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### A NSQIP Analysis of Post-operative Antibiotic Utilization in Uncomplicated Appendicitis

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# **A NSQIP Analysis of Post-operative Antibiotic Utilization in Uncomplicated Appendicitis**

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**IRB Number:** Not required, Database research

**Describe role of Submitting/Presenting Trainee in this project (limit 150 words):**  
Pediatric Surgical Scholar (research fellow in department of surgery) and primary author

## **Background, Objectives/Goal, Methods/Design, Results, Conclusions limited to 500 words**

### **Background:**

In 2010, APSA published recommendations supporting the use of pre-operative antibiotics in patients with non-perforated appendicitis. However, no evidence was found to support antibiotic use in the post-operative period. Compliance with these recommendations varies greatly. Post-operative antibiotic use in these patients can increase length of stay, cost, and resistance to antibiotics.

### **Objectives/Goal:**

We sought to determine the rate of post-operative antibiotic utilization in uncomplicated appendicitis following publication of the APSA recommendations.

### **Methods/Design:**

Targeted appendectomy procedure files from NSQIP (2015-2016) were merged with corresponding base NSQIP files and queried for children with uncomplicated appendicitis. Descriptive statistics were calculated for all demographic and appendectomy variables. Further analysis was conducted on the population that received antibiotics following discharge. Statistical analysis was completed in STATA v15.

### **Results:**

We identified 4,637 patients treated for non-perforated appendicitis. 62% were male, median age was 11.5 years [IQR 9, 14], and total length of stay (LOS) was 1 day [IQR 1, 2]. 426 patients (9.2%) were prescribed oral antibiotics upon discharge. Of those, total LOS was 2 days [IQR 1, 3]

compared to 1 day [IQR 1, 1] for those discharged without antibiotics ( $p < 0.001$ ). Median preoperative length of stay was 0 days in both groups ([IQR 0,1]  $p = 0.53$ ) while median postoperative length of stay was 2 days [IQR 1, 3] for those discharged on oral antibiotics compared to 1 day [IQR 1,1] for those discharged without antibiotics ( $p < 0.001$ ). This translates to a minimum of two additional days of antibiotics use in this subset of patients.

**Conclusions:**

Discharge antibiotics are given in almost 10% of patients with uncomplicated appendicitis despite lack of evidence supporting this practice. Continued efforts to standardize practice in this patient population are needed.