

Cessation Facts and Myths about Smokers with Chemical Dependency, Mental Health Conditions, and Homelessness

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Disclosure

- ❖ Funding Sources in last 5 years
 - ❖ National Heart, Lung, and Blood Institute
 - ❖ National Cancer Institute
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 - ❖ National Institute on Minority Health and Health Disparities
 - ❖ ClearWay Minnesota
- ❖ Industry funding
 - ❖ Pfizer for FDA-approved research project involving use of nicotine patch, bupropion, and varenicline
 - ❖ No speaker bureau
- ❖ Off label medication uses discussed
 - ❖ None



Overview

- ❖ Defining the Problem
- ❖ Myths
- ❖ Facts
- ❖ Unknowns
- ❖ Publications and Resources



Defining the problem

- ❖ Although the prevalence of smoking has declined overall in the US in the last few decades, tobacco use remains endemic among certain underserved "special" populations including (for the purpose of current presentation)
 - ❖ Chemical dependent population
 - ❖ Persons with mental health conditions
 - ❖ Homeless

Substance Abuse Populations

Misconceptions or myths about nicotine dependence and substance abusers?

- ❖ Smoking cessation may act as a stressor to jeopardize sobriety
- ❖ Smoking cessation may precipitate relapse
- ❖ Nicotine dependence viewed as a minor problem
- ❖ Substance abuse patients are not interested in quitting smoking

Facts about cigarette smoking and chemical dependency

- ❖ Prevalence of smoking range 70%-95% [Burling and Ziff, 1998]
- ❖ They tend to be heavy smokers
- ❖ More dependent on nicotine
- ❖ Have lower quit rates [Marks et al. 1997; Lasser et al. 2000; Novy et al. 2001]
- ❖ The combined use of tobacco and other drugs is a significant and preventable risk for disease and premature deaths. The risk of combined use are multiplicative rather than just additive [Talami et al. 2002; Lee et al. 2005; Marrero et al. 2005]
- ❖ Persons with AUD are more likely to die from tobacco-related conditions such as lung cancer and cardiovascular disease than alcohol-related conditions [Hurt et al. 1996]

Possible theories about for the high degree of overlap

- ❖ Similar genetic predisposition
- ❖ Using one substance to enhance reinforcing effects of the other
- ❖ Capacity of one substance to reduce unpleasant effects of the other

What are the attitudes of substance abuse users about smoking cessation?

- ❖ Consistent evidence refute the misconception that recovering substance abusers are not interested in quitting smoking at some point during their recovery [Sees and Clark, 1993]
 - ❖ A survey [n=272] of patients entering substance abuse treatment in a VA hospital reported that
 - ❖ All alcoholics
 - ❖ 72% of cocaine addicts
 - ❖ 70% of heroin addicts expressed interest in quitting smoking [Sees et al. 1993]
 - ❖ 52% of alcoholics and 42% of heroin addicts were interested in quitting smoking at the time they started treatment for other addictions.
 - ❖ Several studies have found that relatively few [5%-30%] believe that attempting to quit smoking has had or will have negative impact on their sobriety [Bobo et al. 1987; Irving et al. 1994; Joseph et al. 1990; Orleans & Hutchinson, 1993]
 - ❖ Some studies have found that a high proportion [>60%] of substance users are interested in concurrently quitting smoking and other drugs in programs where both are offered [Irving et al. 1994; Joseph et al. 1990]

When should Tobacco Cessation Treatment Occur?

- ❖ Concurrent cessation vs. one substance at a time
 - ❖ *Concurrent*—Continued use of one addictive substance could provoke relapse to the other due to the brain's cross-sensitivity to both drugs
 - ❖ *One substance at a time*—due to the demands of withdrawal from quitting tobacco or alcohol
- ❖ The vast majority of studies suggest that concurrent treatment does not increase the probability of relapse [Burling et al. 1991; Hurt et al. 1994; Martin et al. 1997; Bobo et al. 1998; Patten et al. 1998; Burling et al. 2001; Kalman et al. 2001; Gariti et al. 2002; Rohsenow et al. 2002; Haug et al. 2004]
- ❖ Two studies involving timing of intervention showed that smokers were more likely to participate when tobacco cessation was offered concurrently with treatment for alcohol dependence compared to when it was delayed [Kalman et al. 2001; Joseph et al. 2004]
- ❖ In the two studies that found evidence of greater relapse for concurrent treatment for tobacco and alcohol treatment, the differences between treatment and control groups were not observed consistently at all time points and all measures [Grant et al. 2003; Joseph et al. 2004]

What smoking cessation methods work for substance abuse populations?

- ❖ Efficacy of bupropion and nicotine replacement therapy (gum and patch) have been shown to be similar for smokers with and without a past history of alcoholism [Cooney et al. 2002; Hayford et al. 1995; Humfleet et al. 1999]. Participants who were alcoholics at baseline were less likely to be abstinent at all time points [Humfleet, 1999]
- ❖ One study showed lower tobacco abstinence rates with nicotine patch for smokers with past or active alcoholism compared with those without such as history [Hays et al. 1999].
- ❖ Another study (n=240 subjects) showed that smoking cessation rates at the end of nicotine patch therapy were similar in recovering alcoholics (46%) and non-alcoholics (47%) receiving active 22 mg patches but higher than the respective placebo groups (17% and 19%). The 1-year rate was higher in the non-alcoholic group assigned to an active patch (31%) compared to placebo (14%). For recovering alcoholics, the rates were lower and not significantly different versus placebo [Hurt et al. 1995]. The study concluded that recovering alcoholic smokers can achieve comparable short-term cessation rates with nicotine patch therapy.
- ❖ Cognitive behavioral therapy has been found to be helpful for alcoholic smokers [Patten et al. 1998; Patten 2001].
- ❖ A study examined smoking intervention for newly recovering drug and alcohol-dependent smokers in a residential rehabilitation program.
 - ❖ Participants were randomly assigned to treatment conditions (n = 50 each) including multicomponent smoking treatment (MST), MST plus generalization training of smoking cessation to drug and alcohol cessation (MST+G), or usual care (UC).
 - ❖ Both conditions consisted of 5 weeks of prequit treatment and 4 weeks of postquit supportive counseling plus nicotine patch.
 - ❖ Both treatment conditions achieved continuous smoking abstinence rates (MST: 12%; MST+G: 10%, at 12-month follow-up) that were significantly higher than in the UC condition (0%). The MST condition had a continuous drug and alcohol abstinence rate that was significantly higher than that of the MST+G condition (40% vs. 20% at 12-month follow-up) although neither differed significantly from that of the UC condition (33%). [Burling et al. 2001]
- ❖ In a recent study, 162 alcohol-dependent smokers were randomized to either intensive intervention for smoking cessation or usual care.
 - ❖ The intensive intervention consisted of 16 sessions of individual cognitive behavior therapy (CBT) and combination nicotine replacement therapy that lasted 26 weeks.
 - ❖ At 12 and 26 weeks, the verified 7-day point-prevalence quit rate was significantly higher for the intensive intervention group than for the usual care group.
 - ❖ Verified 30-day alcohol abstinence rates were not significantly different for the two treatment groups at any of the follow-up assessments.
 - ❖ Authors concluded that the intensive smoking cessation intervention yielded a higher short-term smoking quit rate without jeopardizing sobriety and recommended use of a chronic care model to facilitate maintenance of smoking cessation during the first year of alcohol treatment and perhaps for longer periods of time. [Carmody et al. 2011]

Psychiatric Population

Tobacco Cessation and Severe Mental Illness [SMI]

- ❖ Tobacco use and dependence are disproportionately higher among persons with SMI mental illness compared with the general population [Ziedonis et al. 2008]
- ❖ Up to 70% of people with SMI smoke cigarettes and approximately half are heavy smokers [Banham & Gilbody]
- ❖ Tobacco-related illnesses are a major contributor to excess morbidity and mortality experience by people with severe mental illness [Banham & Gilbody 2010].
- ❖ **Depression**
 - ❖ Cross-sectional studies show that >30% of patients with current depression are daily smokers [Grant et al. 2004; Wasmansky et al. 2005; Ziedonis et al. 2008]
 - ❖ Lifetime prevalence of major depression is as high as 64% among clinic-based smoking treatment programs [Hitsman et al. 2003]
- ❖ **Schizophrenia**
 - ❖ ~75%-85% of people with schizophrenia use tobacco [Hughes & Hatsukami 1986]
 - ❖ and ~50% are heavy smokers (> 25 cigarettes per day; Lasser et al. 2000)
 - ❖ Topography studies have found higher total puffs per cigarette and greater carbon monoxide boost in smokers with schizophrenia compared to controls [Hitsman et al. 2005; Tidey et al. 2005; Williams et al. 2006]


Facts about Tobacco Cessation and SMI

- ❖ **PTSD**
 - ❖ For patients with military-related PTSD, integrating smoking cessation treatment into mental health care resulted in greater prolonged abstinence compared to referral to specialized cessation treatment [McFall et al. 2010].
- ❖ **Depression**
 - ❖ Smokers with a history of depression are as likely as those without a depression history to achieve either short-term (<3 months) or long-term (≥ 6 months) tobacco abstinence [Hitsman et al. 2003; Covey et al. 2006]
 - ❖ A recent meta-analysis found similar short-term tobacco abstinence among smokers with or without history of depression. However, smokers with a history of depression had 34% lower odds of long-term abstinence
- ❖ **Schizophrenia**
 - ❖ People with schizophrenia are able to quit with
 - ❖ Psychosocial treatment
 - ❖ Nicotine dependence treatment medications
 - ❖ Social support [Ziedonis et al. 2008]

What smoking cessation treatments work for people with SMI?


- ❖ **Depression**
 - ❖ Antidepressant pharmacological and psychological treatments have been combined with standard smoking cessation
 - ❖ One study compared standard CBT for smoking cessation with CBT for depression combined with standard CBT. [Brown et al. 2001]. Adding CBT for depression did not improve cessation compared with standard CBT for cessation. Smokers with history of depression did well with standard CBT [24.7% abstinence rate at 1 year]
 - ❖ Another study showed that smokers with recurrent major depression who received cognitive behavioral depression skills training were more than 2.43 times more likely to be abstinent at 12 months compared with smokers in the control conditions [Haas et al. 2004].
 - ❖ Three published studies have targeted smokers with current depression. Results from all three randomized clinical trials show that currently depressed smokers can achieve abstinence rates similar to those of non-depressed smokers [Hall et al. 2006; Munoz et al. 1997; Thorsness et al. 2001]
- ❖ **Schizophrenia**
 - ❖ Motivational interviewing with personalized feedback was effective in motivating 32% of smokers with schizophrenia to seek smoking cessation treatment within one month of the single session compared with 11% for educational intervention, and 0% for those given information only [Steinberg, Ziedonis et al. 2004]
 - ❖ Bupropion is well tolerated and reduces smoking and carbon monoxide [Ewins et al. 2001; Gorge et al. 2002; Weiner et al. 2001]
 - ❖ Nicotine patch is safe and well tolerated
 - ❖ Nicotine nasal spray also helpful and may produce short-term reduction in schizophrenic symptoms [Smith et al. 2002 & 2006]
 - ❖ Treatment mediators and moderators [similar to those in the general population]
 - ❖ Greater baseline motivation to quit
 - ❖ Lower levels of tobacco dependence [Addington et al. 1998; Addington & el-Guebaly, 1998; George et al. 2000; Sacco et al. 2004]
 - ❖ Combination of psychosocial and medication treatments [Addington et al. 1998; Addington & el-Guebaly, 1998]
 - ❖ Using the optimal dose of nicotine replacement or bupropion [Ewins et al. 2001; George et al. 2002; Kallman et al. 2005; Williams & Hughes 2003; Ziedonis, Smetson et al. 2005]
 - ❖ Atypical antipsychotics [Dudas, Sacco, & George 2003; George et al. 1995 & 2000; McEvoy et al. et al. 1999v2; Procyshyn et al. 2001; Sacco et al 2004]

Homeless Populations



Tobacco Use in Homeless Populations

- ❖ What should homeless persons worry about?
- ❖ Shelter
- ❖ Food
- ❖ Drugs
- ❖ Survival issues



Actual causes of death



Facts about Tobacco Use in Homeless Populations

- ❖ The prevalence of smoking is estimated to be up to 70% in homeless populations
- ❖ Homeless persons are heavier smokers (>20 cpd), start younger, and smoke for a longer duration than their non-homeless counterparts
- ❖ Although equally interested in quitting as other persons, homeless individuals have limited awareness of and access to smoking cessation programs
- ❖ Homeless individuals are generally excluded from tobacco research studies
- ❖ Little is known about smoking cessation within this population.

Why do Homeless Persons Smoke Cigarettes? [Okuyemi et al. 2006]

- ❖ Boredom and lack access to alternative activities
- ❖ Mood regulation and stress reduction
- ❖ Lack of daily structure and routine
- ❖ Social activity and camaraderie
- ❖ Appetite suppression for weight/hunger control
- ❖ Viewed as a habit associated with behavioral triggers or simply done to satisfy physical and psychological cravings and regulate withdrawal symptoms

Reasons for smoking

- ❖ *"I think it is more of a lot to do with boredom...If I'm just sitting there and there's nothing to do, it's like, oh - I need to go smoke. I got to do something!"*
- ❖ *"With all the pressures of being homeless and all the situations you have to deal with, the cigarettes seem to be kind of a way out."*
- ❖ *"I'm bi-polar and so...it soothes me out."*
- ❖ *"No matter where you go, there's always a group of smokers you can walk up to, you know, start a conversation with."*

Past Quit & Relapse Experiences

- ❖ Quit Methods
- ❖ Cold turkey
- ❖ Mandatory cessation during incarcerations
- ❖ Substitutes
- ❖ Pharmacologic aids
- ❖ During pregnancy
- ❖ Reasons for Relapse
- ❖ Emotional or traumatic event
- ❖ Associated with alcohol
- ❖ Release from hospital, jail/prison or end of military service
- ❖ Loss/change of job
- ❖ After delivery of baby

Reasons for Wanting to Quit

- ❖ Personal appearance
- ❖ Financial benefits and high cost of cigarettes
- ❖ Reduced health risks for self and children
- ❖ Psychological and emotional benefits
- ❖ Concerns about secondhand smoke
- ❖ Inconvenient due to indoor smoking policies and limited places where permitted
- ❖ Wanting to be good role model for children
- ❖ Physical fitness

Reasons for Wanting to Quit

- ❖ *“Your breath stinks, your clothes stink, your car stinks...and you’ve got the physical appearance of nicotine on your hands or on your teeth.”*
- ❖ *“I feel guilty...I’m in a homeless shelter. I’ve got children and I buy cigarettes... \$2.00 a day adds up.”*

Inhibitors/Barriers to Quitting

- ❖ Lack of daily structure & fewer restrictions
- ❖ Pervasive, socially accepted behavior within the homeless population
- ❖ Limited access to medical care & other support services
- ❖ More stressful, unstable life situations
- ❖ Unsanitary, crowded living conditions
- ❖ Competing priorities, such as job/housing search, recovery program, or other appointments
- ❖ Smoking associated with polysubstance use, chosen lifestyle, and self-medication for mental illness

Preferred Smoking Cessation Program

- ❖ Retention
 - ❖ Partner with existing programs, transitional shelters, case managers
 - ❖ Obtain multiple contact information, including frequented service sites
 - ❖ Time & place – same every week, once per week, convenient/central sites
 - ❖ Incentives - provided every session, bigger reward at end, tangible goals
- ❖ Incentives and Compensation
 - ❖ Transportation assistance
 - ❖ Smoke-free entertainment opportunities
 - ❖ Merchandise or restaurant vouchers, gift cards/certificates
 - ❖ Accommodate personal needs and interests through choices
- ❖ Individual Counseling
 - ❖ More focused & private with personalized attention and fewer distractions
 - ❖ Counselor may be a non-smoker or not able to relate to homeless situation
- ❖ Support Groups
 - ❖ Supportive environment with opportunity to learn from & share with others
 - ❖ Accountability and competition may result in dishonesty and disagreement

Pharmacotherapy

Preferences by 1st choice

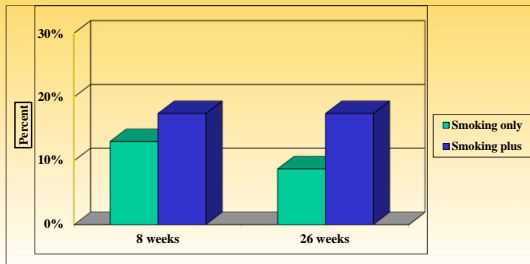
Zyban (29.3%)
Inhaler (28.8%)
Patch (20.7%)
Gum (13.8%)
Lozenge (10.3%)
Spray (0%)

- ❖ Consensus that Zyban would have the most “street value”

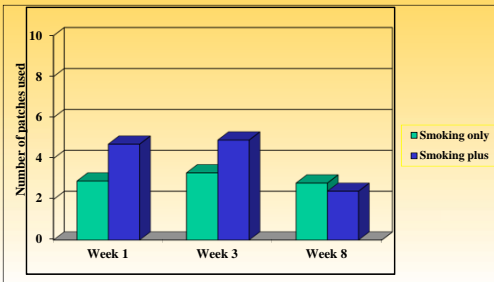
Smoking Cessation in Homeless Populations [Okuyemi et al. 2006]

- ❖ 8-week treatment with either 21 mg Nicotine patch or 4 mg Nicotine lozenge (participants' choice). Sample size=46
- ❖ Random assignment to one of 2 MI groups
 - ❖ Smoking only (5 MI sessions addressing smoking only)
 - ❖ Smoking Plus (5 MI sessions Addressing smoking along with other substance abuse/life events that impact their ability to quit smoking).
- ❖ 6 groups sessions to provide educational information and social support
- ❖ Main outcome was verified 7-day point prevalence abstinence from cigarettes at 8-weeks and at 6-months from randomization.
- ❖ Verification was by expired carbon monoxide (CO) ≤ 10 ppm. Salivary cotinine ≤ 20 ng/ml was used when there was discrepancy between self-report and CO

7-day verified Abstinence*



Number of Patches used in the past 7 days



Another pilot study [Shelley et al. 2010]

- ❖ Another study which had no control group (n=58) tested the effects of a 12-week group therapy that used both motivational interviewing and Cognitive Behavioral Therapy principles plus choice of pharmacotherapy [nicotine patch, gum, lozenge or inhaler; bupropion, varenicline]
- ❖ Most participants used at least one type of medication [67%]
- ❖ 75% completed 12-week end of treatment surveys
- ❖ CO-verified quit rates were 15.5% at 12 weeks and 13.6% at 24 weeks

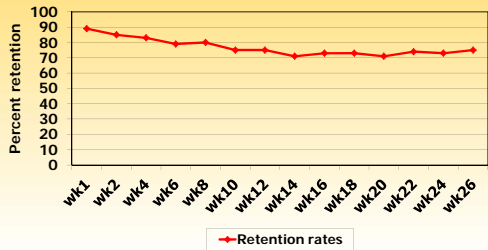
Recently completed large clinical trial [Goldade and Okuyemi et al 2011]

- ❖ A community-based randomized trial of 430 homeless smokers that assessed the effectiveness of adherence-focused MI to for smoking cessation.
- ❖ Participants were randomized to either
 - ❖ the intervention group (nicotine patch + MI): six individual MI counseling sessions each lasting 15 to 20 minutes
 - ❖ control arm (nicotine patch + standard care): a one-time brief (10-15 minutes) advice to quit smoking.
- ❖ At baseline participants in both groups received a two-week supply of 21-mg nicotine patches and an additional two-week supply of 21 mg nicotine patch every two weeks.
- ❖ Primary outcome was verified (CO and salivary cotinine) 7-day abstinence from cigarette smoking at week 26.

Recently completed large clinical trial [Goldade and Okuyemi et al 2011]

- ❖ 839 individuals screened for study eligibility
 - ❖ 568 were eligible
 - ❖ 430 were randomized
 - ❖ 216 to the MI intervention
 - ❖ 214 to the control group.
 - ❖ 76.1% completed their week 8 visit
 - ❖ 75.4% completed the final week 26 visit.
- ❖ Outcomes data promising [under review]

High Retention Rates!!



Summary

- ❖ Persons with chemical dependency, severe mental conditions or experiencing homelessness
 - ❖ Have strikingly high smoking rates
 - ❖ Are heavy smokers
 - ❖ Highly nicotine dependent
 - ❖ Are more likely to die from tobacco-related problems than from mental or other substance use disorders
 - ❖ Are interested in quitting smoking
 - ❖ Will participate in formal smoking cessation programs if given the opportunity
 - ❖ Cognitive behavioral therapy and motivational interviewing have been shown to work
 - ❖ Nicotine replacement therapies, bupropion, [and probably varenicline] are safe and effective
 - ❖ Quitting smoking does not jeopardize recovery from abuse of other substances
 - ❖ The national PHS 2008 *Clinical Practice Guideline* recommends that, "Smokers with psychiatric and substance use disorders should be offered tobacco dependence treatment, and clinicians must overcome their reluctance to treat this population". Not providing evidence-based tobacco cessation treatment to these patients is less than standard care.

Publications and Resources

- Resources**
- American Cancer Society: 1-800-227-2345; www.cancer.org
 - American Lung Association Freedom From Smoking Online www.freedomfromsmoking.org; (maintains profiles of state tobacco control activities)
 - American Legacy Foundation: www.legacy.org
 - Center for Disease Control: www.cdc.gov
 - Agency for Healthcare Research and Quality: www.ahrq.gov
 - American Academy of Family Physicians: www.aafp.org
 - American College of Chest Physicians: www.chestnet.org
 - American Psychological Association: www.apa.org
 - Association for the Treatment of Tobacco Use and Dependence: www.attud.org
 - Medicare and Medicaid: www.cms.hhs.gov/mcd/viewdecisionmemo.asp?id=130 and www.cms.hhs.gov/Smoking-Cessation
 - North American Quitline Consortium (NAQC): www.Naquitline.org
 - National Cancer Institute: Call 1-877-44U-QUIT (1-877-448-7848); Text Message Experts on LiveHelp: www.cancer.gov
 - National Heart, Lung, and Blood Institute: www.nhlbi.nih.gov
 - National Institute on Drug Abuse: www.nida.nih.gov
 - National Quitplan: 1-800-QUIT-NOW (1-800-784-8689)
 - Office on Smoking and Health at the Centers for Disease Control and Prevention: www.cdc.gov/tobacco
 - Robert Wood Johnson Foundation: www.rwjf.org
 - Society for Research on Nicotine and Tobacco: www.srn.org
 - TobaccoFree Nurses: www.tobaccofreenurses.org

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