

# Antimicrobial Stewardship Education & Communication Strategies

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NEBRASKA ANTIMICROBIAL STEWARDSHIP ASSESSMENT AND PROMOTION PROGRAM

# Staff Education and Engagement

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# Disclosures

- Josette M. McConville, BSN, RN, CIC  
Nothing to disclose
- L. Kate Tyner, BSN, RN, CIC  
Nothing to disclose



Who can help?



How can they help?



Getting there

# Antibiotic Stewardship Team: Basic Engagement

Medical Director

Consultant Pharmacist

Charge nurses

Education Coordinator

Director of Nursing

Assistant Director of Nursing

Infection Preventionist

Information Technology staff member

# Things you can ask for

## Champions

IP, Educator  
and Medical  
Director

Develop agendas and policies, lead training, provide leadership and support

## Stewardship staff

IP, DON,  
ADON,  
Educator,  
Pharmacist

Help develop training or help select existing tools that will be meaningful to team members, review use of tools [like SBARs], remind staff to use tools, help solve problems with implementation

## Monitoring staff

IP and  
Pharmacist

Compile data on antibiotic use, enter data into a database, develop findings and communicate them

# STEWARDSHIP *Teamwork*



Name people that can help you with specific tasks

DEVELOP AGENDAS:

SCHEDULE/ ASSIST WITH TRAINING:

HELP SELECT EXISTING TOOLS THAT WILL BE MEANINGFUL TO STAFF:

REVIEW USAGE OF TOOLS:

REMIND STAFF TO USE TOOLS:

HELP SOLVE IMPLEMENTATION PROBLEMS:

COMPILE DATA ON ANTIBIOTIC USE:

ENTER DATA INTO A DATABASE:

DEVELOP FINDINGS:

COMMUNICATE FINDINGS:

GATHER NEW INFECTION INFORMATION:

*Teamwork notes*



# Core Elements in a Process Intervention

- Early education/ engagement: Clinical team educated about the potential harm associated with inappropriate antibiotic use related to asymptomatic UTI
- Later cycle education and engagement: Clinical team provided data on ASB and UTI SBAR completion

- Prioritize reducing treatment of asymptomatic bacteriuria
- Implement UTI SBAR

Education

Take Action

Reporting

Tracking

This is both  
engagement and  
education

- Number of UTI and treatment courses trended month to month in *report* at QAPI
- Use of UTI SBAR is trended and *discussed* at QAPI

- Tracking the number of urinary tract infections and treatment courses
- Tracking the use of UTI SBAR completion



# Engagement and Education: Advanced engagement

Often 2 sides of the same coin

Engaging clinical team members can look like:

- Resident case examples of antibiotic related harm; rash, diarrhea, MDRO acquisition
- Sharing examples of misuse of antibiotics, like an antibiotic started for delirium that was later attributed to pain and dehydration
- Sharing examples of instances of “treatment” of a UTI with a antibiotic that was not actually active against an organism found on culture (drug-bug mismatch)



# Key Antimicrobial Stewardship Education Concepts

- Major goal of healthcare education is to improve job skills and competency
- Workplace training in healthcare is a response to emerging issues and tends to be problem-focused
- Learning retention increases with immediate application
- Needs assessment/performance improvement studies identify areas for knowledge, skills, or attitude
- Development of a well-defined plan for each learning experience
- Education should be linked to organizational mission

# Learning Environment



- Conducted on site vs. virtual
- Distractions
- Must be flexible
- Informal vs. formal
- Supportive
- Be prepared for the unexpected



## IDENTIFYING DELIRIUM

### ABCs OF IDENTIFICATION



**A**cute/subacute

- Altered mental status with change in attention

**B**ehavioral disturbance

- (Restless, agitated, combative)

**C**hanges in consciousness

- (Jittery, drowsy, difficult to arouse)

### COMMON CAUSES OF DELIRIUM

• Sleep deprivation	• Dehydration	• Pain
	• Medications	• Immobility

### COMMON SYMPTOMS

• Drowsiness or agitation	• Arguing with staff or family members	• Hallucinating
• Refusing therapy/meals/medications		• Wandering off



This resource is in your workbook.

How might you use it for education with your team members?

Which team members?



..also in your workbook.

When you picture staff education, would you consider walking rounds with this as a discussion aide?

Think about your target  
How might you check for understanding?  
How might you document the interaction?

**TREATING AND PREVENTING DELIRIUM**

**1 MODIFY ENVIRONMENT**

- Orient often—time, date, place
- Provide calendar/clock in room
- Surround with familiar faces

**2 PROMOTE NORMAL SLEEP**

- Reduce noise, dim lights
- Promote sleep at night, activity during day

**3 CORRECT SENSORY DEFICITS**


- Eyeglasses
- Hearing aids
- Pain management
- Good lighting

**4 ENHANCE DAYTIME ACTIVITIES**

- Cognitive stimulation—word games, crossword puzzles, current events discussion
- Encourage physical therapy/occupational therapy
- Active while awake, only sleep at night
- MOBILIZE!

**5 PREVENT DEHYDRATION**

- Small sips of water throughout the day
- Encourage good nutrition—supplement if necessary with smoothies and protein drinks
- Address constipation

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# Use Multiple Teaching Modalities

- Utilize various teaching modalities to accommodate different learning styles and preferences.
  - Lectures
  - Workshops
  - Case studies
  - Online modules
  - Videos
  - Interactive discussions
  - Printed education (newsletters, posters, etc.)



# Ideas from the field

- Place antibiogram with interpretation highlights in the mailbox of providers
- Send an email “I saw this great education, I really liked... and wanted to share.” Include the link
- Place newsletter in breakroom or on bulletin board
- Hang posters in breakrooms and staff restrooms



# Identify Target Audiences - Prescribers

- Topics specific to treatment of infections: microorganisms and usual susceptibilities, antimicrobials and their mechanism of action, and the prevalence of AMR.
- Clinicians should also have an understanding of the benefits of using antimicrobials to treat different conditions, the principles of AMS, symptom management and the use of microbiology test results.
- Prescribers also need training in effective communication to equip them to inform patients and manage their expectations
- Providing regular education throughout the clinician's career will help them to safely and appropriately use antimicrobials in their practice, and also contribute more fully to AMS.
- All clinicians who prescribe antimicrobials within their scope of practice require ongoing AMS education and support.

Topic	Concepts	Audience	Principles, Learning Outcomes, and Competencies
Antimicrobial Resistance	<ul style="list-style-type: none"> <li>• Selection</li> <li>• Mutation</li> </ul>	<ul style="list-style-type: none"> <li>• Prescribers</li> <li>• Infection Preventionists</li> <li>• Nurses</li> </ul>	<ul style="list-style-type: none"> <li>• Extent and causes of resistance in pathogens (low antimicrobial concentration and prolonged exposure of microorganisms to antimicrobials is driving resistance)</li> <li>• Extent and causes of resistance in commensals, and the phenomenon of overgrowth (e.g. <i>Clostridioides difficile</i> infection, yeast infection)</li> <li>• Epidemiology of resistance, accounting for local variations and importance of surveillance (e.g. antibiogram education)</li> </ul>
	<ul style="list-style-type: none"> <li>• Infection Prevention and Control</li> </ul>	<ul style="list-style-type: none"> <li>• Prescribers</li> <li>• Infection Preventionists</li> <li>• Nurses</li> <li>• Environmental Services Staff</li> <li>• Residents/Families</li> </ul>	<ul style="list-style-type: none"> <li>• Spread of resistant organisms</li> </ul>
Antimicrobial Agents	<ul style="list-style-type: none"> <li>• Mechanisms of action</li> <li>• Resistance</li> <li>• Toxicity</li> <li>• Cost</li> </ul>	<ul style="list-style-type: none"> <li>• Prescribers</li> <li>• Infection Preventionists</li> <li>• Nurses</li> </ul>	<ul style="list-style-type: none"> <li>• Broad-spectrum versus narrow-spectrum antimicrobials; preferred choice of narrow-spectrum agents</li> <li>• Combination therapy (synergy, limiting emergence of resistance; broaden the spectrum)</li> <li>• Collateral damage of antimicrobial use (toxicity, cost)</li> <li>• Consequences of bacterial resistance</li> <li>• Lack of development of new antimicrobials (limited arsenal)</li> </ul>

Pulcini C, Gyssens IC. How to educate prescribers in antimicrobial stewardship practices. *Virulence* 2013;4(2):192–202

YouTube

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The Nebraska Infection Control Assessment and Promotion (ICAP) program and the Nebra... >

[asap.nebraskamed.com](https://asap.nebraskamed.com) and 1 more link

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# Evaluate Learning Outcomes

- Assess the effectiveness of your educational efforts by evaluating learning outcomes and behavior change among participants.
- Collect feedback through surveys, quizzes, and follow-up assessments to identify areas for improvement.
  - How are you going to change your practice?
  - Do we need to pivot our educational strategy?
  - Is additional education needed?



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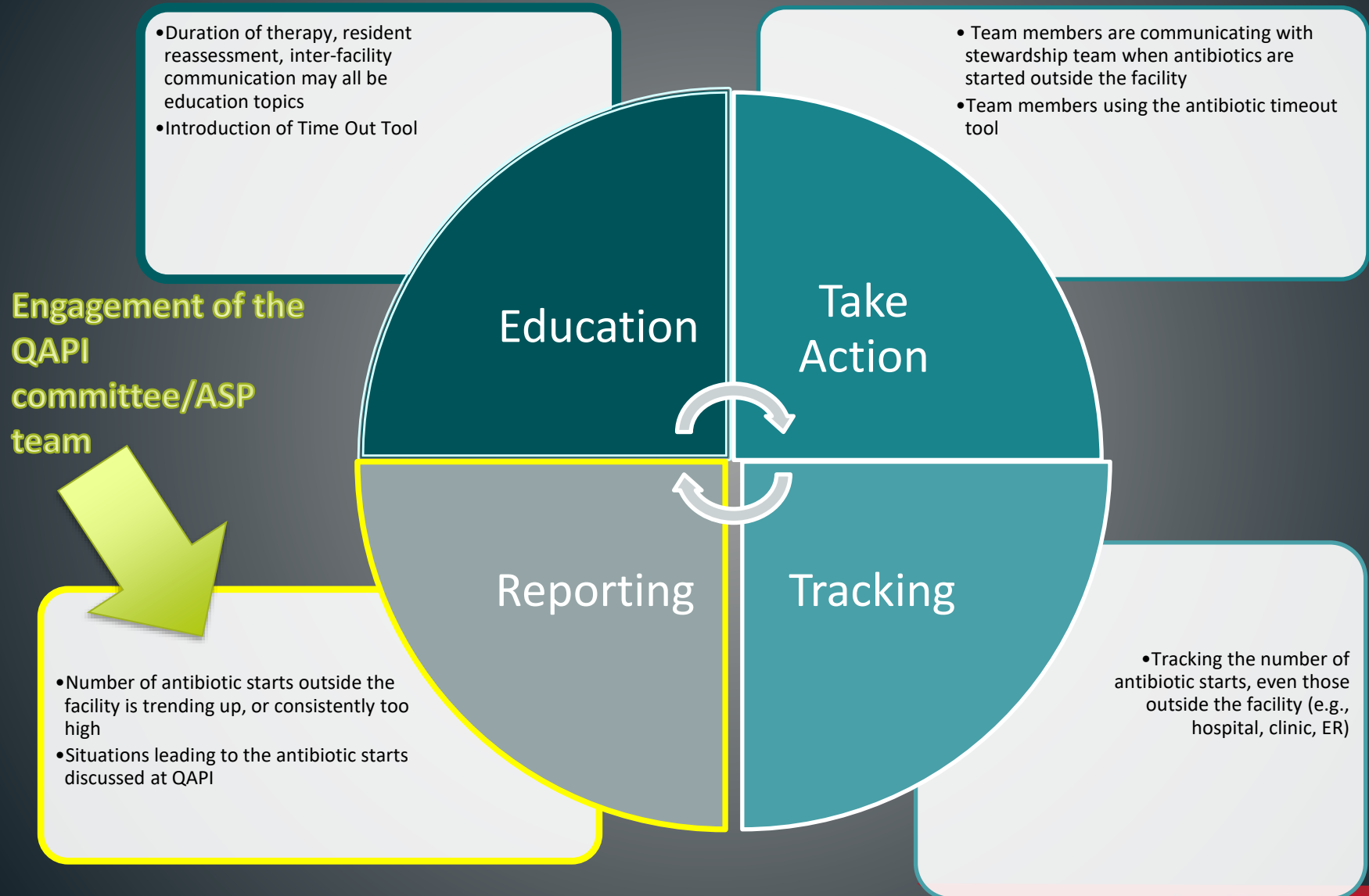
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# Core Elements in a **NEW** Intervention:

## *For Example, Antibiotic Time Out*



## Take home messages:

- Ensure your team includes colleagues that can assist with engagement and education
- Engagement and education are not extra steps, they are pieces of the stewardship process
- Educational resources are available, and the ASP team selects the ones that help them address their priorities most effectively



Questions?

# Education for Residents and Families

Josette McConville, RN, CIC



# Core Element: Education

## Residents and families

Nursing homes engage residents and their family members in antibiotic use and stewardship educational efforts to ensure clinicians have their support to make appropriate antibiotic use decisions. Working with residents and families will reduce the perception that their expectations may be a barrier to improving antibiotic use in nursing homes.

Does your organization provide education to residents and family members on appropriate antibiotic use?  
How is this done?

# Effective Education

Effective communication with residents and their families helps to address treatment expectations.

- Reduce the expectation of an automatic antibiotic prescription.
- Talk to residents and their families about when antibiotics are and are not needed, and discuss possible harms such as allergic reactions, *C. difficile* and antibiotic resistant infections.

Healthcare professionals in the nursing home can help reduce inappropriate antibiotic use by utilizing a 4-part communication strategy (CDC)

# Proactive Education

- Implementation strategies – be deliberate and consistent
- Standardized communication strategies
- Share information with each resident and family about appropriate use of antibiotics
- Consider various methods of information sharing that is preferable to resident and family requests and learning styles. Options could include:
  - On-demand videos on facility website
  - Posters
  - Handouts
  - Information in monthly newsletter
  - Individual training or email notification as needed

# Focus on Individual Risks

Focus discussion towards individual-oriented conversation about possible harm to the individual.

- Individual risks
  - Allergy
  - Side effects, such as upset stomach
  - Drug-drug interactions
  - C. diff
- Antibiotic resistance, potential to impact the resident or others close to the resident
- Avoid emphasizing societal impacts of antibiotic resistance

**Keep the discussion simple, understandable, and directly related to the patient.**

# Signage Recommendations



- ✓ Simple and consistent
- ✓ Eye-catching visuals
- ✓ Readable text
- ✓ Call to action, highlight key information
- ✓ Accessible language
- ✓ Consider placement



# Communicate Commitment to Safety

Communicate the facility's commitment to appropriate antibiotic use.

Ask the resident and family to make a commitment toward safe antibiotic use.

- Don't ask for an antibiotic when the doctor says it isn't needed.



[CDC Stewardship Leadership Commitment Letter for Nursing Homes](#)

# General Education Resources

## Why does taking antibiotics lead to antibiotic resistance?

Any time you take antibiotics, they can cause side effects and contribute to the development of antibiotic resistance. Antibiotic resistance is one of the most urgent threats to the public's health.

### Always remember:

1. Antibiotic resistance does not mean the body is becoming resistant to antibiotics; it means bacteria are developing the ability to defeat the antibiotics designed to kill them.
2. When bacteria become resistant, antibiotics cannot fight them, and the bacteria multiply.
3. Some resistant bacteria can be harder to treat and can spread to other residents in the nursing home.

## What if I have questions about antibiotics?

**Talk to your healthcare professional if you have any questions about your antibiotics, such as:**

- What infection does this antibiotic treat and do you know I have that infection?
- How long do I need to take this antibiotic?
- What are the potential side effects from this antibiotic?
- Could any of my other medications interact with this antibiotic?
- How will you know that the antibiotic is working for my infection?

Improving the way healthcare professionals prescribe antibiotics, and the way we take antibiotics, helps keep us healthy now, helps fight antibiotic resistance, and ensures that these life-saving drugs will be available for future generations.

**40%-75% of antibiotics prescribed in nursing homes may be unnecessary or inappropriate.**

To learn more about antibiotic prescribing and use, visit [www.cdc.gov/antibiotic-use](http://www.cdc.gov/antibiotic-use) or call 1-800-CDC-INFO.



## Do You Need Antibiotics?

**Information about antibiotics for nursing home residents and their families**



CDC Antibiotic use: Nursing home

## Viruses or Bacteria What's got you sick? Common infections in nursing homes

Antibiotics are often prescribed when they are not needed for respiratory infections. Antibiotics are only needed for treating certain infections caused by bacteria. Viral illnesses cannot be treated with antibiotics. When antibiotics aren't needed, they won't help you, and the side effects could still cause harm.

Common Respiratory Infections in Nursing Homes	Common Cause			Are Antibiotics Needed?*
	Virus	Virus or Bacteria	Bacteria	
Common cold/runny nose	✓			No
Sore throat (except strep)	✓			No
COVID-19	✓			No
Flu	✓			No
Acute bronchitis/chest cold		✓		No**
Sinus infection		✓		Maybe
Pneumonia		✓		Yes
Strep throat			✓	Yes

\*Antibiotic drugs are available for some viral infections, such as COVID-19 or flu.  
\*\*Antibiotics are only needed for nursing home residents with acute bronchitis or a chest cold (acute bronchitis, chronic obstructive pulmonary disease (COPD) or other chronic lung disease).



To learn more about antibiotic prescribing and use, visit [www.cdc.gov/antibiotic-use](http://www.cdc.gov/antibiotic-use).



CDC VirusOrBacteria-NH-P.pdf

# Specific Education Resources

Developed by the Massachusetts Infection Prevention Partnership

## Suspect a Urinary Tract Infection?

### How Taking Antibiotics When You Don't Need Them Can Cause More Harm Than Good

*An Important Message for Seniors and their Families*



#### Did You Know That...

- » Up to 50 percent of all antibiotics prescribed are not needed or are not prescribed appropriately?
- » Confusion or sudden behavior changes don't necessarily indicate a urinary tract infection (UTI)?
- » As many as half of seniors living in long-term care settings will test positive for bacteria in their urine, **without actually having a UTI?**

#### Learn Why The CDC is Sounding The Alarm About The Overuse of Antibiotics



© Massachusetts Coalition for the Prevention of Medical Errors - used with permission of from the Coalition and the Massachusetts Infection Prevention Partnership.

#### So if a test shows bacteria, does this mean I have a UTI?

Not necessarily. Diagnosis of a UTI requires **both** finding bacteria on a urine test **and** the presence of specific symptoms. Having **both** is important, because bacteria can and do live naturally in the bladder without causing any pain or symptoms. This is called **asymptomatic bacteriuria**, which is present in as many as half of seniors living in long-term care settings.

#### What are the specific symptoms of a UTI?

- » a burning feeling, discomfort or pain with urination.
- » pain in the lower abdomen or back.
- » increase in frequency (needing to "go" more often than usual).
- » repeated strong urges to urinate
- » blood in the urine.

These symptoms may or may not be accompanied by fever.

#### What about other symptoms, such as confusion or a sudden change in behavior?

UTI is less likely without the specific symptoms listed above. Non-specific symptoms such as confusion, a sudden change in behavior, fatigue or a fall may be caused by other factors, including:

- » dehydration
- » inadequate nutrition
- » poor sleep
- » depression
- » medication side effects
- » constipation

It is important to consider a range of possible causes, to prevent missing the real diagnosis.

#### I was prescribed antibiotics before. Why not now?

In the past, when a urine specimen tested positive — even when no symptoms of infection were present — doctors were taught that treatment with antibiotics was the right approach. **We know now that is not correct.**

The American Geriatric Society now recommends to physicians "Don't use antimicrobials (antibiotics) to treat bacteriuria in older adults unless specific urinary tract symptoms are present."

Handout to explain the risks associated with unnecessary antibiotic used to treat a suspected UTI.

[Suspect a Urinary Tract Infection brochure MA Coalition final.pdf](#)



# Additional Resources

### Preventing and Treating Common Cold

Are you sneezing, or do you have a stuffy and runny nose? You might have a cold. Antibiotics do not work against viruses that cause colds and will not help you feel better.

**What is Common Cold?**  
A common cold is a mild upper respiratory illness that resolves in a short period of time.

**Symptoms**  
Symptoms of a cold usually peak within 2 to 3 days and can include:

- Sneezing
- Nasal congestion
- Sore throat
- Cough
- Fever (although most people with colds do not have fever)

When viruses that cause colds first infect the nose and sinuses, the nose starts clear. Usually, this helps wash the viruses from the nose and sinuses. After 2 or 3 days, mucus may change to a white, yellow, or green color. This is normal and does not mean you need an antibiotic.

Some symptoms, especially fever or stuffy nose and cough, can last for up to 10 to 14 days. These symptoms should improve over time.

Colds can have similar symptoms to flu. It can be difficult to know if you have a cold or the flu. It can be difficult to know if you have a cold or the flu. It can be difficult to know if you have a cold or the flu.

**Causes**  
More than 200 viruses can cause a cold, but rhinoviruses are the most common type. Rhinoviruses are the most common type. Rhinoviruses are the most common type.

**When to Seek Medical Care**  
See a healthcare professional if you have:

- Trouble breathing or fast breathing
- Dehydration
- Fever that lasts longer than 5 days
- Symptoms that last more than 10 days without improvement
- Symptoms, such as fever or cough, that improve but then get worse
- Worsening of chronic medical conditions

This list is not all-inclusive. Please see a healthcare professional for any symptom that is severe or concerning.



[Preventing and Treating Common Cold](#)

### You've Been Prescribed an Antibiotic in the Hospital for an Infection

Don't feel bad if you've been prescribed an antibiotic. Antibiotics are medicines that help fight infections. They are not the same as painkillers. They are not the same as painkillers. They are not the same as painkillers.

**BE ANTIBIOTICS AWARE**  
SMART AND BEST CARE

**Your healthcare team may run tests before you start taking an antibiotic.**

- Your healthcare team may run tests before you start taking an antibiotic.
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**After a few days of treatment, your healthcare team might change, or even stop, your antibiotic.**

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**You may experience side effects from your antibiotic.**

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**The Facts:**

- When a patient needs antibiotics, the benefits outweigh the risks of side effects or antibiotic resistance.
- When antibiotics aren't needed, they won't help you, and the side effects could still hurt you.
- Common side effects of antibiotics include: heartburn, nausea, diarrhea, or yeast infections.
- Some serious side effects include: Clostridium difficile infection (C. diff), which causes diarrhea that can lead to severe colon damage and death. People who have taken antibiotics may experience allergic reactions.
- Antibiotics do not work on viruses, such as colds, flu, or many types of pneumonia. It's important to know when to use antibiotics.
- Antibiotics are only needed for treating certain infections caused by bacteria. It's important to know when to use antibiotics.



[You've Been Prescribed an Antibiotic](#)

### ANTIBIOTICS AREN'T ALWAYS THE ANSWER.

Antibiotics save lives, improving the way healthcare professionals prescribe antibiotics, and the way we take antibiotics, helps keep us healthy now, today, and in the future. Antibiotics are not the answer. Antibiotics are not the answer. Antibiotics are not the answer.

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**Taking antibiotics makes you sick**  
Antibiotics make you sick. Antibiotics make you sick. Antibiotics make you sick.

**If you need antibiotics, take them exactly as prescribed.**  
If you need antibiotics, take them exactly as prescribed. If you need antibiotics, take them exactly as prescribed.

**Resistant to antibiotics means 1 out of 5 infections-related visits to the emergency department.**  
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[ANTIBIOTICS AREN'T ALWAYS THE ANSWER](#)

# Managing resident and family expectations

- Prepare staff to have meaningful conversations with residents and families
  - Affirm leadership support for antibiotic stewardship
  - Ask staff to discuss what questions and challenging scenarios they encounter from residents and/or family members
  - Encourage staff to demonstrate active listening
  - Provide talking points
    - What are symptoms of urinary, respiratory and soft tissue infections
    - What symptoms could indicate a different concern, such as virus or dehydration
    - Risks associated with overuse of antibiotics

# 4-Part Communication Strategy

Healthcare professionals can use the 4-part **Communication Strategy**<sup>6</sup> to discuss appropriate antibiotic use when there is a change in the resident's condition.



## 1. Review findings:

Review relevant information such as symptoms or physical examination findings that support the decision about appropriate testing and antibiotic use.



## 2. Deliver a clear diagnosis:

Deliver a clear diagnosis that explains the change in the resident's condition.



## 3. Provide a **FIRST** negative, **THEN** positive treatment recommendation:

When an antibiotic is not needed, **FIRST** provide a negative treatment recommendation that "rules out" the need for antibiotics. **THEN** provide a positive recommendation for further evaluation, management, and monitoring.



## 4. Discuss a contingency plan:

Outline a contingency plan that details what actions will be taken if the resident does not improve, or if their condition worsens.

[Nursing Home Healthcare Professionals: Be Antibiotics Aware](#)

# Promote During Antibiotic Awareness Week



U.S. Antibiotic Awareness Week is observed each year from **November 18-24**. The purpose of the observance is to raise awareness of the importance of appropriate antibiotic and antifungal use and the threat antimicrobial resistance poses.



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