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Introduction

- CDC Core Elements of Hospital antimicrobial stewardship (AMS) prioritizes facility-based treatment guidelines for antibiotic choice and duration.
- Participation in a quality improvement activity, Better Antibiotic Selection in Children (BASiC), part of a voluntary national Value in Inpatient Pediatric (VIP) network helped our hospital to revise our adherence to local guidelines for antimicrobial treatment of urinary tract infection (UTI) and community acquired pneumonia (CAP).
- Project Aim:
 - Shorten antibiotic duration of therapy for CAP and UTI to 7 days after adjustments of our multidisciplinary guidelines based on local and national recommendations.

Methods

- **Study Design & Setting:**
 - Retrospective/prospective chart review study
 - Compares baseline and post-intervention duration of antibiotic prescribing for UTI and CAP cases from July 2019-December 2021 based on data collected through the VIP program.
- **Inclusion Criteria:**
 - Patients identified by diagnosis code for CAP or UTI seen in the ED admitted to a single free-standing children's hospital.
 - Each case was randomized for inclusion and manually reviewed to ensure it met the diagnosis clinical definition.
- **Exclusion Criteria:**
 - Cases with underlying chronic medical conditions
- **Time period:**
 - Baseline Data: July 2019- February 2021
 - Implementation Data: March 2021-December 2021
- **Statistic Analysis:** Duration of antibiotics prescribed was compared for each group using Mann-Whitney U testing.

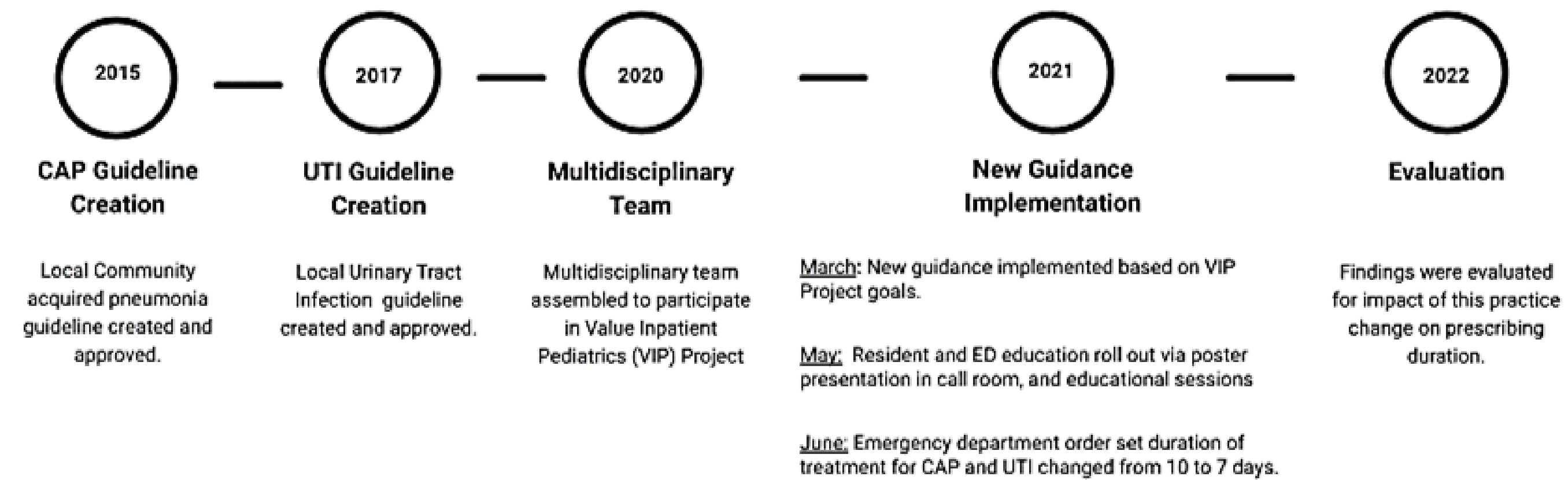


Figure 1. Timeline of guideline implementation and evaluation:

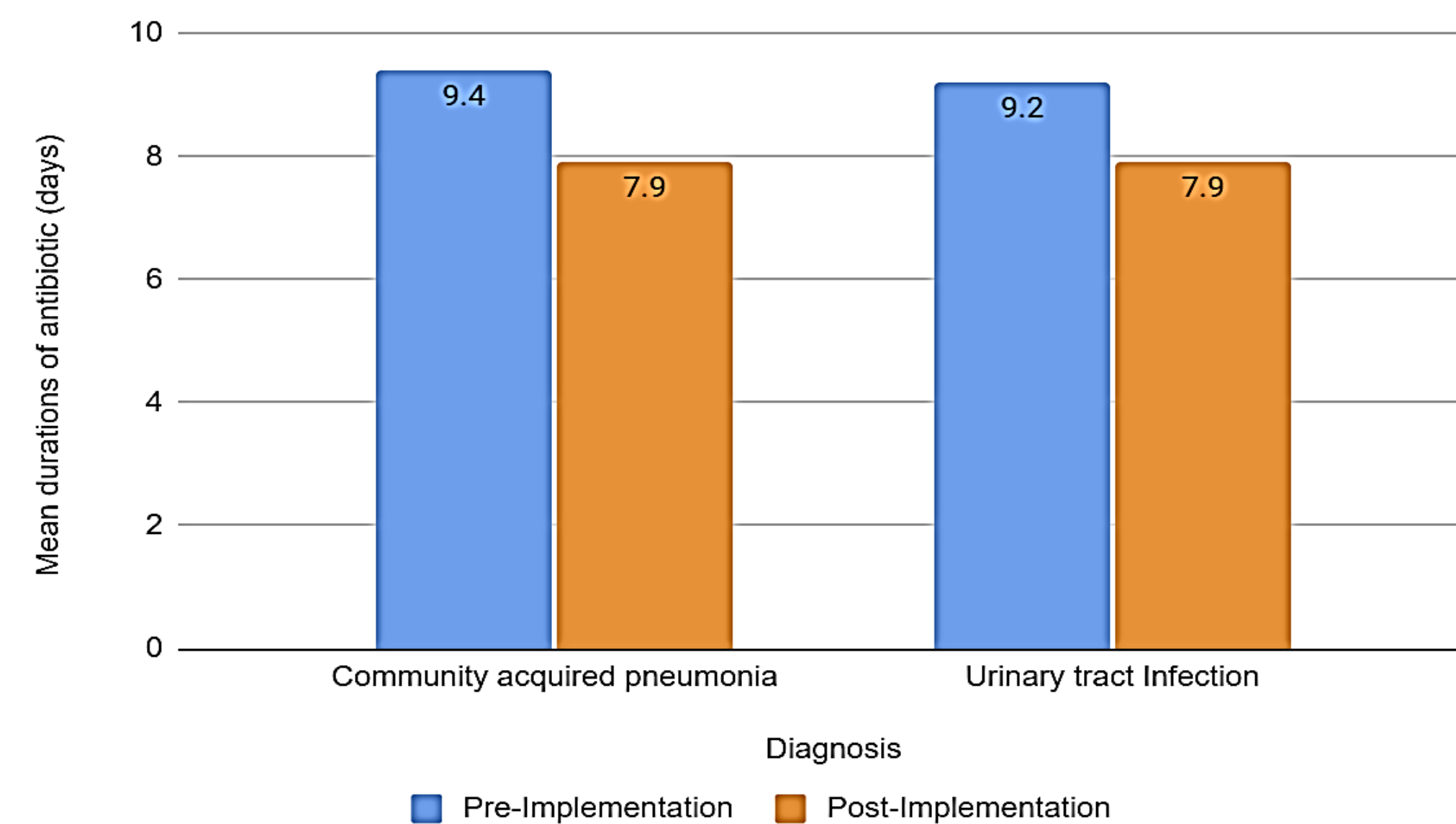


Figure 2. Mean duration of antibiotics pre and post program implementation (p<0.001)

Results

- 351 cases included overall with CAP or UTI
 - CAP Cases (163)
 - 98 pre-guideline (baseline)
 - 65 post-guideline
 - UTI Cases (188)
 - 121 pre-guideline (baseline)
 - 67 post-guideline
- Post Implementation, there was a >1 day decrease in duration of antibiotic therapy (p<0.001).

Conclusions

- Institutional implementation of guidelines is an important step in local AMS.
- Guideline implementation alone is not enough to ensure practice change and going beyond the CDC core elements has become important. In our case, participation in a national project with local multidisciplinary involvement was successful in improving duration of therapy for CAP and UTI not previously achieved by the local guidelines.
- Changes were made to the electronic medical record (EMR) in the ED to ensure sustainability of this change.
- Default preferred length of therapy order presets created in the EMR was likely a significant driver of change.