

Smoking Cessation Strategies for Women Before, During, and After Pregnancy

Recommendations for State and Territorial Health Agencies





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Although the rate of smoking during pregnancy in the United States decreased from 18.4 percent in 1990 to 12.8 percent in 2008, it remains far above the national Healthy People 2020 goal of 1 percent for 2010 and 2020.¹ Prenatal smoking varies greatly among states, from 5.1 percent in Utah to 28.7 percent in West Virginia.² Rates are highest among certain subpopulations, especially non-Hispanic white and American Indian/Alaska Native women, women younger than 25, women with lower levels of education, and women who initiated prenatal care later in pregnancy.³



A key strategy to support healthy mothers and healthy babies is to prevent initiation of smoking and promote cessation before, during, and after pregnancy. Prior to pregnancy, it is critical to utilize opportunities with women to discuss smoking. Because almost half of all pregnancies are unplanned,⁴ preventing initiation and promoting smoking cessation for women, regardless of whether they are planning to become pregnant, can reduce the number of women who are smokers prior to conception and enter pregnancies as smokers. Preventing initiation of smoking can improve preconception health, which can lead to improved reproductive health outcomes.

Women are more likely to stop unhealthy behaviors, including smoking, during pregnancy than other times in their lives, so pregnancy offers a critical

In 2011, rates of smoking among women aged 18-24 and 25-44 were 16.4 percent and 19.7 percent respectively, comparable to the overall adult smoking rate of 18 percent.

opportunity for state and territorial health agencies to provide smoking cessation support to these women and their families.⁵ In 2011, rates of smoking among women aged 18-24 and 25-44⁶ were 16.4 percent and 19.7 percent respectively, comparable to the overall adult smoking rate of 18 percent.⁷ ⁸Although approximately half of female smokers quit when they decide to become pregnant or upon learning that they are pregnant, only an additional 5-12 percent of pregnant female smokers quit by the last three months of pregnancy.⁹ There are also lower quit rates (36%) and higher relapse rates (53%) after pregnancy among low-income women.¹⁰ In addition, higher rates of smoking (38.8%) were observed in pregnant Medicaid enrollees in 2004, according to the Pregnancy Risk Assessment Monitoring System (PRAMS).

Medicaid enrollees were at least three times more likely to smoke during the last three months of pregnancy than women with private insurance.¹¹ In 2008, according to PRAMS data available from 29 states, the prevalence of smoking during the last three months of pregnancy was highest among women who were between 20-24 years of age (19.3%), were Alaska Native (30.4%), had less than 12 years of education (22.5%), or were Medicaid insured during prenatal care (22.1%).¹²

Harmful effects of smoking before, during, and after pregnancy

Maternal smoking is one of the most prevalent modifiable risk factors for poor birth outcomes. It is associated with fetal growth restriction, preterm

Recommendations to Improve Smoking Cessation Before, During, and After Pregnancy

1. Provide training and technical assistance to healthcare and public health providers on helping women quit using tobacco before, during, and after pregnancy.
2. Extend pregnancy-specific and postpartum-specific quitline services to women during and after pregnancy.
3. Promote awareness of cessation benefits and effectiveness of treatment by implementing coordinated media campaigns that specifically target women during childbearing years.
4. Develop customized programs for specific at-risk populations of women who are smokers and of reproductive age.
5. Include Women, Infants, and Children (WIC) sites as points for intervening with pregnant and postpartum women.
6. Design and promote barrier-free cessation coverage benefits for pregnant and postpartum women in public and private health plans.
7. Promote cessation service integration aimed at improving birth outcomes.
8. Implement evidence-based tobacco control policies that augment tobacco cessation for women before, during, and after pregnancy.

delivery, placental complications, Sudden Infant Death Syndrome (SIDS), and certain birth defects.¹³ Non-combusted tobacco products, such as chewing tobacco, snuff, moist snuff, dissolvable tobacco strips, and electronic cigarettes, also contain nicotine, are addictive, and have serious health implications for pregnant women and their fetuses.¹⁴ Nicotine levels can also be higher for a fetus than for the mother and can adversely impact fetal lung development. Furthermore, nicotine and carbon monoxide in smokeless tobacco products may be responsible for severe adverse pregnancy outcomes, such as preterm birth.¹⁵

Even after pregnancy, parents' tobacco use poses serious risks for infants and young children. Exposure to secondhand smoke (SHS) causes:

- Lower respiratory illness in infants and children and cough and wheeze in children.¹⁶
- Middle ear infections.
- Impaired lung function.
- Increased risk of SIDS.¹⁷

Young children, who tend to spend especially large amounts of time in the home and who have little control over their exposure to SHS, are particularly

vulnerable to its effects.¹⁸ Eleven percent of children aged 6 and younger are exposed to SHS in their homes four or more days per week.¹⁹ Despite lower smoking rates, serum cotinine levels—an indicator of exposure to SHS—in children have only somewhat decreased over the past 20 years, demonstrating that homes remain a significant source of SHS exposure for children.²⁰ Children (ages 6-11) exposed to SHS also have levels of urine concentration of tobacco-specific nitrosamine carcinogens 2.5 times higher than nonsmoking adults.²¹ Women exposed to SHS in their homes are less likely to remain abstinent from cigarettes than those who live with nonsmokers.²² Moreover, parental smoking is a consistent predictor of youth experimentation with and initiation of smoking.²³

Cost savings can be realized through effective smoking cessation programs

Medicaid is one of the largest providers of prenatal care, covering almost half of the nation's births. Consequently, a significant portion of the costs of adverse smoking related pregnancy outcomes are likely to fall on the state Medicaid program.²⁴ In 2007, a study found that Medicaid costs could be lowered by 5.6 percent (cost savings of \$10 billion)

if all Medicaid enrollees were to quit smoking.²⁵ However, a 2004 study found that only 39 percent of Medicaid-enrolled smokers and 60 percent of Medicaid physicians knew that their state Medicaid program offered any coverage for tobacco-dependence treatments.²⁶

Effective cessation programs have the potential to realize significant cost savings for families, employers, insurers, and local, state, and federal governments. An annual reduction of smoking prevalence of 1 percent can save more than \$20 million in direct medical costs by the end of the first year and more than \$570 million over seven years.²⁷ Research shows savings up to \$8 million annually in direct neonatal inpatient costs given the cost of an intervention (\$24-\$34) versus the costs saved (\$881) for each woman who quits smoking during pregnancy.²⁸ Estimated infant healthcare costs attributable to maternal smoking have declined from \$366 million per year in 1996 to \$122 million in 2004 as fewer women are smoking during pregnancy (18.4% reported smoking during pregnancy in 1990 compared to fewer than 10% in 2004).²⁹



Targeted tobacco cessation strategies among pregnant women also yield substantial benefits for state budgets. A comprehensive tobacco-prevention program in the Massachusetts Department of Public Health, which began in 1993, quickly began paying for itself just through the declines in smoking among pregnant women in the state,³⁰ with a 50 percent decline in smoking among

For a list of evidence-based recommendations, see The Guide to Community Preventive Services, also called “The Community Guide.”

pregnant women (from 25% to 11%) between 1990 and 1999.³¹ Research shows that for \$1 spent on the comprehensive tobacco-prevention program, Massachusetts saved \$2 in smoking-related health-care costs.³² Since July 2006, MassHealth (insurance used in Massachusetts for Medicaid) has provided comprehensive cessation coverage. A study of the costs and savings of the program found that for every \$1 spent in program costs there were \$3.12 (range \$3 to \$3.25) in medical savings and a \$2.12 (range \$2 to \$2.25) return on investment to the Medicaid program.³³ In addition, the California Department of Public Health’s tobacco control program, which began in 1989, reduced state healthcare costs by more than \$100 million in its first seven years by reducing the number of smoking-caused low-birth-weight babies. More than \$11 million in savings were seen in the first two years of the program.³⁴ Therefore, implementing tobacco cessation strategies targeting pregnant women resulted in an overall reduction in healthcare costs in these states.

Role of State and Territorial Health Agencies

A coordinated health systems approach involving public health, state and local tobacco control programs, healthcare systems, community resources, Medicaid, and local health organizations produces successful long term cessation outcomes for pregnant and postpartum women. State and territorial health agencies can help individuals end their tobacco addictions by using evidence-based and cost-effective strategies. (For a list of evidence-based recommendations, see *The Guide to Community Preventive Services*, also called “The Community Guide”). Targeted tobacco control interventions

for women from both the state and community level are needed to fully leverage the opportunities that the parenting life stage offers for promoting smoking cessation and achieving reductions in the prevalence of smoking.³⁵ This issue brief provides specific recommendations on how state and territorial health agencies can work with their partners to create a system that reduces the adverse health outcomes and costs associated with smoking before, during, and after pregnancy.

RECOMMENDATION 1: PROVIDE TRAINING AND TECHNICAL ASSISTANCE TO HEALTHCARE AND PUBLIC HEALTH PROVIDERS ON HELPING WOMEN QUIT USING TOBACCO BEFORE, DURING, AND AFTER PREGNANCY.

State and territorial health agencies should work to increase the capacity of clinicians to provide or refer to cessation services, enhance clinicians' ability to address issues of prevention and SHS, and provide training to individuals, physicians' offices, and clinics.

The 2008 U.S. Public Health Service (USPHS) recommendations on pregnant smokers specify that clinicians screen all pregnant women for tobacco use and provide augmented pregnancy-tailored counseling at the first prenatal visit to those who smoke, as well as throughout the pregnancy.³⁶ The American College of Obstetricians and Gynecologists (ACOG) released a committee opinion in 2010 that affirmed the USPHS recommendations.³⁷ If behavioral interventions are unsuccessful, nicotine replacement therapy *could* be considered. However, ACOG cautions that patients should be under **close supervision** and that clinicians should consider the risks of smoking and the use of nicotine replacement therapy.³⁸

Smoking cessation screening and counseling before, during, and after pregnancy must be a core component of every family medicine, maternity



care, and pediatric practice. The Five A's method (ask, advise, assess, assist, and arrange) is an evidence-based approach that is widely used to improve cessation rates during and beyond pregnancy.³⁹ It consists of trained providers spending five to 15 minutes at each visit counseling women who want to quit.⁴⁰ The smoking status of women should be assessed at every provider encounter using provider reminder systems, as recommended by The Community Guide.⁴¹ Providers must be trained to effectively intervene using the Five A's approach with non-pregnant, pregnant, and postpartum female smokers. CDC funded the development of a web-based training with up to 4.5 CEUs available for healthcare providers. The online training is available 24/7 and offers "mini-lectures" on smoking cessation from expert faculty, as well as opportunities to interact with pregnant and postpartum patients on smoking cessation issues.⁴² ACOG endorses the training.

***State Example:** In 2010, Oklahoma's Medicaid agency, the Oklahoma Health Care Authority, partnered with the Oklahoma State Department of Health and the Oklahoma Tobacco Settlement Endowment Trust to institute the practice facilitation model in obstetric care settings.⁴³ The practice facilitation model helps improve*

birth outcomes via systemic change in obstetric care provider behavior through education and hands-on technical assistance related to evidence-based tobacco cessation practices, such as those recommended by USPHS. The model provides intensive onsite support to obstetric care providers to redesign clinical processes, access electronic patient registries, and improve clinical quality measures and outcomes, such as tobacco cessation for individual patients. Provider and office staff receive education and direct technical assistance from a trained public health professional to integrate best practices into the daily routine. This model helps increase obstetric care providers' knowledge and routine use of the Five A's tobacco cessation counseling, rates of inquiry about tobacco use, and referrals to the Oklahoma Tobacco Helpline.⁴⁴



State Example: North Carolina's You Quit Two Quit⁴⁵ Project, run by the University of North Carolina's Center for Maternal and Infant Health in partnership with the North Carolina Division of Public Health Tobacco Prevention and Control Branch and other partners, is a statewide project to promote evidence-based tobacco cessation interventions among pregnant and postpartum women. The program creates continuity of care by focusing on the preconception, prenatal, and perinatal periods, and includes an emphasis on preventing postpartum relapse and eliminating

SHS exposure. Through demonstration projects in four county health departments and statewide outreach to providers serving pregnant women and new mothers, You Quit Two Quit developed successful models for providing training and technical assistance to healthcare providers on helping pregnant women quit using tobacco and stay tobacco-free postpartum.⁴⁶

RECOMMENDATION 2: EXTEND PREGNANCY-SPECIFIC AND POSTPARTUM-SPECIFIC QUITLINE SERVICES TO WOMEN DURING AND AFTER PREGNANCY.

Quitlines are available throughout the United States.⁴⁷ All quitlines are linked through one electronic portal, 1-800-QUIT-NOW, which automatically connects callers to their state's quitline. Quitlines offer information, direct support, and ongoing counseling and have been successful in helping pregnant smokers quit and remain smoke free.⁴⁸ Most states offer pregnancy-specific services, focusing on the pregnant woman's motivation to quit and providing postpartum follow up to prevent relapses to smoking. However, all pregnant smokers, regardless of insurance status, still need standardized comprehensive services and barrier-free access to quitline programs. Women who contact quitline programs often request only self-help materials, which may not be as effective as cessation counseling. More needs to be done to encourage women who are referred to quitlines to enroll in counseling services.⁴⁹

KEY RESOURCE: In 2011, the Centers for Medicare and Medicaid Services announced a new policy designating tobacco cessation quitlines as an administrative activity eligible for a 50 percent federal Medicaid match.⁵⁰ To take advantage of this benefit, state and territorial health agencies should collaborate with state Medicaid agencies to expand coverage (and decrease barriers), promote existing cessation coverage, and gain funding for quitline services provided to Medicaid members.

State Example: Michigan extended its free quitline counseling sessions for pregnant women who are uninsured or enrolled in Medicaid by providing ongoing support, with up to nine calls during pregnancy and after delivery. Callers receive their own personal quit coach and other incentives, including a \$5 or \$10 reward card for each completed phone appointment. Trained coaches encourage individuals to develop the confidence and coping skills to quit tobacco use and remain tobacco-free.⁵¹

State Example: The Colorado QuitLine pregnancy/postpartum program offers up to nine personal coaching calls designed to help women quit during and after pregnancy with the assistance of a trained coach and text messages to offer guidance and support during the quitting process. All pregnant women who enrolled in the program received incentives for each completed call. Enrollees in a pilot program, most of whom were Medicaid beneficiaries, received a reward card to purchase items for themselves and the baby.⁵² Upon completing the program, 55 percent of women quit smoking prior to delivery.⁵³

RECOMMENDATION 3: PROMOTE AWARENESS OF CESSATION BENEFITS AND EFFECTIVENESS OF TREATMENT BY IMPLEMENTING COORDINATED MEDIA CAMPAIGNS THAT SPECIFICALLY TARGET WOMEN DURING CHILDBEARING YEARS.

Tobacco use declines when sustained mass media advertising and counter-marketing campaigns are combined with other tobacco control strategies.⁵⁴ Effective media campaigns use advertising in a variety of media—such as television, radio, billboards, and print in addition to social/viral marketing strategies—promote cessation, decrease social acceptability of tobacco use, and build public support for tobacco control policies. State and territorial health agencies can also augment cessation resources with an e-health element, specifically social media, to increase the reach and engagement in cessation activities. Such resources have the potential to reach large audiences, are

convenient for many participants, and can be tailored for women before, during, and after pregnancy, at a relatively low cost.

KEY RESOURCE: CDC's *The Health Communicator's Social Media Toolkit*⁵⁵ highlights resources needed to develop, disseminate, and engage communities through health communication activities.

Examples: Two national initiatives, *Smokefree Women*⁵⁶ and *Smokefree Teen*,⁵⁷ help reach and engage female smokers with tailored smoking cessation information that increases and supports quit attempts. Interactive tools available through these initiatives include quizzes, a live chat feature that connects visitors to National Cancer Institute smoking cessation counselors, a quit guide smartphone application, various social media platforms, and a multicomponent smartphone app. *Smokefree Teen* also includes text messaging services. States can use these initiatives to support health communication campaigns targeting women and teens on smoking cessation.

State Example: In 2010, to encourage tobacco cessation among women of child-bearing age, Oklahoma implemented a statewide media campaign promoting the *SoonerQuit* tobacco cessation program (available to Medicaid enrollees) and the *Oklahoma Tobacco Helpline*. The statewide marketing campaign included promoting stories locally through radio and television commercials that featured Oklahoman women of childbearing age who successfully quit smoking one to three years prior. The campaign resulted in a 36 percent increase in the number of pregnant women using the *Oklahoma Tobacco Helpline* from FY10 to FY11.⁵⁸

RECOMMENDATION 4: DEVELOP CUSTOMIZED PROGRAMS FOR SPECIFIC AT-RISK POPULATIONS OF WOMEN WHO ARE SMOKERS AND OF REPRODUCTIVE AGE.

Since there are significant disparities in smoking rates by race, income, and educational status, state and territorial health agencies should strengthen efforts to identify and assist smokers in specific at-risk populations. The lower a pregnant smoker's socioeconomic status, the more barriers she faces in quitting and remaining abstinent.⁵⁹ Because these women are less likely to seek general preventive care,⁶⁰ integrating culturally and age specific tobacco prevention into routine reproductive health visits in school-based clinics, family planning programs, WIC, and university programs may help reach and educate priority populations.⁶¹

Financial incentives for smoking cessation program enrollment or successful smoking cessation are important mechanisms to increase smoking cessation rates, especially in women of lower socioeconomic status.⁶² Incentive trials have shown larger treatment effects than other behavioral interventions, but there have been few studies. In a review of six controlled trials on financial incentives for smoking cessation among low income women, researchers found higher levels of smoking cessation during and after pregnancy with financial incentives.⁶³

State Example: *In 2012, Alabama became the first state to add smoking cessation counseling and medications to the services offered through its family planning program, Plan First.⁶⁴ In addition to the counseling and medications, women who seek services through the health department are also followed by a licensed social worker for a period of seven months to provide support for cessation efforts. Plan First⁶⁵ is jointly operated by Medicaid and the Alabama Department of Public Health and provides family planning services to uninsured women between the ages of 19 and 55 who would not qualify for Medicaid unless pregnant. More than 96,000 women are currently enrolled in the program.*

State Example: *The Baby & Me – Tobacco Free program⁶⁶ was created and developed in 2002 as a model cessation practice to help pregnant women*

quit smoking and stay quit using prenatal and postpartum cessation counseling, unique incentives (diaper vouchers), and biomarker feedback. The Baby & Me – Tobacco Free program is integrated into the areas, locations, and “comfort level” services that low-income populations already utilize, such as WIC program and prenatal clinics and public health department offices. In New York, this program was provided in WIC offices and prenatal clinics and included four face-to-face prenatal sessions with a counselor who performed smoking cessation counseling, carbon monoxide testing, and random saliva cotinine testing.⁶⁷ In an evaluation of New York's Baby & Me – Tobacco Free program, the average prenatal quit rate for the program was 60 percent, while postpartum quit rates varied from 32 to 64 percent at six months.⁶⁸

RECOMMENDATION 5: INCLUDE WIC SITES AS POINTS FOR INTERVENING WITH PREGNANT AND POSTPARTUM WOMEN.

WIC is a federally funded supplemental food and nutrition program for pregnant women and young children administered by the U.S. Department of Agriculture, state health departments, and American Indian tribal organizations and run through city and county health departments, community health clinics, and nonprofit partner organizations.⁶⁹ Nearly half of all births in the United States are to women enrolled in WIC services.⁷⁰ Smoking cessation is a priority focus of WIC, given that the prevalence of smoking is much greater among WIC participants than the national average, according to the Pregnancy Nutrition Surveillance System.⁷¹

In 2011, almost 38 percent of non-Hispanic white women, 34 percent of multiracial women, and 16.3 percent of non-Hispanic black women enrolled in WIC were smokers three months prior to pregnancy; conversely, 22 percent of non-Hispanic white, 18 percent of multiracial, and almost 7 percent of non-Hispanic black women enrolled in WIC were smokers in the last three months of their pregnancy.⁷²

Many state tobacco programs include their WIC program in developing intervention strategies for pregnant smokers. These partnerships link WIC participants to their local tobacco cessation program or quitline and provide them with educational materials. Program data show that smokers who enrolled in WIC during their first trimester of pregnancy are significantly more likely to decrease smoking when compared to those who enrolled in their third trimester and are also less likely to increase smoking during pregnancy.⁷³

***State Example:** In 2010, the California Smokers' Helpline (CSH) launched a new partnership with Public Health Foundation Enterprises' WIC program. At the initial face-to-face screening with WIC applicants, WIC counselors identify pregnant smokers and offer them one of three referral options to CSH: a transfer to CSH via a dedicated toll-free number, a fax referral, or a card that provides the toll-free numbers to CSH including hours, website, and motivational messages. CSH reports pregnant smokers identified by WIC and referrals to the helpline on a quarterly basis.⁷⁴*

RECOMMENDATION 6: DESIGN AND PROMOTE BARRIER-FREE CESSATION COVERAGE BENEFITS FOR PREGNANT AND POSTPARTUM WOMEN IN PUBLIC AND PRIVATE HEALTH PLANS.

Through provisions in the Patient Protection and Affordable Care Act (ACA), state and territorial health agencies have new opportunities to expand the number of Medicaid members who are eligible for care, expand cessation treatment for pregnant women, eliminate cost-sharing for tobacco cessation, and expand coverage for tobacco cessation treatment to also include women of reproductive age. To address barriers to treatment, the ACA also requires health plans to provide coverage with no cost sharing for all preventive health services that have a rating of "A" or "B" from the current U.S. Preventive Services Task Force, including tobacco cessation, which has an "A" rating.⁷⁵

Specifically, ACA section 4107 requires states to provide Medicaid coverage for tobacco cessation

counseling and pharmacotherapy for tobacco cessation by pregnant women, without co-payments.⁷⁶ The benefit for pregnant women follows the USPHS recommendations on treating tobacco use and covers all seven FDA approved nonprescription and prescription drugs, diagnostic tests, therapy, and counseling.⁷⁷

***State Example:** The Utah Tobacco Prevention and Control Program (TPCP) and Utah's Medicaid program are both housed within the Utah Department of Health (UDOH). The partnership between Medicaid, in the Division of Health Care Financing, and TPCP, in the Division of Community and Family Health Services, began in 2000 through a directive from UDOH's executive director. TPCP contracts with Medicaid to implement a tobacco cessation education program for pregnant women covered under Medicaid. Combined TPCP/Utah Master Settlement Agreement funding and state Medicaid and federal matching dollars support the program. Initial success led to an expansion of services in 2003, adding cessation medications and Utah Tobacco Quit Line services for all Medicaid clients. TPCP provided leadership in designing the Medicaid-based cessation program by contributing cessation expertise and providing information to guide the program's overall development.⁷⁸*

RECOMMENDATION 7: PROMOTE CESSATION SERVICE INTEGRATION AIMED AT IMPROVING BIRTH OUTCOMES.

Integrated service delivery is an approach aimed at improving the health and well-being of women, children, and families by providing access to a quality, comprehensive, and coordinated community-based system of services.⁷⁹ Specific models that promote service integration and target healthy birth outcomes and infant mortality reduction include co-location of reproductive and other healthcare services, Healthy Start, home visiting, group prenatal care, and parenting support. These programs provide case management, smoking cessation, screening, risk assessment, referral to

local resources, and counseling and education at clients' homes to improve birth outcomes.⁸⁰



The federal Healthy Start program⁸¹ is an initiative mandated to reduce infant mortality rates and improve perinatal outcomes through grants to areas with high annual infant mortality rates. Healthy Start projects address disparities in the health of mothers and babies due in part to inadequate access to care by providing them with direct outreach and client recruitment, health education, case management, depression screening and referral, and interconception care services. Healthy Start also uses community and peer outreach, provides medical care, and helps women meet basic needs, such as food and housing. Compared to the overall national infant mortality rate of 6.7/1,000 live births in 2006, the infant mortality rate for Healthy Start projects was 5.7/1,000.⁸² The Healthy Start program serves as a link to smoking cessation services. For example, Florida Healthy Start providers are required to use the Five A's approach with women during pregnancy and also offer tobacco cessation services for pregnant and postpartum women and anyone living in the home who smokes.⁸³

Example: Text4baby⁸⁴ is an individualized, mobile phone text messaging service that provides prenatal and healthy lifestyle advice, including tips for tobacco-free living, to expectant and new mothers. Based on smoking status and stage of

pregnancy, a woman receives individualized cessation-related tips and resources encouraging her to quit smoking or stay smoke free. Text4baby is a public-private partnership with participation from state health departments, government, corporations, academic institutions, professional associations, and nonprofits. The service is available for free to pregnant women thanks to participating wireless service providers.

RECOMMENDATION 8: IMPLEMENT EVIDENCE-BASED TOBACCO CONTROL POLICIES THAT AUGMENT TOBACCO CESSATION FOR WOMEN BEFORE, DURING, AND AFTER PREGNANCY.

State agencies including public health and housing should work together to promote a comprehensive approach that encourages cessation by all family members of pregnant women and infants and implement smoke-free home policies, especially in federally assisted and multi-unit housing. State and local strategies to prevent initiation of smoking or increase smoking cessation among pregnant women—such as combining higher cigarette taxes with smoke-free policies—can be effective in reducing prenatal smoking. Cigarette tax increases may help curb smoking in women before, during, and after pregnancy. A dollar increase in cigarette taxes or prices increased the probability of quitting by 5 percentage points in the final trimester and increased the probability that a new mother would not return to smoking four months after giving birth by 4 percentage points.⁸⁵ In addition, implementing a full worksite smoking ban increases quit rates by the third trimester by an estimated 5 percentage points. This ban policy includes promoting tobacco-free policies in work, public places, and environments affecting pregnant women or new moms, like educational facilities and commercial and home-based day care settings.

A number of communities in California have adopted ordinances restricting smoking in multi-unit housing, including several ordinances that eliminate smoking in individual units in certain types of multi-unit housing.⁸⁶ Several communities



in California and a number of states have enacted laws eliminating smoking in common areas, requiring disclosure of smoking policies and status, or establishing that SHS is a nuisance.⁸⁷

***State Example:** A smoking ban in Pueblo, Colorado, was the United States' first evidence that population-level interventions using public smoking bans improved maternal and fetal outcomes. The results of a "natural experiment" that compared outcomes in two cities, one with a smoking ban (Pueblo) and one without a ban (El Paso), showed reductions in both maternal smoking and premature births in the city with a smoking ban.⁸⁸*

***State Example:** In 2004, Massachusetts enacted a statewide smoke-free law. Subsequent research showed that women were less likely to smoke during pregnancy if they lived in a municipality with an indoor smoking ordinance in place. Furthermore, women who lived in a municipality with an ordinance for more than two years were less likely to smoke than women who lived in a municipality with an ordinance for less than a year.⁸⁹*

Conclusion

In view of the significant health risks posed to women and their children by tobacco use before, during, and after pregnancies, public health policies and programs are needed to protect these populations. Smoking cessation programs in pregnancy reduce the proportion of women who continue to smoke and reduce low birth weight and preterm birth. State and territorial health agencies have a vital interest in improving birth outcomes and reducing adverse outcomes affected by maternal smoking. States have found optimal success in reducing tobacco use prevalence when, in addition to increasing individual access to barrier free care and clinical services, they and their partners pursue multi-faceted community- and state-level interventions such as mass media campaigns, legislation raising the price of tobacco products, reducing exposure to SHS, and the creation of accessible quitlines. There are also opportunities under ACA to support efforts to remove barriers to treatment to help facilitate tobacco cessation efforts.



Resources

2010 Surgeon General's Report—How Tobacco Smoke Causes Disease: The Biology and Behavioral Basis for Smoking-Attributable Disease

http://www.cdc.gov/tobacco/data_statistics/sgr/2010/index.htm

The American College of Obstetricians and Gynecologists 2010 Committee Opinion on Smoking Cessation During Pregnancy

<http://www.acog.org> (Search “smoking cessation during pregnancy”)

CDC's *The Health Communicator's Social Media Toolkit*

http://www.cdc.gov/socialmedia/tools/guidelines/pdf/socialmediatoolkit_bm.pdf

The Guide to Community Preventive Services

<http://www.thecommunityguide.org/index.html>

Pediatric and Pregnancy Nutrition Surveillance System

<http://www.cdc.gov/pednss/>

Pregnancy Risk Assessment Monitoring System

<http://www.cdc.gov/prams/>

Smokefree Women

<http://women.smokefree.gov/>

Text4baby

<http://www.text4baby.org/>

U.S. Public Health Service 2008 Guideline on Treating Tobacco Use and Dependence

<http://www.ncbi.nlm.nih.gov/books/NBK63952/>

Women, Infants, and Children

<http://www.fns.usda.gov/wic>

State Programs

Alabama: Plan First Family Planning for Women

<http://www.adph.org/planfirst/Default.asp?id=5936>

California: Smokers' Helpline

<http://www.nobutts.org/>

Colorado: My Quit Path

<http://www.myquitpath.com/>

Florida: Healthy Start Standards and Guidelines

<http://www.doh.state.fl.us/family/mch/hs/hstraining/hstraining.html>

Massachusetts: Make Smoking History

<http://www.makesmokinghistory.org/>

Michigan: Tobacco Quitline

<http://www.njhcommunity.org/michigan/>

New York: Baby & Me Tobacco Free (additional states also offer this program)

<http://babyandmetobaccofree.org/>

North Carolina: You Quit, Two Quit

<http://www.youquittwoquit.com/>

Oklahoma: SoonerQuit

<http://www.okhca.org/individuals.aspx?id=2733>

Utah: Tobacco Free Utah

<http://www.tobaccofreeutah.org/index.html>

Endnotes

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