Urgent Care Antibiotic Stewardship Toolkit
Urgent Care Antibiotic Stewardship Toolkit

Summary

Antibiotic stewardship is a public health issue that needs to be addressed in all medical settings, including Urgent Care centers. Urgent Care clinicians and facilities see many patients that present with conditions requiring clinicians to make decisions regarding the use of antibiotics. When making these decisions, clinicians are expected to abide by guidelines and evidence-based medicine while ensuring a positive patient experience. These decisions are multifactorial and need considerations for quality and safety issues, as well as patient experience. Having the proper set of tools is important to have a meaningful impact on the appropriate use of antibiotics.

The Core Elements of Outpatient Antibiotic Stewardship developed by the CDC provide a framework for outpatient clinics and facilities that routinely provide antibiotic treatment. These core elements of commitment, action, tracking and reporting, and education and expertise provide a framework for these tools to be applied in outpatient clinical settings like the Urgent Care centers. Tools such as evidence-based clinical protocols, clinical and patient education, communication tools, etc., can help drive the appropriate use of antibiotics and help improve clinical outcomes.
# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>3</td>
</tr>
<tr>
<td>Core Elements of Outpatient Antibiotic Stewardship</td>
<td>4</td>
</tr>
<tr>
<td>Commitment</td>
<td>4</td>
</tr>
<tr>
<td>Action</td>
<td>4</td>
</tr>
<tr>
<td>Tracking and Reporting</td>
<td>7</td>
</tr>
<tr>
<td>Education and Expertise</td>
<td>7</td>
</tr>
<tr>
<td>Conclusions</td>
<td>7</td>
</tr>
<tr>
<td>References</td>
<td>9</td>
</tr>
<tr>
<td>Appendix A: Sample Letter</td>
<td>11</td>
</tr>
<tr>
<td>Appendix B: Sample Letter</td>
<td>12</td>
</tr>
</tbody>
</table>
Introduction

Antibiotic stewardship is among the current hot topics about which we are hearing from experts, colleagues, and even politicians. According to the Center for Disease Control and Prevention (CDC), antibiotic stewardship is the effort to measure and improve how antibiotics are prescribed by clinicians and used by patients. The issue of antibiotic resistance poses a genuine public health concern, and for good reason. According to the CDC, at least 30% of antibiotic courses prescribed in the outpatient setting are unnecessary, meaning that no antibiotic is needed at all. Most of this unnecessary use is for acute respiratory conditions, such as colds, COVID-19, bronchitis, sore throats caused by viruses, and even some sinus and ear infections. There is a high frequency of prescribing antibiotics in the outpatient setting for COVID-19 despite no benefit whatsoever against this infection. Also, according to the CDC, total inappropriate antibiotic use (which includes unnecessary antibiotic use plus inappropriate antibiotic selection, dosing, and duration) may approach 50% of all outpatient antibiotic use.

These trends in antibiotic use have come with a heavy cost. Antibiotics cause 1 out of 5 emergency department visits for adverse drug events (ADEs) and are the most frequent cause of ADEs leading to emergency department visits in children. Seven of the top ten drugs involved in ADEs leading to emergency room visits are antibiotics. Stated in terms of cost, $10.7 billion were spent on antibiotics in the United States in 2009, including $6.5 billion among patients who visit physician offices.

What does this mean for Urgent Care clinicians and facilities? Most of us feel our current antimicrobial prescription usage is appropriate. There is evidence, however, that as a group, we could improve significantly. Antibiotics are prescribed sometimes when they are not needed, and broad-spectrum antibiotics are prescribed sometimes when narrow-spectrum agents would be recommended. Reasons for such behaviors could include patients explicitly requesting antibiotics, clinician perception that patients want antibiotics, and patient satisfaction concerns. Some other reasons include practicing defensive medicine, or, covering for an infection that might be worse than it appears, etc.

Unfortunately, even completely appropriate antibiotic prescribing will harm some patients (allergic reactions, diarrhea, commensal overgrowth, Clostridium difficile infections) and lead to antibiotics being less useful over time. This is an accepted cost for treating infections the right way, however, over-prescribing and inappropriate prescribing have all the negatives with no clinical upside.

Urgent Cares are on the front lines, seeing the largest group of patients of any specialty where the decision to treat with antibiotics or not and which antibiotic to use is made so many times a day it’s almost impossible to count. The College of Urgent Care Medicine (CUCM) has developed a toolkit to help Urgent Care clinicians and facilities develop and implement strategies that will help them promote antibiotic stewardship at their levels. This document provides this toolkit.

Please note, there are certain circumstances where special considerations regarding antibiotic use should be considered, such as high-risk patients including those who are immunosuppressed and those with poor follow-up. As scientists, we also need to understand that a high pretest probability may outweigh an initial negative test while awaiting culture results. But these should be the exceptions to the rule of appropriate prescribing. What if it seems like a patient really wants antibiotics? Clinicians should utilize their tool kits and spend time educating patients on the reasoning behind their clinical decision making.
Core Elements of Outpatient Antibiotic Stewardship

The Core Elements of Outpatient Antibiotic Stewardship developed by the CDC provide a framework for outpatient clinics and facilities that routinely provide antibiotic treatment. This model can help Urgent Care clinicians and facilities implement effective strategies to modify prescribing practices in hopes of aligning them with evidence-based recommendations for diagnosis and management. The core elements of outpatient antibiotic stewardship include commitment, action for policy and practice, tracking and reporting, and education and expertise.

Commitment

The first and perhaps the most critical step to implementing an antibiotic stewardship program is commitment to the program. It is important that this commitment is demonstrated at both the clinician and facility level. Certain measures through which this commitment can be demonstrated in Urgent Care include:

Clinicians:

- Letter in support of antibiotic stewardship: Clinicians should have a poster in the exam rooms showing a letter from them to their patients stating their commitment to prescribing antibiotics appropriately. As shown in Appendix A, the letter can be a simple statement demonstrating this commitment.

Facilities:

- Single dedicated leadership: There should be one leader in place with leadership and administrative support who should oversee antibiotic stewardship and be accountable to the senior leadership.
- Support for the clinicians: CUCM recommends that the senior facility leadership should provide a letter or a written statement to the clinicians and the staff to inform them that they will be supported when following evidenced based guidelines when prescribing antibiotics. In this era of weighted patient satisfaction scores and emphasis on customer experience and ratings, many providers are hesitant to not prescribe antibiotics for fear of poor scores. Once these clinicians know they have the leadership and administrative support, they are more likely to appropriately prescribe antibiotics. Appendix B provides an overview of such a statement.

Action

We recommend that clinicians and facilities begin by developing a plan to focus on a few top diagnoses where antibiotic stewardship would be useful. A few common conditions where antibiotics are overprescribed typically include upper respiratory infections, pharyngitis, sinusitis, and bronchitis. Through the use of electronic medical records and chart reviews, parameters can be set up to monitor prescribing habits for one or more of the previously mentioned conditions. Policies can be created to support evidence based medical guidelines regarding antibiotic usage and prescribing. A plan stating the mission and outcomes of Antibiotics Stewardship can also be created and distributed to staff. Goals may also be identified during this step.

Certain actions that clinicians and facilities can perform to promote antibiotic stewardship include:

1. Use evidence-based diagnostic criteria and treatment recommendations. We should all routinely avoid prescribing antibiotics for those with:
a. Acute pharyngitis without a positive objective test for Strep ii. Acute bronchitis, without pneumonia, when there is no comorbidity of COPD, pulmonary fibrosis, or other chronic lung disease (other than asthma)
b. Viral upper respiratory infections, including COVID-19
c. Asthma exacerbation without pneumonia
d. Non-severe sinusitis of less than 10 days duration

In situations where patients do have a positive objective test for Strep, have Bronchitis with chronic lung disease, or non-severe sinusitis for longer than 10 days, narrow-spectrum antibiotics typically work fine and conform to current evidence-based guidelines4, 5, 6.

Tools that can be used include:

- CDC – Adult Outpatient Treatment Recommendations
- Oxford Academic – Clinical Practice Guideline for the Diagnosis and Management of Group A Streptococcal Pharyngitis: 2012 Update by the Infectious Diseases Society of America

2. Use delayed prescribing practices or watchful waiting, when appropriate.

Tools that could be used include:

- CDC – What is Delayed Prescribing? PDF
- CDC – What is Watchful Waiting? PDF

3. Provide communications skills training for clinicians. Clinicians need to work with the patients to collectively acknowledge that antibiotic “nontreatment” may indeed be a change from what the patient had experienced in the past, but it is informed by the newest science of benefits and harms of antibiotics.

Tools that could be used include:

- AAFP – How to Prescribe Fewer Unnecessary Antibiotics: Talking Points That Work with Patients and Their Families
- NYSDOH NY – Video – Educating Patients About Antibiotic Use (7:40 min)

Certain other communication tools that can help clinicians with these tough communications include:

a. Refer to bronchitis as a “chest cold” or viral URIs/sinus symptoms as a “head cold” with “sinus pressure”.
b. Leave the door open for easy follow-up if symptoms worsen or do not improve.
c. When prescribing an antibiotic, explain the possible patient harm associated with antibiotics. These include an increase in antibiotic resistance for a person, their family and friends, and society in general; yeast infections, diarrhea, and more severe Clostridium difficile colitis; allergic reactions, etc. It is anyways a good practice to explain and discuss with patients the side effects and adverse events associated with antibiotic use in every situation where an antibiotic is prescribed.
d. When an antibiotic is appropriately prescribed, specifically explain to the patient why they need it and that it might not be needed each time they feel similarly ill.
4. Require explicit written justification in the medical record for non-recommended antibiotic prescribing.

CUCM recommends that practices work with their respective EMR vendors to develop mechanisms to incorporate hard stops in the EMR or require a written justification for non-evidence-based medicine practices regarding antibiotic prescribing.

5. Provide support for clinical decisions.

The EMRs can be a great resource to provide "decision support" mechanisms which would help clinicians in making better decisions with regards to the antibiotic prescriptions.

6. Examples of such features within the EMR would include the addition of "popup" boxes with acknowledgement by the clinician. These could be simple "yes/no" acknowledgements (more educational in nature) or include the need to write-in a reason (a minor impediment to doing the “wrong” thing). As well, data on clinician responses could be followed to assess individual’s practice for ongoing feedback.

Here are some ideas:

a. Anytime an antibiotic is prescribed when the only diagnosis is “viral upper respiratory infection”, “viral pharyngitis”, “COVID-19” or the varying ICD10 diagnoses that go with “acute bronchitis”, “asthma exacerbation” “serous otitis media”, “sinusitis” (other than the ICD10 diagnosis that indicates that symptoms have persisted for more than 10 days) or similar, have a popup that says “Antibiotics are not needed for the diagnosis(es) listed. Please provide a rationale for this prescription.” and have the clinician type-in a response. If, after the rationale, the clinician still prescribes an antibiotic, then another popup can come up with “Have you considered the option of delayed or post-dated antibiotic treatment in this case?”

b. Anytime an antibiotic is prescribed for any of the suppurative otitis media diagnoses, have another popup that says, “Have you considered the option of watchful waiting or delayed or post-dated antibiotic treatment in this case?”

c. Anytime an oral antibiotic is prescribed for otitis externa, have a popup that says “This condition usually responds to topical therapy alone. Please provide a rationale for this prescription.”

d. Anytime an antibiotic is prescribed for “Strep pharyngitis” have a popup that says “A positive objective test for Strep is recommended prior to antibiotic prescription.” and leave it at that, or have some part of the programming that can tell that the test was done, or require more explanation based on an initial yes/no response as to whether one was done or not.

e. Anytime amoxicillin/clavulanate, levofloxacin, ciprofloxacin (others?) is prescribed, have a popup that says “A narrower-spectrum antibiotic may be more appropriate. Please provide a rationale for this prescription.”

f. Anytime anything other than nitrofurantoin, TMP/SMX, or cephallexin is prescribed for “acute cystitis” have a popup that says “Evidence supports the use of other antibiotics in this case. Please provide a rationale for this prescription.”
Anytime any antibiotic is prescribed, have a pop-up that says something to the effect “Have you advised the patient of the true need for this medication for his/her infection and the potential side effects and harms?”

Tracking and Reporting
CUCM recommends that Urgent Care centers perform regular audits and provide feedback to guide changes in practice and to assess improvement in antibiotic prescribing trends. The following tools can be used by clinicians and facilities for tracking and reporting:

Clinicians:
- Self-evaluate antibiotic prescribing practices. This step is one of the most important for antibiotic stewardship. Clinicians can and should play an extremely important role in performing self-assessments to develop a feedback loop for self-improvement. Self-assessments can be performed by reviewing individual reports on antibiotic use and noting continued improvement. Another important avenue for doing self-assessments is performing peer reviews. CUCM strongly suggest developing peer review committees and having them cases on a regularly scheduled basis to monitor for outliers and improvement.
- Participate in continuing medical education and quality improvement activities to track and improve antibiotic prescribing: CDC – Continuing Education and Informational Resources – DCD Training on Antibiotic Stewardship.

Facilities:
- Implement at least one antibiotic prescribing tracking and reporting system.
- Assess and share performance on quality measures and established reduction goals addressing appropriate antibiotic prescribing from health care plans and payers.

Education and Expertise
Both clinician and patient education is essential in order to operationalize changes in behaviors that are associated with antibiotic use. Here is a list of certain tools that can be used:

Clinician Education Tools:
- CDC Train – Antibiotic Resistance, Antibiotic Stewardship, and Antibiotic Adverse Events
- Stanford Medicine – To Prescribe or Not to Prescribe
- Stanford Health Care – Think Twice About that Fluoroquinolone Prescription PDF
- CDC – Is it Really a Penicillin Allergy? PDF

Patient Education Tools:
- CDC – Viruses or Bacteria – What’s Got You Sick? PDF
- CDC – Symptom Relief for Viral Illnesses PDF
- CDC – Antibiotic Do’s & Don’ts

Conclusions
Antibiotic stewardship is a journey of gaining continuous improvement in the core understanding of the role of antibiotics in treating conditions through the use of evidence-based medicine. A better
understanding of the role of the antibiotics in treating relevant conditions, and their avoidance for conditions that do not necessitate their use will help in improving the clinical decision-making processes and operations that we have set up in Urgent Care centers. Recognizing the need for antibiotic stewardship and applying the correct tools to help Urgent Care centers achieve this goal are the responsibility of all clinicians and practices that help patients in an Urgent Care model of healthcare delivery. Establishing and implementing a good antibiotic stewardship in Urgent Care centers can help protect patients from unnecessary antibiotic use and their unintended consequences. This can also help improve clinical outcomes in Urgent Care centers. Educating our colleagues to be consistent not sending mixed messages to patients will help improve the process. Things will not change overnight, but a dedicated effort is necessary – for patients and for future effectiveness of antimicrobials.
References


Appendix A: Sample Letter

To: _____________ Clinical Employees

Subject: ____________Antibiotic Stewardship Program

This letter is to inform Health System providers, leaders, and employees that ______________ Antibiotic Stewardship Program (ASP) is a key initiative of highest priority. The prudent use of antimicrobials within the hospital and other healthcare facilities is clinically vital to the health of our community.

As you may be aware, up to 50% of antimicrobials prescribed in US acute care hospitals are estimated to be either unnecessary or inappropriate. There is a causal relationship between inappropriate antimicrobial use and antimicrobial drug resistance. Globally, the dramatic rise in resistant microorganisms and the slow development of new antimicrobial drugs has prompted various agencies to focus on optimizing usage.

The priority of this effort is evidenced by the President’s National Plan to Combat Antibiotic Resistance and The Joint Commission (TJC) standards for Antibiotic Stewardship.

_______________ has created an interdisciplinary team to implement and oversee our Antibiotic Stewardship Program. Dr. _____________ from Infectious Disease Services will serve as lead for the ASP along with Dr. _____________ from Pharmacy Services and Dr _____________, Chief of Medical Quality. The team operates in collaboration between Infection Preventionists, Nursing representatives, Pharmacists, and Providers. Members will be responsible for clinical reporting, developing antimicrobial policies, ensuring utilization of our antibiogram, providing staff education on the prudent use of antimicrobials, and other related responsibilities.

_______________ supports its Ambulatory team at ________________ providing Urgent Care, Primary Care and Specialty Services. _______ leadership has committed in all outpatient settings to the Antibiotic Stewardship program. The team consists of the Ambulatory medical leadership, Dr. _____________ from Primary Care, Dr. _____________ from Urgent Care and Dr. _____________ from Ambulatory Medical Quality as well as all the Nursing Directors in each center. The team will work in conjunction with _____________ hospital team for collaboration and continuity of care. Providers and staff have been educated on evidenced based management of illness, alternatives, and microbial resistance. Members of the Ambulatory Antibiotic Stewardship program are responsible for tracking and reporting, education, and evaluation of the program’s efficacy.

Information and educational materials on Antimicrobial Stewardship will be available on the Pharmacy Webpage under Infectious Disease – Antimicrobial Stewardship.

My signature below represents my understanding of the importance of this national priority, as well as my commitment to supporting the initiatives at my organization.

Recipient: (print and sign) ____________________________________________
Appendix B: Sample Letter

Dear Urgent Care Physicians, Nurse Practitioners and Physician Assistants,

[Company] Urgent Care has committed to implementing an Antimicrobial Stewardship Program in all our Urgent Care Centers. The initiation of the program is to mirror what is being implemented on the inpatient facilities within the [Company] System. The Antimicrobial Stewardship Program has been created due to the increasing burden of healthcare spending, adverse outcomes, and health of the community we serve.

This program involves appropriately prescribing antibiotics the right dose, type, and duration for the patient. Guidance and assistance are offered through Urgent Care leadership as well as through the [Company] pharmacy team and the Infectious Disease Department. Education will be continuously provided throughout to the providers. Our patients will be given literature and other forms of education regarding correct antibiotic prescribing. Administration will support providers when patients are displeased with this initiative supported by evidence-based medicine.

Please continue the great and important work performed in our Urgent Care centers knowing you will be supported. We are all appreciative of the excellent care you provide to the patients and community of [Company].

Best,

CMO