Denormalizing Tobacco Use in the Behavioral Health Setting

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Discussion

- Individuals with mental illness and/or substance use disorders are more vulnerable to tobacco dependence due to co-morbidity factors.
- The neurochemical and behavioral associations of tobacco use to the use of other substances is significant.
- Fully integrated tobacco interventions in addiction services improves treatment outcomes.
- Effective implementation strategy includes provision to denormalize tobacco use in the treatment and recovery culture.
“...to study the basic dimensions of the cigarette as they relate to cigarette acceptability...[and] to record and interpret changes in smoke inhalation patterns [and nicotine retention] in response to changes in smoke composition”, and “to develop a better understanding of the actions of nicotine and other smoke compounds, especially those which reinforce the smoking act.”

Nicotine & Tobacco Research, Volume 6, Number 6, December 2004
Factors Determining the Effects of Cigarette Smoking

- Sensorial
- Chemical
- Physical
- Perceptual
- Cognitive
- Psychological

Philip Morris Sensory Technology Operation Plans, 1991
Tobacco Industry Research

Biobehavioral Division at RJ Reynolds
1985 List of Projects

- Central Nervous System Neurobiology
- Psychophysiology of Tobacco Use
- Pharmacology of Tobacco Use
- Cellular Physiology and Biochemistry
- Psychophysics of Tobacco Use
- Psychosociology of Tobacco Use

Nicotine & Tobacco Research, Volume 6, Number 6, December 2004
NYC Tobacco Use Prevalence

2008 Adult Smoking Rate = 15.8%
NYC Department of Health and Mental Hygiene, 2009

- Addiction Treatment = 60 to 95%
- Serious Mental Illness = 75 to 80%
- HIV and AIDS = 50 to 70%

Professional Development Program, Rockefeller College, SUNY at Albany,
The Foundation: Integrating Tobacco Use Interventions into Chemical Dependence Services, 2008
<table>
<thead>
<tr>
<th>Disorder</th>
<th>Prevalence Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major depression</td>
<td>36 - 80 %</td>
</tr>
<tr>
<td>Bipolar disorder</td>
<td>51 - 70 %</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>62 - 90 %</td>
</tr>
<tr>
<td>Anxiety disorders</td>
<td>32 - 60 %</td>
</tr>
<tr>
<td>PTSD</td>
<td>45 - 60 %</td>
</tr>
<tr>
<td>ADHD</td>
<td>38 - 42 %</td>
</tr>
<tr>
<td>Alcohol abuse</td>
<td>34 - 93 %</td>
</tr>
<tr>
<td>Other drug abuse</td>
<td>49 - 98 %</td>
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</tbody>
</table>

Prevalence rates by diagnostic category across studies (Morris et al., 2009)
Nearly half of all cigarettes in the United States are consumed by individuals with an addiction or mental illness.  

Grant, 2004; Lasser, 2000

In sample of 78 people with schizophrenia, participants spent nearly 1/3 (27.36%) of monthly public assistance income on cigarettes.  

Steinberg et al., 2004
Why Individuals With COD Have Higher Rates of Tobacco Dependence

- The pathophysiology of these disorders increases vulnerability to nicotine dependence.
- Individuals with are self-medicating affective and cognitive deficits associated with these disorders.
- Social factors (e.g., peer modeling, settings).

Factors Linked with High Smoking Rates

- Genetic predisposition
- Nicotine effects
- Boredom
- Smoking part of culture
- Used as a reward in some treatment settings
- Lack of social support

- May negate some antipsychotic agents’ side effects
- Increased sensitivity to nicotine withdrawal
- High unemployment rates & poverty
- Relatively low education levels
Comparative Causes of Death in the United States

About 70% of individuals with mental illness smoke cigarettes. Studies show that they live 8 to 20 years less than the general population. Williams & Ziedonis, 2004; Dembling et al., 1999

Tobacco use was the cause of death in 51% of alcoholics who completed inpatient treatment examined over a 20-year period post treatment. Hurt et al. 1996

Among males with heroin addiction, tobacco use was responsible for more deaths than accidental drug poisoning/overdose, suicide/homicide/accidents, and chronic liver disease examined over a 33-year period. Hser et al. 2001

Centers For Disease Control and Prevention, 2004
Tobacco Dependence
A Chronic Substance Use Disorder

- Neurobiological
- Psychological
- Social
Nicotine Neurochemistry

Nicotine has a cascade effect on a variety of neurotransmitters and is one of the most potent stimulants of the midbrain dopamine reward pathway. Pomerleau, 1992

Drug action of nicotine releases:

- **Excitatory, Activating, Stimulating neurotransmitters**
  - Norepinephrine
  - Glutamate

- **Inhibitory, Calming, Relaxing neurotransmitters**
  - GABA
  - Serotonin

- **Rewarding neurotransmitters**
  - Dopamine

- **Analgesic neurotransmitters**
  - Endorphins
  - Enkephlins
The Cycle of Nicotine Addiction in Smokers
Is Reinforcing and Progressive

Nicotine in Cigarettes Is Used for:
- Pleasure
- Enhanced performance
- Self-medication of withdrawal symptoms
- Mood regulation

Tolerance and Physical Dependence
- Tolerance related to both upregulation (increased number) and desensitization of nicotine receptors
- 2-hour half-life of nicotine and rapid clearance from CNS in combination with upregulation and decreased sensitivity can result in withdrawal symptoms and urge to smoke

Abstinence May Produce Nicotine Withdrawal Symptoms
- Dysphoric or Depressed Mood
- Irritability, Frustration, or Anger
- Increased Appetite or Weight Gain
- Difficulty Concentrating
- Urge to Smoke
- Insomnia
- Anxiety
- Restlessness
- Decreased Heart Rate
- Lightheadedness


DYNAMIC Dialogues
Empowering Smoking Cessation and COPD Management
Primary and Secondary Factors in Tobacco Dependence

Figure 1. State, trait and environmental factors, and neurotransmitter systems that mediate smoking maintenance and relapse. The blue circles represent primary contributors to smoking maintenance and relapse, whereas the green circles represent secondary contributors to those processes. Abbreviations: ACh, acetylcholine (nicotinic ACh receptor); DA, dopamine; ECB, endocannabinoid (CB, receptor); EOP, endogenous opioid peptide; Glu, glutamate; 5-HT, 5-hydroxytryptamine; NA, noradrenaline.

Nicotine affects the same neural pathway as alcohol, opiates, cocaine, and marijuana. Pierce & Kumaresan, 2006

Tobacco use reinforces the effects of alcohol and cocaine. Little, 2000; Wiseman & McMillan, 1998

Tobacco use has a modulating effect by reducing cocaine-induced paranoia. Wiseman & McMillan, 1998
Psychological Factors

- Sense of Security
- Chemical Coping Beliefs
- Chemical Coping Identity
- Shared Behavioral Defenses that Justify Other Drug Use
Social Factors

Tobacco use in an population with COD maintains…

- rituals and social norms that serve to reinforce chemical coping beliefs.
- drug dealing behavior and lifestyle
- drug acquisition skills including manipulative behavior, prostitution and other criminal activity, etc.
The Paradox

- As one walks through a drug recovery process, the cigarette is often the last thread of a tangible link to the old (addict identity) while developing the new (addict in recovery identity).

- Tobacco use provides a sense of familiar comfort, yet often inhibits key objectives of drug recovery: cognitive and behavioral change to redefine self and lifestyle.
Addressing Tobacco Improves Treatment Outcomes

- [Tobacco dependence treatment] provided during addictions treatment was associated with a 25% increased likelihood of long-term abstinence from alcohol and illicit drugs.

Meta Analysis of 19 Randomized Control Trials with Individuals in Current Treatment or Recovery.
Addressing Tobacco Improves Treatment Outcomes

- Alcoholics who quit smoking are more likely to succeed in alcoholism treatment.
  Shiffman & Balabanis, 1996

- Nicotine craving and heavy smoking may contribute to increased use of cocaine and heroin.
  National Institute on Drug Abuse, 2000

- Non-tobacco users maintain longer periods of sobriety after inpatient treatment for alcohol/drug dependence than tobacco users.
  Stuyt, 1997
Tobacco Interventions

Two Fundamental Goals:

1. “Denormalize” tobacco use within the program and recovery culture.
2. Provide treatment to assist residents to establish and maintain tobacco abstinence as part of their “a day at a time” recovery.
Change Strategies

- Anchor the rationale for addressing tobacco to the organization’s mission, 12-Step teachings or TC principles.
- Introduce the topic as a recovery issue.
- Develop a written ATOD policy (see OASAS 856 checklist).
- Strategically address the resistance to social change.
- Provide targeted staff training after completing a needs assessment; match training to agency stage-readiness.
- Use language consistent with treatment and recovery culture.
- Integrate tobacco treatment into existing programming.
- Cultivate a consensus of all stakeholders.
Change Strategies

Think parallel process

- Meet people where they are
- Strive to understand staff perspective
- Wherever possible, offer options
- Roll with resistance non-reactively
- Avoid willfulness
- Support staff initiatives for change
- Partner with staff to tailor interventions for their practice context

(Miller & Rollnick, 2001; Williams et al., 2006)
Environmental Support

Alcohol, Tobacco, & Drug-Free Policy

WE NEED YOUR HELP

East House wants to maintain a healthy safe environment

This house is

Alcohol, Tobacco
and Drug Free

By not using these substances, we can support each other in recovery

Thank you for Your Support and Cooperation
Reframe Language

Consistent to Recovery Culture, 12-Step Teachings and Therapeutic Community Principles

<table>
<thead>
<tr>
<th>Common Terminology</th>
<th>Language to Promote Norm Change</th>
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<tbody>
<tr>
<td>Smoking</td>
<td>Tobacco Use, Hit, Fix</td>
</tr>
<tr>
<td>Quit date</td>
<td>Tobacco Recovery Start Date</td>
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<tr>
<td>Cessation</td>
<td>Treatment, Recovery</td>
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</table>
## System Changes

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<thead>
<tr>
<th></th>
<th>Current System</th>
<th>Change</th>
<th>Related Tasks</th>
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<tbody>
<tr>
<td>Assessment</td>
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<td>Intake/Orientation</td>
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<td>Treatment Planning</td>
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<td>Services</td>
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<td>Psychoeducation</td>
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<td>Case Review/QA</td>
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<td>Discharge</td>
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Tobacco Dependence Treatment

The addiction to nicotine

Medications

The habit of using tobacco

Behavior change program

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

Fiore et al. 2008; rxforchange/ucsf
Tobacco Dependence Treatment

Two Levels of Tobacco Counseling to Match Interventions to Client Stage-Readiness:

**Tobacco Awareness** (Cognitive)
- Engagement
- Develop Interest
- Highlight Importance
- Enhance Stage-Readiness

**Tobacco Recovery** (Behavioral)
- Learn Skills
- Elevate Confidence
- Embrace Lifestyle Change
- **Always** with Pharmacotherapy
Treating Tobacco Use And Dependence

CLINICAL PRACTICE GUIDELINE
2008 UPDATE

U.S. Department of Health and Human Services
Public Health Service

2008 Guideline: 5/7/08
When I stopped living the problem and began living the answer, the problem went away.

Thank You

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