



Although UTIs, skin and soft tissue infections, and lower respiratory tract infections are the most commonly treated infections among nursing home residents, proper diagnosis and treatment pose significant and distinctive challenges. For example, treatment for asymptomatic bacteriuria is common, but research provides no evidence that treating asymptomatic bacteriuria in older adults is beneficial. Antibiotic treatments do not affect the prevalence of bacteriuria, the frequency of symptomatic urinary infections, or morbidity and mortality.<sup>1,2</sup> Moreover, research has shown that such treatments are potentially harmful.

Nursing homes serve as one of our most fertile breeding grounds for antibiotic-resistant strains of bacteria, in which antibiotic use gives rise to high rates of multidrug-resistant Gram-negative bacteria, most notably *Pseudomonas aeruginosa* and *Acinetobacter baumannii*.



## Minimum Criteria for Initiating Antibiotics for a Urinary Tract Infection

**For residents without an indwelling catheter, initiate antibiotics if the resident meets criteria of one of three situations:**

1. Acute dysuria alone

**OR**

2. Fever of 100°F (37.9°C) or two repeated temperatures of 99°F (37°C) **AND** at least **one** of the following:

**New or worsening:**

- Urgency, or
- Frequency, or
- Suprapubic pain, or
- Gross hematuria, or
- Costovertebral angle tenderness, or
- Urinary incontinence

**OR**

3. No fever, then **two** or more of the following

- Urgency, or
- Frequency, or
- Suprapubic pain, or
- Gross hematuria, or
- Urinary incontinence

**For residents with a chronic indwelling catheter, initiate antibiotics if one or more of the following criteria are met:**

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4. Residents with an intermittent catheter or a condom catheter should be evaluated as if they are not catheterized.
5. Urine cultures should be used to identify the most appropriate antibiotic. For residents with acute dysuria, it may be appropriate to initiate empirical antibiotic therapy; but for all other symptoms, wait for a urine culture.
6. For residents that regularly run a lower temperature, use a temperature of 2°F (1°C) above the baseline as a definition of a fever

## Minimum Criteria for Initiating Antibiotics for a Skin and Soft Tissue Infection

### **Initiate antibiotics if the following criteria are met:**

- New or increasing purulent drainage at a wound, skin, or soft tissue site

### **OR**

- At least two of the following:
  - Fever (temperature >100°F [37.9°C] or two repeated temperatures of 99°F [37°C]), or
  - Redness, or
  - Tenderness, or
  - Warmth, or
  - Swelling that is new or increasing at the affected site

### **Notes:**

1. For residents that regularly run a lower temperature, use a temperature of 2°F (1°C) above the baseline as a definition of a fever
2. Herpes zoster is a virus and therefore does not require antibiotics but appropriate antivirals.
3. Deeper infections such as bursitis may present with similar signs/symptoms.
4. Underlying osteomyelitis should be considered when managing a resident with an infected diabetic or decubitus ulcer.
5. Thromboembolic disease should be considered when a resident presents with an erythematous or swollen leg.
6. These criteria do not apply to residents with burns.
7. Gout can at times be mistaken for cellulitis or vice versa.

### **If none of the minimum criteria are met, consider initiating the following:**

- Assess vital signs, including temperature every \_\_\_\_\_ hours for \_\_\_\_\_ hours; and/or
- Notify physician/NP/PA if symptoms worsen or if unresolved in \_\_\_\_\_ hours.

### **Regardless of whether or not the minimum criteria are met, consider initiating the following:**

- For discomfort or prior to cleaning/dressing changes, consider using acetaminophen or other pain reliever as needed

## Minimum Criteria for Initiating Antibiotics for a Lower Respiratory Tract Infection

**If a resident has a fever of >102°F (38.9°C), initiate antibiotics if one of the following criteria is met:**

- Respiratory rate >25 breaths per minute, or
- Productive cough

**If a resident has a fever of 100°F (37.9°C) but less than 102°F (38.9°C), initiate antibiotics if the following criteria are met:**

- Cough **AND** at least one of the following:
  - Pulse >100, or
  - Delirium (sudden onset of confusion, disorientation, dramatic change in mental status) or
  - Rigors (shaking chills), or
  - Respiratory rate >25

Delirium is defined as disturbance of consciousness with reduced ability to focus, shift, or sustain attention; change in cognition (such as memory deficit, disorientation) or development of a perceptual disturbance not better accounted for by dementia; and development of symptoms over a short period of time, with a tendency to fluctuate during the day.

**If a resident is afebrile with COPD, and classified as high risk because of age >65, initiate antibiotics if the following criterion is met:**

- New or increased cough with purulent sputum production

**If a resident is afebrile without COPD, and classified as high risk because of age >65, initiate antibiotics if the following criteria are met:**

- New or increased cough with purulent sputum production **AND** at least one of the following:

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**Regardless of whether or not the minimum criteria are met, avoid antihistamines (especially Benadryl®) and consider initiating the following:**

- For cough, consider using a cough suppressant.
- For discomfort, consider using acetaminophen or other pain reliever.
- Consider using a heating pad or hot water bottle on the chest at bedtime for \_\_\_\_\_ minutes, although caution is advised.
- Raise upper body (use multiple pillows) to sleep/rest.
- Encourage \_\_\_\_ ounces of fluid by mouth or G-tube for \_\_\_\_ days or until urine is light yellow in color.
- Encourage salt water gargles
- Record fluid intake for \_\_\_\_ days.
- Initiate intravenous fluid hydration and/or initiate hypodermoclysis.

**As necessary, request a chest X-ray.**

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