

FINAL - DHQP and NCEZID cleared

---

## **ANTIBIOTIC USE EDUCATIONAL EFFORT - INTERVIEWER GUIDE**

### **HEALTHCARE PROVIDERS (HCPs) - NURSING HOME NURSES**

---

#### **WELCOME, OVERVIEW, AND RULES [2-3 MINUTES]**

Thank you for taking the time to join us for this interview. My name is [INSERT NAME] and I work for ICF, a private firm, who is conducting research on behalf of the US Centers for Disease Control and Prevention, or CDC, who is sponsoring this health communication campaign. I want to take a few minutes to tell you what to expect from our conversation and go over the informed consent.

ICF is conducting this study on behalf of CDC to learn about antibiotic prescribing in nursing home settings and to gather feedback on communication materials for CDC's campaign to improve antibiotic use. This information will be used to improve the materials that you see.

Remember your participation is voluntary. That means you can stop us at any time and if you are uncomfortable with a question, or if you simply don't have a response, it is fine to pass.

Our discussion should take about one hour. Your name and any identifiable information you may share during our discussion will not be included in our final report, so no responses will be linked to you directly. I don't expect you to tell me anything that you would be uncomfortable sharing, but hope that you will be honest with your responses to the questions I ask.

Please speak up and speak clearly. We are audiotaping the discussion so that we can have an accurate record of the discussion. We have observers from CDC and ICF listening and taking notes during our discussion today. We also have a technology support person to assist with any with any technical needs during our discussion.

Do you have any questions before we get started?

*Begin recording and ask:* We are now recording this session. I want to ask you again,

Do you agree to participate in this interview?

Do you consent to us recording your responses?

## **UNDERSTAND PROVIDERS' PERCEIVED ROLE IN IMPROVING ANTIBIOTIC USE. [10 MINUTES]**

Ok, great. Let's get started. I'd like to start our conversation by hearing your thoughts about antibiotics.

1. **Do you think you, as a nurse, have a role in improving antibiotic use in nursing home settings?**
  - a. PROBE: [For either response] Why?
  - b. PROBE: [If yes] What actions do you currently take to improve antibiotic use?
  - c. PROBE: [If yes] What actions could you take (i.e. education, antibiotic review)?
  - d. PROBE: [If yes] Do you feel that learning about improving antibiotic use for specific infections can help you improve resident care?
2. **In general, do you feel antibiotics are sometimes prescribed when they aren't needed to nursing home residents?**
  - a. PROBE: [If yes] What would you say are the most significant drivers of inappropriate antibiotic prescribing?
3. **Do you encounter any challenges/barriers around improving antibiotic use? If so, what are they?**
  - a. PROBE: Do you encounter any difficulties in communicating with prescribers?
  - b. PROBE: Do you encounter pressure from families related to antibiotics?
  - c. PROBE: What would make it easier for you to support improvement in antibiotic use?
4. **What policies, if any, are you aware of in your nursing home related to antibiotic prescribing?**
  - a. PROBE: What policies do you think would be most effective in improving antibiotic use in your facility?
5. **Have you ever seen, heard, or read any TV, radio, newspaper, or online advertising about *Be Antibiotics Aware*?**
  - a. PROBE: [If yes] Where have you seen or heard about *Be Antibiotics Aware*?
    - On TV?
    - On Social media?
    - Through e-mail?
    - On a website?

## GATHER FEEDBACK ON CDC MATERIALS THAT CAN HELP TO OPTIMIZE ANTIBIOTIC PRESCRIBING IN NURSING HOMES - TEST AVOID TREATMENT OF ASYMPTOMATIC BACTERIURIA POSTER [15 MINUTES]

In the last few minutes, we discussed your thoughts around antibiotic prescribing. Now, let's move on to our first material. Take a few minutes to read this and then we'll discuss (give 3-4 minutes to read).

Nursing Home Staff: **BE ANTIBIOTICS AWARE**

### Avoid Treatment of Asymptomatic Bacteriuria

**SCENARIO**  
You receive a positive urine culture for a resident. The resident is feeling well and does not have symptoms that indicate a urinary tract infection. It's unclear why the urine culture was done.

Asymptomatic bacteriuria (ASB) is the isolation of bacteria in a urine culture from a resident without signs or symptoms of a urinary tract infection (UTI). ASB is common in nursing home residents, found in an estimated 15-35% of men, 25-50% of women, and 100% of residents with catheters.

Residents with a positive urine culture result (even with pyuria  $\geq 10$  white blood cells/cml) alone **do not** require antibiotics. In older adults, pyuria does NOT indicate that ASB needs treatment.<sup>1</sup>

**Nursing home staff can avoid treatment of ASB by:**

1. Avoiding a urine analysis and culture unless a resident has local signs and symptoms suggestive of a UTI.
2. Avoiding antibiotic therapy unless the resident meets the minimum criteria for antibiotic treatment.

Minimum Criteria for Starting Antibiotics in a Suspected Urinary Tract Infection <sup>2</sup>	
Without Catheter	Either one of the following: - Acute dysuria, OR - Fever* AND at least one of the following: - New or worsening urgency - Frequency - Suprapubic pain - Gross hematuria - Urinary incontinence - Costovertebral angle tenderness
With Catheter	At least one of the following: - Fever* - New costovertebral angle tenderness - Shaking chills - New onset delirium

\*Fever  $\geq 37.9^{\circ}\text{C}$  [ $100^{\circ}\text{F}$ ],  $1.5^{\circ}\text{C}$  [ $2.4^{\circ}\text{F}$ ] increase above baseline temperature. Antibiotics should not be started for cloudy, foul smelling urine.

The scenarios and recommendations are applicable to most nursing home residents. This document **does not** provide general guidance and does not apply to all clinical scenarios. Always assess the individual resident, use your clinical judgement and follow your facility's protocols and treatment guidelines when applicable.

References:  
1. Wooten RR, Hooton T, Gupta D, et al. Infectious Diseases Society of America Guidelines for the Diagnosis and Treatment of Asymptomatic Bacteriuria in Adults. *Clinical Infect Dis*. 2018;67(1):1-10.  
2. Lewis RJ, Manning DG, Berglund R, et al. Development of a test algorithm for the initiation of antibiotics in residents of long-term care facilities: results of a consensus conference. *J Am Geriatr Soc*. 2017;65(1):1-10.

**BE ANTIBIOTICS AWARE**  
SMART USE. BEST CARE.

**CDC**  
www.cdc.gov/antibiotic-use

Let's start with some questions about the content in this material.

6. Do you think asymptomatic bacteriuria is an important topic to learn more about in nursing home settings? Why? Or why not?
7. What do you like about this material?
  - a. PROBE: What about the length of this material?

- 8. How could this material be improved?**
  - a. PROBE: Is there anything that is confusing or needs clarification?
  - b. PROBE: Is there anything else you would like to see included in this material?
  - c. PROBE: Do you think this information should be presented in a different format?
    - i. PROBE: [If yes] What type of formats would you like to see (i.e. video, role playing)? And, why would you prefer this/these formats?
    - ii. PROBE: [If no] Why?
- 9. Would you use this material?**
  - a. PROBE: [For “No”] Why?
  - b. PROBE: [For “Yes”] How?
  - c. PROBE: Would you recommend it to others?
- 10. Overall, if provided to nurses, how helpful do you think this material is /would be for improving antibiotic use in nursing homes?**
  - a. PROBE: [For any response] Why?
- 11. Is there another clinical scenario you would like to see in the same format as this material (i.e. pneumonia)?**

Now I have a few questions about the visual aspects of this piece.

- 12. What do you think about the layout of information in this material?**
- 13. Overall, how appealing is this material to you? (HMTS 7e)**
- 14. Would it catch your attention if you saw it somewhere (HMTS 9e) Would you stop to read it?**
- 15. Where would you expect to find this material for you to use?**
  - a. PROBE: What about on CDC’s website?
  - b. PROBE: What about on a state health department website?
  - c. PROBE: What about in publications or during yearly conferences from professional societies, like the Gerontological Advanced Practice Nurses Association (GAPNA), National Association of Directors of Nursing Administration in Long-Term Care (NADONA), or others?

## GATHER FEEDBACK ON *DO YOU NEED ANTIBIOTICS?* BROCHURE THAT CAN HELP NH NURSES EDUCATE RESIDENTS AND THEIR FAMILIES ABOUT ANTIBIOTIC USE, FOCUSING ON ADVERSE EVENTS OF ANTIBIOTICS. [15 MINUTES]

Ok, let's move on to our second material. Please take a few minutes to read though it before I ask questions (give 4-5 minutes).

**Why does taking antibiotics lead to antibiotic resistance?**  
Any time antibiotics are used, they can cause side effects and lead to 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 have become resistant to 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.

**Up to 70% of residents in a nursing home receive one or more courses of antibiotics each year.**

**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).

**What if I have questions about antibiotics?**  
Talk to your doctor and nursing staff 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 the antibiotic is working for my infection?

**Let them know if you develop any side effects, especially diarrhea, which could be C. difficile infection and needs to be treated immediately.**

**Do You Need Antibiotics?**  
Information about antibiotics for nursing home residents and their families

**Why is it important to Be Antibiotics Aware in nursing homes?**  
Antibiotics are lifesaving medicines, and are frequently prescribed in nursing homes. When you need 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.**

**What do antibiotics treat?**  
Antibiotics are only needed for treating some infections caused by bacteria. Antibiotics are also called tools for treating common infections, such as pneumonia, and for life-threatening conditions including sepsis, which is the body's extreme response to an infection.

**What don't antibiotics treat?**  
Antibiotics do not work on viruses, such as those that cause colds, flu, bronchitis, or the common cold. Antibiotics also aren't needed for some common bacterial infections, including many sinus infections and some ear infections.

**What are the potential side effects of antibiotics?**  
Common side effects from antibiotics can include:

- Rash
- Nausea
- Diarrhea
- Yeast infections

**More serious side effects can include:**

- Clostridium difficile (also called C. difficile or C. diff) infection
- Life-threatening allergic reactions
- Interactions between antibiotics and other medications
- Infections with antibiotic-resistant bacteria, including C. difficile

**What is C. difficile infection?**  
C. difficile is a bacteria that causes colitis or inflammation of the colon. C. difficile infection can lead to severe colitis, diarrhea, disabling diarrhea, and sometimes death.

When you take an antibiotic, good bacteria in the body that protect against infection are destroyed. During this time, you can get sick from C. difficile bacteria that are picked up from contaminated surfaces or spread from another resident's or healthcare professional's hands.

**Symptoms of C. difficile infection include:**

- Watery diarrhea (at least three bowel movements per day for two or more days)
- Fever
- Nausea
- Abdominal (stomach) pain/tenderness
- Loss of appetite

**More than 3 million Americans receive care or reside in nursing homes every year.**

**How can I stay healthy?**  
You can stay healthy and keep others healthy by:

- Washing nursing home staff and visitors' clean their hands before touching you or caring for your wound or catheter.
- Covering your cough to prevent the spread of germs.
- Asking family or friends not to visit when they don't feel well.
- Staying in your room when sick.
- Protecting yourself by getting vaccines for flu and pneumonia and encouraging others around you to do the same.

Talk to your doctor and nursing home staff about ways you can take to stay healthy and prevent infections.

**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 lifesaving drugs will be available for future generations.**

**BE ANTIBIOTICS AWARE**  
SMART USE. BEST CARE

### 16. Overall, how helpful do you think this brochure is / would be in providing education for residents and their families about appropriate antibiotic use?

- PROBE: [For any response] Why?
- PROBE: [For "Not helpful"] Would putting this information in a different format be more helpful to provide education to residents and families? If so, what format?
- PROBE: Would you use this brochure to provide education for residents and their families? Why or why not?
- PROBE: Is there anything else that residents and their families ask you about antibiotic use that isn't covered in this brochure?
- PROBE: Is there anything residents and their families should know about antibiotic use that isn't covered in this brochure?

### 17. What's your general reaction to the way this brochure looks? (HMTS 6e)

- PROBE: What do you think about the layout of the information?
- PROBE: What do you like about this brochure?
- PROBE: How could this brochure be improved?

### 18. Are there any other types of materials or resources that you think would be helpful to educate residents and their families about appropriate antibiotic use?

- a. PROBE: What about letters, short videos, presentations during resident council meetings or other meetings?

Let's look specifically at the side effects section in this brochure:



- 19. In a typical week, how often do you talk to your residents and/or their families about possible side effects related to antibiotic use?
  - a. PROBE: How do you generally counsel residents and their families about antibiotic-related side effects?
  - b. PROBE: What side effects do you typically talk to them about?
  - c. PROBE: What about *C. difficile* infection?
- 20. Do you think informing residents and their families about possible antibiotic-related side effects could reduce pressure to prescribe unnecessarily?
  - a. PROBE: [For either response] Why?
- 21. Do you think this section would help you provide education to residents/their families about possible antibiotic-related side effects?
  - a. PROBE: [For yes or no] Why?
  - b. PROBE: Is there any other information about antibiotic side effects that residents/their families ask you that isn't covered in this section?
  - c. PROBE: Is there anything residents/their families should know about antibiotic use side effects that isn't covered in this section?

**GATHER FEEDBACK ON [VIRUSES OR BACTERIA: WHAT'S GOT YOU SICK?](#) CHART THAT CAN HELP NH NURSES EDUCATE RESIDENTS AND THEIR FAMILIES ABOUT ANTIBIOTIC USE FOR SPECIFIC INFECTIONS. [15 MINUTES]**

Now, let's move on to our last material. Take a few minutes to read this and then we'll discuss (give 1-2 minutes to review).

**Viruses or Bacteria**  
What's got you sick?

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 Condition	Common Cause			Are Antibiotics Needed?
	Bacteria	Bacteria or Virus	Virus	
Common cold/runny nose			✓	No
Sore throat (except strep)			✓	No
Flu			✓	No
Acute bronchitis/chest cold*		✓		No 1
Sinus infection		✓		Maybe
Pneumonia		✓		Yes
Strep throat	✓			Yes
Urinary tract infection	✓			Yes 2

1. In residents without chronic obstructive pulmonary disease (COPD) or other chronic lung diseases.  
2. Except in cases of a positive test without symptoms.

**BE ANTIBIOTICS AWARE**  
SMART USE. BEST CARE

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

**22. Overall, how helpful do you think this chart is / would be in providing information for residents and their families about when antibiotics are needed for infections caused by bacteria?**

- a. PROBE: [For any response] Why?
- b. PROBE: [For “Not helpful”] Would putting this information in a different format be more helpful to provide education to residents and families? If so, what format?
- c. PROBE: Would you use this chart to provide education for residents and their families? Why or why not?
- d. PROBE: Is there anything else that residents and their families ask you about antibiotic use for specific infections that isn't covered in this chart?
- e. PROBE: Is there anything residents and their families should know about antibiotic use for specific infections that isn't covered in this chart?



23. **Do you think including urinary tract infections in this chart is helpful, or should this chart focus on respiratory infections?**
24. **Do you think a similar material for any other infection(s) can help improve antibiotic use?**
25. **What’s your general reaction to the way this chart looks? (HMTS 6e)**
  - a. PROBE: What do you think about the layout of the information?
  - b. PROBE: What do you like about this chart?
  - c. PROBE: How could this chart be improved?
26. **Are there any other types of materials or resources that you think would be helpful to educate residents and their families about appropriate antibiotic use for specific infections?**
  - a. PROBE: What about letters, short videos, presentations during resident council meetings or other meetings?

### **CLOSING [2-3 MINUTES]**

Well, that’s the last of my questions. Do you have any comments or questions that you’d like to bring up before we end our discussion?

Thank you again for taking the time to participate in this discussion. Please visit [www.cdc.gov/antibiotic-use](http://www.cdc.gov/antibiotic-use) for more information on appropriate antibiotic prescribing.

We sincerely appreciate and value your input!