



Nursing Home Antimicrobial Stewardship Guide Determine Whether To Treat

Toolkit 3. Minimum Criteria for Common Infections Toolkit

Tool 4. Letter to Prescribing Clinicians on the Protocol for Three Common Infections

PRINTED ON NURSING HOME OR MEDICAL DIRECTOR'S STATIONERY

[DATE]

[PRESCRIBING CLINICIAN NAME]
RECIPIENT ADDRESS
CITY, STATE ZIP]

Re: Change in protocol regarding three common infections and antibiotic stewardship

Dear Dr./Ms./Mr. [LAST NAME],

Based on clinical practice guidelines developed by nursing home, infectious disease, and geriatric experts, our facility has decided to modify its protocol around the three most common infectious syndromes treated in nursing homes—urinary tract infections (UTIs), skin and soft-tissue infections, and lower respiratory tract infections. We will use the Minimum Criteria for Common Infections toolkit. The tools seek to facilitate gathering critical information by nurses to communicate to prescribing clinicians and/or to enable prescribing clinicians to make decisions based on the most recent guidelines. The toolkit includes a Web-based application with the minimum criteria as well as communication forms. Each form is based on the SBAR form of communication (i.e., Situation, Background, Assessment, and Recommendation). The SBAR communication style has been shown to promote better communication by addressing the specific types of information that clinicians are likely to need for decisionmaking.



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.^{1,2} 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, methicillin-resistant *Staphylococcus aureus*, and Vancomycin-resistant enterococci.³ In 2008, 93 percent of deaths from *Clostridium difficile* were among persons 65 years of age and older, and *Clostridium difficile* was reported as the 18th leading cause of death in this age group.⁴

Embedded in each of these communication tools are our new protocols for initiating antibiotics for each of the three infections. In addition to providing standardized information to help with decisionmaking, a clinician will be provided with recommendations from the nursing home's protocol for initiating antibiotics via a Web-based application. These recommendations are based on current best practices and clinical guidelines developed by Loeb et al.⁵ and include newer surveillance information by Stone et al.⁶ In addition, should you choose not to initiate antibiotics, there are options for continued surveillance. Nonetheless, the decision whether or not to treat an infection ultimately rests with the prescribing clinician, taking into account any special considerations such as comorbidities and whether the resident is in hospice. As with any guideline, unusual circumstances requiring exceptional treatment will occur. In preparation for implementing the new protocols, copies of the criteria are attached.

Your cooperation with our new protocol is greatly appreciated. We deeply appreciate your assistance in making this a success. If you have any questions, please feel free to contact me at your convenience at (###) ###-#### or XXXX@XXX.com.

¹ Colgan R, Nicolle LE, McGlone A, et al. Asymptomatic bacteriuria in adults. *Am Fam Physician*. 2006 Sep;74(6):985-90. PMID: 17002033.

² Nicolle LE, Bradley S, Colgan R, et al. Infectious Diseases Society of America guidelines for the diagnosis and treatment of asymptomatic bacteriuria in adults. *Clin Infect Dis*. 2005 Mar 1;40(5):643-54. Epub 2005 Feb 4. Erratum in: *Clin Infect Dis*. 2005 May 15;40(10):1556. PMID: 15714408.

³ Centers for Disease Control and Prevention, American Medical Directors Association. Antibiotic use in nursing homes. Get Smart About Antibiotics Week November 18–2013. Centers for Disease Control and Prevention; 2013. http://www.cdc.gov/getsmart/healthcare/pdfs/GetSmartWeek_NursingHomes.pdf. Accessed June 18, 2014.

⁴ Miniño AM, Xu JQ, Kochanek KD. Deaths: preliminary data for 2008. *National Vital Statistics Reports*; vol. 59, no. 2. Hyattsville, MD: National Center for Health Statistics; 2010. http://www.cdc.gov/nchs/data/nvsr/nvsr59/nvsr59_02.pdf. Accessed June 18, 2014.

⁵ Loeb M, Bentley DW, Bradley S, et al. Development of minimum criteria for the initiation of antibiotics in residents of long-term-care facilities: results of a consensus conference. *Infect Control Hosp Epidemiol*. 2001 Feb;22(2):120-4. PMID: 11232875.

⁶ Stone ND, Ashraf MS, Calder J, et al. Society for Healthcare Epidemiology Long-Term Care Special Interest Group. Surveillance definitions of infections in long-term care facilities: revisiting the McGeer criteria. *Infect Control Hosp Epidemiol*. 2012 Oct;33(10):965-77. PMID: 22961014

Sincerely,

[Signature]
[PRINTED NAME]
Medical Director

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:

- Fever of 100°F (37.9°C) or two repeated temperatures of 99°F (37°C), or
- New or worsening costovertebral tenderness, or
- New onset suprapubic pain, or
- New or worsening delirium (sudden onset of confusion, disorientation, dramatic change in mental status), or
- New or worsening rigors (shaking chills) with or without identified cause, or
- New or worsening hypotension (e.g., significant change from baseline BP or a systolic BP <90)

Notes:

1. Urine cultures should not be performed on a scheduled basis (e.g., monthly).
2. Urine cultures should **not** be used to identify UTIs in the absence of symptoms.
3. Smelly or cloudy urine is **not** a symptom of a UTI.

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.

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

- Encourage _____ ounces of liquid intake ____ daily until urine is light yellow in color.
- Record fluid intake every _____ hours for _____ hours.
- Assess vital signs, including temp, every _____ hours for _____ hours.
- Request notification if symptoms worsen or if unresolved in _____ hours.

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 temp, 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 relievers 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 a 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:
 - Respiratory rate >25, or
 - Delirium (sudden onset of confusion, disorientation, dramatic change in mental status)

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

- Assess vital signs, including temp, every _____ hours for _____ hours.
- Notify physician/NP/PA if symptoms worsen or if unresolved in _____ hours.

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.