

# Ambulatory Care Antimicrobial Stewardship Elements

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# Objectives

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1. Describe the rationale for antimicrobial stewardship efforts and their relevance to ambulatory care practice.
2. Identify pertinent standards of practice and their implications on establishing attainable antimicrobial stewardship goals.
3. Apply currently available evidence to develop practical strategies for achieving antimicrobial stewardship goals.

# Contents:

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# Recommendation Summary

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## Implement Sustainable Interventions:

### Interventions

#### Low resource demand

- Identify at least one accountable leader for assessing practice site and establishing feasible goals
- Clinical decision support: develop guideline-based order sets
- Work with lab partners to develop site-specific antibiogram (consider regional partners if local data is insufficient)
- Develop and promote “delayed prescribing” strategies (template)
- Report prescriber performance audit at least once annually
- Promote prescriber-focused educational resources through local in-services or published continuing education programs

# Recommendation Summary

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## Implement Sustainable Interventions:

### Interventions

#### **Moderate-High resource demand**

- Establish interdisciplinary antimicrobial stewardship committee with regular meetings (ideally FTEs/PD devoted to stewardship goals)
- Frequent and regular review of prescriber performance audits
- Local antibiogram updated annually
- Coordinate regular in-services for prescribers and continuing education programs
- Consider pursuing advanced collaborative practice procedures to utilize POC testing and monitor outcomes data (supplemental, true effect on antimicrobial stewardship is yet to be established)

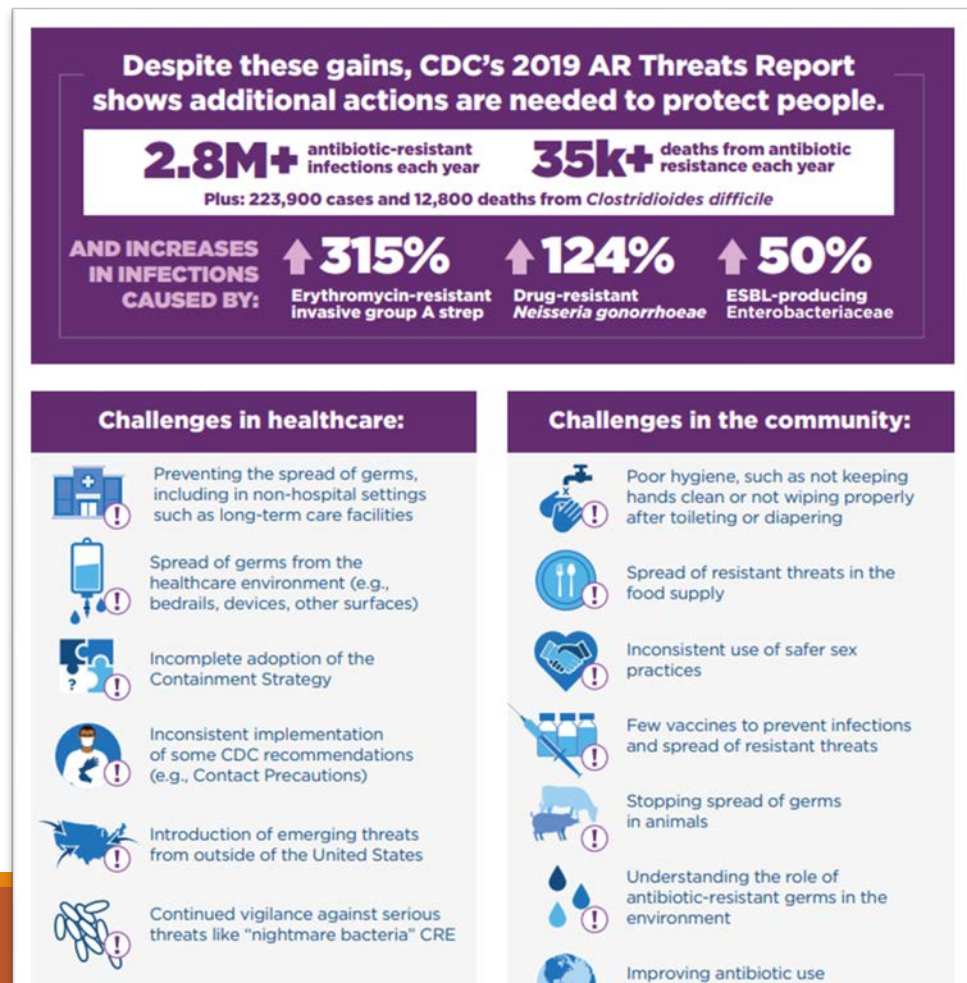
# PURPOSE

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# Background

## 2019 Antibiotic Resistance Threat Report, CDC<sup>1</sup>

- Over 2.8 million antimicrobial-resistant infections occur annually, resulting in >35,000 deaths
- Additionally, *C. difficile* was responsible for 223,900 hospitalizations with 12,800 deaths (2017 data)



# Background

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## Executive Order 13676: *Combating Antibiotic-Resistant Bacteria* (2014)<sup>2</sup>

- National Strategy for Combating Antibiotic-Resistant Bacteria(2014)<sup>3</sup>
- National Action Plan for Combating Antibiotic-Resistant Bacteria (2015)<sup>4</sup>

**The White House**

Office of the Press Secretary

For Immediate Release

September 18, 2014

## Executive Order -- Combating Antibiotic-Resistant Bacteria

EXECUTIVE ORDER

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### COMBATING ANTIBIOTIC-RESISTANT BACTERIA

By the authority vested in me as President by the Constitution and the laws of the United States of America, I hereby order as follows:

Section 1. Policy. The discovery of antibiotics in the early 20th century fundamentally transformed human and veterinary medicine. Antibiotics save millions of lives each year in the United States and around the world. The rise of antibiotic-resistant bacteria, however, represents a serious threat to public health and the economy. The Centers for Disease Control and Prevention (CDC) in the Department of Health and Human Services (HHS) estimates that annually at least two million illnesses and 23,000 deaths are caused by antibiotic-resistant bacteria in the United States alone.

Detecting, preventing, and controlling antibiotic resistance requires a strategic, coordinated, and sustained effort. It also depends on the engagement of governments, academia, industry, healthcare providers, the general public, and the agricultural community, as well as international partners. Success in this effort will require significant efforts to minimize the emergence of antibiotic-



# Background

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## National Action Plan for Combating Antibiotic-Resistant Bacteria (2015) Objectives:<sup>4</sup>

- **1.1.1A**: Strengthen antibiotic stewardship in inpatient, outpatient, and long-term care settings by **expanding existing programs, developing new ones, and monitoring progress and efficacy**.
- **1.1.1B**: **Strengthen educational programs** such as Get Smart: Know When Antibiotics Work\*, which inform physicians, agricultural workers, and members of the public about good antibiotic stewardship.
- **1.1.3**: **Implement annual reporting of antibiotic use in inpatient and outpatient settings** and identify geographic variations and/or variations at the provider and/or patient level that can help guide interventions.

\*Now named the “Be Antibiotics Aware” initiative<sup>10</sup>

# Background

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## National Action Plan for Combating Antibiotic-Resistant Bacteria (2015) Objectives:<sup>4</sup>

- **3.1: Develop and approve new diagnostics**, including tests that rapidly **distinguish between viral and bacterial pathogens and tests that detect antibiotic resistance** that can be implemented in a wide range of settings.
- **3.2: Expand the availability and use of diagnostics to improve treatment of antibiotic resistant bacteria**, enhance infection control, and facilitate outbreak detection and response in healthcare and community settings.

# GOALS

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# Standards – TJC<sup>5</sup>

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Antimicrobial Stewardship in Ambulatory Health Care (MM.09.01.03) effective as of January 1, 2020:

- EP 1: The **organization identifies an individual(s) responsible** for developing, implementing, and monitoring activities to promote appropriate antimicrobial medication prescribing practices.
- EP 2: : The organization sets **at least one annual antimicrobial stewardship goal**.
- EP 3: The organization uses **evidence-based practice guidelines** related to its annual antimicrobial stewardship goal(s).

# Standards – TJC<sup>5</sup>

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## Antimicrobial Stewardship in Ambulatory Health Care (MM.09.01.03) effective as of January 1, 2020:

- EP 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.
- EP 5: The organization collects, analyzes, and **reports data pertaining to the antimicrobial stewardship goal(s) to organizational leadership and prescribers** (i.e. antimicrobial prescribing patterns, antimicrobial resistance patterns, or an evaluation of the antimicrobial stewardship activities implemented).

# Standards – AAAHC: Patient Safety Toolkit<sup>6,7</sup>

- Currently no official requirements or stated performance measures
- Patient Safety Toolkit: CDC Core Elements of Outpatient Antibiotic Stewardship
- Core Elements checklist for facilities and prescribers
  - Baseline assessment and evaluation of progress



## **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, or have clinicians assess their own antibiotic prescribing practices themselves.



## **Education and expertise**

Provide educational resources to clinicians and patients on antibiotic prescribing, and ensure access to needed expertise on optimizing antibiotic prescribing.

# Standards – AAAHC: Patient Safety Toolkit<sup>6,7</sup>

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## Core Elements: Commitment

Dedication and accountability for optimized antibiotic prescribing and patient safety:

- Identify and establish an accountable leader to direct activities.
- Stewardship duties are included in position description or evaluation criteria.
- Clinical staff receive appropriate training on setting patient expectations.

# Standards – AAAHC: Patient Safety Toolkit<sup>6,7</sup>

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## Core Elements: Action

Implementation of policies or practices to improve antimicrobial stewardship:

- Provide communications skills trainings for clinicians.
- Require explicit justification of prescribing practices that deviate from guideline recommendations.
- Provide clinical decision support.
- Triage systems in place to prevent unnecessary visits (i.e. call centers, nurse hotlines, or pharmacist consultation)



# Standards – AAAHC: Patient Safety Toolkit<sup>6,7</sup>

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## Core Elements: Tracking/Reporting

### Monitoring of antibiotic prescribing aspects:

- Antibiotic prescribing for high-priority conditions.
- Percentage of all visits leading to antibiotic prescriptions.
- Antibiotic complications and trends in resistance – reported at the level of the health care system.
- Assess performance on quality measures and established reduction goals addressing antibiotic prescribing from third party payers/health care plans.

# Standards – AAAHC: Patient Safety Toolkit<sup>6,7</sup>

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## Core Elements: Education and Expertise

Provision of relevant resources to clinicians and patients regarding evidence-based prescribing practices:

- In-person educational training (academic detailing).
- Continuing education activities for clinicians.
- Timely access to reliable subject-matter experts.

# Standards – AAAHC: Patient Safety Toolkit<sup>6,7</sup>

## Core Elements: Prescriber Checklist

### COMMITMENT

1. Can you demonstrate dedication to and accountability for optimizing antibiotic prescribing and patient safety related to antibiotics?  Yes  No

If yes, indicate which of the following are in place (select all that apply)

- Write and display public commitments in support of antibiotic stewardship.

### ACTION

2. Have you implemented at least one practice to improve antibiotic prescribing?  Yes  No

If yes, indicate which practices which you use. (Select all that apply.)

- Use evidence-based diagnostic criteria and treatment recommendations.  
 Use delayed prescribing practices or watchful waiting, when appropriate.

### TRACKING AND REPORTING

3. Do you monitor at least one aspect of antibiotic prescribing?  Yes  No

If yes, indicate which of the following are being tracked. (Select all that apply.)

- Self-evaluate antibiotic prescribing practices.  
 Participate in continuing medical education and quality improvement activities to track and improve antibiotic prescribing.

### EDUCATION AND EXPERTISE

4. Do you provide education to patients and seek out continuing education on antibiotic prescribing?  Yes  No

If yes, indicate how you provide antibiotic stewardship education. (Select all that apply.)

- Use effective communications strategies to educate patients about when antibiotics are and are not needed.  
 Educate about the potential harms of antibiotic treatment.  
 Provide patient education materials

# INTERVENTIONS

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# Evidence-based Recommendations

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Dobson *et al.*: Patient-infection continuum <sup>8</sup>

Need to seek care

- **Aim to avoid unnecessary clinic visits**
  - Preventative initiatives
  - Patient education
  - Discharge/transitions in care

Decision to prescribe antibiotics

- **Optimize antibiotic use**
  - Point-of-care (POC) diagnostics
  - Prescriber auditing and education
  - Development of regional/local antibiograms
  - Development of medication formulary

# Evidence-based Recommendations

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Dobson *et al.*: Patient-infection continuum <sup>8</sup>

Dispensing  
antibiotics

- **Improve appropriate antibiotic use**
  - Verification of prescribing decisions
  - Pharmacists reinforce education points with prescribers

Post-encounter  
care

- **Improve patient safety**
- **Decrease antibiotic overprescribing**
  - Implement “delayed prescribing” strategies
  - 24-48 hr. follow-up as a safety net

# Evidence-based Recommendations

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## Auditing and feedback

<b>Study</b>	<b>Intervention</b>
Meeker <sup>9</sup>	Peer comparison (with reinforcement) can result in reduction of unnecessary prescriptions for acute respiratory tract infections.
Gerber <sup>10,11</sup>	Continuous and regular reporting of metrics (prescriber performance) led to a 50% reduction in broad spectrum antibiotics (multiple diagnoses) with regular, quarterly reports. Upon follow-up, this effect was found to not be sustained once reporting ceased.

# Evidence-based Recommendations

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## Education and guideline implementation

Study	Intervention
Mangione-Smith, <i>et al.</i> <sup>12</sup> ; Coxeter, <i>et al.</i> <sup>13</sup>	Communication training: focuses on the quality of communication between prescribers and patients. Implementation is shown to have had an 85% reduction in risk of prescribing for viral respiratory tract infections AND improve patient satisfaction. Shared decision making has additionally shown a 38% reduction in prescribing compared to usual care with no reduction in patient satisfaction.



# Evidence-based Recommendations

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## Education and guideline implementation

Study	Intervention
Drekonja, <i>et al.</i> <sup>14</sup>	Systematic review: implementation of antibiotic prescription guidelines were associated with improved outcomes (overall antibiotic usage and appropriateness of selection).

# Evidence-based Recommendations

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## Clinical Decision Support

Study	Intervention
Jenkins <i>et al.</i> : <sup>15</sup>	Clinical pathway + education + peer champion --> significant decrease (14.4% RR; p<0.001) for non-pneumonia respiratory tract infections.

# Evidence-based Recommendations

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Point-of-care Testing	
Study	Intervention
Klepser <i>et al.</i> : <sup>16</sup>	Collaborative disease management for patients with flu-like illness (55 pharmacies across 3 states); patients were screened for use of flu rapid CLIA-waived test; 11% positive resulting in antiviral treatment under the collaborative practice. No antibiotics were give.
Klepser <i>et al.</i> : <sup>17</sup>	Pharmacy-based pharyngitis management program using GAS RADT screening in adults with S/Sx consistent with pharyngitis. 273 pt seen; only 17.6% positive, receiving antibiotics per the program. Pt testing negative were counseled on supportive care - no negative outcomes were noted in those w/o antibiotic treatment.

# Evidence-based Recommendations

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## Delayed Prescribing

Study	Intervention
Chao <i>et al.</i> : <sup>18</sup>	Prospective randomized trial comparing antibiotic use for AOM at 3 days (primary) and 7-10 days (secondary) between groups with a “delayed antibiotic” prescription and groups without any at all. This study additionally assessed parental visit satisfaction. Observation therapy was well accepted by parents of children with AOM. Observation without an antibiotic prescription led to lower antibiotic use for AOM than observation with a delayed antibiotic prescription without affecting visit satisfaction.

# Evidence-based Recommendations

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## Delayed Prescribing

Study	Intervention
de la Poza <i>et al.</i> : <sup>19</sup>	Randomized clinical trial in adults with acute RTIs comparing four treatment strategies: no prescription given, prescription given immediately, prescription given with instructions for delayed fill, and a prescription available for pick up at a return visit. Antibiotic utilization rates were 12%, 91%, 33% and 23% respectively – supporting that delayed strategies result in nominally less antibiotic use.

# Evidence-based Recommendations

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Arieti, *et al.*:<sup>20</sup>

- White paper published by the ARCH working group (series of white papers focusing on a variety of practice settings) based on systematic analysis of current literature.
- Evidence-based recommendations regarding outpatient antimicrobial stewardship focused on:
  - Leadership commitment and accountability
  - Antimicrobial utilization within stewardship efforts
  - Antimicrobial resistance within stewardship efforts

# Evidence-based Recommendations

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Arieti, *et al.*:<sup>20</sup>

- Leadership commitment and accountability
  - **Stewardship teams should be multidisciplinary** (core members: leaders with experience in stewardship/surveillance, pharmacy, general practitioners).
  - Regulate/promote **stewardship activities at every level of the organization** with well-defined roles, responsibilities and governance.
  - Include **dedicated time and salary support for stewardship activities.**
  - **Allocate FTEs** according to national requirements for the setting and level of intervention as available.

# Evidence-based Recommendations

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Arieti, *et al.*:<sup>20</sup>

- Antimicrobial utilization within stewardship efforts
  - Monitor at a minimum:
    - Total consumption of antibiotics.
    - Antimicrobials used in high volume (or top 5-10 agents).
    - Antimicrobials on the Watch and Reserve categories of the WHO Essential Drug List AWARE index.
    - Antibiotics treating locally relevant resistant pathogens (defined by the stewardship team).



# Evidence-based Recommendations

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Arieti, *et al.*:<sup>20</sup>

- Antimicrobial utilization within stewardship efforts
  - National/regional level:
    - DDD (Defined Daily Dose)/1000 patients/day and
    - #RXs/1000 patients/year
  - Prescriber level:
    - #RXs/100 patients/year OR
    - 100 patient contacts/year
  - Local aggregated data made available for physician networks and prescribing units – stratify by specialty or indication
  - Provide **consumption data** on a regular basis **≥once annually**

# Evidence-based Recommendations

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Arieti, *et al.*:<sup>20</sup>

- Antimicrobial resistance within stewardship efforts
  - Identify and monitor resistance patterns among **UTI cultures**
  - Provide and report resistance **surveillance data  $\geq$ once annually**
  - Deliver resistance surveillance **report to all prescribers, clinicians and admin**

# CONCLUSIONS

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# Recommendation Summary

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## Establish Appropriate Goals:

- Identify local barriers and areas of opportunity to prioritize interventions.
- Determine which outcomes and elements are the most critical and feasible at your site.
- Developing interventions (AAAHC/CDC Core Elements):<sup>6,7</sup>
  - Target **high priority conditions** (acute respiratory tract infections).
  - Utilize **existing resources/support** networks, quality improvement.
  - Identify **local barriers**.
  - Establish/measure **antibiotic use benchmarks** to track progress.
  - Establish clear **evidence-based standards** (clinical practice guidelines).

# Recommendation Summary

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## Establish Appropriate Goals:

### Over-prescribing<sup>7</sup>

- (Acute otitis media, acute respiratory tract infections, bronchitis, influenza, sinusitis, rhinitis, pharyngitis, perioperative dental use)
- Patient satisfaction
- Concern for “undetected” bacterial infections
- Perception of no harm with overuse

### Inappropriate antibiotic selection<sup>7</sup>

- (Sinusitis, rhinitis, pharyngitis, UTIs)
- Misconception broader-spectrum = better spectrum
- Perception of “better pharmacokinetics” for non-recommended indications
- Gaps in familiarity with practice guidelines or knowledge of antimicrobial coverage

# Recommendation Summary

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## Implement Sustainable Interventions:

- Consider potential interventions on patient continuum of care that are most relevant to your practice site.

Need to seek care

- **Aim to avoid unnecessary clinic visits**
  - Preventative initiatives
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Decision to prescribe antibiotics

- **Optimize antibiotic use**
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  - Development of regional/local antibiograms
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Dispensing antibiotics

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Post-encounter care

- **Improve patient safety**
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## Implement Sustainable Interventions:

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- Local antibiogram updated annually
- Coordinate regular in-services for prescribers and continuing education programs
- Consider pursuing advanced collaborative practice procedures to utilize POC testing and monitor outcomes data (supplemental, true effect on antimicrobial stewardship is yet to be established)











# Resources

CDC's "Be Antibiotics Aware": <https://www.cdc.gov/antibiotic-use/><sup>21</sup>


*Be Antibiotics Aware* is a national effort to help fight antibiotic resistance and improve antibiotic prescribing and use.



Antibiotics can save lives, but any time antibiotics are used, they can cause side effects and contribute to the development of antibiotic resistance. In U.S. doctors' offices and emergency departments, at least 28% of antibiotic courses prescribed each year are unnecessary, which makes improving antibiotic prescribing and use a national priority.


 About Antibiotic Use	 Improving Antibiotic Use
 Patient Resources and Education	 Core Elements of Antibiotic Stewardship
 Healthcare Professional Resources and Training	 U.S. Antibiotic Awareness Week
 Health Department Resources	 Prescripción y uso de antibióticos

**Antibiotic Prescribing and Use in the U.S.**



[Antibiotic Use in the United States, 2021 Update: Progress and Opportunities](#)

**CDC's Initiative to Fight Antibiotic Resistance**



CDC is working to combat the threat of antibiotic resistance through its [Antibiotic Resistance Solutions Initiative](#). Find out how you can help.

**Treatment for Common Illnesses**

Causes, symptoms, treatment, and how to feel better. See [Treatment for Common Illnesses](#).

# Resources

## CDC's "Be Antibiotics Aware": Prescriber Training

Antibiotic Use

- About Antibiotic Use +
- Patient Resources and Education +
- Healthcare Professional Resources and Training -
- Educational Resources for Healthcare Professionals
  - CE and Training**
  - Treatment Recommendations +
- Health Department Resources
  - Improving Antibiotic Use +
  - Core Elements of Antibiotic Stewardship +
  - U.S. Antibiotic Awareness Week +

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### Continuing Education and Informational Resources

Several organizations, including the Centers for Disease Control and Prevention, provide continuing education (CE) opportunities related to antibiotic resistance and appropriate antibiotic prescribing practices.

### Healthcare Professionals

Below are continuing education opportunities for healthcare professionals regarding judicious antibiotic prescribing and antibiotic resistance.

#### CDC Training on Antibiotic Stewardship

[CDC Training on Antibiotic Stewardship](#)


This online training course offers participants over 10 hours of free continuing education (CE). It is accessible in multiple modules that can be taken in any order.

**Course objectives include:**

- Updating healthcare professionals on current antibiotic resistance threats
- Informing healthcare professionals about proper antibiotic prescribing
- Encouraging open discussion among physicians and patients about appropriate antibiotic prescribing

**Course highlights include educational content on:**

- Antibiotic resistance threats in the United States
- Benefits of antibiotic stewardship
- Risks and benefits of antibiotics
- Epidemiology of outpatient antibiotic use in the U.S. and opportunities for improvement
- Communication training for clinicians to improve outpatient antibiotic prescribing and use
- Antibiotic stewardship considerations for the management of common outpatient conditions
- Antibiotic stewardship in the outpatient setting, dentistry, emergency departments, hospitals, and nursing homes



While this course is primarily for clinicians who prescribe antibiotics, CDC recognizes that everyone plays an important role in improving antibiotic use. Physicians, nurse practitioners, physician assistants, certified health education specialists, nurses, pharmacists, and public health practitioners with a master's degree in public health are eligible to receive over 10 hours of free continuing education.

This course fulfills Improvement Activities (IA) Patient Safety and Practice Assessment (PSPA)\_23 and PSPA\_24 under the Centers for Medicare & Medicaid Services (CMS) Merit-Based Incentive Programs, or MIPS.

### On This Page

- Healthcare Professionals
- Medical Students

### Webinars

- [Tune in to Safe Healthcare: A CDC Webinar Series](#)
- [COCA Call: What Clinicians, Pharmacists, and Public Health Partners Need to Know about Antibiotic Prescribing and COVID-19](#)

# Resources

## CDC's "Be Antibiotics Aware": Patient Education Resources

### Watchful Waiting for Ear Infections



Your child's ear infection may go away on its own, so your healthcare professional may suggest watching and waiting for 2-3 days to see if your child needs an antibiotic. If your child **will not receive a prescription today**. Many ear infections will resolve on their own, and it's safer not to use antibiotics if they aren't needed.

To help your child feel better in the meantime, they should:

- Rest.
- Drink extra water and fluids.
- Use over-the-counter medicines as needed for relief of pain and fever:  
**Ibuprofen.** Dose and Frequency: \_\_\_\_\_  
**Acetaminophen.** Dose and Frequency: \_\_\_\_\_

If your child is feeling better over the next 2-3 days, no further treatment should be needed.

**Call your healthcare professional to discuss whether your child needs a recheck or antibiotics if your child does not feel better or still has ear pain after 2-3 days.**

**Call your healthcare professional right away if your child has any of the following:**

- Fever of 102.2°F (39°C) or higher.
- Fluid draining from the ear.

Antibiotics should be used only when needed. When they aren't needed, they won't help your child, and the side effects could still cause harm. Common side effects include:

- Rashes
- Dizziness
- Nausea
- Diarrhea
- Abdominal pain
- Diaper rashes

Antibiotics can save lives, and when your child needs antibiotics, the benefits usually outweigh the risks of side effects and antibiotic resistance, which occurs when bacteria develop the ability to defeat the drugs designed to kill them. Your healthcare professional can help you know when antibiotics are needed.

### What Is Delayed Prescribing?



#### WAIT. DO NOT FILL YOUR PRESCRIPTION JUST YET.

Your healthcare professional believes your illness may resolve on its own.

First, follow your healthcare professional's recommendations to help you feel better without antibiotics. Continue to monitor your own symptoms over the next few days.

- Rest.
- Drink extra water and fluids.
- Use a cool mist vaporizer or saline nasal spray to relieve congestion.
- For sore throats in adults and older children, try ice chips, sore throat spray, or lozenges.
- Use honey to relieve cough. Do not give honey to an infant younger than 1 year.

If you **do not feel better in \_\_\_\_\_ days/hours or feel worse**, go ahead and fill your prescription.

If you **feel better, you do not need the antibiotic**, and do not have to risk the side effects.

Waiting to see if you really need an antibiotic can help you take antibiotics only when needed. When antibiotics aren't needed, they won't help you, and the side effects could still hurt you. Common side effects of antibiotics can include rash, dizziness, nausea, diarrhea, and yeast infections.

Antibiotics save lives, and when a patient needs antibiotics, the benefits outweigh the risks of side effects. You can protect yourself and others by learning when antibiotics are and are not needed.

# Resources

## CDC's "Be Antibiotics Aware": Patient Education Resources

### What Is Watchful Waiting?



#### WAIT. DO NOT FILL YOUR PRESCRIPTION JUST YET.

Your healthcare professional believes your illness may go away on its own. You should watch and wait for \_\_\_\_ days/hours before deciding whether to take an antibiotic.

In the meantime, follow your healthcare professional's recommendations to **feel better** and continue to **monitor your own symptoms** over the next few days.

- Rest.
- Drink extra water and fluids.
- Use a cool mist vaporizer or saline nasal spray to relieve congestion.
- For sore throats in adults and older children, try ice chips, sore throat lozenges.
- Use honey to relieve cough. Do not give honey to an infant younger than 1 year.

If you **feel better**, no further action is necessary. You don't need antibiotics. If you **do not** feel better, experience **new symptoms**, or have **other concerns**, your healthcare professional \_\_\_\_\_. Discuss whether you need a **recheck or antibiotics**.

It may not be convenient to visit your healthcare professional multiple times if it is critical to take antibiotics only when needed. When antibiotics aren't needed, they won't help you and the side effects could still hurt you. Common side effects of antibiotics can include rash, dizziness, nausea, diarrhea, and yeast infections.

**Antibiotics save lives, and when a patient needs antibiotics, the benefits outweigh the risks of side effects. You can protect yourself and others by learning when antibiotics are and are not needed.**

To learn more about antibiotic prescribing and use, visit [www.cdc.gov/antibiotic-use](#)

### Symptom Relief for Viral Illnesses



#### 1. DIAGNOSIS

- Cold or cough
- Middle ear fluid (Otitis Media with Effusion, OME)
- Flu
- Viral sore throat
- Bronchitis
- Other: \_\_\_\_\_

You have been diagnosed with an illness caused by a virus. Antibiotics do not work on viruses. When antibiotics aren't needed, they won't help you, and the side effects could still hurt you. The treatments prescribed below will help you feel better while your body fights off the virus.

#### 3. SPECIFIC MEDICINES

- Fever or aches: \_\_\_\_\_
- Ear pain: \_\_\_\_\_
- Sore throat and congestion: \_\_\_\_\_

Use medicines according to the package instructions or as directed by your healthcare professional. Stop taking the medication when the symptoms get better.

Signed: \_\_\_\_\_

#### 2. GENERAL INSTRUCTIONS

- Drink extra water and fluids.
- Use a cool mist vaporizer or saline nasal spray to relieve congestion.
- For sore throats in older children and adults, use ice chips, sore throat spray, or lozenges.
- Use honey to relieve cough. Do not give honey to an infant younger than 1 year.

#### 4. FOLLOW UP

- If not improved in \_\_\_\_ days/hours, if new symptoms occur, or if you have other concerns, please call or return to the office for a recheck.
- Phone: \_\_\_\_\_
- Other: \_\_\_\_\_

# Resources

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Simple, Modular, RPMS Reporting Tool (\$MRRT):

<https://ihs.verdegraphics.com/>

- LT Nicholas Stauffer
- Automation of RPMS data extraction and report synthesis
- Modules: bronchitis (cellulitis, UTI, med adherence, diagnosis coding)

Academic detailing (fees associated):

<https://www.narcad.org/training-series.html>

CDC Core Elements of Outpatient Antibiotic Stewardship:

- Clinician Checklist: [https://www.cdc.gov/antibiotic-use/community/pdfs/16\\_268900-A\\_CoreElementsOutpatient\\_check\\_1\\_508.pdf](https://www.cdc.gov/antibiotic-use/community/pdfs/16_268900-A_CoreElementsOutpatient_check_1_508.pdf)
- Facility Checklist: [https://www.cdc.gov/antibiotic-use/community/pdfs/16\\_268900-A\\_CoreElementsOutpatient\\_check\\_2\\_508.pdf](https://www.cdc.gov/antibiotic-use/community/pdfs/16_268900-A_CoreElementsOutpatient_check_2_508.pdf)

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# Ambulatory Care Antimicrobial Stewardship Elements

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