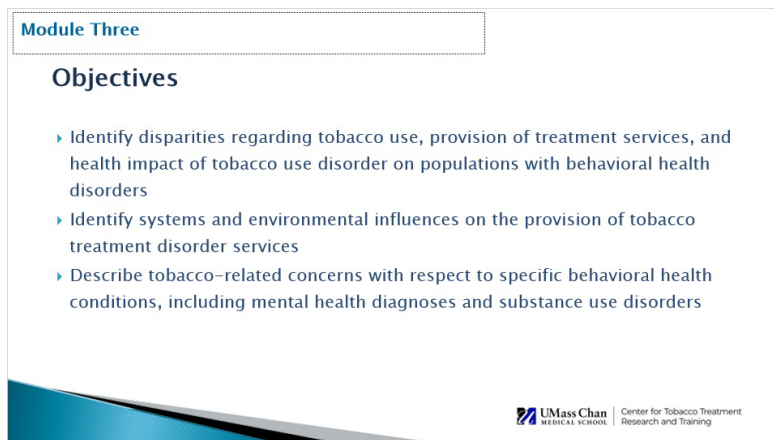


# Module 3: Tobacco Use Disorder and Behavioral Health

## 1.1 Tobacco use Disorder




## 1.2 Objectives



## 1.3 Behavioral health disorders and tobacco use frequently occur together

**Module Three**

### Behavioral health disorders and tobacco use frequently occur together

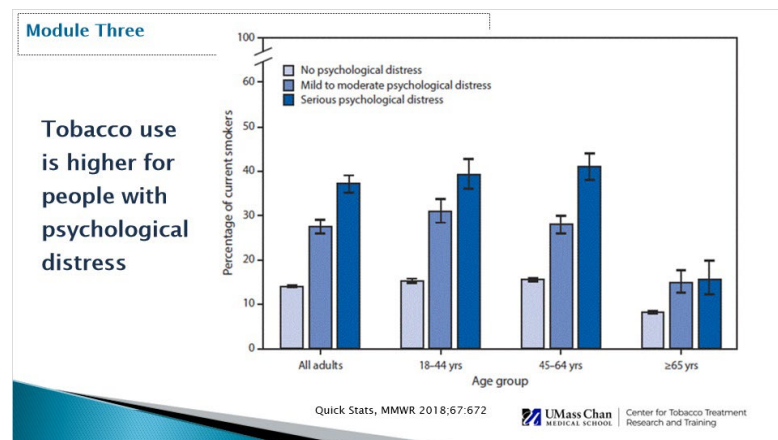


- ▶ ~27% of US adults with any mental illness (AMI) smoke
- ▶ ~3 out of 10 cigarettes sold are smoked by those with AMI
- ▶ Almost 40% of all cigarettes smoked by US adults are consumed by those with AMI or substance use disorder
- ▶ Smoking prevalence increases with the number of mental disorders
- ▶ People with AMI or SUD often smoke with greater intensity, have more difficulty quitting, and higher relapse rates

Hughes, 1985; Lasser et al., 2000; Breslau, Novak & Kessler 2004; CDC, April 5, 2022; Prochaska et al, 2017

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## 1.4 Tobacco use is higher for people with psychological distress



## 1.5 Tobacco use has a severe impact on people with behavioral health problems

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### Tobacco use has a severe impact on people with behavioral health problems

- ▶ People with Serious Mental Illness (SMI) die on average 25 years earlier than those without SMI
- ▶ Among people with Substance Use Disorder (SUD) those who smoke die sooner than non-smokers due to tobacco-related causes
- ▶ Tobacco-related diseases such as cardiovascular and pulmonary conditions are major contributors to these deaths

Mauer, 2006; Hurt et al, 1996; Hser, McCarthy & Anglin, 1994; Bandiera et al, 2015; Prochaska et al, 2017

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## 1.6 Systems and environment contribute to some of the differences in prevalence

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**Systems and environment contribute to some of the differences in prevalence**

Streck et al, 2018;  
Zirakzadeh et al, 2013;  
Richter et al, 2002; McCool et al, 2005

- Higher prevalence of use in people with behavioral health disorders is in part due to lower quit rates.

**System reasons for this include:**

- Tobacco treatment has not been integrated into mental health and substance use treatment.
  - Misconceptions including belief that quitting tobacco is a low priority problem, these populations are not interested in quitting/cannot quit
- Recent meta-analysis of tobacco use disorder treatment in in-patient psychiatric facilities found that treatment is rare or delayed.

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## 1.7 Other systems and environment contributions to disparities

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**Other systems and environment contributions to disparities**

Zirakzadeh et al, 2013; Richter et al, 2002; McCool et al, 2005

- The culture in both substance use and mental health treatment has supported tobacco use
  - Social and treatment networks often include many tobacco users, including treatment providers
  - Tobacco is used as a reward during mental health treatment
  - There is fear of relapse to substance use and worsening of mental health symptoms if tobacco use is stopped. (Unfounded)
- Lack of health insurance and access to treatment make it harder to get support
- For more information visit: [A Hidden Epidemic: Tobacco Use and Mental Illness](#)

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## 1.8 Individual factors contribute to higher rates of tobacco use

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**Individual factors contribute to higher rates of tobacco use**

CDC, February 8, 2013; 62. pp.1-7

- Nicotine masks symptoms associated with mental illness
- Constituents of tobacco smoke reduce blood levels of some psychiatric medications leading to compensatory smoking
- Tobacco use likely started at a young age leading to continued use and dependence
- May have limited coping strategies and experience worse withdrawal symptoms
- Nicotine activates the same neural pathways as other drugs of abuse

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## 1.9 What do we know about specific conditions?

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#### What do we know about specific conditions?



The following slides will present some information about selected mental health and substance problems and tobacco use.

## 1.10 Schizophrenia

### Module Three

- ▶ Has the highest prevalence of smoking among mental illnesses
- ▶ Smoking is more intense resulting in higher cotinine levels
- ▶ Higher levels of some of the symptoms of schizophrenia for smokers than nonsmokers
- ▶ People who are former cigarette smokers have fewer negative symptoms than those who currently smoke cigarettes
- ▶ **There is no evidence for significant changes in psychotic symptoms with tobacco use disorder treatment**

#### Schizophrenia



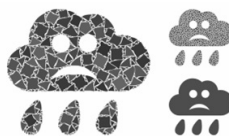
George et al, 2000, 2001 & 2002; De Leon, 1995; Goff, 1992; Ziedonis, 1994; Hall, 1995; Evins, 2001

## 1.11 Depression

### Module Three

- ▶ Bidirectional relationship – hard to determine if depression or tobacco use came first
- ▶ Severity of nicotine withdrawal and cravings may be stronger during quitting attempt
- ▶ Successful cessation does not increase symptoms **AND** sustained abstinence is associated with reduction in depression symptoms
- ▶ Psychological mood management likely an important addition to traditional tobacco treatment

#### Depression



Anthenelli et al, 2016; van der Meer et al, 2013; Weinberger et al, 2013; Morozova et al, 2015

## 1.12 Bipolar Disorder

### Module Three

#### Bipolar Disorder



- ▶ Bipolar Disorder (BD) is also known as manic/depression
- ▶ People with BD are likely to be heavy smokers, more dependent, and less likely to quit
- ▶ Bidirectional relationship – hard to determine if BD or smoking came first
- ▶ BD is associated with more severe depressed mood, rapid cycling, and increased suicidal ideation
- ▶ There is less evidence on the relationship between smoking and mania or hypomania
- ▶ Much more research on effective tobacco treatment is needed

Berk, 2008; Heffner, 2011; McClave, 2010; Waxmonsky, 2005

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## 1.13 Panic Disorder

### Module Three

#### Panic Disorder



PANIC ATTACK

- ▶ Smoking may be viewed as a way to cope with the intense feelings associated with anxiety and panic attacks
- ▶ Smoking is predictive of onset of panic attacks, but experiencing panic attacks does not predict becoming a smoker
- ▶ Inability to cope with withdrawal symptoms contributes to cessation difficulty
- ▶ Severity of the panic disorder is associated with more severe withdrawal symptoms

Amering, 1999; Baker-Morrisette, 2004; Breslau, 2004; Himle, 1988; McCabe, 2004; Zvolensky, 1999

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## 1.14 Post-Traumatic Stress Disorder

### Module Three

#### Post-Traumatic Stress Disorder



POST TRAUMATIC STRESS

- ▶ ~53 to 66% of combat veterans with PTSD smoke
- ▶ ~44% of women with PTSD related to physical/sexual assault smoke
- ▶ Severity of PTSD symptoms associated with heavier smoking and worse withdrawal symptoms
- ▶ Those with  $\geq 5$  adverse childhood events have greater risks for:
  - Early onset smoking
  - Ever smoking
  - Heavier smoking
- ▶ PTSD, not trauma exposure alone, predicts smoking behavior and nicotine dependence

Acerno, 1996; Anda, 1999; Beckham, 1995 & 1997; Breslau, 2003; Op den Velde, 2002; Stellman, 1988; Vlahov, 2002

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## 1.15 There are more deaths in US from smoking than from other substance use

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- ▶ Deaths due to opioids (2018) – over 46,000
- ▶ Deaths due to alcohol (2017) – over 72,000
- ▶ Deaths due to tobacco use (annually, 2005–2009) – over 480,000

There are more deaths in US from smoking than from other substance use

Wilson N et al, 2020; White et al, 2020; USDHHS, 2014.

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## 1.16 Marijuana

### Module Three

#### Marijuana

- ▶ Most marijuana users also use tobacco
- ▶ Co-use of marijuana and tobacco is common
  - Blunts – marijuana smoked in cigar wrappings
  - Spliffs – marijuana and tobacco rolled and smoked together
- ▶ Users of both marijuana and tobacco have higher rates of dependence and a harder time quitting either/both products



Schauer, King & McAfee, 2017; King, Jones, Baldwin & Briss, 2020; Campbell et al, 2020

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## 1.17 Opioids

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#### Opioids



- ▶ Among those who use illicit opioids or are in methadone maintenance treatment, 74%–97% smoke
- ▶ Opioids and nicotine act on the same regions in the brain leading to cross tolerance
- ▶ Cross tolerance makes quitting either opioid use or tobacco alone more difficult
- ▶ The co-use of opioids and tobacco complicate the management of chronic pain

Richter et al, 2002; Morris & Garver-Apgar, 2020.

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## 1.18 Alcohol Use Disorder (AUD)

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- ▶ Alcohol and tobacco are commonly used together
  - Typically begins in adolescence
  - Associated with increased risk for other substance use
- ▶ Smoking urges or the act of smoking becomes the conditioned response to alcohol cues
- ▶ Bidirectional relationship
  - AUD risk is significantly higher in smokers
  - Heavy smokers have a 4-fold risk of AUD
  - Experimental/less heavy smokers have a 2-fold risk of AUD

### Alcohol Use Disorder (AUD)



Gruca, 2006; Gulliver, 1995; Gulliver, SB, 2000; Mitchell, 1995; Perkins, 2001; Cooney, 2003; Rohsenow, 1997

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## 1.19 Smoking and AUD together increase health risks

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### Smoking and AUD together increase health risks

- ▶ 10x greater risk of pancreatitis than in people with AUD who do not smoke
- ▶ 3x greater risk of cirrhosis than in people with AUD who do not smoke
- ▶ 38x greater risk of developing mouth and throat cancer than people who do not drink or smoke
- ▶ Tobacco related illnesses are the leading cause of death for people previously treated for AUD

Alcohol and Tobacco, 2007; Blot, 1992; Klatsky, A.L., 1992; Pitchumoni, C.S., 1988

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## 1.20 Cocaine Dependence

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- ▶ >80% of people who use cocaine smoke cigarettes
- ▶ Users of both cocaine and tobacco are more at risk for:
  - More severe cocaine use
  - More legal problems
  - Cocaine use by intravenous or smoked routes
- ▶ Significant reductions in smoking occur if cocaine use stopped
- ▶ Stimulation of nicotinic receptors may enhance the rewarding effects of cocaine

### Cocaine Dependence



Budney, 1993; Horger, 1992; Patkar, 2000; Roll, 1996

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## 1.21 Challenges

### Module Three

#### Challenges

- ▶ The prevalence of tobacco use in people with mental health disorders is 2 to 4x higher than in the general population
- ▶ 40% of all cigarettes are consumed by individuals with mental health illness and/or addictions
- ▶ Almost half (200,000) of the 480,000 deaths that occur each year from smoking are among people with mental illness and/or substance abuse disorders.
- ▶ Lack of integration for co-treating tobacco use and behavioral health problems

Prochaska, et al; 2017

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## 1.22 Reasons for optimism

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- ▶ As many as 80% of clients in substance abuse treatment express an interest in quitting tobacco use
- ▶ Quitting tobacco is associated with greater abstinence from drug use after completion of drug abuse treatment
- ▶ Significant reductions in smoking do not have adverse effects on psychiatric symptoms
- ▶ Tobacco treatment medications are safe and effective

#### Reasons for optimism

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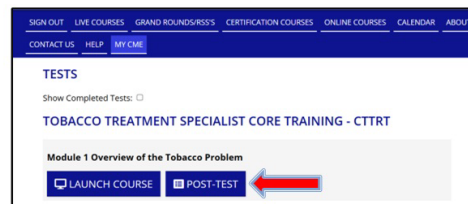
## 1.23 Module Quiz

### Module Three

#### Module 3 Required Quiz

To take the quiz, click on the 'course homepage' link below, it will take you to the course main homepage where you can click on the module quiz 'button' to start the quiz.

[Course homepage](#)



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