

Pregnancy and Secondhand Smoke

Cathy L. Melvin, PhD, MPH

Chair, The National Partnership for Smoke-Free Families



Objectives

- **To summarize the relationship of secondhand smoke exposure to fetal and infant health**
- **To summarize successes and challenges in addressing secondhand smoke exposure during pregnancy**
- **To gain skills in helping pregnant women quit smoking and reduce their exposure to secondhand smoke**

What is Secondhand Smoke?

- Secondhand smoke is a mixture of the smoke given off by the burning end of a cigarette, pipe, or cigar, and the smoke exhaled by smokers.
- Secondhand smoke is also called environmental tobacco smoke (ETS)
- Exposure to secondhand smoke is sometimes called involuntary or passive smoking
- Secondhand smoke contains more than 4,000 substances, several of which are known to cause cancer in humans or animals.

Involuntary Smoking Defined for the Fetus

- From the 2006 Report of the Surgeon General: The Health Consequences of Involuntary Exposure to Tobacco Smoke
- Exposure of the fetus to tobacco smoke, whether from active smoking by the mother or from her exposure to secondhand smoke

Secondhand Smoke Exposure of Pregnant Women

- While there are no national estimates for exposure to pregnant women, population-based studies estimate that at least 58% of children live in a house where there is regular smoking by the parents, other residents, or visitors (Schuster, Franke, & Pham, 2002).
- While maintaining a smoke-free home is helpful, a study by Matt et al demonstrated that environmental tobacco smoke contamination was still 5-7 times higher in homes where people smoked *outside*, as compared to homes with non-smokers (Matt et al., 2004).

Impact of Secondhand Exposure During Pregnancy

- A growing body of literature over the past decade is confirming the hypothesis that secondhand smoke exposure in pregnant women contributes to increased rates of low birth weight, growth retardation, fetal mortality and preterm delivery
- In the laboratory setting, the effects of passive smoking on placental development have been found to be similar to those created by active smoking

Impact of Secondhand Exposure During Pregnancy – Kharrazi

- Analyzed data from specimens of approximately 2,800 non-smoking pregnant women in California using newer, more sensitive measures of serum cotinine.
- 62% of these women had cotinine levels of at least .05 ng/mL
- These levels accounted for 12% of all adverse pregnancy outcomes including prematurity, term low birthweight, and fetal death.
- These results suggest that second-hand smoke exposure among pregnant women may be more ubiquitous than previously thought, and may have a greater impact on pregnancy outcomes than previously suspected.

Children's Exposure to Secondhand Smoke

- 11 percent of children age 6 and under are exposed to secondhand smoke in their homes on a regular basis (4 or more days per week)
- Parents are responsible for 90% of children's exposure to ETS
- Exposure to ETS is higher and prevalence of asthma is more likely in households with low income and low education levels.
- Children with asthma have as much exposure to ETS as children without asthma.

Source: National Survey on Environmental Management of Asthma and Children's Exposure to ETS, 2004



Health Effects for Children

- Children are particularly vulnerable to the effects of secondhand smoke
 - because they are still developing physically
 - have higher breathing rates than adults
 - have little control over their indoor environments.
- Children exposed to high doses of secondhand smoke, such as those whose mothers smoke, run the greatest relative risk of experiencing damaging health effects.

Health Risks for Children

- Secondhand smoke causes premature death and disease in children
- Children exposed to secondhand smoke are at increased risk for Sudden Infant Death Syndrome
 - Cigarette smoking by parents leading to involuntary exposure of the baby carries a high relative risk of 3 for SIDS

Source: 2006 Report of the Surgeon General



Health Risks for Children

- Smoking by parents causes respiratory symptoms and slows lung growth in their children
- Infants and children younger than 6 who are regularly exposed to secondhand smoke are at increased risk of lower respiratory track infections, such as pneumonia and bronchitis.
- Children who regularly breathe secondhand smoke are at increased risk for **middle ear infections.**
- Source: 2006 Report of the Surgeon General

Health Risks for Children

- Causal Relationships
 - Lower respiratory illnesses in infants and children
 - Middle ear disease in children, including acute and recurrent otitis media and chronic middle ear effusion
 - Cough, phlegm, wheeze and breathlessness among school age children
 - Ever having asthma

Source: 2006 Report of the Surgeon General



Health Risks for Children

- Causal Relationships
 - Maternal smoking during pregnancy leads to persistent adverse effects on lung function across childhood
 - Exposure to secondhand smoke after birth causes a lower level of lung function during childhood



Health Risks for Children with Asthma

- Asthma is the most common chronic childhood disease affecting 1 in 13 school aged children on average.
- Exposure to secondhand smoke can cause
 - Onset of wheeze illnesses in childhood
 - New cases of asthma in children who have not previously shown symptoms
- Exposure to secondhand smoke can trigger asthma attacks and make asthma symptoms more severe.

Source: 2006 Report of the Surgeon General



Ways to Reduce Exposure to Secondhand Smoke

- Offering help through the healthcare system
- Use of media
- Policy
 - Price of cigarettes/other tobacco products
 - Reimbursement for treatment
 - Smoke-free environments
 - Community and worksite interventions
- Research, evaluation and surveillance

5 A's Approach to Smoking Cessation

- A 5-step smoking intervention for pregnant women
- Consistent with strategies developed by the US Public Health Service, Treating Tobacco Use and Dependence Clinical Guidelines
- Adapted for pregnant women by ACOG



The 5 A's

1. *Ask* about tobacco use

2. *Advise* to quit

3. *Assess* willingness to make a quit attempt

4. *Assist* in quit attempt

5. *Arrange* follow-up

***How do we include consideration
of secondhand smoke
in the 5As?***

Disclosure of Pregnant Woman's Exposure to SHS

- Since you found out you were pregnant, about how many hours a day, on average, are you in the same room with someone who smokes?
- Which of the following statements best describes the rules about smoking inside your home while you were pregnant?
 - No one was allowed to smoke anywhere inside your home
 - Smoking was allowed in some rooms or at some times
 - Smoking was permitted anywhere inside your home

Source: Adapted from The Pregnancy Risk Assessment Monitoring System, The Centers for Disease Control and Prevention, 2002.

Disclosure of Child's Exposure to SHS

- A validated, 5-part screening instrument for assessing child's exposure has been developed and tested
 - Does child's mother currently smoke?
 - In the home?
 - Does child's father currently smoke?
 - In the home?
 - Is your child exposed to cigarette smoke on a regular basis (any exposure at least one time per week) from anyone other than the parents?

Source: Seifert JA, et al., 2002.

Treating Exposure to SHS

- Intervention trials have focused on parents of children with health problems
- Mixed results from trials
 - Clinical settings in pediatric and group model HMO have shown some success
 - More intensive interventions with biofeedback of child's cotinine level have lead to significant reductions in exposure
 - Home based programs show mixed results

Treating Exposure to SHS

- Good evidence to support use of medicinal nicotine (MN) as a way to reduce exposure of children
- MN is least toxic way to get nicotine for both the smoker and those living or working with the smoker
- Complete substitution of MN for smoking is the goal

Treating Exposure to SHS

- If no cessation or use of MN, messages should be
 - Don't smoke in your home
 - Don't smoke in your car
- Stress impact of secondhand smoke exposure on immediate problem with child
 - ear infections
 - Bronchitis
 - asthma

Recommended treatment for pregnant smokers

- **Ask** about smoking and exposure to SHS
- **Advise** smokers to quit and smokers and non-smokers exposed to SHS about the harms of exposure
- **Assess** willingness to quit and/or ways to minimize exposure to SHS

Recommended Treatment for Pregnant Smokers Wanting to Quit

- ***Assist*** pregnant smokers and household members who smoke
 - Counseling
 - Skills building
 - Pregnancy-specific self-help materials
 - Support
 - Offer MN to household members to reduce or eliminate SHS exposure of pregnant woman
- ***Arrange*** to follow-up at subsequent visits and to begin postpartum relapse prevention counseling late in pregnancy

Recommended Treatment for Parents who Smoke

Advise

- Quitting and give information about the benefits of quitting for themselves and their children
- Consultation with their primary care clinician about obtaining help, including pharmacotherapy, if they are willing to quit
- Provide information about NRT

Recommendations from Treating Tobacco Use and Dependence, Clinical Practice Guidelines

- First-line medications for smokers include bupropion (sustained-release bupropion), nicotine gum, nicotine inhaler, nicotine nasal spray, and nicotine patch.
- Second-line medications for smokers include clonidine.

Resources

Clean Air for Healthy Children and Families

- Provider Training and Train-the-Trainer Smoking Cessation Curriculum
- Supported by the American Academy of Pediatrics, Pennsylvania Chapter
- Smoking cessation counseling training program primarily targeted to healthcare professionals caring for pregnant women, mothers and caregivers of young children, and teens.
- www.cleanairforhealthychildren.org

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Partnership for Smoke-Free Families Program

Technical Assistance Manual

- For healthcare organizations considering the implementation of pregnancy-specific guidelines for smoking cessation.
- Outlines the development and implementation of PSF, a collaborative effort among three large health care systems in San Diego, California.
- Focuses on smoking cessation for pregnant women and the reduction of environmental tobacco smoke exposure among infants and young children.
- Contains valuable lessons learned, recommendations for program implementation, and samples of program materials.
- Designed to provide other organizations with the information they need to create similar programs in their own unique health care settings.
- Available on www.smokefreefamilies.org

Forever Free ...for Baby and Me™ Program

- A 10-booklet tobacco treatment program tailored specifically for pregnant and post-partum women.
- Based on previous research and interviews with women
- Includes a booklet for the woman's partner.
- Previews of the booklet are available on the Moffitt Cancer Center website.
- The guide can be purchased at <http://www.moffitt.org/foreverfreestore/>

Environmental Protection Agency

- Free Resources!
 - *Smoke-free Homes Community Action Kit*
 - *Planning Guide for Pledge Events CD-ROM*
 - *Local Programs Promoting Smoke-free Homes Booklets*
- Designed to help you start local smoke-free homes program and educate the public about the health risks associated with exposure to ETS.
- EPA publications and materials page to learn more about ordering these materials at no cost:
www.epa.gov/smokefree/publications.html

Smoke-Free Homes: Secondhand Smoke Reduction Program

- National effort devoted to reducing children's exposure to secondhand smoke.
- Sponsored by the American Academy of Allergy, Asthma & Immunology (AAAAI), the American Academy of Pediatrics (AAP), the AAP Center for Child Health Research, and Children's National Medical Center in Washington, DC.
- www.kidslivesmokefree.org

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Smoke-Free Homes

Resources for clinicians:

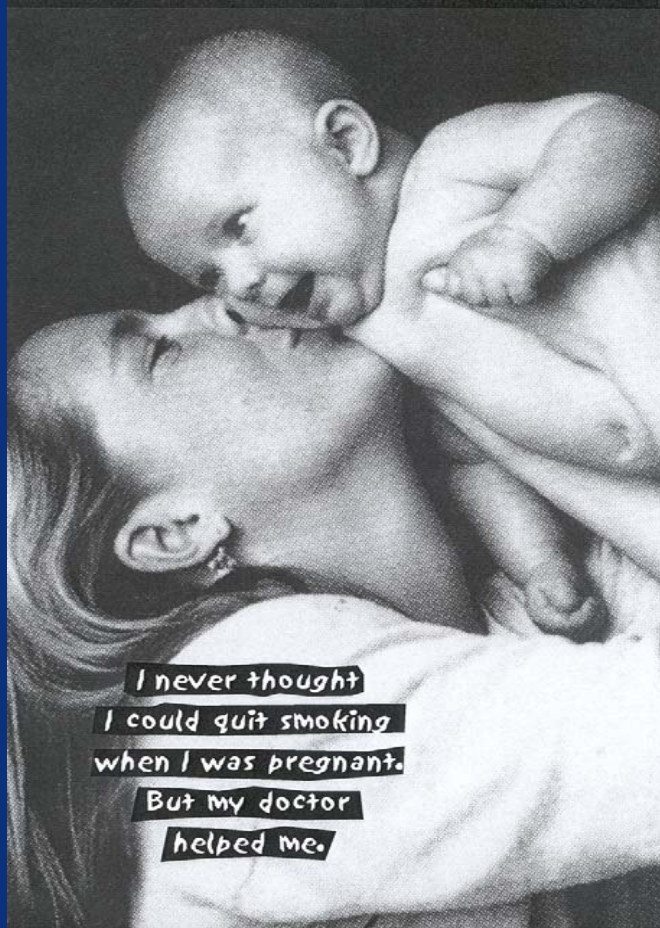
- Professional's Toolbox with direct links to downloadable materials from organizations committed to the effort;
- Training materials on pediatric secondhand smoke exposure reduction from a collaborative effort with CEASE (Clinical Effort Against Secondhand Smoke Exposure) Program
- Grand Rounds talks and other speaker's materials to educate pediatricians and residents in counseling of parents to reduce SHS exposure of their children
- Online continuing medical education course series for pediatric providers, including nursing and other support staff

Smoking Cessation in the Pediatric Office

- Sponsored by the University of Alabama
- Assists pediatric health care providers in determining the smoking status of the parents of pediatric patients and influencing those who smoke to quit.
- www-cme.erep.uab.edu/scpo/index.html

CEASE: Clinical Effort Against Secondhand Smoke Exposure

- Developed by child healthcare clinicians to help other child healthcare clinicians adjust their office setting to address parental tobacco use in a routine and effective manner.
- **www.ceasetobacco.org**



*I never thought
I could quit smoking
when I was pregnant.
But my doctor
helped me.*

THE END

The National Partnership for
Smoke-Free Families

www.smokefreefamilies.org

or

www.helppregnantmokersquit.org



SMOKE-FREE
FAMILIES

Care Providers

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[Facts About Smoking and Pregnancy](#)
[Partner Training](#)
[Best Methods to Quit](#)
[Care Professional Resources](#)



Quitting smoking is the most important action a pregnant woman can take to ensure the health of her baby. The U. S. Surgeon General has reported that eliminating smoking during pregnancy could prevent 10% of all infant deaths and 12% of all deaths due to perinatal conditions.

As a health care provider, you now have an enormous opportunity to improve the health of mothers and their babies by helping pregnant smokers quit. An easy-to-implement, evidence-based clinical counseling approach has been recently developed and can double or even triple quit rates among pregnant smokers. This approach has been published by the U. S. Public Health Service in its Treating Tobacco Use and Dependence Clinical Practice Guideline, and by the American College of Obstetricians and Gynecologists. The approach is effective for most pregnant smokers, including low-income women, the group most likely to smoke during pregnancy.

[More about the counseling approach](#)

Learn How

There are a number of resources to help you learn how to making smoking cessation counseling a routine part of prenatal care. [\[more\]](#)

Resources

A variety of resources are available for care professionals... [\[more\]](#)

Facts About Smoking and Pregnancy

Learn more about the effects of smoking on your body.... [\[more\]](#)

Best Methods to Quit

An easy-to-implement, evidence-based clinical counseling approach, the "5 A's", has been recently developed... [\[more\]](#)

05.04.06 5As | Clip

How health professionals can help pregnant smokers quit using the 5As



05.04.06 5A's
Clinician
Checklist |
Clip
5A's Clinician
Checklist and
Flowsheet

05.04.06 Motivating Pregnant Patients to Quit Smoking | Clip

This document, by Barry Egner, MD, provides important information on the steps and stages in motivating patients to change behavior.



05.05.06
Adapting the
5As for
Pregnant
Women |
Clip
Helping
Pregnant
Smokers:

A adapting the 5A's for Pregnant Women

05.05.06 With Help From Your Doctor | Clip

A poster reminding patients that "with help from your doctor you could quit smoking by your next visit".