

Core Elements of Outpatient Antibiotic Stewardship

Antibiotic resistance is a major global public health threat.¹ The Centers for Disease Control and Prevention (CDC) estimates that antibiotic-resistant infections affect 2 million people and cause 23,000 deaths annually in the United States (U.S.). Another 250,000 individuals require hospital care and 14,000 die from *Clostridium difficile*, an infection related to use of antibiotics. In the U.S., more than 60% of national antibiotic expenditures occurs in outpatient settings.² Many of these prescriptions are unnecessary; in Oregon in 2014, >50% of episodes of bronchitis in persons with no underlying conditions received an antibiotic, despite the fact that the majority of cases of bronchitis are due to a virus (Figure). So, what can primary care providers do to protect patients from the rising tide of antibiotic resistance?

Fortunately, relief is in sight: HealthInsight, Oregon's Medicare Quality Innovation Network-Quality Improvement Organization (QIN-QIO), has launched a new initiative, "Get Smart: Preserving the Power of Antibiotics." Based on CDC's recently published guidelines, "Core Elements of Antibiotic Stewardship,"³ Get Smart provides a framework for implementing evidence-based antibiotic stewardship practices in outpatient settings. Even better, implementing the Core Elements qualifies as an Improvement Activity under the Medicare Quality Payment Program (QPP).

HealthInsight provides free assistance to implement the outpatient Core Elements, including technical assistance, education and materials designed to: 1) enable the clinic or facility to surround patients with consistent information about avoiding unnecessary antibiotics; 2) aid clinicians in making appropriate prescribing decisions; and 3) assist providers in tracking prescription activities and keeping current with clinical knowledge about antibiotics.

COMMITMENT

As with many endeavors, the first step is making a commitment.

- **Post it.** Commitment posters displayed in exam rooms have been shown to aid in reducing inappropriate prescriptions for acute respiratory infections. The posters show a letter from the clinician to their patients describing their commitment to antibiotic stewardship and their reasons for not prescribing antibiotics.⁴ Templates can be found on the [Oregon AWARE website](#).
- **Leadership is crucial.** As guidelines for hospital antibiotic stewardship programs recommend designating a single leader, strong leadership is also needed in outpatient settings.⁵
- **Build it in to your clinic culture.** Include antibiotic stewardship-related duties in position descriptions or performance evaluation criteria for medical directors, nursing leadership positions, and practice management personnel to help ensure that staff have sufficient time and resources to devote to stewardship.⁶
- **Be a team.** Ensure that any staff member having patient contact can communicate consistent expectations about antibiotic use.

ACTION FOR POLICY AND PRACTICE

Several evidence-based policies and interventions have been shown to reduce inappropriate prescribing. First, ensure that clinicians use evidence-based diagnostic criteria and treatment recommendations when deciding to use antibiotics. Guidelines are available from several reputable professional societies, such as the Infectious Diseases Society of America and the American Academy of Pediatrics. For Oregon clinicians, Oregon Public Health Division's AWARE* staff have

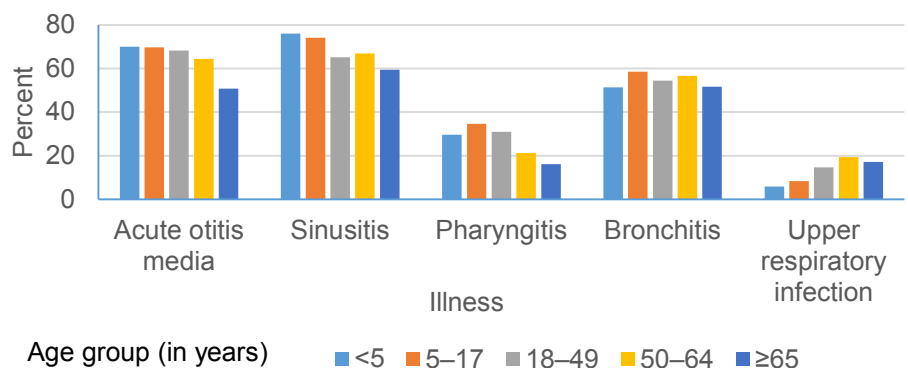
* Alliance Working for Antibiotic Resistance Education

consolidated synopses of these into a single document available online (see *verso*).

Consider implementing one or more of these strategies to reduce inappropriate prescribing:

Use delayed prescribing or watchful waiting when appropriate for conditions that usually resolve without treatment, such as mild cases of acute otitis media or sinusitis.⁷⁻⁹ Watchful waiting means providing suggestions for symptomatic relief with a clear plan for follow-up if symptoms do not improve within 2-3 days, or giving the patient a post-dated prescription.

FIGURE. Proportion of patients filling antibiotics prescriptions for respiratory tract infections, by age group, Oregon, 2014 (All Payer All Claims Dataset).



Provide communications skills training for clinicians to help address patient concerns and better convey drawbacks such as lack of efficacy, adverse events, and development of antibiotic resistance associated with antibiotic use for viral infections.¹⁰ AWARE has resources for training based on use of motivational interviewing skills focused on negotiating antibiotic use.

Use electronic medical records systems, such as requiring explicit written justification in the electronic medical record for non-recommended antibiotic prescribing (such as a macrolide for bronchitis in a patient without chronic obstructive pulmonary disease),¹¹ or clinical decision support tools that provide information to clinicians on conditions unlikely to require antibiotics or to prompt use of a narrow spectrum drug over a broad spectrum drug.¹²

Prevent unnecessary visits by using call centers, nurse hotlines, or pharmacist consultations as triage systems to counsel patients about self-care of common viral conditions and provide criteria for when clinical consultation is actually necessary.

TRACKING AND REPORTING

Tracking and reporting antibiotic prescribing can be used to develop targets for intervention and track progress in improving prescribing. Strategies for tracking antibiotic use include:

- automatic electronic medical record extraction,
- manual periodic chart reviews, or
- use of existing measures, such as the Healthcare Effectiveness Data and Information Set measures.

HealthInsight can assist practices in using their data and meeting QPP requirements. Looking at baseline data for upper respiratory tract infections at the facility helps in choosing a high-priority condition to target for intervention, reduce use of unnecessary broad-spectrum agents, or ensure proper dose and duration of antibiotic use.

Once an intervention is selected, let the healthy competition begin. Feedback to clinicians on their own rates of prescribing compared to their peers has been shown to be effective in reducing inappropriate prescribing.^{13,14} In turn, clinician feedback on interventions can guide modifications to maximize impact. Lastly, consider

tracking other outcomes: lowering rates of *Clostridium difficile* and adverse events from antibiotics is also worthwhile and provides compelling evidence to your patients that reducing antibiotic use improves patient care.

EDUCATION AND EXPERTISE

We mentioned that use of evidence-based guidelines and training on effective communication techniques are helpful to providers, but patient education is also a crucial component.¹²

Be sure that all clinic staff can deliver these key messages:

- Antibiotics do not work for viruses.
- Know when it's important to seek medical care, and seek advice about self-management of symptoms.
- Be aware of common side effects (diarrhea, abdominal pain) and more severe complications (*C. difficile* and allergic reactions) and consider alternative treatment.
- Antibiotic use earlier in life can disrupt the intestinal biome, resulting in allergic, infectious and autoimmune diseases.¹⁵
- Oregon AWARE has FAQs about cough, cold, and otitis media, explaining when patients need to seek care, along with tips for symptomatic care at home for viral infections, that can be downloaded for your patients.

RESOURCES

Visit HealthInsight's Get Smart web page, where all you need to do is click the "Join Us Today" button to get started. You can also find the Core Elements Checklist and an online tool kit with resources. <https://healthinsight.org/getsmart>

The AWARE web site is worth a visit. We have resources for providers, such as our treatment guidelines, data on outpatient antibiotic use in Oregon, posters describing use of the wait-and-see strategy, exam room posters, and patient educational materials that can be used in your office. <https://public.health.oregon.gov/DiseasesConditions/CommunicableDisease/AntibioticResistance/Pages/provider.aspx>

We also offer free CME available in the form of an online webinar on motivational interviewing that provides insight and tips on negotiating antibiotic use with patients at <http://bit.ly/havingdifficultconversations>. You can also direct patients to helpful advice about when to seek care for respiratory tract infections, in English, Spanish, Russian and Vietnamese. <https://public.health.oregon.gov/>

[DiseasesConditions/CommunicableDisease/AntibioticResistance/Pages/respiratory_teat_guides_patient.aspx](https://public.health.oregon.gov/DiseasesConditions/CommunicableDisease/AntibioticResistance/Pages/respiratory_teat_guides_patient.aspx)

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