Counseling and Interventions to Prevent Tobacco Use and Tobacco-Caused Disease in Adults and Pregnant Women: U.S. Preventive Services Task Force Reaffirmation Recommendation Statement

U.S. Preventive Services Task Force*

Description: Reaffirmation of the 2003 U.S. Preventive Services Task Force (USPSTF) recommendation on counseling to prevent tobacco use.

Methods: The USPSTF reviewed new evidence in the U.S. Public Health Service's 2008 clinical practice guideline and determined that the net benefits of tobacco cessation interventions in adults and pregnant women remain well established.

Recommendations: Ask all adults about tobacco use and provide tobacco cessation interventions for those who use tobacco products. (Grade A recommendation)

Ask all pregnant women about tobacco use and provide augmented, pregnancy-tailored counseling for those who smoke. (Grade A recommendation)

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For author affiliation, see end of text.

* For a list of the members of the USPSTF, see the **Appendix** (available at www.annals.org).

The U.S. Preventive Services Task Force (USPSTF) makes recommendations about preventive care services for patients without recognized signs or symptoms of the target condition.

It bases its recommendations on a systematic review of the evidence of the benefits and harms and an assessment of the net benefit of the service.

The USPSTF recognizes that clinical or policy decisions involve more considerations than this body of evidence alone. Clinicians and policymakers should understand the evidence but individualize decision making to the specific patient or situation.

Summary of Recommendations and Evidence

The USPSTF recommends that clinicians ask all adults about tobacco use and provide tobacco cessation interventions for those who use tobacco products. This is a grade A recommendation.

The USPSTF recommends that clinicians ask all pregnant women about tobacco use and provide augmented, pregnancy-tailored counseling for those who smoke. This is a grade A recommendation.

See the **Figure** for a summary of this recommendation and suggestions for clinical practice.

See **Table 1** for a description of the USPSTF grades and **Table 2** for a description of the USPSTF classification of levels of certainty about net benefit.

Rationale

Importance

Tobacco use, cigarette smoking in particular, is the leading preventable cause of death in the United States. Tobacco use results in more than 400 000 deaths annually from cardiovascular disease, respiratory disease, and cancer. Smoking during pregnancy results in the deaths of about 1000 infants annually and is associated with an increased risk for premature birth and intrauterine growth retardation. Environmental tobacco smoke contributes to death in an estimated 38 000 people annually.

Recognition of Behavior

The "5-A" behavioral counseling framework provides a useful strategy for engaging patients in smoking cessation discussions: 1) Ask about tobacco use; 2) Advise to quit through clear personalized messages; 3) Assess willingness to quit; 4) Assist to quit; and 5) Arrange follow-up and support.

Effectiveness of Interventions to Change Behavior

In nonpregnant adults, the USPSTF found convincing evidence that smoking cessation interventions, including brief behavioral counseling sessions (<10 min-

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Web-Only
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utes) and pharmacotherapy delivered in primary care settings, are effective in increasing the proportion of smokers who successfully quit and remain abstinent for 1 year. Although less effective than longer interventions, even minimal interventions (<3 minutes) have been found to increase quit rates. See the Clinical Considerations section for a discussion of complementary services to which primary care clinicians may refer patients.

The USPSTF found convincing evidence that smoking cessation decreases the risk for heart disease, stroke, and lung disease.

In pregnant women, the USPSTF found convincing evidence that smoking cessation counseling sessions, augmented with messages and self-help materials tailored for pregnant smokers, increases abstinence rates during pregnancy compared with brief, generic counseling interventions alone. Tobacco cessation at any point during pregnancy yields substantial health benefits for the expectant mother and baby. The USPSTF found inadequate evidence to evaluate the safety or efficacy of pharmacotherapy during pregnancy.

Harms of Interventions

Finding no published studies that describe harms of counseling to prevent tobacco use in adults or pregnant women, the USPSTF judged the magnitude of these harms to be no greater than small. Harms of pharmacotherapy are dependent on the specific medication used. In nonpregnant adults, the USPSTF judged these harms to be small.

USPSTF Assessment

The USPSTF concludes that there is high certainty that the net benefit of tobacco cessation interventions in adults is substantial.

The USPSTF also concludes that there is high certainty that the net benefit of augmented, pregnancy-tailored counseling in pregnant women is substantial.

CLINICAL CONSIDERATIONS

Patient Population Under Consideration

This recommendation applies to adults 18 years or older and all pregnant women regardless of age. The USPSTF plans to issue a separate recommendation statement about counseling to prevent tobacco use in nonpregnant adolescents and children.

Counseling Interventions

Various primary care clinicians may deliver effective interventions. There is a dose–response relationship between quit rates and the intensity of counseling (that is, more or longer sessions improve quit rates). Quit rates seem to plateau after 90 minutes of total counseling contact time (1). Helpful components of counseling include problem-solving guidance for smokers (to help them develop a plan to quit and overcome common barriers to quitting) and the provision of social support as part of treatment. Complementary practices that improve cessation rates include motivational interviewing, assessing readiness to change, offering more intensive counseling or referrals, and using telephone "quit lines" (1).

Treatment

Combination therapy with counseling and medications is more effective at increasing cessation rates than either component alone. Pharmacotherapy approved by the U.S. Food and Drug Administration and identified as effective for treating tobacco dependence in nonpregnant adults includes several forms of nicotine replacement therapy (gum, lozenge, transdermal patch, inhaler, and nasal spray), sustained-release bupropion, and varenicline (1).

Useful Resources

Detailed reviews and recommendations about clinical interventions for tobacco cessation are available in the U.S. Public Health Service Clinical Practice Guideline "Treating Tobacco Use and Dependence: 2008 Update" (available at www.surgeongeneral.gov/tobacco) (1).

Tobacco-related recommendations from the Centers for Disease Control and Prevention's Guide to Community Preventive Services are available at www.thecommunityguide.org/tobacco (2).

OTHER CONSIDERATIONS

Implementation

Strategies that have been shown to improve rates of tobacco cessation counseling and interventions in primary care settings include implementing a tobacco user identification system; providing education, resources, and feedback to promote clinician intervention; and dedicating staff to provide tobacco dependence treatment and assessing the delivery of this treatment in staff performance evaluations (1).

DISCUSSION

In 2003, the USPSTF reviewed the evidence for tobacco cessation interventions in adults and pregnant women contained in the 2000 U.S. Public Health Service (PHS) clinical practice guideline "Treating Tobacco Use and Dependence" (3) and found that the benefits of these interventions substantially outweighed the harms (4). In 2008, the USPSTF reviewed new evidence in the updated PHS guideline (1) and determined that the net benefits of screening and tobacco cessation interventions in adults and pregnant women remain well established. The USPSTF found no new substantial evidence that could change its recommendations and, therefore, reaffirms its previous recommendations. The previous recommendation statement (4) and a link to the updated PHS guideline review can be found at www.preventiveservices.ahrq.gov.

RECOMMENDATIONS OF OTHERS

Policies of the American Academy of Family Physicians on tobacco use prevention and cessation (5) are

Figure. **Counseling and interventions to prevent tobacco use and tobacco-caused disease in adults and pregnant women: clinical summary of a U.S. Preventive Services Task Force recommendation.**

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USPSTF

COUNSELING AND INTERVENTIONS TO PREVENT TOBACCO USE AND TOBACCO-CAUSED DISEASE IN ADULTS AND PREGNANT WOMEN: CLINICAL SUMMARY OF U.S. PREVENTIVE SERVICES TASK FORCE RECOMMENDATION

Population	Adults Age ≥18 Years	Pregnant Women of Any Age
Recommendation	**Ask about tobacco use. Provide tobacco cessation interventions to those who use tobacco products.**	**Ask about tobacco use. Provide augmented pregnancy-tailored counseling for women who smoke.**
	Grade: A	**Grade: A**
Counseling	The **"5-A"** framework provides a useful counseling strategy: 1. **A**sk about tobacco use 2. **A**dvise to quit through clear personalized messages 3. **A**ssess willingness to quit 4. **A**ssist to quit 5. **A**rrange follow-up and support Intensity of counseling matters: brief one-time counseling works; however, longer sessions or multiple sessions are more effective. Telephone counseling "quit lines" also improve cessation rates.	
Pharmacotherapy	Combination therapy with counseling and medications is more effective than either component alone. FDA-approved pharmacotherapy includes nicotine replacement therapy, sustained-release bupropion, and varenicline.	The USPSTF found inadequate evidence to evaluate the safety or efficacy of pharmacotherapy during pregnancy.
Implementation	Successful implementation strategies for primary care practice include: • Instituting a tobacco user identification system • Promoting clinician intervention through education, resources, and feedback • Dedicating staff to provide treatment, and assessing the delivery of treatment in staff performance evaluations	
Relevant Recommendations from the USPSTF	Recommendations on other behavioral counseling topics are available at www.preventiveservices.ahrq.gov.	

For a summary of the evidence systematically reviewed in making these recommendations, the full recommendation statement, and supporting documents, please go to www.preventiveservices.ahrq.gov.

FDA = U.S. Food and Drug Administration; USPSTF = U.S. Preventive Services Task Force.

Table 1. **What the USPSTF Grades Mean and Suggestions for Practice**

Grade	Definition	Suggestions for Practice
A	The USPSTF recommends the service. There is high certainty that the net benefit is substantial.	Offer/provide this service.
B	The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.	Offer/provide this service.
C	The USPSTF recommends against routinely providing the service. There may be considerations that support providing the service in an individual patient. There is moderate or high certainty that the net benefit is small.	Offer/provide this service only if other considerations support offering or providing the service in an individual patient.
D	The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits.	Discourage the use of this service.
I statement	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.	Read the clinical considerations section of the USPSTF Recommendation Statement. If the service is offered, patients should understand the uncertainty about the balance of benefits and harms.

USPSTF = U.S. Preventive Services Task Force.

Table 2. **U.S. Preventive Services Task Force Levels of Certainty Regarding Net Benefit**

Level of Certainty*	Description
High	The available evidence usually includes consistent results from well-designed, well-conducted studies in representative primary care populations. These studies assess the effects of the preventive service on health outcomes. This conclusion is therefore unlikely to be strongly affected by the results of future studies.
Moderate	The available evidence is sufficient to determine the effects of the preventive service on health outcomes, but confidence in the estimate is constrained by such factors as: the number, size, or quality of individual studies inconsistency of findings across individual studies limited generalizability of findings to routine primary care practice lack of coherence in the chain of evidence. As more information becomes available, the magnitude or direction of the observed effect could change, and this change may be large enough to alter the conclusion.
Low	The available evidence is insufficient to assess effects on health outcomes. Evidence is insufficient because of: the limited number or size of studies important flaws in study design or methods inconsistency of findings across individual studies gaps in the chain of evidence findings that are not generalizable to routine primary care practice a lack of information on important health outcomes. More information may allow an estimation of effects on health outcomes.

* The U.S. Preventive Services Task Force (USPSTF) defines *certainty* as "likelihood that the USPSTF assessment of the net benefit of a preventive service is correct." The net benefit is defined as benefit minus harm of the preventive service as implemented in a general primary care population. The USPSTF assigns a certainty level based on the nature of the overall evidence available to assess the net benefit of a preventive service.

available at www.aafp.org/online/en/home/policy/policies/t/tobacco.html.

Clinical recommendations of the American College of Preventive Medicine on tobacco cessation counseling (6) are available at www.acpm.org/pol_practice.htm.

Recommendations of the American College of Obstetricians and Gynecologists for assisting smoking cessation during pregnancy (7) are available at www.acog.org/departments/dept_notice.cfm?recno=13&bulletin=1863.

From the U.S. Preventive Services Task Force, Agency for Healthcare Research and Quality, Rockville, Maryland.

Disclaimer: Recommendations made by the USPSTF are independent of the U.S. government. They should not be construed as an official position of the Agency for Healthcare Research and Quality or the U.S. Department of Health and Human Services.

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Potential Financial Conflicts of Interest: None disclosed.

Requests for Single Reprints: Reprints are available from the USPSTF Web site (www.preventiveservices.ahrq.gov).

References

1. **Fiore MC, Jaen CR, Baker TB, Bailey WC, Benowitz NL, Curry SJ, et al.** Treating tobacco use and dependence: 2008 Update. Clinical Practice Guideline. Rockville, MD: U.S. Department of Health and Human Services, Public Health Service; 2008. Accessed at www.surgeongeneral.gov/tobacco/ on 24 September 2008.

2. **Guide to community preventive services: tobacco use.** Atlanta: Centers for Disease Control and Prevention. Accessed at www.thecommunityguide.org/tobacco on 16 March 2009.

3. **Fiore MC, Bailey WC, Cohen SJ, Dorfman SF, Fox BJ, Goldstein MG, et al.** Treating tobacco use and dependence. Clinical Practice Guideline. Rockville, MD: U.S. Department of Health and Human Services, Public Health Service; 2000. Accessed at www.surgeongeneral.gov/tobacco/treating_tobacco_use.pdf on 31 March 2009.

4. **U.S. Preventive Services Task Force.** Counseling to prevent tobacco use and tobacco-caused disease: recommendation statement. Rockville, MD: Agency for Healthcare Research and Quality; 2003. Accessed at www.preventiveservices.ahrq.gov on 24 September 2008.

5. **American Academy of Family Physicians.** Tobacco Use, Prevention and Cessation. Policy statement. Leawood, KS: American Academy of Family Physicians, 2005. Accessed at www.aafp.org/online/en/home/policy/policies/t/tobacco.html on 24 September 2008.

6. **Kattapong VJ, Locher TL, Secker-Walker RH, Bell TA.** American College of Preventive Medicine practice policy. Tobacco-cessation patient counseling. Am J Prev Med. 1998;15:160-2. [PMID: 9713673]

7. **ACOG Committee on Health Care for Underdeserved Women.** ACOG committee opinion. Number 316, October 2005. Smoking cessation during pregnancy. Obstet Gynecol. 2005;106:883-8. [PMID: 16199654]

Appendix: U.S. Preventive Services Task Force

Members of the U.S. Preventive Services Task Force† are Ned Calonge, MD, MPH, *Chair* (Colorado Department of Public Health and Environment, Denver, Colorado); Diana B. Petitti, MD, MPH, *Vice-Chair* (Arizona State University, Phoenix, Arizona); Thomas G. DeWitt, MD (Children's Hospital Medical Center, Cincinnati, Ohio); Allen J. Dietrich, MD (Dartmouth Medical School, Hanover, New Hampshire); Kimberly D. Gregory, MD, MPH (Cedars-Sinai Medical Center, Los Angeles, California); David Grossman, MD (Group Health Cooperative, Seattle, Washington); George Isham, MD, MS (HealthPartners Inc., Minneapolis, Minnesota); Michael L. LeFevre, MD, MSPH (University of Missouri School of Medicine, Columbia, Missouri); Rosanne M. Leipzig, MD, PhD (Mount Sinai School of Medicine, New York, New York): Lucy N. Marion, PhD, RN (School of Nursing, Medical College of Georgia, Augusta, Georgia); Bernadette Melnyk, PhD, RN (Arizona State University College of Nursing & Healthcare Innovation, Phoenix, Arizona); Virginia A. Moyer, MD, MPH (Baylor College of Medicine, Houston, Texas); Judith K. Ockene, PhD (University of Massachusetts Medical School, Worcester, Massachusetts); George F. Sawaya, MD (University of California, San Francisco, San Francisco, California); J. Sanford Schwartz, MD (University of Pennsylvania Medical School and the Wharton School, Philadelphia, Pennsylvania); and Timothy Wilt, MD, MPH (University of Minnesota Department of Medicine and Minneapolis Veteran Affairs Medical Center, Minneapolis, Minnesota).

†This list includes members of the Task Force at the time this recommendation was finalized. For a list of current Task Force members, go to www.ahrq.gov/clinic/uspstfab.htm.