BACKGROUND

- Measuring antimicrobial consumption data is a foundation of antimicrobial stewardship programs [1].
- Although relatively easily obtained, consumption data from the hospital or service level do not offer prescribers information about their individual antimicrobial prescribing habits.
- Additionally, although clinicians may prescribe antimicrobials with differing frequency, there may also be variability in the clinical spectrum of antimicrobials prescribed [2].

OBJECTIVES

1) To develop a novel metric (the modified Spectrum Score) to define individual aggregate breadth of antimicrobial prescribing.
2) To develop a scalable, summative feedback tool to graphically describe antimicrobials spectrum as well as total consumption of antimicrobials by individual General Internal Medicine physicians.
3) To provide feedback to clinicians and assess understanding and utility.

METHODS

Study Design: Quasi-experimental quality improvement with qualitative assessment via semi-structured interview.
Setting: 423-bed tertiary care medical centre, Department of Medicine (GIM).
Inclusion Criteria: All GIM physicians with > 500 patient days of service.

RESULTS

Physician-Specific Feedback Tool

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
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<tbody>
<tr>
<td>Do you find this tool understandable to describe usage of antimicrobial prescribing on General Internal Medicine?</td>
<td>Yes: 13/13, No: 0/13</td>
</tr>
<tr>
<td>Do you find this tool understandable to describe the spectrum of antimicrobial prescribing on General Internal Medicine?</td>
<td>Yes: 13/13, No: 0/13</td>
</tr>
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Qualitative Assessment

- Responding Cohort (n=13):
  - How would this tool change your prescribing of antimicrobials?
    - "It wouldn’t right now"
    - "…need more data"
    - "…interesting to see variability"
  - What other information would you like to see to make this tool practice changing?
    - "More data per clinician…greater than a year"
    - "Trending the data over time"
    - "Including case-mix and balancing measures"

- Semi-structured Interview Cohort (n=4):
  - Apparent variability in both consumption and spectrum of antimicrobials prescribed on General Internal Medicine.
  - Clinicians are generally amenable to further feedback with modifications to the tool and time period of assessment.
  - Drivers of variability require further investigation including impact of case mix on overall antimicrobial prescribing metrics.
  - Next steps include addition of balancing measures (length of stay, readmission, mortality), additional metrics to describe antimicrobial usage (antibiotic free days) and development of an interactive physician dashboard.

CONCLUSION

- Apparent variability in both consumption and spectrum of antimicrobials prescribed on General Internal Medicine.
- Clinicians are generally amenable to further feedback with modifications to the tool and time period of assessment.
- Drivers of variability require further investigation including impact of case mix on overall antimicrobial prescribing metrics.
- Next steps include addition of balancing measures (length of stay, readmission, mortality), additional metrics to describe antimicrobial usage (antibiotic free days) and development of an interactive physician dashboard.

REFERENCES


For additional information please contact Mark.McIntyre@uhn.ca.