**National Quality Forum—Evidence (subcriterion 1a)**

**Measure Number** (*if previously endorsed*)**:** 0684

**Measure Title**: Percent of Residents with Urinary Tract Infection

**IF the measure is a component in a composite performance measure, provide the title of the Composite Measure here:** Click here to enter composite measure #/ title

**Date of Submission**: 10/31/2019

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| **Instructions**  *Complete 1a.1 and 1a.2 for all measures. If instrument-based measure, complete 1a.3.*  *Complete* ***EITHER 1a.2, 1a.3 or 1a.4*** *as applicable for the type of measure and evidence.*  *For composite performance measures:*  *A separate evidence form is required for each component measure unless several components were studied together.*  *If a component measure is submitted as an individual performance measure, attach the evidence form to the individual measure submission.*   * All information needed to demonstrate meeting the evidence subcriterion (1a) must be in this form. An appendix of *supplemental* materials may be submitted, but there is no guarantee it will be reviewed. * If you are unable to check a box, please highlight or shade the box for your response. * Contact NQF staff regarding questions. Check for resources at [Submitting Standards webpage](http://www.qualityforum.org/Measuring_Performance/Submitting_Standards.aspx). |

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| **Note: The information provided in this form is intended to aid the Standing Committee and other stakeholders in understanding to what degree the evidence for this measure meets NQF’s evaluation criteria.**   1a. Evidence to Support the Measure Focus The measure focus is evidence-based, demonstrated as follows:   * Outcome: [**3**](#Note3) Empirical data demonstrate a relationship between the outcome and at least one healthcare structure, process, intervention, or service. If not available, wide variation in performance can be used as evidence, assuming the data are from a robust number of providers and results are not subject to systematic bias. * Intermediate clinical outcome: a systematic assessment and grading of the quantity, quality, and consistency of the body of evidence [**4**](#Note4)that the measured intermediate clinical outcome leads to a desired health outcome. * Process: [**5**](#Note5) a systematic assessment and grading of the quantity, quality, and consistency of the body of evidence [**4**](#Note4) that the measured process leads to a desired health outcome. * Structure: a systematic assessment and grading of the quantity, quality, and consistency of the body of evidence [**4**](#Note4)that the measured structure leads to a desired health outcome. * Efficiency: [**6**](#Note6) evidence not required for the resource use component. * For measures derived from patient reports, evidence should demonstrate that the target population values the measured outcome, process, or structure and finds it meaningful. * Process measures incorporating Appropriate Use Criteria: See NQF’s guidance for evidence for measures, in general; guidance for measures specifically based on clinical practice guidelines apply as well.   **Notes**  **3.** Generally, rare event outcomes do not provide adequate information for improvement or discrimination; however, serious reportable events that are compared to zero are appropriate outcomes for public reporting and quality improvement.  **4.** The preferred systems for grading the evidence are the Grading of Recommendations, Assessment, Development and Evaluation [(GRADE) guidelines](http://www.gradeworkinggroup.org) and/or modified GRADE.  **5.** Clinical care processes typically include multiple steps: assess → identify problem/potential problem → choose/plan intervention (with patient input) → provide intervention → evaluate impact on health status. If the measure focus is one step in such a multistep process, the step with the strongest evidence for the link to the desired outcome should be selected as the focus of measurement. Note: A measure focused only on collecting PROM data is not a PRO-PM.  **6.** Measures of efficiency combine the concepts of resource use and quality (see NQF’s [Measurement Framework: Evaluating Efficiency Across Episodes of Care](http://www.qualityforum.org/Publications/2010/01/Measurement_Framework__Evaluating_Efficiency_Across_Patient-Focused_Episodes_of_Care.aspx); [AQA Principles of Efficiency Measures](http://www.aqaalliance.org/files/PrinciplesofEfficiencyMeasurementApril2006.doc)). |

**1a.1. This is a measure of**: (*should be consistent with type of measure entered in De.1*)

Outcome

Outcome: Urinary Tract Infection

Patient-reported outcome (PRO): Click here to name the PRO

*PROs include HRQoL/functional status, symptom/symptom burden, experience with care, health-related behaviors.* (*A PRO-based performance measure is not a survey instrument. Data may be collected using a survey instrument to construct a PRO measure.)*

Intermediate clinical outcome (*e.g., lab value*): Click here to name the intermediate outcome

Process: Click here to name what is being measured

Appropriate use measure: Click here to name what is being measured

Structure: Click here to name the structure

Composite: Click here to name what is being measured

**1a.2 LOGIC MODEL** Diagram or briefly describe the steps between the healthcare structures and processes (e.g., interventions, or services) and the patient’s health outcome(s). The relationships in the diagram should be easily understood by general, non-technical audiences. Indicate the structure, process or outcome being measured.

**Outcomes and corollary outcomes**

This outcome-based quality measure reports the percentage of long stay-nursing home residents with a urinary tract infection (UTI). UTIs are important to address both because of their impacts on health as an intermediate outcome (such as unpleasant symptoms) and because they can lead to serious corollary outcomes and complications, such as sepsis, hospitalization, emergency department use, delirium, or death.

Additionally, an increasingly prevalent corollary outcome is antimicrobial resistance in UTIs. In one study, Kistler et al. (2017) found MDROs in 12% of bacterial UTI cultures across 31 nursing homes. Antimicrobial resistance proliferates through inappropriate widespread antibiotic treatment of asymptomatic bacteriuria (often misdiagnosed as UTI), which has no benefits for patients (Cooper et al., 2019; Crninch & Drinka, 2014). The growing prevalence of antibiotic resistance increases the importance of preventing UTIs in coordination with treatment efforts and only prescribing antibiotics when necessary and clinically appropriate.

Nursing home structural characteristics and care processes can impact the quality of care that facilities provide to residents (Mukamel et al., 2008) and may therefore ultimately impact the health outcomes of residents, including UTIs. ***Figure 1*** below illustrates the key structures and outcomes that are associated with lower rates of UTI. The structures and processes listed in the figure are not exhaustive but are intended as examples.

**Evidence for link between structure and quality of care outcomes**

Nursing home characteristics associated with higher UTI incidence include chain membership (i.e., a type of ownership structure where 2 or more facilities share the same owner) and occupancy rate (Castle & Anderson, 2011). Nurse staffing levels have also been found to be associated with UTI rates (Castle & Anderson, 2011; Castle et al., 2017; Hyer et al., 2011). In addition to nurse staffing levels, organizational efforts to educate staff in catheter protocols and infection prevention have successfully reduced UTI rates (Meddings et al., 2017; Trautner et al., 2017). One study found training for staff from the Association for Professionals in Infection Control and Epidemiology to be associated with lower rates of UTIs (Herzig et al., 2016).

**Evidence for link between processes and quality of care outcomes**

Nursing home characteristics, infrastructure, and resources may affect key processes known to influence UTI outcomes. As described in the text that follows, these key processes are adherence to clinical guidelines, appropriate antibiotic treatment, appropriate assessments of and use of catheters, and best practices in hygiene and hydration.

First, implementation of clinical guidelines for UTI diagnostic processes and treatment, including the prescription of antibiotics, reduces adverse outcomes (Cooper et al., 2019; McMaughan et al., 2016; Nicolle, 2016). To relieve the burning pain and urgent need to urinate associated with UTI and prevent complications, UTIs are usually successfully treated with antibiotics and other medications (Detweiler et al., 2015; Nicolle, 2009; Saint et al., 2006; Gradwohl et al., 2016). In fact, one study estimated that antibiotic therapy shortens the duration of symptoms and likely cures more than 90 percent of infections (Nicolle et al., 2006). Clinical guidelines can help nursing homes identify the cause of a UTI and implement appropriate treatment sooner, which can prevent the infection from becoming more serious or causing serious complications, such as sepsis and death (Smith et al., 2018). Consistent surveillance of residents is also important in UTI prevention, with missing activities such as administering medication on time and documenting nursing care associated with higher rates of UTIs (Nelson & Flynn, 2015).

Second, one commonly cited evidence-based clinical practice for preventing UTIs and reducing UTI rates is appropriate use of catheterization. Generally, the use of catheters is associated with urinary tract infections, with one study finding that 3% to 7% of residents with indwelling catheters develop UTIs (Gucwa et al., 2016). Moreover, the odds of a resident having a multi-drug resistant organism (MDRO) UTI significantly increased with the presence of catheterization (Gucwa et al., 2016). Therefore, encouraging only appropriate use of urinary catheterization can help to lower the rate of UTIs and prevent the corollary adverse outcome of MDRO proliferation.

Third, evidence suggests that there are broader clinical practices nursing homes can implement, beyond appropriate catheterization, that are effective in preventing UTIs. These processes include keeping the perineal area clean (Wolff et al., 2017), ensuring hand hygiene (Montoya et al., 2016; Meddings et al., 2017), improving management of urinary incontinence (Meddings et al., 2017), and implementing hydration regimens (Wolff et al., 2017).

**Figure 1: Role of Nursing Home Structures and Processes in Rate of Urinary Tract Infections**

STRUCTURES

* Facility characteristics (e.g., size, ownership, chain affiliation, financial resources, profit status, case mix, culture)
* Staffing resources (e.g., ratios and mix, education level)

PROCESSES

* Best practices (hygiene and hydration regimens)
* Adherence to guidelines (prevention and alternative approaches to care)
* Appropriate assessments and use of catheterization

OUTCOME

* Lower rate of urinary tract infections

COROLLARY OUTCOMES

* Lower rates of sepsis, hospitalization, emergency department use, delirium, or death
* Decrease proliferation of MDROs

Castle, N. G., & Anderson, R. A. (2011). Caregiver staffing in nursing homes and their influence on quality of care: Using dynamic panel estimation methods. *Medical Care, 49*(6), 545-552.

Castle, N., Engberg, J. B., Wagner, L. M., & Handler, S. (2017). Resident and facility factors associated with the incidence of urinary tract infections identified in the nursing home Minimum Data Set. *Journal of Applied Gerontology, 36*(2), 173-194.

Cooper, D., McFarland, M., Petrilli, F., & Shells, C. (2019). Reducing inappropriate antibiotics for urinary tract infections in long-term care: A replication study. *Journal of Nursing Care Quality, 34*(1), 16-21.

Crnich, C. J. & Drinka, P. (2014). Improving the management of urinary tract Infections in nursing homes: It's time to stop the tail from wagging the dog." *Annals of Long Term Care: Clinical Care and Aging, 22*(9), 32-36.

Detweiler, K., Mayers, D., & Fletcher, S. G. (2015). Bacteriuria and urinary tract infections in the elderly. *Urologic Clinics of North America, 42*(4), 561-568.

Gradwohl S.E., Bettcher, C.M., Chenoweth C.E., Van Harrison R., & Zoschnick L.B. (2016). Michigan Medicine: Urinary tract infection [PDF]. Retrieved from <http://www.med.umich.edu/1info/FHP/practiceguides/uti/uti.pdf>

Gucwa, A. L., Dolar, V., Ye, C., & Epstein, S. (2016). Correlations between quality ratings of skilled nursing facilities and multidrug-resistant urinary tract infections. *American Journal of Infection Control, 44*(11), 1256-1260.

Herzig, C., Dick, A., Castle, N., & Stone, P. (2016). Policies and practices to reduce urinary tract infections in nursing homes [Abstract]. *American Journal of Infection Control 44*, S12.

Hyer, K., Thomas, K. S., Branch, L. G., Harman, J. S., Johnson, C. E., & Weech-Maldonado, R. (2011). The influence of nurse staffing levels on quality of care in nursing homes. *The Gerontologist, 51*(5), 610-616.

Meddings, J., Saint, S., Krein, S. L., Gaies, E., Reichert, H., Hickner, A.,…Mody, L. (2017). Systematic review of interventions to reduce urinary tract infection in nursing home residents. *Journal of Hospital Medicine*, *12*(5), 356.

Montoya, A., Cassone, M., & Mody, L. (2016). Infections in nursing homes: Epidemiology and prevention programs. *Clinics in Geriatric Medicine, 32*(3), 585-607.

Mukamel, D. B., Weimer, D. L, Spector, W. D., Ladd, H., & Zinn, J. S. (2008). Publication of quality report cards and trends in reported quality measures in nursing homes. *Health Services Research, 43*(4), 1244-1262.

Nelson, S. T., & Flynn, L. (2015). Relationship between missed care and urinary tract infections in nursing homes. *Geriatric Nursing, 36*(2), 126-130.

Nicolle L., Anderson P.A.M., Conly J., Mainprize T.C., Meuser J, Nickel J.C.,…Zhanel G.G. (2006) Uncomplicated urinary tract infections in women: current practice and the effect of antibiotic resistance on empiric treatment. *Canadian Family Physician, 52,* 612-618.

Nicolle L. E. (2009). Urinary tract infections in the elderly. *Clinics in Geriatric Medicine, 25*(3), 423-36.

Nicolle, L. E. (2016). Urinary tract infections in the older adult. *Clinics in Geriatric Medicine, 32*(3), 523-538.

Saint S., Kaufmann S.R., Rogers M.A.M., Baker, P.D., Boyko, E.J ,& Lipsky, B.A. (2006) Risk factors for nosocomial urinary tract-related bacteremia: A case control study. *American Journal of Infection Control*, *34*(7),401-7.

Smith, S. N., Greene, M. T., Mody, L., Banaszak-Holl, J., Petersen, L. D., & Meddings, J. (2018). Evaluation of the association between Nursing Home Survey on Patient Safety culture (NHSOPS) measures and catheter-associated urinary tract infections: Results of a national collaborative. *BMJ Quality & Safety, 27*(6), 464-473.

Trautner, B. W., Greene, M. T., Krein, S. L., Wald, H. L., Saint, S., Rolle, A. J.,...Mody, L. (2017). Infection prevention and antimicrobial stewardship knowledge for selected infections among nursing home personnel. *Infection Control & Hospital Epidemiology, 38*(1), 83-88.

Wolff, M. L., et al. (2016). An innovative quality assurance activity to reduce urinary tract infection rates in a green gouse skilled nursing setting." *Annals of Long Term Car*e, *24*(10), 17-20.

**1a.3 Value and Meaningfulness:** **IF** this measure is derived from patient report, provide evidence that the target population values the measured ***outcome, process, or structure*** and finds it meaningful. (Describe how and from whom their input was obtained.)

This is not applicable.

**\*\*RESPOND TO ONLY ONE SECTION BELOW -EITHER 1a.2, 1a.3 or 1a.4) \*\***

**1a.2 FOR OUTCOME MEASURES including PATIENT REPORTED OUTCOMES -** **Provide empirical data demonstrating the relationship between the outcome (or PRO) to at least one healthcare structure, process, intervention, or service.**

**1a.3 SYSTEMATIC REVIEW(SR) OF THE EVIDENCE (for intermediate outcome, PROCESS, or STRUCTURE PERFORMANCE measures, including those that are instrument-based) If the evidence is not based on a systematic review go to section 1a.4) If you wish to include more than one systematic review, add additional tables.**

**What is the source of the systematic review of the body of evidence that supports the performance measure? A systematic review is a scientific investigation that focuses on a specific question and uses explicit, prespecified scientific methods to identify, select, assess, and summarize the findings of similar but separate studies. It may include a quantitative synthesis (meta-analysis), depending on the available data. (IOM)**

Clinical Practice Guideline recommendation (with evidence review)

US Preventive Services Task Force Recommendation

Other systematic review and grading of the body of evidence (*e.g., Cochrane Collaboration, AHRQ Evidence Practice Center*)

☐ Other

1. Systematic Review of Interventions to Reduce Urinary Tract Infection in Nursing Home Residents (2017)

Ref: Meddings, J., Saint, S., Krein, S. L., Gaies, E., Reichert, H., Hickner, A.,…Mody, L. (2017). Systematic review of interventions to reduce urinary tract infection in nursing home residents. *Journal of Hospital Medicine*, *12*(5), 356.

Assessment of Interventions for Patients Regardless of Urinary Catheter Status

* Hand hygiene (R)
* Encourage fluid intake/hydration to reduce infection (NR)
* Improve general patient hygiene to reduce infection (R)
* Cranberry product as prophylaxis (NR)
* Vitamin/mineral supplement as UTI prophylaxis (NR)
* Treatment of atrophic vaginitis as UTI prophylaxis (R)
* Interventions to improve management of urinary incontinence (R)
* Implementation of effective infection control program (R)

**Table 1. Recommendations for Interventions**

| Assessment | Definition |
| --- | --- |
| R | Interventions that have some evidence of benefit (not always from controlled intervention studies), at least for certain populations and settings. |
| NR | Interventions that are not recommended based on available evidence or rationale. |

1. Clinical Practice Guideline for the Evaluation of Fever and Infection in Older Adult Residents of Long-Term Care Facilities (2009)

Ref: High K.P., Bradley S.F., Gravenstein D., Mehr D.R., Quagliarello V.J., Richards C., & Yoshikawa T.T. (2009). Clinical practice guideline for the evaluation of fever and infection in older adult residents of long-term care facilities. *Clinical Infectious Diseases*,*48*,149-171. <https://academic.oup.com/cid/article/48/2/149/304388>

Guidelines (See Table 2 for grading of evidence)

Urinalysis and Urine Culture

12. Urinalysis and urine cultures should not be performed for asymptomatic residents (A-I).

13. In noncatheterized residents, the diagnostic laboratory evaluation of suspected UTI should be reserved for those with acute onset of UTI-associated symptoms and signs (e.g., fever, dysuria, gross hematuria, new or worsening urinary incontinence, and/or suspected bacteremia) (A-II).

14. In residents with long-term indwelling urethral catheters, evaluation is indicated if there is suspected urosepsis (i.e., fever, shaking chills, hypotension, or delirium), especially in the context of recent catheter obstruction or change (A-II).

15. Appropriately collected urine specimens include a midstream or clean-catch specimen obtained from elderly men who are cooperative and functionally capable; however, it is often necessary to use a freshly applied, clean condom external collection system, with frequent monitoring of the urine bag (B-II). Specimen collection from women will often require an in and-out catheterization (B-III).

16. Residents with long-term indwelling urethral catheters and suspected urosepsis should have catheters changed prior to specimen collection and institution of antibiotic therapy (A-II).

17. The minimum laboratory evaluation for suspected UTI should include urinalysis for determination of leukocyte esterase and nitrite level by use of a dipstick and a microscopic examination for WBCs (B-II). If pyuria (110 WBCs/high-power field or a positive leukocyte esterase or nitrite test is present on dipstick, only then should a urine culture (with antimicrobial susceptibility testing) be ordered (B-III).

18. If urosepsis is suspected, urine and paired blood specimens should be obtained, if feasible, for culture and antimicrobial susceptibility testing, and a Gram stain of uncentrifuged urine should be requested (B-III).

**Table 2. Strength of Recommendation and Quality of Evidence**

| Category/grade | Definition |
| --- | --- |
| A | Good evidence to support a recommendation for or against use. |
| B | Moderate evidence to support a recommendation for or against use. |
| C | Poor evidence to support a recommendation for or against use. |
| Quality of evidence | Definition |
| I | Evidence from >1 properly randomized, controlled trial. |
| II | Evidence from >1 well-designed clinical trial, without randomization; from cohort or case-controlled analytic studies (preferably from >1 center); from multiple time-series; or from dramatic results from uncontrolled experiments. |
| III | Evidence from opinions of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees. |

1. Urinary Tract Infections in Long-Term Care Facilities (2001)

Ref: Nicolle, L.E., SHEA Long-Term Care Committee. Urinary tract infections in long-term care facilities [PDF]. (2001). *Infection Control and Hospital Epidemiology, 22*(3), 167-175. Retrieved from <http://www.shea-online.org/images/guidelines/UTIs_in_LTCF_2001.pdf>

Guidelines (See Table 3 for grading of evidence)

*Surveillance*

1. Surveillance for endemic asymptomatic bacteriuria in LTCFs should not be undertaken. Category BII.

a. Surveillance may be appropriate when an outbreak with a potential uropathogen is suspected. *Category BIII.*

2. Surveillance for symptomatic infection may be undertaken, depending on institutional priorities and infection control resources. *Category BII.*

a. Rates should be reported as per 1,000 patient-days or per 1,000 catheterized-patient–days. *Category BIII.*

3. Standard diagnostic criteria should be used for the identification of symptomatic UTI. Limitations in the ability to make a specific diagnosis of symptomatic UTI should be acknowledged in these criteria. *Category BII.*

*Prevention*

1. Nutritional status and care of comorbid illnesses should be optimized for patients in LTCFs. *Category CIII.*

a. There is insufficient evidence for a recommendation for routine use of estrogen therapy to prevent UTI in women. No recommendation.

2. Routine screening for UTI by urinalysis or urine culture is not recommended for LTCF residents. *Category AI.*

3. Condom catheters should be used to manage incontinence in men only where the benefits to the patient outweigh potential risks. *Category AII.*

a. Condom catheters for external urinary drainage should be applied and managed appropriately to minimize skin breakdown and ensure unobstructed drainage. *Category AIII.*

b. Condom-catheter leg bags should be disinfected and dried prior to reuse. *Category CII.*

4. Where clinically appropriate, intermittent catheterization should be used for urinary drainage rather than a chronic indwelling catheter. *Category BII.*

a. For intermittent catheterization, use a clean technique. *Category AI.*

5. Chronic indwelling urethral catheters should be used only where the benefits outweigh the risks of UTI and its complications. *Category AII.*

a. Indwelling catheters should be discontinued at the earliest opportunity. *Category AII.*

b. There is insufficient evidence to make a recommendation for or against routine chronic indwelling urethral catheter changes. No recommendation.

6. Bacteriuric LTCF residents who are to undergo an invasive genitourinary procedure should receive preprocedure antimicrobial prophylaxis. *Category AI.*

*Diagnosis*

1. A clinical diagnosis of symptomatic UTI should be made only with acute symptoms referable to the genitourinary tract or bacteremia. *Category BII.*

a. A clinical diagnosis of symptomatic UTI should not be made in the presence of stable, chronic genitourinary symptoms. *Category BIII.*

b. In residents with clinical deterioration, including fever, no localizing genitourinary findings, and a positive urine culture, a diagnosis of UTI is possible but not definite. *Category AII.*

2. A urine specimen for culture should be obtained prior to therapy from any resident treated for symptomatic UTI. *Category AII.*

a. A urine specimen with 105 CFU/mL of organisms is consistent with UTI. *Category AI.*

b. In the presence of acute urinary symptoms, lower quantitative counts may be consistent with the diagnosis of acute UTI. *Category BIII.*

c. The diagnosis of asymptomatic bacteriuria requires two consecutive urine specimens with >=105 CFU/mL of the same organism and the absence of symptoms referable to the urinary tract. *Category AII.*

d. For men and women, a clean-catch voided urine specimen is the preferred method for collection of urine for culture. *Category AII.*

e. In men using external condom collecting systems, a urine specimen collected from a freshly applied leg bag with >=105 CFU/mL is consistent with UTI. *Category AII.*

f. For men or women, where a voided specimen cannot be collected, a urine specimen should be obtained by in-and-out catheterization. A quantitative count >=103 CFU/mL of a single predominant pathogen from a specimen obtained with appropriate aseptic technique is consistent with infection. *Category BIII.*

3. In asymptomatic patients with chronic indwelling catheters, urine specimens for culture should be obtained aseptically through the catheter port. *Category AII.*

a. In patients with chronic indwelling catheters and suspected symptomatic UTI, a urine specimen for culture to determine infecting organisms and susceptibilities should be obtained from a freshly inserted chronic indwelling catheter prior to initiating antimicrobial therapy. *Category AI.*

4. The presence or absence of pyuria in a urinalysis specimen should not be used as a criterion to diagnose UTI or to differentiate symptomatic from asymptomatic infection. *Category AII.*

a. The absence of pyuria makes UTI unlikely. *Category AII.*

*Treatment*

1. Asymptomatic bacteriuria should not be treated with antimicrobial therapy in LTCF residents. *Category A1.*

2. There is insufficient evidence to recommend nonantimicrobial methods to manage UTI in LTCF residents. No recommendation.

3. The selection of an antimicrobial for treatment of symptomatic UTI should be based on known or suspected infecting organisms, patient tolerance, local formulary, and documented efficacy. *Category AIII.*

a. The duration of therapy should not exceed 10 to 14 days; shorter courses may be considered for women with minor lower tract symptoms. *Category AII.*

b. For individuals with chronic indwelling catheters, the duration of therapy should be less than 10 days. *Category BIII.*

c. For men with relapsing symptomatic infection, 6 weeks of therapy for retreatment may be considered. *Category BI.*

4. When the diagnosis of symptomatic UTI is uncertain, a decision of whether or not to treat with antimicrobials must be made on the basis of clinical assessment. Where antimicrobials are given, ongoing clinical reassessment of presenting signs and symptoms to assess the impact of antimicrobial therapy should be undertaken. *Category BIII.*

a. Clinical assessment should be undertaken by a physician or appropriately trained designate. *Category AII.*

5. Post-treatment urine cultures to document cure should not be obtained. *Category AII.*

**Table 3. Strength of Recommendation and Quality of Evidence**

| Category/grade | Definition |
| --- | --- |
| A | Good evidence to support the recommendation. |
| B | Moderate evidence to support the recommendation. |
| C | Poor evidence to support the recommendation |
| Quality of evidence | Definition |
| I | Evidence from at least one properly randomized, controlled trial. |
| II | Evidence from at least one well-designed clinical trial without randomization, from cohort or case-controlled analytic studies (preferably from more than one center), from multiple time-series studies, or from dramatic results in uncontrolled experiments. |
| III | Evidence from opinions of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees. |

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**1a.4 OTHER SOURCE OF EVIDENCE**

*If source of evidence is NOT from a clinical practice guideline, USPSTF, or systematic review, please describe the evidence on which you are basing the performance measure.*

**1a.4.1 Briefly SYNTHESIZE the evidence that supports the measure.** A list of references without a summary is not acceptable.

This is not applicable.

**1a.4.2 What process was used to identify the evidence?**

This is not applicable.

**1a.4.3. Provide the citation(s) for the evidence.**

This is not applicable.