

# Evaluating Impact of Incorporating Clinical Practice Guidelines for Management of Infectious Diseases into an Electronic Application (App)



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## Background

- In 2017, IWK Health incorporated guidelines for infectious syndromes into an electronic App
- Healthcare providers in Nova Scotia identified the electronic App as a facilitator to improving antimicrobial use

## Study Objectives

- To compare antimicrobial prescribing before and after implementation of the electronic App

## Methods

- Quasi-experimental design
- Retrospective chart review before and after implementation of the App with an interrupted time series analysis
- Pediatric patients who received an empiric antimicrobial agent for a suspected or confirmed infection listed in the App while admitted to hospital were included
- Empiric antimicrobial prescribing was assessed by two members of the research team using a previously developed checklist and considering patient specific factors
- Checklist developed with input from experts using the Delphi Method

## Disclosures and Acknowledgements

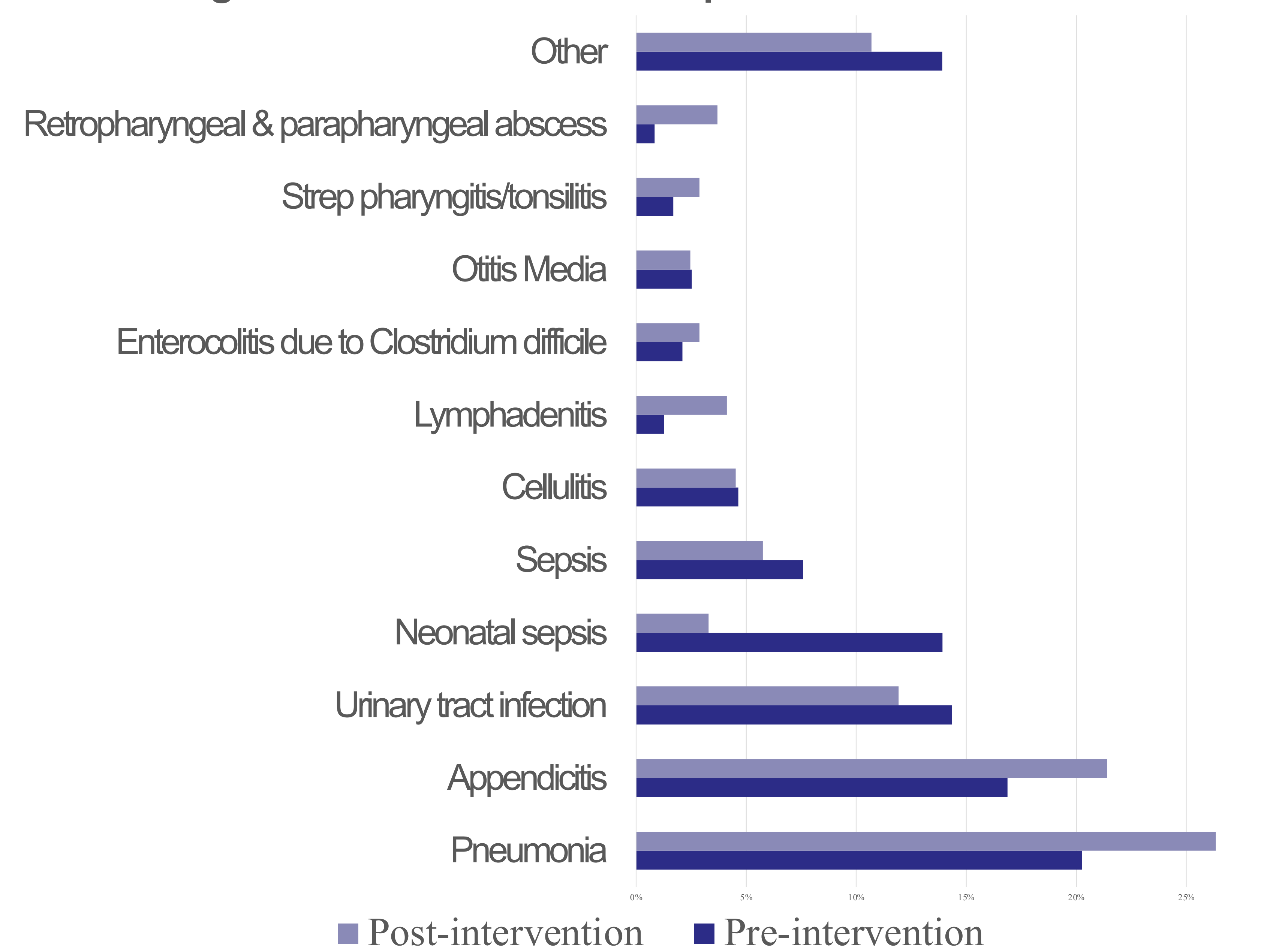
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## Baseline Characteristics

Table 1: Baseline Characteristics

Characteristic	Pre-Intervention (N = 238)	Post-intervention (N = 243)
<b>Age</b>		
< 2 months	22.37%	9.88%
2 months to 3 years	25.74%	24.69%
3 years - 5 years	10.13%	15.23%
6 years to 13 years	34.14%	41.15%
> 13 years	6.75%	7.82%
<b>Sex</b>		
- Female	44.49%	44.86%
- Male	55.51%	55.14%

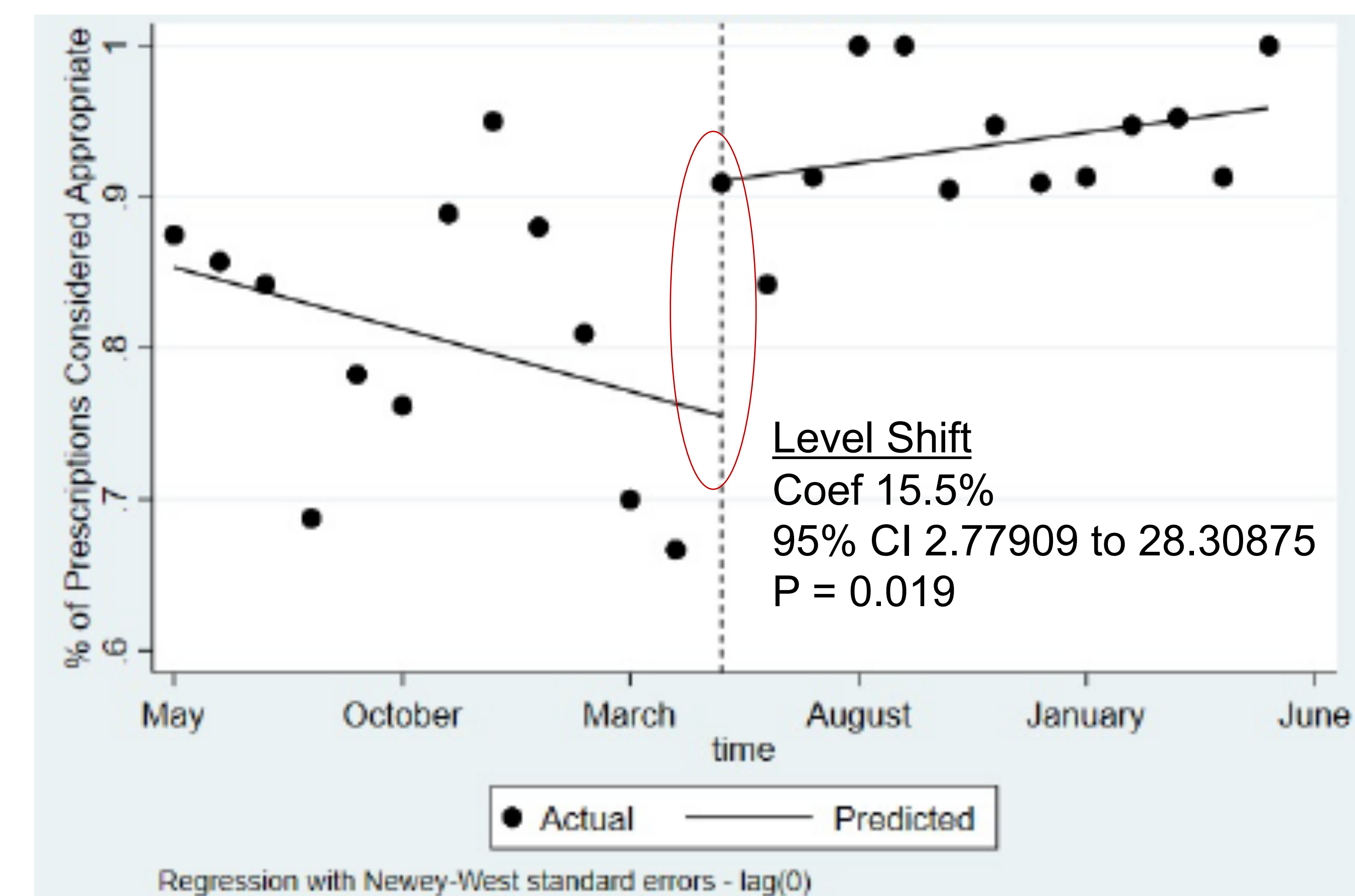
Figure 1: Indications for Empiric Antimicrobial Use



## Results

- 238 patients were included in the pre-intervention arm and 243 patients in the post-intervention arm (Table 1, Figure 1)
- The electronic App showed an immediate 15.6% improvement in antibiotic prescribing (Figure 2)

Figure 2: Impact of the App on Antimicrobial Prescribing



## Limitations

- Generalizability
- Retrospective design
- Differences in patient population

## Conclusion

- Antimicrobial prescribing improved after implementation of an electronic App
- Further research to explore impact of the electronic App on specific infectious syndromes and on patient outcomes is needed

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