

# Putting Prevention into Practice

*An Evidence-Based Approach*

## Screening for Hearing Loss in Older Adults

JENNIFER CROSWELL, MD, MPH, *Medical Officer, U.S. Preventive Services Task Force Program, Agency for Healthcare Research and Quality*

BRYANT WEBBER, MD, *General Preventive Medicine Residency, Uniformed Services University of the Health Sciences*

► See related U.S. Preventive Services Task Force Recommendation Statement at <http://www.aafp.org/afp/2013/0115/od1.html>. Access to the statement is free and unrestricted.



This clinical content conforms to AAFP criteria for evidence-based continuing medical education (EB CME). See CME Quiz on page 94.

The case study and answers to the following questions are based on the recommendations of the U.S. Preventive Services Task Force (USPSTF), an independent panel of experts in primary care and prevention that systematically reviews the evidence of effectiveness and develops recommendations for clinical preventive services. More information is available in the USPSTF Recommendation Statement and the evidence synthesis at <http://www.uspreventiveservicestaskforce.org>. The practice recommendations in this activity are available at <http://www.uspreventiveservicestaskforce.org/uspstf/uspshear.htm>.

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

### Case Study

A 75-year-old woman presents to your office for a routine well-woman examination. She mentions that her friend was recently diagnosed with hearing loss and fitted for a hearing aid. She has no perceived hearing loss, but she wonders whether she needs a hearing aid.

### Case Study Questions

1. Based on the recommendations of the U.S. Preventive Services Task Force (USPSTF), what should you tell this patient?

- A. There is strong evidence that screening will improve health outcomes in older adults with hearing loss who have no symptoms and are unaware of a problem.
- B. There are important and common harms associated with the use of hearing aids.
- C. There is not enough evidence to know whether screening for hearing loss will be of benefit to her.
- D. Although not all older adults who are prescribed a hearing aid find them helpful or choose to use them, cost is not a barrier to use.
- E. Although they may improve communication, hearing aids have not been shown to affect quality of life for any population with hearing loss.

2. According to the USPSTF, which one of the following statements about screening for hearing loss is correct?

- A. The whispered voice, finger rub, and watch tick tests are not reliable for identifying persons with hearing loss.
- B. A handheld audiometer is the preferred method to screen for hearing loss in the clinical setting.
- C. All adults with perceived hearing problems have objective hearing loss on examination.
- D. Before a person receives a hearing aid, diagnosis of hearing loss should be confirmed with a pure-tone audiogram.
- E. Diagnostic confirmation of a positive screening result for hearing loss can be performed without special equipment and completed within 10 minutes.

3. Which of the following statements about risk factors for hearing loss are correct?

- A. The most common cause of hearing loss in older adults presents as a decreased ability to perceive tones in the low-frequency range.
- B. Diabetes mellitus is an independent risk factor for hearing loss.
- C. Previous exposure to ototoxic agents is an independent risk factor for hearing loss.
- D. Previous recurring outer ear infection is an independent risk factor for hearing loss.

Answers appear on the following page.

## Answers

**1. The correct answer is C.** The USPSTF concluded that there is insufficient evidence to assess the balance of benefits and harms of screening for hearing loss in asymptomatic adults 50 years or older. This recommendation does not apply to persons seeking evaluation for perceived hearing problems, or for cognitive or affective symptoms that may be related to hearing loss; these persons should be assessed for objective hearing impairment and treated when appropriate. Because of a paucity of directly applicable trials, there is inadequate evidence to determine whether screening for hearing loss improves health outcomes in persons who are unaware of hearing loss or who have perceived hearing loss but have not sought care. Therefore, the incremental benefits and costs of screening asymptomatic adults compared with testing and treating only those who seek treatment of perceived hearing impairment are unknown. Adequate evidence shows that the harms of treating hearing loss in older adults are small to none. The cost of a hearing aid is a barrier to use for many older adults because it is not covered by Medicare or many private insurance companies. Health-related quality of life is improved for some adults with moderate to severe hearing loss who use hearing aids compared with those who do not use hearing aids.

**2. The correct answer is D.** Before a person receives a hearing aid, diagnosis of objective hearing loss should be confirmed with a pure-tone audiogram. This requires a

soundproof booth and trained personnel to administer the test, and takes approximately one hour to complete. Screening for hearing loss in the primary care setting can be accomplished through clinical testing methods (whispered voice, finger rub, and watch tick tests), single-question screening (e.g., "Do you have difficulty with your hearing?") or multiple-item patient questionnaires (Hearing Handicap Inventory for the Elderly—Screening Version), and handheld audiometers. All are relatively accurate and reliable screening tools for identifying adults with objective hearing loss. Not all adults with perceived hearing difficulty have objective hearing loss.

**3. The correct answers are B and C.** Risk factors for hearing loss include increasing age; diabetes and other systemic diseases; a history of exposure to loud noises or ototoxic agents, including occupational exposures; genetic factors; and previous recurring inner ear—not outer ear—infections. Presbycusis, the most common cause of hearing loss in older adults, is an age-related degeneration of hair cells in the inner ear that leads to a decreased ability to perceive high-frequency tones.

## SOURCES

Screening for hearing loss in older adults: U.S. Preventive Services Task Force recommendation statement. *Ann Intern Med.* 2012;157(9):655-661.

Chou R, Dana T, Bougatsos C, Fleming C, Beil T. Screening adults aged 50 years or older for hearing loss: a review of the evidence for the U.S. Preventive Services Task Force. *Ann Intern Med.* 2011;154(5):347-355. ■