Helping Patients Kick the Habit:
A Pharmacist Managed Tobacco Cessation Clinic

USPHS Symposium
May 20th, 2015
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Tséhootsooí Medical Center, Fort Defiance, AZ
“CIGARETTE SMOKING... is the chief, single, avoidable cause of death in our society and the most important public health issue of our time.”

- VADM C. Everett Koop, MD, USPHS
Objectives

1. Explain the detrimental health effects of commercial tobacco: cigarettes, smokeless tobacco, and e-cigarettes.

2. Use the Five A’s Model for facilitating tobacco cessation

3. Identify and counsel on appropriate PHS recommended first-line medications for tobacco cessation

4. List barriers of a pharmacist managed tobacco cessation clinic
Tobacco Use

- Kills 480,000 people every year
- Smoking costs - $300 billion annually
- Life expectancy reduced by 15-25 years
- >70% of all current smokers have expressed a desire to QUIT
- High prevalence among American Indians/Alaska Natives (AI/AN)
  - 2013 National Health Interview Survey (NHIS) of smokers age >18
    - Non-hispanic multiple race - 26.8%
    - AI/AN - 26.1%
    - Whites - 19.4%
    - African Americans - 18.3%
    - Hispanics - 12.1%
    - Asian Americans - 9.6%
Risks from Smoking

Cancers
- Head or Neck
- Lung
- Leukemia
- Stomach
- Kidney
- Pancreas
- Colon
- Bladder
- Cervix

Chronic Diseases
- Stroke
- Blindness
- Gum infection
- Aortic rupture
- Heart disease
- Pneumonia
- Hardening of the arteries
- Chronic lung disease & asthma
- Reduced fertility
- Hip fracture
Smokeless Tobacco

- Multiple Names: spit tobacco, dip and chew, snuff, chewing tobacco
- 1 dip = 5x nicotine in 1 cigarette
- 4x more likely to develop oral cancer
- More than 1/5th of the content in some tobacco brands is sugar

“There is no significant evidence that smokeless tobacco is a safer alternative to cigarettes.”

- VADM Richard Carmona, MD, MPH, FACS June 3, 2003
Other Forms of Tobacco

- Electronic nicotine delivery systems (ENDS):
  - Hookah pipes
  - e-cigs, e-pipes, e-cigars, vapor pens

- Popular among youth
  - Although considered safer than cigarettes, effects have not been well studied
  - Not proven to be safe or effective as a method of cessation
  - Effects of secondhand smoke exposure to the vapor not known
Call to Action
5 A’s MODEL
Five A’s Model

• Low Intensity Intervention
  ▫ Less than 3 minutes can save lives!
  ▫ Increases quit rate by 60%

1. Ask about tobacco use at every visit
2. Advise every smoker to stop
3. Assess readiness to quit
4. Assist the patient in stopping tobacco use
5. Arrange for follow up and monitor progress
ASK
Do you currently use tobacco?

YES

NO

ADVISE
to quit

ASK
Have you ever used tobacco?

YES

NO

ASSESS
Are you willing to quit now?

YES

NO

ASSIST
Provide appropriate tobacco dependence treatments

ASSIST
Intervene to increase motivation to quit

ASSIST
Provide relapse prevention

ASSIST
Encourage continued abstinence

ARRANGE FOLLOWUP
Who can be treated?

• Eligible:
  ▫ All those who are willing to quit

• Cautions:
  ▫ Pregnant women
  ▫ Adolescents
  ▫ Light smokers
  ▫ Smokeless tobacco users
Twofold Process

Clinical Practice Guidelines for Treating Tobacco Use and Dependence - Last Updated May 2008

- Tobacco Dependence
  - Behavioral
    - Stages of Change
    - Motivational Interviewing
  - Physiological
    - Non-pharmacological
      - 1st Line Medications
    - 2nd Line Medications
Stages of Change Model
Motivational Interviewing

R - Roll with resistance
E - Express empathy
A - Avoid argumentation
D - Develop discrepancies
S - Support self-efficacy
The Healing Time Line

A realistic look at how long it takes for your body to recover after your last puff

Twenty minutes after quitting, your blood pressure decreases.

Eight hours: The amount of carbon monoxide in your blood drops back to normal while oxygen increases to normal.

Forty-eight hours: Your nerve endings start to regenerate, and you can smell and taste things better.

One to nine months: Coughing, sinus congestion, fatigue, and shortness of breath decrease.

One year: The added risk of heart disease declines to half of that of a smoker.

Five years: Your stroke risk may be reduced to that of someone who never smoked.

Ten years: Your risk of all smoking-related cancers such as lung, mouth, and throat decrease by up to 50 percent.

Fifteen years: Your risk of heart disease and smoking-related death is now similar to that of someone who never smoked.

Source: American Lung Association

Funded by the Commonwealth of Pennsylvania, Edward G. Rendell, Governor
## Cost Savings

<table>
<thead>
<tr>
<th></th>
<th>ONE PACK per week @ $5.51*</th>
<th>TWO PACKS per week @ $5.51* each</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>One Month</strong></td>
<td>$22</td>
<td>$44</td>
</tr>
<tr>
<td>You could have:</td>
<td>haircut or large pizza</td>
<td>gym membership</td>
</tr>
<tr>
<td><strong>Six Months</strong></td>
<td>$132</td>
<td>$264</td>
</tr>
<tr>
<td>You could have:</td>
<td>pair of sneakers</td>
<td>set of new tires</td>
</tr>
<tr>
<td><strong>One Year</strong></td>
<td>$264</td>
<td>$529</td>
</tr>
<tr>
<td>You could have:</td>
<td>smartphone</td>
<td>tablet</td>
</tr>
<tr>
<td><strong>Five Years</strong></td>
<td>$1,320</td>
<td>$2,645</td>
</tr>
<tr>
<td>You could have:</td>
<td>riding lawnmower</td>
<td>trip to a foreign country</td>
</tr>
<tr>
<td><strong>10 Years</strong></td>
<td>$2,640</td>
<td>$5,289</td>
</tr>
<tr>
<td>You could have:</td>
<td>all-terrain vehicle</td>
<td>one-carat diamond ring</td>
</tr>
<tr>
<td><strong>55 Years</strong></td>
<td>$15,840</td>
<td>$29,095</td>
</tr>
<tr>
<td>You could have:</td>
<td>year of in-state college tuition</td>
<td>new car</td>
</tr>
</tbody>
</table>
TREATMENT & COUNSELING
Non-Pharmacologic Methods

- Behavior modification
- Counseling
- Cold Turkey
- Unassisted Tapering
# 1st Line Treatments

<table>
<thead>
<tr>
<th>Medication</th>
<th>Dosage</th>
<th>Use</th>
<th>Adverse Effects</th>
<th>Warnings/Cautions</th>
</tr>
</thead>
</table>
| Bupropion SR 150mg | 150mg QAM x 3 days, then 150mg BID                                     | Start 1-2 weeks prior to quit date  
May use for 2 to 6 months | - Insomnia  
- Dry mouth                                           | - Current MAOI use  
- Black box warning  
- History of seizures |
| Nicotine Patch    | 7, 14, or 21 mg/day                                                    | 8 to 12 weeks              | - Insomnia  
- Local skin reaction  
- Vivid dreams                      | - Severe eczema or psoriasis |
| Nicotine Gum      | 2 or 4 mg every 1 to 2 hrs                                             | Up to 12 weeks or as needed | - Stomach ache  
- Mouth soreness/Jaw pain                           | - Dentures                  |
| Nicotine Lozenge  | 2 or 4 mg every 1-2 hrs x 6 weeks, then 2-4 hrs x 3 weeks, then every 4-8 hrs x 3 weeks | 3 to 6 months              | - Hiccups  
- Cough  
- Heartburn                                |                           |
# 1st Line Treatments (cont.)

<table>
<thead>
<tr>
<th>Medication</th>
<th>Dosage</th>
<th>Use</th>
<th>Adverse Effects</th>
<th>Warnings/Cautions</th>
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</thead>
</table>
| Nicotine Nasal Spray      | 0.5mg/spray in each nostril 1 to 2 doses per hour                       | 3 to 6 months, taper at the end          | - Nasal Irritation  
- Nasal congestion  
- Changes in smell and taste                                               | - Asthma                            |
| Nicotine Inhaler          | 4mg per cartridge 6 to 16 cartridges/day                              | Up to 6 months, taper at the end         | - Mouth/throat irritation  
- Nasal congestion  
- Cough                                                               | - Nicotine toxicity                   |
| Varenicline               | 0.5 mg every morning x 3 days 0.5 mg BID x 3 days Then 1 mg BID      | Start 1 week before quit date Use 3 to 6 months | - Nausea  
- Insomnia  
- Abnormal, vivid, or strange dreams                                      | - FDA Warning  
- Undergoing dialysis  
- Significant renal impairment  
- Serious psychiatric illness                                           |
**2\textsuperscript{nd} Line Medications**

**Consider use when:**
- Contraindication for 1\textsuperscript{st} line treatments
- Failure with 1\textsuperscript{st} line treatments

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</table>
| Clonidine (oral or transdermal) | 0.1mg PO BID  
0.1mg/day patch applied weekly | Initiate up to 3 days before or on Quit Date  
3 to 10 weeks | - Dry mouth  
- Drowsiness  
- Dizziness | - Rebound hypertension  
- Pregnancy Category C | |
| Nortriptyline               | 25mg PO QHS  
↑ 75 to 100mg (target dose) | Initiate 10 to 28 days before Quit Date  
12 weeks | - Dry mouth  
- Drowsiness  
- Hypotension | - Suicidal ideation  
- Orthostatic hypotension | |
Monotherapy vs Combination Therapy

• While both therapies are effective, combination therapy shows more efficacy in long term cessation rates
  - Nicotine Patch +
    - NRT (gum, inhaler, nasal spray)
    - Bupropion SR

• The combination of counseling and medication therapy is more effective than either alone
Selecting Appropriate Therapy

<table>
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<tr>
<th>Questions</th>
<th>Answers</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How soon after waking do you smoke your first cigarette?</td>
<td>Within 5 minutes</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>6-30 minutes</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>31-60 minutes</td>
<td>1</td>
</tr>
<tr>
<td>2. Do you find it difficult to abstain from smoking in places where it is forbidden?</td>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>0</td>
</tr>
<tr>
<td>3. Which cigarette would you hate to give up?</td>
<td>The first one in the morning</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Any other</td>
<td>0</td>
</tr>
<tr>
<td>4. How many cigarettes a day do you smoke?</td>
<td>10 or less</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>11-20</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>21-30</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>31 or more</td>
<td>3</td>
</tr>
<tr>
<td>5. Do you smoke more frequently in the morning than in the rest of the day?</td>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>0</td>
</tr>
<tr>
<td>6. Do you smoke even though you are sick in bed for most of the day?</td>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>0</td>
</tr>
</tbody>
</table>

**TOTAL**
Withdrawal Symptoms

- Anxiety
- Insomnia
- Dizziness
- Headache
- Nausea
- Fatigue
- Myalgia
- Dyspepsia
Patient Case 1

AB is a 36 year old male who is being seen as a walk in for a constant cough. He has high blood pressure, eczema, asthma, and a history of seizures. During the patient interview the provider uses the 5 A model and determines that AB is at the following stage of change based off of this response:

“I don’t think I have a problem. You have to die from something, right?”

A. Contemplation  
B. Preparation  
C. Action  
D. Precontemplation  
E. Maintenance
Patient Case 2

SW comes in for her tobacco cessation appointment and completes the PHQ-2 questionnaire and Fagerstrom survey. PHQ-2 Score = 2, Fagerstrom Score = 8. She has set her quit date for May 25th. She’s tried to quit 3 other times “cold turkey.”

Which pharmacotherapy treatments are appropriate for SW?

I. Nicotine 21mg patch
II. Nicotine 14mg patch
III. 2mg nicotine gum
IV. 4mg nicotine gum
V. Bupropion SR 150mg

A. I only
B. I and IV
C. II and IV
D. V
E. II and III
CLINIC & BARRIERS
Define Success

• Health professionals shouldn’t grade themselves on how many people they can "get" to quit, but rather how many times they deliver the message when the opportunity arises.

• Under these criteria, there is no reason not to have an intervention success approaching 100%
Clinic Implementation and Components

Create clinic policy/protocol
Find a champion
Facility approval
Create clinic template
Train staff
Educate all necessary personnel
Advertise and rollout clinic
Tobacco Cessation Clinic Results

- 72 total patients
  - 42 smokers, 28 chewers, 2 patients smoked and chewed
- 57 referrals in 12-months
  - 41 showed
  - 16 no-shows
- 15 walk-ins
- 6 patients successfully quit and did not relapse
- 49 patients lost to follow up, unknown cessation status
Clinic Barriers

• High no-show rate to appointments
• Medication adherence
• Turnover of pharmacists/provider champion
• Training new staff
• Space
Clinic Modifications

- Clinic set up
- Clerk/Administrative Technician
- Bi-annual Training
- Incentive Program
Take Aways

• Patients should be asked about tobacco use at every encounter

• Behavioral counseling + pharmacotherapy is a cornerstone of tobacco cessation

• ENDS have not been shown to be safe or effective in tobacco cessation use

• Providers can make a significant difference in patients’ motivation and success in quitting
Patient Assistance & Mobile Apps

- American Heart Association
- 1-800-QUIT NOW
- SmokeFreeTXT
- Free Apps
  - Livestrong MyQuit Coach
  - Quit it Lite
  - Quit Smoking
  - Craving to Quit
  - QuitNow!
Additional Resources

- National Tobacco Cessation Collaborative: http://www.tobacco-cessation.org/resources/tools.html
- Smokefree.gov
- National Tobacco Control Program: http://www.cdc.gov/tobacco/stateandcommunity/tobacco_control_programs/ntcp/index.htm
- CDC.gov
  Tips from Former Smokers http://www.cdc.gov/tobacco/quit_smoking/how_to_quit/
References

• Health Effects of Light and Intermittent Smoking A Review  Rebecca E. Schane; Pamela M. Ling; Stanton A. Glantz. Circulation. 2010; 121: 1518-1522 doi: 10.1161/CIRCULATIONAHA.109.904235
Questions?