

Antibiotic Stewardship to Improve Antibiotic Prescribing for Acute Respiratory Tract Infections

in Primary Care

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Abstract

Background and purpose: Overprescribing antibiotics for patients with acute respiratory tract infections (ARTIs) is a significant concern in primary care settings. Addressing this issue, providers should practice antibiotic stewardship for safe antibiotic prescribing and improving patient outcomes. A 12-week quality improvement (QI) project implemented an evidence-based antibiotic stewardship education program designed to enhance provider knowledge and reduce unnecessary antibiotic prescriptions for viral ARTIs in a primary care setting.

Methods: This QI project employed a pre and post-test design. The convenience sample included two physicians and four nurse practitioners at an urban primary care clinic involved in ARTI care during the 12-week implementation. The intervention comprised provider education and toolkit, including EBP guidelines for ARTI patients. After 12 weeks, provider knowledge was assessed using a modified KAP survey, while antibiotic prescription rates for viral ARTIs were measured via electronic health records (EHR) review. The feasibility of the antibiotic stewardship program was also evaluated.

Results: Analysis showed a statistically significant increase in provider knowledge ($p = .039$). The antibiotic prescriptions for viral ARTIs decreased by 4.5% ($p = .5$). When the provider's prescribing preference was assessed, there was a 43% reduction in unnecessary prescriptions ($OR = 0.57$, 95% CI [0.15–2.12], $p = .4$). Over 60% of participants completely agreed that the program was feasible at the site.

Conclusions: This project confirms previous research on the efficacy of a multifaceted antibiotic stewardship educational intervention on primary care providers. The results were found to be effective and highly feasible, further highlighting its potential for widespread implementation.

Implications: This project suggests establishing antibiotic stewardship as a standard care practice for ARTI patients in primary care settings. Future replication and evaluation of antibiotic stewardship education programs for primary care providers could expand this project to further promote appropriate antibiotic prescribing and use.

Keywords: ARTIs, antibiotic prescription, antibiotic stewardship, provider education, primary care