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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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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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