Treating Tobacco Dependence
Get with the Guidelines

Marie-Denise Gervais, MD
Family Medicine & Community Health
University of Miami Miller School of Medicine

Epidemiology

How Prevalent Is The Problem?

• Tobacco use, primarily cigarette smoking, is the leading cause of preventable morbidity and mortality in the United States.
• Tobacco use kills approximately 440,000 Americans every year.
• One in every five U.S. deaths.
• 70.9 million Americans aged 12 or older reported current use of tobacco.
Smoking and Cancer
Smoking increases the risk for many types of cancer:
- Lip
- Mouth
- Bladder
- Kidney
- Esophagus
- Lung
- Larynx (voice box)
- Pancreas

Other Diseases
Increases risk of HTN, coronary heart disease & stroke
- Sudden infant death syndrome (SIDS)
- Chronic Lung Disease
  - Bronchitis
  - Asthma
  - COPD
  - Emphysema

Health Effects During Pregnancy
- Abruptio
- Low-birth-weight
- Premature birth
Pregnancy Continued

- Smoking has adverse effects on unborn child
- 20-30% of smoking women quit in pregnancy
- Smoking cessation programmes are effective
- NRT is assumed to be safe
- Bupropion and varenicline are contra-indicated
- Post-partum follow up reduces the 70% relapse rate

Pregnancy is often a trigger for quitting


Adolescent Smoking

- Nearly all smokers begin as adolescents
- 75% become daily smokers by 20 y.o.
- Higher daily consumption, lower quit rate
- Female > Male
- Affective and Cognitive Components
  - Vulnerable subset: loss of autonomy with a few cigs also - greater withdrawal problems
  - Relationship to maternal smoking during pregnancy?

Adolescent Smoking Continued

- Address the issues that matter to the teenager
- Brief interventions are likely to be effective
- Pharmacotherapies are not licensed in teenagers

Teenagers care about the immediate benefits to their appearance, well being and financial status rather than future health gains

Mental health

- Psychotic disorders are associated with three times the risk of being a heavy smoker (35% vs 9%)
- Smoking may alleviate symptoms of psychosis
- Smoking and depression are related
- The antidepressants, bupropion and nortriptyline are effective in assisting smoking cessation
- Bupropion interacts with other antidepressants

People with mental health problems are more likely to smoke than those without mental illness.

Addiction

A state in which an organism engages in a compulsive behavior, even when faced with negative consequences.

This behavior is reinforcing, or rewarding.

A major feature of addiction is the loss of control in limiting intake of the addictive substance.

Nicotine Receptors in the Brain
Reward Pathways

Maximizing Efficiency of Nicotine Delivery for Addiction

Tobacco Addiction

Prevalent, chronic, relapsing addiction
23% of US men
19% of US women
27% of FL18-24 y/o
½ die from tobacco

http://science.fsu.edu/content/avoidsaddiction/images/withdraw.jpg

National Health Interview Survey
Florida Adult Tobacco Survey
Intervention Strategies

The Problem

Only 70% of family physicians currently ASK their patients if they use tobacco.

Only 40% take further action.

-AAFP

Why don’t doctors ask?

Too busy
Lack of expertise
No financial incentive
Expect futility
Don’t want to appear judgmental
Respect for patient’s privacy
Negative message might scare patients away
Health professional smokes

-AAFP
**Do you?**

Ask all patients  
Vital sign  
Medical record  
Electronic database  
Advise all who smoke to quit  
Assess willingness to quit  
Assist with brief or interventional counseling  
Arrange for follow-up

PHS Guidelines

**Ask**

Table 1. Ask—systematically identify all tobacco users at every visit

<table>
<thead>
<tr>
<th>Action</th>
<th>Strategies for implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implement an office-wide system that ensures that, for EVERY patient at EVERY clinic visit, tobacco-use status is queried and documented.¹</td>
<td>Expand the vital signs to include tobacco use or use an alternative universal identification system.²</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vital Signs</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood Pressure:</td>
<td></td>
</tr>
<tr>
<td>Pulse:</td>
<td>Weight:</td>
</tr>
<tr>
<td>Temperature:</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Respiratory Rate</th>
<th>Current</th>
<th>Former</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tobacco Use</td>
<td>(circle one)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹Required assessment is not necessary in the case of the adult who has never used tobacco or has not used tobacco for many years, and for whom this information is clearly documented in the medical record.  
²Alternative to expanding the vital signs are to place tobacco-use status stickers on all patient charts or to indicate tobacco use status using electronic medical records or computerized systems.

PHS Guidelines

**Advise**

“As your doctor, I need you to know that quitting smoking is the most important thing you can do to protect your health now and in the future. The clinic staff and I will help you.”

Personalize—Tie tobacco use to current symptoms and health concerns
Assess Willingness to Quit

Are you willing to quit smoking?
How convinced are you that quitting is important for your health?
How important is it for you to quit smoking?
How confident are you that you can quit?

If someone is initially not willing, that can change at any moment. Explore ambivalence, offer assistance and follow up.

Assist in becoming smoke-free

Offer counseling
Offer pharmacotherapy
Provide support through the office
Schedule follow up

3 EASY & FREE WAYS TO QUIT

Talk to a Quit Coach® who can help you quit tobacco.
1-877-U-CAN-NOW
1-877-822-6699

Online help quitting tobacco is only a few clicks away.
www.quitnow.net/florida

Looking for local face-to-face help? Find a center near you.
www.ahectobacco.com
Motivational Interviewing

The cycle of change
Ambivalent to cessation
• Move them closer to a cessation attempt
• Understand how you can help

Be a positive partner
Let them describe their doubts – and fear of failing
Identify how to plan a quit attempt
Offer the ongoing medical support

Adapted from Prochaska JO, DiClemente CC. J Consult Clin Psychol 1983; 51: 390-5

The cycle of change
Ready to make a cessation attempt
• Provide support for a quit attempt

Be supportive and enthusiastic!
Give time to planning the attempt
Set a quit date
Discuss problems of withdrawal

Adapted from Prochaska JO, DiClemente CC. J Consult Clin Psychol 1983; 51: 390-5
The cycle of change

Action! a cessation attempt
• Be available to support the quit attempt

Congratulate!
Arranged review (even if relapse)

Action

Behavioral Interventions

• Self-help materials
• Brief Advice
• Counseling
• Exercise

Self-Help Materials

• Appear to increase long-term abstinence ~1.5-fold relative to no intervention
• May be tailored to individual or type
• Should be available in office and provided to all smokers

**Brief Advice (<3 Min)**

- May be offered by clinician or nurse
- Should include firm quit recommendation and call attention to health outcomes and practical issues
- Increases odds of quitting ~1.7-fold compared to no advice
- Absolute benefit appears greater for motivated patients


---

**Individual Counseling**

- Improves quit rates for adults
- Recommended by US Public Health Service for adolescents
- May be more effective than team-based counseling
- When possible, should be >10 minutes, face-to-face, with trained specialist


---

**Elements of a Counseling Intervention**

- Discuss previous quit experiences
- Anticipate challenges
- Assess patient’s household environment
- Provide patient with options for dealing with nicotine withdrawal
- Suggest abstaining from alcohol during quit attempt
Why Is It So Difficult To Quit?

Pharmacotherapy + behavioural counselling improves long-term quit rates

Smokers of 10 or more cigarettes a day who are ready to stop should be encouraged to use pharmacological support as a cessation aid.
Nicotine replacement

- Begin NRT on the quit date, (apply patches the night before)
- Use a dose that controls the withdrawal symptoms
- NRT provides levels of nicotine well below smoking
- Prescribe in blocks of two weeks
- Arrange follow up to provide support
- Use a full dose for 6 to 8 weeks then stop or reduce the dose gradually over 4 weeks.

NRT increases the odds of quitting about 1.5 to 2-fold


NRT: Nicotine patches

- Patches provide a slow, consistent release of nicotine throughout the day
- Available in various shapes and sizes,
- Common side effects with patches include skin sensitivity and irritation

NRT increases the odds of quitting about 1.5 to 2-fold


NRT: Nicotine nasal spray

- Nasal sprays more closely mimic nicotine from cigarettes
- Common side effects with nasal sprays include nasal and throat irritation, coughing and oral burning

NRT increases the odds of quitting about 1.5 to 2-fold

NRT: Nicotine gum

- Instruct the patient to 'chew and park'
- Absorption may be impaired by coffee and some acidic drinks
- Common side effects with gum include gastrointestinal disturbances and jaw pain
- Dentures may be a problem!

NRT increases the odds of quitting about 1.5 to 2 fold


NRT: Nicotine lozenges

- Nicotine tablets deliver 2-mg or 4-mg dosages of nicotine over 30-minutes
- Common side effects with gum include burning sensations in the mouth, sore throat, coughing, dry lips, and mouth ulcers

NRT increases the odds of quitting about 1.5 to 2 fold


Bupropion

- Begin bupropion a week before the quit date
- Normal dose 150mg bd, (reduce in elderly, liver/renal disease)
- Contra-indicated in patients with epilepsy, anorexia nervosa, bulimia, bipolar disorder or severe liver disease.
- The most common side effects are insomnia (up to 30%), dry mouth (10-15%), headache (10%), nausea (10%), constipation (10%), and agitation (5-10%)
- Interaction with antidepressants, antipsychotics and anti-arrhythmics

Bupropion increases the odds of quitting about 2 fold

**Nortryptiline**

- Tri-cyclic antidepressant
- Not licensed for smoking cessation
- Low cost
- Side-effects include sedation, dry mouth, light-headedness, cardiac arrhythmia
- Contra-indicated after recent myocardial infarction

*Nortryptiline increases the odds of quitting about 2 fold*


**Varenicline**

- Begin varenicline a week before the quit date, increasing dose gradually.
- Alleviates withdrawal symptoms, reduces urge to smoke
- Common side effects include: nausea (30%), insomnia (14%), abnormal dreams (13%), headache (13%), constipation (9%), gas (6%) and vomiting (5%).
- Contra-indicated in pregnancy
- New drug

*Varenicline increases the odds of quitting about 2.5 fold*


**SIDE EFFECTS**

- Neuropsychiatric side effects with varenicline were first publicly reported by the Food and Drug Administration (FDA) on November 20, 2007.
- In a public health advisory issued on February 1, 2008, the agency stated, “As FDA’s review of the data has progressed it has become increasingly likely that the severe changes in mood and behavior may be related to Chantix.”

Side Effects

- On June 16, 2011, the FDA issued a safety announcement that Chantix may be associated with a “a small, increased risk of certain cardiovascular adverse events in patients who have cardiovascular disease.”
- On July 4, 2011, four scientists published a review of double-blind studies stating that the use of varenicline carries an increased risk of serious adverse cardiovascular events compared with placebo.

Combination Therapy

Goal is to minimize withdrawal symptoms

Bupropion + NRT
NRT + NRT
Clonidine + NRT
Nortryptiline + NRT

Not Varenicline + NRT

Best Practice Systems Interventions

Computerized reminders
Routine cessation advice/brief counseling
Provider incentives
Patient incentives
Quality measurement
Trained staff
Literature in waiting rooms and exam rooms
Insurance coverage
Tobacco Industry-sponsored Prevention Materials

Ineffective and may actually encourage positive attitudes toward smoking in young people

AJPH 2006; 96: 2154-2160

Primary intent is public relations effort to improve corporate image and to defer legislation

AJPH 2002; 92: 917-930

Effort to deceive and mislead the public...avoid providing to patients or consumers.

AMA Resolution 411 (Introduced by FL Delegation)

---

**CMS codes and documentation**

1. The patient’s tobacco use
2. The patient’s conditions adversely affected by tobacco use or the therapeutic agent affected by tobacco use
3. The amount of time spent on tobacco cessation counseling and the context in which it was provided
4. Use 99406 for 3 to 10 minutes or 99407 for more than 10 minutes

---

**Medicare Reimbursement Rates**

3–10 Minute Intervention at $12.89

<table>
<thead>
<tr>
<th>Provider Income</th>
<th>2 patients / day</th>
<th>4 patients / day</th>
<th>10 patients / day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily</td>
<td>$25.78</td>
<td>$51.56</td>
<td>$128.90</td>
</tr>
<tr>
<td>Monthly</td>
<td>$515.60</td>
<td>$1,031.20</td>
<td>$2,578.00</td>
</tr>
<tr>
<td>Yearly</td>
<td>$5,929.40</td>
<td>$11,858.80</td>
<td>$29,647.00</td>
</tr>
</tbody>
</table>
Medicare Reimbursement Rates
10 + Minute Intervention at $24.83

<table>
<thead>
<tr>
<th>Provider Income</th>
<th>2 patients / day</th>
<th>4 patients / day</th>
<th>10 patients / day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily</td>
<td>$49.66</td>
<td>$99.32</td>
<td>$248.30</td>
</tr>
<tr>
<td>Monthly</td>
<td>$993.20</td>
<td>$1,986.40</td>
<td>$4,966.00</td>
</tr>
<tr>
<td>Yearly</td>
<td>$11,421.80</td>
<td>$22,843.60</td>
<td>$57,109.00</td>
</tr>
</tbody>
</table>

Billing for Cessation Counseling
8 visits in 12 months (4 per attempt)
Can use modifier - 25
Any eligible provider
Inpatient or outpatient
Document time spent counseling

Bridging the Gap Between Academia and the Community

Academic Health Science Center

AHEC

Consumers/Communities
Health Care Providers/Organizations
AHEC Tobacco Services
Professional & staff training
Cessation classes
Patient education materials
Curriculum and policy development

Summary
• Smoking cessation confers numerous well-established health benefits.
• Clinicians should initially assess a smoker’s degree of nicotine addiction.
• A proactive intervention strategy that includes counseling and/or pharmacotherapy should be tailored to the patient.
• Physicians must individualize and personalize therapy and debunk smoking myths.
• Relapse is common among smokers who try to quit.

Conclusions
• Tobacco use is a major public health threat.
• Pharmacotherapy works and is relatively safe
• Many options now available
• Expectation Management important.
• Be patient and compassionate.
<table>
<thead>
<tr>
<th>Organization</th>
<th>URL</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Dept. of Health &amp; Human Services</td>
<td><a href="http://www.smokefree.gov">www.smokefree.gov</a></td>
</tr>
<tr>
<td>Florida AHEC Network</td>
<td><a href="http://www.ahectobacco.com">www.ahectobacco.com</a></td>
</tr>
<tr>
<td>Quit Now</td>
<td><a href="http://www.quitnow.net/florida">www.quitnow.net/florida</a></td>
</tr>
<tr>
<td>Centers for Disease Control and Prevention</td>
<td><a href="http://www.cdc.gov/tobacco">www.cdc.gov/tobacco</a></td>
</tr>
<tr>
<td>Office of the U.S. Surgeon General</td>
<td><a href="http://www.surgeongeneral.gov/tobacco">www.surgeongeneral.gov/tobacco</a></td>
</tr>
<tr>
<td>Florida Department of Health</td>
<td><a href="http://www.tobaccofreeflorida.com">www.tobaccofreeflorida.com</a></td>
</tr>
</tbody>
</table>

Contact

Marie-Denise Gervais, MD
dgervais@med.miami.edu
(305) 243-9705