

ACOG

Committee on
Health Care for
Underserved Women

Committee on
Obstetric Practice

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Smoking cessation during pregnancy.
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Committee Opinion



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Smoking Cessation During Pregnancy

ABSTRACT: Smoking is one of the most important modifiable causes of poor pregnancy outcomes in the United States. An office-based protocol that systematically identifies pregnant women who smoke and offers treatment has been proved to increase quit rates. For pregnant women who are light to moderate smokers, a short counseling session with pregnancy-specific educational materials often is an effective intervention for smoking cessation. The 5 A's is an office-based intervention developed for use by trained practitioners. Techniques for smoking reduction, pharmacotherapy, and health care support systems can help smokers quit.

Epidemiology

Increased public education measures and public health campaigns in the United States have led to a decline in smoking during pregnancy (1). Pregnancy appears to motivate women to make lifestyle changes; approximately 46% of prepregnancy smokers quit during pregnancy (1). From 1990 to 2003, the rate of smoking reported by pregnant women decreased from 18.4% (2) to 11% (3). The smoking rate during pregnancy in 2002 for women ages 18 and 19 years was 18%, higher than that for pregnant women of any other age (4).

Consequences of Maternal Smoking

The biologic evidence that maternal smoking has a detrimental effect on the fetus includes fetal hypoxia from increased carboxyhemoglobin; reduced blood flow to the uterus, placenta, and fetus; and direct effects of nicotine and other compounds in tobacco smoke on the placenta and fetus (5). Health risks associated with smoking during pregnancy include intrauterine growth restriction, placenta previa, and abruptio placentae (5). Adverse pregnancy outcomes include premature rupture of membranes (6, 7), low birth weight, and perinatal mortality (5). Evidence also suggests that smoking is associated with an increase in ectopic pregnancies (5). It is estimated that eliminating smoking during pregnancy would reduce infant deaths by 5% (8) and reduce the incidence of singleton low-birth-weight infants by 10.4% (9). There is a

strong association between smoking during pregnancy and sudden infant death syndrome (SIDS) (5). Children born to mothers who smoke during pregnancy are at increased risk for asthma (10), infantile colic (11), and childhood obesity (12). Successful smoking cessation before the third trimester eliminates much of the reduced birth weight caused by maternal smoking (5). Women who continue to smoke during pregnancy must achieve very low levels of tobacco use to see improvements in infant birth weight, and they must quit entirely if their infants are to have birth weights similar to those of women who do not smoke (13).

Intervention

Both cessation of tobacco use and prevention of relapse to smoking are key clinical intervention strategies during pregnancy. Techniques for helping patients to stop smoking have included counseling, cognitive and behavioral therapy, hypnosis, acupuncture, and pharmacologic therapy. A 5–15-minute counseling session performed by appropriately trained health care providers is most effective with pregnant women who smoke fewer than 20 cigarettes per day (14). This intervention, known as the 5 A's, is appropriate for use during routine prenatal office visits and includes the following five steps: Ask, Advise, Assess, Assist, and Arrange. The intervention is adapted from the U.S. Public Health Service clinical practice guideline, "Treating Tobacco Use and Dependence" (14). Its effectiveness can be enhanced for those who smoke any amount by referring the patient to a pregnancy-specific smoker's "quitline." The approach described in the box and outlined as follows guides the provider through the interaction and in documentation of the treatment (14).

1. **Ask** about smoking status. Providers should ask the patient at the first prenatal visit to choose a statement that best describes her smoking status from a list of statements on smoking behavior (see the box). Using this multiple-choice method is more likely to elicit an accurate response than asking a question that elicits a simple "yes" or "no" answer. A smoking cessation chart, a tobacco use sticker, or a vital signs stamp that includes smoking status may be useful in the medical record to remind providers to ask patients about smoking status at follow-up visits (see resource box).
2. **Advise** patients who smoke to stop by providing clear, strong advice to quit with personalized messages about the benefits of quitting and the impact of continued smoking on the woman, fetus, and newborn. Congratulate patients who report having stopped smoking and affirm their efforts with a statement about the benefits of quitting.
3. **Assess** the patient's willingness to attempt to quit smoking within the next 30 days. One approach to this assessment is to say, "Quitting smoking is one of the most important things you can do for your health and your baby's health. If we can give you some help, are you willing to try?" If the patient is willing, the provider can move to the next step. If the patient is unwilling to try, providers may consider having a brief discussion with the patient to educate and reassure her about quitting (14). Quitting advice, assessment, and assistance should be offered at subsequent prenatal care visits.
4. **Assist** patients who are interested in quitting by providing pregnancy-specific, self-help smoking cessation materials (see resource box). Enhance the patient's problem-solving skills by asking when and where she typically smokes and suggesting how she might avoid these situations that trigger the desire to smoke. Offer support on the importance of 1) having a smoke-free space at home, 2) seeking out a "quitting buddy" such as a former smoker or nonsmoker both at work and at home, and 3) understanding nicotine withdrawal, such as irritability and cravings. Communicate caring and concern and encourage the patient to talk about the process of quitting.

The provider also may refer the patient to a smoker's quitline. Telephone quitlines offer information, direct support, and ongoing counseling and have been very successful in helping pregnant smokers quit and remain smoke free (15). Great Start (1-866-66-START) is a national pregnancy-specific smoker's quitline operated by the American Legacy Foundation. Some states also have proactive direct fax referral capability for providers to connect pregnant smokers directly to their state quitline. By dialing the national quitline network (1-800-QUIT NOW), callers are routed immediately to their state smoker's quitline.

5. **Arrange** follow-up visits to track the progress of the patient's attempt to quit smoking. For current and former smokers, smoking status should be monitored throughout pregnancy, providing opportunities to congratulate and support success, reinforce steps taken toward quitting, and advise those still considering a cessation attempt.

Although counseling and pregnancy-specific materials are effective cessation aids for many pregnant women, some women continue to smoke. These women often are heavily addicted to nicotine and should be *Asked* and *Advised* and *Assessed* about smoking at follow-up visits. Women who continue to smoke may benefit from screening for alcohol use and other drug use (16). If the alcohol or drug use screen result is positive, information about the risks associated with alcohol and drug use during pregnancy should be added to the *Advise* step, and specific strategies for abstaining from alcohol and drugs should be discussed in the *Assist* step. Clinicians also may consider referring patients for additional psychosocial treatment (14).

Although quitting smoking early in pregnancy yields the greatest benefits for the pregnant woman and fetus, quitting at any point can be beneficial (14). The benefits of cutting down are difficult to measure or verify. The effort of women who cut down should be reinforced, but these women also should be reminded that quitting entirely brings the best results for their health, the health of the fetus, and that of their babies (17).

Approximately 60–80% of women who quit smoking during pregnancy return to smoking within a year postpartum (1). Former smokers should be counseled in the third trimester and at the postpartum visit and subsequent gynecology visits concerning relapse to smoking (18).

Pharmacotherapy

The use of nicotine replacement products or other pharmaceuticals for smoking cessation aids during pregnancy and lactation have not been sufficiently evaluated to determine their efficacy or safety. Nicotine gum, lozenges, patches, inhalers, and special-dose antidepressants that reduce withdrawal symptoms, such as bupropion, should be considered for use during pregnancy and lactation only when nonpharmacologic treatments (eg, counseling) have failed. If the increased likelihood of

Smoking Cessation Intervention for Pregnant Patients

Ask—1 minute

- Ask the patient to choose the statement that best describes her smoking status:
 - A. I have NEVER smoked or have smoked FEWER THAN 100 cigarettes in my lifetime.
 - B. I stopped smoking BEFORE I found out I was pregnant, and I am not smoking now.
 - C. I stopped smoking AFTER I found out I was pregnant, and I am not smoking now.
 - D. I smoke some now, but I have cut down on the number of cigarettes I smoke SINCE I found out I was pregnant.
 - E. I smoke regularly now, about the same as BEFORE I found out I was pregnant.

If the patient stopped smoking before or after she found out she was pregnant (B or C), reinforce her decision to quit, congratulate her on success in quitting, and encourage her to stay smoke free throughout pregnancy and postpartum.

If the patient is still smoking (D or E), document smoking status in her medical record, and proceed to Advise, Assess, Assist, and Arrange.

Advise—1 minute

- Provide clear, strong advice to quit with personalized messages about the benefits of quitting and the impact of smoking and quitting on the woman, fetus, and newborn.

Assess—1 minute

- Assess the willingness of the patient to attempt to quit within 30 days.

If the patient is ready to quit, proceed to Assist.

If the patient is not ready, provide information to motivate the patient to quit and proceed to Arrange.

Assist—3 minutes

- Suggest and encourage the use of problem-solving methods and skills for smoking cessation (eg, identify situations that trigger the desire to smoke).
- Provide social support as part of the treatment (eg, "We can help you quit").
- Arrange social support in the smoker's environment (eg, identify a "quit buddy" and smoke-free space).
- Provide pregnancy-specific, self-help smoking cessation materials.

Arrange—1 minute or more

- Assess smoking status at subsequent prenatal visits and, if patient continues to smoke, encourage cessation.

Adapted from Melvin CL, Dolan-Mullen P, Windsor RA Jr, Whiteside HP, Goldenberg RL. Recommended cessation counseling for pregnant women who smoke: a review of the evidence. *Tob Control* 2000;9(suppl 3):III80–4. Reproduced with permission from the BMJ Publishing Group.

Resources for Smoking Cessation

The American College of Obstetricians and Gynecologists Resources for the Clinician

American College of Obstetricians and Gynecologists. Smoking cessation during pregnancy: a clinician's guide to helping pregnant women quit smoking. Washington, DC: ACOG; 2002. Contains guidelines, a tool kit for the clinician, lecture guide, and CD-ROM. Request a copy by e-mail to: smoking@acog.org. Lecture guide is available online. Go to www.acog.org/goto/smoking.

Dartmouth Medical School. Smoking cessation for pregnancy and beyond: learn proven strategies to help your patients quit. Hanover (NH): Dartmouth Medical School; 2004. Available for purchase from the ACOG Distribution Center (800-762-2264, sales.acog.org): Item No. AA423; price: \$25.

American College of Obstetricians and Gynecologists. Smoking and women's health. In: Special issues in women's health. Washington, DC: ACOG; 2005. p. 151–67. Available for purchase from the ACOG Distribution Center (800-762-2264, sales.acog.org): Item No. AA451; price: \$59; ACOG members: \$45. Available online to members. Go to www.acog.org/goto/underserved.

American College of Obstetricians and Gynecologists "Ask about tobacco use" chart stickers. Washington, DC: ACOG. Available for purchase from the ACOG Distribution Center (800-762-2264, sales.acog.org): Item No. AA268; price: \$19/260 stickers; ACOG members: \$15/260 stickers.

Other Resources for the Clinician

The following resources are for information purposes only. Referral to these sources and web sites does not imply the endorsement of ACOG. This list is not meant to be comprehensive. The exclusion of a source or web site does not reflect the quality of that source or web site. Please note that web sites are subject to change without notice.

Many states offer free or low-cost smoking cessation counseling services consisting of telephone quitlines, group or individual counseling programs, and materials to help the smoker quit and prevent relapse. Check with the state or local public health office or tobacco control program to access these resources.

Helping pregnant women quit smoking: progress and future directions. *Nicotine Tob Res* 2004; 6(suppl 2): S95–277.

National Partnership to Help Pregnant Smokers Quit: has tools on helping patients quit, assessing smokers' quitlines, and obtaining Medicaid reimbursement for smoking cessation services. Posters are also available. Web: www.helppregnant smokersquit.org. E-mail: info@helppregnant smokersquit.org.

British Medical Association. Smoking and reproductive life: the impact of smoking on sexual, reproductive and child health. London (UK): BMA; 2004. Available at: [www.bma.org.uk/ap.nsf/Content/smokingreproductivelife/\\$file/smoking.pdf](http://www.bma.org.uk/ap.nsf/Content/smokingreproductivelife/$file/smoking.pdf). Retrieved June 22, 2005.

Treating tobacco use and dependence: clinician's packet. A how-to guide for implementing the Public Health Service Clinical Practice Guidelines. Washington, DC: U.S. Public Health Service; 2003. Available at: www.surgeongeneral.gov/tobacco/clincpack.html. Retrieved June 22, 2005.

Web Sites

American Cancer Society
www.cancer.org

The American Heart Association
www.americanheart.org

The Centers for Disease Control and Prevention: Tobacco Information and Prevention Source (TIPS).
www.cdc.gov/tobacco
TIPS contains documents for health providers to implement tobacco control programs

The National Cancer Institute
www.cancer.gov

National Partnership to Help Pregnant Smokers Quit
www.helppregnant smokersquit.org/quit/toll_free.asp
The partnership has a listing of states with pregnancy-specific quitlines.

Smoke-Free Families
www.smokefreefamilies.org

Smokefree.gov
www.smokefree.gov
Web site has multiple cessation strategies and information for smokers.

Resources for Patients

American College of Obstetricians and Gynecologists, Smoke-Free Families. Need help putting out that cigarette? Washington, DC: ACOG; Chapel Hill (NC): Smoke-Free Families; 2001. Available in English and Spanish for purchase from the ACOG Distribution Center (800-762-2264, sales.acog.org): Item Nos. AA424 and AA4245; price: \$10/10 booklets.

You can quit smoking: support and advice from your prenatal care provider. Available at: www.surgeongeneral.gov/tobacco/prenatal.pdf. Retrieved June 22, 2005. Available for multiple orders from AHRQ (PO Box 8547, Silver Spring MD 20907-8547, 800-358-9295): Item No. AHRQ 00-0052.

Recomendaciones y apoyo de su médico de cuidados, Spanish language. Available at: www.surgeongeneral.gov/tobacco/prenatalsp.pdf. Retrieved June 22, 2005. Available for multiple orders from AHRQ (PO Box 8547, Silver Spring MD 20907-8547, 800-358-9295): Item No. AHRQ 00-0065.

American Legacy Foundation. Great start quitline. Available at: www.americanlegacy.org/greatstart/html/quitline.html. Retrieved: June 22, 2005. 866-66-START for toll free help Monday–Friday 8:00 AM–8:00 PM (Eastern Time) and Saturday 9:00 AM–4:00 PM. Counseling in English or Spanish.

smoking cessation, with its potential benefits, outweighs the unknown risk of nicotine replacement and potential concomitant smoking, nicotine replacement products or other pharmaceuticals may be considered (14). Because potential benefits seem to outweigh potential risks, research to determine the safety and efficacy of pharmacotherapy is underway. Some tobacco control experts have reported that if nicotine replacement therapy is used during pregnancy, products with intermittent dosages, such as the gum or inhaler, should be tried first (19). If the nicotine patch is used, it can be removed at night to reduce fetal nicotine exposure (20). Nicotine replacement therapy also may be considered during lactation. Optimally, smokers can be treated with these pharmacotherapies before conception.

Support Systems

The Agency for Healthcare Research and Quality has recommended systems changes to help health care providers identify and treat tobacco users (14). These changes require the partnership of health care administrators and insurers, and include the following strategies: 1) provide education, resources, and feedback to promote provider involvement in smoking cessation; 2) promote hospital policies that support and provide smoking cessation services; 3) include effective smoking cessation treatments as paid or covered services in all health benefits packages; and 4) reimburse clinicians and specialists for delivery of effective tobacco dependence treatments and include these interventions among the defined duties of the clinicians (14).

Coding

Office visits specifically addressing smoking cessation may be coded using International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) code 305.1 (tobacco use disorder, tobacco dependence from the Mental Health section) with Current Procedural Terminology* (CPT®) code 99401 or 99211:

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- CPT code 99401 (preventive medicine counseling lasting approximately 15 minutes): If counseling is done by the physician at the time of a regular antepartum visit, use modifier 25 on code 99401. If counseling is done by the physician at another encounter, separate from the antepartum visit, no modifier is needed with code 99401.
- CPT code 99211: If a nurse counsels the patient, and if nurses are recognized by the insurance company as qualified providers of the service, code 99211 would be used instead of code 99401. If the nurse is not recognized as a caregiver, the services will not be covered unless provided by the physician.

Note that not all payers reimburse for counseling outside of the global package and some do not cover preventive services at all.

Many private and public insurers are changing policy to provide coverage for smoking cessation counseling for pregnant women. Although coverage for such counseling may have been denied previously, it may be prudent for the clinician to continue to submit for reimbursement for these services.

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