554 IMPROVING CARE FOR PEDIATRIC URINARY TRACT INFECTION: RELATIONSHIP BETWEEN IMPLEMENTATION OF A CLINICAL PATHWAY AND PRESCRIBING PATTERNS IN THE ED

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Background Urinary tract infections (UTIs) are the most common serious bacterial infection in children; nearly 10% of

Figure 1 Percent of UTI Patients Receiving Narrow-Spectrum Antibiotic (cephalexin).
girls and 2% of boys are affected during their first 8 years of life. Broad-spectrum antibiotics are popular first-line treatment agents; however, these medications can lead to resistant organisms and more severe infections over time. In July 2010, our institution implemented a clinical pathway for children presenting to the ED with UTI based on national guidelines and local consensus regarding the need for antimicrobial stewardship. A goal of the pathway was to increase narrow spectrum (cephalexin) and decrease broad spectrum (cefixime) antibiotic use for children with uncomplicated UTI presenting to the ED.

**Objectives**

To determine the impact of a UTI clinical pathway on provider antibiotic prescribing patterns.

**Methods**

We used statistical process control (p-charts) to analyze the percentage of patients receiving each antibiotic over time. Data were analyzed over a 6-year period; 1.5 years before and 4.5 years after pathway implementation.

**Results**

2292 patients were included. The percentage of patients receiving targeted narrow spectrum antibiotics increased from an average of 19% to 73% (figure 1). There was a concomitant decrease in the percentage of patients receiving broad-spectrum antibiotics (cefixime) from 46% to 3% (figure 2). Special cause variation was noted twice during the study period; immediately following pathway implementation and again 6 months later when the pathway was revised to increase provider education regarding appropriate antibiotic use.

**Conclusions**

Implementation of clinical pathways for UTI can result in sustained improvements in antimicrobial stewardship among children seen in ED settings.