Smoking

The association of smoking with adverse pregnancy outcomes is well known, particularly the increased risk of preterm birth. All pregnant women should be assessed for tobacco use (of all kinds), both historically and for current use. Former and current smokers should have additional time spent during the prenatal visit on smoking cessation. Previous smokers should be congratulated and encouraged to abstain from tobacco use, especially as they transition in the postpartum period. Current smokers will require more intervention on the part of the provider and health care team in order to support smoking cessation efforts, and subsequently the adverse pregnancy risks. There may be several impediments to addressing smoking cessation in pregnancy as providers, as well as patients ultimately being successful in quitting.

Barriers to success for providers may include time limitations associated with the prenatal visit, knowledge based on interventions appropriate and successful for pregnant women, and limited adjunctive treatments available to this population. Motivational techniques such as the 5 A’s (Ask, Advise, Assess, Assist, Arrange) have been shown to be effective in smoking cessation counseling for pregnant women. However they involve time, and although most obstetricians are familiar with the 5 A’s, they are not used regularly during prenatal visits. Regular use is recommended, as well as pregnancy-specific smoking cessation materials and direct referral to smoker’s quit lines (1-800-QUIT-NOW). Separate coding and billing for this type of counseling will help balance the time needed to appropriately treat these patients. Although there are adjunctive agents in the form of nicotine replacement therapy available to the general smoking patient population, they cannot be recommended for use in pregnant women at this time. Neither long-term neurodevelopmental safety nor decrease in smoking rates have been shown in meta-analysis of randomized trials comparing nicotine replacement therapy to control in the pregnant population.

Specifically, the use of electronic cigarettes (e-cigarettes) has been increasing in the population, including women who are pregnant. Many pregnant women underestimate the potential risks associated with e-cigarettes, and up to 43% of surveyed women believed e-cigarettes were less harmful to a developing fetus. Currently there are no data on the use of electronic cigarettes in pregnancy, either with respect to safety profile or its utility as a means to accomplish smoking cessation. Nicotine itself has been shown to have adverse neurological and behavioral modifications in the fetus. Until there is robust data showing the safety of electronic
cigarettes and that it is successful for completely withdrawing the pregnant patient from all sources of nicotine, it should not be condoned by those providing care to pregnant women. It is important to screen for traditional and smokeless tobacco use, and counsel on the risks.

Up to 35% of pregnant smokers may deny currently smoking during the pregnancy. Identifying these women in real-time during visits may assist in directive counseling for smoking cessation. Expired air carbon monoxide testing or point-of-care urine cotinine testing can be performed in the clinical setting in conjunction with prenatal visit and provide immediate feedback to the provider. These tests are less expensive and invasive than serum cotinine testing and may be considered as an adjuvant to behavioral therapies.

In cases of women who cannot complete smoking cessation, vitamin supplementation may be helpful in ameliorating some of the adverse events associated with tobacco use. Vitamin C 1000 mg daily and vitamin E 400 IU daily may reduce the risk of placental abruption and preterm birth < 37 weeks of gestation in pregnant smokers and can be considered in this high-risk population.
References


This algorithm and key driver material was written by a group of experts in the field of Preterm Birth. It was then reviewed by the Society for Maternal-Fetal Medicine’s (SMFM’s) Publications Committee, Executive Committee and Risk Management.

Standardization of healthcare processes and reduced variation has been shown to improve outcomes and quality of care. SMFM developed these documents to help facilitate the standardization process. These algorithms and key driver documents are “tools” to assist clinicians and practices. The practice of medicine continues to evolve, and individual circumstances may vary. They reflect clinical and scientific advances as of the date issued and are subject to change. They are not intended to dictate a certain management or course of action. We encourage users to adapt them to their particular situation, environment and patient population.

This publication is not expected to reflect the opinions of all members of the Society for Maternal-Fetal Medicine.

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