cases of UTIs were evaluated pre-guideline implementation among 621 (63.5%) females with 490 (50.1%) Black patients. A total of 1420 cases of UTIs were evaluated post-guideline implementation among 843 (59.4%) females with 693 (48.8%) Black patients. With inpatient UTI DOT, following implementation there was an increase by 31.5 DOT/month with a sustained increase by 6.25 DOT/month with no statistically significant change. Total UTI DOT (including outpatient) showed a sustained decrease by 21.1 DOT/month with no overall statistical significance. With inpatient UTI guideline concordance, following implementation there was an increase by 2.5% per month with a sustained increase by 0.7% per month with no statistically significant change. Total UTI guideline concordance (including outpatient) showed a sustained increase by 1.4% per month with no overall statistical significance. **Conclusion:** Guideline implementation for UTI treatment did not lead to statically significant change in DOT or guideline concordant prescribing at EUH.

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Presentation Type:
Poster Presentation
Subject Category: Antibiotic Stewardship
A validation study on a standardized assessment algorithm for antimicrobial prescribing appropriateness

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Background: Since 2013, the Australian Hospital National Antimicrobial Prescribing Survey (Hospital NAPS) has provided a standardized framework for hospitals to assess the quality of antimicrobial prescribing. As part of the program's continuous quality improvement, a revised appropriateness algorithm was developed and is scheduled for implementation in 2025. This study aims to validate this algorithm by evaluating accuracy and inter-rater reliability (IRR) in assessing guideline concordance and appropriateness. **Methods:** A prototype of the revised assessment algorithm was developed using Qualtrics®, including an assessment of antimicrobial-level guideline concordance, appropriateness and reasons for non-optimal prescribing, as well as overall indication-level guideline concordance and appropriateness. An eLearning module was developed to ensure consistency of training for assessors. Fourteen clinical vignettes (ten general and four specialist) across a range of real-world clinical scenarios and with varying levels of complexity were developed. Gold standard assessments were determined by an independent group of infectious diseases (ID) and antimicrobial stewardship (AMS) clinicians. Existing Hospital NAPS users were invited to participate. General vignettes were split into two equal groups and assigned to assessors in an alternating manner. Those with expertise in haematology/oncology or paediatrics were assigned additional specialist vignettes. Results were analyzed for accuracy against the gold standard, and for IRR using Fleiss' Kappa coefficient. **Results:** A total of 102 assessors, across a range of professions, remoteness areas and years of auditing experience, completed their assigned vignettes. Assessors correctly identified the antimicrobial regimen for auditing in 91.9% of assessments, with incorrectly identified assessments excluded. A total of 681 antimicrobial-level and 534 indication-level assessments were analyzed. Figure 1 summarizes the accuracy and IRR for the main outcome measures of guideline concordance and appropriateness. Accuracy and IRR were higher for appropriateness compared with guideline concordance, and at the overall indication-level compared with the antimicrobial-level. Auditors correctly identified all gold-standard reasons for non-optimal prescribing in 68.3% of assessments. Across all measures, accuracy and IRR was higher amongst assessors with specialist ID/AMS experience compared to those without, from metropolitan compared with regional settings, and amongst those with 4 or more years of auditing experience. Pharmacists without ID/AMS expertise scored as highly as doctors and pharmacists with ID/AMS expertise. **Conclusion:** The revised Hospital NAPS algorithm provides a valid measure of guideline concordance and appropriateness. Higher accuracy and IRR were observed for appropriateness compared with guideline concordance, highlighting the importance of appropriateness as a measure for stewardship surveillance in reflecting quality of patient care.

Figure 1: Summary of accuracy and inter-rater reliability for antimicrobial-level and indication-level guideline concordance and appropriateness.

Outcome measure	Accuracy % (95% CI)	Inter-rater reliability	
		Fleiss' Kappa	Interpretation
Antimicrobial-level assessment			
Guideline concordance	81.3 (78.3, 84.3)	0.47	Moderate
Appropriateness	83.4 (80.5, 86.2)	0.54	Moderate
Overall indication-level assessment			
Overall guideline concordance	83.3 (79.6, 86.8)	0.46	Moderate
Overall appropriateness	88.4 (85.6, 91.1)	0.59	Moderate

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Poster Presentation
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Assessment of a Prescription Feedback Intervention on Diagnosis, Management, and Safety Outcomes of Acute Bacterial Sinusitis

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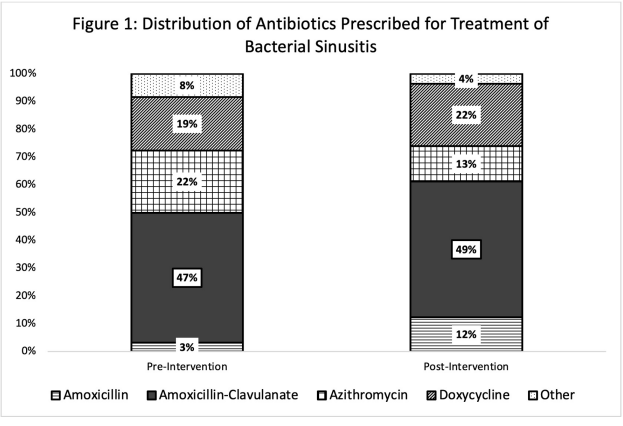
Introduction: Although most rhinosinusitis cases are viral, misdiagnosis of an underlying bacterial cause is common, leading to excessive antibiotic utilization. Interventions to improve diagnosis and prescribing for sinusitis may reduce antimicrobial resistance and improve patient outcomes. **Methods:** Antibiotic prescriptions by 237 URMC Primary Care Network(PCN) clinicians between 9/1–11/31/2022 (baseline n=23,048) and 12/1/2023–2/29/2024 (post-intervention n=18,885) were extracted as part of a network-wide education and prescription feedback intervention focusing on antibiotic utilization rates, and guideline-concordant prescribing for sinusitis defined from local antibiograms and national guidelines. Random subsets of pre- and post-intervention prescriptions



(250 each period for 90% power, Type I alpha=0.05) were systematically reviewed by two medical student or resident reviewers, with adjudication of discrepancies by infectious diseases-trained clinicians for 1) appropriate diagnosis of bacterial infection, 2) antibiotic selection, and 3) treatment duration. Charts were also reviewed for treatment failure requiring course extension, urgent care or emergency department utilization, hospital admission, and antibiotic-related toxicity during therapy or within 30 days of conclusion. Statistical analysis was performed in GraphPad and Excel ver. 2408. **Results:** Correct use of diagnostic criteria increased from 52.8% to 63.6% (p<0.01) post-intervention, a 10.8% absolute and 20.4% relative increase in appropriate diagnosis of bacterial sinusitis. Although rates of guideline-concordant treatment duration remained similar (74% vs. 74.4%, p=0.92), appropriate antibiotic selection increased from 71.6% to 85.6% (p< 0.01) (Fig. 1), and complete concordance of both spectrum and duration increased from 49.6% to 60.8% (p=0.012). Rates of antibiotic-associated adverse events requiring treatment discontinuation were similar pre- and post-intervention (Table 1). There were no Clostridium difficile infections. Health care contact beyond the prescribing office increased post-intervention (p < 0.01) (Table 1) but this was unrelated to sinusitis or antibiotic treatment complications (Fig. 2). Conclusions: A large-scale network intervention significantly improved use of diagnostic criteria and appropriate treatment of acute bacterial sinusitis without negatively impacting the incidence of treatment- or infection-related complications.

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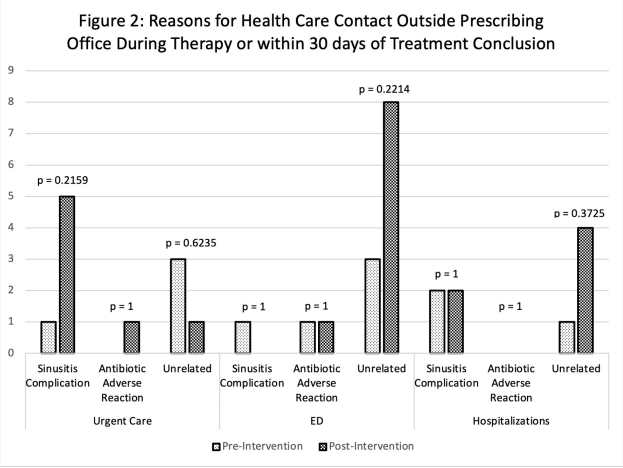

Table 1: Comparison of Sinusitis Antibiotic Therapy Complications Pre- and Post-Intervention

Complications of antibiotic therapy	Pre-Intervention (n,%)	Post-intervention (n,%)	P-value
Health Care Contact Outside Prescribing Office*	**12(4.8%)**	**22(8.8%)**	**0.0031**
Urgent Care	4(1.6%)	7(2.8%)	0.5443
Emergency Department	5(2%)	9(3.6%)	0.4172
Hospital Admissions	3(1.2%)	6(2.4%)	0.5038
Reason for Visit/Admission			
Sinusitis complication	4(1.6%)	6(2.4%)	0.75
Adverse Antibiotic Reaction	1(0.4%)	2(0.08%)	1
Unrelated to treatment	7(2.8%)	13(5.2%)	0.0201
Adverse Reaction Requiring Early Antibiotic Discontinuation	**5(2%)**	**8(3.2%)**	**0.1753**
GI Upset	3(1.2%)	4(1.6%)	1
Skin Reaction	1(0.4%)	1(0.4%)	1
Hospitalization	1(0.4%)	0	1
Reason not specified	0	2(0.08%)	0.4990
Yeast Infection	0	1(0.4%)	1

*during therapy or within 30 days of treatment conclusion

Presentation Type:
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Subject Category: Antibiotic Stewardship

Antimicrobial Stewardship in Hospital Outpatient Clinics: A Qualitative Study of Alignment with Existing Guidance

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Background: It is estimated that 28% of all oral antibiotics prescribed in outpatient care in the United States are inappropriate.1 Most hospitals have established antimicrobial stewardship programs (ASPs) that focus on inpatient antimicrobial stewardship2,3 however, less is known about the engagement of hospital ASPs in outpatient clinics. The goal of this project was to explore the extent to which ASP activities in hospital affiliated clinics align with current guidance for outpatient antibiotic stewardship and challenges to applying hospital based interventions in outpatient settings. **Methods:** The study population comprised 288 hospitals that participated in two previous antimicrobial stewardship studies4. Hospitals needed to have an active outpatient ASP to be included. We conducted in-depth telephone interviews with ASP leaders from 28 diverse hospitals. We used MAXQDA 20225 for data analysis and the framework method6 to organize and analyze interview transcripts based on 4 CDC Core Elements for Outpatient Stewardship.7 **Results:** The sample included 11 large, 9 medium, 8 small hospitals with various outpatient settings (Figure 1). Commitment. Few hospital ASPs had a dedicated outpatient stewardship leader. Around half the hospitals included outpatient sub-committees or representatives on the ASP committee. Only one hospital had a formal stewardship lead at the clinics while others relied on local contacts and EHR system-based interventions. Tracking and reporting. Most hospitals in the sample reviewed outpatient specific data, though many had no data analyst or IT resources for outpatient data. Action. Hospitals in our sample differed widely regarding development of decision-support tools. Only some developed guidelines tailored to outpatient settings, a few of them distributed via CDSS requiring indications for prescriptions, whereas others simply made inpatient guidelines available to clinicians. Education. Only some hospital ASPs developed content tailored for outpatient. Key challenges for expansion of stewardship into outpatient settings included lack of funding, and dedicated staff; lack of clarity