

Putting Prevention into Practice

An Evidence-Based Approach

Screening for Asymptomatic Bacteriuria in Adults

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Case Study

A 33-year-old woman presents to your clinic for a first prenatal visit at 8 weeks' gestation. She reported morning nausea and breast tenderness. Review of systems and physical examination were consistent with early pregnancy but were otherwise unremarkable.

Case Study Questions

1. Based on the U.S. Preventive Services Task Force (USPSTF) recommendation statement, which one of the following is the most appropriate course of action for your patient?

- A. Do not screen for asymptomatic bacteriuria because the patient has no symptoms.
- B. Obtain a urine dipstick screening test from the patient today.
- C. Obtain a urine culture from the patient today.
- D. Obtain a urinalysis with microscopic analysis from the patient today.
- E. Defer screening for asymptomatic bacteriuria until the third trimester.

2. The benefits of treating screen-detected asymptomatic bacteriuria include reduced incidence of pyelonephritis. Pyelonephritis in pregnancy is associated with which of the following?

- A. Septicemia.
- B. Low birth weight.
- C. Respiratory distress.
- D. Spontaneous abortion.

3. The patient returns to your clinic for postpartum follow-up. According to the USPSTF, should she be screened again for bacteriuria?

- A. Screening is not recommended for asymptomatic nonpregnant adults because the potential harms of screening and treatment outweigh the benefits.
- B. Screening should be considered on a case-by-case basis. There is not enough evidence regarding the harms or benefits of this service to support a generalized screening recommendation.
- C. Screening should be performed only if the patient was previously treated for bacteriuria.
- D. Screening should be offered only to patients with diabetes mellitus.
- E. Screening should be offered as part of the patient's wellness visit.

Answers appear on the following page.

See related U.S. Preventive Services Task Force Recommendation Statement at <https://www.aafp.org/afp/2020/0415/p489>.

This PPIP quiz is based on the recommendations of the USPSTF. More information is available in the USPSTF Recommendation Statement and supporting documents on the USPSTF website (<https://www.uspreventiveservicestaskforce.org>). The practice recommendations in this activity are available at <https://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/asymptomatic-bacteriuria-in-adults-screening1>.

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A collection of Putting Prevention into Practice published in *AFP* is available at <https://www.aafp.org/afp/ppip>.

CME This clinical content conforms to AAFP criteria for continuing medical education (CME). See CME Quiz on page 461.

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Answers

1. **The correct answer is C.** Asymptomatic bacteriuria occurs when the urinary tract is colonized with significant amounts of pathogenic bacteria in the absence of symptoms or signs of a urinary tract infection. The USPSTF concluded with moderate certainty that screening for and treatment of asymptomatic bacteriuria in pregnant women have moderate net benefit in reducing perinatal complications.¹ The USPSTF recommends screening pregnant women for asymptomatic bacteriuria with a urine culture at 12 to 16 weeks of gestation or at the first prenatal visit, whichever comes first.

2. **The correct answers are A, B, and C.** Asymptomatic bacteriuria in pregnant women is associated with increased risk of pyelonephritis. Pyelonephritis is associated with a number of perinatal complications, including septicemia, respiratory distress, low birth weight, and spontaneous preterm birth.²

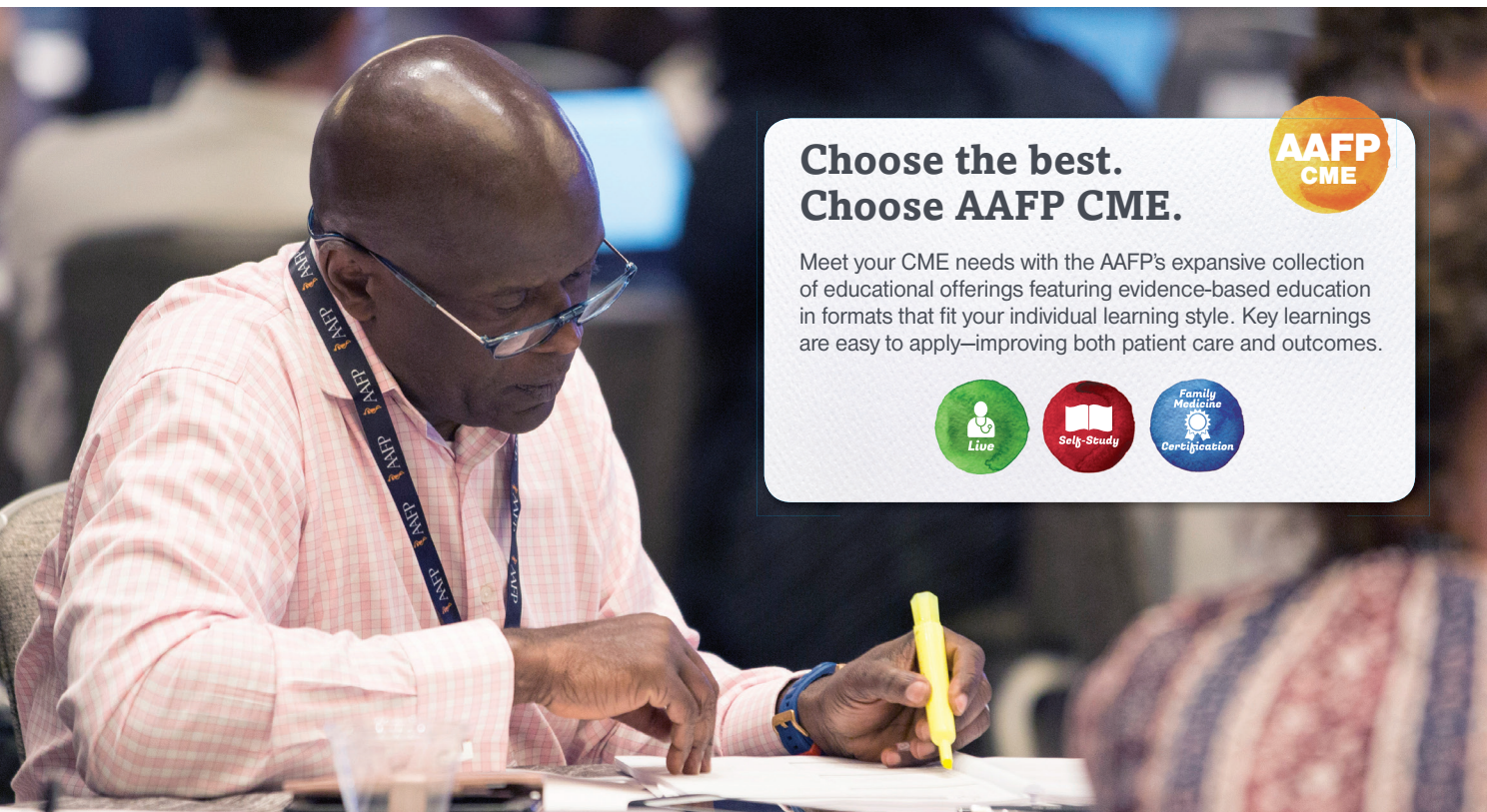
3. **The correct answer is A.** The USPSTF recommends against screening in nonpregnant adults. There is adequate evidence that treatment of screen-detected asymptomatic

bacteriuria in nonpregnant adults has no benefit. The USPSTF considered the harms of screening to be at least small based on the known harms associated with antibiotic use (changes to the microbiome and antimicrobial resistance). Thus, the USPSTF concluded that screening in this group has no benefit and may be harmful (D recommendation). Previous diagnosis of asymptomatic bacteriuria or diabetes is not an indicator for screening. Routine screening is also not recommended.

The views expressed in this work are those of the authors and do not reflect the official policy or position of the Department of Defense, the Uniformed Services University of the Health Sciences, the U.S. Department of Health and Human Services, or the U.S. government.

References

1. Owens DK, Davidson KW, Krist AH, et al. Screening for asymptomatic bacteriuria in adults: US Preventive Services Task Force recommendation statement. *JAMA*. 2019;322(12):1188-1194.
2. Henderson JT, Webber EM, Bean SI. Screening for asymptomatic bacteriuria in adults: updated evidence report and systematic review for the US Preventive Services Task Force. *JAMA*. 2019;322(12):1195-1205. ■



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