

Treating Tobacco Use and Dependence: The OB/GYN Patient

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This presentation created in collaboration with:
The Pharmacy Partnership for Tobacco Cessation (F Vitale) and Rx for Change (K Hudmon)

"Smoking is...

...the chief, single, avoidable
cause of death in our society
and the most important public
health issue of our time."

C. Everett Koop, M.D., former U.S. Surgeon General

Smoking has profound negative health consequences
on both the fetus and the mother and is the main
cause of obstetric morbidity and mortality.

HEALTH CONSEQUENCES of SMOKING

- Cancers
 - Acute myeloid leukemia
 - Bladder and kidney
 - Cervical
 - Esophageal
 - Gastric
 - Laryngeal
 - Lung
 - Oral cavity and pharyngeal
 - Pancreatic
- Cardiovascular diseases
 - Abdominal aortic aneurysm
 - Coronary heart disease
 - Cerebrovascular disease
 - Peripheral arterial disease
- Other effects: cataract, osteoporosis, periodontitis, poor surgical outcomes
- Pulmonary diseases
 - Acute (e.g., pneumonia)
 - Chronic (e.g., COPD)

U.S. Department of Health and Human Services. (2004). *The Health Consequences of Smoking: A Report of the Surgeon General*.

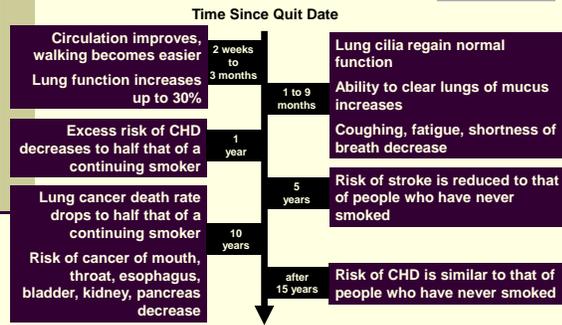
HEALTH CONSEQUENCES of SMOKING: REPRODUCTIVE HEALTH

- Reduced fertility in women
- Pregnancy and pregnancy outcomes
 - Placenta previa
 - Placental abruption
 - Preterm premature rupture of membranes
 - Preterm delivery
 - Low infant birth weight
- Infant mortality
 - Sudden infant death syndrome (SIDS)



U.S. Department of Health and Human Services. (2004). *The Health Consequences of Smoking: A Report of the Surgeon General*.

QUITTING: HEALTH BENEFITS



COMPOUNDS in TOBACCO SMOKE

An estimated 4,800 compounds in tobacco smoke, including 11 proven human carcinogens

Gases	Particles
<ul style="list-style-type: none"> ■ Carbon monoxide ■ Hydrogen cyanide ■ Ammonia ■ Benzene ■ Formaldehyde 	<ul style="list-style-type: none"> ■ Nicotine ■ Nitrosamines ■ Lead ■ Cadmium ■ Polonium-210



Nicotine is NOT the primary culprit for the negative health effects of tobacco use in adults.

NICOTINE in Pregnancy

- May contribute to:
 - Uteroplacental insufficiency via vasoconstriction
 - Fetal neurotoxicity resulting in delayed or impaired brain development
 - Slowed maturation of pulmonary cells
 - Increased risk for SIDS
- These risks are based primarily on animal studies
- Note: Nicotine replacement therapy (NRT) provides considerably lower levels of nicotine than does tobacco use.

DRUG INTERACTIONS with SMOKING

Clinicians should be aware of their patients' smoking status:

- Clinically significant interactions result not from nicotine but from the combustion products of tobacco smoke.
- These tobacco smoke constituents (e.g., polycyclic aromatic hydrocarbons; PAHs) may enhance the metabolism of other drugs, resulting in a reduced pharmacologic response.
- Smoking might adversely affect the clinical response to the treatment of a wide variety of conditions.

HANDOUT

PHARMACOKINETIC DRUG INTERACTIONS with SMOKING

Drugs that may have a *decreased effect* due to induction of CYP1A2:

- Bendamustine
- Caffeine
- Clozapine
- Erlotinib
- Fluvoxamine
- Irinotecan (clearance increased due to increased glucuronidation)
- Olanzapine
- Ropinirole
- Tacrine
- Theophylline

Smoking cessation will reverse these effects.

HANDOUT

With permission, from *Rx for Change: Clinician-Assisted Tobacco Cessation*, <http://rxforchange.ucsf.edu>

PHARMACODYNAMIC DRUG INTERACTIONS with SMOKING

Smokers who use combined hormonal contraceptives have an increased risk of serious cardiovascular adverse effects:

- Stroke
- Myocardial infarction
- Thromboembolism



This interaction **does not** decrease the efficacy of hormonal contraceptives.

Women who are 35 years of age or older AND smoke at least 15 cigarettes per day are at significantly elevated risk.

With permission, from *Rx for Change: Clinician-Assisted Tobacco Cessation*, <http://rxforchange.ucsf.edu>

Helping Patients Quit

What works?

The CLINICIAN'S ROLE in PROMOTING CESSATION

- Tobacco users expect to be encouraged to quit by health professionals.
- Screening for tobacco use and providing tobacco cessation counseling are positively associated with patient satisfaction (Barzilai et al., 2001).

Failure to address tobacco use tacitly implies that quitting is not important.

Barzilai et al. (2001). *Prev Med* 33:595-599.

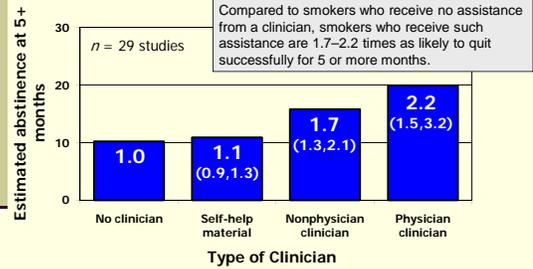
CLINICAL PRACTICE GUIDELINE for TREATING TOBACCO USE and DEPENDENCE

- Released May 7, 2008
- Sponsored by the Agency for Healthcare Research and Quality of the U.S. Public Health Service with
 - American Legacy Foundation
 - Centers for Disease Control and Prevention
 - National Cancer Institute
 - National Institute for Drug Addiction
 - National Heart, Lung, & Blood Institute
 - Robert Wood Johnson Foundation
 - University of Wisconsin

The 2008 Guideline is a distillation of more than 8,700 research articles.

www.surgeongeneral.gov/tobacco/

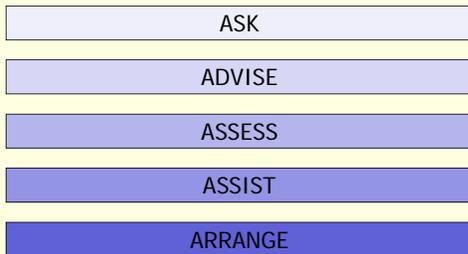
EFFECTS of CLINICIAN INTERVENTIONS



Fiore et al. (2008). *Treating Tobacco Use and Dependence: 2008 Update. Clinical Practice Guideline.* Rockville, MD: USDHHS, PHS.

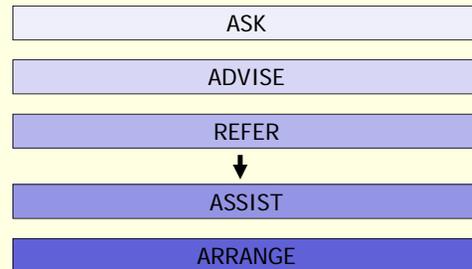
With permission, from *Rx for Change: Clinician-Assisted Tobacco Cessation.* <http://rxforchange.ucsf.edu>

Comprehensive Intervention: The 5 A's



Fiore et al. (2008). *Treating Tobacco Use and Dependence: 2008 Update. Clinical Practice Guideline.* Rockville, MD: USDHHS, PHS.

Brief Intervention: Ask-Advise-Refer



Fiore et al. (2008). *Treating Tobacco Use and Dependence: 2008 Update. Clinical Practice Guideline.* Rockville, MD: USDHHS, PHS.

The 5 A's: ASK

- **ASK** all patients about tobacco use
 - Record on medical chart, flag chart for future reference, and follow-up at future visits
 - "Do you ever smoke or use any type of tobacco?"
 - "I take time to ask all of my patients about tobacco use—because it's important."
 - "[Condition X] often is caused or worsened by smoking. Do you, or does someone in your household smoke?"
 - Ask in a way that promotes disclosure

The 5 A's: Ask (cont'd)

Create a questionnaire:

- A. I have never smoked, or I have smoked less than 100 cig/life
- B. I stopped smoking **before** I became pregnant and am not smoking now
- C. I stopped smoking **after** I became pregnant and am not smoking now
- D. I smoke some now but have cut back since I found out I was pregnant
- E. I smoke regularly now, the same as I have

How To Respond

- If A, congratulate
- If B or C, congratulate and reinforce quit
- If D or E:
 - Classify as “smoker”
 - Document status in chart
 - Proceed with intervention
 - Advise and Refer (brief intervention)
 - Advise, Assess, Assist, Arrange (5 A's)

The 5 A's (cont'd)

- **ADVISE** tobacco users to quit (clear, strong, personalized, sensitive)
 - “It’s important that you quit as soon as possible, and I can help you.”
 - “I realize that quitting is difficult. It is the most important thing you can do to protect the health of you and your baby, now and in the future. I have training to help my patients quit, and when you are ready, I will work with you to design a specialized treatment plan.”
 - “Quitting early in pregnancy will provide the greatest benefit to you and your baby.”

How to Advise: Pregnant Women

- Review potential negative effects to mother, fetus and birth process
- Review benefits for mother and child
- Help the patient to identify a powerful, internal reason to quit
 - What other reasons may there be for quitting?
- Do not:
 - Scare
 - Shame
 - Intimidate

The 5 A's (cont'd)

- **ASSESS** readiness to make a quit attempt
- **ASSIST** with the quit attempt
 - Not ready to quit: provide motivation (the 5 R's)
 - Ready to quit: design a treatment plan
 - Recently quit: relapse prevention

The 5 A's (cont'd)

- **ARRANGE** follow-up care

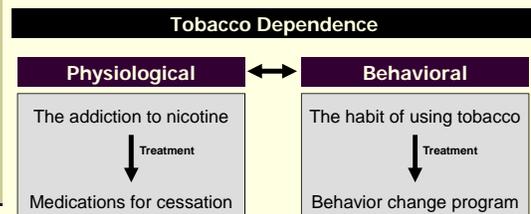
Number of sessions	Estimated quit rate*
0 to 1	12.4%
2 to 3	16.3%
4 to 8	20.9%
More than 8	24.7%

* 5 months (or more) postcessation

PROVIDE ASSISTANCE THROUGHOUT THE QUIT ATTEMPT

Fiore et al. (2008). *Treating Tobacco Use and Dependence: 2008 Update. Clinical Practice Guideline*. Rockville, MD: USDHHS, PHS (p. 86).

TOBACCO DEPENDENCE: A 2-PART PROBLEM



Treatment should address the physiological **and** the behavioral aspects of dependence.

With permission, from *Rx for Change: Clinician-Assisted Tobacco Cessation*. <http://rxforchange.ucsf.edu>

CPG Recommendations: Medications

“Numerous effective medications are available for tobacco dependence, and clinicians should encourage their use by all patients attempting to quit smoking—except when medically contraindicated or with specific populations for which there is insufficient evidence of effectiveness (i.e., pregnant women, smokeless tobacco users, light smokers, and adolescents).”

Strength of evidence = A

Fiore et al. (2008). *Treating Tobacco Use and Dependence: 2008 Update. Clinical Practice Guideline*. Rockville, MD: USDHHS, PHS (p. vii).

CPG Recommendations: Effectiveness of Medications in Pregnant Women

- Lack of sufficiently-powered, conclusive studies
- Panel did not make a recommendation regarding medication use during pregnancy

Fiore et al. (2008). *Treating Tobacco Use and Dependence: 2008 Update. Clinical Practice Guideline*. Rockville, MD: USDHHS, PHS (p. 170).

CPG Recommendations: Safety of Medications in Pregnant Women

“Nicotine most likely does have adverse effects on the fetus during pregnancy. Although the use of NRT exposes pregnant women to nicotine, smoking exposes them to nicotine plus numerous other chemicals that are injurious to the woman and fetus. These concerns must be considered in the context of inconclusive evidence that cessation medications boost abstinence rates in pregnant smokers.”

Fiore et al. (2008). *Treating Tobacco Use and Dependence: 2008 Update. Clinical Practice Guideline*. Rockville, MD: USDHHS, PHS (p. 172).

CPG Recommendations: Psychosocial Interventions for Pregnant Women

“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

Fiore et al. (2008). *Treating Tobacco Use and Dependence: 2008 Update. Clinical Practice Guideline*. Rockville, MD: USDHHS, PHS (p. 165).

CPG Recommendations: Psychosocial Interventions for Pregnant Women (cont'd)

“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

Fiore et al. (2008). *Treating Tobacco Use and Dependence: 2008 Update. Clinical Practice Guideline*. Rockville, MD: USDHHS, PHS (p. 165).

CPG Recommendations: Psychosocial Interventions for Pregnant Women (cont'd)

Pregnant smokers	Number of arms	Estimated odds ratio (95% CI)	Estimated abstinence rate (95% CI)
Usual care	2	1.0	8.6
Self-help materials	2	1.9 (1.2-2.9)	15.0 (10.1-21.6)

Pregnant smokers	Number of arms	Estimated odds ratio (95% CI)	Estimated abstinence rate (95% CI)
Usual care	8	1.0	7.6
Psychosocial intervention	9	1.8 (1.4-2.3)	13.3 (9.0-19.4)

Fiore et al. (2008). *Treating Tobacco Use and Dependence: 2008 Update. Clinical Practice Guideline*. Rockville, MD: USDHHS, PHS (pp. 166, 169).

Examples of Effective Psychosocial Interventions with Pregnant Smokers

- Physician advice regarding smoking-related risks (2-3 min), videotape with information on risks, barriers, and tips for quitting, midwife counseling in one 10-min session, self-help manual, and follow-up letters
- Pregnancy-specific self-help manuals and one 10-min counseling session with a health educator
- One 90-min counseling session with bimonthly telephone follow-up calls during pregnancy and after delivery

Fiore et al. (2008). *Treating Tobacco Use and Dependence: 2008 Update. Clinical Practice Guideline*. Rockville, MD: USDHHS, PHS (p. 167).

Ask-Advise-Refer (brief intervention): Your Role

- Can be done in fewer than 3 minutes
- Do not feel obligated to conduct the entire cessation program, just start it!
- **Begin** the process by:
 - **Asking** patients to about tobacco use
 - **Advising** patients to quit
 - Recommend a medication, if appropriate
 - **Referring** patients to other resources



“Can’t I Just Cut Back?”

- No clinical evidence of efficacy
- Most individuals who cut back compensate by smoking differently
- Many quickly return to baseline
- No way to know effect of even one cigarette on fetus – there is no safe level of tobacco use

“Quitting smoking is like learning any new behavior. It is important to create a plan and stick to it.”

Where to Refer: Behavior Change Programs

- **1 800 QUIT NOW**
- All products have free behavior change programs that accompany product
- Hospital/Community
 - Workplace group programs
 - Hospital-based group programs
- Healthcare professional specialist
- Websites:
 - www.quitnet.com
 - www.acog.org



Where to Refer: Social Support

- Encourage creation of support network:
 - Formal program for quitting
 - On line support: www.quitnet.com
 - Chat rooms for pregnant smokers
 - Family
 - Friends
 - Co-workers
 - Church group

An Important Consideration: Influence of Family Members

- Does husband/significant other smoke?
- Does mother or grandmother smoke?
 - What was her experience while pregnant?
- Are there other smokers in household?

Where to Refer: Cessation Medications

- Non prescription:
 - Nicotine transdermal patch
 - Nicotine gum
 - Nicotine lozenge
- Prescription:
 - Nicotine transdermal patch
 - Nicotine oral Inhaler
 - Nicotine nasal spray
 - Bupropion SR
 - Varenicline

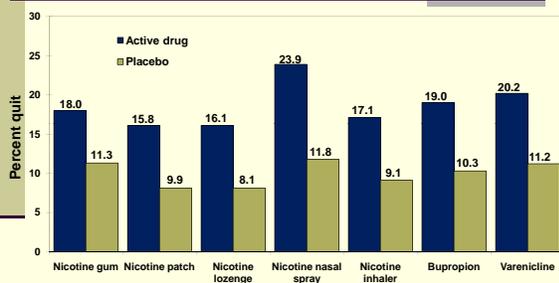


HANDOUT

Why Use a Cessation Medication?

- Withdrawal is substantial in most smokers
 - Irritability
 - Anxiousness
 - Impatience
 - Restlessness
- If "Cold Turkey":
 - Most return to smoking to relieve withdrawal
- Medications:
 - Substantially reduce or eliminate withdrawal so quitter can focus on behavior change
 - Approximately double chances of quitting

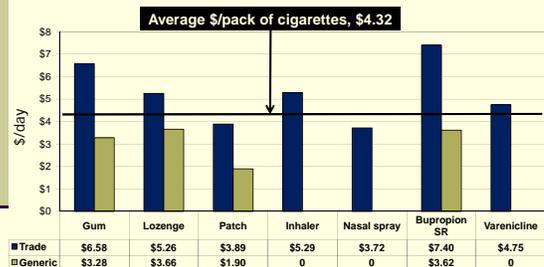
LONG-TERM (≥ 6 month) QUIT RATES for AVAILABLE CESSATION MEDICATIONS



Data adapted from Cahill et al. (2008), *Cochrane Database Syst Rev*; Stead et al. (2008), *Cochrane Database Syst Rev*; Hughes et al. (2007), *Cochrane Database Syst Rev*

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COMPARATIVE DAILY COSTS of PHARMACOTHERAPY

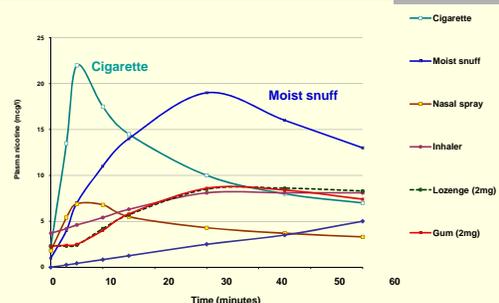


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Nicotine from Smoking vs. NRT

- Smoking:
 - Rapid administration via lungs
 - Peak: 11 seconds
 - Frequent consumption of cigarette
 - High dose of nicotine
- NRT Use:
 - Slow to very slow administration (oral/skin)
 - Peak 15 min to 6 hours
 - Less frequent administration
 - Much lower dose

PLASMA NICOTINE CONCENTRATIONS for NICOTINE-CONTAINING PRODUCTS



With permission, from *Rx for Change: Clinician-Assisted Tobacco Cessation*, <http://rxforchange.ucsf.edu>

Medication Recommendations

- Behavioral interventions: first line of treatment
- Pregnancy classifications for medications:
 - Zyban: Category C
 - Chantix: Category C
 - Rx NRT: Category D
- If NRT is chosen:
 - Clearly discuss pros/cons
 - Document
 - Monitor blood levels throughout
 - Have frequent follow up

If NRT is Chosen:

- Generally use with woman smoking > 20/day
- Ad libitum forms (gum, lozenge, inhaler)
- Use only PRN to deal with cravings
- If using patch:
 - Use only while awake (16 hours)
 - Use for shortest period possible
 - Downside: continuous exposure
- Strongly encourage continued participation in behavior change programs

A Call To Action!

- Integrate tobacco cessation interventions into routine patient care for ALL patients of ALL ages
 - Pregnancy opens a window of opportunity to intervene with a smoker
- You can have a profound effect on reducing the negative effects of tobacco:
 - Make **ASK** a vital sign
 - Make **ADVISE** a priority for all users
 - Make **REFER** a common practice