

A QUALITY IMPROVEMENT PROJECT TO IMPROVE THE PREVALENCE OF APPROPRIATELY PRESCRIBED CHOICE OF ANTIBIOTICS IN AN AMBULATORY ONCOLOGY CENTRE

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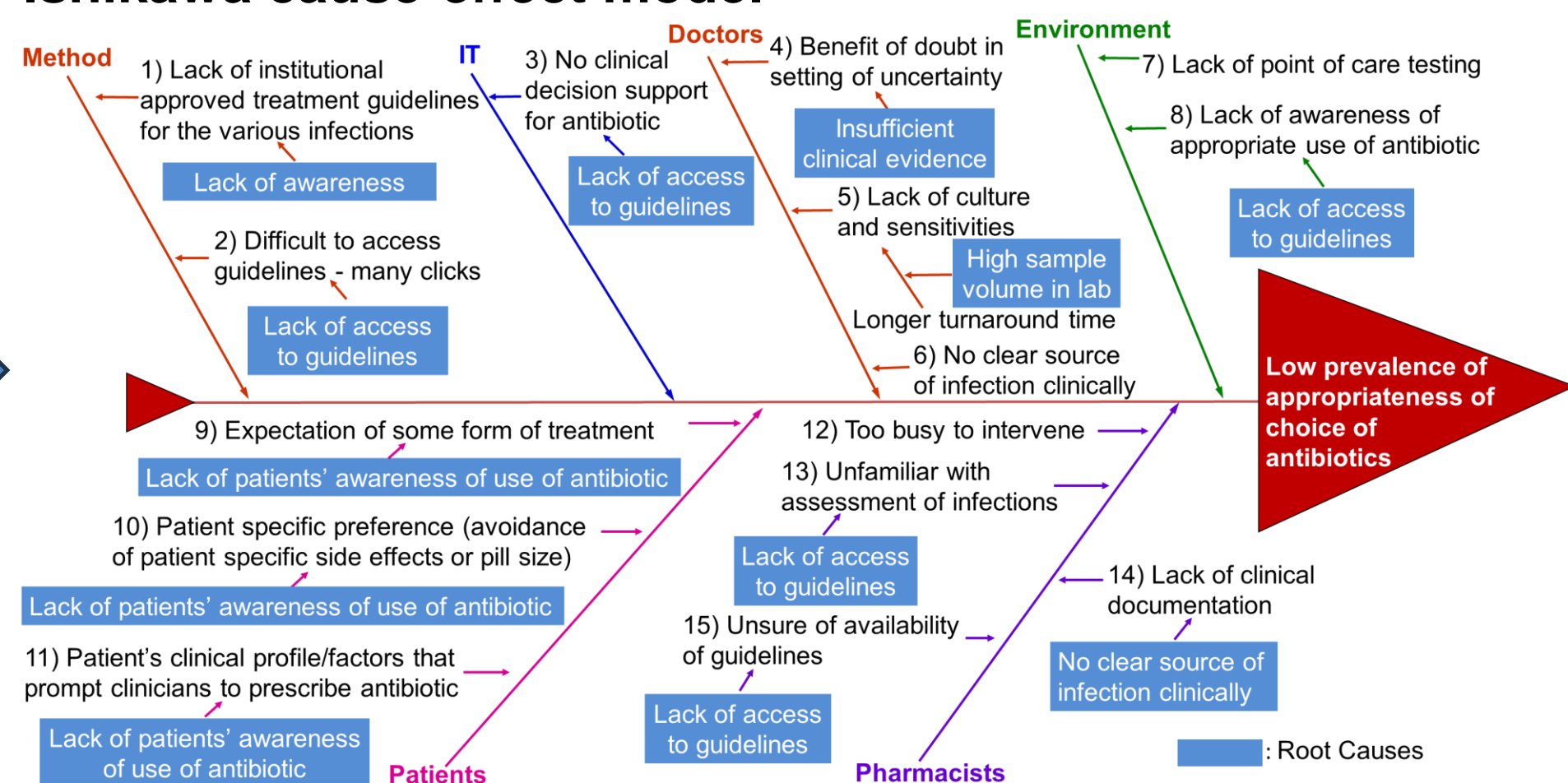
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Introduction

- Antibiotics overprescribing has led to an increase in antimicrobial resistance, limiting the choice of effective first line antibiotics especially in the treatment of infections in cancer patients.
- Nearly 30% of ambulatory oncology patients were reported to have received appropriate broad-spectrum antibiotics¹. In an exploratory study conducted in National Cancer Centre Singapore (NCCS), it was found that only 58.6% of prescribed antibiotics were appropriate².
- Objective:** To conduct a quality improvement project in NCCS to improve the prevalence of appropriately prescribed choice of antibiotics from 58.6% to 65% over one year.

Method

Ishikawa cause-effect model



August 2022
A multidisciplinary team comprising of medical oncologists, pharmacists and QI representatives was formed.



- PDSA cycle 1:** Identified areas of inappropriate antibiotics prescribing to focus on followed by
 - Conducting case based educational sessions for medical oncologists and pharmacists
 - Developing of empiric antibiotic cheat sheet in clinical areas
- All interventions were performed in consultation with the Infectious Diseases Experts

- January 2023:** Antibiotic cheat sheet was introduced in all clinical areas
- February 2023:** Case based educational sessions conducted for medical oncologists and pharmacists

- August 2023 (PDSA cycle 2):** Conducted another case based educational session for radiation oncologists

- Measure (February to August 2023):** Retrospective audit was conducted for appropriateness of all prescribed oral antibiotics for 6 months
- Identified Radiation Oncologists as the second leading group of Drs (after Medical Oncologists) who prescribe the most antibiotics



Results

- Median prevalence of appropriateness of choice of antibiotics (Figure 1): 78.9% (post PDSA 1), 83.9% (post PDSA 2)

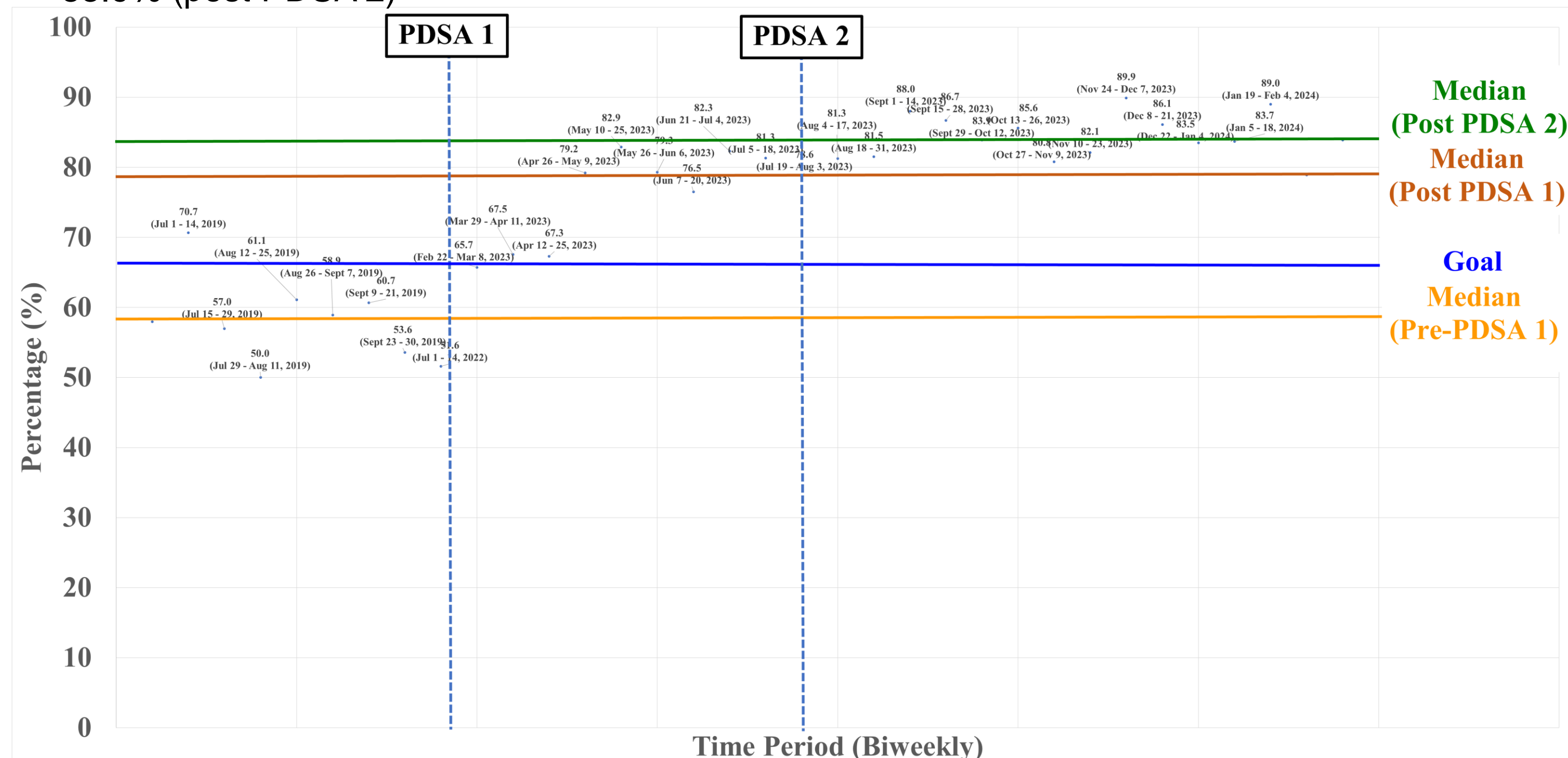


Figure 1: Run Chart on percentage of appropriate choice of prescribed antibiotics

Discussion

- Possible **reasons** for **initial success**: having a multidisciplinary team that focused on the implementation of practical and targeted interventions
- Limitations**: lack of engagement of other disciplines and time needed to effect a change

Conclusion

- The appropriateness of choice of prescribed antibiotics has achieved its initial goal of improving the prevalence of appropriately prescribed choice of antibiotics
- To bring about a sustainable improvement in the prevalence of appropriately prescribed choice of antibiotics, an iterative program is required

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