Tobacco Use and Treatment in Behavioral Health Populations

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Learning Objectives

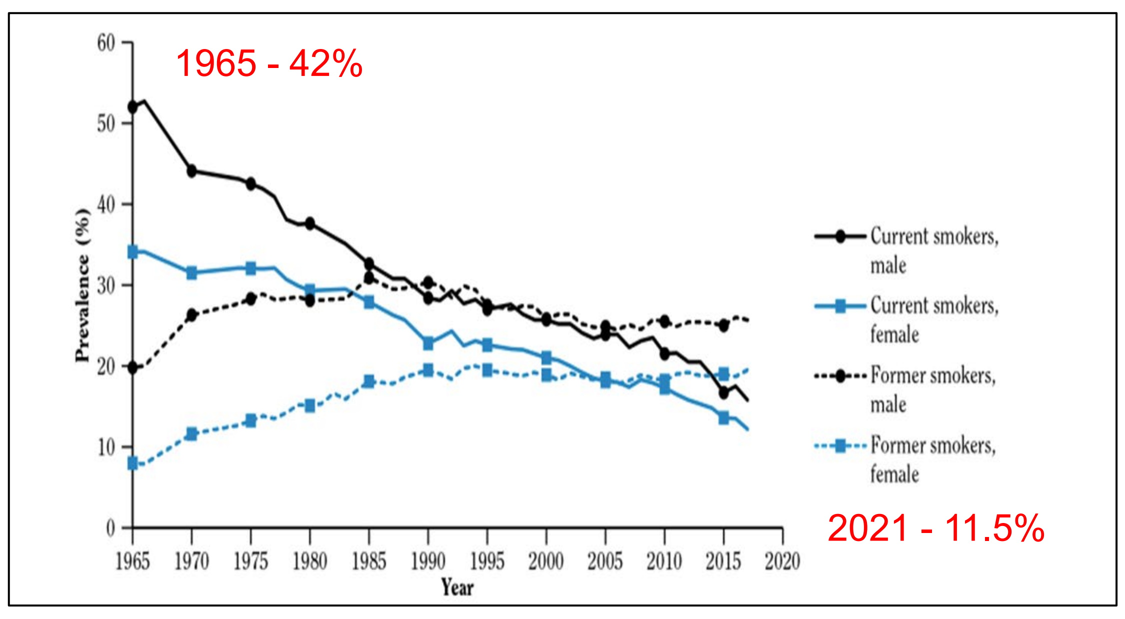
- Review rates of smoking in behavioral health populations.
- Identify the health and mental health consequences of smoking for behavioral health populations.
- Learn myths that perpetuate smoking in behavioral health populations.
- Review efficacy of tobacco treatments in behavioral health populations.

"Cigarette smoking is the chief, single, avoidable cause of death in our society and the most important public health issue of our time."

C. Everett Koop, M.D.
former U.S. Surgeon General

Smoking in the US General Adult Population (2021)

- 19% use any tobacco product (47.1 million adults)
- Tobacco cigarettes are the most used product (11.5%, 28.3 million adults); 13.1% of men, 10.1% of women
- E-cigarettes are the second most used product (4.5%)
- Smoking dropped from 42% in 1965 to 11.5% in 2021.
- This is the lowest prevalence to date
- 68% of ever smokers are now former smokers.



Data from the National Health Interview Survey

Cornelius ME, Loretan CG, Wang TW, Jamal A, Homa DM. Tobacco Product Use Among Adults — United States, 2020. MMWR Morb Mortal Wkly Rep 2022;71:397–405. DOI: http://dx.doi.org/10.15585/mmwr.mm7111a1external icon; Department of Health and Human Services. Smoking Cessation. A Report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2020.

Smoking Remains High Among Certain Groups

Behavioral Health Populations

- Behavioral health includes individuals at risk or living with mental, behavioral, and/or substance use disorders.
- They are a special population in tobacco use research:
  - Higher smoking prevalence than the general population
  - Disproportionate tobacco-related health disparities
  - Less access to treatments
  - Underrepresented in treatment trials

Many Smokers are Living with a Behavioral Health Disorder

Substance Abuse and Mental Health Services Administration
SAMHSA
National Survey on Drug Use and Health

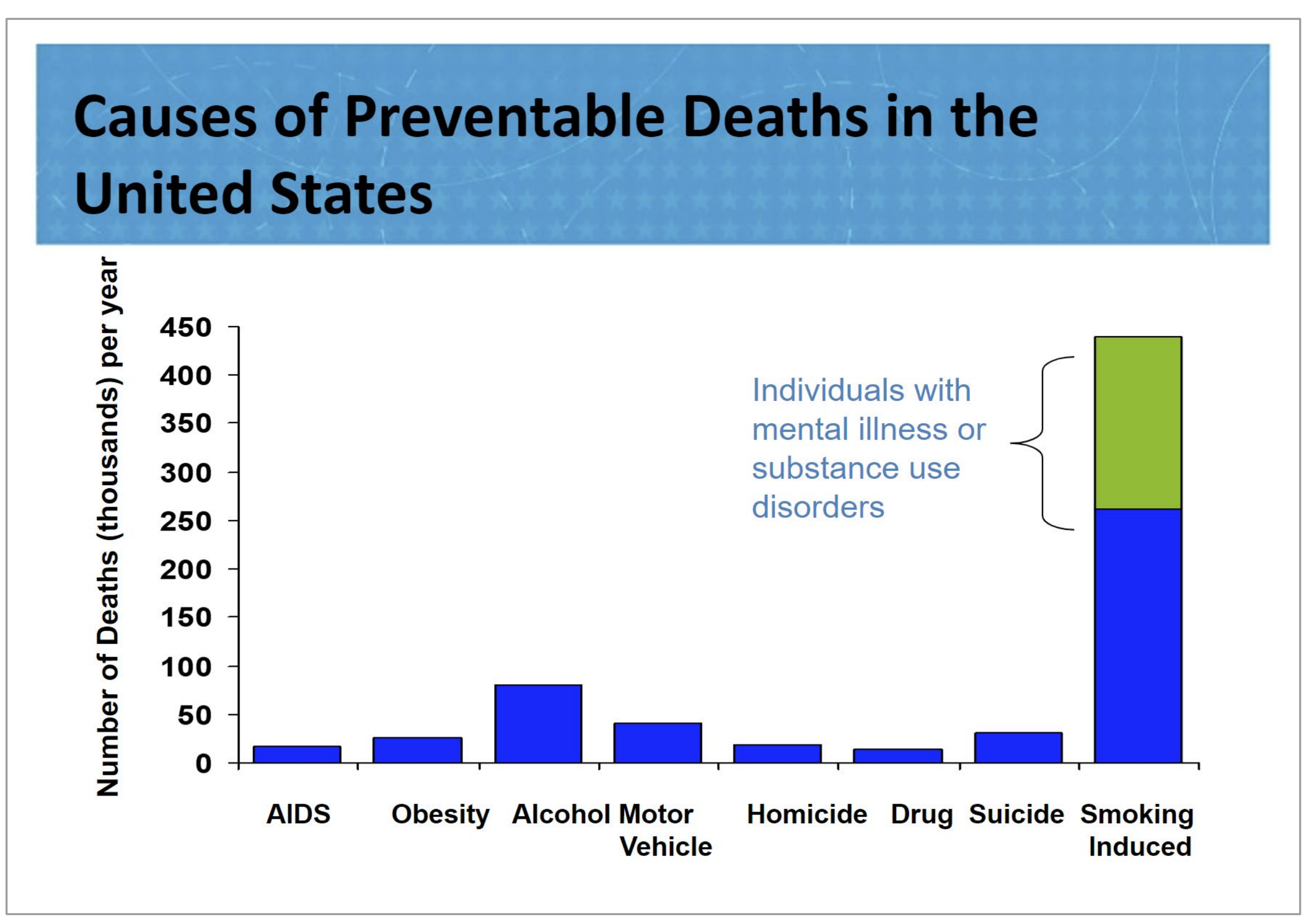
The NSDUH Report

Data Spotlight
March 20, 2013

Adults with Mental Illness or Substance Use Disorder Account for 40 Percent of All Cigarettes Smoked

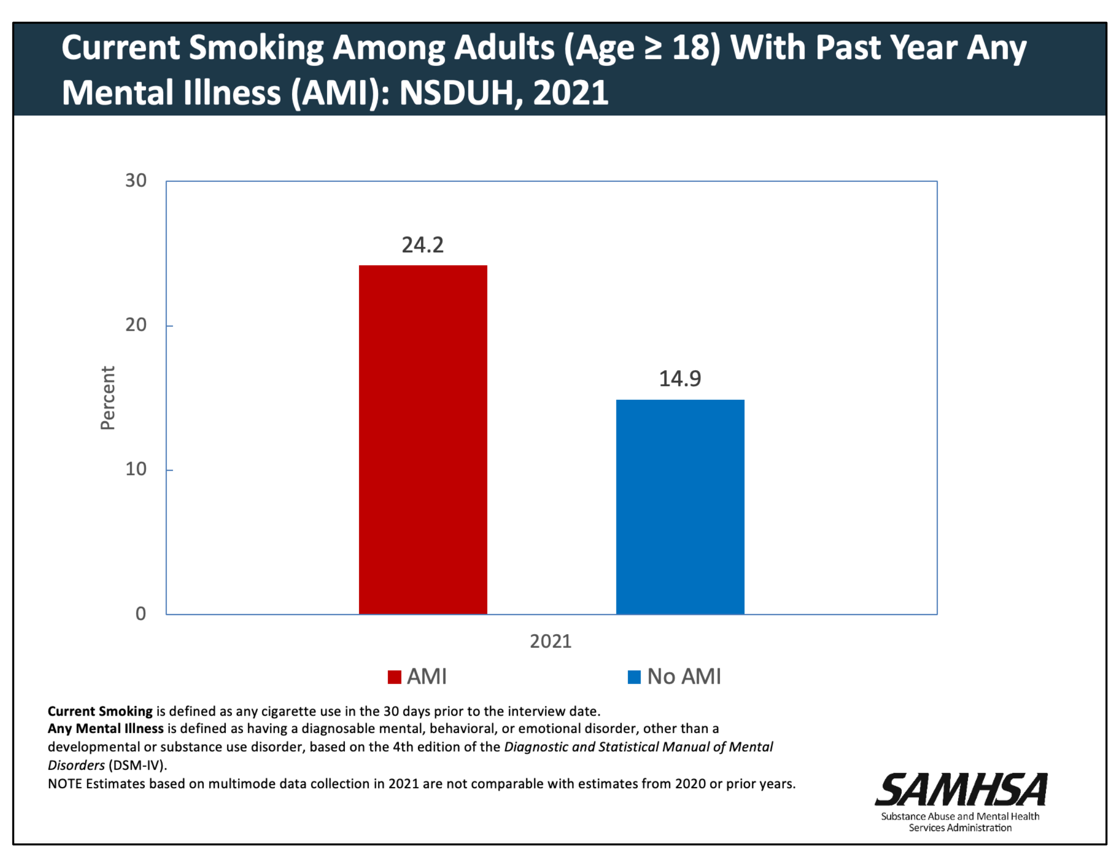
Adults with mental illness or substance use disorders are more likely than adults without those problems to use cigarettes.[1] In addition, adults with these problems who do smoke tend to smoke more cigarettes.[2] The 2009 to 2011 National Surveys on Drug Use and Health (NSDUHs) define any mental illness (AMI) as any diagnosable mental, behavioral, or emotional disorder other than a substance use disorder. The NSDUHs define substance use disorder (SUD) as dependence on or abuse of alcohol or illicit drugs.[3] On an average day, adults aged 18 or older smoked 588 million cigarettes. Adults with AMI or SUD represent 24.8 percent of adults. However, they used 39.6 percent of all cigarettes smoked by adults (Figures 1 and 2).

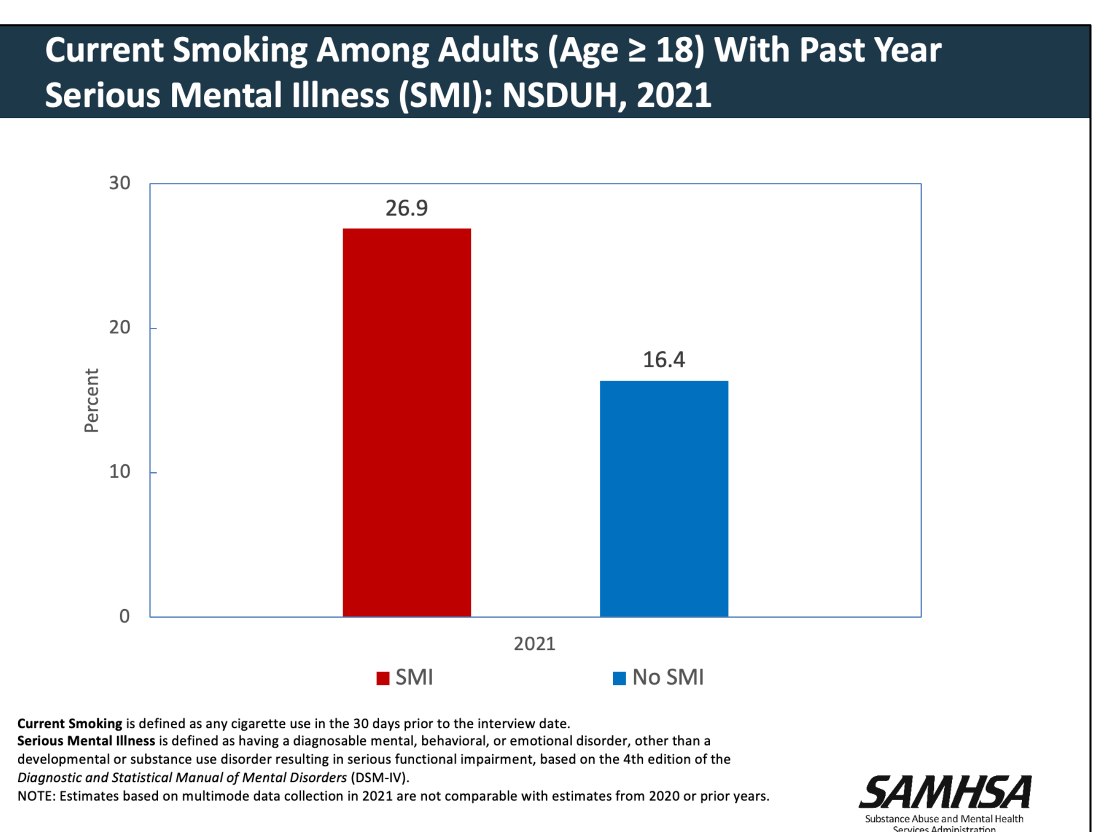
These data show that, given the health issues associated with cigarette smoking, it is necessary to focus on smoking prevention for adults with AMI or SUD and help them quit smoking. For resources, please visit: http://www.kap.samhsa.gov/products/manuals/advisory/pdfs/Advisory_Tobacco_for_Counselors.pdf and http://www.integration.samhsa.gov/health-wellness/tobacco-cessation.



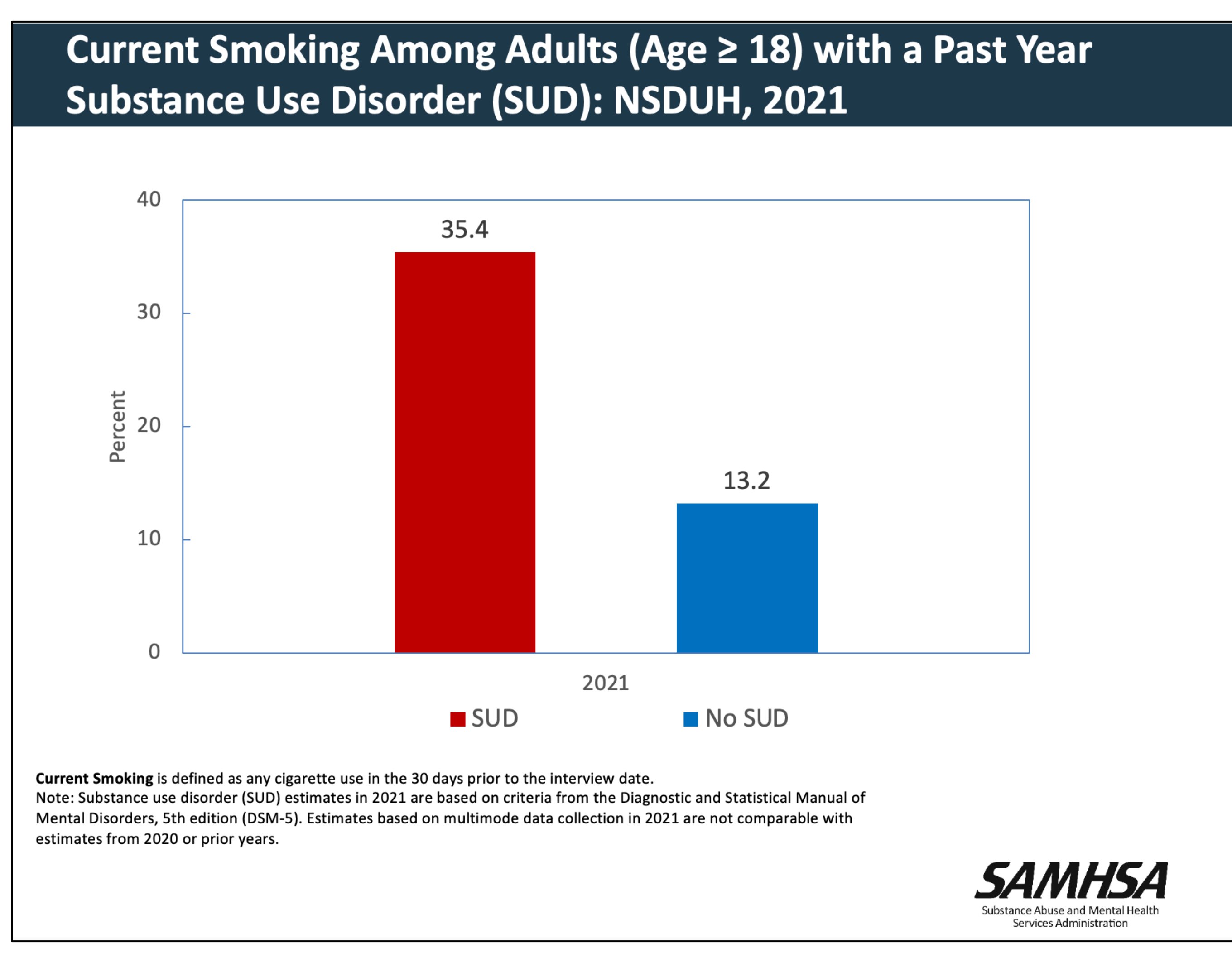
All Ages; Source: CDC

Smoking in Mental Health Disorder Populations





Smoking in Substance Use Disorder Populations



People with Behavioral Health Disorders are Dying from Smoking

- Annually, **200,000+** of the **520,0000** deaths due to smoking are among individuals with mental health or substance use disorders.
- Tobacco contributes to more than 3 times as many deaths as alcohol and illicit drugs.

Mental Health Disorders

Individuals with chronic mental illness die on average **5 to 25 years earlier** than the general population.
Smoking related illnesses such as cardiovascular disease, lung disease, and diabetes are the top causes of death

Substance Use Disorders

In a 20-year longitudinal study of individuals with AUD or SUDs:
Mortality rate = **48%**
Almost triple the expected 18%
Half of the deaths were attributed to smoking

NSDUH, 2013; Mauer, 2006; Hurt et al., 1996; Prochaska et al., 2017

People with Behavioral Health Disorders are Dying from Smoking

Smoking, Mental Illness, and Public Health

Judith J. Prochaska,[1] Smita Das,[2] and Kelly C. Young-Wolff[3]

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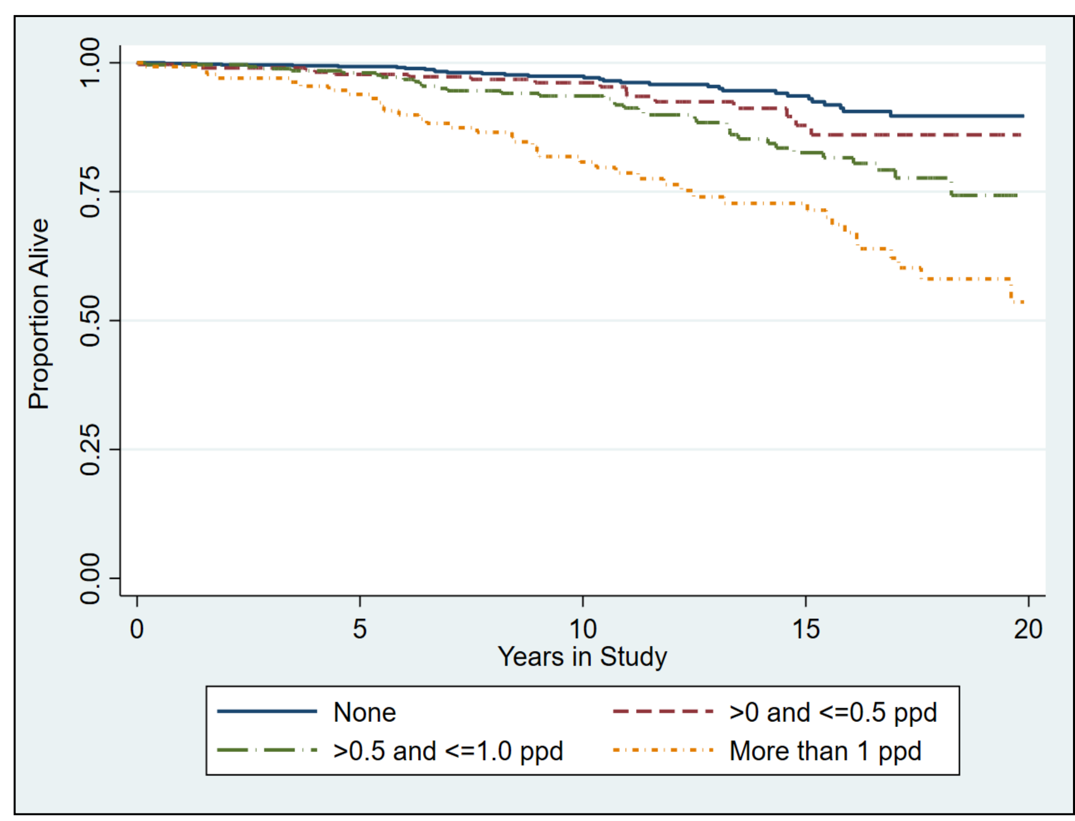
Abstract

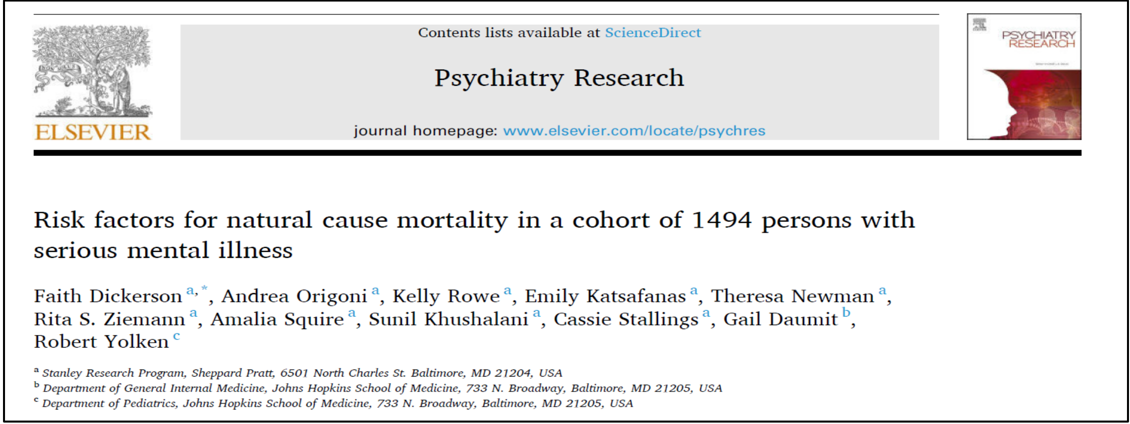
Tobacco use remains the leading preventable cause of death worldwide. In particular, people with mental illness are disproportionately affected with high smoking prevalence; they account for more than 200,000 of the 520,000 tobacco-attributable deaths in the United States annually and die on average 25 years prematurely. Our review aims to provide an update on smoking in the mentally ill. We review the determinants of tobacco use among smokers with mental illness, presented with regard to the public health HAVE framework of "the host" (e.g., tobacco user characteristics), the "agent" (e.g., nicotine product characteristics), the "vector" (e.g., tobacco industry), and the "environment" (e.g., smoking policies). Furthermore, we identify the significant health harms incurred and opportunities for prevention and intervention within a health care systems and larger health policy perspective. A comprehensive effort is warranted to achieve equity toward the 2025 Healthy People goal of reducing US adult tobacco use to 12%, with attention to all subgroups, including smokers with mental illness.

People with Behavioral Health Disorders are Dying from Smoking



Survival by Number of Packs per day at Baseline (N=1494)

HR=1.48, < .5 ppd
HR =2.45, > 0.5 <=1.0 ppd
HR=5.13, > I ppd



Contents lists available at ScienceDirect

Psychiatry Research

journal homepage: www.elsevier.com/locate/psychres

ELSEVIER

Risk factors for natural cause mortality in a cohort of 1494 persons with serious mental illness

Faith Dickerson[a,*], Andrea Origoni[a], Kelly Rowe[a], Emily Katsafanas[a], Theresa Newman[a], Rita S. Ziemann[a], Amalia Squire[a], Sunil Khushalani[a], Cassie Stallings[a], Gail Daumit[b], Robert Yolken[c]

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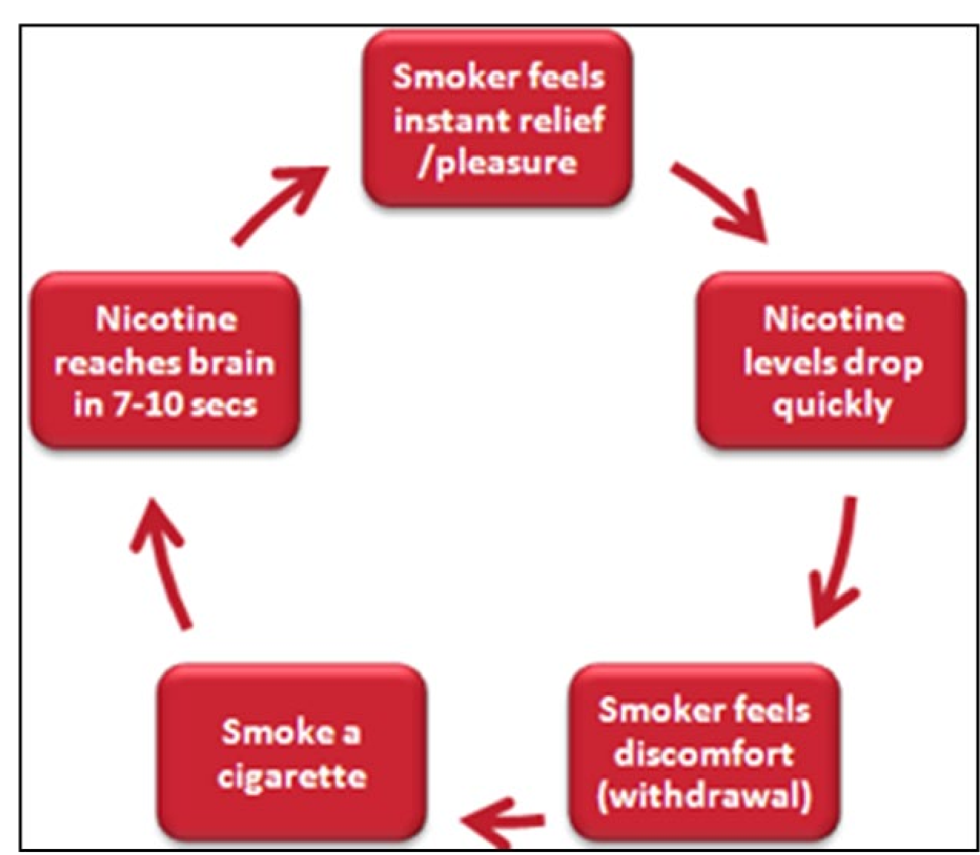
After age at study entry, the strongest predictive factor for mortality was tobacco smoking with the greatest risk associated with the highest level of daily tobacco use.

Dickerson et al. 2021 Psychiatry Research, Jan 24;298:113755

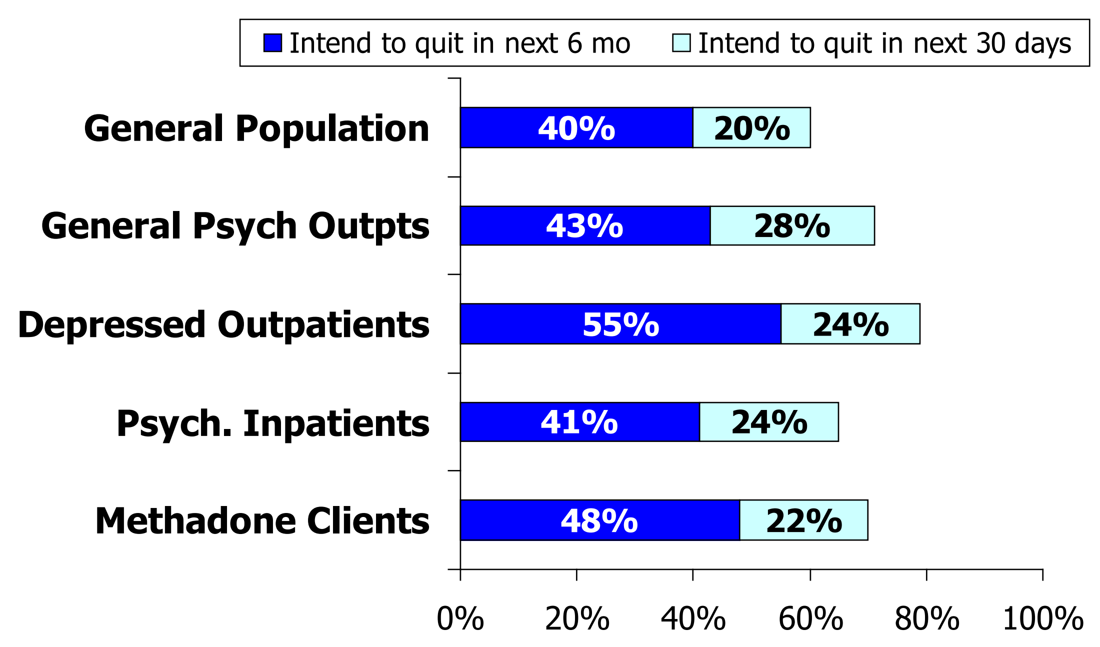
Myth 1: Smoking is Self-Medication

- Myth: Smoking is necessary self-medication for persons with mental illness
- Fact: Nicotine enhanced concentration and attention transiently but does not improve symptoms of mental illness
- Reductions in negative mood are due to relieving nicotine withdrawal



Myth 2: Motivation to Quit is Low

- Myth: People with mental illness and substance use disorders are not interested in quitting
- Fact: All know the dangers of smoking, and many want to quit
- Behavioral health patients are trying to quit
  - Over 80% who smoke have made 1+ quit attempt in their lifetime.
  - In 2018, approximately 55% have made at least one quit attempt in the past year.
  - Smokers with co-occurring disorders make approximately 5-10 attempts before sustaining a quit attempt.

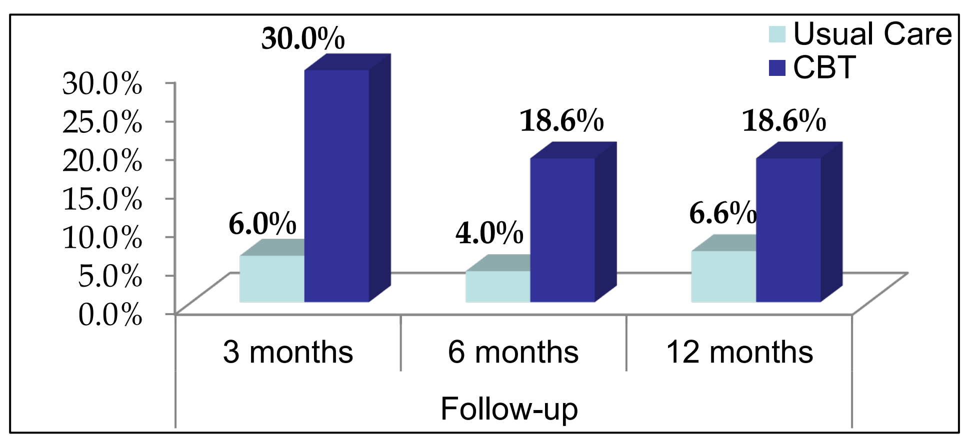


No relationship between psychiatric symptom severity and readiness to quit

Myth 3: Inability to Quit

- Myth: People with behavioral health disorders cannot quit smoking
- Fact: Clinical trials show otherwise
- Smokers with mental health and substance use disorders can quit or cut down when provided with the means and support to do so.

Baker et al., 2006: Individuals with psychosis were more likely to reduce or quit smoking when receiving NRT + motivational interviewing + CBT versus usual car



Dickerson, Bennett et al. *Psychiatric Rehab J*. 2011 34:311-316

- Persons with SMI who had been abstinent from smoking for >= 4 months
  - Mean age: 50 (±9.5) years
  - 60% male
  - Mean duration of smoking: 25.3 (±11.4) years
  - Mean duration of current abstinence: 7.4 (±8.6) years
- Main strategies: social support from friends or family (58%); direction from a doctor (46%); use of nicotine replacement therapy (31%); advice of friends who had quit (23%)

Reasons Endorsed for Quitting Smoking

Reason	N (%)
Health problem or concern	57 (73%)
Cost of cigarettes	55 (71%)
Suggestion or advice from others excluding doctor	50 (64%)
Suggestion or advice from doctor	42 (54%)
Example of friend who quit	25 (32%)
Experience of being in a hospital where smoking was prohibited	22 (28%)
Smoking restrictions where live or work	13 (17%)

Myth 4: Smoking Cessation Interferes with Recovery

- Myth: Quitting smoking worsens mental illness symptoms and causes substance use relapse
- Fact: Studies show that quitting smoking improves mental illness symptoms and addiction recovery.
- Individuals with mental health disorders can quit smoking without additional risk of exacerbating mental health symptoms.
- Quitting smoking supports addiction recovery. Smoking is a trigger for substance use. Continued smoking is linked with greater odds of substance use relapse.
- Incorporating smoking cessation into substance use treatment programming does not lead to increased risk of relapse and is associated with a 25% increased likelihood of long-term abstinence from alcohol and illicit drugs.

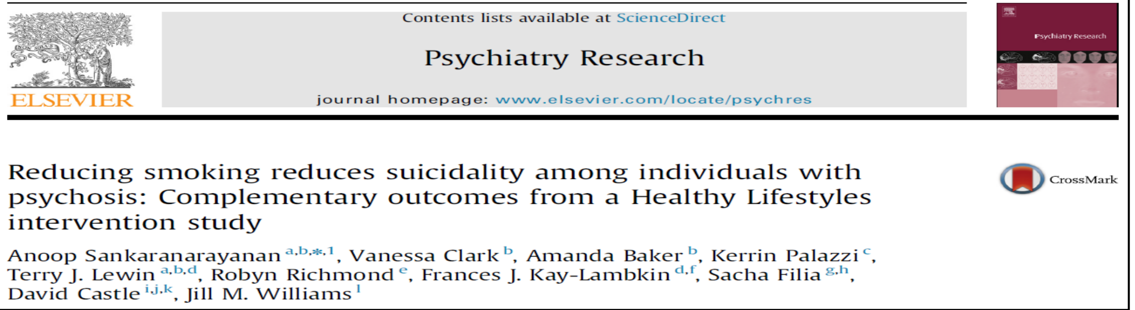
Change in mental health after smoking cessation: systematic review and meta-analysis

OPEN ACCESS

Gemma Taylor *doctoral researcher*[1,2], Ann McNeill *professor of tobacco addiction*[2,3], Alan Girling *reader in medical statistics*[1], Amanda Farley *lecturer in epidemiology*[1,2], Nicola Lindson-Hawley *research fellow*[2,4], Paul Aveyard *professor of behavioural medicine*[2,4]

[1]School of Health and Population Sciences, University of Birmingham, Birmingham B15 2TT, UK; [2]UK Centre for Tobacco and Alcohol Studies, Epidemiology and Public Health, University of Nottingham, NG5 1PB, UK; [3]Institute of Psychiatry, King's College London, London SE5 8AF, UK; [4]Department of Primary Care Health Sciences, University of Oxford, Oxford OX1 2ET, UK

Stopping smoking is associated with *improvements* in depression, anxiety, stress, and psychological quality of life. The strength of the association is similar for both the general population and clinical populations, including those with mental health disorders.



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ELSEVIER

Reducing smoking reduces suicidality among individuals with psychosis: Complementary outcomes from a Healthy Lifestyles intervention study

Anoop Sankaranarayanan[a,b,*,1], Vanessa Clark[b], Amanda Baker[b], Kerrin Palazzi[c], Terry J. Lewin[a,b,d], Robyn Richmond[e], Frances J. Kay-Lambkin[d,f], Sacha Filia[g,h], David Castle[i,j,k], Jill M. Williams[l]

At 12 months, smoking reduction was significantly associated with suicidality change; an association was also seen between smoking reduction and depression and depression and suicidality…smoking interventions may have benefits over and above those for improved physical health, by reducing suicidal ideation in people with psychosis.

Tobacco Industry Promotes Smoking in Behavioral Health Populations

- Funded “research” on
  - Low risk of cancer in schizophrenia patients despite high rates of smoking
  - Self-medication hypothesis
- Marketed idea that nicotine helpful for emotional issues
- Donated cigarettes to psychiatric institutions
- Lobbied for psychiatric units to be excluded from Joint Commission 1993 ban on smoking in hospitals

Tobacco Treatment for Behavioral Health Populations

- Because of these myths, persons with behavioral health disorders are rarely offered tobacco treatment.
- Physical health treatment providers consider this a mental health issue.
- Mental health treatment providers consider this a physical health issue.
- Treatment must address the two parts of tobacco dependence

Treatment should address both the addiction **and** the habit.

Physical	Behavioral
The addiction to nicotine	The habit of using tobacco
↓ Treatment	↓ Treatment
Medications for cessation	Behavior change program

Tobacco Treatments for Behavioral Health Populations

Pharmacotherapy

- Nicotine Replacement Therapy
- Bupropion (Wellbutrin/Zyban)
- Varenicline (Chantix)

Behavioral counseling

- Based on readiness to quit
- Motivational interviewing strategies
- Focused on triggers, coping with withdrawal, coping with stress, setting a quit date
- Can be used when individual has low readiness

➢ ***Evidence-based practice = Pharmacotherapy + Behavioral Counseling***

Programmatic interventions

- Quitlines
- American Lung Association
- Nicotine Anonymous

Digital Interventions

Neuropsychiatric safety and efficacy of varenicline, bupropion, and nicotine patch in smokers with and without psychiatric disorders (EAGLES): a double-blind, randomised, placebo-controlled clinical trial

Robert M Anthenelli, Neal L Benowitz, Robert West, Lisa St Aubin, Thomas McRae, David Lawrence, John Ascher, Cristina Russ, Alok Krishen, A Eden Evins

Neuropsychiatric Safety and Efficacy of Varenicline, Bupropion, and Nicotine Patch in Smokers With Psychotic, Anxiety, and Mood Disorders in the EAGLES Trial

A. Eden Evins, MD, MPH, Neal L. Benowitz, MD,† Robert West, PhD,‡ Cristina Russ, MD,§ Thomas McRae, MD, MS,§ David Lawrence, PhD,§ Alok Krishen, MS,||¶ Lisa St Aubin, DVM,§ Melissa Culhane Maravic, PhD, MPH,# and Robert M. Anthenelli, MD***

All are safe and effective for people with behavioral health conditions.

Services Research to Increase Access to Tobacco Treatment for Behavioral Health Populations

- Our work has focused on making tobacco cessation services more available for these smokers
  - Integrated with outpatient mental health services
  - Peer mentors to support cessation
  - Integrated with inpatient mental health services
  - Determining how to adapt and increase access to digital interventions

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Frontline Reports Full Access

Connecting Hospitalized Tobacco Smokers With Serious Mental Illness to a Digital Cessation Intervention

Melanie E. Bennett, Ph.D., Amanda L. Graham, Ph.D., Faith Dickerson, Ph.D., M.P.H.

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J Dual Diagn. 2015 ; 11(3-4): 161–173. doi:10.1080/15504263.2015.1104481.

Smoking Cessation in Individuals With Serious Mental Illness: A Randomized Controlled Trial of Two Psychosocial Interventions

Melanie E. Bennett, PhD[1,2], Clayton H. Brown, PhD[1,4], Lan Li, MS[2], Seth Himelhoch, MD, MPH[1,2], Alan Bellack, PhD[2], Lisa Dixon, MD, MPH[1,3]

Psychiatric Rehabilitation Journal
2016, Vol. 39, No. 1, 5–13

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1095-158X/16/$12.00 http://dx.doi.org/10.1037/prj0000161

The Use of Peer Mentors to Enhance a Smoking Cessation Intervention for Persons With Serious Mental Illnesses

Faith B. Dickerson, Christina L. G. Savage, and Lucy A. B. Schweinfurth
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Summary

- Behavioral health patients can quit smoking
- Talk to behavioral health patients about smoking
- Offer effective treatments
- Help people try out medications and learn new coping skills, even if they're not ready to quit
- Keep the conversation going