



**GREAT PLAINS QIN – KANSAS**

**OUTPATIENT**

**ANTIBIOTIC STEWARDSHIP TOOLKIT**

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*Serving Kansas, Nebraska, North Dakota & South Dakota*

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## Introduction

Antibiotic Resistance is a critical national and global health concern. The discovery of antibiotics in the early 20th century fundamentally transformed human and veterinary medicine. Antibiotics now save millions of lives each year in the United States and around the world. However, the rise of antibiotic-resistant bacterial strains represents a serious threat to public health and the economy. The CDC estimates that annually at least two million illnesses and 23,000 deaths are caused by antibiotic-resistant bacteria in the United States alone. <sup>1</sup> Antibiotics account for nearly 1 in 5 adverse drug events, and of those about 6% require hospitalization. An estimated 34 million unnecessary prescriptions for antibiotics are ordered each year to treat acute respiratory conditions.

As more strains of bacteria become resistant to an ever-larger number of antibiotics, our drug choices will become increasingly limited and expensive and, in some cases, non-existent. If this trend continues unchecked, a wide range of modern medical procedures, from basic dental care to organ transplants, likely would be accompanied by a much greater risk of developing a difficult-to-treat or untreatable antibiotic infection. The safety of many modern medical procedures is dependent on the ability to treat bacterial infections that can arise as post-treatment complications. <sup>2</sup>

Antibiotic stewardship programs are designed to **strategically approach, monitor, reduce and prevent misuse and overuse** of antibiotics in healthcare settings. The Centers for Disease Control and Prevention (CDC) released core elements of antibiotic stewardship in outpatient settings to help guide providers in the right direction. Establishing effective antibiotic stewardship interventions can **protect patients and improve clinical outcomes** in outpatient healthcare settings.

**This toolkit provides outpatient antibiotic stewardship leaders with resources to aid in the implementation of a program inclusive of the CDC Core Elements of Outpatient Antibiotic Stewardship.**

1. [Centers for Disease Control and Prevention](#)
2. [White House National Strategy for Combatting Antibiotic Resistant Bacteria](#)

*“Every day we don’t act to better protect antibiotics, we will make it harder and more expensive to address drug resistance in the future. Drug resistance can undermine both our ability to fight infectious diseases and much of modern medicine.” – Dr. Tom Frieden, MD, MPH, Director U.S. Centers for Disease Control and Prevention*

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## About Great Plains Quality Innovation Network

Great Plains Quality Innovation Network (QIN) is the Quality Innovation Network-Quality Improvement Organization (QIN-QIO) serving Kansas, Nebraska, North Dakota and South Dakota. Great Plains QIN uses the collective knowledge and resources of its members to achieve the aims of better health care that include improved health, safer care and lower healthcare costs.

Join our Learning and Action Network to have access to tools, resources, education, subject matter experts and networking opportunities. Learn more on our website at [www.greatplainsqin.org/antibiotic-stewardship/](http://www.greatplainsqin.org/antibiotic-stewardship/).

For more information about our antibiotic stewardship initiative, please contact:

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## Core Elements

The [CDC Core Elements of Outpatient Antibiotic Stewardship](#) contains four core elements.

### Commitment

A commitment from all health care team members to prescribe antibiotics appropriately and engage in antibiotic prescribing is crucial in improving antibiotic prescribing. Every person involved in patient care can act as an antibiotic steward. By agreeing to work with the Great Plains QIN in our Outpatient Antibiotic Stewardship Initiative and appointing a clinical leader you have organizationally committed to use antibiotics appropriately.

- Write and display public commitments in support of antibiotic stewardship
- Identify a single leader to direct antibiotic stewardship activities within a facility
- Include antibiotic stewardship related duties in position descriptions or job evaluation criteria
- Communicate with all clinic staff to set patient expectations

Commitment resources include:

- [Great Plains QIN Commitment Poster](#)
- [A Commitment to Our Patients About Antibiotics \(poster\)](#)
- [A Commitment to Patients and Kansas Healthcare Providers \(editable\)](#)

## Action

Taking action is the implementation of policies and interventions to promote appropriate antibiotic prescribing practices. A stepwise approach with achievable goals can facilitate policy and practice changes and help clinicians and staff members adjust practices. Assessment and modification and prioritizing of implemented policies and interventions are critical to improving antibiotic prescribing practices.

- Use evidence-based diagnostic criteria and treatment recommendations.
- Use delayed prescribing practices or watchful waiting, when appropriate.
- Provide communications skills training for clinicians.
- Require explicit written justification in the medical record for non-recommended antibiotic prescribing.
- Provide support for clinical decisions.
- Use call centers, nurse hotlines, or pharmacist consultations as triage systems to prevent unnecessary visits.

Action resources include:

- [Great Plains QIN Viral Prescription Pad](#)
- [Chart: Viruses or Bacteria — What's Got You Sick?](#)
- [An antibiotic is the wrong tool to treat a virus \(poster\)](#)

## Tracking and Reporting

Tracking and reporting antibiotic prescribing, also called audit and feedback, can guide changes in practice and be used to assess progress in improving antibiotic prescribing.

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

When setting up reporting systems, decisions need to be made about the level at which to track and report, which outcomes to track and report, and how to obtain the data. This core element is flexible to apply to a variety of settings.

Your practice might consider tracking:

- HEDIS or QPP measures
- Antibiotic prescribing for one or more high-priority conditions (e.g. acute bronchitis)
- Percentage of all visits leading to antibiotic prescriptions
- Pharmacies can track vaccinations
- At the system level
  - Complications of antibiotic use (e.g. adverse drug events, *C. difficile* infections)
  - Antibiotic resistance trends among common outpatient bacterial pathogens

Tracking and reporting resources include:

- Audit Worksheets –
  - [Bronchitis](#)
  - [Viral Upper Respiratory Illness](#)
- [Peer Comparison May Yield Lasting Boost in Antibiotic Stewardship](#) -
- [Measuring Outpatient Prescribing](#)
- HEDIS and MIPS/QPP Measures
  - <http://www.ncqa.org/hedis-quality-measurement/hedis-measures>
  - [The Quality Payment Program and Antibiotic Stewardship Crosswalk](#)
  - <https://qpp.cms.gov/mips/quality-measures>

## Education & Expertise

Providing appropriate antibiotic use education to patients and their family members can improve health literacy and support efforts to improve antibiotic use. Education for clinicians and clinic staff members reinforces appropriate antibiotic prescribing and improves the quality of care.

### Clinicians:

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

### Outpatient Facilities:

- Provide face-to-face educational training (academic detailing)
- Provide continuing education activities for clinicians
- Ensure timely access to persons with expertise

Deficits in knowledge are not the only barrier to prescribing antibiotics appropriately in the outpatient setting. Effective education includes reviewing and understanding the guidelines for appropriate antibiotic prescribing while also addressing the additional psychosocial pressures that influence clinician prescribing practices such as organizational focus on patient satisfaction.

A valuable resource for clinicians is providing organizational access to colleagues and consultants with expertise in appropriate antibiotic use. Pharmacists and clinical pharmacists can provide this expertise and support either internally or on a contract basis. Perhaps an existing telehealth program could be brought to use here by providing access to infectious disease or clinic pharmacists with antibiotic stewardship expertise.

### Education resources include:

- **Patient –**
  - [Antibiotics Aren't Always the Answer \(poster\)](#)
  - [Antibiotics Aren't Always the Answer \(brochure\)](#)
  - [Chills, Coughs and/or Colds - Oh My! \(poster\)](#)



- **Provider –**

- [Stanford CE Course: To Prescribe or Not to Prescribe – Antibiotics and Outpatient Infections](#)
- [Is It Really a Penicillin Allergy? \(poster\)](#)
- [List of Kansas providers that can perform PCN testing](#)
- [PCN Allergy Testing](#)
- [Weighing in on Antibiotic Resistance: Community Pharmacists Tip the Scale](#)
- [Adult Treatment Recommendations](#)
- [Pediatric Treatment Recommendations](#)
- [Antibiotic Resistance Patient Safety Atlas](#)
- [Antibiotic Resistance Patient Safety Atlas – Antibiotic Class Definitions](#)
- [Continuing Education Courses](#)

## Supportive Literature and Other Resources

[CDC Core Elements of Outpatient Antibiotic Stewardship – Appendix](#)

[Pew Charitable Trusts Antibiotic Use in Outpatient Settings](#)

[Kansas Healthcare-Associated Infections & Antimicrobial Resistance Advisory Group](#)

[Videos for Healthcare Professionals](#)

[Great Plains QIN Core Element Video Series](#)

[KDHE Semmelweis Times ABS Part 1](#)

[KDHE Semmelweis Times ABS Part 2](#)

[Antibiotic Use in the United States, 2017: Progress and Opportunities](#)

Pisano, J., *et al.* (2016). Social media as a tool for antimicrobial stewardship. *AJIC*, 44, pp.1231-1236.

Beerlage-de-Jong, N., *et al.*, (2017). The value of participatory development to support antimicrobial stewardship with a clinical decision support system. *AJIC*, 45, pp. 365-371.

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