

AHRQ Safety Program for Telemedicine: Improving Antibiotic Use

Sustaining Stewardship Activities



Objectives

By the end of this presentation, participants will be able to—

- Develop sustainability plans for antibiotic stewardship activities over subsequent 1–2 years in telemedicine
- Identify targets for future antibiotic stewardship efforts based on antibiotic prescribing patterns in a telemedicine practice
- Understand the importance of completing a gap analysis on an annual basis to identify targets for improvement for antibiotic stewardship efforts in telemedicine

What Comes Next After Implementing Changes?

- You've made changes to improve antibiotic prescribing in your practice
- Keep up the good work and celebrate successes!
- Keep up the momentum
- Find new targets for improvement



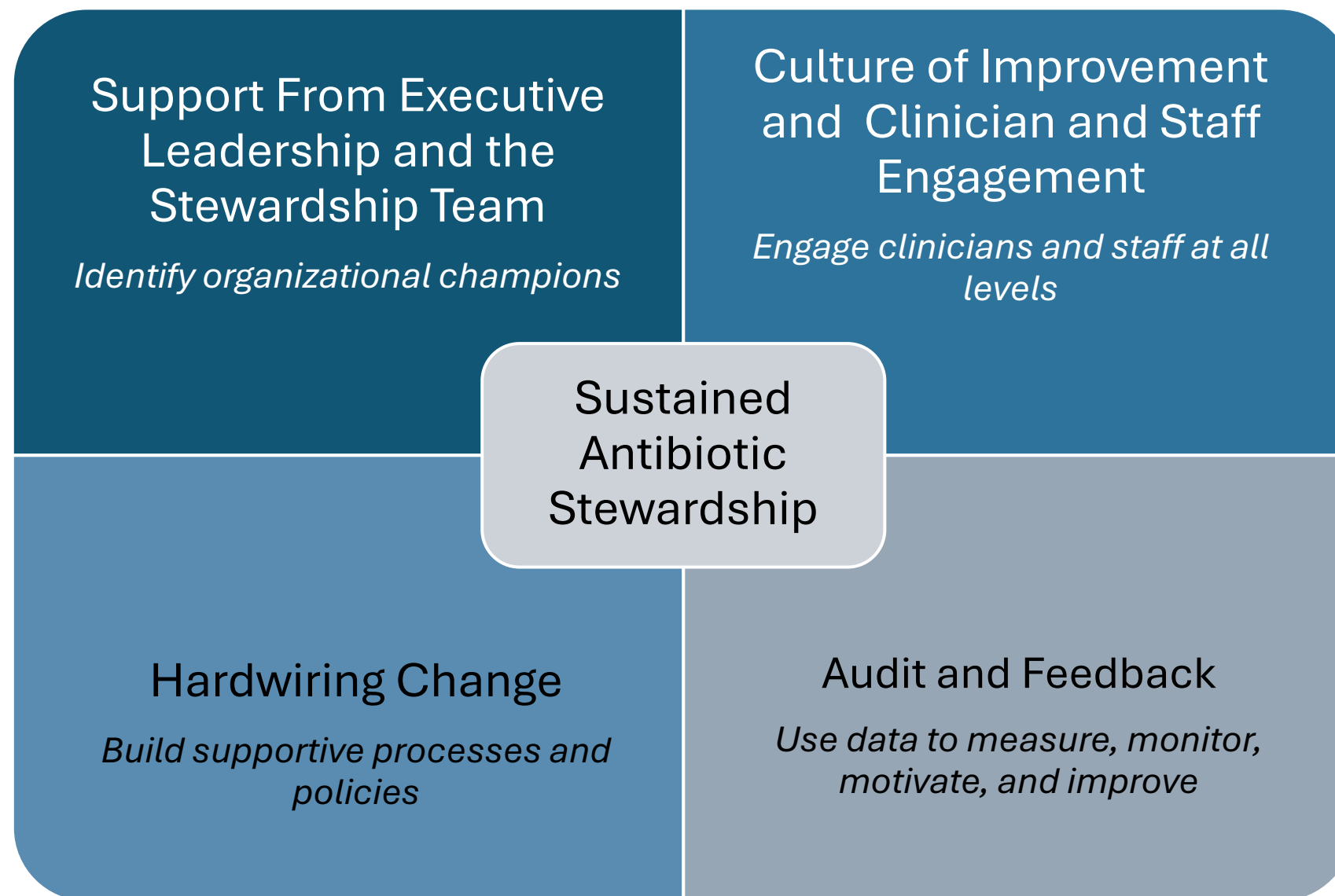
CDC Core Elements of Outpatient Antibiotic Stewardship Programs¹

1. Leadership commitment
2. Accountability
3. Stewardship expertise
4. Action
5. Tracking
6. Reporting
7. Education

Implementation Steps²

1. Obtain support from senior leadership
2. Identify core practice members who have led or will lead antibiotic stewardship efforts such as a clinician lead and an administrative lead
3. Make the case that antibiotic stewardship is a patient safety issue to the whole telemedicine practice
4. Learn how to access antibiotic prescription data
5. Improve communication skills with patients and standardize antibiotic prescribing across the telemedicine practice
6. Develop a list of prioritized infectious conditions to target and discuss best practices in diagnosis and treatment of these infectious conditions
7. Monitor and report back antibiotic prescribing data
8. Develop a [sustainability plan](#)

Sustainability Plan Guidance



Telemedicine Practice Sustainability Plan

- Develop month-to-month plan for 1–2 years covering—
 - Infectious conditions to focus on
 - Order of conditions to focus on
 - Time spent on each condition
 - Frequency of review of antibiotic prescription data
 - Frequency of meetings across the telemedicine practice
- Develop with discussion from telemedicine practice members, then present to senior leadership

	A	B	C	D	E	F	G
1		Quarter 1		Quarter 2			
2		January	February	March	April	May	June
3	Sustainability Component 1: Support from Executive Leadership and the Stewardship Team						
4	Activity description						
5	Activity description						
6	Activity description						
7	Activity description						
8	Sustainability Component 2: Culture of Improvement and Staff Engagement						
9	Activity description						
10	Activity description						
11	Activity description						
12	Activity description						
13	Sustainability Component 3: Hardwiring Change						
14	Activity description						
15	Activity description						
16	Activity description						
17	Activity description						
18	Sustainability Component 4: Audit and Feedback						
19	Activity description						
20	Activity description						
21	Activity description						
22	Activity description						

Consider using the [sustainability plan template](#) (sample above)

Ongoing Sustainability Plans

- Update sustainability plan every 1–2 years
- Continue to set aside protected time for the telemedicine practice to focus on stewardship activities and disseminate information and data



Evidence for Sustainability³

Research study: Intervention practices experienced a 50 percent reduction in inappropriate antibiotic use compared with control practices.

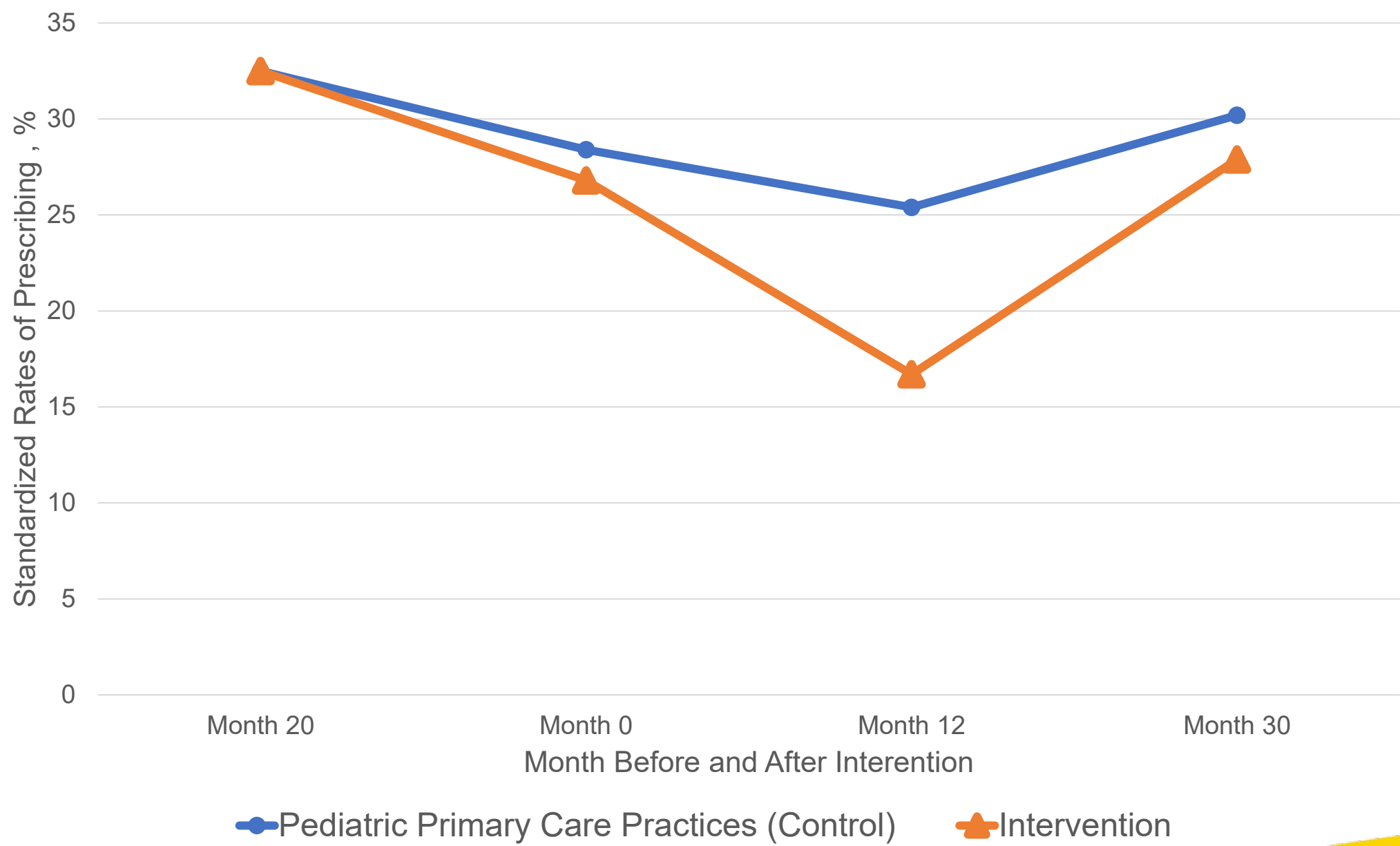
Intervention Practices

- 1-hour education session focusing on upper respiratory tract infections and sinusitis
- Quarterly review of antibiotic prescribing rates compared with other practices

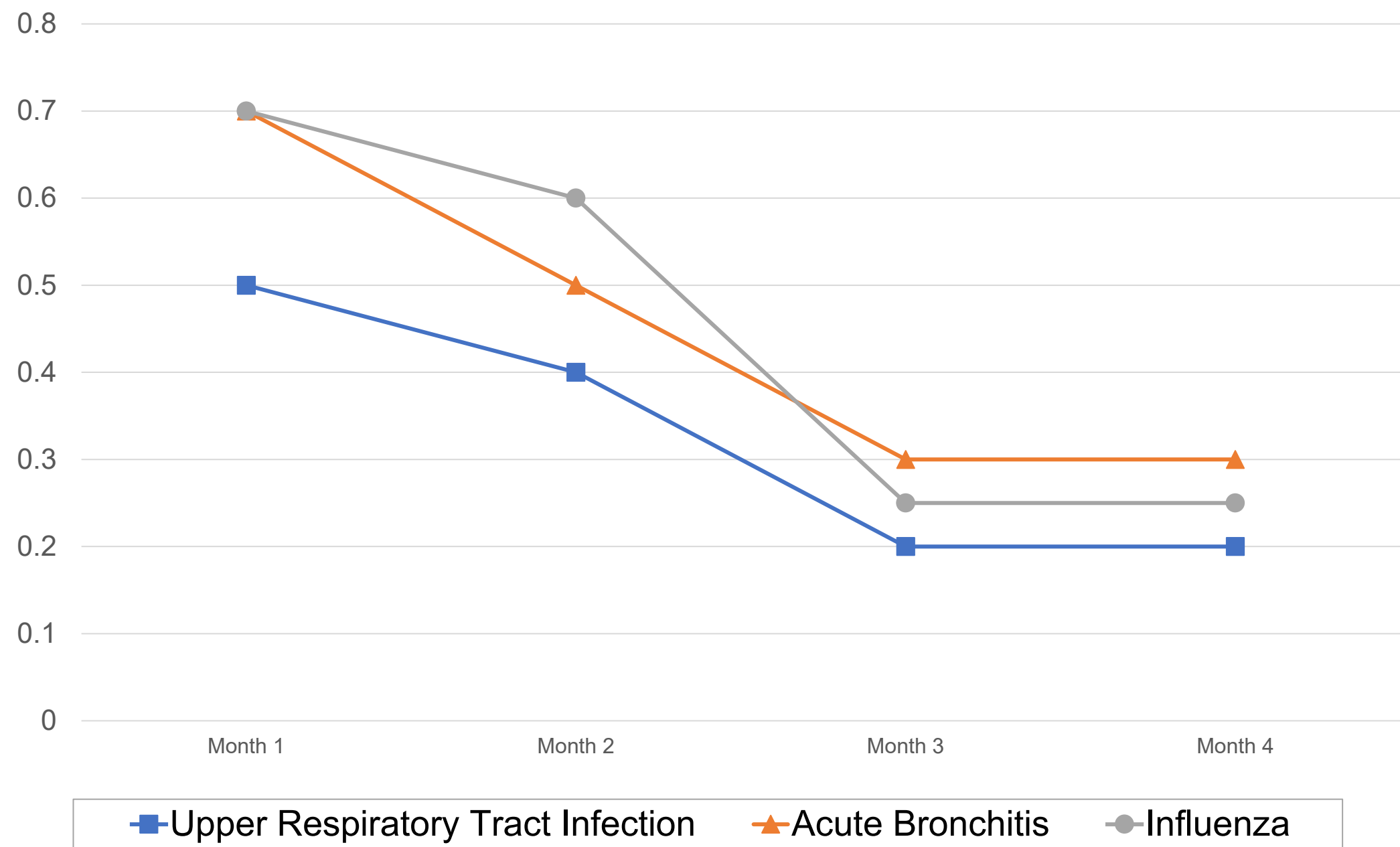
Control Practices

- No educational session
- No review of antibiotic prescribing rates with practice members

Post-Intervention: Intervention Group Prescribes Less⁴



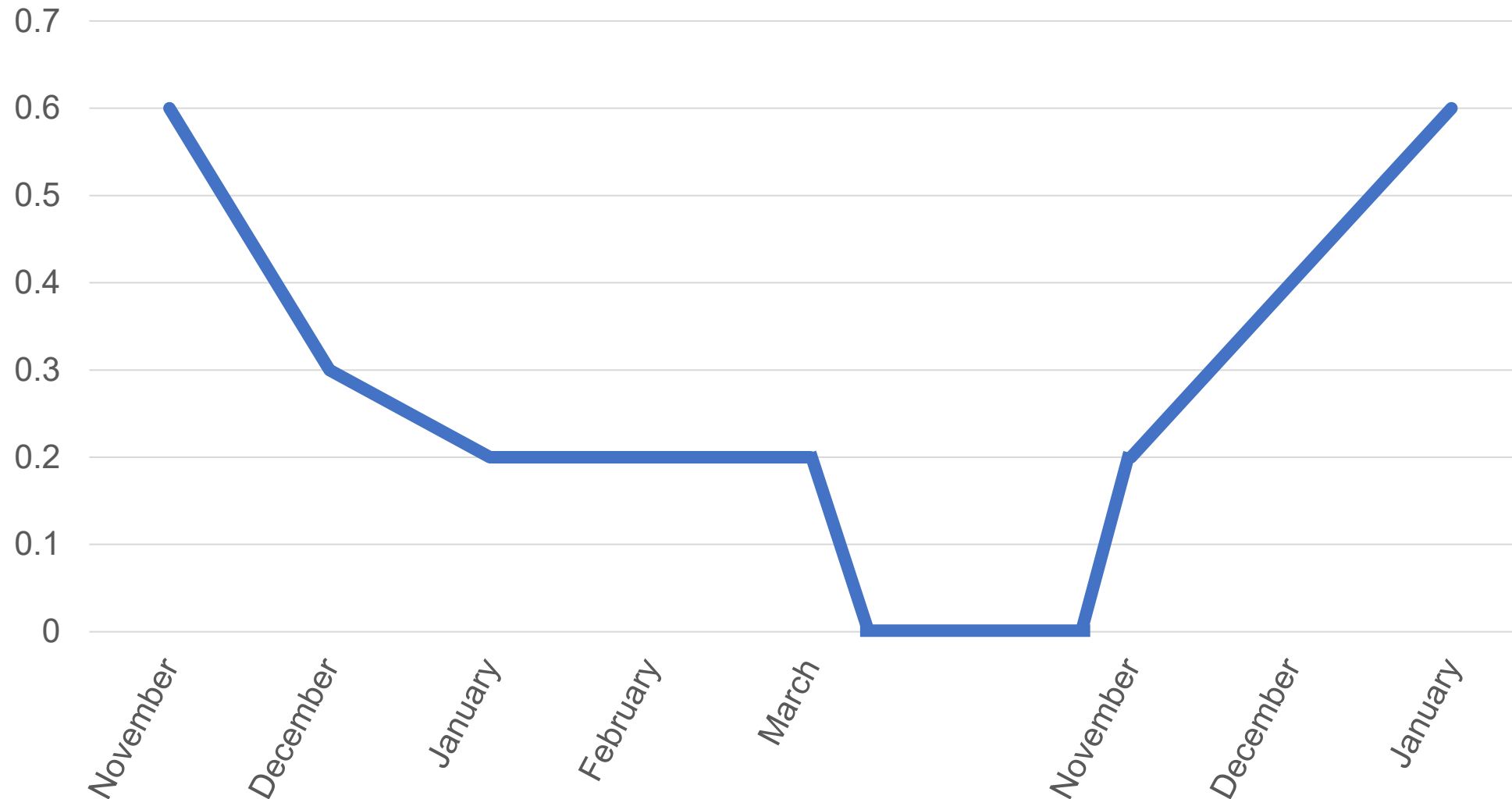
Proportion of Acute Respiratory Tract Visits With Antibiotic Prescriptions



Continue to review antibiotic prescribing data and feed this data back to practice members at least quarterly.

The Iterative Nature of Stewardship

Antibiotic Prescriptions Associated With Influenza Diagnosis – Hypothetical



Possible interventions:

- Refocus efforts on influenza
- Re-present education
- Discuss when to recommend influenza testing
- Discuss approaches to communicate test results to patients
- Discuss treatment options (antivirals, symptomatic treatment)
- Determine if practice changes may have occurred

Gap Analysis

- Perform [gap analysis](#) every 1–2 years to define areas for further improvement
- Use the gap analysis to inform the sustainability plan
- Components of gap analysis divided into—
 - Fundamental: components all antibiotic stewardship teams should have in place
 - Enhanced: components that may further enhance antibiotic stewardship activities

Take-Home Messages

- ✓ Ongoing stewardship efforts are needed to ensure optimal antibiotic prescribing.
- ✓ Four components to consider for sustainability: (1) support from executive leadership and the stewardship team, (2) culture of improvement and staff engagement, (3) hardwiring change, and (4) audit and feedback.
- ✓ Initial sustainability plan should have a month-to-month description to address the order of the conditions to focus on, the time to spend on each condition, frequency of antibiotic prescription data review, and frequency of meetings.
- ✓ Update sustainability plans every 1–2 years.
- ✓ Antibiotic prescription data can help inform infectious condition targets to include in the sustainability plan.
- ✓ Complete an annual gap analysis.

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References

1. Centers for Disease Control and Prevention. The core elements of outpatient antibiotic stewardship programs. July 6, 2026. <https://www.cdc.gov/antibiotic-use/hcp/core-elements/outpatient-antibiotic-stewardship.html>. Accessed July 21, 2026.
2. Keller SC, Cosgrove SE, Miller MA, et al. A framework for implementing antibiotic stewardship in ambulatory care: lessons learned from the Agency for Healthcare Research and Quality Safety Program for Improving Antibiotic Use. *Antimicrobial Stewardship & Healthcare Epidemiology*. 2022 July 4;2(1):e109. PMID: 36483406.
3. Gerber JS, Prasad PA, Fiks AG, et al. Effect of an outpatient antimicrobial stewardship intervention on broad-spectrum antibiotic prescribing by primary care pediatricians: a randomized trial. *JAMA*. 2013 Jun 12;309(22):2345-52. PMID: 23757082.
4. Gerber JS, Prasad PA, Fiks AG, et al. Durability of benefits of an outpatient antimicrobial stewardship intervention after discontinuation of audit and feedback. *JAMA*. 2014 Dec 17;312(23):2569-70. PMID: 25317759.