Healthcare Provider Adherence to Antibiotic Stewardship in the Pediatric Primary Care Setting

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Intro & Background

Viral Illnesses create millions of office visits for children per year resulting in over 10 million unnecessary antibiotic prescriptions. Acute disease processes including sore throats, upper respiratory infections (URIs), and sinusitis rank among the top ten most common childhood illnesses.

Purpose & Aims

This quality improvement project's purpose was to evaluate antibiotic stewardship practices when treating acute pharyngitis, sinusitis, and upper respiratory infections.

The project aims were to:

- Increase provider knowledge
- Decrease inappropriate antibiotics
- Adopt guidelines

Intervention

Integration of evidence-based practice guidelines from the American Academy of Pediatrics (AAP) when treating patients with acute pharyngitis, sinusitis, or upper respiratory tract infections.

Methods

Design: One-group, pre/posttest intervention design set in pediatric primary care outpatient clinics.

Samples: 3 Pediatricians, 508 chart audits in total- 132 pre & 376 post intervention

Measures: 3 total measures

- 9-question pre-and post-test to evaluate provider knowledge
- Total number of antibiotics and appropriateness
- 9-question Likert-scale for provider satisfaction.

Analysis: Descriptive stats, Fisher's Exact

Aim 1 results

Aim 1. Clinicians showed an increase in treatment knowledge for the diagnoses of focus following guideline implementation. A Wilcoxon signed-rank test was used to perform this non-parametric statistical test

See Table 1 below

Table 1. Treatment Knowledge Results

Treatment knowledge	Pre Test	Post Test	% Change
Mean	48.1	59.3	+ 11.2%
Median	44.4	55.5	+ 11.1%

Aim 2 & 3 Results

Aim 2. There was a decrease in the percentage of overall inappropriate antibiotics prescribed post guideline implementation.

See Table 2.

Table 2. Antibiotic Treatments

Time	# of Patients	Rx	Inappropriate Rx	% Rx
Pre	132	11	3	27%
Post	376	19	2	10.5%

Aim 3. All 3 physicians provided responses indicating high satisfaction with implementing and adopting guidelines into practice.

Conclusion & Discussion

- **Conclusion:**

The integration and adoption of evidence-based guidelines into daily practice will help to reduce inappropriate antibiotic prescribing habits and promote optimal patient outcomes.

- **Discussion:**

Given the rise of antibiotic resistance, it is imperative that clinicians promote the use of up-to-date guidelines in daily practice to ensure high quality patient care is delivered as healthcare continues to evolve.