WORDS MATTER

How Provider Communication Shapes Antibiotic Prescribing

Practical Strategies for Outpatient Antimicrobial Stewardship

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ADVOCATE HEALTH

DISCLOSURE

CO-PI

PCORI HEALTH SYSTEMS IMPLMENTIATION INITIATIVE:

ATRIUM HEALTH CHILDRENS OPTIMAL OUTPATIENT STEWARDSHIP

ADVOCATE HEALTH

LEARNING OBJECTIVES 

Understand how communication influences outpatient antibiotic prescribing

Recognize language that increases unnecessary antibiotic use

Use scripts that support stewardship without increasing visit length

Apply brief, evidence-based communication strategies

ADVOCATE HEALTH

US ORAL OUTPATIENT PRESCRIPTIONS BY AGE GROUP 2011 – 2016 AND 2020 – 2022

Highest Prescribing Rates

2011 - 2012

≤ 2 years

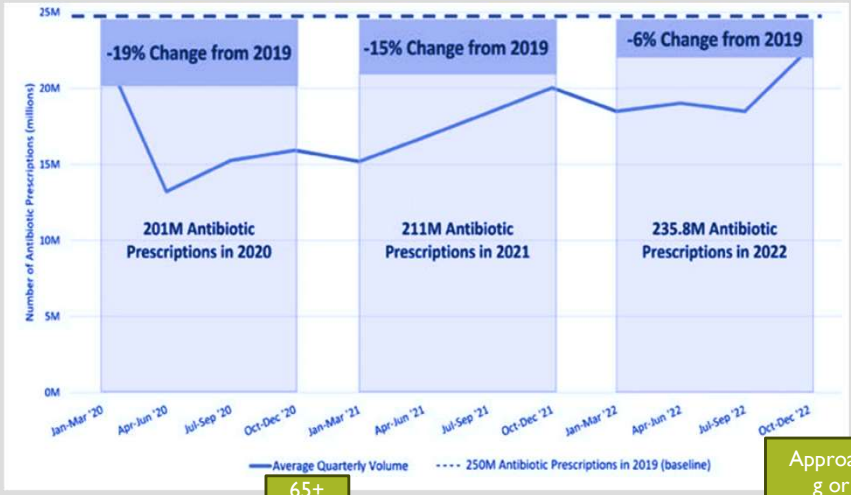
2014 - 2016

≥ 65 years

5% decrease in national rate of oral antibiotic prescriptions 2011 - 2016

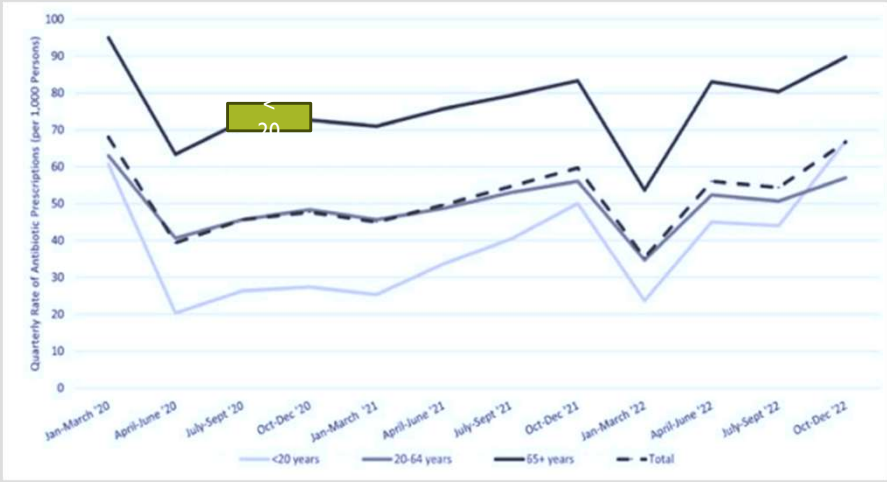
Primarily driven by pediatrics (< 20 years) where rates decreased by 13%

Adult rates increased by 2%



65+

Approaching or > Baseline



King LM, et al Clin Infect Dis 2020;70:370 – 377
Bizune D, et al. Antimicrob Steward Healthc Epidemiol 2024;4, e193, 1 – 3

Among privately-insured patients diagnosed with ...

Common bacterial infections

31-36% of **children**

43-56% of **adults**

... received an inappropriate type of antibiotic.
(i.e., not the recommended, or first-line, antibiotics based on medical guidelines).

Common viral infections

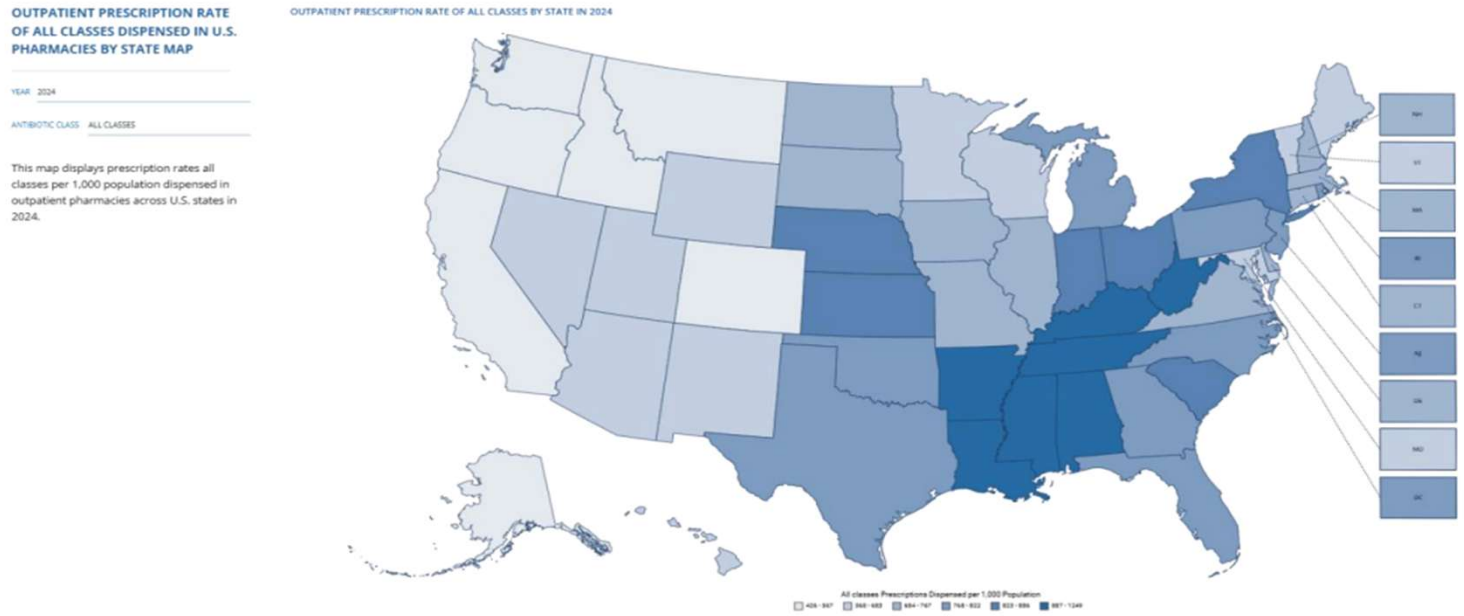
4-70%
of **children** received unnecessary antibiotics.

7-66%
of **adults** received unnecessary antibiotics.

Children	Viral Infection	Adults
70%	Bronchitis	66%
48%	Nonsuppurative middle ear infection	52%
12%	Viral upper respiratory infection	32%
9%	Bronchiolitis	N/A
4%	Influenza	7%

https://www.pewtrusts.org/en/projects/antibiotic-resistance-project

Figure 1. Antibiotic prescriptions per 1,000 persons by state (sextiles) for all ages – United States, 2024



- CDC data shows that patients in the Southern United States were the most likely to receive an inappropriate antibiotic prescription for an ARTI
    - South: 844 outpatient prescriptions per 1000 population

- Higher antibiotic prescribing in the South is likely due, in part, **to non-clinical factors such as regional differences in clinicians' prescribing habits and patient expectations.**

- NC rate is 787 outpatient prescriptions per 1000 population
    - Above 50th percentile

WHY OUTPATIENT ANTIMICROBIAL STEWARDSHIP MATTERS

The majority of antibiotics are prescribed in outpatient settings

A significant proportion are unnecessary or inappropriate

Overuse contributes to resistance, adverse events, and C. difficile infection

WHY EFFECTIVE ANTIMICROBIAL STEWARDSHIP COMMUNICATION MATTERS

Decrease adverse drug events and resistance for patients

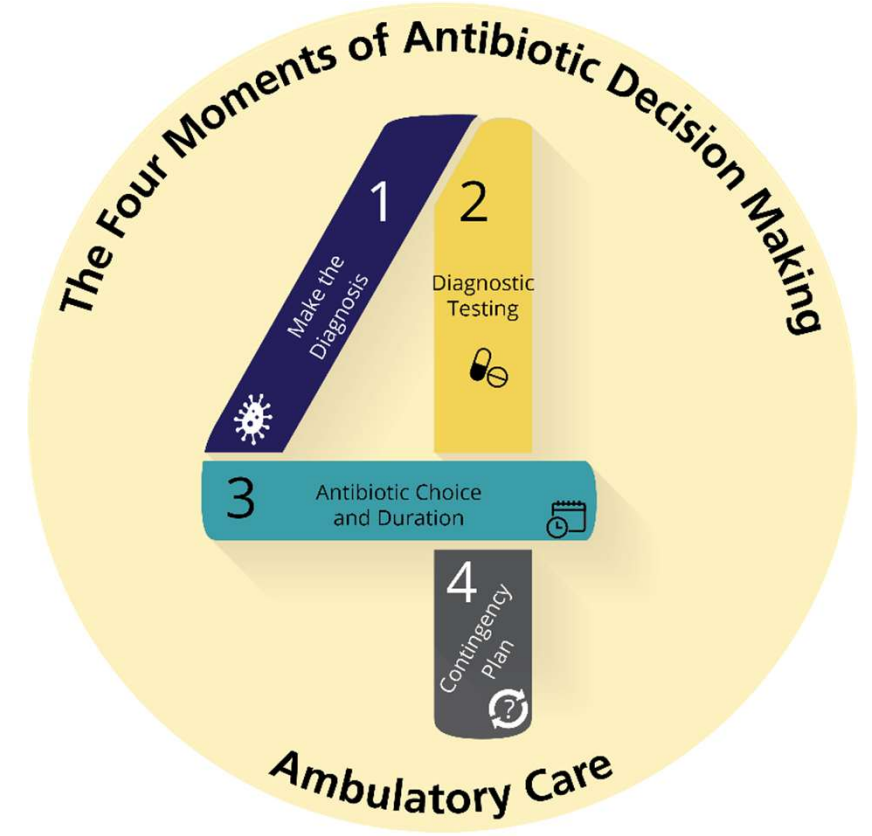
Decreases Clinicians from pressure-driven prescribing

Saves Health systems unnecessary utilization

Antibiotics for future patients

THE FOUR MOMENTS OF ANTIBIOTIC DECISION MAKING

1. Does my patient have an infection that requires antibiotics?
2. Do I need to order any diagnostic tests?
3. If antibiotics are indicated, what is the narrowest, safest, and shortest regimen I can prescribe?
4. Does my patient understand what to expect and the follow-up plan?



THE "DIFFICULT PATIENT"

- About 1 in 6 primary care encounters (17%) are characterized as having a "difficult patient"
- Significant Characteristics:
  - Depression/anxiety/psychiatric disorders
  - Women
  - Less experienced provider
  - Job burnout
- Patients perceived as difficult were more likely to have unmet visit expectations and lower satisfaction

The Prevalence and Characteristics of Difficult Patient Encounters: A Systematic Review and Meta-analysis

Ann Intern Med. doi:10.7326/ANNALS-25-01882

CLINICIAN PERCEPTION OF PATIENT DEMAND FOR ANTIBIOTICS IN THE OUTPATIENT SETTING

How Does Perceived Patient Demand "Cause" Prescribing?

Satisfying patients and providing value

- Feeling that patients need to be given something to legitimize their suffering
- Desire to provide value to patients for time and money spent
- Patients behave like customers
- Urgent Care providers felt less able to counter patient demand due to lack of patient relationship

Negative Repercussions of Not Prescribing

- Concern over poor patient satisfaction scores and negative online reviews
- Strong desire to avoid confrontation about antibiotics in encounter
- Takes time and energy to explain why an antibiotic isn't needed; a clinician's resolve can wear thin having to repeatedly do this over time
- Concerns for undermining clinician-patient relationship

Belief in Inconvincible

- Some patients will not be satisfied until they receive an antibiotic; efforts to engage with them are futile

Koht MR, et al. Fam Practice 2020;37:276-282

ADVOCATE HEALTH

Practice Factors:

- Specialty type:
  - Urgent Care/ED vs IM/FM vs Peds
- Virtual vs Onsite
- Physician age or length of training
- APP versus Physician
- Academic affiliate vs Non-academic

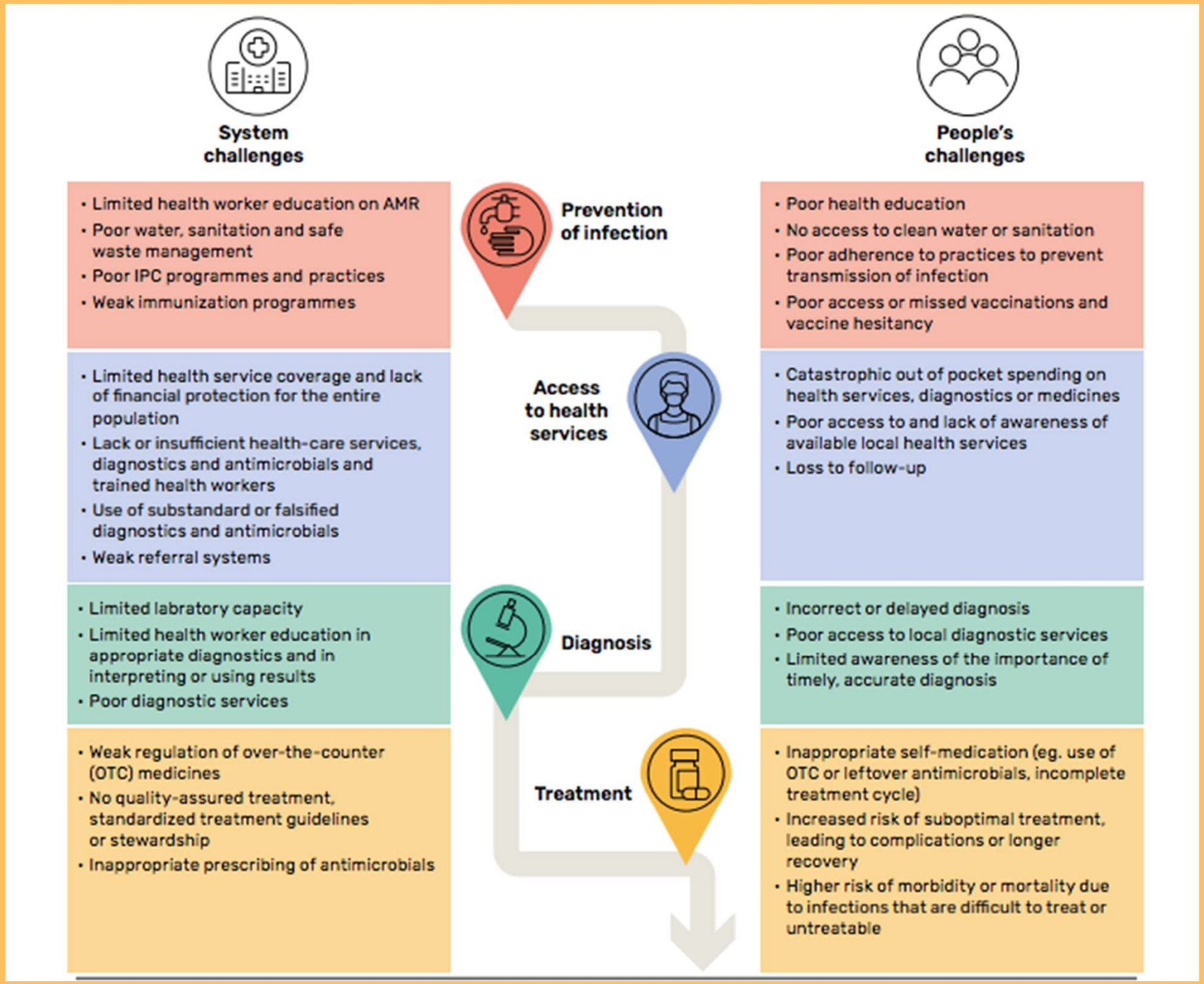
Patient Factors:

- Diagnosis/Indication
- Age
- Race/Ethnicity
- Rural vs Urban vs Suburban
- **Social Drivers Of Health**

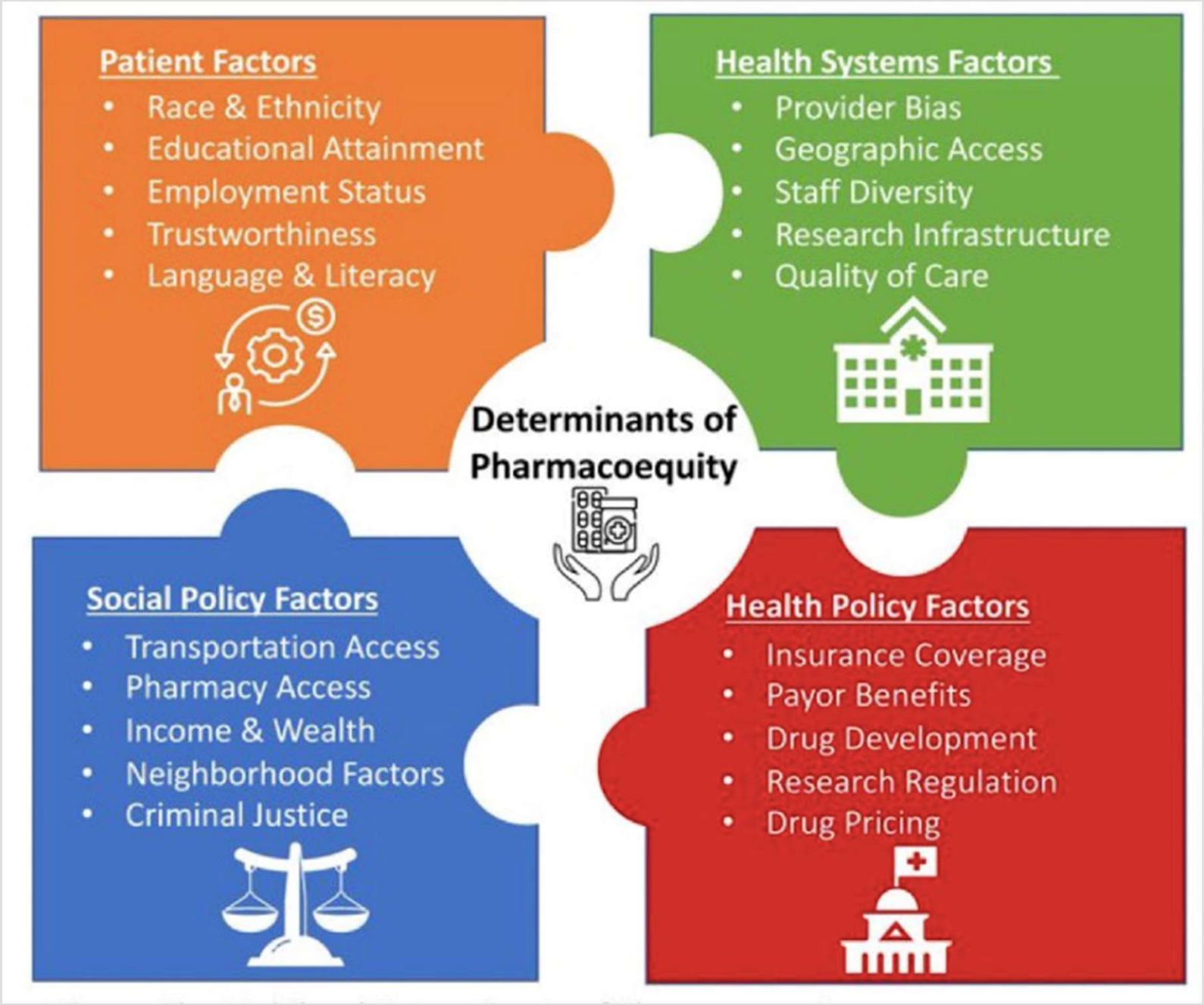
Infect Control Hosp Epidemiol 2022 Jan;43(1):56-63. doi: 10.1017/ice.2021.44. Epub 2021 Jun 2
Open Forum Infect Dis 2021 Jun 17;8(7):ofab324. doi: 10.1093/ofid/ofab324. eCollection 2021 Jul
Antimicrob Steward Healthc Epidemiol. 2024 Oct 16;4(1):e176.doi: 10.1017/ash.2024.436. eCollection 2024..

Know What Affects Health

Source: www.cdc.gov/chinav



People-centered approach to addressing antimicrobial resistance in human health: WHO core package of interventions to support national action plans. Geneva: World Health Organization; 2023. Licence: CC BY-NC-SA 3.0 IGO



Essien UR, Dusetzina SB, Gellad WF. A Policy Prescription for Reducing Health Disparities—Achieving Pharmacoequity. *JAMA.* 2021;326(18):1793–1794. doi:10.1001/jama.2021.1776

WHY PROVIDERS OVERPRESCRIBE

Perceived patient demands

Time pressure and decision fatigue

Maintaining patient satisfaction

Ease of prescribing and Framing techniques

Lack of prescribing awareness

Clin Ther. 2021 October ; 43(10): 1654–1667. doi:10.1016/j.clinthera.2021.08.004

BMC Fam Pract. 2018 Jun 23;19(1):96. doi: 10.1186/s12875-018-0788-4

Antibiotics (Basel). 2017 Oct 31;6(4). pii: E23. doi: 10.3390/antibiotics6040023

ADVOCATE HEALTH

THE PATIENT'S PERSPECTIVE...

Confusion About Which Illnesses May Be Treated By Antibiotics

- Patients **often get confused about the types of illnesses that may be treated by antibiotics**
- Patients who do not understand the appropriate use of antibiotics may **incorrectly believe** that they can treat any illness

Understanding How to Take Antibiotics They Are Prescribed

- Patients often **do not understand how** to take antibiotics as they are prescribed
- Patients often **do not understand the importance** of taking antibiotics as they are prescribed

Inaccurate Beliefs About When and How to Use Antibiotics

- Patients reported that they obtain information about antibiotics from **clinical and non-clinical sources**
- Inaccurate information about the use of antibiotics **may impact their expectations** regarding the use of antibiotics in their treatment

Perceived Inconsistencies in Prescribing Practices Among Clinicians

- Some patients **think that some providers are more wiling than others** to prescribe antibiotics
- Among some patients, **inconsistency in prescribing practices** is associated with their confusion about when it is or is not appropriate to use antibiotics to treat an illness

Unclear Communication From Clinicians About the Appropriate Use of Antibiotics

- When an antibiotic is not prescribed, patients **want providers to explain to them why an antibiotic is not needed to treat their illness**
- Patients want providers to **communicate information** about antibiotics in a manner that is **easy for them to understand**

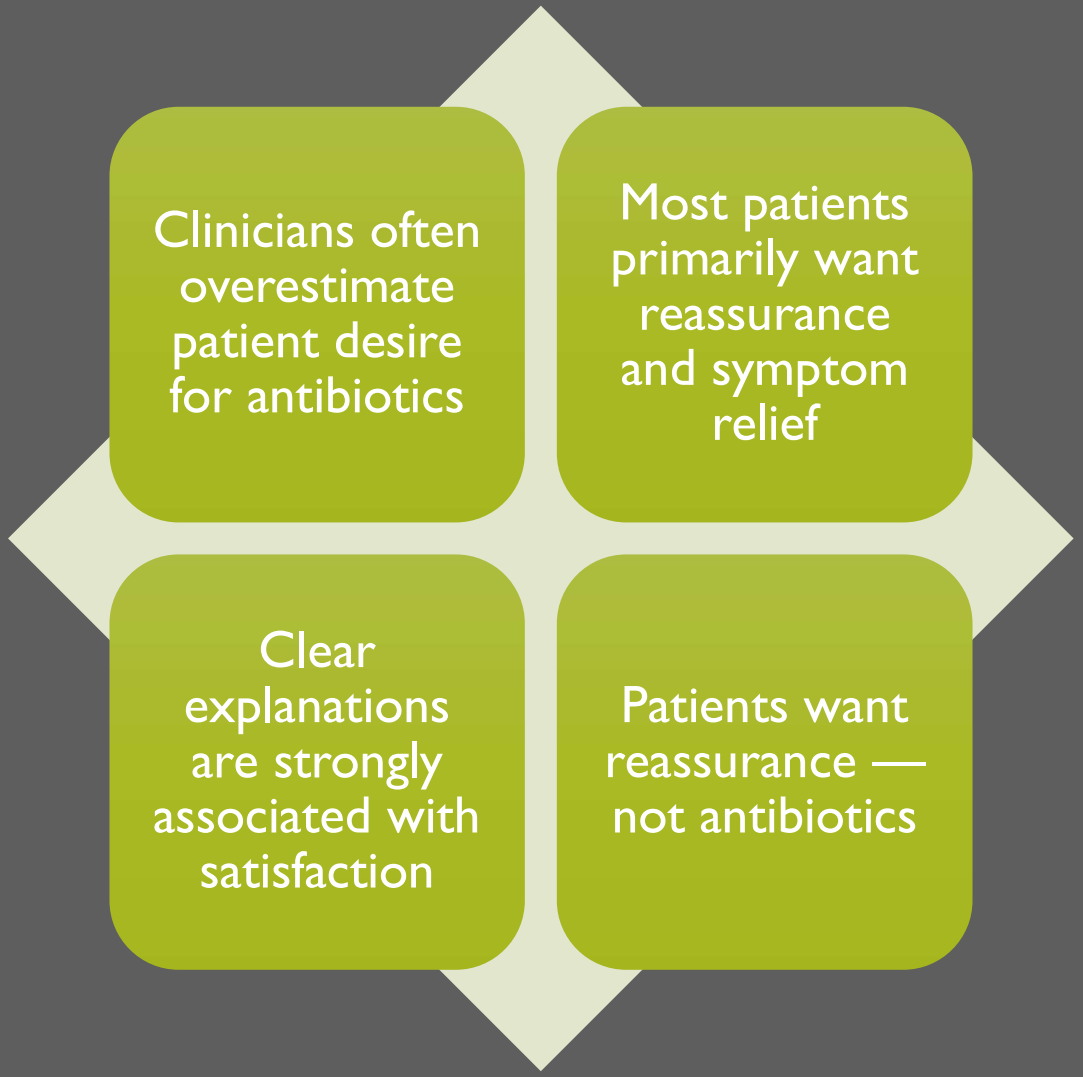
ME D, TL L, YJ T, et al. Exploring Patient Awareness and Perceptions of the Appropriate Use of Antibiotics: A Mixed-Methods Study. *Antibiot (Basel, Switzerland)*. 2017;6(4). doi:10.3390/ANTIBIOTICS6040023

ADVOCATE HEALTH

SOCIAL MEDIA

ARTIFICIAL INTELLIGENCE

PERCEIVED VS ACTUAL PATIENT EXPECTATIONS



WORDS MATTER!

- Communication is a key clinical intervention
- Use effective communication strategies to address patients' beliefs and concerns
- Language choices influence prescribing decisions

HOW TO COMBAT MISTRUST – AT THE CLINICIAN LEVEL

HOW TO ADDRESS MISTRUST with patients

1. **DETERMINE PURPOSE/GOAL**
   What does the patient need assistance with? How are they feeling?

2. **ESTABLISH RULES/GUIDELINES**
   What do you have to offer to the patient? What are you not willing to do? What are the expectations from both sides?

3. **ASSUME POSITIVE INTENT**
   This is the most important trait to keep in mind as provider. Not all patients are "X" (ie drug seekers).

4. **ENGAGE IN DIALOGUE, NOT DEBATE**
   Restate your goals and rules
   Educate patient-- debunk internet
   What is the data for "X"?
   ex: COVID data

5. **SHOW CULTURAL HUMILITY**
   They don't have to trust you blindly just because you are a provider.
   You need to EARN it!
   Educate yourself -- implicit bias training

6. **BE OPEN & TRANSPARENT**
   Ask them about what you don't understand
   Ask about pronouns and cultures

7. **CREATE TRUSTING/SAFE SPACES**
   Show that you and your staff care
   Effective communication with staff

8. **END WITH ACTION**
   Shared decision making

"The Patient Journey"

Viewing

Comprehending

Accepting

Forming An Intention to Act

Adopted from HSII presentation by Dr. Julie Szymczak April 2025

CANDIDATE DIAGNOSIS

- Patients/Parents can indirectly communicate their expectations for antibiotics
- Explicit: The patient/parent names a potential diagnosis
  - “I have a bad sinus infection…usually my doctor gives me antibiotics”
- Implicit: describes symptoms that implies a diagnosis
  - “Everyone in school has strep throat”
  - “My nose is full of thick green discharge”

DART: DIALOGUE AROUND RESPIRATORY ILLNESS TREATMENT

- Delivering treatment recommendation in 4 key statements:

  1) Review symptoms and physical exam findings

  2) Deliver the diagnosis in terms the patient can understand

  3)Deliver in recommendations in two parts:

  - Negative statement
  - Positive statement

- 4) Provide a contingency plan

https://www.uwimtr.org/dart/

Arch Pediatr Adolesc Med
Published Online: July 2001
2001;155;(7):800-806. doi:10.1001/archpedi.155.7.800

USE BOTH POSITIVE AND NEGATIVE COMMUNICATION TECHNIQUES

Positive treatment recommendation:

explanations of what patient can do to alleviate symptoms

Negative treatment recommendations:

explanations of the inappropriateness of antibiotics for their infection

Using both these types of statements together reduced antibiotic prescribing and improved parent ratings for the visit

RM Smith et al. Ann Fam Med 2015;13:221-227. doi: 10.1370/afm.1785.

DART EXAMPLE 

PE review:

In reviewing your symptoms, you have had a 5 days of a headache with increase nose drainage that's green. You don't have a fever or any radiation of pain to eyes or upper jaw. Your ears and throat don't have any signs of infection

Decision:

Based on these findings, looks like you have acute sinusitis. Based on your symptoms and exam, this is most likely a viral infection

Positive/Negative:

- Antibiotics are not going to help a viral infection
- To relieve your symptoms, I recommend using a decongestant and ibuprofen to relieve your headaches

Contingency:

I will provide you with information on how to relieve your symptoms. If your symptoms get worse (fever) or last longer then 10 days, please contact the office so we can see you again

Provider Scripting for Cold/Flu/Upper Respiratory Infections and Antibiotics

Don't	Do Say
Ask questions such as: • "Why are you here?" • "What do you need?" • "How can I help you today?"	• "Tell me about your symptoms." • "What symptoms are you having?"
Minimize their illness: • "It's ***just*** a virus/cold." • "You have to let this run its course."	• "You have an upper respiratory infection. This is caused by a virus. It can make you feel really bad for a few weeks, but there are some things we can do to help you feel better." • "Getting plenty of rest is important to help fight viruses. If you push yourself too hard, it may take longer for you to get better."
Be indecisive: • "It's ***probably*** a virus." • "Antibiotics ***probably*** won't help" • "***Most*** upper respiratory infections are caused by viruses."	• "You have a virus." • "Antibiotics will not help you feel better because your illness is viral." • "You have an upper respiratory infection which is caused by a virus."
Generalize: • "This works for a lot of people." • "Try XYZ, it may help your symptoms."	• "This is what I do when I have these symptoms." • "This is what I tell my family members to do when they are sick." • "These are the treatments you can use to help your symptoms."

If a patient says, "I want/need an antibiotic," do say:

- "Tell me your symptoms and we'll discuss the best treatment options."
- "Tell me what's going on and I will do a detailed exam so I can make the right diagnosis and give you the treatments that are most effective for you."
- "Antibiotics will not help your upper respiratory infection, because it's caused by a virus. Taking antibiotics now could actually make you feel sicker, and I don't want to give you something that would do more harm than good."
- "Here are some treatments you can use to help relieve your symptoms. If you are not feeling better or you feel worse in 5-7 days, call me and we will reevaluate your symptoms."

CATEHEALTH

HIGH-YIELD PHRASES

"Antibiotics treat bacteria, not viruses — and this looks viral."

"I want to treat what's causing this, not prescribe something unnecessary."

"Taking antibiotics when not needed can cause side effects and resistance."

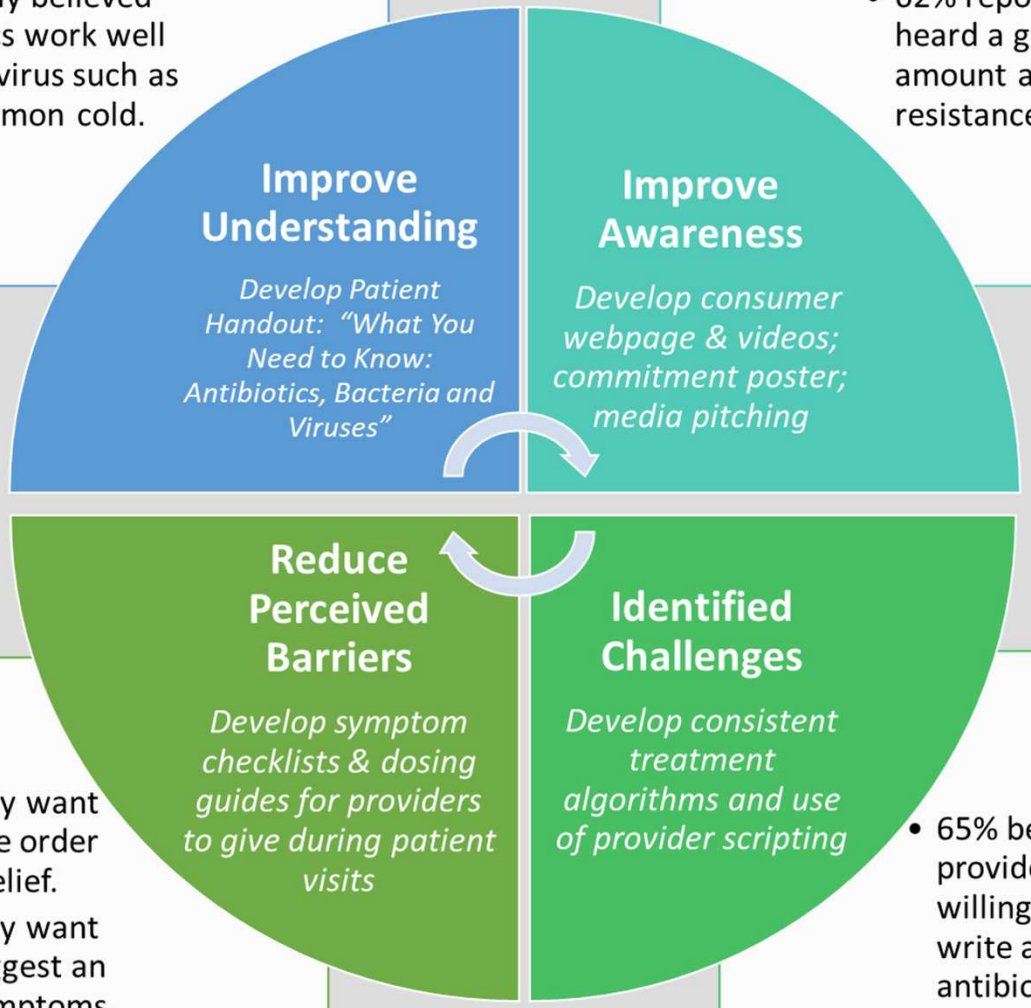
"If you're not improving in 48–72 hours, please contact us."

ADVOCATE HEALTH

HOW TO ADDRESS PATIENT AND PROVIDER COMMUNICATION GAPS

- 53% incorrectly believed that antibiotics work well for treating a virus such as the flu or common cold.

- 62% report they have heard a great deal/fair amount about antibiotic resistance.



- 61% report they want provider to give order for symptom relief.
- 78% report they want provider to suggest an OTC to help symptoms.

- 65% believe that some providers are more willing than others to write an order for an antibiotic

ME D, TL L, YJ T, et al. Exploring Patient Awareness and Perceptions of the Appropriate Use of Antibiotics: A Mixed-Methods Study. *Antibiot (Basel, Switzerland)*. 2017;6(4). doi:10.3390/ANTIBIOTICS6040023

COMMUNICATION OUTSIDE THE PATIENTS ROOM

- Messaging in waiting room
- Social media during flu/cold/cough season
- Consumer facing website
- “One message”
- Patient portal

A Commitment to Improving Antibiotic Use

Antibiotics are powerful, lifesaving medications. We are **dedicated** to prescribing antibiotics when they are needed, and we will avoid prescribing antibiotics when they are not needed as they may do harm. When your healthcare professional prescribes antibiotics, take them as directed.

Antibiotics fight infections caused by **bacteria**. Antibiotics don't work against **viruses** that cause the common cold, most coughs, and sore throats.

You can experience side effects while taking antibiotics. Common side effects could include a skin rash, diarrhea, or a yeast infection. More serious side effects could include a *C. diff* infection, which causes severe diarrhea that can lead to severe colon damage and death.

Using antibiotics also gives bacteria a chance to become more resistant to them. This can make future infections harder to treat, which means that antibiotics might not work when you really do need them.

Taking antibiotics only when needed helps keep you healthy, helps fight antibiotic resistance, and ensures that these life-saving drugs will be available for future generations.

We will answer any questions about the role of antibiotics in your treatment.

Sincerely,

BE ANTIBIOTICS AWARE
SMART USE, BEST CARE

To learn more about antibiotic prescribing and use, visit **www.cdc.gov/antibiotic-use** or call 1-800-CDC-INFO.

CDC

CS324363K

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EDUCATION AT TIME OF VISIT

Symptom Relief for Viral Illnesses

BE ANTIBIOTICS AWARE
SMART USE, BEST CARE

1. DIAGNOSIS

- ◯ Cold or cough
- ◯ Middle ear fluid (Otitis Media with Effusion, OME)
- ☐ Flu
- ◯ Viral sore throat
- ◯ Bronchitis
- ◯ Other:

You have been diagnosed with an illness caused by a virus. Antibiotics do not work on viruses. When antibiotics aren't needed, they won't help you, and the side effects could still hurt you. The treatments prescribed below will help you feel better while your body fights off the virus.

2. GENERAL INSTRUCTIONS

- ◯ Drink extra water and fluids.
- ◯ Use a 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 younger than 1.

3. 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.

4. 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: _____

To learn more about antibiotic prescribing and use, visit **www.cdc.gov/antibiotic-use**.

CDC

What Is Watchful Waiting?

BE ANTIBIOTICS AWARE
SMART USE, BEST CARE

GOOD NEWS!

Your healthcare professional believes your illness will likely go away on its own.

You should watch and wait for ____ **days/hours** before deciding whether to take an antibiotic.

In the meantime, follow your healthcare professional's recommendations to help you feel better and continue to **monitor your own symptoms** over the next few days.

- ◯ Rest.
- ◯ Drink extra water and fluids.
- ◯ Use a cool mist vaporizer or saline nasal spray to relieve congestion.
- ◯ For sore throats in adults and older children, try ice chips, sore throat spray, or lozenges.
- ◯ Use honey to relieve cough. Do not give honey to an infant younger than 1.

If you **feel better, no further action is necessary. You don't need antibiotics**.

If you **do not feel better,** experience **new symptoms,** or have **other concerns,** call your healthcare professional _____. **Discuss whether you need a recheck or antibiotics.**

It may not be convenient to visit your healthcare professional multiple times, but it is critical to take antibiotics only when needed. When antibiotics aren't needed, they won't help you and the side effects could still hurt you. Common side effects of antibiotics can include rash, dizziness, nausea, diarrhea, and yeast infections.

Antibiotics save lives, and when a patient needs antibiotics, the benefits outweigh the risks of side effects. You can protect yourself and others by learning when antibiotics are and are not needed.

To learn more about antibiotic prescribing and use, visit **www.cdc.gov/antibiotic-use**.

CDC

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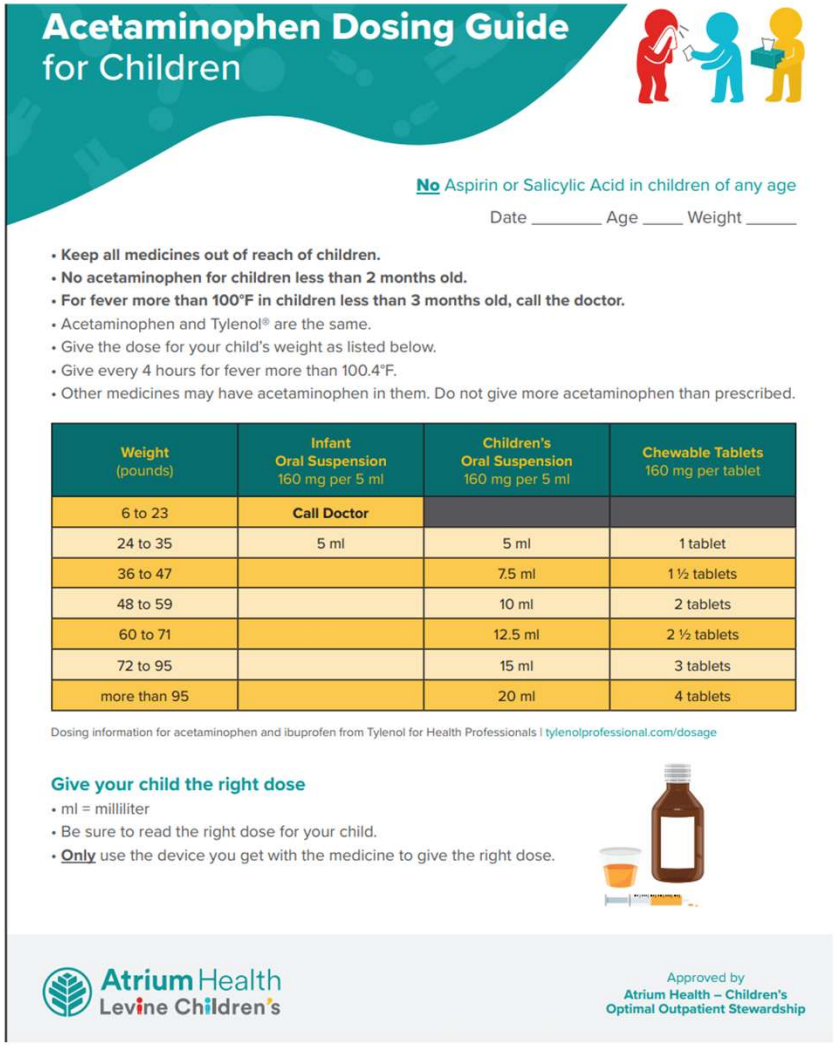


Acetaminophen Dosing Guide for Children

No Aspirin or Salicylic Acid in children of any age

Date _____ Age ____ Weight _____

- **Keep all medicines out of reach of children.**
- **No acetaminophen for children less than 2 months old.**
- **For fever more than 100°F in children less than 3 months old, call the doctor.**
- Acetaminophen and Tylenol® are the same.
- Give the dose for your child's weight as listed below.
- Give every 4 hours for fever more than 100.4°F.
- Other medicines may have acetaminophen in them. Do not give more acetaminophen than prescribed.

Weight (pounds)	Infant Oral Suspension 160 mg per 5 ml	Children's Oral Suspension 160 mg per 5 ml	Chewable Tablets 160 mg per tablet
6 to 23	**Call Doctor**		
24 to 35	5 ml	5 ml	1 tablet
36 to 47		7.5 ml	1 ½ tablets
48 to 59		10 ml	2 tablets
60 to 71		12.5 ml	2 ½ tablets
72 to 95		15 ml	3 tablets
more than 95		20 ml	4 tablets

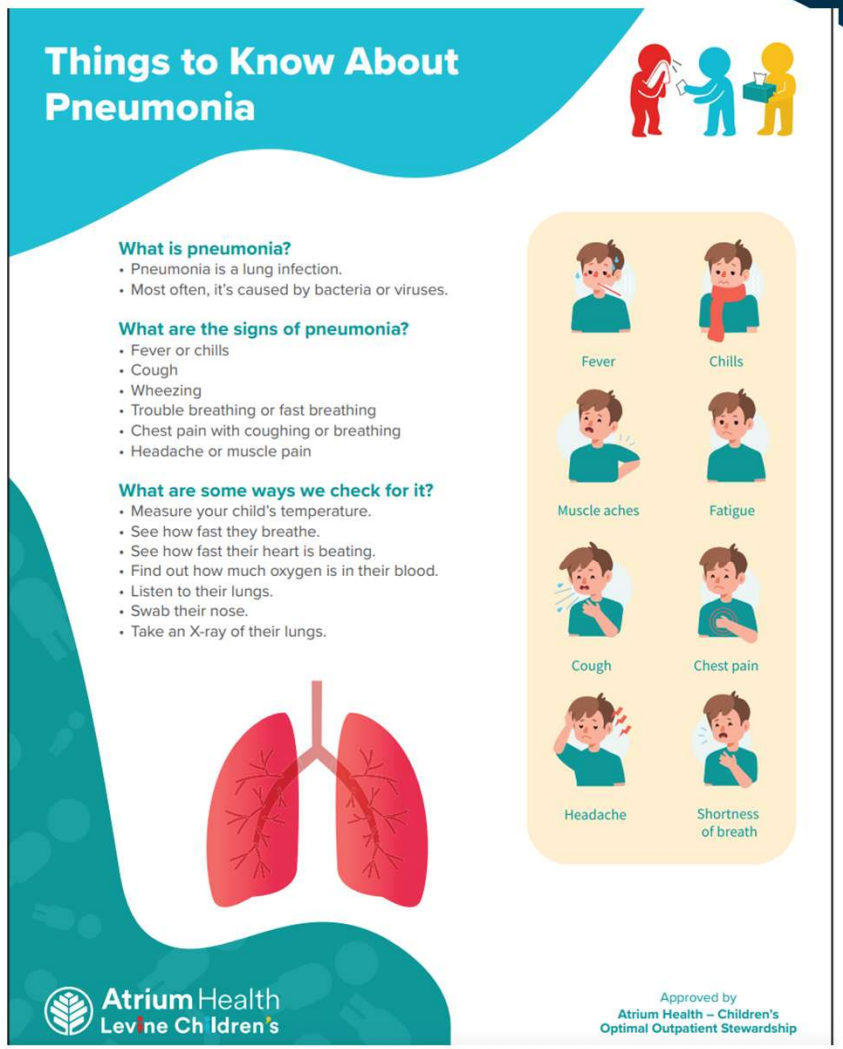
Dosing information for acetaminophen and ibuprofen from Tylenol for Health Professionals | tylenolprofessional.com/dosage

Give your child the right dose

- ml = milliliter
- Be sure to read the right dose for your child.
- **Only** use the device you get with the medicine to give the right dose.

Atrium Health Levine Children's

Approved by
Atrium Health – Children's
Optimal Outpatient Stewardship



Things to Know About Pneumonia

What is pneumonia?

- Pneumonia is a lung infection.
- Most often, it's caused by bacteria or viruses.

What are the signs of pneumonia?

- Fever or chills
- Cough
- Wheezing
- Trouble breathing or fast breathing
- Chest pain with coughing or breathing
- Headache or muscle pain

What are some ways we check for it?

- Measure your child's temperature.
- See how fast they breathe.
- See how fast their heart is beating.
- Find out how much oxygen is in their blood.
- Listen to their lungs.
- Swab their nose.
- Take an X-ray of their lungs.

Fever
Chills
Muscle aches
Fatigue
Cough
Chest pain
Headache
Shortness of breath

Atrium Health Levine Children's

Approved by
Atrium Health – Children's
Optimal Outpatient Stewardship

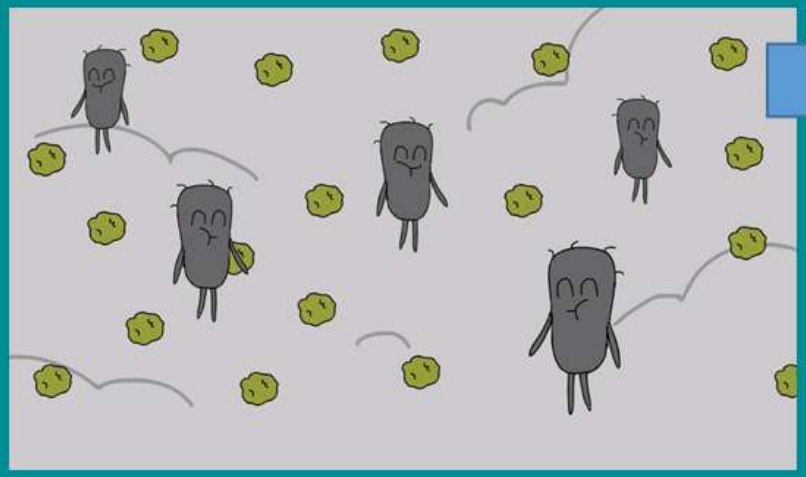
- Use clear language-Check with patient literacy
- Include in after visit summary

ADVOCATE HEALTH

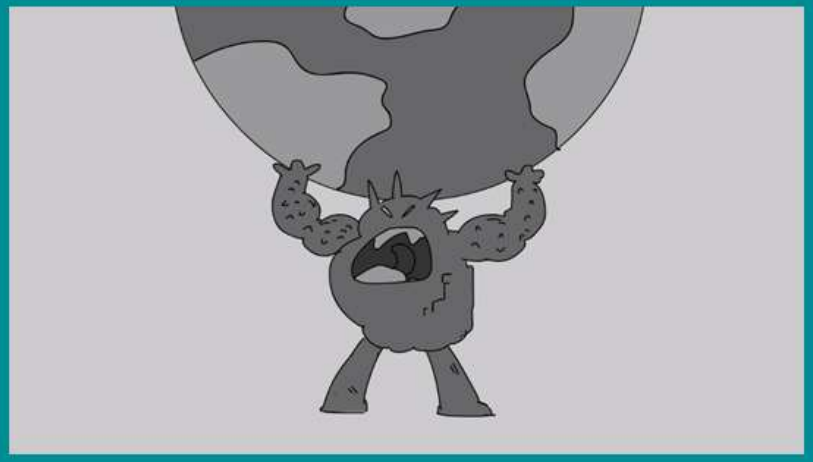
Educational Videos:

Good Germs vs. Bad Germs (animated)

Colds, Flu and Antibiotics



Local Leader!!



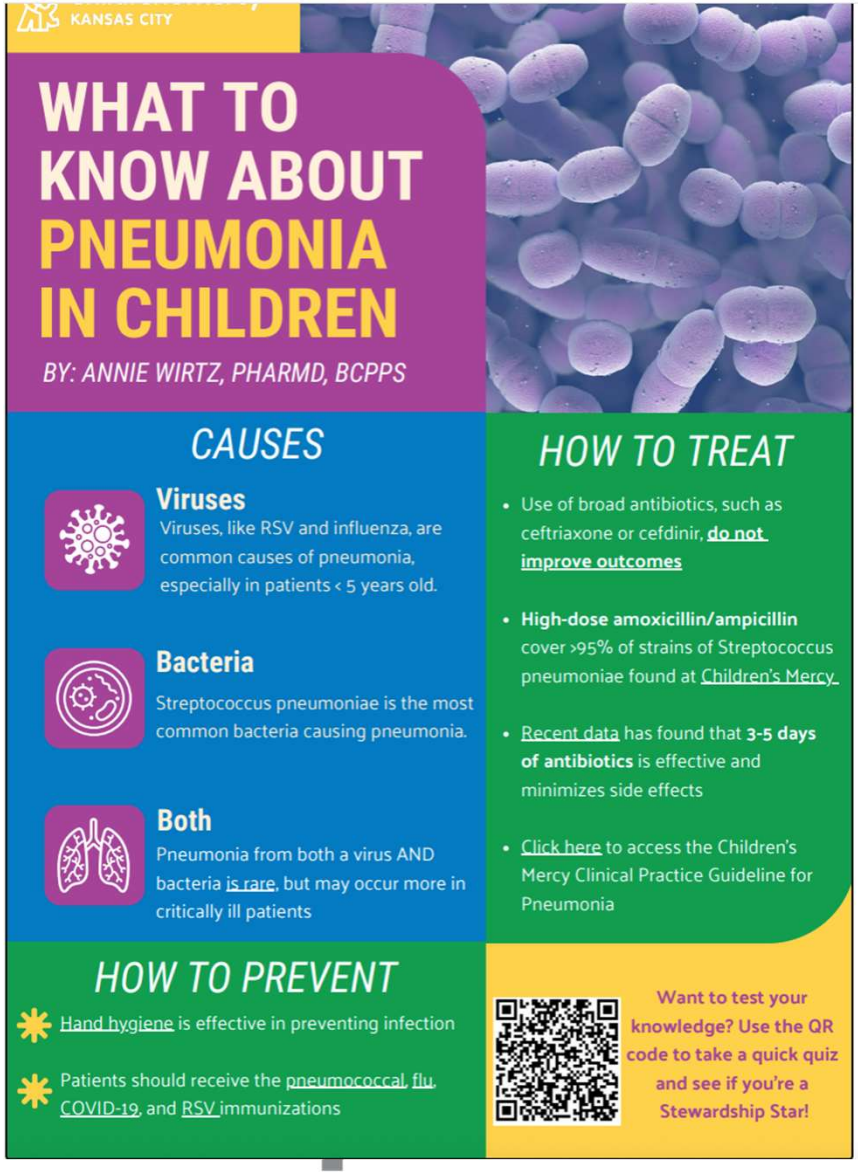
These are typically caused by viruses

- Colds ✓
- Upper Respiratory Infections ✓
- Coughs ✓

Atrium Health

PROVIDER RESOURCES

- Guidelines/Algorithms
- Webinars or Grand rounds
  - CME/MOC
- Email “bites”
- Easy access to info
- Dashboards or reports with prescribing data



Diagnosis and Management of

Sinusitis in Adults and Children

2023 Update

This care process model (CPM) was developed by Intermountain Healthcare's Antibiotic Stewardship and Community-Based Care teams. It is based on expert opinion and clinical practice guidelines from the Infectious Disease Society of America (IDSA), the American Academy of Pediatrics (AAP), and the American Academy of Otolaryngology (AAO). This CPM provides best-practice recommendations for diagnosing and managing acute sinusitis in adult and pediatric patients, including guidance for when and how antibiotics should be used for acute bacterial sinusitis.

Key Points

Antibiotics are over-prescribed for sinusitis.

- Although 85% of adults with sinus symptoms will have a resolution/reduction of symptoms in the next 5-7 days without antibiotics, 80-90% of adults with sinus symptoms are prescribed antibiotics.[1]
- Studies have shown the use of antibiotics does not significantly alter the persistent disease course in both children[2] and adults[3]. It is estimated that only 35-59% of antibiotic prescriptions for sinusitis are appropriate.[4]
- A recent Cochrane Review concluded that there is no place for antibiotics for people with uncomplicated acute rhinosinusitis.[5]

Watchful waiting, with or without a delayed antibiotic prescription is a recommended treatment option for persistent acute bacterial sinusitis.

- The AAP and AAO guidelines allow observation (watchful waiting) of patients exhibiting purulent nasal discharge ≥10 days. In children, the AAP recommends observing for an additional 3 days, while adults can be observed for 7 days.[6,7]

Antibiotic recommendations:

- Guidelines recommend antibiotic therapy for:
  - Children with *Severe* or *Worsening* clinical presentation
  - Adults with a *Severe* clinical presentation. (See page 2 for definitions)
- A duration of 5-days is recommended for the initial course of antibiotics in adults and children.[8,9] See antibiotic stewardship quick order page
- Amoxicillin is recommended as first-line treatment in non-severe sinusitis due to low rates of beta-lactamase positive organisms in the region.

Intermountain provides tools to help improve antibiotic stewardship.

- Order sets for delayed antibiotics; search "only fill"— *iCentra instructions*
- See Antibiotic Stewardship folder on QuickOrders page for details

Supporting evidence

Infectious Diseases Society of America (IDSA) 2012 Guidelines
American Academy of Pediatrics (AAP) 2013 Guidelines
American Association of Otolaryngology 2015 Guidelines

What's Inside?

What's new in this update?

Recommended first-line antibiotic treatment course for acute bacterial sinusitis in adults and children has been shortened to 5 days.[8]

Intermountain Measures

- Antibiotic prescribing rates for sinusitis
- Duration of primary antibiotic therapy for adult and pediatric sinusitis

See *SCORE UC Prescribing Dashboard*

Intermountain Health

SUMMARY CARD

Acute Sinusitis - Pediatric

Intermountain Health 2023

Diagnosis of sinusitis

Purulent nasal discharge AND nasal obstruction or facial pressure

Have the symptoms been present >4 weeks?

- no → *Complete Sinusitis CPM*
- yes → Consider subacute or chronic sinusitis; Refer to ENT

To diagnose acute bacterial sinusitis (ABS), patient must fall into at least ONE of the clinical presentation categories below

SEVERE	Temperature ≥102.2 °F (39 °C), facial pain/pressure, and purulent nasal discharge for 3 consecutive days
WORSENING	New or worsening sinusitis signs and symptoms AFTER initial improvement or following URI that has lasted ≥7 days
PERSISTENT	Purulent nasal discharge AND facial pain or nasal obstruction without improvement for ≥10 days

Does patient meet ≥1 of the 3 ABS presentations?

- no → Acute VIRAL sinusitis likely → Treat acute **VIRAL** sinusitis symptoms
  - Recommend symptomatic therapy*
  - Instruct patient to return if symptoms worsen or persist ≥10 days
- yes → Acute BACTERIAL sinusitis likely → Treat as acute **BACTERIAL** sinusitis (see pg 2)

*Symptom relief checklists Ages (0-12) / Spanish ; Ages (12-18) / Spanish

SUMMARY CARD

Acute Sinusitis - Pediatric

Intermountain Health 2023

Treatment of acute bacterial sinusitis

Patient <18 with acute bacterial sinusitis

Discuss symptom relief and treat according to clinical presentation

Complete Sinusitis CPM

SEVERE | **WORSENING** | **PERSISTENT**

Primary antibiotics

amoxicillin-clavulanate: 45mg amox/kg/dose orally 2 times per day (max 2g amox/dose) for 5 days

If patient is allergic to penicillin use cefdinir + clindamycin

If needed

Watchful waiting only

Watchful waiting + delayed antibiotic prescription

Instruct patient to contact doctor or fill delayed prescription if worse in 2-3 days or if no improvement in 5-7 days

Primary antibiotic for use if WORSENING or no improvement during watchful waiting period*

amoxicillin: 45mg/kg/dose orally 2 times per day (max 2g/dose) for 5 days

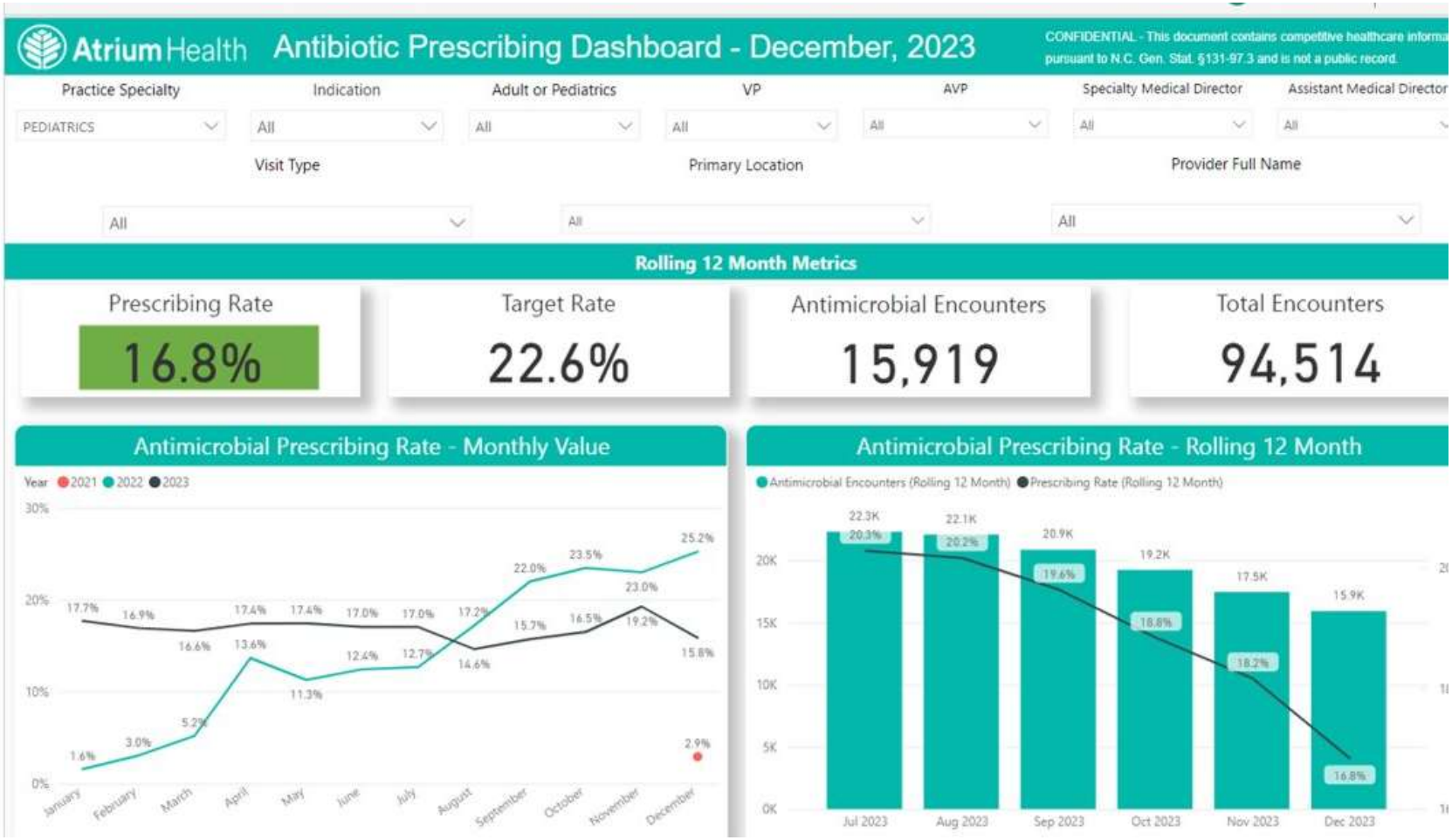
*If patient allergic to penicillin use cefdinir only as 1st line agent

If needed

Secondary antibiotics if needed

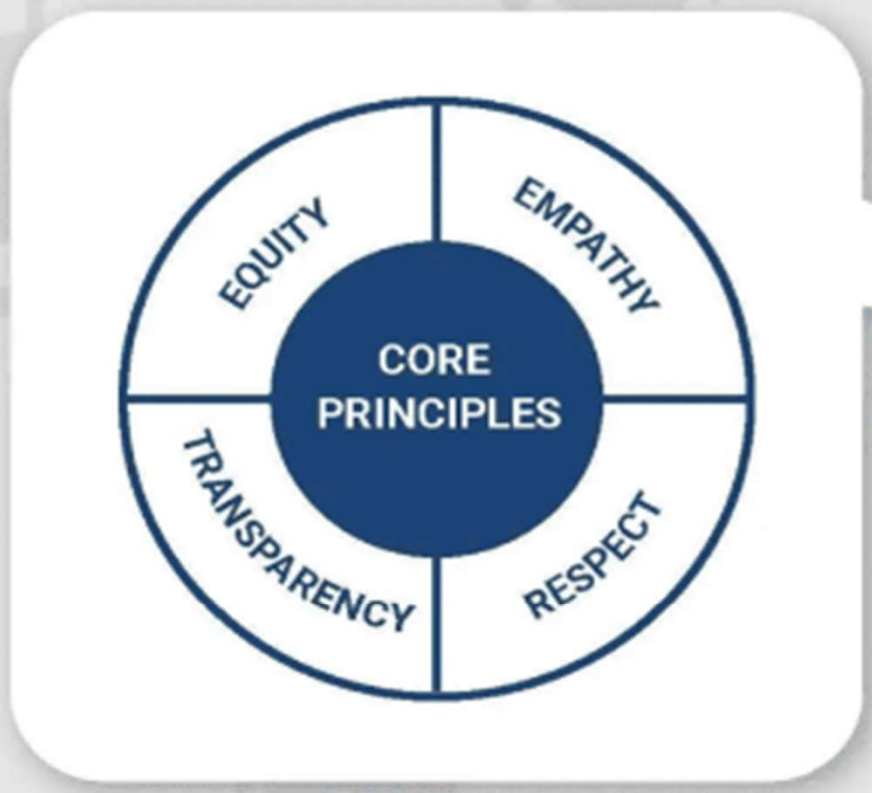
cefdinir + clindamycin

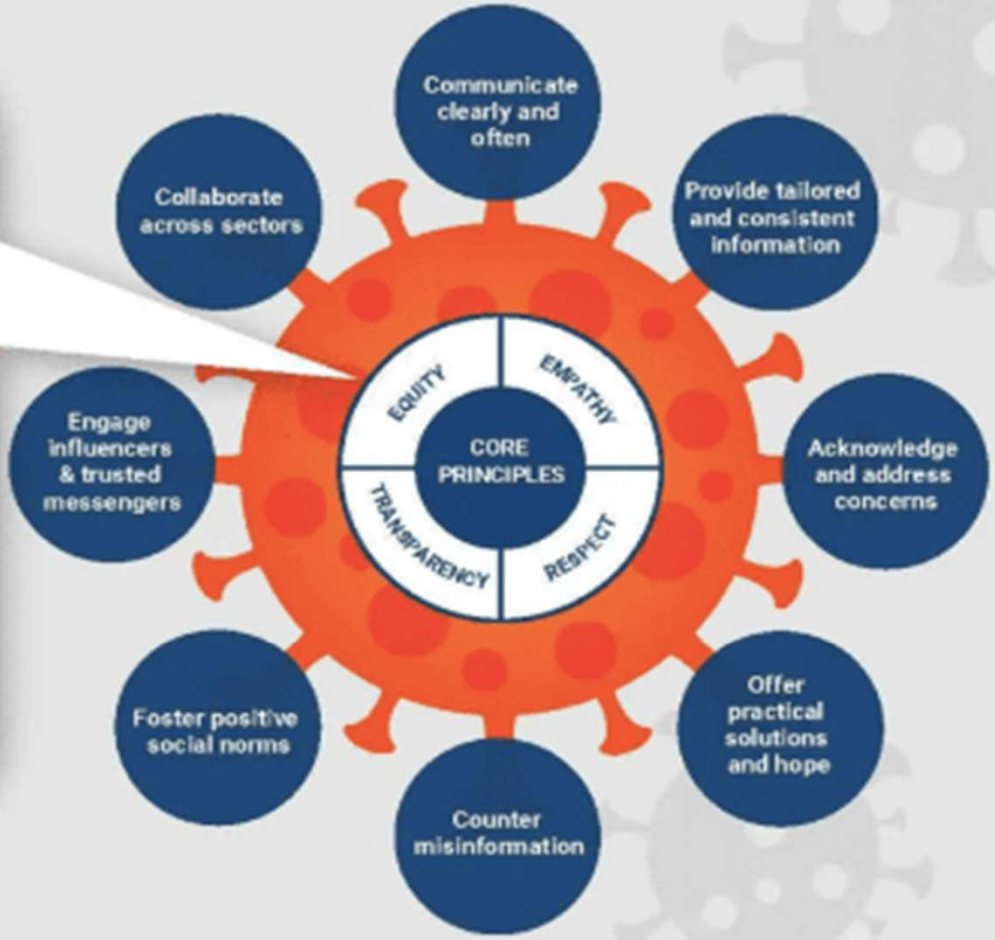
- **cefdinir:** 14mg/kg/dose orally once per day (max 600mg/dose) 7 days
- **clindamycin:** 10mg/kg/dose orally 3 times per day (max 300mg/dose) for 7 days


Atrium Health
Antibiotic Prescribing Dashboard - December, 2023
CONFIDENTIAL - This document contains competitive healthcare informa
pursuant to N.C. Gen. Stat. §131-97.3 and is not a public record.
Practice Specialty
PEDIATRICS
Indication
All
Adult or Pediatrics
All
VP
All
AVP
All
Specialty Medical Director
All
Assistant Medical Director
All
Visit Type
All
Primary Location
All
Provider Full Name
All
Rolling 12 Month Metrics
Prescribing Rate
16.8%
Target Rate
22.6%
Antimicrobial Encounters
15,919
Total Encounters
94,514
Antimicrobial Prescribing Rate - Monthly Value
Year 2021 2022 2023
30%
20%
10%
0%
17.7%
16.9%
16.6%
17.4%
17.4%
17.0%
17.0%
17.2%
14.6%
15.7%
16.5%
19.2%
15.8%
1.6%
3.0%
5.2%
13.6%
11.3%
12.4%
12.7%
22.0%
23.5%
23.0%
25.2%
2.9%
January
February
March
April
May
June
July
August
September
October
November
December
Antimicrobial Prescribing Rate - Rolling 12 Month
Antimicrobial Encounters (Rolling 12 Month)
Prescribing Rate (Rolling 12 Month)
20K
15K
10K
5K
0K
22.3K
20.3%
22.1K
20.2%
20.9K
19.6%
19.2K
18.8%
17.5K
18.2%
15.9K
16.8%
Jul 2023
Aug 2023
Sep 2023
Oct 2023
Nov 2023
Dec 2023

WORDS MATTER!!

- Communication is the key intervention for improving antimicrobial stewardship





THANK YOU!
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