Implementing Ambulatory Antimicrobial Stewardship

SANFORD FARGO URGENT CARE EXPERIENCE

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Learning Objectives

1. Identify Joint Commission (JC) requirements for ambulatory antimicrobial stewardship (AMS).
2. Demonstrate methods to fulfill JC requirements for ambulatory AMS.
3. Recognize resources available that can help develop and advance ambulatory AMS programs.

Why Ambulatory AMS?

Most antibiotic use is in the outpatient setting

Large proportion of outpatient antibiotics are unnecessary and/or inappropriate

Joint Commission Requirements January 2020

Fleming-Dutra KE, et al. *JAMA*. 2016;315(17):1864
Chandra DL, et al. *Open Forum Infect Dis*. 2022;9(7):ofac302. doi:10.1093/ofid/ofac302

Initial Goals

- Fulfill JC requirements for ambulatory AMS
- Integration into the ID clinic
- Resource for ID clinic and ID consult patients

JC Requirements

#1	• The organization identifies individual(s) responsible for developing, implementing and monitoring activities to promote appropriate antimicrobial medication prescribing practices.
#2	• The organization sets at least one annual antimicrobial stewardship goal.
#3	• The organization uses evidence-based practice guidelines related to its annual antimicrobial stewardship goal(s).
#4	• The organization provides all clinical staff and licensed independent practitioners with educational resources related to its antimicrobial stewardship goal(s) and strategies that promote appropriate antimicrobial medication prescribing practices.
#5	• The organization collects, analyzes, and reports data pertaining to the antimicrobial stewardship goal(s) to organizational leadership and prescribers.

The Joint Commission. https://www.jointcommission.org/

JC Requirement #1

The organization identifies individual(s) responsible for developing, implementing and monitoring activities to promote appropriate antimicrobial medication prescribing practices.

- Dubert Guerrero, MD (physician lead of ASP)
- Maxx Enzmann, PharmD (senior pharmacist)

Initial Collaboration

- Clinic Vice President
- Pharmacy Clinical Manager
- Urgent Care Department Chair

JC Requirement #2

The organization sets at least one annual antimicrobial stewardship goal.

- Decrease inappropriate antibiotic prescriptions for upper respiratory tract infections in urgent care
- Improve “appropriate care rates” (ACRs) for bronchitis, acute upper respiratory tract infection (AURI), and pharyngitis

Urgent care chosen due to highest volume of antibiotic prescriptions in the health system

Bronchitis, AURI, and pharyngitis identified as easiest “targets” (Tier 3 ICD-10 diagnoses)

Intervention

- Quarterly report cards
- Periodic department education

The Joint Commission. https://www.jointcommission.org/
Ilges D, et al. *Open Forum Infect Dis*. 2023;10(12):ofad585.

JC Requirement #3

The organization uses **evidence-based practice guidelines** related to its annual antimicrobial stewardship goal(s).

- AAFP Bronchitis Guidelines
- IDSA Streptococcal Pharyngitis Guidelines
- CDC resources

Adult Outpatient Treatment Recommendations

Print

The table below summarizes the most recent recommendations for appropriate antibiotic prescribing for adults seeking care in an outpatient setting. Antibiotic prescribing guidelines establish standards of care and focus quality improvement efforts.

The table also offers information related to over-the-counter medication for symptomatic therapy. Over-the-counter medications can provide symptom relief, but have not been shown to shorten the duration of illness. They also have a low incidence of minor adverse effects. Providers and patients should weigh the potential for benefits and minor adverse effects when considering symptomatic therapy.

Condition	Epidemiology	Diagnosis	Management

JC Requirement #4

The organization **provides** all clinical staff and licensed independent practitioners with **educational resources** related to its antimicrobial stewardship goal(s) and strategies that promote appropriate antimicrobial medication prescribing practices.

- Initial urgent care department meeting included introductions and AMS fundamentals
- Educational handouts with links to resources distributed to all urgent care providers
- Resources included in report card emails
- One educational session focused specifically on bronchitis

JC Requirement #5

The organization **collects, analyzes, and reports data** pertaining to the antimicrobial stewardship goal(s) to organizational leadership and prescribers.

- Report cards sent to prescribers
- Department data sent to urgent care department chair
- Pre- and post-intervention data shared to ASP subcommittee

Report Cards

Report Build

Epic One Report (from Clarity database)

Gathers respiratory encounters per provider (AURI, pharyngitis, bronchitis)

Calculates ACR = # respiratory encounters WITHOUT antibiotic prescribed / total # respiratory encounters

EXTENSIVE exclusion criteria

- Pharyngitis with positive Group A Strep Test
- Problem list
- 30-day problem list

Calculates ACRs for each diagnosis and composite, department averages, provider type averages (MD, NP, PA), and quintile ranks for department and provider types

Provider Specialty: PA - Family Medicine

Provider Type: Physician Assistant

Measures	Provider rate for Appropriate Care (Ideal = 100%)	Average Rate for Peers (Department)	Average Rate for Peers (Provider Type)	Quintile Rank (Department)	Quintile Rank (Provider Type)	Total Encounters
Acute Bronchitis	NS	55.58%	43.48%	NS	NS	6
Pharyngitis	100.00%	89.78%	83.22%	1	1	17
Acute URI	100.00%	86.18%	71.51%	1	1	30
Composite	92.68%	81.72%	71.15%	2	1	53

Provider Specialty: NP - Family Medicine

Provider Type: Certified Nurse Practitioner

Measures	Provider rate for Appropriate Care (Ideal = 100%)	Average Rate for Peers (Department)	Average Rate for Peers (Provider Type)	Quintile Rank (Department)	Quintile Rank (Provider Type)	Total Encounters
Acute Bronchitis	0.00%	55.58%	30.40%	4	4	68
Pharyngitis	56.82%	89.78%	85.14%	5	4	44
Acute URI	75.00%	86.18%	80.30%	5	4	12
Composite	28.57%	81.72%	68.57%	5	4	124

Please find below your upper respiratory tract infection (URTI) antibiotic prescribing data for Q4 2023 (October-December 2023). The URTI diagnoses used were bronchitis, pharyngitis (without a positive Group A Strep test), and AURI. You will see your individual composite appropriate care rate, which is defined as the percentage of URTI encounters without antibiotic prescriptions for patients that did not have other indications for antibiotics.

Included in this report, you will also see the average for your department. **The goal is for your individual appropriate care rate to be at or above 85%.**

You did not reach goal for last quarter. We are encouraging a personal goal of achieving/exceeding 85% appropriate care for URTIs. Please consider utilizing the attached resources and do not hesitate to reach out with questions.

More information about the Sanford ambulatory care antimicrobial stewardship team and its initiatives, as well as URTI treatment resources from the CDC specifying conditions for which antibiotics are not indicated (i.e., acute URTI, bronchitis, pharyngitis and sometimes sinusitis) are attached to this email. Direct access to CDC resources can be found at this link: https://www.cdc.gov/antibiotic-use/clinicians/adult-treatment-rec.html

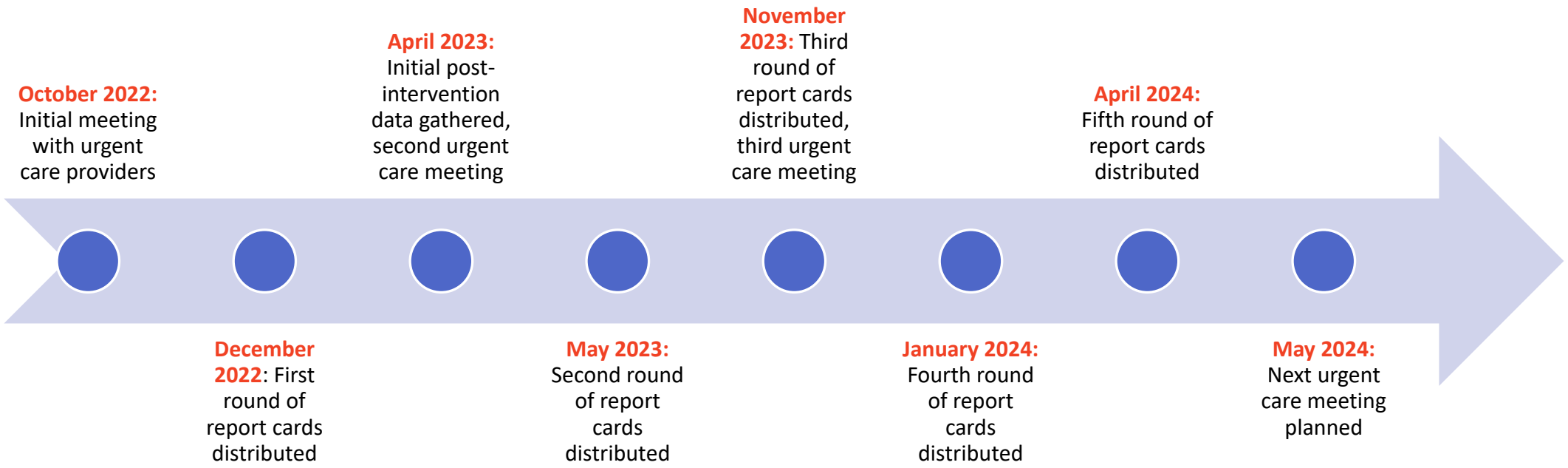
This data will continue to be trended and distributed quarterly. Please don't hesitate to reach out to Dr. Braunagel, Dr. Guerrero, or myself with questions.

Sincerely,

Dubert Guerrero, MD, DTM&H, FIDSA
Chair, Infectious Disease
Medical Director, Antimicrobial Stewardship Program

Maxx Enzmann, PharmD, BCPS, BCIDP
Senior Pharmacist, Infectious Disease/Antimicrobial Stewardship

Ambulatory AMS Timeline

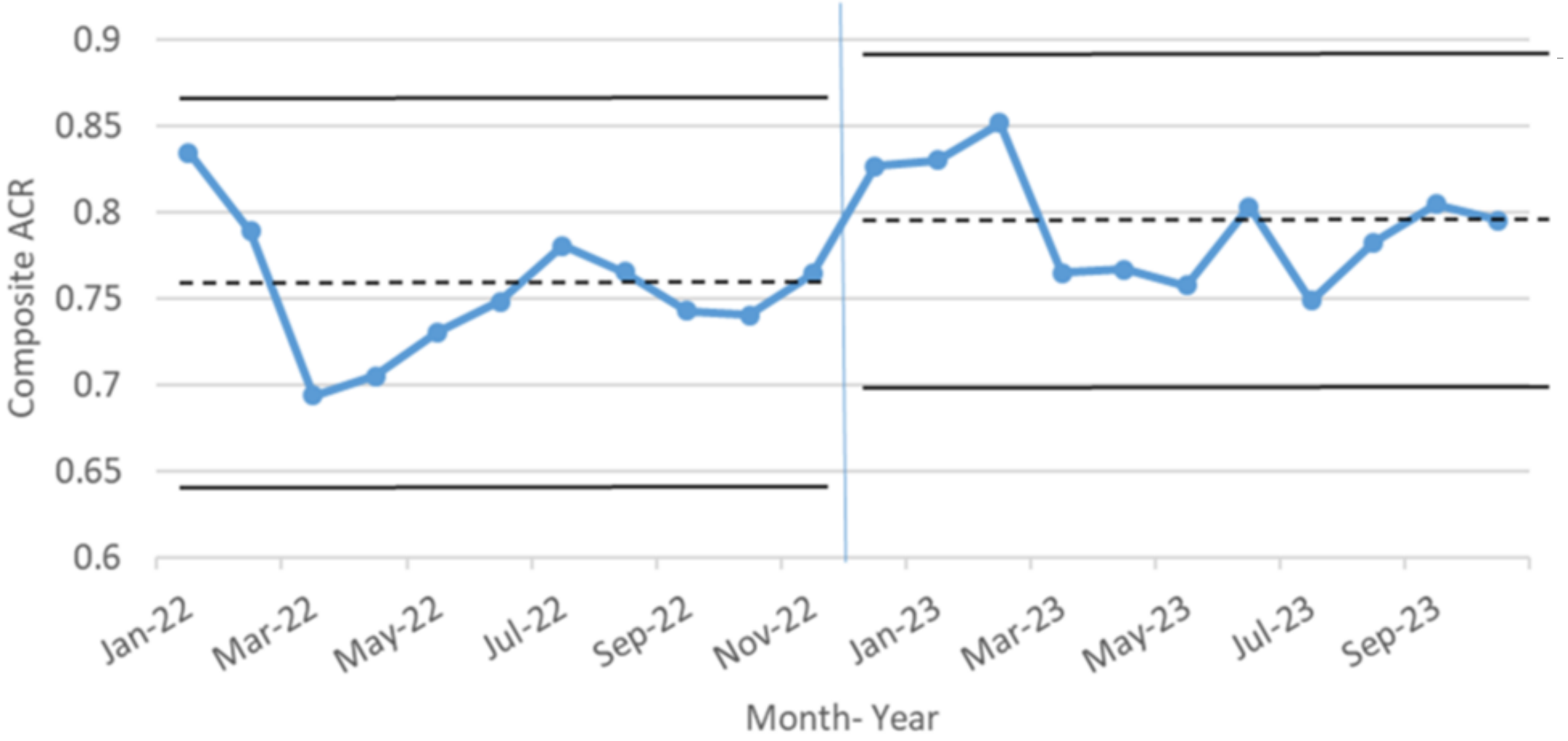


Summary of JC Requirements/Actions

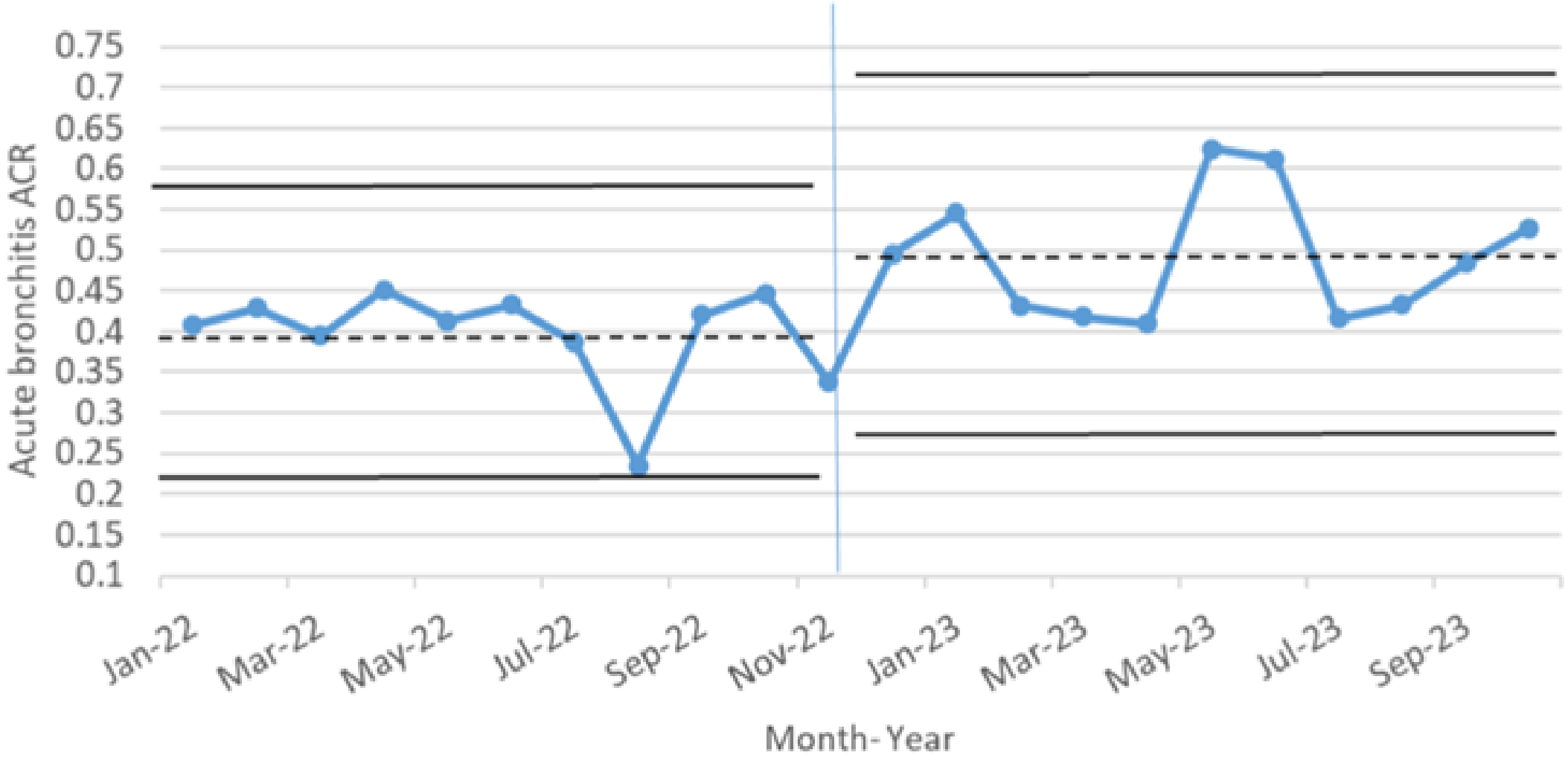
1. • Recruited leaders and key stakeholders
2. • Set a goal to improve ACRs for select “never” indications for antibiotics
3. • Utilized CDC, IDSA, and AAFP guidelines and resources
4. • Met with urgent care providers in person routinely to field questions
   • Emailed providers handout with educational resources
5. • Provided provider-specific report cards
   • Shared department data with leaders and ASP subcommittee

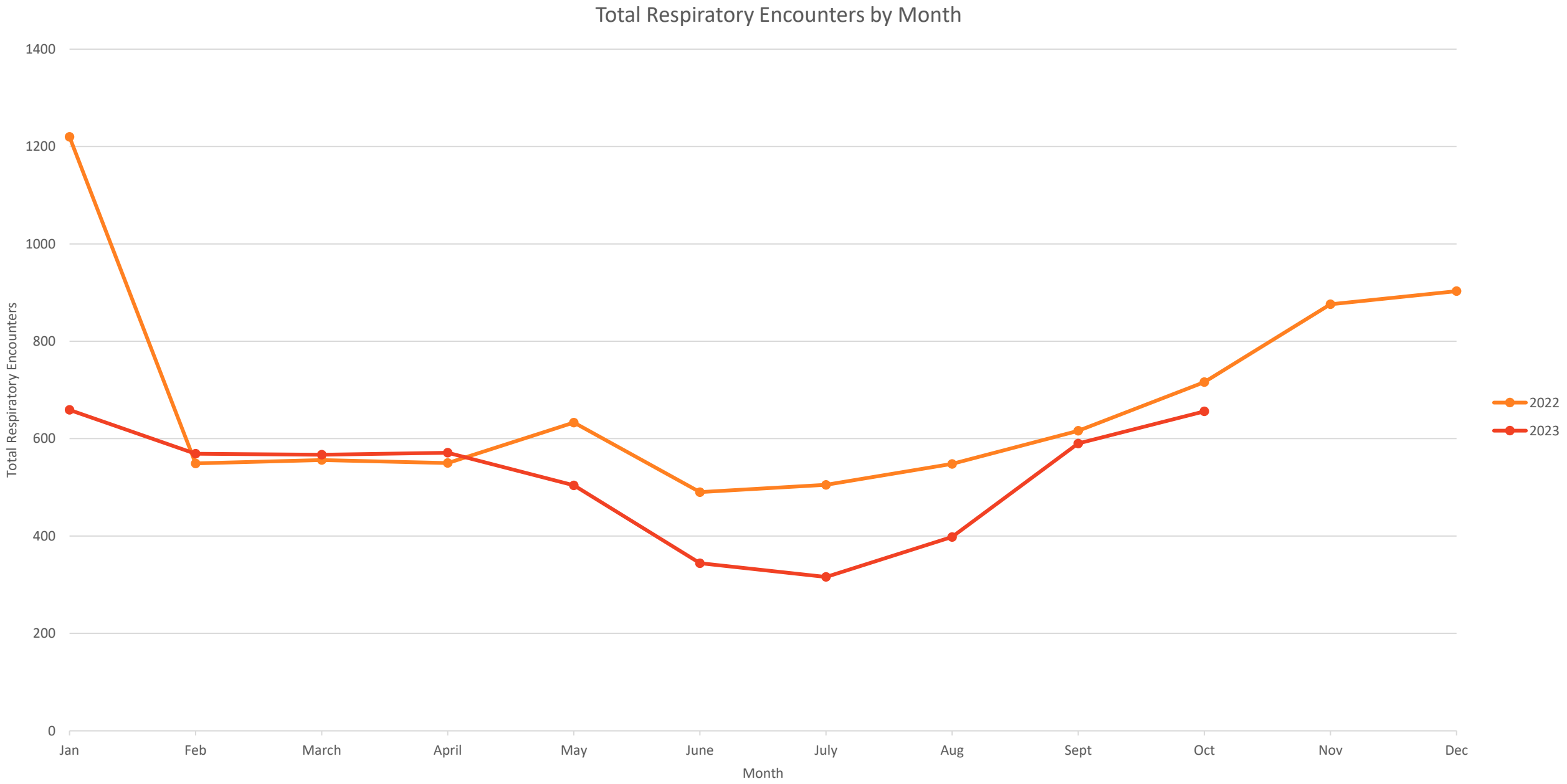
Initial Impact

Composite ACRs



Bronchitis ACRs




Total Respiratory Encounters by Month
1400
1200
1000
800
600
400
200
0
Total Respiratory Encounters
Jan
Feb
March
April
May
June
July
Aug
Sept
Oct
Nov
Dec
Month
2022
2023

Statistical Analysis

Appropriate Care Rate	Pre-Intervention		Post-Intervention		t-test	p-value
	N	Mean (SD)	N	Mean (SD)		
Composite	179	0.76 (0.19)	172	0.79 (0.21)	-1.79	**0.037**
AURI	179	0.82 (0.19)	172	0.85 (0.20)	-1.37	0.085
Bronchitis	151	0.39 (0.40)	139	0.49 (0.41)	-2.05	**0.021**
Pharyngitis	179	0.84 (0.20)	172	0.86 (0.20)	-0.71	0.239

Limitations

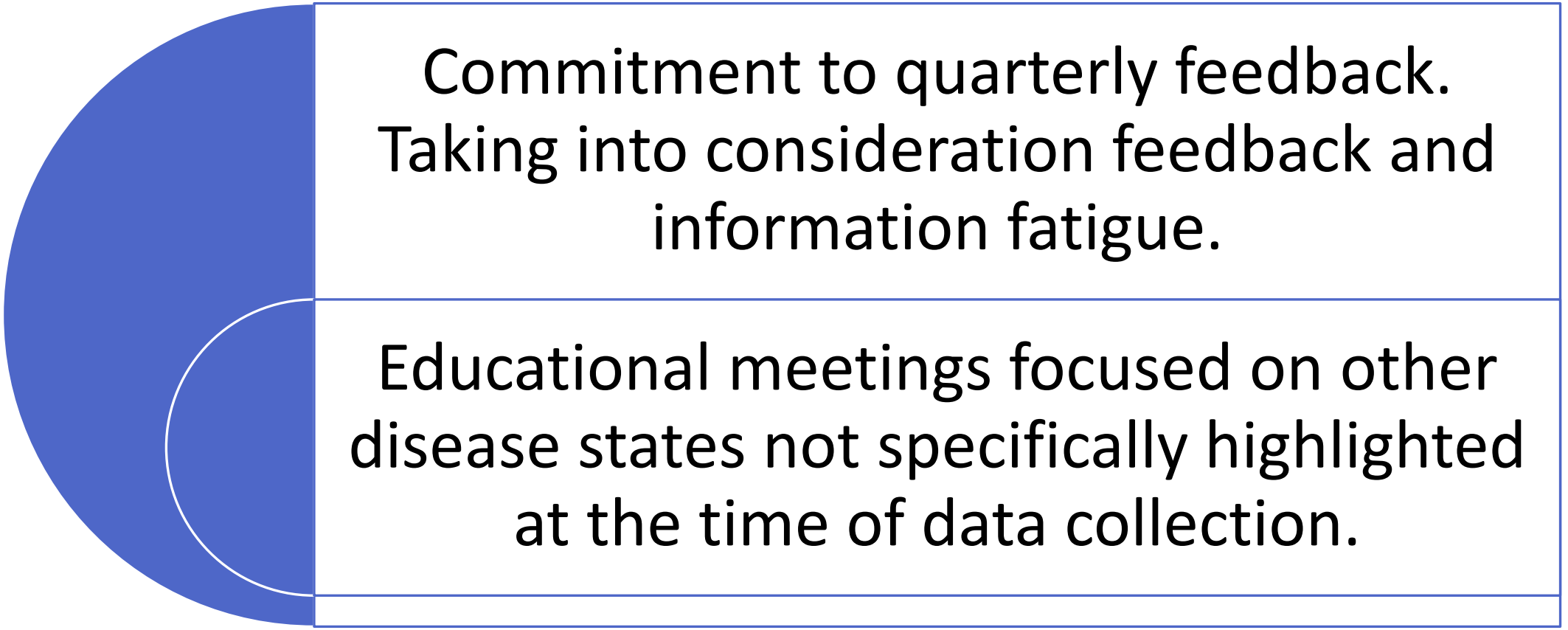
Electronic Algorithm

- Vast exclusion criteria, unable to patient-specific factors outside of ICD-10 codes.

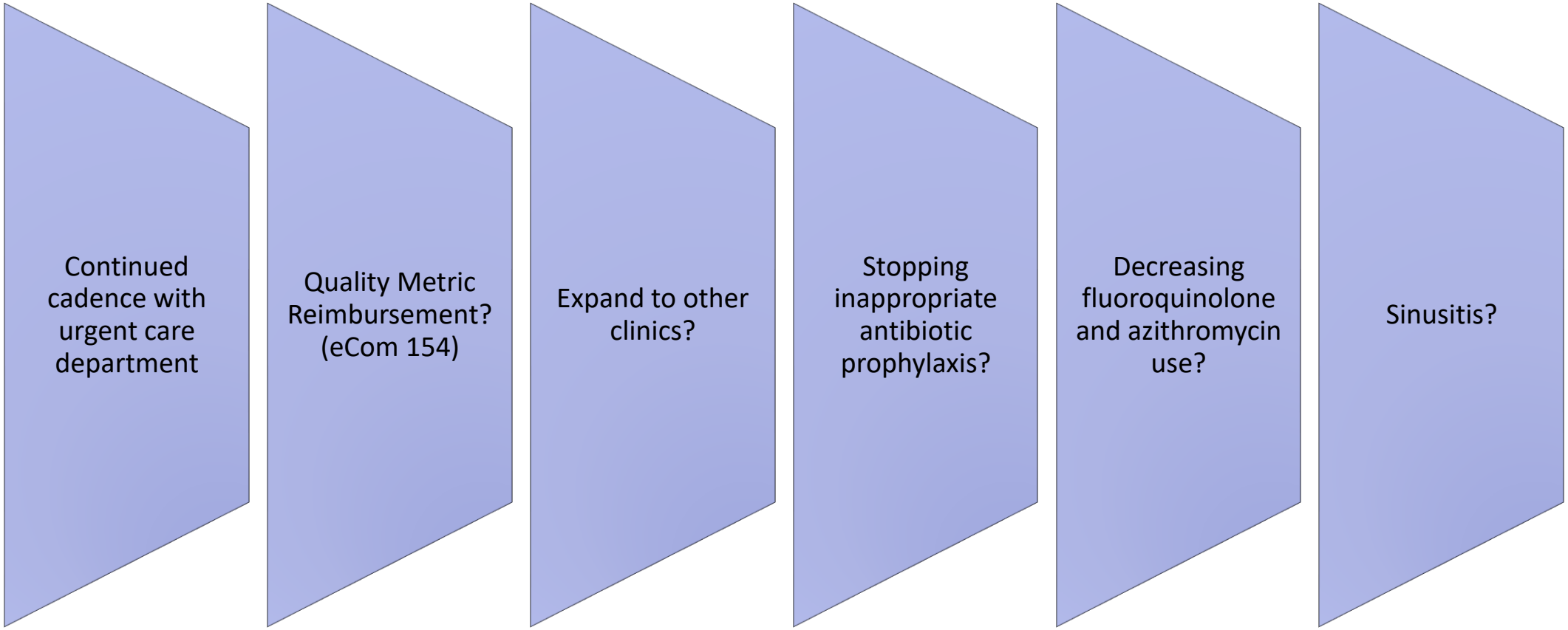
Time Frame

- Imperative to evaluate how the efficacy of this intervention withstands over time.

Continued Efforts



Next Steps


Continued cadence with urgent care department
Quality Metric Reimbursement? (eCom 154)
Expand to other clinics?
Stopping inappropriate antibiotic prophylaxis?
Decreasing fluoroquinolone and azithromycin use?
Sinusitis?

Thank You for Your Time!

Questions for the group:

- What are your institutions doing to address the ambulatory AMS JC requirements?
- What barriers have you identified?
- What are the best sources of data? Homegrown systems or publicly available data?

Please reach out to me at maxx.enzmann@sanfordhealth.org if you have any further questions for me or my team!