Tobacco Use Among People with Severe and Persistent Mental Illness

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Central East Tobacco Cessation Tuesdays Webinar
May 19, 2015

Goals for today:
- Why tobacco, why now?
- Tobacco and SPMI
- Tobacco and Substance Use Disorders
- What to do when?
- Describe the effects of tobacco products on pharmacological treatment
- Review the medications used in the treatment of tobacco dependence

Why Focus On Tobacco Dependence?
- Smoking claims ~440,000 lives annually (1 out of every 5 deaths in the US)
- Alcohol and Other Drugs ~116,000 lives
- 25 million U.S. smokers alive today will most likely die of a smoking-related illness

Prevalence of tobacco use:
- 75-100% of people with Substance Use d/oss
- 70-95% of people with SPMI
- 40-50% of people with Depression and Anxiety
- 44% of cigarettes smoked in the US are smoked by people with a psychiatric condition
- ~20% of general population use tobacco

Mortality:
- People with Opioid use disorders: death rate of smokers 4x that of non-smokers
- People with Alcohol use disorders: 51% of mortality potentially tobacco-related
- People with SPMI: die 25-32 years younger than non-ill peers - potentially tobacco related

Campbell et al., 1996; Ziedonis & George, 1997; Lassser et al., 2000; Viveca and White, 2008
Morbidity:

People with Alcohol use disorders:
• Pancreatitis (10 x)
• Cirrhosis (3 x)
• Mouth and throat cancers (38 x)

People with SPMI:
• Heart disease (2.3 x)
• Diabetes (2.7 x)
• Respiratory diseases (3.2 x)
• Infectious diseases (3.4 x)

Compared to tobacco users without BH disorders
• More nicotine addicted
• Smoke higher-nicotine cigarettes
• Smoke more per day
• More toxic exposure (more cigarettes, larger portion consumed)

Lasser et al., 2000; Williams and Ziedonis, 2000; McGreadie, 1996; George TP et al., 2003

Effects on Addiction Treatment
• People with Alcohol addiction who quit – more likely to succeed in alcohol treatment
• Continued smoking – significant factor in relapse back to active substance misuse
• Smoking cessation – unlikely to compromise alcohol use outcomes
• Preliminary findings that opioid, cocaine addiction and methadone treatment might be more effective if integrated with tobacco tx

Taylor et al., 2000; Proschscht et al., 2003

Effects on Addiction and Relapse
AOD Treatment programs that address tobacco simultaneously associated with a
25% greater likelihood
of achieving long-term abstinence from AOD

Prochaska, 2004

Neurobiological Connection (critical component)
• Smoking may interfere with the metabolism of psychotropic medications
  – Potentially higher doses needed for therapeutic effect
  – Side effects may increase as tobacco decreases
• Implications for reduction/cessation

Williams and Ziedonis, 2000; Taylor, 2000

Smoking Cessation May Increase Levels of Psychotropics and Other Medications
• Haloperidol
• Olanzapine
• Chlorpromazine
• Clozapine
• Fluphenazine
• Clomipramine
• Imipramine
• Desipramine
• Nortriptyline
• Doxepin
• Carbamazepine
• Desmethyldiazepam
• Oxazepam
• Heparin
• Acetaminophen
• Insulin
• Caffeine
• Theophylline
• Propranolol
• Tacrine
• Warfarin
• Others
“Positives” of Tobacco

- Nicotine improves sensory gating and cognitive symptoms in schizophrenia acutely
- Nicotine acts as a monoamine oxidase inhibitor (MAOI) and COULD have antidepressant effects
- Implications for reduction/cessation

But...

- Tobacco itself is untested for all of these effects and its lethality is unquestionable. Much safer treatments are available.
- Long-term smoking linked to cognitive decline:
  - ↓ memory, ↓ problem solving ability, ↓ thinking speed and even ↓ IQ
- Alcoholics who smoke have more cerebral atrophy than alcoholics who do not smoke

Individuals change voluntarily when they...

- Become interested in or concerned about the need for change
- Become convinced that the change is in their best interests or will benefit them more than cost them
- Organize a plan of action that they are committed to implementing
- Take the actions that are necessary to make the change and sustain the change

Stages of Change

- Precontemplation
- Contemplation
- Preparation
- Action
- Maintenance/Relapse Prevention
- [Relapse]

Ongoing Assessment

- Readiness
- Importance
- Confidence
- Severity/Heaviness of use
- Previous attempts/experience quitting
Assessment:
Stage of Change Readiness
Which of the following best describes you:
• I currently use a tobacco product
  – Not seriously thinking about quitting [precontemplation]
  – Seriously thinking of quitting in next 6 mos. [contemplation]
  – Seriously thinking of quitting in next 30 days [contemplation or preparation (if quit attempt in last yr)]
• Quit tobacco within the last 6 mos. [action]
• Quit tobacco more than 6 mos. Ago [maintenance]

Assess Importance/Confidence
1. On a scale of 0 – 10 how important is it for you [how confident are you that you can] ______ (e.g. quit/reduce tobacco)?
2. Why are you at a ______ and not a zero?
3. What would it take for you to be at a ______ (one number higher than they are)?

Assessment:
“Severity” of Use
Fagerström Test for Nicotine Dependence (FTND)
• Adult (Heatherton, et. al., 1991)
• Modified for Adolescents (Prokhorov, et. al., 1996; Prokhorov, et. al., 1998)
• Smokeless Tobacco (FTND-ST) (Boyle, et. al., 1995)

Assessment:
Heaviness of Smoking/Use
1. How soon after you wake, do you have first cigarette?
   a) Within 5 min (3 pts.)
   b) 6-30 min. (2 pts.)
   c) 31-60 min. (1 pt.)
   d) After 60 min. (0 pts.)
2. How many cigarettes per day?
   a) 10 or fewer (0 pts.)
   b) 11-20 (1 pt.)
   c) 21-30 (2 pts.)
   d) 31 or more (3 pts.)
   SCORING (“addiction”): 0-2 = low 3-4 = moderate 5-6 = high

Assessment:
Heaviness of Smokeless/Use
1. How soon after you wake, do you place your first dip?
   a) Within 5 min (3 pts.)
   b) 6-30 min. (2 pts.)
   c) 31-60 min. (1 pt.)
   d) After 60 min. (0 pts.)
2. How many cans/pouches per week do you use?
   a) More than 3 (2 pts.)
   b) 2 – 3 (1 pt.)
   c) 1 (0 pts.)
   SCORING (“addiction”): 0-1 = low 2-3 = moderate 4-5 = high

Previous attempts/ Experience quitting
• Longest period of abstinence?
• Methods employed (e.g. NRTs/meds, Quitline, support system, online, self-help)?
• Motivators?
• What worked?
• What didn’t work?
• What led to going back to tobacco?
Stage-Based Approach: What to do when...

Precontemplation
- Assess use and readiness to change
- Identify individual goals/motivators
- Brief motivational conversations
- Offer practical help
- Relationship building
- Utilize natural discussion opportunities

Common Complications: (Ways to Create Resistance and Strategies to Avoid Them)

6 Complications
1. Question & Answer
2. Be the expert
3. Information Overload
4. Labeling
5. Blaming/shaming
6. Demanding change

6 Ways to Engage
1. Ask and Listen
2. Shared Responsibility
3. Check Understanding
4. Person-Centered
5. Acceptance of Person
6. Change is the Person’s Decision

Decisional balance

<table>
<thead>
<tr>
<th>Decisional balance</th>
<th>Good</th>
<th>Not so Good</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continuing to use tobacco</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quitting tobacco</td>
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Contemplation
- Continue to develop motivation for change
- Understand consumer goals
- Tip ambivalence
- Structured health-based curriculum
- Assess/build self-efficacy
- Ongoing assessment
- Peer support

Preparation
- Set a quit date
- Relapse prevention planning
- Tell your supports your plans
- Make it “uncomfortable” to use
- Education about tobacco use
- Discuss alternatives to use
- Delay “most hate to give up”
- Skip one cigarette / chew / dip
Group Curricula

Learning About Healthy Living
www.centerforebp.case.edu

tobaccoprogram.org/pdf/Learning%20About%20Healthy%20Living.pdf

Action/Maintenance
- Tobacco-specific group and individual skills training
- Pharmacological management
- Relapse prevention
- Practice refusal skills
- Social support / peer support
- Quitline
- Contingency management (reward abstinence)

4 D’s – for getting through a craving
- Delay
- Deep breathe
- Drink water
- Distract yourself / do something else

Pharmacological Treatments: FDA-Approved

Nicotine Replacement
- Patch
- Gum
- Lozenge
- Inhaler
- Nasal Spray
- Bupropion
- Varenicline

Long-term (≥6 month) Quit Rates
(each method individually compared to placebo)

Data adapted from Abbott et al. (1998), Earleywine et al. (1998), Hughes et al. (1997), Hughes et al. (1998).

Nicotine Safety
Confusion about safety/efficacy of nicotine
- Not a carcinogen
- Not a significant risk factor for cardiovascular events

Risk-benefit ratio supports nicotine medications over using tobacco
Nicotine Replacement Therapy (NRT)

- Nicotine absorption poorer than cigs
- Lower dose delivered
- Poorly orally absorbed; ↑ first pass metabolism
- Less rewarding than smoking
- **Under-dosing common**
- Worsened by poor compliance

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**Dosing Nicotine Replacement**

<table>
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<tr>
<th>Cigarettes/day</th>
<th>Patch dose</th>
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<tr>
<td>&lt; 10</td>
<td>7-14 mg/day</td>
</tr>
<tr>
<td>11-20</td>
<td>14-21 mg/day</td>
</tr>
<tr>
<td>21-40</td>
<td>21-42 mg/day</td>
</tr>
<tr>
<td>&gt; 40</td>
<td>42+ mg/day</td>
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The patch should generally be continued at this dose for 2-6 weeks, then tapered at two week intervals until discontinued at the discretion of the treating physician and in collaboration with the patient.

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**Simple Instructions**

- For oral NRTs (gum, lozenge, and/or inhaler)
  - Stress nicotine absorbed through the mouth
  - Encourage use on a set schedule (not “as needed for cravings”) – to break addictive behavior

- **Rule of Thumb:**
  - 1 mg replacement = 1 cigarette

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**Relapse**

- Help consumer learn from relapse
- Assess current use and readiness to change and recycle through the stages of contemplation, preparation, and action
- Do NOT talk about “failure”

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**Take-home messages**
Summary: Tobacco use and BH
- Contributes to morbidity and mortality
- Smoke more / get more toxic exposure per cigarette
- Impacts pharmacological treatment
  - Interferes with metabolism of many medications
- Neurobiological connection
  - Impact on symptoms
- Direct implications for intervention

Summary: Stage-based Approach
- People in earlier stages of change-readiness:
  - Engagement/build relationship
  - Focus on individual goals/motivators
  - "A conversation about change"
- People in middle stages of change-readiness:
  - Tip ambivalence
  - Education and optimism that change is possible
- People in later stages of change-readiness:
  - Make and sustain change
  - Learn from relapse

Summary: Pharmacological Treatment
- Recent practice guidelines have advised the use of NRT for all patients attempting to stop smoking:
  - Pharmacotherapy may double the quit rate
  - NRT Dosing: ~1 mg per cigarette
- Higher doses and/or longer duration of use may be beneficial

Summary: Pharmacological Treatment
- Combination treatments improve outcomes
  - Bupropion and lozenge
  - Patch and lozenge
- Extended combination treatment (12 mos.) has led to quit rates as high as 50%
- Individual preference, cost, and tolerability will guide decision-making

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A Technical-Assistance Center
Providing consultation, training, and evaluation for the implementation of integrated behavioral healthcare services
Helpful Resources

Office of the U.S. Surgeon General
www.surgeongeneral.gov/tobacco
Has numerous helpful resources for clinicians and consumers
Quit Now Virginia
http://www.vdh.state.va.us/LHD/richmondcity/chronicdisease/quitnowvirginia.htm
1-800-QUIT-NOW (Telephone Quitline)
American Lung Association:
www.lungusa.org
1-866-QUIT-YES (Telephone Quitline)
National Cancer Institute
www.nci.nih.gov
1-877-44U-QUIT (Telephone Quitline)

Helpful Resources (cont.)

CDC, NCI, NIH and DHHS resource:
www.smokefree.gov
UMDNJ Tobacco Dependence Program
www.tobaccoprogram.org
Smoking Cessation Leadership Center
smokingcessationleadership.ucsf.edu
Rx for Change (free training curriculum—must register to use)
Rxforchange.ucsf.edu

CEBP Tobacco Training on You Tube
http://www.youtube.com/user/caseilig