Treating Smokers with Mental Illness

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Disclosures

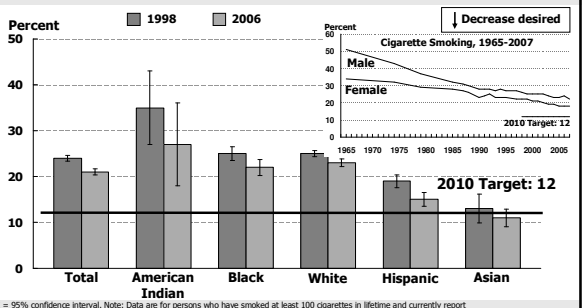
- Grant support from NIDA, NIMH, Pfizer
- Consultant for Pfizer

Learning Objectives

The participants will be able to:

- Discuss the high prevalence of tobacco use in persons with mental illness or other addictions.
- List the numerous medical and non-medical consequences of tobacco use in the population
- Review evidence for treatment research in smokers with comorbidity including techniques for assessment and brief intervention
- Identify barriers in the mental health system that makes it difficult for smokers to access tobacco dependence treatment

Cigarette Smoking, Adults 18 Years and Over

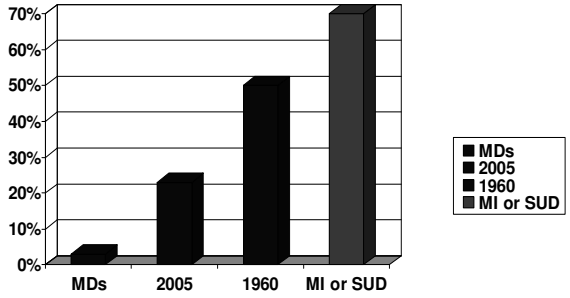


I = 95% confidence interval. Note: Data are for persons who have smoked at least 100 cigarettes in lifetime and currently report smoking everyday or some days. American Indian includes Alaska Native. The categories black and white exclude persons of Hispanic origin. Persons of Hispanic origin may be any race. Respondents were asked to select one race prior to 1999. For 1999 and later years, persons were asked to select one or more races. Data for the single race categories shown are for persons who reported only one racial group. Data are age adjusted to the 2000 standard population. Data prior to 1997 are not strictly comparable with data for later years due to the 1997 questionnaire redesign.
SOURCE: National Health Interview Survey, CDC, NCHS.

Hardening Hypothesis

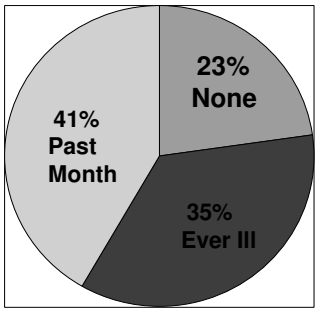
- Leveling in smoking prevalence 1990s
- Remaining smokers are more resistant to quitting
  - Increased dependence
  - Reduced cessation
- Smokers not being reached by TC messages
  - Poverty, low SES
  - Mental illness
- No current definitions of hardening include comorbidity of mental illness or addiction

Smoking Prevalence Rates



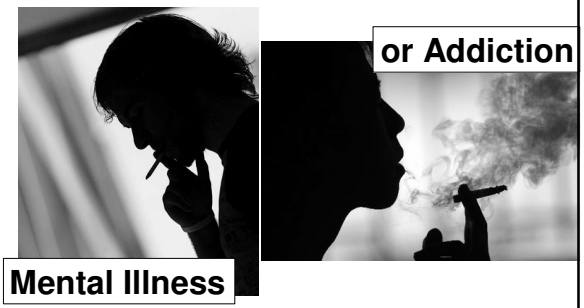
Williams & Ziedonis, 2004

Current Smokers by Mental Illness History



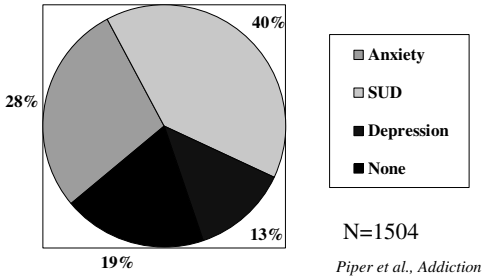
Lasser et al, JAMA, 2000

Three Fourths of Smokers have a Past or Present Problem with



Lasser et al., 2000; Data from National Comorbidity Study

81% of Smokers Seeking Cessation Treatment have Lifetime Co-morbidity



N=1504

Piper et al., Addiction 2010

Tobacco Priority/ Disparities Groups

- Disproportionate consumption
- Disproportionate consequences
- Disadvantaged group
- Limited access to tobacco-related health care
- Targeted marketing by the tobacco industry

Are Tobacco Control Techniques Targeting this Population?

- Prevention
  - None
- Treatment
  - State-level, minimal
- Policy/ Clean Indoor Air
  - Not known
- Surveillance and Research
  - NSDUH
    - Not part of universal assessments
- Price and Access
  - Not known
- Litigation against Tobacco Industry
  - None- None of MSA Funds

Persons with a mental disorder/addiction in the past month purchase/ consume 30-44% of cigarettes in the U.S.

Disproportionate consumption= disparity group

Is this group price sensitive?

Lasser et al, 2000; Grant et al., 2004

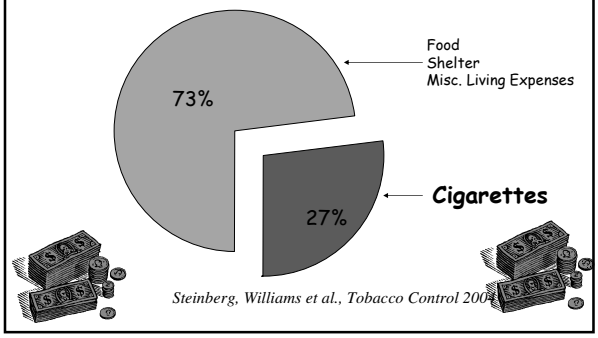
Tobacco excise taxes

- ↑ Price ↑ Cessation and ↓ Initiation
- Smokers with mental illness are responsive to price, although the **price elasticities** may differ somewhat. (model controlled for poverty, stressful life events, and family history of addiction)
- Did not include level of dependence.

Saffer and Dave (2002)

Monthly Budget as a Percentage of Median Public Assistance Received

(N=68)



Steinberg, Williams et al., Tobacco Control 2005

Smokers with Serious Mental Illness may **not** be Price Sensitive

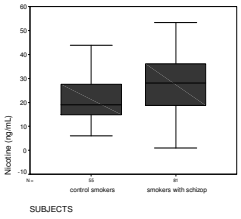
- Smoke more generic/ discount value brands vs controls *(p< 0.01)*
- Discount/generic cigarette use ↑ nationally from 6% (1988) to 26% (2004)
  - Lower household income
  - Higher cpd
  - Lower cessation

(Maxwell Report 2004; Cummings et al., 1997; Harris & Chan, 1999)

60% of Mental Health Consumers Report that Their Families Buy Them Tobacco

CHOICES

Individuals with SCZ highly addicted



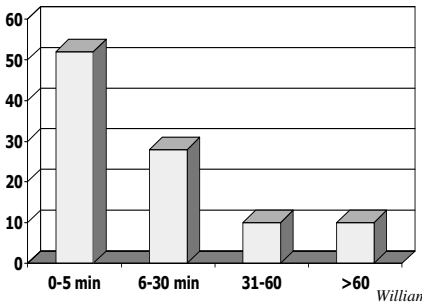
21 28

p< 0.0001

- Heavy smoking common (>25 cpd)
- FTND >6
- Increased nicotine intake per cigarette

Williams JM et al., Schizophrenia Research 2005

80% of Smokers with SMI report smoking within 30min of awakening



N=100

Williams et al., CMHJ 2010

Clean indoor air laws and workplace tobacco bans

- Benefit from TF recreational facilities (bingo), shopping malls, churches, buses
- Not in workplace
- Workers less likely to be covered
  - Blue-collar and food/hospitality service (bartenders, restaurant)
  - Workers who earn ≤$ 50,000/ yr
  - HS education or less

Gerlach et al., 1997; Delnevo et al., 2004

Smoke-Free Hospitals

- Hospitals with a psychiatric or substance abuse unit have lower compliance with 1992 JCAHO tobacco standards
- Tobacco-free psych hospitals do no show increase in violence of incidents
- Policy supports treatment
- Psychiatric inpatients **not** given NRT were > 2X likely to be discharged from the hospital AMA
- No Exemptions

Longo et al., 1998; Joseph et al., 1995 ; Prochaska 2004

- 60% of mental health consumers report living with smokers AND smoking indoors

Are mental health workers putting themselves at risk at work?

Smoking in the Home

- Successful quitters were more likely to have rules against smoking in their homes
- Living with other smokers reduces the chances of successfully quitting
- Smoking bans in the workplace or the home are predictors of successful quitting

Lee and Kahende 2007

- **Recent data from several states have found that people with SMI die, on average, 25 years earlier than the general population.**

National Association of State Mental Health Program Directors (NSMHPD) 2006; Miller et al., 2006

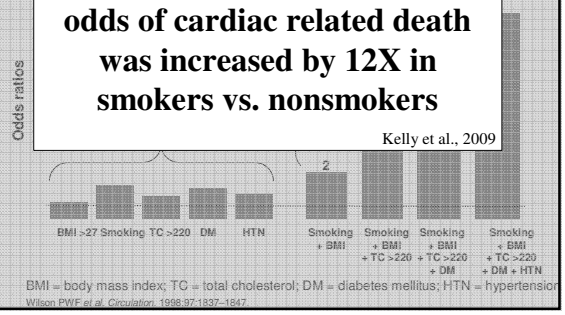
Disproportionate consequences=

disparity group

Cause of Death in Patients with Psychosis

For those aged 35-54 years, the odds of cardiac related death was increased by 12X in smokers vs. nonsmokers

Kelly et al., 2009



BMI = body mass index; TC = total cholesterol; DM = diabetes mellitus; HTN = hypertension

Wilson PWF *et al. Circulation*. 1998;97:1837–1847.

Anti-tobacco counter-marketing efforts

- ??? None
- Tobacco industry documents reveal evidence of targeting **to** psychologically vulnerable populations/ mentally ill

Prochaska et al., 2008; Apollonio and Malone 2005

Ongoing Surveillance

- Almost none
- Clinical samples/ Cross-sectional
- Poor estimates for serious mental illness
- Not part of MDS for North American Quitline Consortium (NAQC)
- NO LONGITUDINAL PERSPECTIVE

K6

- Screening Serious Psychological Distress
- SMI
  Axis I Disorder (not substance use)
  Functional impairment (GAF<60)
- 6 Questions (Score > 13)
- Symptoms of psychological distress
- Not diagnostic

Kessler et al., 2002; Kessler et al., 2003

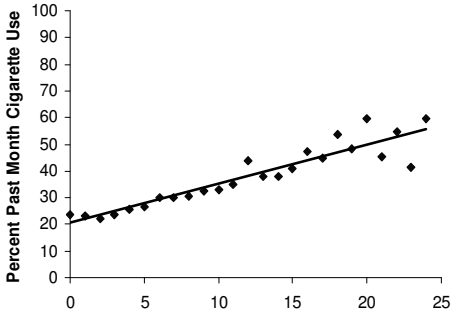
SPD (K6) and Smoking

	Yes	No
	Weighted %	
Daily Smoking	**30.2**	16.7
Lifetime	**71.3**	59.9

Data from 2002 NSDUH

Hagman et al., 2007; Williams et al, in press

Increased severity of SPD ↑ likelihood of being a current smoker



2002 National Survey on Drug Use and Health

Percent/Adjusted Odds Ratio for Past Month Cigarette Smoking, 2002 NSDUH

	%	AOR	(95% CI)
• SMI			
– **YES**	26.0	**1.82**	(1.61-2.06)
– **NO**	44.9	1.0	referent
• Alcohol/ Drug Use Disorder			
– **YES**	57.9	**3.09**	(2.78-3.45)
– **NO**	24.4	1.0	referent

Controlled for age, gender, race, education

Nicotine dependence and SPD status according to the NDSS and FTND, NSDUH 2002

	SPD status Yes (SPD score ≥ 13)		No (SPD score ≤ 12.99)	
	Weighted %	95% CI	Weighted %	95% CI
Nicotine Dependence based on NDSS score	49.7%	± 3.67	33.3%	± 1.39
Nicotine Dependence based on FTND score	57.6%	± 3.53	42.1%	± 1.47
***Nicotine Dependence in the past month**	66.5%	± 3.24	49.5%	± 1.48
Smoked first cigarette within five minutes from waking	29.2%	± 3.61	19.3%	± 1.29

Hagman et al., Addict Behav. 2008

State level Prevention and Cessation Initiatives

- Risk Factor for Tobacco Use Progression
- Reduced access to tobacco treatment
- May not be helped by community/ brief tobacco treatments

CURRENT MENTAL ILLNESS INCREASES SMOKING PROGRESSION

	DAILY SMOKING	**NIC DEPEND**
Maj Depression	X	X
Dysthymia	X	X
GAD	X	X
Substance Use Disorder	X	X
ODD		X
Conduct Disorder		X

Breslau et al., 2004a; Breslau 1995; Dierker 2001

Reduced Access to Tobacco Treatment

- Nicotine dependence documented in 2% of mental health records
- Psychiatrists treat tobacco dependence in in less than 2% of their outpatient practice
- Psychiatrists have lowest awareness of Quitlines and state tobacco services
- Less than 30% of state psychiatric hospitals offer cessation sessions
- Less than half of outpt SA treatment programs offer smoking cessation counseling or pharmacotherapy

Peterson 2003; Montoya 2005; Friedmann 2008; Steinberg 2006

Usual Community Treatments or State Funded May not Work

Not ready for cessation

Target Preparation

Not aware/ not accessing

Too brief

Stigma

Rigid algorithms

Community Cessation Group

6 or 8 weeks

Once weekly

Everyone quit together (Week 2)

Group support and coping

Quitline

Toll-free telephone counseling

Good for transportation issues

Assessment & 4 Follow up calls

- Lack of stable phone service
- Limited access
  - Group home
  - Boarding home
- Crisis/ problem calls
- Mental health issues and symptoms

Major Depression

- Conflicting evidence if more difficulty quitting
- Past history of depression, not factor
- Current symptoms, recurrent illness may be important
- Antidepressants treat both
- 30% risk of relapse to MDE after quitting if past history +

Niaura 2001; Anda 1990; Glassman 2001

Is history of MDE associated with failure to quit smoking?

- Meta-analysis – 15 studies
- No differences for smokers + or – h/o MDE
  - short-term ($\leq$ 3 mos) or
  - long-term abstinence rates ($\geq$ 6 mos)

Hitsman et al., 2003

Current Depression

- N=600 Smokers
- 15% quit rate at 12 weeks (88/600)
- BDI≥10 less likely to quit vs BDI< 10 (OR 6.4)
- Coping skills and personality traits did not predict outcome

Berlin & Covey, 2006

Smokers with Anxiety

- ~ 39% of smokers seeking treatment
- Higher nicotine dependence: Panic attack, GAD, Social Anxiety
- More withdrawal symptoms
- Reduced cessation at 8 weeks, 6 months (vs no diagnosis)

Piper et al., Addiction 2010

Serious Mental Illness

REDUCED CESSATION

- Schizophrenia/ Schizoaffective disorder
- Bipolar disorder
- PTSD
- ADHD

Quit Ratios by SPD

Ratio of former to ever smokers/ estimation of cessation in population

- Non-SPD 0.47
- SPD 0.29

SPD= serious psychological distress

Hagman et al., 2008

Mental Health Professionals Should Take a Lead in Tobacco Treatment

- High prevalence of tobacco use
- Nicotine Dependence in DSM-IV
- Trained in addictions & co-occurring disorders
- Familiar with some medications for tobacco
- Tobacco interactions with psych meds
- Longer and more treatment sessions
- Experts in psychosocial treatment
- Tremendous patient need
- Relationship to mental symptoms

Williams & Ziedonis. Behavioral Healthcare 2006

Medication Interactions with Tobacco Smoke

- Smoking ↑ P450 enzyme system
- Polynuclear aromatic hydrocarbons (tar)
- **↑ 1A2 isoenzyme activity**
- Smoking ↑ metabolism of meds
  - ↓ serum levels
- Smokers on higher medication doses

Drugs Reduced by Smoking

Antipsychotics

Olanzapine **Clozapine**
Fluphenazine, Haloperidol, Chlorpromazine

Antidepressants

Amitriptyline, doxepin, clomipramine, desipramine, imipramine, fluvoxemine

Others

Caffeine, theophylline, warfarin, propranolol, acetominophen

Desai et al., 2001; Zevin & Benowitz 1999

Quitting Smoking

- Risk for medication toxicity
- May ↑ levels acutely
- Consider dose adjustment
- Clozapine toxicity
  - Seizures
- Reduce caffeine intake

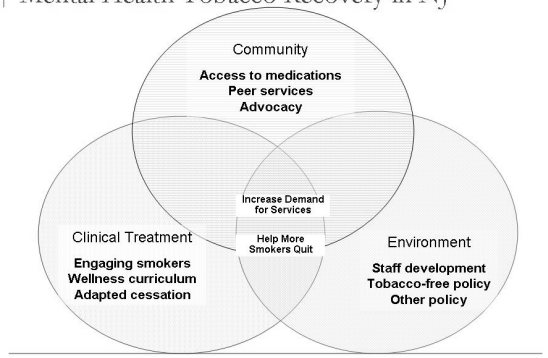
- **Nicotine (or NRT) Does Not** Change Medication Levels
- Nicotine metabolized by **CYP2A6**

Addressing Tobacco Requires Attention to Multiple Domains

- Neurobiological
- Psychological
- Social & Environmental
- Spiritual & Advocacy
- Treatment System & Institutional

- Greater dependence
- Poor coping; low confidence
- Live with smokers
- Seeing peers succeed; having hope
- Provider bias; No access to help

Mental Health Tobacco Recovery in NJ



Williams et al, Administration & Policy in Mental Health and Mental Health Services Research, 2010

New York State Leadership Academy for Wellness and Smoking Cessation

- Summit on November 15, 2010 in Albany, NY
- Important collaboration bridging public health and behavioral health.
- 30 Partners participated
  - Behavioral health professionals
  - Consumers
  - Tobacco prevention experts
- **Goal of the summit: to create an action plan to lower the smoking prevalence rate among people with behavioral health disorders in New York State.**

Supported by the SAMHSA and the UCSF Smoking Cessation Leadership Center

Baseline Data and Goal of Partners

Currently in New York State:

- 30% of people with serious mental illnesses smoke
- 50% of people with mental illness and substance use disorders smoke

GOAL: Reduce smoking prevalence by 10% in each of these groups by 2015.

Overarching strategies to reach this goal

1. Peer Support and Recipient Engagement
2. Medicaid and Managed Care Utilization and Expansion of Benefits
3. Training and Dissemination
4. Improved Tobacco Cessation through Policy, Certification, and Regulation

For more information contact
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Gregory Miller, MD Gregory.Miller@omh.ny.gov

Conclusions

- Smokers with mental illness or addictions comorbidity are a Disparity Group that should be a higher priority
- Not clear that current Tobacco Control Strategies are helping this group of smokers
- Working with Mental Health Systems and Providers is an Effective Approach

TREATING TOBACCO DEPENDENCE IN MENTAL HEALTH SETTINGS

Two-day training for Mental Health Professionals

http://rwjms.umdnj.edu/addiction/TrainingPrograms.htm

November 15 & 16, 2011

New Brunswick, NJ

Sponsored by UMDNJ-RWJMS, Division of Addiction Psychiatry
Phone: 732-235-4053 E-mail: szkodnna@umdnj.edu

References

- Hagman BT, Delnevo CD, Hrywna M, Williams JM. Tobacco Use Among Those With Serious Psychological Distress: Findings from the National Survey of Drug Use and Health, 2002. Addict Behav. 2008 Apr;33(4):582-92.
- Williams JM, Zimmermann MH, Steinberg ML, Gandhi KK, Delnevo C, Steinberg MB, Foulds J. A Comprehensive Model for Mental Health Tobacco Recovery in New Jersey. Administration and Policy in Mental Health and Mental Health Services Research 2010 Nov 13. [Epub ahead of print]
- Williams JM, Delnevo C and Ziedonis DM. The Unmet Needs of Smokers with Mental Illness or Addiction. In The Social and Economic Consequences of Tobacco Control Policy. Eds. K Neckerman & P Bearman. (In press)