Smoking Cessation in Primary Care

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## Disclosure

**Consultant Arrangements:** None

**Equity Ownership:** None

**Patent Arrangements:** None

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- National Cancer Institute
- Phila Department of Public Health

**Employment:**
- University of Pennsylvania

**Speakers' Bureau:** None

**Other:** None
Objectives

• Describe the biology of nicotine addiction and how it relates to clinical manifestation.

• Identify potential management strategies for complex patients who use tobacco.

• Describe the safety and efficacy of tobacco pharmacotherapy in patients with a history of cardiovascular disease or mental illness.
The Archetypal Complicated Patient

“Mary”

- 65 yo female
- COPD
- HTN
- Past NSTEMI
- DM II
- Current smoker
Risk Factors for COPD

- Genetic Predisposition
- Gender
- Age
- Socioeconomic status
- Respiratory infections

- Exposure to particulates
  - Tobacco smoke
  - Occupational dusts
  - Biomass pollution
  - Outdoor air pollution

- Oxidative stress
Mechanisms of Cigarette Smoke Induced Lung Damage

- Cigarette smoke-derived free radicals and oxidants
- Oxidative Stress
  - Antioxidant genes
  - ‘Susceptibility’ genes
  - Inactivation of antiproteases
  - Lipid peroxidation
  - Depletion of antioxidant defenses
  - Neutrophil sequestration
  - Transcription of proinflammatory cytokines

Inflammation

Epithelial permeability

Source: MacNee, Chest 2000 May; 117(5) Supp 1: 303S-317S
Mechanisms of Cigarette Smoke Damage Connection to Heart Disease?

Oxidative Stress

- Cigarette smoke-derived free radicals and oxidants
- Antioxidant genes
- ‘Susceptibility’ genes

Inactivation of antiproteases
- Lipid peroxidation
- Depletion of antioxidant defenses
- Neutrophil sequestration
- Transcription of proinflammatory cytokines

Increased O2•-

Decreased NO•

Endothelial Cell Injury

Mechanisms of Cigarette Smoke Damage
How About Diabetes?

Cigarette smoke-derived free radicals and oxidants

Antioxidant genes

‘Susceptibility’ genes

Oxidative Stress

Inactivation of antiproteases
Lipid peroxidation
Depletion of antioxidant defenses
Neutrophil sequestration
Transcription of proinflammatory cytokines

β cell dysfunction
Impaired Glucose Tolerance
Endothelial Injury

Source: Ceriello, Arterioscler Thromb Vasc Biol 2004; 24: 816-823
**Risk factors**
- Smoking and lifestyle factors
- Genetic susceptibility

**COPD**
- Chronic airway infection
- Acute exacerbations
- Airway and systemic inflammation
- Lung hyperinflation and endothelial dysfunction
- Oxidative stress

**Mechanisms**
- Ischemic heart disease
- Stroke and heart failure
- Hypertension and diabetes
- Muscle weakness and osteoporotic fractures
- Depression

**Comorbidities**
- Worse symptoms
- Worse health status
- Reduced activity
- Reduced survival

**Outcomes**
Extrapulmonary comorbidities in chronic obstructive pulmonary disease: state of the art

**Smoking cessation predicts amelioration of microalbuminuria in newly diagnosed type 2 diabetes mellitus: a 1-year prospective study**

Christina Voulgari*, Nicholas Katsilambros, Nicholas Tentolouris

<table>
<thead>
<tr>
<th></th>
<th>Δ SBP</th>
<th>Δ DBP</th>
<th>% PVD (ABI &lt;0.9)</th>
<th>% Microalbumin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stopped Smoking</td>
<td>-26.8</td>
<td>-9.9</td>
<td>-5.8</td>
<td>-77.5</td>
</tr>
<tr>
<td>Continued Smoking</td>
<td>-13.6</td>
<td>-6.2</td>
<td>-2.7</td>
<td>-27.4</td>
</tr>
<tr>
<td>P-value</td>
<td>0.03</td>
<td>0.02</td>
<td>0.03</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

Voulgari. Metabolism 2011
Smoking cessation predicts amelioration of microalbuminuria in newly diagnosed type 2 diabetes mellitus: a 1-year prospective study

Christina Voulgari*, Nicholas Katsilambros, Nicholas Tentolouris

<table>
<thead>
<tr>
<th></th>
<th>Odds Ratio</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACE Inhibitor</td>
<td>1.25</td>
<td>0.04</td>
</tr>
<tr>
<td>Statin</td>
<td>1.20</td>
<td>0.30</td>
</tr>
<tr>
<td>Smoking Cessation</td>
<td>2.10</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

Voulgari. Metabolism 2011
### Five-Year Prognosis in an Incident Cohort of People Presenting with Acute Myocardial Infarction

Colin R. Simpson¹*, Brian S. Buckley², David J. McLernon³, Aziz Sheikh¹, Andrew Murphy², Philip C. Hannaford⁴

<table>
<thead>
<tr>
<th></th>
<th>Odds Ratio</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTCA</td>
<td>0.27</td>
<td>P=&lt;0.001</td>
</tr>
<tr>
<td>β-blockers</td>
<td>0.41</td>
<td>P=&lt;0.001</td>
</tr>
<tr>
<td>ACE Inhibitor</td>
<td>1.55</td>
<td>P=&lt;0.001</td>
</tr>
<tr>
<td>Anti-platelet</td>
<td>1.03</td>
<td>P&gt;0.05</td>
</tr>
<tr>
<td>Smoking Cessation*</td>
<td>0.34</td>
<td>P=&lt;0.05</td>
</tr>
</tbody>
</table>

* from Kondo.  Circ J  2011
Nicotine Dependence Itself a Chronic Illness

“There’s someone in my head, but it’s not me.” - Pink Floyd 1982
Smoking: Disordered Motivation

- Nicotine releases “gratification” producing chemicals in the brain.
- Long term use of nicotine produces changes in brain function and structure.
- Addictive properties related to rate of delivery to the brain.
Mesolimbic Dopaminergic system

Emotion
Motivation
Memory
Long term changes

- Increased neuronal arborization
- Increased density of nicotinic receptors
- Increased sensitivity of receptor ion channels
- Changes gene expression
  - Neuronal protein synthesis increases
  - Neurotransmitter synthesis increases
Enhancing the “Gratification Factor”

**VTA**

**nACh**

**DA**

**Core**

**Shell**

**Nuc Accum**

**Thalmus**

**Striatum**

**Negative Prediction Error**

**Core** = Gratification of Compulsion

**Shell** = Drug Seeking Behavior
Enhancing the “Gratification Factor”

VTA

DA

nACh

Thalmus
Striatum

Core

Shell

Nuc Accum

Shell = Drug Seeking Behavior
Core = Gratification of Compulsion
Disordered Motivation: *Compulsion.*

- **Ambivalence** = cardinal sign
- Not exactly ready, willing, or able.
- **Hesitant**
- Patients want change, but don’t want change.
- “I desperately want to *want* to quit smoking”

“Come back when you’re ready”
Habit vs. Compulsion

Lifetime

Baseline Experience

With Treatment

Observed Behaviors

Cessation Model

Treatment Goal

Lifetime
Nicotine levels in blood

- Cigarettes
- Gum
- Patch
Nicotine Replacement Therapy

• Patch
  – Helps to *prevent* cravings from occurring
  – Start high (21mg/day) and step down over 8 - 10 weeks.
  – Most common side effect = local irritation
  – OTC preparations only
### Nicotine Patch

"The Nicotine Patch is an efficacious smoking cessation treatment that patients should be encouraged to use."

Strength of Evidence = A

<table>
<thead>
<tr>
<th>Pharmaco-Therapy</th>
<th>Number of arms</th>
<th>Estimated OR (95% CI)</th>
<th>Estimated Abstinence Rate (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Placebo</td>
<td>80</td>
<td>1.0</td>
<td>13.8</td>
</tr>
<tr>
<td>Nicotine Patch</td>
<td>32</td>
<td>1.9 (1.7, 2.2)</td>
<td>23.4 (21.3, 25.8)</td>
</tr>
</tbody>
</table>
Nicotine Replacement Therapy

- Gum
  - 2mg and 4 mg dose
  - chewed and parked to allow mucosal absorption
  - 1 to 2 pieces per hour when used alone
  - can be used in conjunction with patch to treat sudden urges
Nicotine Gum

“Nicotine Gum is an efficacious smoking cessation treatment that patients should be encouraged to use.”

Strength of Evidence = A

<table>
<thead>
<tr>
<th>Pharmaco-Therapy</th>
<th>Number of arms</th>
<th>Estimated OR (95% CI)</th>
<th>Estimated Abstinence Rate (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Placebo</td>
<td>80</td>
<td>1.0</td>
<td>13.8</td>
</tr>
<tr>
<td>Nicotine Gum</td>
<td>15</td>
<td>1.5 (1.2, 1.7)</td>
<td>19.0 (16.5, 21.9)</td>
</tr>
</tbody>
</table>
Nicotine Replacement Therapy

- **Inhaler**
  - Helps to treat sudden cravings once they occur
  - Softly puffed to allow mucosal absorption
  - 1 to 2 puffs per hour as needed
  - can be used alone or in conjunction with patch
  - May give smoker sense of “control”
**Combination NRT**

“Combining the long-term patch (>14 weeks) with a self-administered form of NRT is more efficacious than a single form.” Strength of Evidence = A

<table>
<thead>
<tr>
<th>Pharmaco-Therapy</th>
<th>Number of arms</th>
<th>Estimated OR (95% CI)</th>
<th>Estimated Abstinence Rate (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 NRT</td>
<td>32</td>
<td>1.0</td>
<td>23.4</td>
</tr>
<tr>
<td>2 NRT</td>
<td>3</td>
<td>3.6 (2.5, 5.2)</td>
<td>36.5 (28.6, 45.3)</td>
</tr>
</tbody>
</table>
Bupropion SR

- Safe with continued smoking.
- Less weight gain.
- Start 7-10 days prior to quit date.
- Duration: 8-12 weeks, consider up to 6 months or longer in h/o depression.
- Combine with NRT for better results.
Bupropion SR

“Bupropion SR is an efficacious smoking cessation treatment that patients should be encouraged to use.”

Strength of Evidence = A

<table>
<thead>
<tr>
<th>Pharmaco-Therapy</th>
<th>Number of arms</th>
<th>Estimated OR (95% CI)</th>
<th>Estimated Abstinence Rate (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Placebo</td>
<td>80</td>
<td>1.0</td>
<td>13.8</td>
</tr>
<tr>
<td>Bupropion SR</td>
<td>4</td>
<td>2.1 (1.5, 3.0)</td>
<td>30.5 (23.2, 37.8)</td>
</tr>
</tbody>
</table>
Patch + Bupropion

“Combining Bupropion treatment with transdermal NRT is more efficacious than a single form.” Strength of Evidence = A

<table>
<thead>
<tr>
<th>Pharmaco-Therapy</th>
<th>Number of arms</th>
<th>Estimated OR (95% CI)</th>
<th>Estimated Abstinence Rate (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patch</td>
<td>32</td>
<td>1.0</td>
<td>23.4</td>
</tr>
<tr>
<td>Combo</td>
<td>3</td>
<td>2.5 (1.9, 3.4)</td>
<td>28.9 (23.5, 35.1)</td>
</tr>
</tbody>
</table>
Varenicline

- Use for at least one week prior to abstinence attempt
- No effect on weight gain.
- May require >4 weeks Rx to reach effect
- Duration: 6 months more effective than 3 months. Up to one year safe.
- Nausea main SE – take with food
- Watch for depressive Sx.
Fun Facts about NRT and CAD

- Baseline nicotine levels produced by smoking are higher than patch (1-5)
- Arterial levels of nicotine are 6-10x higher in smokers than patch / gum (6)
- Because of rapid delivery in smoking, CV effects are greater with cigarettes than NRT (7)
- Pts using NRT who continue to smoke reproduce their baseline nicotine levels, not higher (8)
1. Hurt R et al.  JAMA 1994
Mechanisms of Injury

<table>
<thead>
<tr>
<th>Mechanism</th>
<th>Cigarette</th>
<th>Nicotine Replacement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect on lipids</td>
<td>✓</td>
<td>✗</td>
</tr>
<tr>
<td>Endothelial toxicity</td>
<td>✓</td>
<td>✗</td>
</tr>
<tr>
<td>Oxidant injury</td>
<td>✓</td>
<td>✗</td>
</tr>
<tr>
<td>Neutrophil activation</td>
<td>✓</td>
<td>✗</td>
</tr>
<tr>
<td>Enhanced thrombosis</td>
<td>✓</td>
<td>✗</td>
</tr>
<tr>
<td>Fibrinogen activation / blood viscosity</td>
<td>✓</td>
<td>✗</td>
</tr>
<tr>
<td>Carcinogenesis</td>
<td>✓</td>
<td>✗</td>
</tr>
</tbody>
</table>

Cigarette Nicotine Replacement
An analysis of smokers admitted with acute coronary syndrome who received transdermal nicotine therapy and those who did not was performed. Propensity analysis was used to match patients. Transdermal nicotine therapy appears safe and does not have an effect on the mortality of patients with acute coronary syndromes.
9,991 patients, 194 patch

<table>
<thead>
<tr>
<th>Variable</th>
<th>No Patch (n = 187)</th>
<th>Patch (n = 187)</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (mean ± SD, yrs)</td>
<td>52.1 ± 11.1</td>
<td>52.1 ± 10.3</td>
<td>0.9</td>
</tr>
<tr>
<td>Men</td>
<td>72.7% (136)</td>
<td>68.5% (128)</td>
<td>0.4</td>
</tr>
<tr>
<td>Caucasian</td>
<td>73.8% (138)</td>
<td>75.4% (141)</td>
<td>0.7</td>
</tr>
<tr>
<td>Hypertension</td>
<td>60.4% (113)</td>
<td>61.5% (115)</td>
<td>0.8</td>
</tr>
<tr>
<td>Hyperlipidemia</td>
<td>48.1% (90)</td>
<td>51.9% (97)</td>
<td>0.5</td>
</tr>
<tr>
<td>Previous diabetes mellitus</td>
<td>25.7% (48)</td>
<td>22.5% (42)</td>
<td>0.5</td>
</tr>
<tr>
<td>Previous heart failure</td>
<td>15.5% (29)</td>
<td>13.9% (26)</td>
<td>0.7</td>
</tr>
<tr>
<td>Previous myocardial infarction</td>
<td>40.6% (76)</td>
<td>41.7% (78)</td>
<td>0.8</td>
</tr>
<tr>
<td>Ejection fraction (mean ± SD, %)</td>
<td>55.0 ± 12.7</td>
<td>54.1 ± 13.4</td>
<td>0.4</td>
</tr>
<tr>
<td>Acute myocardial infarction</td>
<td>39.0% (73)</td>
<td>40.1% (75)</td>
<td>1.0</td>
</tr>
</tbody>
</table>
**Outcomes**

<table>
<thead>
<tr>
<th>Outcome</th>
<th>No Patch (n = 187)</th>
<th>Patch (n = 187)</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>7-d mortality</td>
<td>0.5% (1)</td>
<td>0% (0)</td>
<td>0.3</td>
</tr>
<tr>
<td>30-d mortality</td>
<td>1.6% (3)</td>
<td>1.1% (2)</td>
<td>0.7</td>
</tr>
<tr>
<td>1-yr mortality</td>
<td>5.4% (10)</td>
<td>4.8% (9)</td>
<td>0.8</td>
</tr>
<tr>
<td>Coronary bypass</td>
<td>13.9% (26)</td>
<td>19.8% (37)</td>
<td>0.1</td>
</tr>
<tr>
<td>Coronary angioplasty</td>
<td>42.3% (79)</td>
<td>50.3% (94)</td>
<td>0.1</td>
</tr>
</tbody>
</table>

Meine T et al.
A total of 653 cases and 2,990 controls were interviewed. There was no association between nicotine patches and MI (OR 0.46; 95% CI: 0.09, 1.47). Among those who abstained from smoking, the OR for use of nicotine patches was 0.25 (0.01, 1.67); among those who smoked concomitantly, the OR for patch use was 0.83 (0.09, 3.81). Adjustment for confounding did not alter the study’s findings.
Risk of First MI on NRT

Table 2. Association Between Nicotine Patch Use and Myocardial Infarction: Nicotine Patch Use in Index Week

<table>
<thead>
<tr>
<th></th>
<th>Cases Nicotine Exposed/Total (%)</th>
<th>Controls Nicotine Exposed/Total (%)</th>
<th>Exact OR (95% CI)</th>
<th>Exact p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>All subjects</td>
<td>3/653 (0.46%)</td>
<td>30/2,990 (1%)</td>
<td>0.46 (0.09, 1.47)</td>
<td>0.26</td>
</tr>
<tr>
<td>Only subjects in whom MI was confirmed by chart review</td>
<td>3/505 (0.59%)</td>
<td>30/2,990 (1%)</td>
<td>0.59 (0.11, 1.91)</td>
<td>0.55</td>
</tr>
</tbody>
</table>

CI = confidence interval; MI = myocardial infarction; OR = odds ratio.
Pfizer Ignored Depressed Patients in Tests of Chantix Side Effects

Shay Morrigan | February 21st, 2012

One of the main complaints in current Chantix side effects lawsuits is the fact that manufacturer Pfizer failed to test their product on the mentally ill or those with depression. By doing so, the company neglected to study the safety of their smoking-cessation drug in...
Psychiatric Adverse Events in Randomized, Double-Blind, Placebo-Controlled Clinical Trials of Varenicline
A Pooled Analysis  Drug Saf 2010; 33 (4): 289-301

Serena Tonstad,¹ Simon Davies,² Martina Flammer,² Cristina Russ² and John Hughes³

Table III. Subjects with all adverse events, psychiatric adverse events and discontinuations

<table>
<thead>
<tr>
<th>Category</th>
<th>Varenicline (n=3091) [n (%)]</th>
<th>Placebo (n=2005) [n (%)]</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>All adverse events</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subjects with any adverse event</td>
<td>2587 (83.7)</td>
<td>1473 (73.5)</td>
</tr>
<tr>
<td>Subjects with serious adverse events&lt;sup&gt;a&lt;/sup&gt;</td>
<td>66 (2.1)</td>
<td>45 (2.2)</td>
</tr>
<tr>
<td>Subjects discontinued due to adverse events</td>
<td>326 (10.5)</td>
<td>133 (6.6)</td>
</tr>
<tr>
<td>Subjects discontinued for any reason&lt;sup&gt;b&lt;/sup&gt;</td>
<td>821 (26.6)</td>
<td>608 (30.3)</td>
</tr>
<tr>
<td><strong>Psychiatric adverse events</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subjects with any psychiatric adverse events</td>
<td>946 (30.6)</td>
<td>418 (20.8)</td>
</tr>
<tr>
<td>Subjects with any psychiatric adverse events other than solely sleep disorders and disturbances</td>
<td></td>
<td></td>
</tr>
<tr>
<td>all severities (mild, moderate, severe)</td>
<td>331 (10.7)</td>
<td>194 (9.7)</td>
</tr>
<tr>
<td>moderate and severe only</td>
<td>152 (4.9)</td>
<td>81 (4.0)</td>
</tr>
<tr>
<td>Subjects with psychiatric serious adverse events</td>
<td>1 (&lt;0.1)</td>
<td>2 (0.1)</td>
</tr>
</tbody>
</table>
# Varenicline, Smoking Cessation, and Neuropsychiatric Adverse Events

Robert D. Gibbons, Ph.D.  J. John Mann, M.D.  *Am J Psychiatry Gibbons; AiA:1–8*

## TABLE 3. Neuropsychiatric Events Before and After Propensity Score Matching in a U.S. Department of Defense Observational Study

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Before Matching</th>
<th></th>
<th></th>
<th>After Matching</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>Odds Ratio</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Varenicline</td>
<td>Nicotine Patch</td>
<td>p&lt;sup&gt;a&lt;/sup&gt;</td>
<td>Varenicline</td>
<td>Nicotine Patch</td>
<td>p&lt;sup&gt;b&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Patients With</td>
<td>Patients With</td>
<td>N=19,933</td>
<td>Patients With</td>
<td>Patients With</td>
<td>N=13,215</td>
<td>N=13,215</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety disorder</td>
<td>151</td>
<td>132</td>
<td>0.76</td>
<td>0.83</td>
<td>0.44</td>
<td>92</td>
<td>110</td>
<td>0.70</td>
<td>0.83</td>
<td>0.23</td>
</tr>
<tr>
<td>Depressive disorder</td>
<td>113</td>
<td>108</td>
<td>0.57</td>
<td>0.68</td>
<td>0.18</td>
<td>71</td>
<td>92</td>
<td>0.54</td>
<td>0.70</td>
<td>0.12</td>
</tr>
<tr>
<td>Drug-induced mental disorder</td>
<td>7</td>
<td>70</td>
<td>0.04</td>
<td>0.44</td>
<td>&lt;0.0001</td>
<td>6</td>
<td>59</td>
<td>0.05</td>
<td>0.45</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Episodic and mood disorder</td>
<td>190</td>
<td>152</td>
<td>0.95</td>
<td>0.96</td>
<td>0.99</td>
<td>118</td>
<td>128</td>
<td>0.89</td>
<td>0.97</td>
<td>0.56</td>
</tr>
<tr>
<td>Other psychiatric disorder</td>
<td>3</td>
<td>10</td>
<td>0.02</td>
<td>0.06</td>
<td>0.02</td>
<td>2</td>
<td>10</td>
<td>0.02</td>
<td>0.08</td>
<td>0.04</td>
</tr>
<tr>
<td>Posttraumatic stress disorder</td>
<td>64</td>
<td>86</td>
<td>0.32</td>
<td>0.54</td>
<td>0.002</td>
<td>45</td>
<td>65</td>
<td>0.34</td>
<td>0.49</td>
<td>0.07</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>10</td>
<td>15</td>
<td>0.05</td>
<td>0.09</td>
<td>0.16</td>
<td>9</td>
<td>12</td>
<td>0.07</td>
<td>0.09</td>
<td>0.66</td>
</tr>
<tr>
<td>Suicide attempt</td>
<td>2</td>
<td>4</td>
<td>0.01</td>
<td>0.03</td>
<td>0.42</td>
<td>2</td>
<td>3</td>
<td>0.02</td>
<td>0.02</td>
<td>0.99</td>
</tr>
<tr>
<td>Transient mental disorder</td>
<td>9</td>
<td>4</td>
<td>0.05</td>
<td>0.03</td>
<td>0.41</td>
<td>8</td>
<td>3</td>
<td>0.06</td>
<td>0.02</td>
<td>0.23</td>
</tr>
<tr>
<td>Neuropsychiatric disorders (any of the above)</td>
<td>475</td>
<td>503</td>
<td>2.38</td>
<td>3.17</td>
<td>&lt;0.0001</td>
<td>301</td>
<td>417</td>
<td>2.28</td>
<td>3.16</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>
A Randomized, Double-Blind, Placebo-Controlled Study Evaluating the Safety and Efficacy of Varenicline for Smoking Cessation in Patients With Schizophrenia or Schizoaffective Disorder

Jill M. Williams, MD; Robert M. Anthenelli, MD; Chad D. Morris, PhD; Joan Treadow, RN, John R. Thompson, PhD; Carla Yunis, MD, MPH; and Tony P. George, MD

Figure 3. Seven-Day Point Prevalence of Abstinence From Smoking at Weeks 12 and 24

OR = 4.74 (95% CI, 1.03–21.78), P = .046

OR = 6.18 (95% CI, 0.75–50.71), P = .090
A Randomized, Double-Blind, Placebo-Controlled Study Evaluating the Safety and Efficacy of Varenicline for Smoking Cessation in Patients With Schizophrenia or Schizoaffective Disorder

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Figure 2. Mean PANSS Scores (total and subscale) by Week

Abbreviation: PANSS = Positive and Negative Syndrome Scale.
“I’LL QUIT TODAY.”

Pennsylvania’s new FREE QUITLINE has been clinically tested and proven to help smokers quit and stay quit.

Call today for information or to set your quit date.

24 HOURS A DAY, 7 DAYS A WEEK

The Pennsylvania Department of Health and the American Cancer Society, your partners in helping your patients quit.
Useful Web Resources

- tobaccodependence.chestnet.org
- www.penn-stop.com
- www.phillycopd.com
Clinician Training

Preparing for the Integration of Tobacco Use Treatment into Healthcare

A Professional Development Course

http://penn-stop.com/WP1/training
Points to Remember

• Smoking is the behavioral manifestation (cardinal sign) of a disturbance in brain biology induced by exposure to nicotine.

• The cardinal symptom of this pathology is *compulsion* to smoke, manifest as reluctance.

• Smoking Cessation is cost-effective, and has a significant impact on morbidity of chronic illness.

• Pharmacotherapy very useful when used within a chronic disease management model.
“If we always do what we’ve always done, we’ll always get what we’ve always gotten.”

- Anonymous

Comprehensive Smoking Treatment Program

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