

AHRQ Safety Program for Telemedicine: Improving Antibiotic Use

Implementation Guide for the AHRQ Toolkit To Improve Antibiotic Use in Telemedicine

Introduction

Developing or improving antibiotic stewardship activities in telemedicine practices can take time. If you are just starting to implement antibiotic stewardship activities as a telemedicine clinician or in a telemedicine practice, the resources provided in the [AHRQ Toolkit To Improve Antibiotic Use in Telemedicine](#) are intended to be introduced and implemented over 1–2 years. If you have been incorporating antibiotic stewardship activities in your telemedicine practice or as a telemedicine clinician for some time, you should assess what elements of the toolkit will enhance your efforts. If you are currently incorporating antibiotic stewardship activities in your telemedicine practice, you should assess which elements of the toolkit will improve your efforts. Regardless of the stage of your implementation, you should begin by reviewing the elements of the toolkit, as described below. Of note, some content is available in more than one section of the toolkit. Implementation of the toolkit can help practices address the [Centers for Disease Control and Prevention's Core Elements of Outpatient Stewardship](#) as applied to telemedicine.

Most topics included in the toolkit include a presentation and other content. Presentations include a slide set and a script, referred to in the toolkit as a facilitator guide. In addition, many topics, particularly those regarding infectious diseases syndromes, include a one-page summary of the most pertinent information intended for clinicians and members of a telemedicine practice. Handouts for patient and family education are available for most topics. In addition, most infectious syndrome topics have sample responses to patient portal messages that may be received by a telemedicine practice or clinician.

Develop and Improve Your Stewardship Activities

It is recommended to begin with the presentations and tools under the “[Develop and Improve Antibiotic Stewardship Activities in Telemedicine Practices To Improve Patient Safety](#)” tab. The presentations in this section cover why a telemedicine practice should focus on improving antibiotic prescribing, how to develop infrastructure to promote antibiotic stewardship in your telemedicine practice, and how to collect data and track your progress. The tools are intended to complement the presentations as additional material to guide interventions.

Summary of Topics

- “Why Should Practices Focus on Improving Antibiotic Prescribing” ([slides](#) and [facilitator guide](#)) provides a general overview of why improving antibiotic use is important from a patient safety perspective. This presentation can be used to demonstrate to leadership, telemedicine clinicians, and telemedicine practice staff the potential harms associated with antibiotic use and why all individuals should work together to use antibiotics in the safest and most effective way possible. This presentation is intended for the entire telemedicine practice and can be used at a telemedicine practice meeting to introduce the concepts of antibiotic stewardship in telemedicine.
- “Antibiotics and What they Treat” ([slides](#) and [facilitator guide](#)) provides detailed information about the coverage of specific antibiotics and antibiotic classes. This presentation is important for clinicians to review to be reminded what specific infections different antibiotics treat. This presentation is intended



for all the telemedicine clinicians and can be used at a telemedicine practice meeting to learn about indications for antibiotics.

- “Addressing Antibiotic Allergies” ([slides](#) and [facilitator guide](#)) explains how to address commonly reported antibiotic allergies in telemedicine encounters, and how evaluating antibiotic allergies can improve antibiotic stewardship and antibiotic safety. This presentation is intended for the entire telemedicine practice and can be used at a telemedicine practice meeting.
- “Sustaining Antibiotic Stewardship Activities” ([slides](#) and [facilitator guide](#)) focuses on how to develop sustainability plans to determine antibiotic stewardship activities over the initial 1–2 years of starting antibiotic stewardship work or forming an antibiotic stewardship team and how to identify targets for future antibiotic stewardship efforts based on antibiotic prescribing patterns. This presentation is targeted toward members of the antibiotic stewardship team.

Associated Tools

- The [Gap Analysis Tool](#) assists with the evaluation of current antibiotic stewardship staffing and implementation and allows for identification of areas in which antibiotic stewardship activities may benefit from improvement. It should be completed at the beginning of a telemedicine practice’s stewardship implementation work. If, after completing the gap analysis, major deficiencies are noted, antibiotic stewardship leadership should meet with practice leadership to determine how to manage the deficiencies. This may include developing a business case for additional staff resources or gaining access to data analysis resources. The gap analysis should also be filled out annually to track progress over time and review the potential need for changes in resource allocation.
- The [Commitment Poster](#) is a poster declaring that the telemedicine practice and telemedicine clinicians are dedicated to ensuring judicious antibiotic prescribing. The poster is intended to be signed by clinicians and displayed as a poster behind the clinician, as a screensaver, or as a landing page on a telemedicine platform as a visible pledge to patients, families, and staff members that the telemedicine practice is committed to safe and responsible antibiotic prescribing. Photographs of telemedicine clinicians and staff and the telemedicine practice logo can be added to the poster.
- The [Antibiotic Prescribing Data Collection Tool](#) is a comprehensive data collection form for building a system to track antibiotic prescriptions and telemedicine visits. It is intended to be shared with the information technology group that supports the telemedicine practice to facilitate extraction of antibiotic prescriptions for respiratory tract infections based on a provided list of ICD-10 codes.
- The [Guide to Conducting a Virtual Physical Exam Over Telemedicine](#) provides advice on how to perform elements of a virtual physical examination over telemedicine. It focuses on general advice and advice on how to perform a virtual upper respiratory tract exam, a virtual exam of the chest, a virtual abdominal exam, and a virtual skin exam. This document is intended to be used by clinicians who see patients over telemedicine in synchronous video visits.

The [Sustaining Antibiotic Stewardship Tools](#) can help you continue your antibiotic stewardship activities over time. It is suggested that these tools be used to develop a [sustainability plan](#) to determine antibiotic stewardship activities over the initial 1–2 years of starting antibiotic stewardship work and identify targets for future antibiotic stewardship efforts based on antibiotic prescribing patterns.

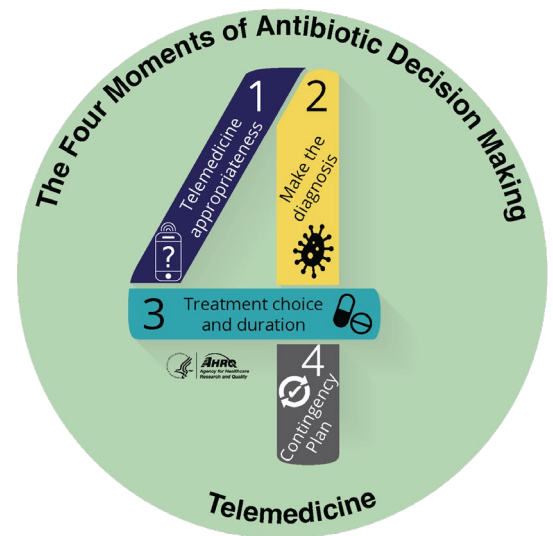
Four Moments of Antibiotic Decision Making Framework

Next, review the [Four Moments of Antibiotic Decision Making framework](#) and determine how to present it to telemedicine clinicians and staff. This framework identifies the critical time periods of antibiotic decision making

throughout a course of antibiotics. It is intended to be disseminated to all telemedicine clinicians and telemedicine staff to ensure that a standardized, rational thought process is employed when making decisions about whether antibiotics are needed and, if so, the most appropriate regimen.

Actions that can be taken to integrate the Four Moments into regular practice include:

- Local guidelines or protocols should be developed using the Four Moments framework. For example, each guideline/protocol should include appropriate diagnostic criteria to determine which patients can be seen over telemedicine, which patients may have an infection requiring antibiotics, and whether diagnostic testing is needed; recommendations for antibiotic therapy including duration of therapy; and guidance on followup instructions.
- [Posters](#) are available that can be reproduced for displaying in telemedicine portals, screensavers, and on landing or log-in screens, or for distributing to staff to remind them of the Four Moments.



Learn Strategies for Communicating With Patients, Families, and Colleagues About Antibiotic Prescribing in Telemedicine

Next, review the material under the "[Learn Strategies for Communicating With Patients, Families, and Colleagues About Antibiotic Prescribing in Telemedicine](#)." These materials are designed to improve communication and consensus around antibiotic prescribing within the telemedicine practice. In telemedicine, communication about antibiotic prescribing with patients and their families is essential in improving antibiotic use. It is also important to come to a consensus as a telemedicine practice around the importance of judicious antibiotic prescribing and management of patients with symptoms of infections.

Summary of Topics

- "Communicating With Patients and Families About Antibiotic Decisions" ([slides](#) and [facilitator guide](#)) focuses on how telemedicine clinicians and telemedicine practice staff can communicate with patients and families around appropriate antibiotic use. This presentation uses examples of common concerns raised by patients and families around desires for antibiotic treatment for conditions for which antibiotics will not improve outcomes and can cause harm (e.g., upper respiratory tract infections, influenza without pneumonia, COVID-19, and respiratory syncytial virus [RSV] infection, and acute bronchitis) and strategies to address these concerns. This presentation is intended for the entire telemedicine practice.

Associated Tools

- The [Commitment Poster](#) is a poster declaring that the telemedicine practice and telemedicine clinicians are dedicated to ensuring judicious antibiotic prescribing. The poster is intended to be signed by clinicians and displayed in as a poster behind the clinician, as a screensaver, or as a landing page on a telemedicine platform. It serves as a visible pledge to patients, families, and staff members that the telemedicine practice is committed to safe and responsible antibiotic prescribing. Photographs of telemedicine clinicians and staff and the telemedicine practice logo can be added to the poster.

- The [Communicating With Patients and Families Clinician Guide](#) summarizes approaches to improve communication with patients and their families about antibiotic decisions. It provides telemedicine clinicians with potential responses to patients or their family members who are requesting antibiotics that are not indicated.
- The [Communicating With Your Clinician Patient Handout](#) can be provided to patients and their families to help explain why antibiotics are sometimes not needed.
- The [Sample Responses to Patient Portal Messages](#) are a group of handouts separated by syndrome or infectious condition. These provide examples of responses to common patient portal messages that may be sent by patients or their family members regarding common infectious syndromes or conditions. Clinicians or telemedicine practice staff can modify these responses and use them as templates to quickly and efficiently respond to patient portal messages.
- The [Handouts for Patients and Families](#) can be provided electronically or printed for patients and their families to provide information about common infections treated over telemedicine.

Learn Best Practices for Diagnosing and Managing Common Infectious Syndromes over Telemedicine

Next, review the materials under the “[Learn Best Practices for Diagnosing and Managing Common Infectious Syndromes over Telemedicine](#)” tab. Each syndrome is associated with a presentation and a facilitator guide. In addition, other support materials include brief documents for each syndrome that can be used as a poster, handout, and/or template for local guidelines; patient and family handouts; and sample responses to patient portal messages.

The specific infectious diseases topics addressed are case based and focus on common scenarios in the telemedicine setting. Several focus on respiratory tract infections because these are common reasons for patients to contact a telemedicine practice and often result in antibiotic prescriptions. Topics discussed include respiratory tract infections (influenza infections, RSV infections, upper respiratory tract infections/the common cold, COVID-19 infections, acute bronchitis, acute sinusitis, pharyngitis, and acute otitis media in children), sexually transmitted infections in adults, urinary tract infections, cellulitis, and diarrhea. Also included is information on the assessment and management of antibiotic allergies. In addition, three topics include a one-page informational document only for clinicians: conjunctivitis, tickborne illnesses, and antibiotic prophylaxis.

Suggestions for integrating the material into a telemedicine practice include:

- Standing meetings with telemedicine clinicians to (1) review topic-specific materials and agree on an approach to integrate the material into practice, and (2) develop and implement relevant local guidelines/protocols.
- Strategic distribution of antibiotic stewardship materials in frequently accessed points of care (e.g., local website, telemedicine portal landing page, etc.).
- Incorporation of presentations into telemedicine clinician and/or staff onboarding and/or orientation materials.

Your telemedicine practice may consider focusing on a specific syndrome or topic every few months. During that period, activities may include developing or updating local guidelines/protocols on the topic, disseminating information about the topic to members of the telemedicine practice, and collecting and feeding back data on improvements in how clinicians are managing these syndromes. Whenever the stewardship team updates

material, it is important to ensure that all members of the telemedicine practice are aware of the changes (and that consensus is reached) to ensure that the most up-to-date content is being used and to ensure buy-in.

Conclusions

The AHRQ Toolkit To Improve Antibiotic Use in Telemedicine provides a pathway for telemedicine practices to develop and improve their antibiotic stewardship approaches. Telemedicine practices are encouraged to consider how all elements of the toolkit can be applied to improve antibiotic use and enhance the safety of patients receiving antibiotics.

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