New York State Medicaid Prescriber Education Program (NYSMPEP)

A partnership between the New York State Department of Health (NYSDOH) and the State University of New York (SUNY) formed in response to legislation in April 2008

The program goal is to optimize the quality of care for NYS Medicaid members by providing prescribers timely evidence-based pharmacotherapy information and best practices

Online, self-paced programs are available at no cost to prescribers for Accreditation Council for Continuing Medical Education (ACCME) Physicians Recognition Award (PRA) Category 1 Credit

https://nypep.nysdoh.suny.edu/

OUTPATIENT ANTIBIOTIC STEWARDSHIP AS A TOOL TO CURB ANTIBIOTIC RESISTANCE

A New York State Medicaid Prescriber Education Program Enduring Presentation

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University at Buffalo The State University of New York

Objectives

- Explain factors contributing to increasing antibiotic resistance and why antibiotic stewardship is important
- Recognize resources that promote optimal antibiotic use in routine practice
- Identify evidence-based infection prevention and control measures
- Describe patient counseling tips and techniques to generate informative conversations with patients/caregivers about antibiotics and their appropriate use

Disclosures

Speaker has received grant/research support

from the National Institutes of Health (NIH)

Antibiotic resistance

GLOBALLY

- Leading threat to global health, food security, and development

UNITED STATES

- Every year at least 2.8 million people are infected with antibiotic-resistant bacteria resulting in at least 35,000 deaths

Preservation of the utility of antibiotics is essential

Antibiotic resistance. World Health Organization. Updated July 31, 2020. Accessed November 3, 2021. https://www.who.int/news-room/fact-sheets/detail/antibiotic-resistance
Antibiotic resistance threats in the United States, 2019. U.S. Department of Health and Human Services, CDC; 2019. http://dx.doi.org/10.15620/cdc:82532

Evolution of acquired resistance

KEY TERMINOLOGY

- **Multidrug-resistant**
  - Non-susceptibility to at least one agent in three or more antimicrobial categories
- **Extensively drug-resistant**
  - Non-susceptibility to at least one agent in all but two or fewer antimicrobial categories
- **Pandrug-resistant**
  - Non-susceptibility to all agents in all antimicrobial categories

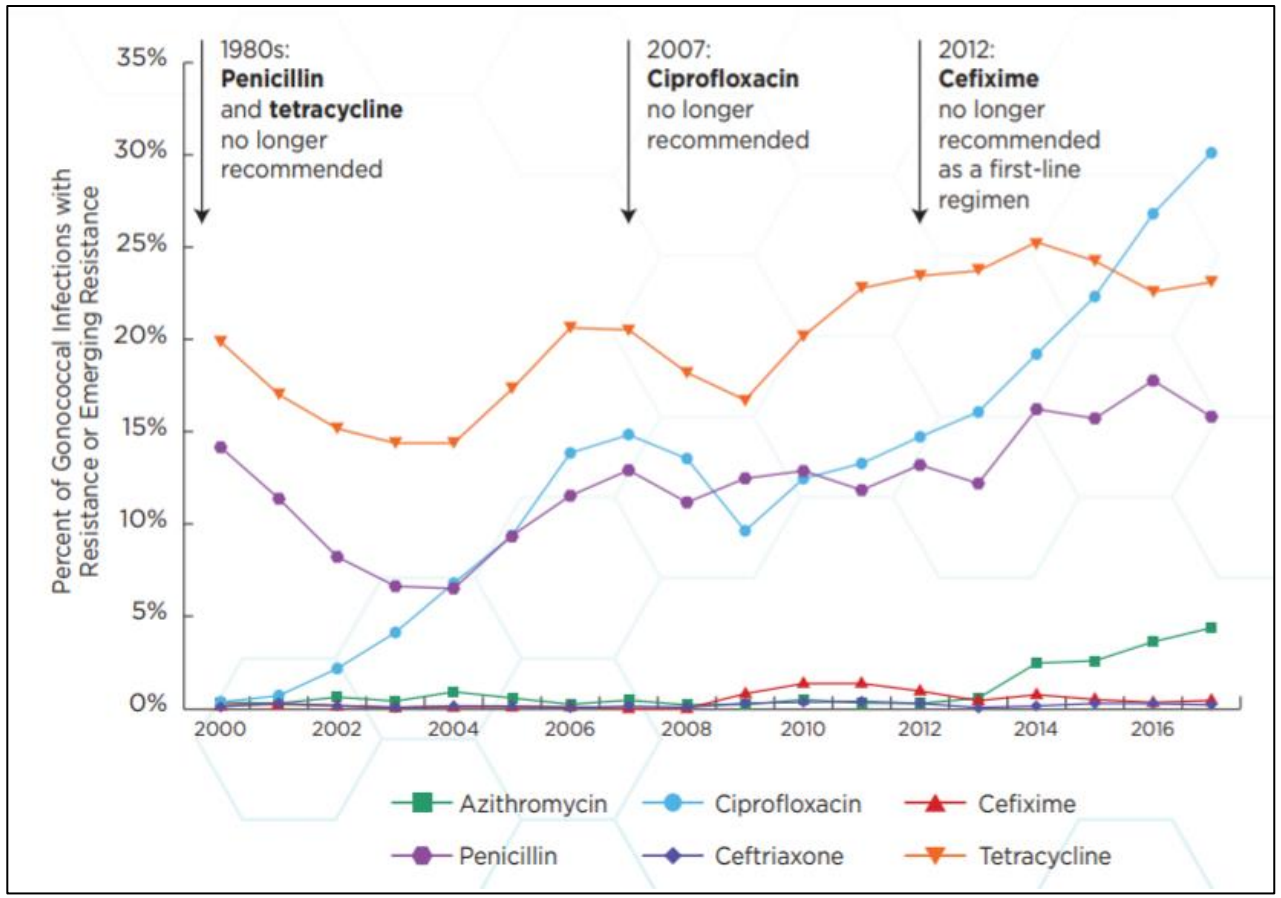
URGENT THREATS TO HUMAN HEALTH

- Carbapenem-resistant *Acinetobacter*
- *Candida auris* (*C. auris*)
- *Clostridioides difficile* (*C. difficile*)
- Carbapenem-resistant Enterobacterales (CRE)
- Drug-resistant *Neisseria gonorrhoeae* (*N. gonorrhoeae*)

Antibiotic resistance threats in the United States, 2019. U.S. Department of Health and Human Services, CDC; 2019. http://dx.doi.org/10.15620/cdc:82532

Magiorakos AP, Srinivasan A, Carey RB, et al. Multidrug-resistant, extensively drug-resistant and pandrug-resistant bacteria: an international expert proposal for interim standard definitions for acquired resistance. *Clin Microbiol Infection*. 2012;18(3):268-281.

Emerging antibiotic resistance



- For example, *Neisseria gonorrhoeae* rapidly develops resistance to antibiotics resulting in fewer treatment options
- Currently, ceftriaxone is the only remaining single-dose regimen preferred for the treatment of gonococcal infections

Antibiotic resistance threats in the United States, 2019. U.S. Department of Health and Human Services, CDC; 2019. http://dx.doi.org/10.15620/cdc:82532

St. Cyr S, Barbee L, Workowski KA, et al. Update to the CDC's treatment guidelines for gonococcal infection, 2020. *MMWR Morb Mortal Wkly Rep* 2020;69:1911-1916. http://dx.doi.org/10.15585/mmwr.mm6950a6

Why a NYSMPEP antibiotic stewardship presentation?

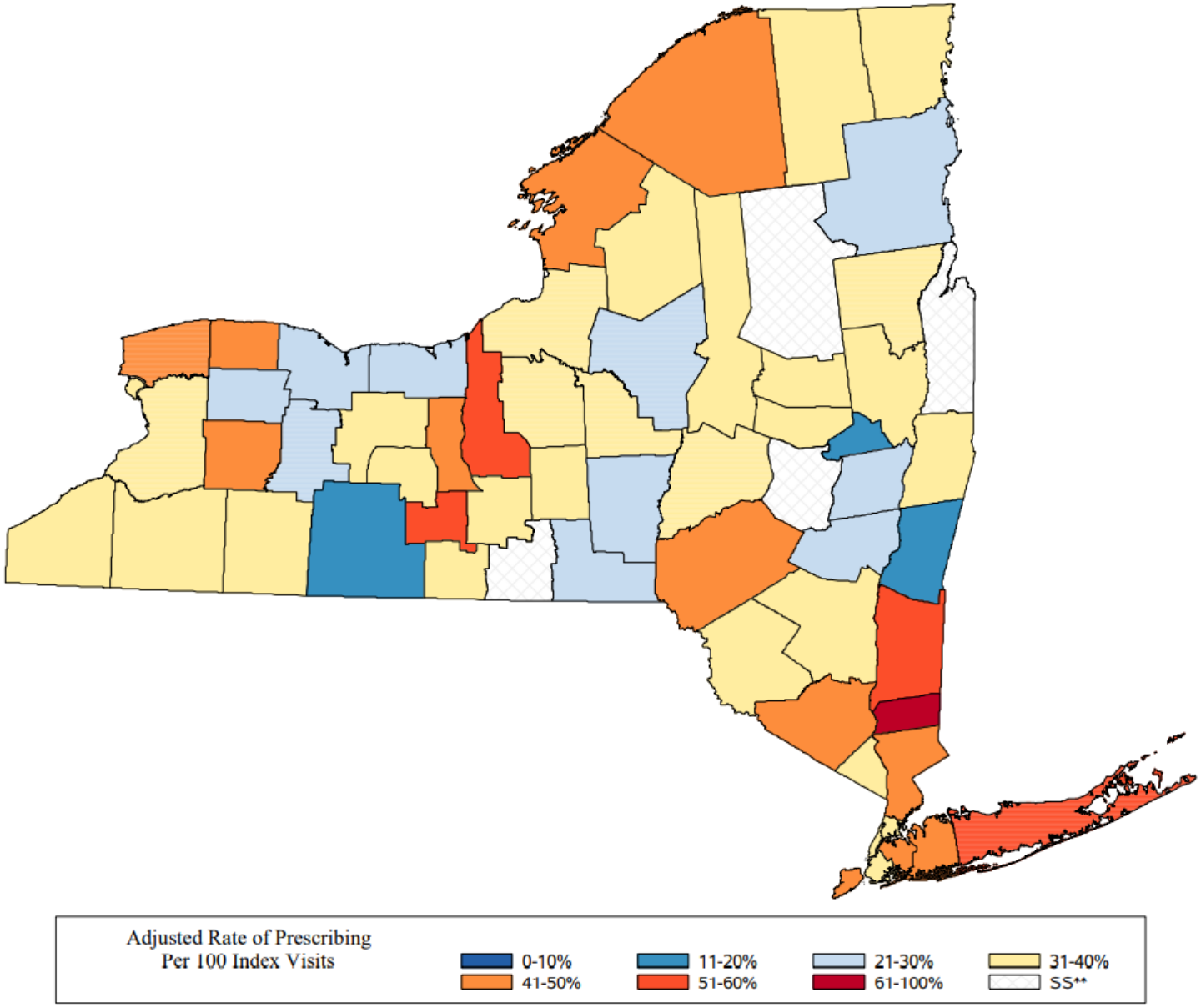
- The New York State (NYS) **ST**op **A**ntibiotic **R**esistance **R**oadmap (**STARR**) and NYS Antimicrobial Resistance Prevention and Control Task Force (ARTF)
  - Increased awareness and knowledge of the **harms of antibiotic resistance**, **optimal antibiotic use**, **healthcare-associated infections**, and **infection prevention and control** measures

The NYS STop Antibiotic Resistance Roadmap (STARR). NYS Antimicrobial Resistance Prevention and Control Task Force; 2018. https://www.health.ny.gov/professionals/protocols_and_guidelines/antibiotic_resistance/docs/nys_starr.pdf

Potentially avoidable outpatient acute upper respiratory infection antibiotic prescribing, adjusted rates by county*

NYS Medicaid enrollees, 2017
Adults 18-64 years old

*County determined by provider practice location
**Small sample size: Counties with <50 index visits
Note: (1) Rates adjusted for age and diagnosis;
(2) Data represents only filled prescriptions

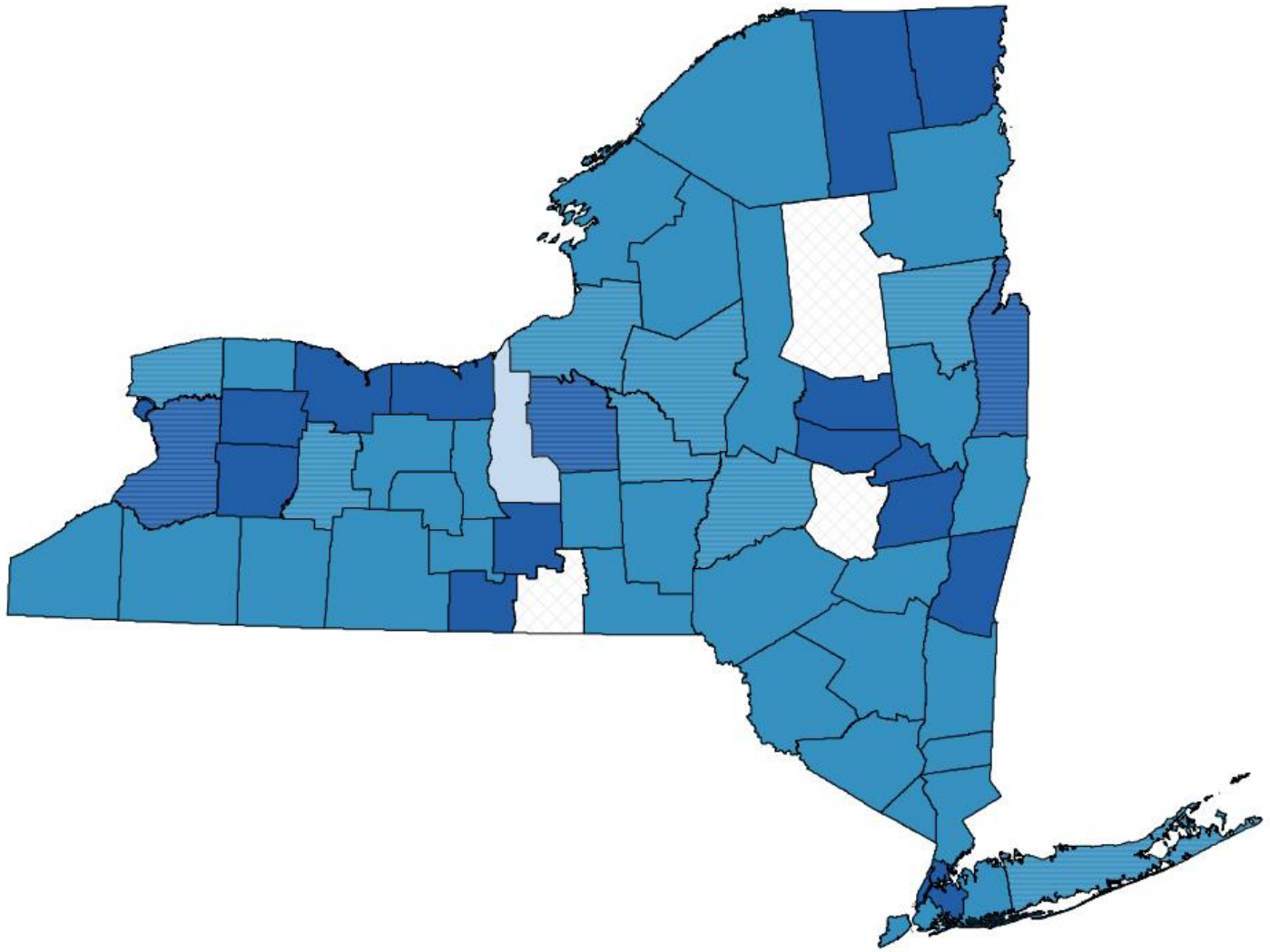


Potentially avoidable antibiotic prescribing rates for acute respiratory infection by provider county, adults age 18-64 years, NYS Medicaid: beginning 2010. Updated November 19, 2019. https://health.data.ny.gov/Health/Potentially-Avoidable-Antibiotic-Prescribing-Rates/vg7a-h5ss

Potentially avoidable outpatient acute upper respiratory infection antibiotic prescribing, adjusted rates by county*

NYS Medicaid enrollees, 2017
Children 3 months-17 years old

*County determined by provider practice location
**Small sample size: Counties with <50 index visits
Note: (1) Rates adjusted for age and diagnosis;
(2) Data represents only filled prescriptions



Potentially avoidable antibiotic prescribing rates for acute respiratory infection by provider county, children age 3 months-17 years, NYS Medicaid: beginning 2010. Updated November 19, 2019.
https://health.data.ny.gov/Health/Potentially-Avoidable-Antibiotic-Prescribing-Rates/r2m7-fr63

Harms of antibiotic resistance; benefits of antibiotic stewardship

HARMS OF ANTIBIOTIC RESISTANCE

- Increased morbidity and mortality
- Longer hospital stays
- New resistance mechanisms can emerge and spread globally
- Higher medical costs
- Limited development of new antibiotics

BENEFITS OF ANTIBIOTIC STEWARDSHIP

- Improved patient outcomes
- Decreased *C. difficile* infections
- Decreased antibiotic resistance
- Decreased costs
- Preservation of the use of existing antibiotics

Antibiotic resistance. World Health Organization. Updated July 31, 2020. Accessed November 3, 2021. https://www.who.int/news-room/fact-sheets/detail/antibiotic-resistance
Sanchez GV, Fleming-Dutra KE, Roberts RM, Hicks L.A. Core Elements of Outpatient Antibiotic Stewardship. *MMWR Recomm Rep* 2016;65(No. RR-6):1–12.

Antibiotics and adverse effects

- Antibiotics are one of the top drug classes leading to emergency department visits due to adverse drug events (ADEs)
- Unnecessary antibiotic use can result in:
  - Rash, dizziness, nausea, diarrhea
  - Allergic reactions
  - Drug interactions
  - Increased risk for infection: *C. difficile* and *Candida*
  - Antibiotic resistance

Adverse drug events from specific medications. Centers for Disease Control and Prevention. Updated November 19, 2019. Accessed November 8, 2021. https://www.cdc.gov/medicationsafety/adverse-drug-events-specific-medicines.html
Be antibiotics aware: smart use, best care. Centers for Disease Control and Prevention. Updated November 17, 2020. Accessed November 8, 2021. https://www.cdc.gov/patientsafety/features/be-antibiotics-aware.html

Spread and impact of antibiotic resistance

- Coronavirus disease 2019 (COVID-19) and antibiotic resistance
  - Sporadic outbreaks of antibiotic resistant infections in COVID-19 units
- Foodborne illness
  - Antibiotic-resistant *Salmonella*
- Environmental pollution
  - In addition to human use, animal farming and agricultural practices may contribute to the development and spread of resistance
    - Safe medication disposal resources for your practice

Factors that may have contributed to those outbreaks:
- Increased hospitalizations
- Personal protective equipment shortages

COVID-19 & antibiotic resistance. Centers for Disease Control and Prevention. Updated October 6, 2021. Accessed November 9, 2021. https://www.cdc.gov/drugresistance/covid19.html
Antibiotic resistance threats in the United States, 2019. U.S. Department of Health and Human Services, CDC; 2019. http://dx.doi.org/10.15620/cdc:82532

Optimal antibiotic use

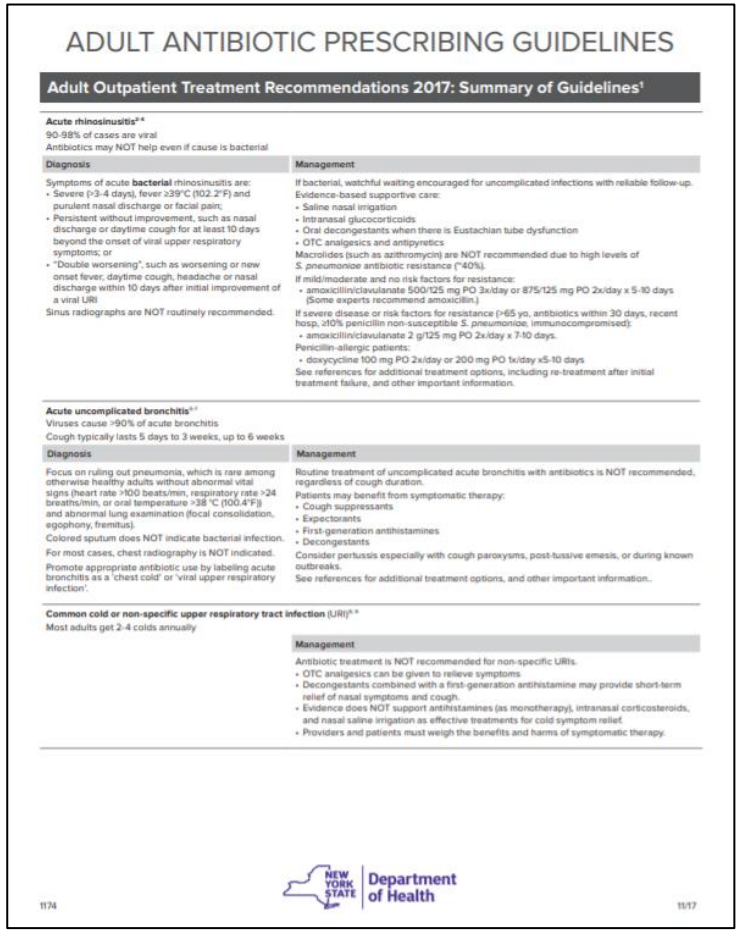
- Antibiotics should be used at the right **dose**, for the right **duration**, and at the right **time**
- Use evidence-based diagnostic criteria and treatment recommendations
  - Clinical practice guidelines, peer-reviewed journal articles
- The NYSDOH has created an **adult and pediatric pocket reference** to provide guidance directed at the management of various common illnesses for which antibiotics are not often needed such as:
  - Acute rhinosinusitis
  - Acute uncomplicated bronchitis
  - Common cold or non-specific upper respiratory tract infection (URI)
  - Pharyngitis

NYSDOH: New York State Department of Health

Sanchez GV, Fleming-Dutra KE, Roberts RM, Hicks L.A. Core Elements of Outpatient Antibiotic Stewardship. *MMWR Recomm Rep* 2016;65(No. RR-6):1–12.
Adult and pediatric antibiotic prescribing guidelines. New York State Department of Health; 2017. https://www.health.ny.gov/publications/1174_8.5x11.pdf

NYSDOH antibiotic prescribing guidelines

ADULT



ADULT ANTIBIOTIC PRESCRIBING GUIDELINES

Adult Outpatient Treatment Recommendations 2017: Summary of Guidelines[1]

Acute rhinosinusitis[2,4]

90-98% of cases are viral

Antibiotics may NOT help even if cause is bacterial

Diagnosis	Management
Symptoms of acute **bacterial** rhinosinusitis are: • Severe (>3-4 days), fever ≥39°C (102.2°F) and purulent nasal discharge or facial pain; • Persistent without improvement, such as nasal discharge or daytime cough for at least 10 days beyond the onset of viral upper respiratory symptoms; or • "Double worsening", such as worsening or new onset fever, daytime cough, headache or nasal discharge within 10 days after initial improvement of a viral URI Sinus radiographs are NOT routinely recommended.	If bacterial, watchful waiting encouraged for uncomplicated infections with reliable follow-up. Evidence-based supportive care: • Saline nasal irrigation • Intranasal glucocorticoids • Oral decongestants when there is Eustachian tube dysfunction • OTC analgesics and antipyretics Macrolides (such as azithromycin) are NOT recommended due to high levels of *S. pneumoniae* antibiotic resistance (~40%). If mild/moderate and no risk factors for resistance: • amoxicillin/clavulanate 500/125 mg PO 3x/day or 875/125 mg PO 2x/day x 5-10 days (Some experts recommend amoxicillin.) If severe disease or risk factors for resistance (>65 yo, antibiotics within 30 days, recent hosp, ≥10% penicillin non-susceptible *S. pneumoniae*, immunocompromised): • amoxicillin/clavulanate 2 g/125 mg PO 2x/day x 7-10 days. Penicillin-allergic patients: • doxycycline 100 mg PO 2x/day or 200 mg PO 1x/day x5-10 days See references for additional treatment options, including re-treatment after initial treatment failure, and other important information.

Acute uncomplicated bronchitis[4,5]

Viruses cause >90% of acute bronchitis

Cough typically lasts 5 days to 3 weeks, up to 6 weeks

Diagnosis	Management
Focus on ruling out pneumonia, which is rare among otherwise healthy adults without abnormal vital signs (heart rate >100 beats/min, respiratory rate >24 breaths/min, or oral temperature >38 °C (100.4°F)) and abnormal lung examination (focal consolidation, egophony, fremitus). Colored sputum does NOT indicate bacterial infection. For most cases, chest radiography is NOT indicated. Promote appropriate antibiotic use by labeling acute bronchitis as a 'chest cold' or 'viral upper respiratory infection'.	Routine treatment of uncomplicated acute bronchitis with antibiotics is NOT recommended, regardless of cough duration. Patients may benefit from symptomatic therapy: • Cough suppressants • Expectorants • First-generation antihistamines • Decongestants Consider pertussis especially with cough paroxysms, post-tussive emesis, or during known outbreaks. See references for additional treatment options, and other important information..

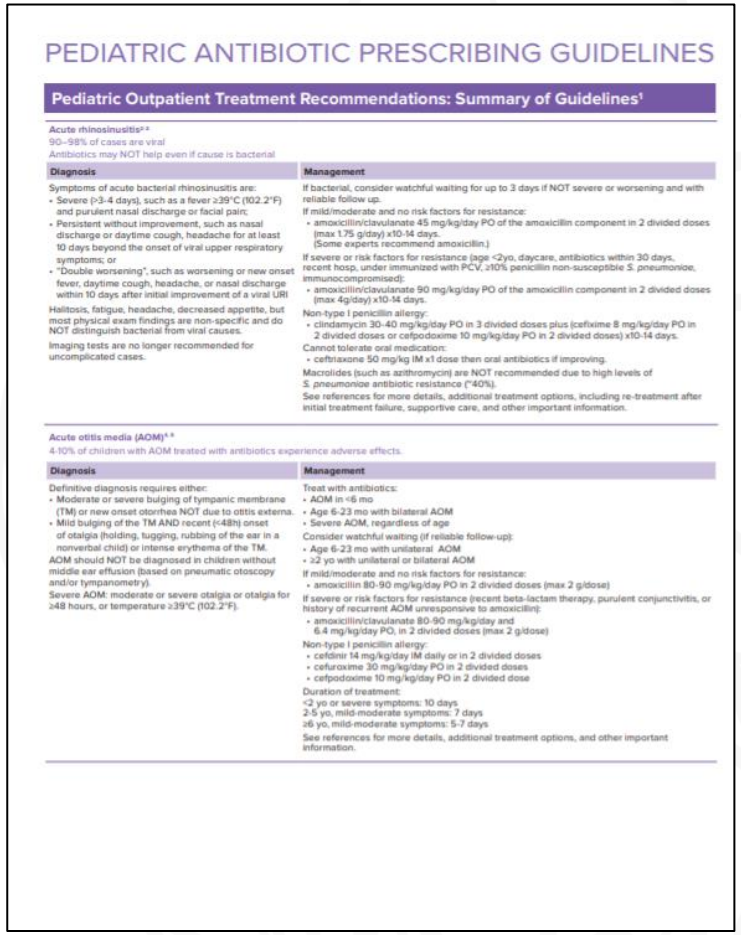
Common cold or non-specific upper respiratory tract infection (URI)[4,5]

Most adults get 2-4 colds annually

Management
Antibiotic treatment is NOT recommended for non-specific URIs. • OTC analgesics can be given to relieve symptoms • Decongestants combined with a first-generation antihistamine may provide short-term relief of nasal symptoms and cough. • Evidence does NOT support antihistamines (as monotherapy), intranasal corticosteroids, and nasal saline irrigation as effective treatments for cold symptom relief. • Providers and patients must weigh the benefits and harms of symptomatic therapy.

1174 — NEW YORK STATE Department of Health — 11/17

PEDIATRIC



PEDIATRIC ANTIBIOTIC PRESCRIBING GUIDELINES

Pediatric Outpatient Treatment Recommendations: Summary of Guidelines[1]

Acute rhinosinusitis[2,3]

90–98% of cases are viral

Antibiotics may NOT help even if cause is bacterial

Diagnosis	Management
Symptoms of acute bacterial rhinosinusitis are: • Severe (>3-4 days), such as a fever ≥39°C (102.2°F) and purulent nasal discharge or facial pain; • Persistent without improvement, such as nasal discharge or daytime cough, headache for at least 10 days beyond the onset of viral upper respiratory symptoms; or • "Double worsening", such as worsening or new onset fever, daytime cough, headache, or nasal discharge within 10 days after initial improvement of a viral URI Halitosis, fatigue, headache, decreased appetite, but most physical exam findings are non-specific and do NOT distinguish bacterial from viral causes. Imaging tests are no longer recommended for uncomplicated cases.	If bacterial, consider watchful waiting for up to 3 days if NOT severe or worsening and with reliable follow up. If mild/moderate and no risk factors for resistance: • amoxicillin/clavulanate 45 mg/kg/day PO of the amoxicillin component in 2 divided doses (max 1.75 g/day) x10-14 days. (Some experts recommend amoxicillin.) If severe or risk factors for resistance (age <2yo, daycare, antibiotics within 30 days, recent hosp, under immunized with PCV, ≥10% penicillin non-susceptible *S. pneumoniae*, immunocompromised): • amoxicillin/clavulanate 90 mg/kg/day PO of the amoxicillin component in 2 divided doses (max 4g/day) x10-14 days. Non-type I penicillin allergy: • clindamycin 30-40 mg/kg/day PO in 3 divided doses plus (cefixime 8 mg/kg/day PO in 2 divided doses or cefpodoxime 10 mg/kg/day PO in 2 divided doses) x10-14 days. Cannot tolerate oral medication: • ceftriaxone 50 mg/kg IM x1 dose then oral antibiotics if improving. Macrolides (such as azithromycin) are NOT recommended due to high levels of *S. pneumoniae* antibiotic resistance (~40%). See references for more details, additional treatment options, including re-treatment after initial treatment failure, supportive care, and other important information.

Acute otitis media (AOM)[4,5]

4-10% of children with AOM treated with antibiotics experience adverse effects.

Diagnosis	Management
Definitive diagnosis requires either: • Moderate or severe bulging of tympanic membrane (TM) or new onset otorrhea NOT due to otitis externa. • Mild bulging of the TM AND recent (<48h) onset of otalgia (holding, tugging, rubbing of the ear in a nonverbal child) or intense erythema of the TM. AOM should NOT be diagnosed in children without middle ear effusion (based on pneumatic otoscopy and/or tympanometry). Severe AOM: moderate or severe otalgia or otalgia for ≥48 hours, or temperature ≥39°C (102.2°F).	Treat with antibiotics: • AOM in <6 mo • Age 6-23 mo with bilateral AOM • Severe AOM, regardless of age Consider watchful waiting (if reliable follow-up): • Age 6-23 mo with unilateral AOM • ≥2 yo with unilateral or bilateral AOM If mild/moderate and no risk factors for resistance: • amoxicillin 80-90 mg/kg/day PO in 2 divided doses (max 2 g/dose) If severe or risk factors for resistance (recent beta-lactam therapy, purulent conjunctivitis, or history of recurrent AOM unresponsive to amoxicillin): • amoxicillin/clavulanate 80-90 mg/kg/day and 6.4 mg/kg/day PO, in 2 divided doses (max 2 g/dose) Non-type I penicillin allergy: • cefdinir 14 mg/kg/day IM daily or in 2 divided doses • cefuroxime 30 mg/kg/day PO in 2 divided doses • cefpodoxime 10 mg/kg/day PO in 2 divided dose Duration of treatment: <2 yo or severe symptoms: 10 days 2-5 yo, mild-moderate symptoms: 7 days ≥6 yo, mild-moderate symptoms: 5-7 days See references for more details, additional treatment options, and other important information.

NYSDOH: New York State Department of Health

Adult and pediatric antibiotic prescribing guidelines. New York State Department of Health; 2017. https://www.health.ny.gov/publications/1174_8.5x11.pdf

In more detail: Acute rhinosinusitis

Diagnosis	Management
Viral: 90-98% of cases	- Symptom relief
Bacterial: Occurs in 0.5-2% of episodes Diagnosis based on symptoms that are: - **Severe** (>3-4 days) such as fever ≥39°C (102.2°F) and purulent nasal discharge or facial pain - **Persistent** without improvement for at least 10 days - **Worsening** after improvement ("double worsening") - Sinus radiographs not routinely recommended	- **Watchful waiting** encouraged for uncomplicated infections with reliable follow-up - Evidence-based supportive care: • Saline nasal irrigation • Intranasal glucocorticoids • Oral decongestants when there is Eustachian tube dysfunction • OTC analgesics and antipyretics

OTC: Over-The-Counter

Adult and pediatric antibiotic prescribing guidelines. New York State Department of Health; 2017. https://www.health.ny.gov/publications/1174_8.5x11.pdf
Antibiotic prescribing: adult outpatient treatment recommendations. Centers for Disease Control and Prevention. Updated October 3, 2017. Accessed November 9, 2021. https://www.cdc.gov/antibiotic-use/clinicians/adult-treatment-rec.html

In more detail: Acute rhinosinusitis (continued)

Diagnosis	Management
Bacterial: Occurs in 0.5-2% of episodes	**If mild/moderate and no risk factors for resistance:** • Amoxicillin/clavulanate 500/125mg PO 3x/day or 875/125mg PO 2x/day x 5-10 days • Macrolides (such as azithromycin) are **NOT** recommended due to high levels of *S. pneumoniae* antibiotic resistance (40%) **If severe disease or risk factors for resistance (age ≥65, antibiotics within 30 days, recent hospitalization, ≥10% penicillin non-susceptible *S. pneumoniae*, immunocompromised):** • Amoxicillin/clavulanate 2g/125mg PO 2x/day x 7-10 days • Penicillin-allergic patients: doxycycline 100mg PO 2x/day or 200mg PO 1x/day x 5-10 days

PO: By mouth, orally

Adult and pediatric antibiotic prescribing guidelines. New York State Department of Health; 2017. https://www.health.ny.gov/publications/1174_8.5x11.pdf
Antibiotic prescribing: adult outpatient treatment recommendations. Centers for Disease Control and Prevention. Updated October 3, 2017. Accessed November 9, 2021. https://www.cdc.gov/antibiotic-use/clinicians/adult-treatment-rec.html

Delayed prescribing and watchful waiting

Evidence-based approaches that can safely decrease antibiotic consumption when used appropriately

DELAYED PRESCRIBING

- Used for conditions that usually resolve without treatment but could benefit from antibiotics if the symptoms do not improve or worsen
- Resources to share with your patients:
  - What is Delayed Prescribing? – CDC

WATCHFUL WAITING

- Suggesting symptomatic relief with a clear plan for follow-up if symptoms worsen or do not improve
- Resources to share with your patients:
  - What is Watchful Waiting? – CDC
  - Relief for Common Symptoms of Colds and Cough – CDC
  - Watchful Waiting for Ear Infections – CDC

CDC: Centers for Disease Control and Prevention

Sanchez GV, Fleming-Dutra KE, Roberts RM, Hicks L.A. Core Elements of Outpatient Antibiotic Stewardship. *MMWR Recomm Rep* 2016;65(No. RR-6):1–12.

Healthcare-associated infections (HAIs)

- Many HAIs are caused by antibiotic-resistant pathogens
- Associated with increased morbidity, mortality, and economic burden
- HAIs are largely **preventable**

Actions for healthcare providers

- Infection prevention and control
- Educate patients on ways to prevent spread
- Be aware of infection and resistance patterns
- Watch for signs and symptoms of sepsis

Protecting patients and stopping outbreaks. Centers for Disease Control and Prevention. Updated February 12, 2020. Accessed November 4, 2021. https://www.cdc.gov/drugresistance/protecting_patients.html

Outpatient infection prevention and control

- Hand hygiene
  - Soap and water
  - Alcohol-based hand sanitizer
- Respiratory hygiene
- Personal protective equipment (PPE)

Image links to additional resources for your practice

Protecting patients and stopping outbreaks. Centers for Disease Control and Prevention. Updated February 12, 2020. Accessed November 4, 2021. https://www.cdc.gov/drugresistance/protecting_patients.html
Guide to infection prevention for outpatient settings: minimum expectations for safe care. Centers for Disease Control and Prevention. Updated September 2016. Accessed November 10, 2021. https://www.cdc.gov/infectioncontrol/pdf/outpatient/guide.pdf

Hand hygiene

- Failure to perform appropriate hand hygiene is considered the leading cause of healthcare-associated infections and contributes to spread of antimicrobial resistant pathogens
- When hands are visibly dirty, contaminated, or soiled, wash with soap and water
  - Hands should be washed with soap and clean running water for at least **20 seconds**
- If hands are not visibly soiled, an alcohol-based hand sanitizer can be used
- Handwashing fact sheets to share and distribute

Boyce JM, Pittet D. Guidelines for hand hygiene in health-care settings. *MMWR Recomm Rep* 2002;51(No. RR-16):1–48.

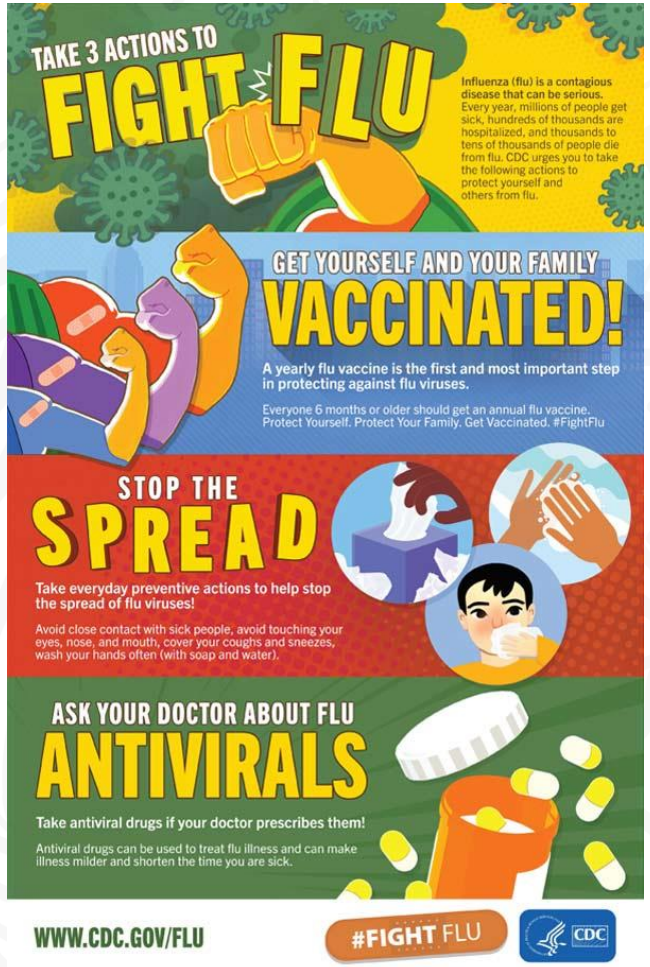
Alcohol-based hand sanitizer

- When there is no visible soiling, alcohol-based sanitizer that contains at least 60% alcohol is an option
- Rub on hands (front and back) and between fingers until dry; do not wipe or rinse
- Regulated as over-the-counter products by the United States Food and Drug Administration (FDA)
- Check the FDAs “do-not-use” list before recommending or using a specific hand sanitizer

Handwashing: clean hands save lives. Centers for Disease Control and Prevention. Updated October 12, 2021. Accessed November 5, 2021. https://www.cdc.gov/handwashing/index.html
Safely using hand sanitizer. U.S. Food & Drug Administration. Updated November 3, 2021. Accessed November 5, 2021. https://www.fda.gov/consumers/consumer-updates/safely-using-hand-sanitizer

Respiratory hygiene and cough etiquette

- To prevent the transmission of all respiratory infections in your practice:
  - Post visual alerts such as fliers
  - Reinforce cough etiquette
  - Offer masks at the entrance
  - Provide tissues and no-touch-required receptacles for disposal
  - Have alcohol-based hand sanitizer readily accessible
  - Follow Droplet Precautions



Boyce JM, Pittet D. Guidelines for hand hygiene in health-care settings. *MMWR Recomm Rep* 2002;51(No. RR-16):1–48.

Personal Protective Equipment

- Another component of Standard Precautions
- Each practice site should ensure appropriate PPE based on site needs and services provided
- Examples include gloves, gowns, **masks**

Be sure to follow local laws, rules, regulations, or guidance with regards to mask requirements

Guide to infection prevention for outpatient settings: minimum expectations for safe care. Centers for Disease Control and Prevention. Updated September 2016. Accessed November 10, 2021. https://www.cdc.gov/infectioncontrol/pdf/outpatient/guide.pdf

Antibiotic Stewardship Programs

- Antibiotic stewardship programs can play an important role in optimizing the use of antibiotics, leading to **better patient outcomes**
- *Core Elements of Outpatient Antibiotic Stewardship*
  - Commitment → Optimize antibiotic prescribing
  - Action for policy and practice → Implement policies/practices to improve antibiotic prescribing
  - Tracking and reporting → Monitor prescribing patterns
  - Education and expertise → Access to educational resources
- Resources for outpatient stewardship implementation

Sanchez GV, Fleming-Dutra KE, Roberts RM, Hicks L.A. Core Elements of Outpatient Antibiotic Stewardship. *MMWR Recomm Rep* 2016;65(No. RR-6):1–12.

Antibiotic stewardship: Commitment

- Each person involved in the patient care process can act as an antibiotic steward
- For example:
  - Incorporate antibiotic stewardship into job descriptions or performance reviews
  - Display public commitments
    - NYSDOH "Smart Use Guarantee" poster and postcard
  - Identify a single leader or "champion"
  - Communicate expectations

NYSDOH: New York State Department of Health

Sanchez GV, Fleming-Dutra KE, Roberts RM, Hicks L.A. Core Elements of Outpatient Antibiotic Stewardship. *MMWR Recomm Rep* 2016;65(No. RR-6):1–12.

Antibiotic stewardship: Action for policy and practice

- Implement at least one policy or practice to improve antibiotic prescribing then assess and modify the intervention as needed
- For example:
  - Use evidence-based recommendations when both diagnosing and treating
  - When appropriate, delayed prescribing or watchful waiting
  - Communication skills training (stay tuned!)
  - Clinical decision support tools
  - Written justification in the medical record
  - Triage systems to avoid unnecessary visits

Sanchez GV, Fleming-Dutra KE, Roberts RM, Hicks L.A. Core Elements of Outpatient Antibiotic Stewardship. *MMWR Recomm Rep* 2016;65(No. RR-6):1–12.

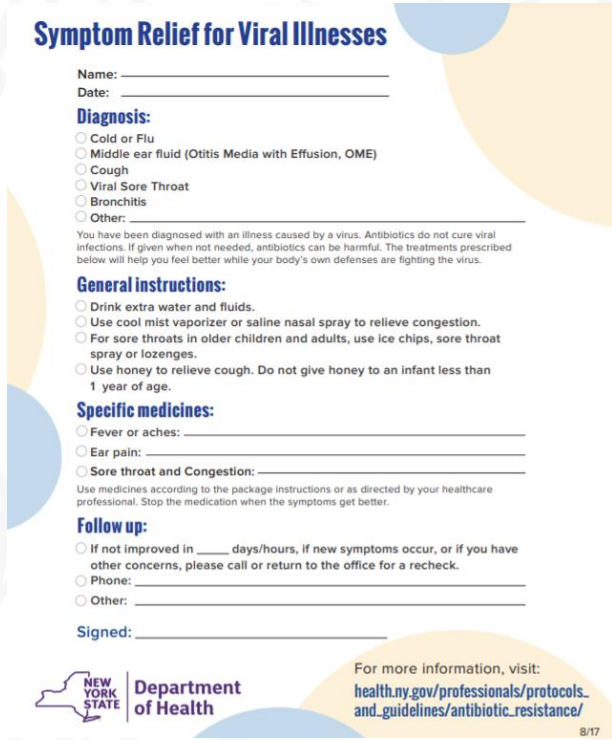
Antibiotic stewardship: Tracking and reporting

- Monitor antibiotic prescribing practices and offer regular feedback to prescribers
- For example:
  - Peer and self-evaluations
  - Participate in continuing medical education
  - Target high-priority conditions; for example, those for which antibiotics are:
    - Overprescribed (acute bronchitis, viral pharyngitis)
    - Underused (sepsis)
    - Inappropriately chosen (using an antibiotic that is not recommended)
  - Share performance on quality measures with prescribers

Sanchez GV, Fleming-Dutra KE, Roberts RM, Hicks L.A. Core Elements of Outpatient Antibiotic Stewardship. *MMWR Recomm Rep* 2016;65(No. RR-6):1–12.

Antibiotic stewardship: Education and expertise

- Education can include prescribers, other staff members, patients, and family members
- For example:
  - Combine recommendations with information on symptom management
    - NYSDOH "Symptom Relief for Viral Illness"
  - Harm versus benefit discussions
    - NYSDOH YouTube "Educating Patients About Antibiotic Use"
  - Provide take-home educational material



Symptom Relief for Viral Illnesses

Name: _____

Date: _____

Diagnosis:

- ○ Cold or Flu
- ○ Middle ear fluid (Otitis Media with Effusion, OME)
- ○ Cough
- ○ Viral Sore Throat
- ○ Bronchitis
- ○ Other: _____

You have been diagnosed with an illness caused by a virus. Antibiotics do not cure viral infections. If given when not needed, antibiotics can be harmful. The treatments prescribed below will help you feel better while your body's own defenses are fighting the virus.

General instructions:

- ○ Drink extra water and fluids.
- ○ Use 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 less than 1 year of age.

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 the medication when the symptoms get better.

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: _____

Signed: _____

NEW YORK STATE | Department of Health

For more information, visit:
health.ny.gov/professionals/protocols_and_guidelines/antibiotic_resistance/

8/17

NYSDOH: New York State Department of Health

Sanchez GV, Fleming-Dutra KE, Roberts RM, Hicks L.A. Core Elements of Outpatient Antibiotic Stewardship. *MMWR Recomm Rep* 2016;65(No. RR-6):1–12.

Communication strategies that support antibiotic stewardship

- Dialogue Around Respiratory Illness Treatment (DART) program
- Structured treatment communication can manage patient/caregiver expectations to decrease unnecessary antibiotic prescribing, increase visit satisfaction, and shorten visit length:
  1) Summarize physical exam findings
  2) Deliver a clear diagnosis
  3) Use two-part treatment recommendations: Negative treatment recommendations followed by positive treatment recommendations
  4) Provide a contingency plan

Robinson JD, Heritage J, Mangione-Smith R. Dialogue around respiratory illness treatment: optimizing communication with parents [webinar]. https://www.uwimtr.org/dart/. Accessed December 22, 2021.

Prescriber communication strategies

1) Summarize physical exam findings
   - Avoid non-specific statements such as, “I’m not seeing anything serious going on here”.

Your nose is congested and throat a little red but nothing concerning for strep throat

Your ears look good and lungs sound great with no wheezing- so no ear infection or signs of pneumonia.

Robinson JD, Heritage J, Mangione-Smith R. Dialogue around respiratory illness treatment: optimizing communication with parents [webinar]. https://www.uwimtr.org/dart/. Accessed December 22, 2021.

Prescriber communication strategies

2) Deliver a clear diagnosis

- Avoid non-specific statements such as, “You have what’s been going around”.

What we have here is a really bad cold

Your strep test is negative which indicates a viral infection

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Fleming-Dutra KE, Mangione-Smith R, Hicks LA. How to prescribe fewer unnecessary antibiotics: talking points that work with patients and their families. *Am Fam Physician*. 2016;94(3):200-202.

Prescriber communication strategies

3) Two-part treatment recommendations
   - State negative treatment recommendations first ("rule out" need for antibiotics)
   - Follow-up with positive treatment recommendations for symptom management

On one hand antibiotics won't help this;

But on the other hand, a teaspoonful of honey in tea can help soothe your cough

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Prescriber communication strategies

3a) Explanation for why antibiotics are not needed

- Patient satisfaction correlates with the quality of the prescriber-patient interaction

Your strep test is negative which indicates a viral infection; antibiotics won't make you better faster

Taking antibiotics when you do not need them can cause harm such as side effects like nausea or diarrhea

Colgan R, Powers JH. Appropriate antimicrobial prescribing: approaches that limit antibiotic resistance. *Am Fam Physician*. 2001;64(6):999-1005.
Fleming-Dutra KE, Mangione-Smith R, Hicks LA. How to prescribe fewer unnecessary antibiotics: talking points that work with patients and their families. *Am Fam Physician*. 2016;94(3):200-202.

Prescriber communication strategies

4) Contingency plan

- For patients who were not prescribed antibiotics, provide instructions for when to seek medical care for worsening or no improvement

If you are not better in 3 to 4 days, call or come back and we can reassess the need for antibiotics then

If you are still sick in a week or develop a high fever, come back and see me

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Prescriber communication strategies

4a) Delayed antibiotic prescribing

- Tip: When providing a delayed prescription, write an expiration date on the prescription that is within the watchful waiting period (e.g., 5 to 10 days in the future)

Your child has an ear infection that will likely clear up on its own. If the ear still hurts in 2 days or gets worse, please come back.

If your ear still hurts in 2 days, here is a prescription to fill then. Please call me with any questions.

Fleming-Dutra KE, Mangione-Smith R, Hicks LA. How to prescribe fewer unnecessary antibiotics: talking points that work with patients and their families. *Am Fam Physician*. 2016;94(3):200-202.

Summary

1. Antibiotic resistance is one of the biggest threats to global health today. Antibiotics should be used at the right dose, for the right duration, and at the right time. Promoting appropriate antibiotic use in routine practice, incorporating delayed prescribing or watchful waiting techniques, and encouraging proper hand hygiene can improve patient outcomes and decrease antibiotic use.

2. Action is needed to promote antibiotic stewardship and patient education in daily prescribing practices.

Thank you!

For additional information on NYSMPEP educational opportunities, please visit the NYSMPEP website

https://nypep.nysdoh.suny.edu/