



**Scope:** This guideline is intended for providers and nursing staff at (Skilled Nursing Facility)

**Purpose:** This guideline is intended to provide antibiotic prescribing and patient care expectations, thereby limiting incomplete or inaccurate treatment of infections. It is also intended to reduce unnecessary urinary cultures and antibiotics through use of regular antibiotic time-outs and clinical decision support based on asymptomatic bacteriuria treatment guidelines.

### **Antibiotic Prescribing: “The 5 D’s”**

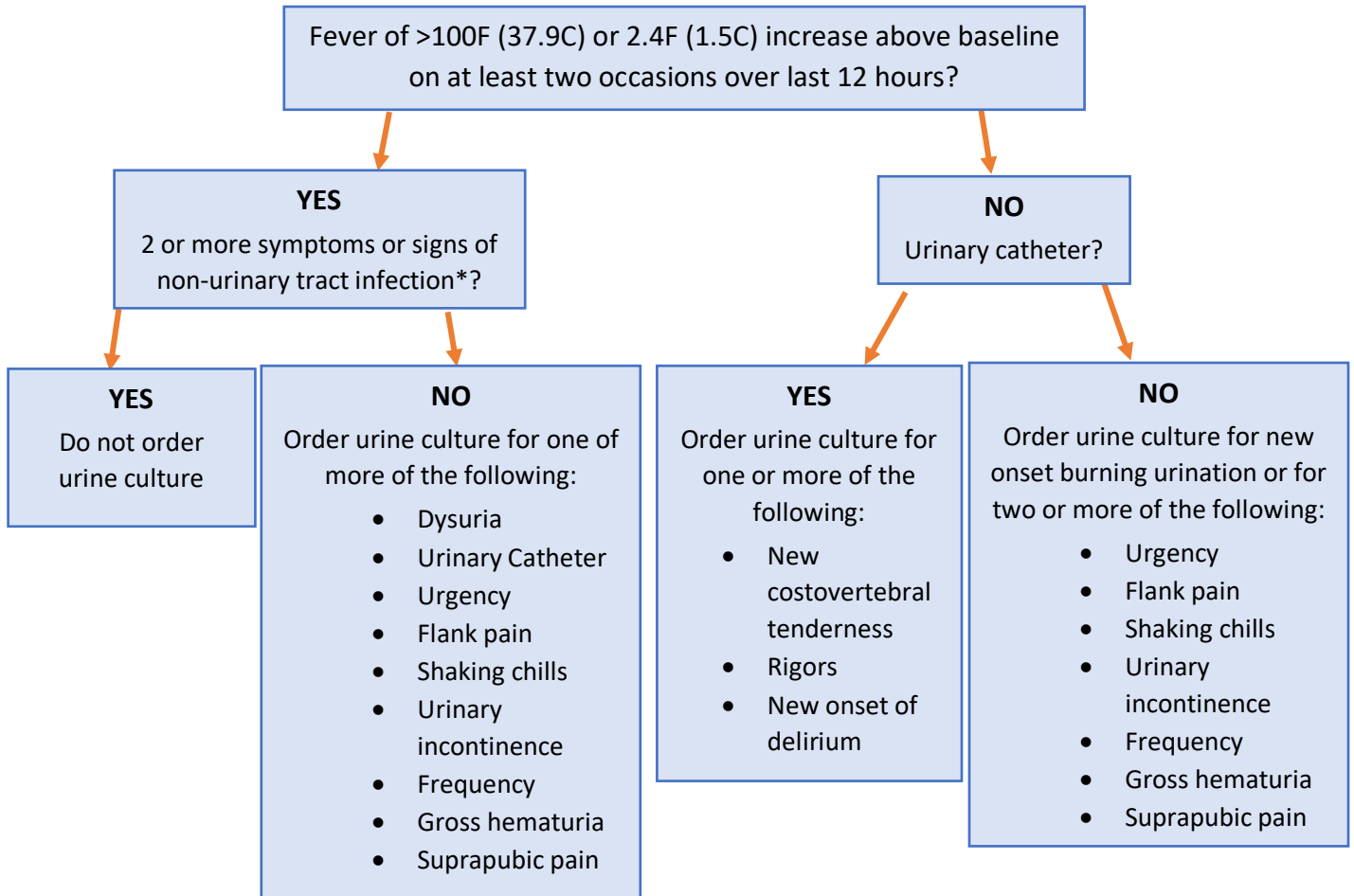
The five D’s are defined as right **d**iagnosis, **d**rug, **d**ose, **d**uration, and **d**e-escalation surrounding the prescribing of antibiotics.

All orders should have the following basic antibiotic stewardship elements documented:

1. Drug (minimal adverse effects, adjust based on microbiology)
2. Dose (Consider body size, comorbidities, other meds)
3. Duration (Includes a start and end date, planned days of therapy)
4. Diagnosis (Treatment indication/rationale, therapeutic or prophylactic, evidence-based)
5. De-escalation (Adjust or discontinue based on microbiology results if given empirically)
  - a. When placing orders, include microbiology cultures.
  - b. When culture results come back in 24-48 hours, take an antibiotic time-out to reassess therapy. This will be initiated by nurse managers on the floor.
    - i. Is this antibiotic still effective against this organism?
    - ii. Determine if spectrum of antibiotic could be narrowed, duration could be shortened, or if antibiotic could be discontinued based on microbiology results.

### **Clinical decision support for ordering Urine Analysis/Urine Culture**

“Asymptomatic bacteriuria,” or asymptomatic urinary infection, is defined as isolation of a specified quantitative count of bacteria in an appropriately collected urine specimen obtained from a person without symptoms or signs referable to urinary infection. Efforts to improve antibiotic stewardship in nursing homes must address clinical decision-making solely based on diagnostic testing in the absence of signs or symptoms of a UTI. This algorithm should be used by providers in conjunction with the UTI SBAR initiated by nursing.



\*Respiratory symptoms include increased shortness of breath, increased cough, increased sputum production, new pleuritic chest pain.

Gastrointestinal symptoms include nausea or vomiting, new abdominal pain, new onset of diarrhea.

Skin and soft tissues symptoms include new redness, warmth, swelling, purulent drainage.

**Literature supporting diagnosis and treatment of asymptomatic bacteriuria**

Nicolle, L.E., Bradley, S., Colgan, R., Rice, J.C., Schaeffer, A., Hooton, T. M. (2005). Infectious Diseases Society of America Guidelines for the Diagnosis and Treatment of Asymptomatic Bacteriuria in Adults, *Clinical Infectious Diseases*, 40, 643–654, <https://doi.org/10.1086/427507>

Phillips, C. D., Adepoju, O., Stone, N., Moudouni, D. K. M., Nwaiwu, O., Zhao, H., ... Garfinkel, S. (2012).

Asymptomatic bacteriuria, antibiotic use, and suspected urinary tract infections in four nursing homes. *BMC Geriatrics*, 12, 73. <http://doi.org/10.1186/1471-2318-12-73>

Loeb et al. (2005). Effect of a multifaceted intervention on number of antimicrobial prescriptions for suspected urinary tract infections in residents of nursing homes: cluster randomised controlled trial. *British Medical Journal* 2005. doi:10.1136/bmj.38602.586343.55

Center for Disease Control (2017). *The Core Elements for Antibiotic Stewardship for Nursing Homes*. Retrieved from <https://www.cdc.gov/longtermcare/pdfs/core-elements-antibiotic-stewardship-appendix-a.pdf>