WASHINGTON STATE DEPARTMENT OF HEALTH

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**Prescribing Appropriate Antibiotics for Acute Respiratory Conditions (PAAARC)**

Toolkit

This toolkit was adapted from the CDC MITIGATE antimicrobial stewardship toolkit: a guide for practical implementation in adult and pediatric emergency department and urgent care settings.1



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TABLE OF CONTENTS

Background 3

Antimicrobial Stewardship 3

What Are HEDIS Measures? 4

Overview of the Toolkit 5

Project Process/Timeline 6

Project Preparation 8

Identify a Project Champion 8

Baseline Data Extraction 8

Select Your Educational Materials 8

Provider Commitment Planning 10

Announce the Program to Your Team 13

Implementation 14

Provider Education 14

Clinician Commitment 15

Patient Education 15

Provider Feedback 15

How to Disseminate Feedback 16

Sample Provider Letters 17

References 19

NOTE/ACKNOWLEDGEMENTS:(Option to include information about report and/or names and titles of authors below TOC)

\*This document is intended to provide guidance but does not replace clinical judgement.

Background

## Antimicrobial Stewardship

Inappropriate antibiotic use is a major public health concern resulting in drug-resistant bacteria, adverse drug reactions, and increased healthcare costs. According to Centers for Disease Control and Prevention (CDC), antibiotic-resistant bacteria cause 2.8 million illnesses and approximately 35,000 deaths each year in the United States.2

The goal of antimicrobial stewardship (AS) is to promote judicious antibiotic use in all healthcare settings in order to optimize patient outcomes. In 2016, CDC released the Core Elements of Outpatient Antibiotic Stewardship which provide a framework for implementing stewardship in outpatient settings.3 Many national professional and accrediting organizations recommend expansion of AS to ambulatory care settings.

Outpatient antibiotic use makes up greater than 60% of all human antibiotic use in the U.S.4 and is therefore a ripe target for antibiotic stewardship programs. Unnecessary antibiotics are frequently prescribed for viral infections, including 75% of adults with acute bronchitis 5,6 and 45% of children with viral URI.7

While outpatient providers understand the problem of antibiotic overuse, practice change is difficult. In many clinic settings, providers are faced with unique challenges to thoughtful decision-making such as frequent interruptions,8 high-volume care, the need for rapid decisions with limited information, variation in staff over different shifts, and concerns with patient satisfaction.9-12

CDC recommends that all outpatient settings implement an AS program.3 Although all CDC Core Elements of Stewardship are essential, a focus on tracking and reporting can help individual providers understand how they compare to their peers and motivate improvement in prescribing.13 This toolkit can provide a pathway for focused interventions to improve antibiotic use and quality of care.

CDC Core Elements for Outpatient Antibiotic Stewardship Programs

* **Commitment:**  Demonstrate dedication to and accountability for optimizing antibiotic prescribing and patient safety.
* **Action for Policy and Practice:** Implement at least one policy or practice to improve antibiotic prescribing, assess whether it is working, and modify as needed.
* **Tracking and Reporting:** Monitor antibiotic prescribing practices and offer regular feedback to clinicians.
* **Education and Experience:** Provide educational resources to clinicians and patients on antibiotic prescribing and ensure access to needed expertise on optimizing antibiotic prescribing.

## What Are HEDIS Measures?

The Healthcare Effectiveness Data and Information Set (HEDIS) is a tool created by the National Committee for Quality Assurance (NCQA) used by more than 90% of U.S. health insurance plans to measure performance on important dimensions of care and service.14,15 HEDIS includes more than [90 measures](https://www.ncqa.org/hedis/measures/).15 Health plans can compare prescribing for these conditions against that of other health plans using a measure that is less vulnerable to variation in diagnosis and coding practices. You can compare various HEDIS measures within the state of Washington [here](https://wacommunitycheckup.org/compare-scores/compare-results/).16

Three HEDIS measures pertain to both antimicrobial stewardship and respiratory conditions.

1. Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis (AAB) assesses adults aged 18-64 years of age with a diagnosis of acute bronchitis who were **not** dispensed an antibiotic prescription (i.e., a higher rate is better).17
2. Appropriate Treatment for Upper Respiratory Infection (URI) assess the percentage of episodes for people 3 months of age and older with a diagnosis of upper respiratory infection that did not result in an antibiotic dispensing event (i.e., a higher rate is better).18
3. A newer HEDIS measure is [Antibiotic Utilization for Respiratory Conditions (AXR)](https://www.ncqa.org/blog/antibiotics-for-respiratory-conditions-newly-revised-measure/). It tracks antibiotic prescriptions for a respiratory condition for people 3 months of age and older in an outpatient setting.19

## Overview of the Toolkit

This guide is written for outpatient clinicians and administrators interested in implementing an AS quality improvement project. The toolkit focuses on Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis (AAB) but can be adapted to track other measures.

The goal of this toolkit is to provide a feasible and effective system for implementing AS and reducing inappropriate prescribing in outpatient settings. It consists of six specific components as below.

* **Project Champion:** A designated clinician champion at the site leads provider education and advocates for this AS project.
* **Provider Education:** Brief, focused education for clinicians including harms from unnecessary antibiotic use, optimal antibiotic use, and best practices for communicating with patients.
* **Patient Education:** Educational materials to patients about the need for judicious use of antibiotics.
* **Provider Commitment - Enhanced Patient Education**: Personalized posters in exam rooms with clinicians’ signed public commitment to antibiotic stewardship emphasizes the importance to patients and provides an opening for questions and education about safe antibiotic use.
* **Departmental Feedback**: Each month the antibiotic prescribing practices are aggregated from the electronic health record data and provided to departmental leadership and/or the project champion.
* **Personalized Feedback**: Personalized monthly performance rankings are provided to each prescriber by email. Each prescriber receives the designation of being a “top performer” or “not a top performer” for appropriate antibiotic prescribing. Designations can be based on performance of prescribers compared to performance at the site or at the state level.

## Project Process Map

Months 1-2

Project Preparation

## Identify a Project Champion

Identify a project champion. This should be an organization or clinic leader who is enthusiastic about quality improvement, respected by colleagues, and can motivate them to participate and collaborate. This individual may decide to create a team to plan this programming and engage necessary stakeholders in your organization.

Project preparation and implementation will take time so we recommend organizational leadership / supervisors provide the project champion with the necessary support to make this project a success. To fully understand the preparation and implementation of this project, we ask that the project champion track the following:

* Workload process measures
  + Expertise required to perform tasks, i.e. basic clinical knowledge, skill using Microsoft Word, Excel and Outlook, interfacing with IT, etc.
  + Approximate time spent for preparation and implementation phases.
  + Time spent performing audit and feedback. i.e. 10 hours for Month 1, 3 hours per month after that
  + Was manual chart review required? (yes/no)
  + Experience and lessons from the project (mid-point and end-of-project)

The project champion will be the point-of-contact for communication with Washington Department of Health’s Antimicrobial Stewardship Team.

## Baseline Data Extraction

Work with your quality improvement and information technology specialists to build and report for the HEDIS measure Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis (AAB) by organization, clinic, and individual prescriber. First, work to obtain retrospective AAB data from CY 2023 for eligible providers in the organization. Report the mean, median, range and interquartile (25-75 percentile) range for this data.

**You may decide to go beyond the AAB criteria** and include more age ranges or add additional diagnoses, such as viral pharyngitis and acute viral upper respiratory conditions, as antibiotic avoidance applies to these diagnoses and others. We encourage you to adapt your report criteria to best serve your organization and patients.

## Select Your Educational Materials

A variety of educational materials are available for both providers and patients. We advise creating a dedicated information session to review the materials selected.

Centers for Disease Control and Prevention’s Be Antibiotics Aware



[*Be Antibiotics Aware*](http://www.cdc.gov/antibiotic-use) features targeted messaging and relevant materials to meet the increasing demand for resources and information about antibiotics. This initiative provides resources to help improve antibiotic prescribing among healthcare professionals, focusing on prescribing antibiotics only when needed, at the right dose, for the right duration, and at the right time. *Be Antibiotics Aware* features a number of resources, including social media messages, communication tools, graphics, posters geared at patients, and videos to help healthcare professionals educate patients and families about antibiotic use and risks for potential side effects.19

Information and materials are available here: [www.cdc.gov/antibiotic-use](http://www.cdc.gov/antibiotic-use)

**Clinician Training**

CDC offers clinician training through CDC TRAIN: [CDC's Antibiotic Stewardship Course](https://www.train.org/cdctrain/training_plan/3697)

* Continuing education available
* There are 9 modules but for PAAARC, we recommend:
  + [Module 4: Outpatient Antibiotic Use Across the United States: Understanding Trends and Inappropriate Antibiotic Use](https://www.train.org/cdctrain/course/1104608) (1 hour)
  + [Module 6: Communication Training: A Key to Improving Outpatient Antibiotic Prescribing and Use](https://www.train.org/cdctrain/course/1104610) (0.5 hours)

**Patient Education**

[Patient Resources and Education | Antibiotic Use | CDC](https://www.cdc.gov/antibiotic-use/materials-references/index.html) are available here.

Among resources available, highly recommended materials include:

* [Viruses or Bacteria: What’s got you sick?](https://www.cdc.gov/antibiotic-use/pdfs/VirusOrBacteria-Original-P.pdf) | [Spanish](https://www.cdc.gov/antibiotic-use/sp/pdfs/VirusBacteriaChart-ES-508.pdf)
* [Treating and Preventing Bronchitis](https://www.cdc.gov/antibiotic-use/pdfs/Preventing-and-Treating-Bronchitis-H.pdf) | [Spanish](https://www.cdc.gov/antibiotic-use/sp/bronchitis.html#print) (web-based only)
* [Prescription Pads](https://www.cdc.gov/antibiotic-use/training/materials.html#anchor_1560790162782) available in different sizes in English and Spanish, which could be adapted to smart phrase texts for use in electronic medical records.
  + Symptom Relief for Viral Respiratory Infections
  + Relief for Common Symptoms of Colds and Cough

Dialogue Around Respiratory Illness Treatment

[Dialogue Around Respiratory Illness Treatment (DART)](https://www.uwimtr.org/dart/) is a program offering providers an introduction to evidence-based communication strategies to help patients and families understand when antibiotics are not effective. 21,22 This strategy was developed by physicians at the University of Washington and Seattle Children's Hospital. It offers video modules to help clinicians understand and manage parents’ expectations regarding antibiotic prescribing for respiratory illnesses. It provides short video examples of communicating effectively with parents of children when antibiotic prescribing is not necessary.

The communication strategy is comprised of 4 parts: 21,22

1. Review your physical exam findings. (e.g., “You don’t have a fever and your lungs sound clear and healthy.”)
2. Deliver a clear diagnosis. (e.g., “You have a chest cold caused by a virus.”)
3. Use a two-part negative/positive treatment recommendation. (e.g., “Great news, you don’t need an antibiotic. Here are some steps you can take to feel better while your chest cold resolves.”)
4. Provide a contingency plan. (e.g., “You should feel much better in about 5 days. If not, or if you get worse before then, please give my office a call.”)

Using the link above, go to “Communication Tutorial.”

## Provider Commitment Planning

Provider commitment is an evidence-based strategy for antibiotic stewardship in primary care settings serves as a reminder to clinicians and to patients about the commitment to avoid inappropriate antibiotic prescribing and avoidance of patient harm. Written public commitments in support of antibiotic stewardship placed in examination rooms can reduce inappropriate antibiotic prescriptions.13

Discuss with your organization leadership what method of public commitment fits best in your setting. Local guidelines may govern selection of materials and how materials can be placed in different areas of a facility.

Provider commitment display options include the following:

**Commitment Posters**

Posters with clinicians’ names and photos with or without signatures make a statement to patients that staff are committed to use antibiotics only when benefits outweigh the harms. In some cases, providers may be reluctant to put their signature on posters for fear patients may use their signature so printed names may be more ideal in this scenario.

A sample can be found below. Consider adapting it to include the organization logo.

Text, letter

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This poster is available here in [English](https://www.cdc.gov/antibiotic-use/pdfs/Commitment-Poster-english-11x17-P.pdf) and [Spanish](https://www.cdc.gov/antibiotic-use/sp/pdfs/CommitmentLetter-11x17-ESP-P.pdf).

Text

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This poster is available [here](https://doh.wa.gov/sites/default/files/2023-06/420-204-ProviderCommitmentToStewardshipPosterCustom.pptx).

**Provider Commitment Log**

Signing a commitment log indicates a personal commitment and accountability to appropriate prescribing and can be visible in department staff areas.

|  |  |  |
| --- | --- | --- |
| Appropriate Antibiotic Prescribing Commitment Log | | |
| By signing below you commit to the organization to prescribe antibiotics only when they are needed and will avoid giving antibiotics when they might do more harm than good.  Refer to the CDC poster and WA DOH PAAARC toolkit for additional reading. | | |
| Printed Name | **Signature** | **Commitment Poster Signature** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

**Smaller Public Displays**

CDC offers sticker sheets, window clings, and counter clings that can easily be printed.

[Print Materials | Antibiotic Use | CDC](https://www.cdc.gov/antibiotic-use/print-materials.html#anchor_1616791124480)

## Announce the Program to Your Team

Introduce the program to your team. You may choose to do this in a variety of ways – emails and/or facility-level announcements. You can start planning for and scheduling dates for future informational session(s). We recommend program introductions contain the following elements:

* Present the purpose of antibiotic stewardship for acute respiratory conditions.
* Introduce HEDIS measures, specifically AAB or your selected measure.
* Inform providers that their antibiotic-prescribing metrics will be tracked and individualized feedback provided in comparison to their peers.
* Share provider and patient educational resources.

See a sample announcement below.

Selecting a start date can influence the success of the program. Select a launch date that will maximize direct attention from your providers. You’ll want to consider the timing and preparation of printed public and educational materials. In the lead up to the launch date, the project champion can bring awareness to the program via presentations at staff meetings or

**Sample Announcement Template**

Dear Colleagues,

As part of our efforts to promote patient safety through antimicrobial stewardship in our clinics, we will be launching an effort to improve appropriate antibiotic prescribing for acute respiratory illnesses in cooperation with the Washington State Department of Health.

This effort is based upon our clinic’s performance related to the Avoidance of Antibiotics for Acute Bronchitis Measure (AAB), a Health Effectiveness Data and Information Set (HEDIS) measure. Since antibiotics are generally not recommended for acute bronchitis, a higher percentage of acute bronchitis cases not treated with antibiotics suggests better quality of care. Our clinic currently averages \_\_\_\_ % as compared to the state average of \_\_\_ %. With your help, we are seeking to decrease antibiotic prescriptions that are considered inappropriate with a goal of becoming closer to or exceeding the state average.

Educational resources will be available for you and your patients. Mark your calendars for information session(s) to be held on \_\_\_\_, 2024.

Additionally, we will develop and provide individualized monthly antibiotic prescribing reports for our organization’s prescribers. We will track the percentage of episodes for patients aged 18-64 years with a diagnosis of acute bronchitis who were not dispensed an antibiotic prescription and perform peer to peer benchmarking.

We look forward to partnering with you on this effort.

Implementation

## Provider Education

Once you have engaged your stakeholders and chosen your educational materials and methods of sharing provider commitment, it is time to share with your providers and staff.

Depending on your planning decisions, you may have decided to host a series of information sessions and/or provide blocks of time for prescribers to engage with educational materials asynchronously.

Make sure to track and report the following to WA DOH AMS Team on a quarterly basis to qualify for compensation:

* + Number and proportion of eligible prescribers who received PAAARC education.
  + Estimated time spent by the project champion preparing and disseminating education.
  + Modality of educational materials. For example, in-person informational sessions, posters, flyers, PowerPoints, meeting agendas, guest speakers, modules, etc.

**Sample Agenda for Information Session**

* + Introduction to PAAARC, a Partnership with Washington State Department of Health
    - Appropriate Antibiotic Prescribing – Why Should We Care?
    - What is a HEDIS measure? What is AAB?
  + How to Communicate with Patients About Antibiotic Avoidance – DART Framework
    - Guest speaker: \*\*\*
  + Patient Educational Resources
    - Pre-printed patient handouts or pre-populated “smart phrases” available to print with after visit instructions.
  + Tracking organization’s and individuals’ AAB reports

## Clinician Commitment Checklist

* Gather providers’ commitment by collecting names and signatures for the commitment log and posters.
* Post the Provider Commitment Log in appropriate staffing areas.
* Post Provider Commitment Posters in agreed upon locations (patient exam rooms and/or waiting areas).

## Patient Education

Disseminate selected patient education materials. Track and report which were used. For example,

* CDC *Be Antibiotics Aware* posters and handouts
* Symptom relief information provided to patients

Provider Feedback

## 

## How to Disseminate Feedback

Peer comparison is a behavioral intervention shown to decrease inappropriate antibiotic prescribing for acute respiratory tract infections.23 Giving feedback to clinicians helps them monitor their own behavior and make changes based on their actual prescribing habits. Feedback can be provided via email.

Sample letters are provided below. We encourage you to adapt these to fit your organization’s goals based on data extraction reports selected during the preparation stage.

Before beginning the intervention, clinicians receive an email (see Sample 1) letting them know what to expect from the peer comparison emails and answering some frequently asked questions (Sample 2). Then, each month, using EHR data within each region about inappropriate prescription rates, clinicians are ranked from highest to lowest. Rankings are typically only shared with the program team and administration; however, sites may choose to share blinded or unblinded rankings with all clinicians.

**Responding to Clinician Concerns or Complaints**

In some cases, clinicians may dispute the peer comparison feedback. Some may question the label *top performer*and why they have not achieved this designation. Complaints about this feedback from colleagues can be challenging to the project champion.

The FAQs below (Sample 2) can be used to alleviate some of these concerns. Communication in advance regarding how calculations are determined, diagnoses codes, utilized, etc. may help clinicians to process this change

Depending on your site, the FAQs and feedback should be adjusted depending on the results and methods.

**Track and Report AAB Audit and Feedback**

Each quarter, report the following audit & feedback metrics:

* Number and proportion of eligible providers that received a feedback report at each time point.
  + For example. 12 of our 15 (80%) of our eligible providers in January, 14/15 (93%) in February, and 15/15 (100%) in March.
* Mean, median, range and interquartile range of AAB HEDIS measure performance for providers at specified time points:
  + Retrospective AAB data from CY 2023 for eligible providers
  + Quarterly prospective periods of the contract

## Sample Provider Letters

The following sample letters below are based on a “top performer” definition: top 10% of providers avoiding antibiotic prescriptions for acute uncomplicated bronchitis. The Project Champion may set a different threshold for “top performer” and adapt letters accordingly.

We are available to consult regarding pros/cons of comparators.

**Sample 1: Clinic Level Feedback Template**

Dear Providers:

As part of our participation with the Washington State Department of Health’s Prescribing Appropriate Antibiotics for Acute Respiratory Conditions (PAAARC) project, we are providing monthly reports for our clinic. For the month of \_\_\_\_\_, our clinic evaluated ## eligible patients with acute uncomplicated bronchitis. Of these, XX.X% received an antibiotic prescription by one of our providers. Our goal is \_\_%.

Thank you for supporting our antibiotic stewardship efforts.

**Sample 2: Frequently Asked Questions**

Dear [Organization Name] Provider,

You will be receiving performance feedback e-mails as part of [NAME OF ORGANIZATION’S] participation in the Washington State Department of Health’s Prescribing Appropriate Antibiotics for Acute Respiratory Conditions (PAAARC) project. In these e-mails, you will encounter the phrase “top performer” for the Healthcare Effectiveness Data and Information Set (HEDIS) metric avoidance of antibiotic treatment for acute bronchitis (AAB). These e-mails will also include the following responses to Frequently Asked Questions:

*What is a “top performer”?*

A top performer refers to the top 10% of providers who avoided antibiotic prescribing for acute uncomplicated bronchitis compared to their peers. This is determined by looking at prescribing rates of all prescribers with at least ## of encounters for acute bronchitis during a specified performance period and ranking them according to percentage without antibiotic prescribing for this diagnosis. The HEDIS AAB measures antibiotic avoidance so the higher the percentage, the better.

*How many “top performers” can there be?*

Top performer status is achievable by only 10% of providers. For those of you who receive the "not top performer" emails, the bar may seem high, but many of your colleagues are reaching it.

*How can I achieve top performance?*

The best way to improve clinical performance is to review the guidelines for antibiotic prescribing for acute respiratory infections and be faithful to them with future patients. Links to two of the most popular guidelines are below. If you do this consistently, you will achieve top performance.

* [CDC: Adult Outpatient Treatment Recommendations](https://www.cdc.gov/antibiotic-use/clinicians/adult-treatment-rec.html)
* [American Family Physician: Acute Bronchitis](https://www.aafp.org/pubs/afp/issues/2016/1001/p560.html)

*Which patients are you including?*

We only include patients with acute bronchitis for which antibiotics are not indicated. Each letter will include the dates for the performance period that this applies.

*Which patients are excluded?*

We exclude patients with chronic obstructive airway diseases, malignancies, disorders that impair the immune system, and concomitant diagnoses with appropriate indications for antibiotic treatment.

**Sample 3: Low Performer Feedback Template**

Dear Provider,

Our data indicates that \_\_\_\_ % of your visits for acute, uncomplicated bronchitis resulted in an antibiotic prescription.

The CDC and other professional organizations recommend against antibiotic treatment for this condition. Guidance for the management of this illness in adults can be found here:

[CDC: Adult Outpatient Treatment Recommendations](https://www.cdc.gov/antibiotic-use/clinicians/adult-treatment-rec.html)

[American Family Physician: Acute Bronchitis](https://www.aafp.org/pubs/afp/issues/2016/1001/p560.html)

Our clinic’s goal is to decrease antibiotic prescriptions that are considered inappropriate with a goal of becoming closer to or exceeding the state average of \_\_\_\_ for the Avoidance of Antibiotics for Acute Bronchitis (AAB) measure ([more information here](https://www.wacommunitycheckup.org/)). A higher percentage is a better result.

The top performer threshold was ##% for this period. Based on this, you are not a top performer.

Our stewardship program is here to provide support and assistance. Please reach out to us at \_\_\_\_\_\_\_\_\_\_\_\_ (contact info) if you have any questions or concerns. We appreciate your partnership in this effort.

**Sample 4: High Performer Feedback Template**

Dear Provider,

Our data indicates that \_\_\_\_ % of your visits for acute, uncomplicated bronchitis did NOT result in an antibiotic prescription. This was within the top 10% of our organization’s providers.

Congratulations! You are a top performer for this measure this period. We appreciate your partnership in this effort.

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