A Quality Improvement Initiative to Decrease Unnecessary Streptococcal Antigen Testing in an Urban Pediatric Emergency Department

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Background
- Acute pharyngitis is a common complaint in the pediatric emergency department (ED)
- Group A beta-hemolytic streptococcus (GAS) accounts for 15-30% of childhood pharyngitis
- Previous investigation revealed that 64% of streptococcal testing performed in our ED during peak season was not clinically indicated

Objective
- To optimize diagnostic and treatment decisions in children with pharyngitis in the ED using quality improvement (QI) methods

Methods
- The first plan-do-study-act (PDSA) cycle included a multi-tiered educational approach (daily huddles, lecture, and closed circuit television)
- Physicians, nurses, and NP’s were included
- Intervention targeted the recent testing guidelines from IDSA and the current hospital testing protocol
- Demographics, clinical features, and rapid antigen test (RADT) results were collected from 25 patients weekly from 3/1/14-7/714.
- Adherence to the current protocol was determined by chart review and compared to pre-intervention data.

Results
- A total of 475 charts were evaluated.
- No decrease in unnecessary testing was seen between the pre-intervention and post-intervention time frames (p=0.43).

Conclusions
- The majority of GAS testing in our ED continues to be unnecessary, and 68% of patients received unnecessary antibiotic treatment.
- Educational interventions targeting healthcare providers did not change clinical testing decision-making; protocol adherence occurred in 32%
- The next QI intervention will include implementing a new GAS testing protocol for the ED and ordering restrictions.