4705/13162 (36%)

Disclosures. **All Authors:** No reported Disclosures.

1959. Parent Satisfaction and Antibiotic Prescribing for Pediatric Respiratory Infections by Telemedicine

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Session: 228. Pediatric Stewardship
Saturday, October 5, 2019: 11:15 AM

Background. Respiratory tract infections (RTIs) are a common reason for direct-to-consumer (DTC) telemedicine consultation. Antibiotic prescribing during video-only DTC telemedicine consults was explored for pediatric RTIs, focusing on correlates with visit duration and patient satisfaction.

Methods. Data on pediatric (age less than 19 years) RTI consults were obtained from a large DTC nationwide telemedicine platform and included patient, physician, and encounter characteristics. Mixed-effects regression was used to assess variation in antibiotic receipt by patient and physician factors, as well as the association between antibiotic receipt and visit length or patient satisfaction.

Results. Of 12,842 RTI visits with 560 physicians, 55% of patients received an antibiotic prescription. Antibiotic prescribing rates among telemedicine providers were high: sinusitis (92.1%), otitis media (96.0%), pharyngitis (76.7%), and bronchitis/bronchiolitis (62.0%). A provider was more likely to receive a 5-star satisfaction rating from the parent when the child was provided a prescription for an antibiotic (OR 3.38; 95% CI 2.84–4.02), an antiviral (OR 2.56; 95% CI 1.81–3.64) or a nonantibiotic (OR 1.93; 95% CI 1.58–2.36). Visit length (mean 6.4 minute) was associated with higher satisfaction only when no antibiotic was prescribed (OR 1.03 per 6 seconds; 95% CI 1.01–1.06). Compared with nonpediatricians, pediatric providers were less likely to prescribe antibiotics (OR 0.44; 95% CI 0.29–0.68); however, patients of pediatricians were more likely to be highly satisfied (OR 1.50; 95% CI 1.11–2.03).

Conclusion. During DTC telemedicine video consultations for RTIs, pediatric patients were frequently prescribed antibiotics, which correlated with visit satisfaction. Although pediatricians prescribed antibiotics at a lower rate than other physicians, their satisfaction scores were higher. Especially problematic, adherence to guideline-concordant criteria for diagnosing acute otitis media and streptococcal pharyngitis, which, respectively, require otoscopy and throat culture, is not possible during a video-only telemedicine consult. High rates of antibiotic prescribing to children with RTIs suggest a need for antimicrobial stewardship efforts during video-only telemedicine consultation.

Disclosures. **All Authors:** No reported Disclosures.

1960. Lost in Translation: Comparing Rates of Outpatient Antibiotic Use in Three Metrics

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Session: 228. Pediatric Stewardship
Saturday, October 5, 2019: 11:30 AM

Background. The Centers for Disease Control and Prevention (CDC) tracks US outpatient antibiotic use in prescriptions per 1000 persons (Rx/1000), while the World Health Organization uses defined daily doses per 1000 persons (DDD/1000), which are based on average adult dose, for global surveillance. A third metric, days of therapy (DOT)/1,000 persons, has not been previously evaluated at the national level. We aim to compare time trends in outpatient oral antibiotic use as Rx/1000, DDD/1000, and DOT/1,000 in the same data to inform ongoing CDC surveillance and facilitate international comparison.

Methods. We identified dispensed outpatient oral antibiotics using pharmacy claims in 2011–2016 IBM® MarketScan® Commercial Databases for individuals <65 years old. Using enrollment data, we calculated mean annual membership with drug coverage. Annual rates of outpatient oral antibiotic use were calculated for Rx/1000, DDD/1000, and DOT/1000 persons. Prescriptions written with a ratio of DDD to days supplied >10 were considered biologically implausible and excluded from DDD calculations. We examined trends for each metric from 2011 to 2016 using negative binomial regression.

Results. Annual numbers of outpatient oral antibiotic prescriptions ranged from 18.6 million to 30.0 million (mean 24.3 million). Overall, Rx/1000 decreased by 7% from 892 in 2011 to 829 in 2016 (Figure 1). From 2011 to 2016, DDD/1000 increased 2% from 23.8 to 24.2 while DOT/1000 decreased 9% from 25.4 to 23.1. Significant per-year decreases were found from 2011 to 2016 for Rx/1000 (−1.1%) and for DOT/1000 (−1.6%), while no significant per-year change was seen with DDD/1000 (table). DDD/1000 underestimate use in pediatrics under the age of 10 (Figure 2). Prolonged duration is seen in adolescents and reflected by DOT/1000.

Conclusion. Trends in DDD/1000 for population aged <65 years do not mirror trends in Rx/1000 and DOT/1000. These differences may reflect that Rx/1000 and DOT/1000 more accurately capture antibiotic prescriptions in children than DDD/1000. As DDD/1000 underestimate antibiotic use in children, DDD/1000 underestimates reduction in antibiotic use over time and may not accurately reflect changes in use over time.

Figure 1: Rates of outpatient oral antibiotic claims in three antibiotic use metrics in IBM® MarketScan® Commercial Databases for years 2011—2016.

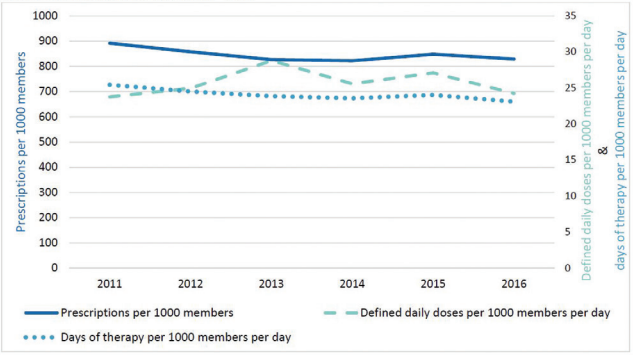

Figure 2: Rates of outpatient oral antibiotic claims in three antibiotic use metrics in IBM® MarketScan® Commercial Databases for all years 2011—2016 by age.

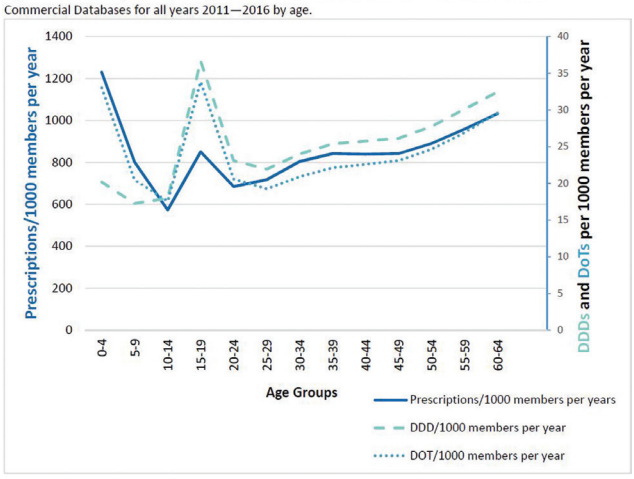

Table: Absolute percent change and negative binomial regression for three different antibiotic use metrics from 2011—2016, IBM® MarketScan® Commercial Databases.

Annual rate	Absolute percent change from 2011 to 2016	Percent change per year	Rate Ratio for per year change*	Rate ratio 95% confidence intervals
Prescriptions per 1000 members (Rx/1000)	-7%	-1.1%	0.99	0.98-0.998
Defined daily doses per 1000 members (DDD/1000)	2%	0.7%	1.01	0.98-1.04
Days of therapy per 1000 members (DOT/1000)	-9%	-1.6%	0.98	0.98-0.99

*Rate ratio denotes the change per year in outpatient oral antibiotic during 2011 to 2016 for each metric. Values <1 show a per-year decrease in use and >1 show an increase in use, while a value of 1 shows no change.

Disclosures. **All Authors:** No reported Disclosures.

1961. Grindr™ on Screen Activity on iPhones Correlates with HIV Risk and Substance Use in Men Who Have Sex with Men, San Diego

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Session: 229. The End of AIDS Starts with Prevention
Saturday, October 5, 2019: 10:30 AM

Background. Technology has changed the way men-who-have-sex-with-men (MSM) seek sex; ≥60% of MSM in the United States use the internet to find sex partners, primarily via Grindr™ which is the most used dating app among MSM. Studies to date have mostly evaluated Grindr™ use as a dichotomous variable and found inconsistent results regarding associations with increased HIV risk behavior. Importantly, Grindr™ "on-screen" activity is monitored by phones and can provide an *objective* measure of app usage. Here we aimed to assess Grindr™ "on-screen" activity in MSM undergoing community-based HIV and sexually transmitted infection (STI) screening in San Diego, and to correlate activity with sexual risk behavior and substance use.

Methods. This nested cohort study was conducted between December 2018 and April 2019 and leveraged our "Good to Go" (AI106039) screening program for participant recruitment. During their testing encounter participants not on HIV PrEP were provided with surveys on demographics, substance use and risk behavior during previous 3 months, and Grindr™ usage. Participants with iPhones were instructed on how to assess Grindr™ on-screen activity (i.e., time on-screen during last 7 days) on their phones (Figure 1). Risk behavior was classified using the validated San Diego Early Test (SDET) Score (Figure 2).

Results. Overall 378/784 (48%) MSM participants indicated that they had opened Grindr™ during the previous 7 days. Grindr™ users had higher SDET scores than those not using Grindr™ (median SDET 2, IQR 0–5; mean 2.29) while there was no difference in proportion of substance users (alcohol and marijuana excluded, 21% vs. 17%; $P = 0.14$). Of 231 MSM who indicated recent Grindr™ use (61%) had iPhones; median on-screen activity during the previous 7 days was 144 minutes (range 1–2,640 minutes). Participants with high Grindr™ utilization (>80th percentile of time on screen corresponding to >480 minutes), had significantly higher SDET scores (median 5 vs. 2; mean 4.02 vs. 3.26; $P < 0.001$) and a tendency toward a higher proportion of substance users (29% vs. 20%) than those with lower Grindr™ utilization.

Conclusion. This study introduces Grindr™ on-screen activity as an objective measure that can help identify MSM at high risk for HIV.