Smoking Cessation During Pregnancy

A Clinician's Guide to Helping Pregnant Women Quit Smoking

2011 Self-instructional Guide and Tool Kit

An Educational Program from the American College of Obstetricians and Gynecologists

THE AMERICAN COLLEGE OF OBSTETRICIANS AND GYNECOLOGISTS

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INSTRUCTIONS FOR EARNING CME CREDIT

Participation in this self-study program should be completed in approximately 3 hours. To successfully complete this program and receive credit, participants must follow these steps:

1. Read the learning objectives.
2. Read the article, text, and tables.
3. Complete the registration information
4. Read, complete, and submit answers to the self-assessment examination and program evaluation questions. Participants must receive a test score of at least 70% and respond to all program evaluation questions.
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6. Follow mailing instruction or FAXing instructions on the registration form at the end of this document.

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TARGET AUDIENCE

The intended audience for this CME activity is a clinician who practices obstetrics/gynecology and others whose practice or interest includes providing health care to pregnant and postpartum women.

LEARNING OBJECTIVES

Upon completion of this continuing medical education activity, participants will be able to:

- employ evidence-based guidelines for smoking cessation during pregnancy
- effectively follow up on patients who are reluctant to quit smoking
- understand the potential harms and benefits of using pharmacotherapies as an aid to quitting smoking for pregnant and postpartum women
- establish a smoking cessation program in the practice setting
- counsel patients about postpartum relapse
- address patient concerns about quitting
- help patients overcome barriers to success
- provide both clinician- and patient-oriented information sources on smoking cessation

RELEASE AND EXPIRATION

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INTRODUCTION

Smoking during pregnancy is the most modifiable risk factor for poor birth outcomes. The American College of Obstetrics and Gynecologists recommends that obstetric health care providers screen all patients to determine whether they smoke and offer treatment for smoking cessation. Smoking during and after pregnancy is associated with fetal and infant risks, including low birth weight, preterm delivery, abruptio placentae, sudden infant death syndrome, and an increase in childhood respiratory illnesses as well as possible cognitive effects associated with learning disabilities and conduct disorders (DiFranza 1996, Drews 1996, Fiore 2008, Makin 1991, Wakschlag 1997). Maternal smoking during pregnancy increases the risk of ectopic pregnancy, preterm premature rupture of membranes, placental complications of pregnancy, preterm delivery, and spontaneous abortion. Long-term health risks to women who smoke include heart disease, cancer, early death, and links to many other diseases and health problems (US DHHS 2001).

Smoking during pregnancy remains a major public health problem. Despite the well-known health risks associated with smoking during pregnancy, many women continue to smoke even after learning that they are pregnant (US DHHS 2001, Melvin 2000). These women need assistance in quitting, and obstetric health care providers are in a unique position to help them. **Successful smoking cessation strategies supported by clinical evidence are available and should be integrated into routine prenatal care for every pregnant woman.**

This educational program provides the background and tools necessary for clinicians to implement an effective behavioral intervention to help their patients quit smoking. The intervention described consists of five steps, is easily integrated into an office practice, requires a manageable investment of time and resources, and is supported by evidence in the literature.

RATIONALE FOR INTERVENTION

Successful treatment of tobacco use and dependence can have a significant effect on pregnancy-related outcomes. A review of clinical outcomes for pregnant women who quit smoking revealed a 20% reduction in the number of low-birth-weight babies, a 17% decrease in preterm births, and an average increase in birth weight of 28g (Lumley 2000, Goldenberg 2000). Quitting smoking even well into the pregnancy term has been shown to provide benefits. Birthweight can be significantly improved if cessation efforts are successful in helping a pregnant woman to quit smoking before her 30th week of pregnancy (Goldenberg 2000, ACOG 2010).

Quitting smoking not only reduces risks of health problems for the baby and complications during delivery but also benefits a woman's long-term health. Smoking is associated with many health risks for women, including:

- Cardiovascular disease – Most coronary heart disease among women younger than 50 is attributable to smoking (US DHHS 2001).
- Lung cancer – Lung cancer surpassed breast cancer as the leading cause of cancer death in women in 1987. About 90% of all lung cancer deaths among US women smokers are attributable to smoking (US DHHS 2001).
- Premature death – The annual risk for death from all causes is about 80% to 90% greater among women who smoke compared with those who have never smoked. For every death attributable to smoking, an average of 14 years of life is lost.

Quitting smoking substantially reduces the risk for coronary artery disease within even the first year and reduces the risk of other health problems including cervical cancer, kidney disease, respiratory disease, hip fractures, menstrual disorders, early menopause, fertility problems, and depression (US DHHS 2001).

Cost effectiveness of intervention. Tobacco dependence interventions for pregnant women are particularly cost-effective because they reduce the number of low birth-weight babies and perinatal deaths (Lightwood 1999), reduce use of newborn intensive care units, shorten lengths of stay, and decrease service intensity (Adams 2004). A 2006 analysis indicated that implementing a smoking cessation intervention such as the 5 A's would cost from $24 to $34 and save $881 per U.S. pregnant smoker, netting savings of up to $8 million in averted neonatal costs given a 70% increase in quit rate (Ayadi 2006).

Smokeless and non-cigarette tobacco use is becoming more prevalent among young women. Like cigarette use, smokeless tobacco, such as chewing tobacco, snuff, moist snuff (snus), dissolvable tobacco strips and electronic cigarettes contain nicotine, are addictive, and have serious health consequences for the pregnant woman and her fetus. Non-cigarette tobacco use is not a safer alternative to smoking nor is there evidence to suggest that it is effective in helping smokers quit. (Fiore, 2008)

Intervention for smoking cessation. The addictive properties of nicotine make it difficult for most smokers to quit without some type of assistance. Because obstetricians and other prenatal care clinicians see their patients regularly during pregnancy, they are in a unique position to provide that assistance though behavioral strategies designed to help pregnant women quit smoking. Pregnancy is a prime "teachable moment" in health care. Women are more likely to quit smoking during pregnancy then at any other time in their lives (US DHHS 2001). A mother-to-be is generally highly motivated to do what she can to have a healthy baby. Clinicians can tap into that motivation to help parents achieve long-term healthy lifestyle changes for themselves and their families.

Although a standardized pregnancy-specific smoking cessation intervention by clinicians has been shown to improve quit rates among smokers, it is generally not integrated into regular prenatal visits (Fiore 1995, Jaen 1997, Kreuter 2000, Prochazka 2000, Sippel 1999, Thorndike 1998). In a 2001 survey of smoking intervention practices by obstetrician-gynecologists, nearly all clinicians reported that they "always" asked about smoking status (93%) and advised patients to quit (90%); however, few respondents offered to assist patients with cessation (28%) or followed up with pregnant patients (24%) (Grimley 2001). Clinicians may be unaware that their provision of brief counseling sessions using pregnancy-specific self-help materials can increase cessation rates (Dolan-Mullen 1999).

Recommendations for pregnancy-specific smoking cessation interventions are based on the results of randomized clinical trials of various cessation methods for pregnant smokers. A meta-analysis prepared for the 2008 US Public Health Service (PHS) *Treating Tobacco Use and Dependence: A Clinical Practice Guideline* concluded that person-to-person psychosocial interventions are more effective than minimal advice to quit. Cessation rates are 80% higher (OR 1.8, CI 1.4-2.3) for pregnant smokers who receive counseling (see **Studies of Smoking Cessation Intervention for Pregnant Patients**, Appendix, page 28). Even pregnancy-specific, self-help materials alone increase cessation rates when compared to usual care. The guidelines also recommend that tobacco dependence interventions take place not only at the first prenatal visit, but throughout pregnancy.

EVIDENCE-BASED GUIDELINES: THE 5 A'S

A brief, five step intervention program, referred to as the "5 A's" model, is recommended in clinical practice to help pregnant women quit smoking (Fiore 2008, Melvin 2000, ACOG 2010). The 5 A's include the following:

- **Ask** about tobacco use.
- **Advise** to quit.
- **Assess** willingness to make a quit attempt.
- **Assist** in quit attempt.
- **Arrange** follow-up.

This approach was originally published by the National Cancer Institute and has been reviewed and updated by several governmental, academic, and private education groups (Glynn 1990, Melvin 2000, Fiore 2008). Although some professional organizations endorse a three-step process "Ask, advise, and refer," this method has not been proven to be effective in pregnancy.

The PHS publication, Treating Tobacco Use and Dependence: A Clinical Practice Guideline, 2008 Update describes the 5 A's intervention in detail and provides a chapter about special populations, including pregnant women (Fiore 2008). The PHS guideline approaches smoking as a chronic condition, similar to diabetes or hypertension, and stresses the need for regular, consistent counseling. This perspective acknowledges the difficulty in quitting smoking and remaining abstinent given the addictive properties of cigarettes. All of the recommendations that formed the basis for the 5 A's approach were rated according to the quality and quantity of empirical supporting evidence in the medical literature (Table 1). Drawing on the 5 A's approach, the American College of Obstetricians and Gynecologists published a Committee Opinion that includes intervention steps specifically designed for pregnant women (ACOG 2010). Information from the PHS guideline, the American College of Obstetricians and Gynecologist's committee opinion, and additional information published in the medical literature about how to use the 5 A's approach has been consolidated in this guide to provide clinicians with a complete resource for helping pregnant patients quit smoking (Fiore 2008, Melvin 2000, ACOG 2010).

TABLE 1

TREATING TOBACCO USE AND DEPENDENCE 2008: PREGNANCY RECOMMENDATIONS WITH STRENGTH-OF–EVIDENCE RATINGS (FIORE 2008)

Recommendation: Because of the serious risks of smoking to the pregnant smoker and the fetus, whenever possible pregnant smokers should be offered person-to-person psychosocial interventions that exceed minimal advice to quit. *Strength of evidence* = A*.

Recommendation: Although abstinence early in pregnancy will produce the greatest benefits to the fetus and expectant mother, quitting at any point in pregnancy can yield benefits. Therefore, clinicians should offer effective tobacco dependence interventions to pregnant smokers at the first prenatal visit as well as throughout the course of pregnancy. *Strength of evidence* = B†.

*A: Multiple well-designed random clinical trials, directly relevant to the recommendation, yielded a consistent pattern of findings.

†B: Some evidence from randomized clinical trials supported the recommendations, but other scientific support was not optimal.

The 5 A's approach to smoking intervention follows a specific protocol, or algorithm, with some scripted material. The suggested language can be adapted to the clinician's personal style and the patient's individual needs. If the 5 A's are integrated into existing routines, the time commitment – measured in minutes – is manageable within a clinical setting and is far outweighed by the potential for reducing the substantial risk that smoking poses to mothers and their babies (Hartmann 2000). The 5 A's approach is summarized in a quick reference guide on page 16.

FIRST A: ASK – 1 MINUTE

Ask the patient about her tobacco use at every first prenatal visit, document it as a vital sign, and track smoking status at every visit. (Fiore, 1995)

Screening for tobacco use should occur automatically as part of the initial history. Societal stigma about smoking, especially during pregnancy, may cause some patients to feel uncomfortable about discussing whether they smoke and how much. In fact, some data suggest that from 13% to 26% of pregnant smokers may not disclose that they smoke when asked about it as a part of a routine clinical interview (Boyd 1998). The manner in which clinicians ask about smoking status during the initial interview can dramatically improve the accuracy of the response (see **How to Intervene**, Appendix, page 24). Rather than asking the patient a yes/no question such as "Do you smoke?" a multiple choice response should be used to improve disclosure and provide useful information for counseling. This approach improves disclosure by 40% for all women including those of various ethnic backgrounds (Dolan-Mullen 1991). For example:

Question: *Which of the following statements best describes your cigarette smoking?*

A. I have never smoked, or I 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 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 (Dolan-Mullen 1994).

A question about smoking status can be included in a general written survey about patient health that is provided to the patient before visiting the clinician, but some clinicians prefer to ask about smoking status as part of the patient interview. The multiple-choice response format has been shown to be effective whether delivered verbally or in written form (Dolan-Mullen 1991). When questioning adolescent patients about smoking status, keep in mind that young patients can become addicted very quickly and are already established smokers by the time they have smoked 100 cigarettes (Research Triangle Institute 2001).

Some clinicians use physiologic markers such as urine tests or blood samples to determine whether a patient is smoking. The "gold standard" for validated self-reported smoking status is blood, urine, or saliva cotinine levels. Expired carbon monoxide is another way to determine smoking status. Testing is unnecessary for implementing a successful counseling intervention in the clinical setting and is generally reserved for use in clinical trials. It has been suggested, however, that testing and communication of results can be used as a motivational tool for some smokers. Expired carbon monoxide testing may provide a tangible incentive to quit smoking – for example, for some patients, blowing "clean air" may reinforce the idea

TABLE 2

SUPPLEMENTARY TOOLS FOR THE 5 A'S APPROACH

Ask

- Program a reminder into your EMR system to screen for tobacco use
- Use the standardized multiple-choice question to ask patients about smoking status
- Record smoking status as a vital sign in the patient record (Fiore 1995)

Advise

- Provide pregnancy-specific educational materials about health risks and the benefits of quitting for mother and baby

Assess

- Refer to a calendar to help the patient choose a specific quit date

Assist

- Write out a "Prescription to Quit," including a quit date and cessation resources (e.g. 1-800-QUIT NOW, www.smokefree.gov)
- Fax a referral to the quitline while the patient is in the office
- Sign a "Quit Contract" between patient and clinician
- Provide a patient diary or phone application for recording smoking triggers prior to quitting or problems and success after quitting
- Practice a "no smoking" dialog the patient can use with family and friends

Arrange

- Program a reminder into your EMR system to follow-up on smoking status at every prenatal visit
- Send a congratulatory letter from the office if a patient quits

Note: The tools associated with each step of the 5 A's approach are not required for the intervention to work, but some clinicians and some office staff members use them for information-gathering and organization as well as for patient support.

that toxins are being eliminated from their bodies (Hartmann 2000).

Smoking is one of only a few important risk factors that can be modified and should therefore be tracked as a vital sign at every visit, just as blood pressure would be tracked (Fiore, 1995). Ideas for documenting smoking status and using other supplementary tools are presented in Table 2.

SECOND A: ADVISE – 1 MINUTE

Advise all tobacco users to stop using tobacco.

Advice to quit should be clear, strong, and personalized with unequivocal messages about the benefits of quitting for both the patient and her baby. An effective way to start the discussion about quitting is to say, "My best advice for you and your baby is for you to quit smoking."

Additional advice can then be tailored to the patient's situation and their responses to the multiple choice "Ask" Question, using positive language and focusing on the positive benefits of quitting. Although clinicians are keenly aware of the danger smoking poses to infants and the long-term health risks for mothers, it is common for patients to minimize risks.

Focusing on bad outcomes such as low birth weight or delivery complications may be ineffective for patients who believe they are not at risk, especially if they or people they know have had uncomplicated,

TABLE 3

POSITIVE EFFECTS OF SMOKING CESSATION DURING PREGNANCY

When you stop smoking…

- your baby will get more oxygen, even after just one day of not smoking
- your baby is less likely to have bronchitis and asthma
- there is less risk that your baby will be born too early
- there is a better chance that your baby will come home from the hospital with you
- you will be less likely to develop heart disease, stroke, lung cancer, chronic lung disease, and other smoke related diseases
- you will be more likely to live to know your grandchildren
- you will have more energy and breathe more easily
- you will have more money that you can spend on other things
- your clothes, hair, and home will smell better
- your food will taste better
- you will feel good about what you have done for yourself and your baby

healthy pregnancies while smoking. Describing the good things the patient can do for herself and her baby by quitting smoking appeals to her desire to be a good mother. Table 3 includes examples of benefits of quitting that clinicians can use when advising patients.

Patients may doubt that clinicians understand how difficult it is to quit. Acknowledging barriers to quitting while providing encouragement may make the patient more receptive to advice. You may also wish to include a personal reason for quitting identified by the patient herself.

The following statement is an example of how to acknowledge the difficulty of quitting while offering encouragement: "I know I'm asking you to do something that takes a lot of effort, but my best advice for you and your baby is to quit smoking. I also see from your patient questionnaire that you have a history of bronchitis and asthma. Quitting smoking will help you feel better and provide a healthier environment for your baby" (Hartmann 2000).

A patient may have the impression that it takes a long time after quitting before her health or the health of her baby improves, but benefits begin immediately. Table 4 delineates how quickly beneficial health changes occur after quitting smoking (US DHHS 2004). Other patient questions or concerns about quitting smoking and sample responses are included in Table 5.

Some women will reduce the number of cigarettes they smoke rather than trying to quit completely, but smoking even a small number of cigarettes is associated with decreased infant birth weight. If a patient suggests cutting down as a strategy, the clinician should let her know that while smoking fewer than five cigarettes in a day may reduce risk, quitting is the best thing she can do for herself and her baby (England 2001).

The importance of communicating unequivocal advice to quit cannot be overstated, but admonishing the patient is ineffective. If you state that your best advice is for the patient to quit, you have communicated clearly without making the patient feel criticized (Hartmann 2000).

Advise all recent quitters to remain smoke-free. If the patient indicates that she recently quit smoking (answers B or C to the question about cigarette smoking), congratulate her for not smoking, and reiterate the importance of staying smoke-free and avoiding situations where others are smoking. Let her know that you will be asking how she is doing at future visits.

THIRD A: ASSESS – 1 MINUTE

Assess the patient's willingness to quit.

After advising the patient to quit smoking and answering her questions, the clinician assesses the patient's willingness to quit within the next 30 days. The time frame can vary depending on the next scheduled visit or how far along the pregnancy is. For women who indicate that they want to quit and are committed to trying within the specified time frame, the clinician should move on to the Fourth A. For women who indicate that they are not yet ready to quit or commit to trying to quit within the time frame, the clinician should use techniques designed to increase the patient's motivation to quit smoking (see **"When the patient doesn't want to try to quit,"** page 14).

FOURTH A: ASSIST – 3+ MINUTES

Assist with a cessation plan by providing support, self-help materials, and problem-solving techniques, and by helping to identify other sources of support.

In the *Assist* step, the clinician encourages the use of problem-solving methods and skills for smoking cessation, provides social support as part of the treatment, helps the patient arrange social support within her own environment, and provides pregnancy-specific self-help materials.

One way to begin counseling is to work with the patient to set a quit date. Clinicians could begin by saying, "You need to choose a quit date so that you can be prepared. Would it be easier to quit on a weekday or weekend?" This direct approach is generally well received by patients as a sign of the clinician's interest (Hartmann 2000). Avoiding dates of significant events such as birthdays or anniversaries is recommended. Some clinicians use a **Quit Contract** (below) or record the agreed-upon quit date in patient education material to be given to the patient to formalize the patient's decision to quit smoking.

Once a patient has set a quit date, clinicians or office staff members may wish to provide reinforcement such as a congratulatory letter or follow-up phone calls. Although this is not required for the 5 A's approach to be successful, it may provide the patient with a sense of encouragement and support. Ideas for addressing common patient concerns about quitting are included in Table 5.

Providing problem-solving techniques to help the patient cope with cravings, withdrawal symptoms, or social situations also increases the likelihood of success (Fiore 2008, Jorenby 1999). Patients may feel overwhelmed by a number of potential barriers to quitting. The clinician can help the patient identify one or two areas to focus on and provide problem-solving techniques or materials to help the patient address potential problems. Because of time limitations during the office visit, it is advisable to ask the patient to prioritize issues of concern – for example, how to handle cravings for a cigarette in social situations with friends who smoke or early-morning cravings. Problem-solving assistance can be spread over several visits. Common problems patients face when they quit or are trying to quit smoking are addressed in Table 6.

Support both within the clinician's office and in the patient's environment is an important part of the *Assist* step (Fiore 2008, Melvin 2000). Office staff who interact with patients should keep a positive attitude concerning smoking cessation to encourage and support any attempt to stop smoking. The importance of a caring attitude cannot be overstated. Information about how to organize the office to implement smoking intervention is presented in **Six Steps to Implementation** (page 18).

Help the patient identify people in her own environment who can help and encourage her to quit. The patient's husband or partner may not be the most likely choice to provide support. If this is the case, query the patient about others in her family or social circle who can reliably support her efforts.

Pregnancy-specific self-help materials are an important part of providing assistance. Interventions using pregnancy-specific materials

TABLE 4

TIMING OF HEALTH BENEFITS AFTER QUITTING SMOKING (US DHHS 2004)

Time since quitting	Benefits
20 minutes	Your heart rate drops.
12 hours	Carbon monoxide level in your blood drops to normal.
2 weeks to 3 months	Your heart attack risk begins to drop. Your lung function begins to improve.
1 to 9 months	Your coughing and shortness of breath decrease.
1 year	Your added risk of coronary heart disease is half that of a smoker's.
5 to 15 years	Your stroke risk is reduced to that of a nonsmoker's.
10 years	Your lung cancer death rate is about half that of a smoker's. Your risk of cancers of the mouth, throat, esophagus, bladder, kidney, and pancreas decreases.
15 years	Your risk of coronary heart disease is back to that of a nonsmoker's.

Note: Patients may believe that health benefits from quitting smoking will not be evident for years, but some benefits occur almost immediately after quitting. The information in this table can be used to help clinicians personalize advice to quit by demonstrating the benefits to the patient and her baby.

QUIT CONTRACT

I agree to stop smoking on _____
Quit Date

I understand that stopping smoking is the single best thing I can do for my health and for the health of my baby.

_____ _____
Patient's signature Clinician's signature

_____
Today's Date

have been found to improve quit rates compared with interventions that do not include self-help materials (Melvin 2000, Windsor 1985). Pregnancy related self-help materials should reinforce counseling offered in the *Assist* step, include pregnancy specific techniques to help the patient quit, and promote benefits gained from quitting. Materials should be readily available and produced in a format that can be used in the patient's environment. Print materials may be more accessible than videotapes or audiotapes, for example. (See **Resources for Clinicians and Patients, Appendix**, pages 26-27.)

The smoking cessation quitline, 1-800-QUIT NOW, offers state specific resources and programmed counseling sessions for callers. Some quitline services provide counseling in both Spanish and English and offer services 24 hours a day, 7 days a week. Many states offer a pregnancy specific quit protocol with counselors trained to address prenatal smoking and postpartum relapse at key intervals specific to the pregnancy, but all state quitlines may not offer equally effective counseling methods. A provider fax referral option may also be provided so that once the pregnant woman signs a release, quitline counselors call her and arrange continued telephone counseling sessions. When the counselor initiates the call to the pregnant smoker, it is a proactive approach. In a reactive approach the initiative to call must come from the smoker. A meta-analysis of sixty-five trials found proactive telephone counseling of three or more calls to be more effective than a minimal intervention that would include self-help materials and brief advice (Stead 2006).

Assisting Heavy Smokers

Pregnant women who smoke more than a pack a day and are unable to quit after participating in the behavioral intervention approach presented in this module may need additional assistance. More intensive counseling can help some women and should be offered even if a referral is needed. Telephone quitline services can be especially helpful to heavy smokers who are trying to quit.

TABLE 5

SAMPLE DIALOGUE TO ADDRESS COMMON PATIENT CONCERNS ABOUT QUITTING

Patient (P): Quitting completely seems very hard. Can I just cut back on my smoking? **Clinician (C):** The most current information we have suggests that any smoking may harm your baby. It is best to quit completely.

P: I'm concerned about whether I can handle the cravings if I try to stop smoking. **C:** Withdrawal symptoms are often signs that your body is healing. Cravings will be strongest during the first few weeks after quitting. They are normal and temporary, and will lesson over time. I can provide some coping strategies for problems you may face when quitting (Table 6).

P: I've heard that most people gain weight when they quit smoking. I am already worried about how much weight I will gain while I'm pregnant, and I don't want to make it worse. **C:** Weight gain during pregnancy is normal. Average weight gain after quitting smoking is generally no more than 10 pounds (Fiore 2008). The weight you gain is far less harmful than the risk you take by continuing to smoke. Once you quit smoking, we can work on strategies to help you maintain a healthy weight both while you are pregnant and after your pregnancy.

TABLE 6

SUGGESTIONS FOR HELPING PATIENTS OVERCOME BARRIERS TO SUCCESS

Any smoking (even a single puff) increases the likelihood of full relapse. Withdrawal symptoms, including negative mood, urges to smoke, and difficulty concentrating are normal and will last only a few weeks at most. Cravings to smoke come in waves. Use self-talk and the strong urge will soon pass. Most people try to quit several times before they are successful. A "slip" is not failure; learn from it and try again.

Barriers	Coping Strategies
Negative moods	Participate in physical activity such as walking and dancing. Taking 10 slow, deep breaths. Talk to a friend. Express yourself through blogging or journaling. Remind yourself that you are a non-smoker.
Being around other smokers	Spend more time with friends who don't smoke. Ask others not to smoke around you. Establish a "smoke free" zone in the house or car. Walk away from smokers when you feel like smoking.
Triggers	Identify and anticipate situations that prompt cravings, such as social gatherings, being on the phone, waking from sleep, or stressful situations. Change your routine: after meals and after waking, immediately brush your teeth or take a walk. Engage in distracting activities: take a walk, knit, garden, read participate in a hobby, or listen to music.
Time pressures	Change your behavior or lifestyle to reduce stress. Use physical activity, such as walking.

FIFTH A: ARRANGE – 1+ MINUTES

Arrange follow up to monitor smoking status and provide support.

The final and ongoing step in the 5 A's approach is to arrange follow-up. Follow-up visits should include repeat assessments of smoking status. For patients attempting to quit, these visits should allow time to monitor their progress, reinforce the steps they are taking to quit, and promote problem-solving skills. Providing encouragement and positive reinforcement for their efforts is important to maintain motivation. Patients who are still smoking should be advised to quit at each opportunity (see **Second A: Advise**, page 8). Those who are heavy smokers or who continue to relapse may need more intensive behavioral counseling.

Changes to the office setting and policies can facilitate implementation of the 5 A's into routine

care. Implementing a tobacco user identification system, dedicating staff to deliver tobacco cessation treatment, educating all staff, and providing resources are changes recommended in the 2008 Clinical Practice Guidelines. Information about how to organize the office to implement smoking intervention is presented in **Six Steps to Implementation** (page 18).

PHARMACOLOGIC INTERVENTION

Pregnant patients should try to quit smoking without using pharmacologic agents. The 5 A's approach has been shown to be an effective behavioral strategy for smoking cessation.

Pharmacologic aids such as nicotine replacement therapy (NRT), bupropion, and varenicline have not been sufficiently tested for efficacy and safety in pregnant patients and should not be used as first-line smoking cessation strategies for these patients. Evidence is inconclusive that smoking cessation medications boost abstinence rates in pregnant smokers. In addition, U.S. clinical trials with sufficient power to determine statistical significance have been pulled or ended due to data or safety monitoring issues (Fiore 2008).

If pharmacotherapy is considered for pregnant smokers who are unable to quit smoking by other means, it is important the woman demonstrate a resolve to quit smoking and to understand the benefits and risks of the use of the medication to herself and her fetus. Clinicians should carefully review patient information, drug side effect profiles, and current information in medical literature when recommending pharmacologic aids.

Since antidepressants marketed for smoking cessation, such as bupropion, carry risks of adverse effects including: increased risk for suicide, insomnia and rhinitis. Pregnant patients who choose to use smoking cessation medications should be closely supervised.

Concomitant Alcohol Use

A pregnant smoker who also uses alcohol should be encouraged to discontinue both cigarettes and alcohol and be offered counseling using the 5 A's approach. Information about risks associated with alcohol use during pregnancy should be added to the *Advise* step, and specific strategies for abstaining from alcohol should be discussed in the *Assist* step (Melvin 2009).

WHEN THE PATIENT DOESN'T WANT TO TRY TO QUIT: MOTIVATIONAL INTERVENTIONS

A patient who declines to make a quit attempt during the *Advise* step may have reasons for not quitting that she is unable or unwilling to express, or she may think the risks do not apply to her. The 2008 Clinical Practice Guidelines state that Motivational Interventions are effective with Strength of Evidence =B (See **Strength of Evidence. Appendix**, page 27). One type of intervention, otherwise known as 5 R's, is often used: relevance, risks, rewards, roadblocks, and repetition (Table 7) (Fiore 2008). It is unnecessary to address all of the 5 R's in a single visit; rather, consider the one or two that are relevant, depending on the patient's comments during the *Advise* and *Assess* steps. If she says she doesn't think she can quit in the next 30 days "because my husband smokes and he isn't ready to quit, too," or, "I don't think I need to quit because I smoked the last time I was pregnant and my baby is fine," use the appropriate "R" to help. In the first example, consider the roadblock presented by this woman's husband's smoking, and in the second, denial of risk. (See ACOG, 2009).

If the patient remains uninterested in quitting after the 5 R's, clinicians can keep communication lines open by ending the talk with a statement such as, "I understand that you are not ready to quit, but would you think about it for our next visit?" Patients will continue to listen to clinician advice even when they are unprepared to act on it. Smoking is too important not to mention. The 5 R's may help a patient identify personal reasons to quit that can motivate her to eventually try to quit smoking.

TABLE 7

THE 5 R'S

Relevance	Patient identifies motivational factors.
Risks	Patient identifies potential negative consequences of continued smoking.
Rewards	Patient describes how quitting would benefit her and her family.
Roadblocks	Patient identifies barriers to quitting.
Repetition	Repeat at every visit for patients who smoke.

Relevance. Encourage the patient to discuss why quitting may be personally relevant – for example, because there are children in the home – to help her identify motivational factors on her own. The idea is to link the motivation to quit to the patient's personal situation, being as specific as possible.

Risks. To ensure that the patient understands the risk to her own health and to her baby's health if she continues to smoke, ask her to identify potential negative consequences. One way to begin this part of the discussion is to ask, "Although you do not want to or are not ready to quit now, what have you heard about smoking during pregnancy?" If the patient seems unaware of the risks, this is a good time to give her pregnancy-specific information. A patient who has had a healthy child while smoking may be unconvinced of the need to quit. This is an opportunity to reiterate the benefits of quitting for this pregnancy and for the child or children she already has. Also, she needs to be aware that each pregnancy is different and she is different as well: older, smoking longer, may have a new chronic disease. The absence of complications in a previous pregnancy does not guarantee future pregnancies free of trouble.

Rewards. Ask the patient to describe how quitting smoking might benefit her and her family. Depending on her situation, she may need some examples, such as, "You will have more energy to take care of yourself and your new baby," or "You'll set a good example for your children and their friends" (see Table 3). The patient's history and comments about her smoking behavior can provide valuable information to create a checklist of factors that will increase her motivation to quit – for example, saving money, taking the baby home from the hospital with her, protecting a child who has asthma, less time required for smoking-related doctors' visits, vanity (healthier skin, absence of odor), and pleasing family and friends.

Roadblocks. Most patients can easily identify barriers to quitting. Reassure the patient that assistance is available to help her overcome roadblocks such as withdrawal symptoms, weight gain, another smoker in the house, and emotional consequences. Problem-solving strategies and tools, including information, can be applied to many situations once roadblocks are identified (see Table 6).

Repetition. Follow up at each visit to see if the patient has changed her mind about undertaking a quit attempt. Tell patients who have tried to quit and relapsed that most people make repeated attempts to quit before they are successful, that she can learn from repeated quit attempts, and each new attempt increases the likelihood of quitting. For a patient who does not respond to the 5 R's intervention, it may be useful to provide information about how to get help if she changes her mind.

5 A'S QUICK REFERENCE

1. Ask – Systematically identify all tobacco users.
At the patient's initial visit for this pregnancy, ask: *Which of the following statements best describes your cigarette smoking?*

A. I have *never* smoked or I 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 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 (Dolan-Mullen 1994).

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, 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*.

Ensure that tobacco-use status is queried and documented for every patient; for example, record on a flow sheet or enter into the patient's electronic health record.

2. Advise – Strongly urge all tobacco users to quit.
With clear, strong, personalized language about the benefits of quitting and the impact of smoking and quitting on the woman and fetus, urge every tobacco user to quit.

- **Clear –** "It is important for you to quit smoking now for your health and the health of your baby, and I can help you."
- **Strong –** "As your clinician, I need you to know that quitting smoking is the most important thing you can do to protect your baby and your own health. The clinic staff and I will help you."
- **Personalized –** Link quitting tobacco use to the patient's health, the baby's health, and the health of the other household members with a statement such as, "Your baby will be healthier, and you'll have more energy."

3. Assess – Determine willingness to quit.
Ask the patient if she is willing to make a quit attempt within the next 30 days.

- If the patient is willing to try to quit, move to the *Assist* and *Arrange* steps.
- If the patient is not ready, provide information to motivate the patient to quit and at next visit, resume 5 A's at *Assess*.
- If the patient is clearly unwilling to make a quit attempt at this time, provide motivational intervention (5 R's).
- Document the patient's choice in her chart to ensure accurate follow-up at the next visit.

4. Assist
Help the patient set a quit date, provide self-help materials, counsel about successful cessation techniques and problem-solving strategies.

- Set a quit date – ideally within 30 days.
- Encourage the patient to tell family, friends, and co-workers about her decision and to request understanding and support from them.
- Prepare her for challenges, such as nicotine withdrawal symptoms in the first few weeks.
- Instruct her to remove tobacco products from her environment; before quitting, she should avoid smoking in places she associates with cigarettes (e.g., at her desk, in her car, in social situations).
- Make it clear that total abstinence is essential: "Not even a single puff after the quit date."
- Review past quit attempts to identify what helped and what contributed to relapse.
- Help the patient develop strategies for dealing with other smokers in the household; she can encourage housemates to quit with her or request that they not smoke in her presence.
- Provide a supportive clinical environment; tell the patient, "My staff and I are here to assist you," and train all staff members to reinforce and support patients who are attempting to quit.
- Help the patient develop social support for her attempt to quit. For example, "Ask your spouse/partner, friends, and coworkers to support you in your quit attempt"
- Provide pregnancy-specific self-help materials about how to quit smoking.
- Introduce the smoking cessation quitline and refer the patient to the quitline either by a call while she is in the office or by a fax referral (if available in your state).

5. Arrange
Make plans to monitor smoking status and provide support during follow-up visits.

- Encourage the patient in her decision to quit.
- Tell her that one half of all people who have ever smoked have now quit.
- Communicate your belief in her ability to quit.
- Ask the patient how she feels about quitting.
- Directly express concern and willingness to help.
- Encourage her to express her fears about quitting, difficulties experienced, and ambivalent feelings.
- Ask her about reasons for wanting to quit.
- Invite her to talk about her success.

SIX STEPS TO IMPLEMENTATION

The 5 A's approach is designed to incorporate smoking cessation messages into routine clinical care of pregnant women effectively but quickly. Like any sustained program, however, it is easier to implement and more effective when more than one staff member is involved. The success of a smoking cessation intervention is more likely if the patient senses involvement and encouragement from everyone she encounters during a clinic visit.

The level of staff involvement depends on the size of the practice or clinic. It is important, therefore, to clearly establish the tasks involved in an intervention program and assign responsibilities. The six steps listed here are designed to assist the clinician and other staff members in setting up a smoking cessation program in the clinic.

STEP 1. DEVELOP ADMINISTRATIVE COMMITMENT

Every person on the staff plays a critical role in a smoking cessation intervention program. To be effective, an intervention program must be fully supported by all staff members who will have responsibility for any aspect of care for the patient, record-keeping, ordering materials, or other aspects of implementation. Reviewing background information about the health consequences of smoking for pregnant patients and their babies and the importance of quitting can help the staff understand how critical it is to help patients quit smoking. Briefly explaining that the 5 A's intervention has been proven effective may help motivate staff to become involved (see **5 A's Quick Reference**, page 16).

STEP 2. INVOLVE STAFF EARLY IN THE PROCESS

Staff members may express concern about introducing additional tasks into the care routine in the office. It is helpful at this point to estimate the number of patients your practice is likely to see based on the geographic and demographic characteristics of your patient population. This number is often lower than anticipated, which can help relieve concerns about workload. Also evaluate what your practice is currently doing to identify and treat pregnant smokers.

Inviting participation in the planning process will permit staff members to contribute ideas and feel a sense of ownership. Addressing problems and anticipating needs may result in smoother introduction of the 5 A's approach. Also, staff members who routinely deal with patients may provide valuable insight into how the 5 A's approach will be received by patients and can offer suggestions about implementation. During the planning process, it is helpful to follow these steps:

- Provide an *overview* of the 5 A's approach, and then review each step separately.
- Emphasize that encouragement by staff members has been shown to help patients quit smoking.
- Invite staff members to ask questions and express concerns.
- Identify barriers to implementation at each step and consider solutions.
- Use input from the staff to develop a realistic implementation plan, including patient outreach, use of new media, and ways to measure and monitor success.
- Determine the staff meeting format for monitoring progress of the implementation plan.
- Underscore that the skills staff members gain in using the 5 A's approach will be useful in screening, treating, and documenting other kinds of risks such as alcohol and drug misuse.

Staff training is a separate step. During initial planning, an overview of the intervention is adequate. At the initial meeting, emphasize that the implementation of the 5 A's approach into the care routine will be monitored, and regular staff meetings will provide an opportunity to discuss what is working well and what needs improvement. If any staff members smoke, this might be the right time to offer them assistance in quitting smoking themselves.

STEP 3. ASSIGN ONE PERSON TO COORDINATE AND MONITOR IMPLEMENTATION

Having one person coordinate planning and implementation of the intervention is recommended to ensure that tasks don't get overlooked. Someone who is primarily responsible for the program can be available to answer staff questions, troubleshoot problems, arrange for training using this manual or other sources of information, and monitor implementation of the program. This individual can also order self-help and other related materials, assure staff ready access to the materials, and identify referral sources for more intensive counseling or counseling for other drug use. Depending on the number of staff members in an office and their responsibilities, the coordinator may or may not be responsible for every aspect of the intervention. Specific assignments can be made once all staff members are trained.

STEP 4. PROVIDE TRAINING

Staff should be trained about the 5 A's, the 5 R's, and the importance of supporting the patient's effort to quit. Information such as this resource guide can help staff members understand the 5 A's approach and anticipate patient needs. Additional training resources for providers are available through the organizations listed in **Resources for Clinicians and Patients** (Appendix, pages 26-27). Additional training is not required to implement a successful intervention program, however.

STEP 5. ADAPT PROCEDURES TO SPECIFIC SETTING

Developing procedures is a crucial step in implementing the 5 A's approach. Specific assignments should be made to ensure that all aspects of the intervention are covered. During a staff meeting, the tasks can be assigned using the template provided in **Assigning Tasks to Staff** (Appendix, page 25).

Assignments for each task will depend on the organization of the practice. Large practices may have a health educator who can be responsible along with the clinician for some of the counseling tasks. Practices with several support staff members may choose to divide tasks so that one person is responsible for procuring patient education materials while another focuses solely on chart documentation. In some cases, patients who require access to additional counseling beyond the 5 A's approach may even have access to smoking cessation specialists, especially in a hospital environment. Larger practices may have the resources to send out congratulatory letters or provide telephone counseling. Conversely, in smaller practices, a physician or nurse may be responsible for nearly all counseling, while support staff concentrate on necessary documentation and procurement of self-help materials. Additional follow up may be impractical in these environments. Although communication with patients using follow-up telephone support or letters is helpful, these tools are not necessary for the 5 A's approach to work.

Materials for clinicians and patients are available through several sources, as listed in (Appendix, pages 26-27). Clinicians in some states use quitlines to provide ongoing counseling and support for pregnant smokers who are trying to quit. It may be useful to refer patients to these services as long as the quitline uses a protocol consistent with the 5 A's.

STEP 6. MONITOR THE IMPLEMENTATION AND PROVIDE FEEDBACK

Implementation should be started on a date when all staff will be available – i.e. avoid vacation and holiday periods. Before starting, review staff assignments and ensure that materials are available. Establish a periodic review to discuss the following issues:

- Are procedures working as intended?
- Are staff members completing assigned tasks?
- Are staff members adequately trained?
- Is documentation complete and accurate?
- Are materials being used appropriately and are they still available?

Review meetings also are an ideal opportunity to evaluate the smoking status of patients counseled. Over time, this will show the staff how many patients the intervention has reached and will provide opportunities to discuss improvements. Reinforcing the importance of the roles each staff member plays in the intervention provides positive feedback and reminds staff that smoking cessation is an important part of good care of women and their families.

No one can anticipate all problems when introducing a new procedure. Staff should understand upfront that they have an important ongoing role to play in developing ways to solve problems or to incorporate new ideas into their practice. Changing structures and staff responsibilities in the office will also require adjustments.

POSTPARTUM RELAPSE

Some 45% to 70% (DiClemente 2000, Colman 2003, Lelong 2001) of women who quit smoking during pregnancy relapse within 1 year after delivery (US DHHS 2001, Dolan-Mullen 1997, McBride 1990). However, relapse may be delayed among women who receive postpartum intervention (McBride 1999). The following steps may help reduce the risk of relapse:

- **Good chart documentation.** This is necessary for systematic follow-up on smoking status. Applying the 5 A's to postpartum visits may be helpful in tracking a patient's smoking status and progress with remaining smoke-free.
- **Positive counseling.** Language is important when considering how to counsel patients to remain smoke-free. It is always useful to reiterate messages about improved maternal and infant health. The same messages provided during pregnancy about the benefits to the family of having a clean, smoke-free home environment and the reduced risk for serious consequences such as sudden infant death syndrome, bronchitis, and asthma and more common childhood conditions such as colic and otitis media are worth repeating. Continue to praise the pregnant woman's effort in quitting. To reinforce the patients' desire to be a good mother, say, for example, "You have really helped your baby get off to a great start by providing a clean, smoke free home so she/he can continue to grow and be healthy." Emphasizing that the patient herself will have more energy to care for her baby and providing additional congratulatory messages are also appropriate strategies. Table 3 provides more suggestions for positive language.

If a patient relapses, reassure her and encourage her to try again. Tell her that successful non-smokers who quit after they "slip" tell themselves, "This was a mistake, not a failure." Ask her to:

- Quit smoking immediately; put the quit date in writing.
- Get rid of all smoking materials (eg, cigarettes, matches, lighters, and ashtrays).
- Talk about what worked initially and what may have led to the relapse.

Remind her that most successful quitters have relapsed, and that each quit attempt puts her closer to never smoking again. Ask the patient to think about what made her want to smoke so she will understand the trigger and develop a plan to avoid it or cope with it next time. Suggest that she use the self-help material she received during pregnancy to remind her of good reasons for quitting, ways to handle slips, and techniques for remaining smoke-free.

Patients who gain a significant amount of weight during pregnancy may be at higher risk for relapse than patients who do not (Carmichael 2000). If a patient is concerned about her weight after delivery while she is trying to quit smoking or maintain smoking cessation, these suggestions might help her (Fiore 2008):

- Don't focus on losing weight while trying to quit smoking. Quit smoking first, and then address weight issues.
- Choose healthy, low-fat foods.
- Participate in physical activities such as walking.
- If the patient is not breastfeeding, consider prescribing a pharmacologic aid to support behavior change. If necessary, arrange for additional weight management support and counseling when the patient has clearly quit smoking. Breastfeeding should always be encouraged and, if the woman chooses to breastfeed, cessation counseling should be undertaken.

Continuing the 5 A's approach after a woman gives birth helps her continue her efforts to quit smoking or maintain smoking cessation. It also reinforces your concern about her smoking status and your interest, as her clinician, in helping her to quit smoking. For patients who relapse, revisit the 5 A's and continue to state the positive effects of quitting (see Table 3). Reassure the patient who has relapsed of your continued assistance in her attempts to quit.

For post partum smokers, several pharmacologic smoking cessation aids are available, including nicotine replacement products such as gum, patches, lozenge, nasal spray and inhalers. Bupropion (an antidepressant) and varenicline are also prescribed as smoking cessation aids because they have been shown to help patients cope with nicotine withdrawal symptoms. However, the FDA has placed black-box warnings on all antidepressants and varenicline as their use increases the risk of suicide, particularly in adolescents and young adults. Users must be followed closely for suicidal ideation. Postpartum smokers who are breastfeeding should check with their pediatrician prior to initiating pharmacologic smoking cessation aids.

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APPENDIX: HOW TO INTERVENE

HOW TO INTERVENE

5 A's Step	Action
Ask about smoking	• Use a multiple-response format as shown in **First A: Ask** (page 7). • Don't ask, "Do you smoke?" or "You don't smoke, do you?" • Indicate smoking status clearly in the patient's chart so that it can be readily noted at follow-up.
Advise to quit	• Emphasize that smoking is one of the most important changes the patient can make. • Emphasize the benefits of quitting (Table 3). • Use positive language; admonishment may be intimidating or discouraging.
Assess willingness to quit	• Ask patient if she is willing to make a quit attempt in the next 30 days. • Consider formalizing the agreement using a **Quit Contract** (page 11).
If patient is willing to quit, **Assist** her with the process	• Briefly counsel the patient and provide support for her attempt to quit. • Suggest ways to overcome barriers (Table 6). • Help the patient identify someone in her environment who can provide encouragement. • Provide pregnancy-specific self-help materials (see **Resources for Clinicians and Patients**, pages 26-27)
If the patient is *not* willing to quit, explore why	• Use the 5 R's (see **When the Patient Doesn't Want to Try to Quit: The 5 R's**, page 14). • If the patient tried to quit before and relapsed, explore what did not work. • Reassure the patient that it generally takes several attempts to quit successfully. • Do not admonish the patient; be open and approachable.
Arrange follow-up	• Assess smoking status at subsequent visits. • If patient continues to smoke, encourage cessation and repeat assistance.

APPENDIX: ASSIGN TASKS TO STAFF

STAFF TASK ASSIGNMENTS

Task	Who Will Do It	Where
Ask		
1. Ask patient about smoking.		
2. Label patient smoking status inside chart.		
Advise		
1. Advise the patient to quit.		
Assess		
1. Assess willingness of patient to try to quit within a specified time frame.		
2. Assess previous quit attempts.		
3. Assess barriers to quitting (5 R's).		
Assist		
1. Help the patient set a quit date.		
2. Provide self-help materials.		
3. Provide problem-solving information.		
4. Provide additional materials such as quit-smoking contract, patient diaries.		
Arrange follow up		
1. Document so that smoking status is checked at the next visit.		
2. Follow up by telephone (optional).		
3. Send congratulatory letters (optional).		
4. Ask about smoking status at next visit.		
Administrative support		
1. Order and keep materials stocked.		
2. Compile follow-up results.		
3. Monitor staff compliance with protocol.		

APPENDIX: RESOURCES FOR CLINICIANS

FROM ACOG:

Motivational Interviewing: A Tool For Behavioral Change
ACOG Committee Opinion #423

Smoking Cessation During Pregnancy
ACOG Committee Opinion #471 (2010)

- Single copies available without charge; please include name, affiliation, and mailing address with request to www.acog.org.
- To order a package of 25, call the ACOG Distribution Center at 800-762-ACOG, ext 882 or order online at sales.acog.com.

OTHER RESOURCES:

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

Treating Tobacco Use And Dependence
Clinical Practice Guidelines from the Agency for Healthcare Research and Quality (AHRQ). To preview go to www.ahrq.gov; under the "Clinical Information" heading click on "Clinical Practice Guidelines" link and look under Tobacco Cessation. To order print copies, telephone 800-358-9295.

FREE CME Smoking Cessation During Pregnancy Program
An online program for provider training on smoking cessation during pregnancy is consistent with the US PHS 2008 Guidelines: Treating Tobacco Use and Dependence. It is interactive, can be used in segments and provides free CMEs / CEUs for physicians, nurses, dentists and dental hygienists: musom.marshall.edu/medctr/med/tobaccocessation/pregnancyandsmoking/login.aspx

Smoke-Free Families
The National Partnership (2002-2008) was a collaboration of more than 30 organizations funded by The Robert Wood Johnson Foundation. Archived products including clinical practice resources, technical assistance tools, and patient materials are available on the National Tobacco Cessation Coalition's website (www.tobacco-cessation.org/sf/index.htm).

APPENDIX: RESOURCES FOR PATIENT/CONSUMERS

Need Help Putting Out That Cigarette?
A 28-page patient self-help guide. To order multiple copies, call 800-762-ACOG, ext. 882. Can also be downloaded from National Partnership for Smokefree Families website (www.tobacco-cessation.org/sf/patient.htm). Click "select English or Spanish for booklet," and click "Printed/web-based materials that will help you in your quit attempt."

www.smokefree.gov
Website contains an online step-by-step cessation guide, telephone quitlines, instant messaging service, and publications that can be downloaded, printed or ordered. Created by the Tobacco Control Research Branch of the National Cancer Institute.

1-800-QUIT NOW
Toll-free telephone number connects you to counseling and information about quitting smoking in your state.

Note: Contact your state public health department division of smoking cessation to learn whether your state offers a toll-free telephone support program and other services to help smokers quit.

APPENDIX: STRENGTH OF EVIDENCE

Every recommendation made by the Clinical Practice Guideline Panel bears a strength-of-evidence rating that indicates the quality and quantity of empirical support for the recommendation. The ratings and their descriptions are listed below (Fiore 2008).

Rating	Description
A	Multiple well-designed randomized clinical trials, directly relevant to the recommendation, yielded a consistent pattern of findings.
B	Some evidence from randomized clinical trials supported the recommendation, but the scientific support was not optimal. For instance, few randomized trials existed, the trials that did exist were somewhat inconsistent, or the trials were not directly relevant to the recommendation.
C	Reserved for important clinical situations in which the Panel achieved consensus on the recommendation in the absence of relevant randomized controlled trials.

APPENDIX: STUDIES OF SMOKING CESSATION INTERVENTION FOR PREGNANT PATIENTS

Meta-analysis (Fiore 2008): Effectiveness of and estimated preparturition abstinence rates for psychosocial interventions with pregnant smokers (n=8 studies).

Pregnant Smokers	Number of arms	Estimated odds ratio (95% C.I.)	Estimated abstinence rate (95% C.I)
Usual Care	8	1.0	7.6
Psychosocial intervention (abstinence preparturition)	9	1.8 (1.4 - 2.3)	13.3 (9.0 - 19.4)

Note: The results of a meta-analysis of 8 published studies of smoking cessation interventions for pregnant women indicated that counseling is significantly more effective than usual care in helping pregnant women quit smoking. The estimated odds ratio of 1.8 across these studies suggests that the intervention produces up to an 80% improvement in cessation rates. A confidence interval of 1.4 to 2.3 indicates that cessation rates are at least 40% higher for patients who receive intervention counseling compared with those who do not. The estimated abstinence rate is consistent with a positive effect of counseling, but the results are not statistically significant.

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SELF-ASSESSMENT QUIZ

1. **Possible risks associated with smoking during pregnancy include:**
   A. Low fetal birth weight
   B. Childhood learning disabilities
   C. Spontaneous abortion
   D. All of the above

2. **A review of clinical outcomes for pregnant women who quit smoking revealed that number of low birth weight babies was reduced by:**
   A. 6%
   B. 11%
   C. 17%
   D. 20%

3. **Pregnant women who quit smoking as late as week _____ of gestation can still positively affect the birth weight of their babies:**
   A. Week 12
   B. Week 16
   C. Week 24
   D. Week 30

4. **The leading cause of cancer death among women is:**
   A. Lung Cancer
   B. Breast Cancer
   C. Ovarian Cancer
   D. Cervical Cancer

5. **Review of the medical literature about smoking cessation during pregnancy revealed which one of the following results:**
   A. Trying to initiate smoking cessation during pregnancy causes stress for expectant mothers and makes relapse more likely than waiting until after delivery to intervene
   B. Brief cessation counseling supported by pregnancy-specific self-help materials is an effective intervention approach to smoking cessation for pregnant women
   C. Smoking cessation intervention for any pregnant woman is complex and generally requires referral to an intensive counseling program for smoking cessation
   D. Most pregnant patients are very motivated, so the most effective way to intervene is to simply advise patients to quit

6. **Clinicians can offer effective behavioral intervention for smoking cessation for most pregnant women with a total time commitment of as little as:**
   A. 1 minute to briefly advise women to quit
   B. 5 to 15 minutes
   C. 30 to 90 minutes
   D. Behavioral intervention is only effective when used with pharmacologic smoking cessation aids

7. **Some women do not disclose that they smoke when asked because of the societal stigma associated with smoking. What strategy can clinicians use to improve disclosure rates when asking about smoking status during an initial patient interview?**
   A. Most patients conceal their smoking, so there is no reliable way to obtain information about smoking status without using physiologic markers such as urine tests or expired carbon monoxide
   B. Describing in detail the poor clinical outcomes for children of mothers who smoke can motivate a smoker to ask for help
   C. Very few women conceal their smoking status from physicians, so simply asking the patient, "Do you smoke?" is the most straightforward strategy
   D. Using a multiple-choice format with relative responses, such as "I stopped smoking after I found out I was pregnant" improves disclosure rates

8. **Tracking smoking status as a vital sign, in the same way blood pressure is monitored, for example, is important because:**
   A. Smoking is one of the few risk factors that can be modified during pregnancy
   B. Recording the information as a vital sign in the chart helps track smoking status for follow-up at future visits
   C. Asking patients about smoking status at each visit increases the likelihood of a successful intervention
   D. All of the above

9. **Which statement about pharmacologic intervention for pregnant smokers is not true?**
   A. The nicotine replacement patch exposes the fetus to a steady dose of nicotine
   B. Studies to-date have not demonstrated the safety or efficacy of pharmacotherapy during pregnancy
   C. There is no circumstance in which a pharmacologic aid is appropriate for a pregnant smoker
   D. Bupropion and Varenicline have been labeled with black box warnings for increased suicide risk

10. **Using the 5 R's to expose reasons a pregnant patient may choose not to try to quit smoking should be repeated how often?**
   A. At every visit as long as the patient is still smoking
   B. After delivery when pharmacotherapy can be offered
   C. Only once; repeating the process too often could cause the patient to become irritated
   D. Once at the initial assessment and once more before the 30th week of pregnancy

11. **Which statement about office staff involvement in the 5 A's smoking cessation approach is accurate?**
   A. Only the physician treating the patient should be involved in intervention because the patient may be embarrassed about her smoking
   B. Staff members involved in implementing a smoking cessation program in the office must attend extensive, ongoing training from a behavioral modification specialist to ensure that the intervention program will be effective
   C. An office intervention program is really only feasible in a large setting with patient education providers on staff
   D. The 5 A's intervention can be adapted according to the office size and the availability of staff

12. **What percentage of women who quit smoking during pregnancy relapse within 1 year after delivery?**
   A. 10% to 35%
   B. 25% to 50%
   C. 45% to 70%
   D. 60% to 85%

13. **If a patient relapses, what should the clinician do?**
   A. Instruct the patient to quit immediately and put the quit date in writing
   B. Tell the patient that most successful quitters have relapsed
   C. Instruct the patient to get rid of all smoking materials
   D. All of the above

14. **Which is the recommended approach for women who are concerned about weight gain if they quit smoking?**
   A. Quit smoking first, and then address weight issues
   B. Make a complete lifestyle change at one time using the 5 A's to quit smoking and initiating a diet for weight control
   C. Address weight issues first as a motivating strategy, and then address smoking cessation
   D. Gaining weight during pregnancy is normal, so tell the patient not to be concerned about it

15. **Which statement about the cost of smoking cessation intervention is true?**
   A. The cost-effectiveness of smoking cessation cannot be measured accurately
   B. Initiating smoking cessation intervention has been shown to be very costly, but it is a necessary part of improving health outcomes
   C. Tobacco dependence interventions are cost effective because they reduce the number of low birth-weight babies, perinatal deaths, and use of newborn intensive care units
   D. In general, the higher the cost of a smoking cessation intervention method, the greater its success

16. **When advising a patient to quit, which is the recommended attitude to use as presented in the 5 A's approach?**
   A. Gently remind the patient that society will view her as a "bad mother" if she doesn't quit
   B. Offer the patient educational pamphlets about the effects of smoking and wait to see if she asks about quitting
   C. In a strict tone, provide a complete list of the health risks to which she is exposing her child so she will know you are serious about her quitting
   D. Use positive language and focus on the benefits of quitting for her baby and herself

17. **Which strategy about assisting patients to quit is recommended in the 5 A's approach?**
   A. Always make sure the father of the child is involved in the patient's quit-smoking efforts; he is most likely to provide the best support for the patient
   B. Encourage the patient to keep her attempts to quit smoking to herself so others won't pressure her
   C. Help the patient identify someone who can provide encouragement and support
   D. The clinician and office staff are the only people who should be involved

18. **What is the best response to the patient who asks if she can just cut down on her smoking?**
   A. "If you can reduce your smoking to 5 cigarettes per day, that is adequate to reduce risk."
   B. "Your goal should be to try and quit completely."
   C. "If cutting back is the best you can do, that is adequate during pregnancy. I can prescribe pharmacologic aids to help you quit completely after delivery."
   D. "Any reduction you make in smoking is good for you and your baby."

19. **The first option on the multiple-choice response format to determine smoking status states: I have never smoked, or I have never smoked more than 100 cigarettes in my lifetime. What should clinicians consider when dealing with adolescents?**
    A. Adolescents can be addicted quickly and be established smokers by the time they have smoked 100 cigarettes
    B. Adolescents do not become addicted as easily as adults, so even smoking 200 cigarettes does not establish the patient as a smoker
    C. Virtually all adolescents who smoke will conceal it and respond that they have never smoked
    D. It is best not to use this format when treating adolescents and use physiologic testing instead to determine smoking status

20. **What strategy should the clinician follow to assist a patient after she has decided to quit smoking?**
    A. Discuss concerns the patient has about quitting smoking and help her develop problem-solving strategies
    B. If the patient has tried to quit smoking before and relapsed, review what helped and what contributed to relapse
    C. Tell the patient that her goal must be to quit completely: "Not even a puff"
    D. All of the above

A CLINICIAN'S GUIDE TO HELPING PREGNANT WOMEN QUIT SMOKING ANSWER SHEET AND EVALUATION FORM

For each question, please circle the letter that corresponds with the correct answer. A score of 70% correct is required to obtain a maximum of *3 AMA PRA Category 1 Credits™*.

1. a b c d	6. a b c d	11. a b c d	16. a b c d
2. a b c d	7. a b c d	12. a b c d	17. a b c d
3. a b c d	8. a b c d	13. a b c d	18. a b c d
4. a b c d	9. a b c d	14. a b c d	19. a b c d
5. a b c d	10. a b c d	15. a b c d	20. a b c d

CME activities must be free of commercial bias for or against any product. In this regard how would you rate this activity?
☐ Excellent ☐ Good ☐ Fair ☐ Poor

Please rate from excellent (4) to poor (1) how well this activity prepared you to meet each of the following objectives.

	4	3	2	1
Employ evidence-based guidelines for smoking cessation during pregnancy				
Effectively follow up on patients who are reluctant to quit smoking				
Recognize when to use pharmacologic intervention				
Establish a smoking cessation program in the practice setting				
Counsel patients about postpartum relapse				
Address patient concerns about quitting				
Help patients overcome barriers to success				
Provide patient-oriented information sources on smoking cessation				

How would you rate the overall quality of this CME activity? ☐ Excellent ☐ Good ☐ Fair ☐ Poor
Do you plan to make any changes in your practice as a result of this CME activity? ☐ Yes ☐ No
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