

Tobacco Use & Treatment for Persons with Mental Illness

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Learning Objectives

At the end of this session, learners will be able to:

- ▶ List 2-3 ways in which quitting tobacco affects psychiatric medications
- ▶ Describe 2-3 tobacco treatment strategies for assisting patients with psychiatric disorders
- ▶ Explain how treating tobacco use can be adapted for persons with mental illness
- ▶ Describe why treatment works in this population

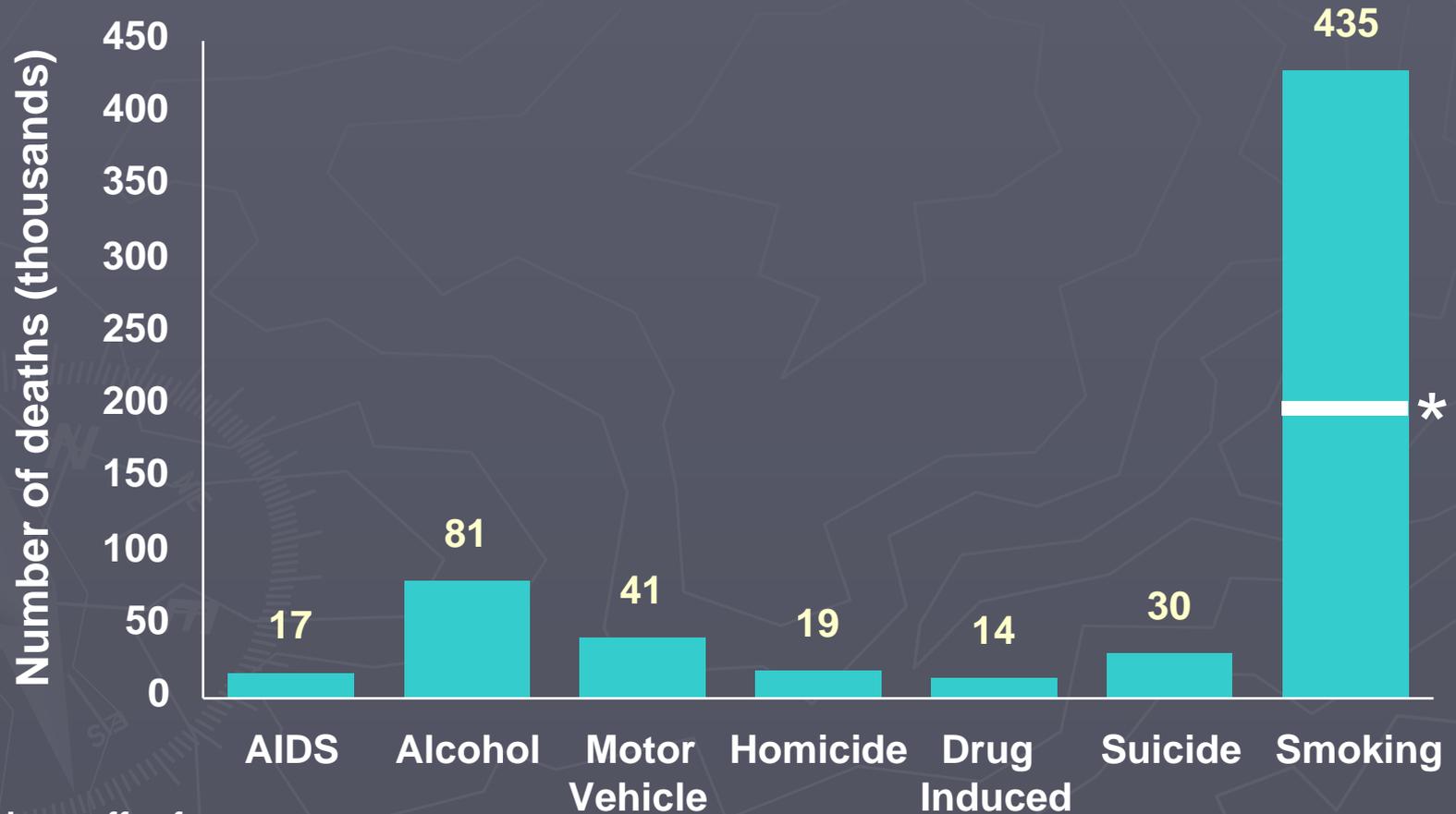
<http://rxforchange.ucsf.edu>



Alarming Statistics

- ▶ The smoking rate among those with a current psychiatric disorder is 41%.
- ▶ About 22% of adults have a current psychiatric disorder; however, they consume over 44% of all cigarettes sold in the U.S.
- ▶ Heavy smokers have more severe psychiatric symptoms, poorer overall general well-being, and greater functional impairment when compared to light smokers and nonsmokers.¹

COMPARATIVE CAUSES of ANNUAL DEATHS in the UNITED STATES



* Also suffer from mental illness and/or substance abuse

Mokdad et al. (2004). *JAMA* 291:1238–1245.
Flegal et al., (2005). *JAMA* 293:1861–1867.

People with serious mental illness die 25 years younger than the general population, largely due to conditions caused or worsened by smoking.

National Association of State Mental Health Program Directors. Morbidity and Mortality in People with Serious Mental Illness. Thirteenth in a Series of Technical Reports. Alexandria, VA: 2006.

Tobacco Use in Michigan

- ▶ Heart Disease, Cancer, Stroke, and COPD are the four leading causes of death in Michigan - all associated with smoking.
- ▶ Tobacco use is the leading preventable cause of death.
- ▶ Secondhand smoke is the third leading preventable cause of death.

Tobacco Use By Michigan Citizens Costs The State

- ▶ \$3.13 billion in Direct Medical Expenditures
(about \$597 for every household in Michigan)
- ▶ \$3.62 billion in Productivity Costs (lost wages, etc.)
- ▶ ~\$1.04 billion in Medicaid expenditures due to tobacco use

Smoking Prevalence by Disorder

- ▶ Major depression 50-60%
- ▶ Anxiety disorder 45-60%
- ▶ Bipolar disorder 55-70%
- ▶ Schizophrenia 65-85%

Source: NASMHPD Tobacco-Free Living in Psychiatric Settings. A Best – Practices Toolkit Promoting Wellness and Recovery, September 2007.

Consumers Want to Quit

- ▶ It is often thought that people with mental illnesses are unable or unwilling to quit smoking.
- ▶ A recent study found that cessation counseling was provided 12% of the time during visits with a psychiatrist.²
- ▶ People with mental health disorders want to quit at the same rate as the rest of the population.

It's a Social Justice Issue

- ▶ People with severe mental illness use tobacco disproportionately and are harmed disproportionately.
- ▶ Those with mental illness deserve the same opportunity to recover from tobacco addiction as anyone else.

Self Check Mini Quiz

True or False:

1. People with mental illness want to quit tobacco at the same rate as others.
2. People with Bipolar Disorder have the highest rates of smoking prevalence among those with mental illness.
3. People with serious mental illness use tobacco at a disproportionately higher rate than the general population.

Check the next slide for answers.

Self Check Mini Quiz Answers

1. People with mental illness want to quit tobacco at the same rate as others. **TRUE**
2. People with Bipolar Disorder have the highest rates of smoking prevalence among those with mental illness. **FALSE (Schizophrenia)**
3. People with serious mental illness use tobacco at a disproportionately higher rate than the general population. **TRUE**

Treating Tobacco Use and Dependence in Patients with Psychiatric Disorders*

- ▶ Heightened risk for relapse
- ▶ Stopping smoking or nicotine withdrawal may exacerbate a patient's comorbid condition
- ▶ Treatment is made more complex by the potential for multiple psychiatric diagnoses and multiple psychiatric medications
- ▶ Nicotine withdrawal could affect pharmacokinetics of certain psychiatric medications (tars in tobacco smoke can change the metabolism of a variety of medications by increasing blood levels of these medications and the risk of adverse events seen with higher doses, even if dose levels remain constant.)
- ▶ Approximately doubles clearance of antipsychotics and antidepressants
- ▶ Need to monitor for increased side effects

*Including substance use disorders

Pharmacokinetic Drug Interactions with Smoking

Polycyclic aromatic hydrocarbons (PAH's) in tobacco smoke induce cytochrome P450 enzymes

Drugs that may have a decreased effect due to induction of CYP1A2:

- ▶ Caffeine
- ▶ Clozapine (Clozaril™)
- ▶ Fluvoxamine (Luvox™)
- ▶ Haloperidol (Haldol™)
- ▶ Olanzapine (Zyprexa™)
- ▶ Phenothiazines (Thorazine, Trilafon, Prolixin, etc)
- ▶ Propranolol
- ▶ Tertiary TCAs / cyclobenzaprine (Flexaril™)
- ▶ Thiothixene (Navane™)
- ▶ Other medications: estradiol, mexiletene, naproxen, phenacetin, riluzole, ropinrole, tacrine, theophylline, verapamil, r-warfarin (less active), zolmitritan

Smoking cessation will reverse these effects

Case reports of medication intoxication following cessation

- ▶ Patients treated with CYP1A2 substrate antipsychotics should regularly be monitored with regard to their smoking consumption in order to adjust doses in cases of a reduction or increase in smoking
- ▶ Tobacco and cannabis smoking cessation can lead to intoxication with clozapine or olanzapine

Zullino, D.F. et al. (2002) International Clinical Psychopharmacology

Drug interactions with smoking: Summary

Clinicians should be aware of their patients' smoking status:

- Clinically significant interactions result not from nicotine but from the combustion products of tobacco smoke.
- Constituents in tobacco smoke (e.g., polycyclic aromatic hydrocarbons; PAHs) may enhance the metabolism of other drugs, resulting in a reduced pharmacologic response.
- Smoking might adversely affect the clinical response to the treatment of a wide variety of conditions.

Psychiatric Medications Affected by Reducing or Quitting Tobacco Use

<p>Antipsychotics</p>	<p>Chlorpromazine(Thorazine), Clozapine (Clozaril), Fluphenazine (Permitil), Haloperidol (Haldol), Mesoridazine (Serentil), Olanzapine (Zyprexa), Thiothixene (Navane), Trifluoperazine (Stelazine), Ziprasidone (Geodon)</p>
<p>Antidepressants</p>	<p>Amitriptyline (Elavil), Clomipramine (Anafranil), Desipramine (Norpramin), Doxepin (Sinequan), Duloxetine (Cymbalta), Fluvoxamine (Luvox), Imipramine (Tofranil), Mirtazapine (Remeron), Nortriptyline (Pamelor), Trazodone (Desyrel)</p>
<p>Mood stabilizers</p>	<p>Carbamazepine (Tegretol)</p>
<p>Anxiolytics</p>	<p>Alprazolam (Xanax), Diazepam (Valium), Lorazepam (Ativan), Oxazepam (Serax)</p>
<p>Others</p>	<p>Acetaminophen, Caffeine, Heparin, Insulin, Tacrine, Warfarin, Rasagiline (Azilect), Riluzole (Rilutek)</p>

Source: BEA Resource Guide, January 2008, p.

Pharmacotherapy for Tobacco Use Treatment

▶ Seven first line FDA approved pharmacotherapies:

- Nicotine Patch
- Nicotine Gum
- Nicotine Inhaler
- Nicotine Nasal Spray
- Nicotine Lozenges
- Bupropion SR
- Chantix (Varenicline)



Nicotine Patch

Pros:

- User friendly, just stick and go
- Once a day dosage & different dosages
- Few side effects

Cons:

- Steady state dosing
- \approx 2 hrs to reach therapeutic level
- Skin reactions
- Can cause "dull" pain if applied on "boney" area
- Sleep disturbance if worn at night



Nicotine Spray

Pros:

- Fastest absorption (< 5 minutes)
- Rx – insurance may cover
- Flexibility

Cons:

- First week difficult; burning eyes, throat, nasal discharge, sneezing
- Poor compliance
- Problems getting off nasal spray
- Expensive without insurance



Nicotine Inhaler

Pros:

- Flexible dosing
- Mimics smoking hand-to-mouth behavior
- Relative quick delivery, 5-10 minutes

Cons:

- Frequent use to achieve adequate dosing
- Throat irritation
- Prescription medication, expensive; not always covered by insurance plans



Nicotine Lozenge

Pros:

- ▶ Flexibility of use
- ▶ Relatively quick absorption
- ▶ Better for those who are gum chewers

Cons:

- ▶ Users need to follow directions
- ▶ Restrictions with eating and drinking 15 minutes before or after use for best results
- ▶ Chalky buildup at lozenge site
- ▶ Hard for people not to chew/swallow
- ▶ OTC – expensive
- ▶ Poison potential with children and animals



Bupropion

Pros:

- Easy to use
- Effective with large number of people
- Covered by most insurance plans
- Can be used in combination with NRT

Cons:

- Most common side effects: sleep disorder, dry mouth, sense of discomfort
- Expensive without insurance
- Contraindications: seizure disorder, bulimia, anorexia nervosa, recent MI, unstable angina, MAOIs



Varenicline

Pros:

- Easy to use
- Alternative to bupropion and NRT
- Non-nicotine medication
- Initial research looks promising

Cons:

- Most common side effects: nausea, insomnia, and unusual dreams
- Expensive without insurance
- Consult physician if develop agitation, depressed mood, or changes in behavior, suicidal ideation or suicidal behavior

Pharmacotherapy for Tobacco Use Treatment

▶ Second line Pharmacotherapies

- Clonidine
 - ▶ Oral
 - ▶ Transdermal
- Nortriptyline

Types of Treatment

- ▶ Self Help
- ▶ Brief Intervention by a clinician
- ▶ One-on-one counseling
- ▶ Group counseling
- ▶ Tobacco treatment medication
- ▶ Quitlines (telephone counseling)
- ▶ On line quit resources (e.g., Quit Net)

Michigan Tobacco Quitline

- ▶ 1-800-QUIT-NOW (784-8669)
- ▶ Available 24 hours a day, 7 days a week
- ▶ Offers gold-standard, highly effective treatment for tobacco users
- ▶ Increases access to treatment to reduce barriers such as transportation, childcare and work schedules

Treatment works

- ▶ 42.5% of ever smokers in the general population have quit.³
- ▶ Quit rates for ever smokers with a psychiatric disorder range from 16.6% (bi-polar disorder) to 41.4% (panic disorder).⁴
- ▶ Medication and CBT increase chances of long term abstinence.
- ▶ Tobacco treatment should be integrated into behavioral (mental health) treatment plan- smokers will be 5 times more likely to remain abstinent.⁵

Treatment Adaptations

- ▶ People with mental illnesses spend as much as 25% of their income on tobacco.
- ▶ Peer support has demonstrated effect with this population.
- ▶ Nicotine Anonymous or other groups work well. Many consumers are already comfortable with a group setting.
- ▶ Loose timetable for quitting. It is recommended that the quit date remain flexible.
- ▶ Monitor closely for relapse of symptoms and for medication levels
- ▶ Integrate with healthy living programs/classes.

Who Can Intervene?

- ▶ Mental health providers may be ideal to deliver smoking cessation
 - Therapeutic alliance with their patients
 - Patients will return for treatment of their mental illness even if they are not seeking smoking cessation
 - Providers have opportunity to encourage repeated quit attempts
 - Cost efficient since it can be integrated into the treatment plan

How do I approach tobacco treatment with the patient?

- ▶ Explain that it is a part of the behavioral (mental health) treatment plan
- ▶ Incorporate tobacco use questions into the intake assessment (Ask, Advise)
- ▶ Assess the patient's readiness to quit: 1) not thinking about quitting; 2) not prepared to quit now, but thinking about quitting sometime in the next 6 months; 3) thinking about quitting in the next month
- ▶ Tell the client you will offer ongoing support in overcoming barriers (Assist, Arrange)

Overcoming Patient Objections

- Self-stigma
- Lack of recovery
- Fear of weight gain – substitute high fiber, low calorie snacks, chew on straws or cinnamon sticks, exercise
- Fear of withdrawal symptoms -
- Boredom
- Depression
- Coping with tension and anxiety
- Daily routines will be altered
- Smoking as social activity
- Expectation of failure

Depression & Tobacco Use Treatment

- ▶ About 25% of currently depressed smokers are interested in quitting.
- ▶ Stepped care (more intensive treatment) has shown better outcomes than a brief intervention.
- ▶ Medications shown to be most effective are bupropion and nortriptyline.⁶
- ▶ Quitlines may be effective but may need additional sessions.

Depression Severity & Tobacco Treatment Outcome

► NO RELATIONSHIP

- Depression severity, as measured by the Beck Depression Inventory-II, was unrelated to participants' likelihood of quitting smoking
- Among intervention participants, depression severity was unrelated to their likelihood of accepting cessation counseling and nicotine patch.

Hall et al., Am J Public Health

Tobacco Use Treatment with Other Disorders

► Schizophrenia

- Programs with a psychosocial treatment component seem to be most effective.
- Tobacco dependence treatment medications that have been studied and have shown some success include bupropion, nicotine nasal spray and clozapine.⁷

Tobacco Use Treatment with Other Disorders

▶ Bipolar Disorder

- No empirically based treatments have been published.⁸
- Use of Nicotine Patch is suggested in this population.⁹

▶ Anxiety Disorder

- CBT techniques that incorporate cognitive restructuring and exposure therapy may be helpful.¹⁰

Self Check Mini Quiz

True or False:

1. Persons with mental illness are at a greater risk for relapse of tobacco use.
2. Nicotine withdrawal can affect certain medications used to treat psychiatric conditions.
3. Support of peers does not affect the ability of a person with mental illness to quit tobacco use.

See next slide for answers

Self Check Mini Quiz Answers

1. Persons with mental illness are at a greater risk for relapse of tobacco use. **TRUE**
2. Nicotine withdrawal can affect certain medications used to treat psychiatric conditions. **TRUE**
3. Support of peers does not affect the ability of a person with mental illness to quit tobacco use. **FALSE**

Self Check Mini Quiz, cont.

4. A quit date should be somewhat flexible.
5. Medications shown to be most effective in persons with depression are _____ and _____.
6. Cognitive behavior therapy is particularly helpful in treating tobacco use in people with this disorder. _____

Self Check Mini Quiz Answers

4. A quit date should be somewhat flexible.

TRUE

5. Medications shown to be most effective in persons with depression are **BUPROPION** and **NORTRIPTYLINE**.

6. Cognitive behavior therapy is particularly helpful in treating tobacco use in people with this disorder. **ANXIETY DISORDER**

Case Studies

- ▶ Two case studies
- ▶ Think about a brief tobacco treatment plan for the patient, including how to reduce barriers and increase the chances for quitting tobacco.

Case studies adapted from lecture given at The Summer Institute titled "New Directions: Reaching Populations with Mental Illness & Substance Use Disorders," Wendy Bjornson, MPH and Gary Tedeschi, PhD, 2008.

Case Study #1

Barbara is a 43 year old mother of two who works in a large health care system. She has a past history of episodes of major depression, once when she was in college, another time following the birth of her second child, and most recently when she tried to stop smoking cold turkey five years ago. She was prescribed an antidepressant medication for the most recent episode of depression, but she weaned herself off after three weeks due to the side effects and was unable to quit smoking completely. Barbara has been a smoker since age 15 when she discovered that smoking seemed to help manage her moods. She presently smokes about a pack a day, but is under pressure from her family and her worksite, which has adopted a 100% tobacco free policy, to quit. She is anxious about quitting because it could cause another depressive episode, but she is also afraid that she will lose her job if she does not. She is also worried that she might have a heart attack like her father, who was a long time smoker.

Case Study #1

Considerations in developing a tobacco treatment plan

- ▶ How might this patient be affected by quitting tobacco?
- ▶ What pharmacotherapy could be offered to assist with depression and quitting tobacco?
- ▶ What potential barriers could the patient present?

Case Study #2

Richard is a 24 year old student who is diagnosed with schizophrenia. When he started to participate in a behavioral group program, Richard noticed that most of the other members smoked, so he decided to try smoking himself. He found that he felt better, that the smoking seemed to ease his symptoms, and he liked the social aspects of smoking together with the other members of the group. A decade later, he is seeing the increased warnings about smoking and finding fewer places to do it. He has thought about the possibility of trying to quit, but doesn't know how to go about it or what might happen to him if he does. He recently found a toll free quitline number and called it to see if he could find out more. The counselor he spoke to didn't ask him whether he had any mental health problems, but did offer to send him two weeks of nicotine patches if he was ready to quit. Richard didn't know what to do. He became frustrated and told the counselor to just forget about it.

Case Study #2

Considerations in developing a tobacco treatment plan

- ▶ Would counseling be an effective treatment for this patient? Why or why not?
- ▶ What things would you suggest in order to help the patient increase chances for quitting tobacco?
- ▶ What about medication? Any recommendations?

Resources

► TOOLKITS

Smoking Cessation for Persons with Mental Illness: A Toolkit for Mental Health Providers (2007). A 42-page binder developed by the University of Colorado at Denver and Health Sciences Center. To order copies of this toolkit and additional materials, visit www.steppitems.com

Tobacco-Free Living in Psychiatric Settings: A Best-Practices Toolkit Promoting Wellness and Recovery (July 2007). Developed by the National Association of State Mental Health Program Directors (NASMHPD). Provides practical tips for converting facilities to smoke-free status.

Available at: www.nasmhpd.org/general_files/publications/NASMHPD.toolkit.FINAL.pdf

Resources

► TOOLKITS

The Help to Quit Program: Addressing Effective Treatment for Tobacco Users with Mental Illness and/or Substance Use Disorders (MI/SUD). Frances Clendenen, Debbie Marion, Brandy Huffman, David Huffman, Gary Sams and Dr. Jill Williams, 2009. For more information, go to www.help-to-quit.com

Resources

- ▶ Facts about Smoking and Mental Health Disorders (2007). Tobacco Cessation Leadership Network. Available at: www.tcln.org.
- ▶ Consumers Helping Others Improve their Condition by Ending Smoking (CHOICES). www.njchoices.org/index.htm
- ▶ UMDNJ Tobacco Dependence Program Website: www.tobaccoprogram.org

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2. Thorndike AN, Stafford RS, Rigotti NA. US physicians' treatment of smoking in outpatients with psychiatric diagnoses. *Nicotine Tob Res*. 2001; 3:85-91.
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10. Morrisette, SB, Tull, MT, Gulliver, SB, et al. Anxiety, Anxiety Disorder, Tobacco Use and Nicotine: A Critical Review of Interrelationships. *Psychological Bulletin*, 2007; 133(2) 245-272

Slides 4, 5, 10, 11 and 12 in this presentation were borrowed from previous lectures by Dr. Gregory S. Holzman, Chief Medical Executive, Michigan Department of Community Health. Adapted from a presentation written by Karen S. Brown, Tobacco Section, Michigan Department of Community Health

Training Evaluation

<http://www.zoomerang.com/Survey/?p=WEB229B7US4SQB>