

## NATIONAL QUALITY FORUM—Evidence (subcriterion 1a)

**Measure Number** (if previously endorsed): 0271

**Measure Title:** [Perioperative Care: Discontinuation of Prophylactic Parenteral Antibiotics \(Non-Cardiac Procedures\)](#)

**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:** [3/17/2014](#)

### Instructions

- 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.
- Respond to all questions as instructed with answers immediately following the question. 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.
- Maximum of 10 pages (*includes questions/instructions*; minimum font size 11 pt; do not change margins).  
**Contact NQF staff if more pages are needed.**
- Contact NQF staff regarding questions. Check for resources at [Submitting Standards webpage](#).

**Note:** The information provided in this form is intended to aid the Steering 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:

- **Health outcome:** <sup>3</sup> a rationale supports the relationship of the health outcome to processes or structures of care. Applies to patient-reported outcomes (PRO), including health-related quality of life/functional status, symptom/symptom burden, experience with care, health-related behavior.
- **Intermediate clinical outcome:** a systematic assessment and grading of the quantity, quality, and consistency of the body of evidence <sup>4</sup> that the measured intermediate clinical outcome leads to a desired health outcome.
- **Process:** <sup>5</sup> a systematic assessment and grading of the quantity, quality, and consistency of the body of evidence <sup>4</sup> 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 <sup>4</sup> that the measured structure leads to a desired health outcome.
- **Efficiency:** <sup>6</sup> evidence not required for the resource use component.

### 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 U.S. Preventive Services Task Force (USPSTF) [grading definitions](#) and [methods](#), or Grading of Recommendations, Assessment, Development and Evaluation ([GRADE](#)) [guidelines](#).
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](#); [AQA Principles of Efficiency Measures](#)).

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

Outcome

- ☐ Health outcome: Click here to name the health outcome
- ☐ Patient-reported outcome (PRO): Click here to name the PRO  
*PROs include HRQoL/functional status, symptom/symptom burden, experience with care, health-related behaviors*
- ☐ Intermediate clinical outcome (e.g., lab value): Click here to name the intermediate outcome
- ☒ Process: [Discontinuation of Prophylactic Parenteral Antibiotics](#)
- ☐ Structure: Click here to name the structure
- ☐ Other: Click here to name what is being measured

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**HEALTH OUTCOME/PRO PERFORMANCE MEASURE** *If not a health outcome or PRO, skip to 1a.3*

**1a.2.** Briefly state or diagram the path between the health outcome (or PRO) and the healthcare structures, processes, interventions, or services that influence it.

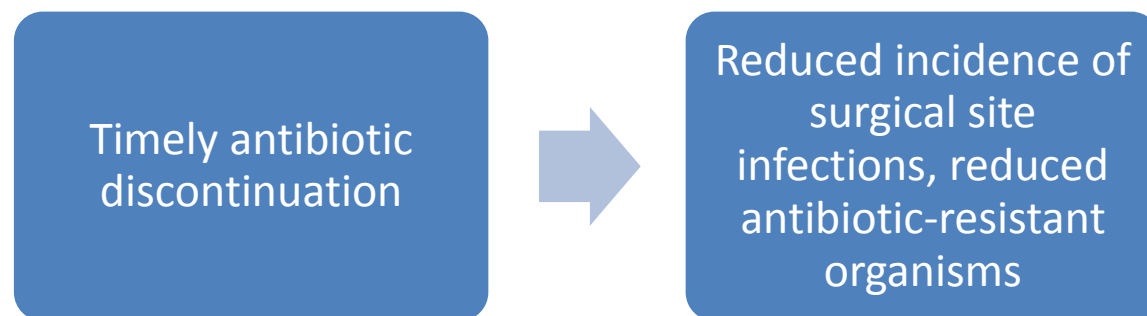
**1a.2.1.** State the rationale supporting the relationship between the health outcome (or PRO) to at least one healthcare structure, process, intervention, or service (*i.e., influence on outcome/PRO*).

*Note: For health outcome/PRO performance measures, no further information is required; however, you may provide evidence for any of the structures, processes, interventions, or service identified above.*

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**INTERMEDIATE OUTCOME, PROCESS, OR STRUCTURE PERFORMANCE MEASURE**

**1a.3.** Briefly state or diagram the path between structure, process, intermediate outcome, and health outcomes. Include all the steps between the measure focus and the health outcome.



**1a.3.1. What is the source of the systematic review of the body of evidence that supports the performance measure?**

- ☒ Clinical Practice Guideline recommendation – **complete sections [1a.4](#), and [1a.7](#)**
- ☐ US Preventive Services Task Force Recommendation – **complete sections [1a.5](#) and [1a.7](#)**
- ☐ Other systematic review and grading of the body of evidence (e.g., *Cochrane Collaboration*, *AHRQ Evidence Practice Center*) – **complete sections [1a.6](#) and [1a.7](#)**
- ☐ Other – **complete section [1a.8](#)**

Please complete the sections indicated above for the source of evidence. You may skip the sections that do not apply.

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**1a.4. CLINICAL PRACTICE GUIDELINE RECOMMENDATION**

**1a.4.1. Guideline citation (including date) and URL for guideline (if available online):**

Bratzler DW, Dellinger EP, Olsen KM, et al. Clinical practice guidelines for antimicrobial prophylaxis in surgery. *Am J Health-Syst Pharm*. 2013;70:195-283.

<http://www.ashp.org/DocLibrary/BestPractices/TGSurgery.aspx>

**1a.4.2. Identify guideline recommendation number and/or page number and quote verbatim, the specific guideline recommendation.**

Page 594:

The shortest effective duration of antimicrobial administration for preventing SSI is not known; however, evidence is mounting that postoperative antimicrobial administration is not necessary for most procedures.<sup>6,7,41,122–124</sup> The duration of antimicrobial prophylaxis should be less than 24 hours for most procedures.

**1a.4.3. Grade assigned to the quoted recommendation with definition of the grade:**

The guideline does not provide a grade for this particular recommendation.

**1a.4.4. Provide all other grades and associated definitions for recommendations in the grading system. (Note: If separate grades for the strength of the evidence, report them in section 1a.7.)**

Not applicable. This particular recommendation was not graded.

**1a.4.5. Citation and URL for methodology for grading recommendations (if different from 1a.4.1):**  
Not applicable.

**1a.4.6. If guideline is evidence-based (rather than expert opinion), are the details of the quantity, quality, and consistency of the body of evidence available (e.g., evidence tables)?**

- ☐ Yes → **complete section [1a.7](#)**
- ☒ No → **report on another systematic review of the evidence in sections [1a.6](#) and [1a.7](#); if another review does not exist, provide what is known from the guideline review of evidence in [1a.7](#)**

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**1a.5. UNITED STATES PREVENTIVE SERVICES TASK FORCE RECOMMENDATION**

**1a.5.1. Recommendation citation (including date) and URL for recommendation (if available online):**

**1a.5.2. Identify recommendation number and/or page number and quote verbatim, the specific recommendation.**

**1a.5.3. Grade assigned to the quoted recommendation with definition of the grade:**

**1a.5.4. Provide all other grades and associated definitions for recommendations in the grading system.** (Note: the grading system for the evidence should be reported in section 1a.7.)

**1a.5.5. Citation and URL for methodology for grading recommendations (if different from 1a.5.1):**

**Complete section [1a.7](#)**

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## **1a.6. OTHER SYSTEMATIC REVIEW OF THE BODY OF EVIDENCE**

**1a.6.1. Citation (including date) and URL (if available online):**

**1a.6.2. Citation and URL for methodology for evidence review and grading (if different from 1a.6.1):**

**Complete section [1a.7](#)**

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## **1a.7. FINDINGS FROM SYSTEMATIC REVIEW OF BODY OF THE EVIDENCE SUPPORTING THE MEASURE**

*If more than one systematic review of the evidence is identified above, you may choose to summarize the one (or more) for which the best information is available to provide a summary of the quantity, quality, and consistency of the body of evidence. Be sure to identify which review is the basis of the responses in this section and if more than one, provide a separate response for each review.*

**1a.7.1. What was the specific structure, treatment, intervention, service, or intermediate outcome addressed in the evidence review?**

Reviewed evidence described in the guideline addressed the relationship between the duration of antibiotic prophylaxis following surgery and surgical site infection rates.

**1a.7.2. Grade assigned for the quality of the quoted evidence with definition of the grade:**

The guideline did not assign a grade for the overall quality of the cited evidence for this recommendation.

**1a.7.3. Provide all other grades and associated definitions for strength of the evidence in the grading system.**

Not applicable. The guideline did not assign a grade for the overall quality of the cited evidence for this recommendation.

**1a.7.4. What is the time period covered by the body of evidence? (provide the date range, e.g., 1990-2010). Date range: [1959-2010](#)**

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## **QUANTITY AND QUALITY OF BODY OF EVIDENCE**

**1a.7.5. How many and what type of study designs are included in the body of evidence? (e.g., 3 randomized controlled trials and 1 observational study)**

Evidence cited in support of the guideline recommendation includes:

3 Clinical Practice Guidelines  
 4 Consensus Statements  
 2 Retrospective Studies  
 2 Surveys  
 1 Observational Study  
 5 Clinical Trials  
 1 Meta-Analysis  
 1 Systematic Review

**1a.7.6. What is the overall quality of evidence across studies in the body of evidence?** (*discuss the certainty or confidence in the estimates of effect particularly in relation to study factors such as design flaws, imprecision due to small numbers, indirectness of studies to the measure focus or target population*)

The guideline does not provide a summary of the overall quality of the evidence across studies. However, the recommendation for antibiotic discontinuation is based on a broad range of evidence, including several randomized, controlled, clinical trials as well as a meta-analysis and a systematic review of the evidence. In reviewing the body of evidence, the guideline developers specifically considered the following characteristics for each study: validity, reliability, clinical applicability, flexibility, clarity, and multidisciplinary nature.

#### ESTIMATES OF BENEFIT AND CONSISTENCY ACROSS STUDIES IN BODY OF EVIDENCE

**1a.7.7. What are the estimates of benefit—magnitude and direction of effect on outcome(s) across studies in the body of evidence?** (*e.g., ranges of percentages or odds ratios for improvement/decline across studies, results of meta-analysis, and statistical significance*)

The guideline does not provide an overall quantitative estimate of the benefit across studies. However, the guideline does cite several clinical trials that demonstrated prolonged use of antibiotics after surgery is not associated with reduced rates of surgical site infections. Additionally, the guideline cites a study that found prolonged antibiotic prophylaxis is associated with an increase of antimicrobial resistance (OR: 1.6; 95% CI, 1.1-2.6).

**1a.7.8. What harms were studied and how do they affect the net benefit (benefits over harms)?**

The guideline considered the potential for increased surgical site infection rates associated with shorter duration of antibiotic prophylaxis following surgery. However, after reviewing the body of evidence, they found no relationship between shorter duration of antibiotic prophylaxis and surgical site infection rate increases. Additionally, shorter duration of antimicrobial prophylaxis results in lower costs as well as reduced risk for acquired antimicrobial resistance. The guideline developers felt these benefits far outweighed any potential harms.

#### UPDATE TO THE SYSTEMATIC REVIEW(S) OF THE BODY OF EVIDENCE

**1a.7.9. If new studies have been conducted since the systematic review of the body of evidence, provide for each new study: 1) citation, 2) description, 3) results, 4) impact on conclusions of systematic review.**

There have been no recent studies directly related to the measure focus. Rather, recent evidence focuses on overall incidence and epidemiological patterns of hospital-acquired infections, particularly with regard to antimicrobial resistance.

**1a.8 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.8.1** What process was used to identify the evidence?

**1a.8.2.** Provide the citation and summary for each piece of evidence.