(MPD) datasets and engaging them through targeted intervention, such as peer-comparison audit and feedback, is a way to impact antibiotic prescribing. Methods: We analyzed the 2022 publicly available Centers for Medicare & Medicaid Services MPD Prescribers by Provider dataset to summarize the data overall and identify HVPs within each specialty. HVPs were classified as prescribers in the top 10% of antibiotic prescribing by volume within their specialty. Prescribers with 1,316 Minnesota prescribers in 2022 were considered HVPs (top 10% by volume by specialty). After removing certain specialties and those with low prescribing rates, 995 HVPs met criteria and were mailed feedback letters, with 4.32% (43 letters) lost to follow-up. These HVPs were responsible for 28.7% of antibiotic prescriptions for Minnesota's MPD beneficiaries in 2022. The median antibiotic prescribing rate of these HVPs was 1.8 times higher than that of lowervolume prescribers (Table 1) (p To date, 18 letter recipients responded to the feedback survey, with 22.2% intending to review their current prescribing habits, 22.2% reflecting that there is room for improvement in their prescribing, and 55.6% have accessed or intend to access AS resources. Conclusion: This audit and feedback initiative demonstrated that the MPD dataset can be used as a low-cost method to provide peer-comparison feedback to HVPs. By reaching providers responsible for nearly 30% of antibiotic prescriptions among MPD beneficiaries in Minnesota, this intervention has potential to influence prescribing behaviors. Further work will evaluate feedback and focus on specific provider specialties and drug classes.

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Table 1. Summary of antibiotic prescribing for Minnesota Medicare Part D beneficiaries in 2022, including all, high, and low-volume prescribers.

Antibiotic Prescribing for Minnesota Medicare Beneficiaries	All Prescribers	High-Volume Prescribers	Low-Volume Prescribers
Number of prescribers	13,164	995	12,169
Number of prescriptions (% of total volume)	825,067	218,406 (26.5%)	606,661 (73.5%)
Number of prescriptions per prescriber, median (IQR)	41 (22–79)	191 (160-243)	38 (21-67)
Prescribing rate (scripts/1,000 beneficiaries), median (IQR)*	383 (212-641)	651 (490-924)	360 (202-607)

High-volume prescribers are defined as the highest 10% of prescribers by volume within each specialty, as well as a prescribing rate in the upper 50th percentile in their specialty
"The prescribing rate of high-volume prescribers is significantly higher than the rate of low-volume prescribers (p<0.001).

Table 2. Specialties of high-volume prescribers.

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Specialty	All Prescribers, Count (%) (n=13,164)	High-Volume Prescribers, Count (%) (n=995)	% of Specialty in High- Volume Category	Prescribing Rate for HVPs, Median (IQR)	
Family Medicine	2,327 (17.7%)	227 (22.8%)	9.8%	439 (344-584)	
Nurse Practitioner	2,172 (16.5%)	183 (18.3%)	8.4%	654 (540-761)	
Physician Assistant	1,882 (14.3%)	168 (16.9%)	8.9%	687 (602-793)	
Dental	1,897 (14.4%)	144 (14.5%)	7.6%	1,307 (1,182-1,471)	
Internal Medicine	1,386 (10.5%)	84 (8.4%)	6.1%	427 (357-687)	
Emergency Medicine	918 (7.0%)	69 (6.9%)	7.5%	591 (531-657)	
Orthopedic Surgery	267 (2.0%)	26 (2.6%)	9.7%	1,107 (912-1,237)	
Dermatology	208 (1.6%)	20 (2.0%)	9.6%	403 (322-617)	
Urology	190 (1.4%)	14 (1.4%)	7.4%	951 (700-1285)	
Other*	1,917 (14.6%)	60 (6.0%)	3.1%	742 (585-1,169)	

<sup>\*</sup> The Other category includes all other specialties available in the Medicare Part D dataset. Infectious disease, oral and maxillofacial surgery, and pulmonary disease were excluded due to the nature of these specialties.

## **Presentation Type:**

Poster Presentation

Subject Category: Antibiotic Stewardship

Use of Statewide All-Payers' Claims Data to Create Outpatient Antibiotic Use Dashboards: A Public Health Stewardship Initiative Kelly Biermann<sup>1</sup>, Beth Ellinger<sup>2</sup>, Dana Richardson<sup>3</sup>, Mariah Welke<sup>2</sup> and Lindsay Taylor<sup>1,2</sup>

<sup>1</sup>University of Wisconsin; <sup>2</sup>Wisconsin Department of Health Services and <sup>3</sup>The Wisconsin Health Information Organization

Background: The Centers for Disease Control and Prevention (CDC) Core Elements of Antibiotic Stewardship for Health Departments includes tracking and reporting of antibiotic use (AU). To support outpatient AU tracking and reporting, the Wisconsin Department of Health Services (DHS) leveraged all-payers' claims data to create health care organization-specific outpatient AU dashboards with benchmarked measures. Methods: DHS contracted with the Wisconsin Health Information Organization's to access their database to review all payers' claims data from 2018-2023, which included medical encounter and pharmaceutical claims. Visits were included if they occurred at a clinic (in-person or virtual), urgent care, or emergency department in Wisconsin. Antibiotic visits were defined as an outpatient visit associated with a filled oral, systemic antibiotic prescription ordered up to three days after the encounter. Antibiotic visits were normalized by all outpatient visits as a rate per 1,000 visits. A quality measure of antibiotic visits for respiratory tract infection (RTI) was developed using the CDC's tier 3 ICD-10 codes representing cough, upper RTI, or bronchitis without co-occurring ICD-10 code for other infection. Antibiotic visit rates were then summarized at the health care organization level, with additional stratification by place of service, diagnosis, patient age, and provider type. Results: From 2018-2023, there were over 59 million outpatient visits in Wisconsin by over 20,000 different

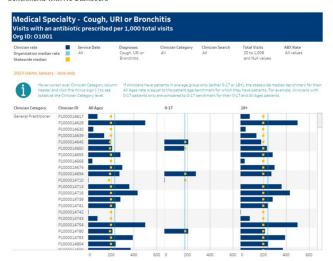
Table 1. Antibiotic visit rates for all diagnoses

Year	Antibiotic Visit Rate	Antibiotic Visits	Total Visits	Clinicians
2018	87	868,720	9,975,307	15,078
2019	76	816,151	10,676,229	15,779
2020	68	557,672	8,194,137	16,084
2021	58	722,971	12,373,880	16,691
2022	64	763,455	11,934,243	17,010
2023	73	471,688	6,434,920	15,527
Total	70	4,200,657	59,588,716	20,666
Clinician categories				
General practitioner	56	1,122,663	20,213,019	4,589
NP or PA	131	1,726,198	13,220,241	6,801
Pediatrics	82	360,088	4,365,534	839
Emergency medicine	128	414,080	3,247,095	978
Specialty medicine	15	144,233	9,516,613	3,661
Surgical specialty	43	297,574	6,990,149	2,738
Trainee	67	135,821	2,036,065	1,060
Total	70	4,200,657	59,588,716	20,666
Place of service				
Emergency department	146	807,809	5,522,662	15,615
Office/clinic	59	3,132,729	52,982,212	20,635
Urgent care	240	260,119	1,083,842	6,895
Total	70	4,200,657	59,588,716	20,666

Table 2. Antibiotic visit rates for visits with the diagnoses of cough, URI, and bronchitis

Year	Antibiotic Visit Rate	Antibiotic Visits	<b>Total Visits</b>	Clinicians
2018	274	99,522	362,734	8,918
2019	242	91,864	379,885	9,175
2020	173	46,899	270,388	8,932
2021	146	43,449	296,844	8,629
2022	141	32,451	229,429	7,170
2023	167	17,524	105,043	6,204
Total	202	331,709	1,644,323	13,350
Clinician categories				
General Practitioner	194	94,211	485,895	4,059
NP or PA	229	144,016	628,458	4,222
Pediatrics	185	47,353	256,074	798
Emergency Medicine	187	29,303	156,959	961
Specialty Medicine	80	4,019	50,229	1,706
Surgical Specialty	328	5,564	16,978	921
Trainee	146	7,243	49,730	683
Total	202	331,709	1,644,323	13,350
Place of Service				
Emergency Department	194	51,540	265,088	6,396
Office/Clinic	203	251,549	1,239,315	12,637
Urgent Care	205	28,620	139,920	3,339
Total	202	331,709	1,644,323	13,350

Figure 1. Prescriber-level antibiotic prescribing rate for RTI compared to statewide and organizational benchmarks with AU Dashboard



clinicians from 57 organizations. Statewide benchmarks were developed for all diagnoses and RTI antibiotic visit rates (Tables 1 and 2). Visits by surgeons and advanced practitioners had the highest rates of antibiotic prescribing for tier 3 RTIs; rates were similar across places of service. Rates per individual prescriber were visually compared to the statewide and organization benchmarks within dashboards (Figure 1). **Conclusion:** All-payers' claims data provides a statewide data source to develop antibiotic visit rates, including a quality measure for visits associated with RTI. Overlying statewide and organizational medians provides a benchmark to identify outliers for further stewardship interventions. Piloting these dashboards will help improve access to AU data.

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## Presentation Type:

Poster Presentation

Subject Category: Antibiotic Stewardship

Lower Clinician Confidence is Associated with Longer Intended Treatment Duration for Outpatient Men with Urinary Tract Infections Tyler Brehm<sup>1</sup>, Larissa Grigoryan<sup>2</sup>, Laura Dillon<sup>3</sup>, Trenton Haltom<sup>4</sup> and Barbara Trautner<sup>5</sup>

 $^1\mathrm{Baylor}$  College of Medicine;  $^2\mathrm{Baylor}$  College of Medicine;  $^3\mathrm{MEDVAMC};$   $^4\mathrm{Baylor}$  College of Medicine and  $^5\mathrm{Baylor}$  College of Medicine

Background: There is limited evidence to guide the diagnosis and treatment of urinary tract infections (UTIs) in men. We hypothesized that lower clinician confidence in ability to correctly diagnose or treat UTIs in men would be associated with increased antibiotic treatment duration. Methods: We surveyed clinicians' knowledge and confidence in diagnosing and treating UTIs in outpatient men as well as their intention to prescribe a specific duration of antibiotics. We distributed the survey to outpatient primary care and emergency medicine providers, urologists, and internal medicine residents. We collected demographics on professional role (physician-attending, physician-trainee, advanced practice professionals [APPs]), specialty, and years in practice. Surveys were distributed on paper and electronically. Analysis involved t-test and ANOVA for continuous variables and Chi-squared for categorical variables as appropriate. Multiple logistic regression analyses were performed using the outcome variable of antibiotic treatment duration, categorized as appropriate (5-7 days) or inappropriate (> 7 days). Results: 186 of 363 distributed surveys were completed (51% response rate). Fifteen surveys were excluded due to the respondent specialty (e.g., dermatology, neurology, etc.), leaving 171 surveys for analysis. Of these, 60% were from trainees, 26% attendings, and 14% APPs (Figure 1). Most physicians (Figure 2) were internal medicine trained (81%), with a smaller proportion of family medicine (8%), urology (6%), and emergency medicine (5%). 14% of respondents reported an intention to treat UTIs in men for longer than 7

Figure 1. Professional Roles of Survey Respondents (N=171)

Trainee Physician

Attending Physician

Advanced Practice Professional

Figure 2. Specialty of Physician Survey Respondents (*N*=171)

Internal Medicine
Family Medicine
Urology
Emergency Medicine
Other
Not Applicable