Helping Veterans Quit Tobacco Use Treatment in VA

Kim Hamlett-Berry, PhD
Director, Tobacco & Health Policy
Office of Mental Health and Suicide Prevention
Overview

• Tobacco Use: The Scope of the Problem
• Tobacco Use beyond Cigarette Smoking
  • Smokeless Tobacco and Electronic Nicotine Delivery Systems
• Veterans and Tobacco Use
• Smoking and Mental Health
• Evidence-Based Tobacco Use Treatment
• VA Resources
Tobacco Use: The Problems

“Tobacco use remains the number one cause of preventable disease, disability, and death in the United States”

HHS, January 2020 U.S. Surgeon General Report

Smoking cigarettes causes about one of every five deaths in the United States

HHS, 2014

Smoking causes 90% of lung cancer deaths in the United States and approximately 80% of COPD-related deaths

HHS, 2014

Cardiovascular disease (CVD) causes more than 640,000 annual deaths in the United States and approximately one in four CVD deaths is caused by smoking

NCHS, 2019; HHS 2014

Smokeless tobacco can cause oral, esophageal, and pancreatic cancer as well as other health problems

HHS, 2014; WHO, 2007
**Tobacco Use: The Problems**

**Nicotine may be as addictive as heroin, cocaine, or alcohol**

CDC, 2019

**Cigarette use causes 480,000 deaths each year in the U.S.**

HHS, 2014

**21.6% of all Veterans in the U.S. smoke cigarettes**

VHA Survey of Enrollees, 2020; Odani et al., 2018

**13.3% of Veterans in care at VA smoke cigarettes**

HHS, 2014; CPG, 2008

**Tobacco use is a chronic, relapsing condition**

HHS, 2014; CPG, 2008

More than **480,000 U.S. deaths every year** are from cigarette smoking

- **33%** Cardiovascular & metabolic diseases
  - 160,000
- **27%** Lung cancer
  - 130,659
- **23%** Pulmonary disease
  - 113,100
- **9%** Second-hand smoke
  - 41,280
- **7%** Cancers other than lung
  - 36,000
- <1% Other
  - 1,633

Smokeless Tobacco: The Problems

Smokeless tobacco contains 2,000 chemical compounds, including at least 28 carcinogens

WHO, 2007; Yatsuya & Folsom, 2010

Levels of the particularly harmful tobacco-specific nitrosamines can be as much as 100 times higher in smokeless tobacco than in other tobacco products

NCI, 2014

Nicotine from smokeless tobacco stays in the blood longer than nicotine from cigarettes

Benowitz et al., 1988

Smokeless tobacco is NOT an effective smoking cessation aid

NCI, 2014

Behavioral counseling for smokeless tobacco is very similar to counseling for smoking, with minor modifications

Fiore et al., 2008; HHS, 2014
Smokeless Tobacco: The Risks

Smokeless tobacco use results in greater physiological dependence than smoking due to higher nicotine content and delivery mode

NCI, 2014

May increase risk of death from myocardial infarction (MI), coronary heart disease (CHD), and stroke

Boffetta & Straif, 2009; Henley et al., 2005; NCI, 2014; Timberlake et al., 2017

Increased risk of cancer of lip, tongue, and floor and roof of mouth

- 50 times higher risk of cheek and gum cancers in long-term snuff users

NCI, 2014; Siddiqi, 2015; WHO, 2007

Smokeless tobacco causes oral cancer, esophageal cancer, and pancreatic cancer

HHS, 2014; NCI, 2010

Smokeless tobacco can cause dental problems including cavities, tooth decay, tooth loss, and oral lesions such as leukoplakia

NCI, 2010
Electronic Nicotine Delivery Systems (ENDS)

ENDS include e-cigarettes, vapes, vape pens, e-hookahs, tank systems. ENDS deliver aerosolized nicotine (addictive substance) or other substances including THC that is inhaled.

CDC, 2019

E-cigarettes are considered tobacco products by the FDA
August 2016; FDA, 2016

In 2017, 2.8% (6.9 million) of U.S. adults reported they used e-cigarettes every day or some days, with the majority being 18-44 years of age.

Wang, 2018
Health effects: contain nicotine, a highly addictive substance; nicotine can affect fetus development; can contain additives/substances that cause cancer; some devices have exploded causing burns and other injuries

CDC, 2019

Some chemicals in e-cigarettes can cause DNA damage and mutagenesis

National Academy of Sciences, Engineering, and Medicine 2018

Safer≠safe: While considered less harmful than traditional cigarettes, long-term risks are not yet clear

Substantial evidence e-cigarette use increases risk of transitioning to smoking cigarettes

NASEM, 2018

Dual users of cigarettes and e-cigarettes may be less likely to stop tobacco use

Manzoli et al., 2017

FDA has not approved e-cigarettes as an aid in quitting smoking — limited evidence that e-cigarettes can aid in tobacco cessation
CDC, 2019; NASEM, 2018

“E-cigarettes have the potential to benefit adult smokers who are not pregnant if used as a complete substitute for regular cigarettes and other smoked tobacco products”
 CDC, 2019

E-cigarette use significantly increases the risk of relapse to cigarette smoking among former smokers
Dai & Leventhal, 2019; Everard et al., 2020; McMillen et al., 2019
Veterans and Tobacco Use:
2020 VHA Survey of Enrollees
U.S. Veterans and Tobacco Use
2010-2015 National Survey on Drug Use and Health

29.2% of Veterans used at least one tobacco product
21.6% were current smokers
7.0% used more than two tobacco products concurrently
5.2% were smokeless tobacco users

Odani et al., 2018
2020 VA Survey of Enrollees

Findings

Smoking prevalence among enrollees declined from the rate reported in 2019 from **14.6%** to **13.3%** of all enrollees. Survey respondents were categorized as a “current smoker” if they indicated they smoked every day or some days.

Recent unsuccessful quitters: **629,755** (more than **54%** of current smokers)—less than **35%** used cessation medication

2020 survey included questions on smokeless tobacco & e-cigarettes:

- **5.1%** of enrollees use smokeless tobacco every day or some days
- **3.5%** of enrollees use e-cigarettes or other vaping product every day or some days

Of **3.7** million “former smokers,” **164,221** were “recent successful quitters” meaning they quit less than a year ago

Of current smokers, **36%** were unaware of NRT as a treatment option and almost **70%** were unaware of tobacco cessation counseling available through VA
Smoking and Tobacco Use in VA

Rates of Smoking Among Veterans in VHA Care, 2020

- 54.2% of current smokers tried to quit last year.
- 75.1% of Veterans who have ever smoked are now former smokers.
Among multiple tobacco product users, e-cigarette + cigarette was the most commonly reported combination (29.2%) in 2017.

Wang, 2018

Among 2020 VA enrollees, 1.5% and 2.0% reported they used e-cigarettes every day or some days, respectively.

VA, 2021

Among 2020 VA enrollees <45 years of age, 8.7% reported using e-cigarettes or other vaping products.

VA, 2021
Smoking and Mental Health
Tobacco Use in Mental Health Populations

Patients with a mental health disorder are 2–3 times more likely to smoke than patients without a mental health disorder.

On average, individuals with a mental health disorder die several years earlier than individuals without a mental health disorder. Most deaths are due to smoking-related disease.

Colton & Manderscheid, 2006; Druss et al., 2011; Forman-Hoffman et al., 2014
Disparities in Rates of Smoking

Between 2004 and 2011, the rate of smoking among individuals without mental illness declined significantly (19.2% to 16.5%), according to nationally representative survey data of noninstitutionalized U.S. residents (Lê Cook et al., 2014).

However, the rate of smoking among those with mental illness changed only slightly over that same time (25.3% to 24.9%) (Lê Cook et al., 2014).

In 2016, 34.6% of adults with a mental illness reported current use of tobacco compared to 23.3% without such an illness (SAMHSA, Sept. 2017).

Past month cigarette use was more likely among adults with any mental illness (33.3%) than among adults with no mental illness (20.7%) (SAHMSA, June 2017).

Adults with mental illness receiving mental health treatment within the previous year were more likely to quit smoking than those who did not (37.2% vs. 33.1%) (Lê Cook et al., 2014).
Health Effects of Tobacco Use on Mental Health Populations

Tobacco users with mental illness have a greater risk of dying from CVD, respiratory illnesses, and cancer than people without mental illness.

National study of Veterans with schizophrenia, bipolar disorder, other psychotic disorders and major depressive disorders found that patients with psychosis were more likely to die of heart disease (HD), with smoking and physical inactivity associated with HD-related mortality.

Kilbourne et al., 2009

Tobacco-related disease accounts for approximately half of the mortality for individuals with schizophrenia, bipolar disorder, and depression.

Callaghan et al., 2014

Tobacco use disorder predicts future suicidal behavior in Veterans independent of age, gender, psychiatric disorder, service connection, and severity of medical comorbidity.

Bohnert et al., 2014

e.g., Dalton et al., 2002; Himelhoch et al., 2004; Lichtermann et al., 2001; Olfson et al., 2015
Patients with Serious Mental Illness

Patients with schizophrenia who also smoke:

- Are more likely than those who don’t smoke to have higher rates of hospitalization, higher medication doses, and more severe psychiatric symptoms
  
  Prochaska, 2011

- Spend approximately 27% of their monthly income on cigarettes, according to a study of outpatients
  
  Steinberg et al., 2004

- Are more likely to die from heart disease or cancer related to tobacco use
  
  Olfson, 2015

- Are more likely to think about or attempt suicide
  
  Breslau, 2005; Sankaranarayan et al., 2015

Among people with schizophrenia and bipolar disorder:

- Current smokers had worse cognitive functioning and poorer functional outcomes than past or never smokers
  
  Depp et al., 2015
Substance Use Disorder and Smoking

75% of individuals ages 12+ entering treatment for substance use disorders (SUD) reported tobacco use

SAMHSA, 2011

Smokers have poorer long-term substance use outcomes than non-smokers

Satre et al., 2007

Tobacco-related diseases account for 50% of deaths among individuals treated for alcohol dependence

Hurt et al., 1996

Death rate is 4 times greater from cigarette smoking vs. nonsmoking long-term drug abusers

Hser et al., 2004

Health consequences of tobacco and other drug use are synergistic—50% greater than the sum of each individually

Bien & Burge, 1990; Castellsague et al., 1999; Pelucchi et al., 2006

The preponderance of evidence suggests smoking cessation does not increase risk for alcohol and other drug relapse

Cavazos-Rehg et al., 2014; Gulliver et al., 2006; Lemon et al., 2003; Prochaska et al., 2004
### Smoking Rates Among VA Patients with Mental Health Disorder or SUD Diagnosis

<table>
<thead>
<tr>
<th>Current Smokers</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Mental Disorder</td>
<td>15.9%</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>47.7%</td>
</tr>
<tr>
<td>Bipolar disorder</td>
<td>38.9%</td>
</tr>
<tr>
<td>Other psychoses</td>
<td>23.1%</td>
</tr>
<tr>
<td>Depression</td>
<td>27.1%</td>
</tr>
<tr>
<td>No PTSD</td>
<td>17.7%</td>
</tr>
<tr>
<td>PTSD</td>
<td>38.8%</td>
</tr>
<tr>
<td>No SUD</td>
<td>16.3%</td>
</tr>
<tr>
<td>Substance use disorder</td>
<td>53.4%</td>
</tr>
</tbody>
</table>

Odds ratio of being a current smoker compared to not having a mental health disorder:

- Schizophrenia: **1.78**
- Bipolar disorder: **1.46**
- Depression: **1.18**
- PTSD: **0.95**
- Substance use: **2.74**

*Duffy et al., 2012*

**National Survey on Drug Use and Health 2010-2015**

48.2% of U.S. Veterans with serious psychological distress were current tobacco users.

*Odani et al., 2018*
Suicide and Smoking

Smokers are at greater risk for suicide, although specific reasons are unclear
Bohnert et al., 2014; Sareen et al., 2015

Smokers are more likely to contemplate and plan suicide
Poorolahj & Darvishi, 2016

Smokers are more likely to attempt and to die by suicide than nonsmokers
Poorolahj & Darvishi, 2016

Tobacco use disorder associated with 36% greater risk for suicide in one VHA prospective cohort study
Bohnert et al., 2014

Impact of cessation is unclear, but any increased risk is likely to be short term

What to do?

Assess for mood and suicidality

Monitor over time, particularly around quit date and early abstinence

Consider mHealth interventions (e.g., 1-855-QUIT-VET) that include referrals to crisis hotlines
Christofferson et al., 2015
Benefits of Quitting on Mental Health and Substance Use Disorder Outcomes

Receiving a smoking cessation intervention (either during treatment or later in recovery) is associated with a 25% increased likelihood of long-term abstinence from alcohol and drugs.

Prochaska et al., 2004

Smoking cessation was associated with reduced depression, anxiety, and improved positive mood.

Taylor et al., 2014

The effect size was comparable for smokers with and without psychiatric disorders.

Taylor et al., 2014

The effect sizes are equal or larger than those of antidepressant treatment for mood and anxiety disorders.

Taylor et al., 2014

Recovering alcoholics who don’t smoke saw greater improvement in cognitive function, versus those who smoked.

Durazzo et al., 2007

In a longitudinal study, daily smokers with mood or anxiety disorder at initial interview had a decreased risk of diagnosis if they quit smoking before a follow-up interview three years later.

Cavazos-Rehg et al., 2014
Evidence-Based Tobacco Use Treatment
Smoking cessation is beneficial at any age. Smoking cessation improves health status and enhances quality of life.

2020 Surgeon General Report on Smoking Cessation: Findings

Almost 70% of adults who smoke want to quit and 50% make a quit attempt each year.

Behavioral counseling + FDA-approved cessation medication increases likelihood of a successful quit.

Combination NRT is more effective than monotherapy.

Tobacco cessation quitlines are effective in increasing smoking cessation rates.

Text message programs and web-based interventions are effective in increasing smoking cessation rates.

Life events such as hospitalization, surgery, and lung cancer screenings can serve to increase motivation to quit.

Tobacco Dependence is a Chronic Disease

Tobacco dependence is a chronic disease that often requires repeated intervention and multiple attempts to quit.

Treatment should address the physiological and the behavioral aspects of dependence.

Research has suggested it may take up to 30 quit attempts to quit for good.

Chaiton et al., 2016

Almost 70% of smokers want to quit yet fewer than 1 in 10 successfully quit in a given year.

Babb et al., 2017
Combining Counseling and Medication Increases Success

Higher numbers of counseling sessions are more effective at supporting abstinence than fewer sessions.

Adding smoking cessation medications to counseling further increases the likelihood of abstinence.

Fiore et al., 2008
Cessation Medications Combat Nicotine Withdrawal

Cigarettes contain nicotine, a highly addictive substance. Withdrawal from nicotine can cause:

- Irritability
- Cravings
- Restlessness
- Anxiety
- Insomnia
- Difficulty concentrating
- Hunger
- Depression

Cessation medications help an individual manage nicotine withdrawal symptoms and cope with the urge to smoke.

When certain FDA-approved cessation medications are combined, abstinence rates increase.
## VA First Line Formulary Options

### Combination Therapy
- Nicotine Patch + Gum prn
- Nicotine Patch + Lozenge prn
- Nicotine Patch + Bupropion
- Bupropion + Gum prn
- Bupropion + Lozenge prn

## VA Second Line Options

### Varenicline
- Can use after ANY failure of monotherapy or combination therapy
- Decreased prescribing in VA from 2008-2016 due to FDA advisories and boxed warning
- Research found no significant differences in neuropsychiatric adverse events with varenicline vs nicotine patch or placebo
- VA released updated varenicline CFU in 2019
- FDA removed varenicline boxed warning in December 2016
- VA, 2020
Major Events Affecting Utilization of Varenicline in VHA

Varenicline and Nicotine Replacement Use Associated with US Food and Drug Administration Drug Safety Communications
Desai et al. 2019
Varenicline utilization in VHA dropped sharply in response to FDA Safety Communications

- **1/2007** - Varenicline added to VA Formulary
  - Peak of 32,581 users in Q1 2008
- **11/2007** – FDA issued initial safety communication re: possible adverse neuropsychiatric events
- **2/2008** – Public Health Advisory issued by FDA
  - 68% decrease in utilization of varenicline in VA (38% decrease in utilization among Medicaid populations)
  - 32.1% increase in use of NRT in VA over the same period
- **7/2009** – FDA boxed warning
- **6/2016**- Publication of EAGLES trial, Anthenelli et al.
- **12/2016** – FDA lifted boxed warning

- **In 12 months following EAGLES, utilization of varenicline in VA increased by 42.7%**

Evaluating Adverse Events in a Global Cessation Study (EAGLES)
Anthenelli et al., 2016

- Randomized, double-blind trial of 8,144 smokers across 140 international centers comparing varenicline, bupropion, nicotine patch, vs. placebo.
  - Participants included smokers motivated to quit with psychiatric disorders (n=4,116) and without (n=4,028) with 12-weeks of treatment and 12-week follow-up.
  - Primary endpoint was incidence of moderate and severe neuropsychiatric events and an efficacy endpoint of biochemically verified abstinence for weeks 9-12.
  - EAGLES did not find an increase in neuropsychiatric events attributable to use of varenicline or bupropion relative to NRT patch or placebo. Varenicline was more effective than NRT, bupropion, patch or placebo. Bupropion and nicotine patch were more effective than placebo.
Cessation Medication Use in VA

“...smoking cessation medications need to be made available to all smokers interested in quitting, regardless of whether or not the patient is willing to attend a smoking cessation program.”

VHA Directive 2003-042
National Smoking and Tobacco Use Cessation Program

Research found that the use of cessation medications by Veterans in VHA care increases their odds of quitting and is cost effective

Duffy et al., 2018; Barnett et al., 2019

Veterans in VHA care in FY2011 who received cessation medication had a quit rate of 19.7% compared to 16.7% of the Veterans not using such medication

Duffy et al., 2018

In 2013, 25.6% of current smokers in VHA care were using tobacco pharmacotherapy

Ignacio et al., 2018

One study found that the VHA enrollees who quit using tobacco pharmacotherapy incurred a treatment cost of a little more than $143. Each “quit” had an incremental cost-effectiveness of $4705.

Barnett et al., 2019
Behavioral Interventions

May be delivered in-person, over the phone, via telehealth, in individual or group formats

May be delivered by any type of health care provider:
- Physicians, nurses, psychologists, psychiatrists, pharmacists, addiction counselors, and dentists
- Quitline coaches may also deliver counseling over the phone

Increased length and number of sessions increases the likelihood of success
- Triggers for tobacco use
- Coping with or avoiding triggers
- Changing behavior to remove tobacco from life
VHA provides care for a population that is characterized by a numerous factors that are strongly associated with smoking, including military service, mental health and substance use co-morbidities, higher rates of homelessness and disability, and lower SES.

To address this, VHA has adopted a comprehensive public health approach to increasing tobacco use treatment across the system

VHA provides evidence-based clinical care, has adopted policies to reduce barriers to treatment, targeted disparity populations, and utilized mHealth and telephone-based interventions to successfully reduce the rate of smoking among Veteran populations within VA
Tobacco Use Treatment: A Public Health Approach

VHA Tobacco & Health addresses tobacco use on two levels:

**Patient/provider level**
Promoting delivery of evidence-based care
- Patient/providers workbooks and handbooks
- Provider/patient handouts and information sheets
- Clinical trainings and tools

**Population level**
Increase reach through mHealth resources
- SmokefreeVET text messaging service
- 1-855-QUIT-VET quitline
Quitline counselors provide callers with:

- Individualized counseling
- Help formulating a quit plan
- Strategies to prevent relapse
- Up to 4 scheduled follow-up calls
- Counseling in English and in Spanish

There is no limit to the number of times a Veteran may call the quitline

Veteran information is kept private

Only available to Veterans enrolled in VHA care

- Warm transfers of callers in emotional distress to the Veterans Crisis Line. Counselors receive the SAVE training annually.

In collaboration with the National Cancer Institute
Quitline Counselors:

Have extensive training and experience counseling callers to quit tobacco

Have been trained to understand the VA population and VA health care services offered to Veterans

Warm transfer callers in emotional distress to the Veterans Crisis Line

Are not healthcare providers

Do not have access to VA electronic medical record

“...I feel great. I couldn’t have done this without you guys. You have been such a support to me. Thank you for helping me through this.”

Cannot prescribe tobacco cessation medications

Will refer callers to their VA health care provider for medications and other health care concerns
User Information

Veterans are most likely to find out about service from their VA provider

Top 3 sources:
- VA Provider
- Print materials
- On the web

Average age of callers is 56

- 86% of callers are male
- 14% of callers are female
- 95% of callers are cigarette smokers
- 5% use other types of tobacco
- 73% are white
- 17% are black or African-American
- 10% of callers are Hispanic or Latino
How to Refer a Patient to 1-855-QUIT-VET

Explain what a quitline is:

• A quitline is a free telephone service you can call to speak with a specially trained tobacco cessation counselor. 1-855-QUIT-VET is specifically for Veterans.

Tell them how it works:

• Your call will be answered by a quitline counselor who will ask you questions about your tobacco habit, what situations or triggers make you want to smoke, and help you create a plan to quit and stay tobacco free.
• The call usually lasts between 15 and 30 minutes.
• The counselor will offer follow-up calls to help you stay quit.

Answer any questions about the effectiveness of quitlines:

• Patients that use a proactive quitline, like 1-855-QUIT-VET, are more likely to successfully quit smoking than those that have minimal or no counseling.

Give them a patient information card or call the quitline together.
Warm Hand-off Treatment Uptake by Referral Method

Self-initiated
- 44% initiate counseling
- 2.3 counseling sessions completed on average
- 18% complete the full series
- 89% report using medication for their quit attempt

Warm Handoff from VA Provider
- 76% initiate counseling
- 3.1 counseling sessions completed on average
- 32% complete the full series
- 97% report using medication for their quit attempt

Secure Message Referral
- 55% initiate counseling
- 3.4 counseling sessions completed on average
- 40% complete the full series
- 92% report using medication for their quit attempt
SmokefreeVET: Text Messaging Program

Automated text message smoking cessation program

Sends 2-5 texts per day beginning 2 weeks before quit date and continuing for 6 weeks afterward

Provides tips, support, and encouragement for quitting smoking

Keywords (“Urge”, “Stress”, “Smoked”, “Dipped”, “Crisis”) can be used anytime to receive an immediate tip in response

Connects users with other VA resources: 1-855-QUIT-VET quitline, Veterans Crisis Line, Stay Quit Coach, refers back to VA provider for smoking cessation medications

Text VET to 47848 (or VETesp for Spanish) or visit www.smokefree.gov/VET

In collaboration with the National Cancer Institute

“I’ve been trying to quit for years, this program has helped me accomplish my goal. Thank you for the support.”
Recommend this program to Veterans to use in addition to receiving behavioral counseling from their provider or attending a smoking cessation clinic

- This text messaging program is intended to provide additional support to Veterans quitting smoking, not to replace the very effective interactions between a patient and their health care provider regarding smoking cessation

Provide your patients using this program with combination NRT or other tobacco cessation medications

- SmokefreeVET: Quit aids like the patch, gum and other meds can help you. Talk to your VA provider or buy at the drugstore. It’s less than the cost of cigarettes.
Important Links and Resources

Internet site (for Veterans and family members):
www.mentalhealth.va.gov/quit-tobacco and veterans.smokefree.gov

- Clinical guidance
- Medication and prescribing information
- Publications and print resources for both patients and providers
- VHA policies
- Link to internal SharePoint site

SharePoint site (for VHA clinicians):
dvagov.sharepoint.com/sites/VHAtobacco

Print & Digital Downloads:
www.smokefree.gov/veterans/smokefreevet-partner-toolkit

Tobacco Use Cessation Clinical Update
Audio Conferences

4th Monday
every other month, 3pm ET

Tobacco Cessation Community of Practice Call

4th Thursday
of each month, 12pm ET

Tobacco Cessation Consultation Service
TobaccoConsultation@va.gov
VHA Program Office email:
VHATobaccoProgram@va.gov

Tobacco Cessation Consultation Service:
TobaccoConsulation@va.gov

Kim Hamlett-Berry, Ph.D.
National Program Director
Tobacco & Health: Policy and Programs
Office of Mental Health and Suicide Prevention
Kim.Hamletva.gov

Dana E. Christofferson, Ph.D.
Deputy Director, Tobacco & Health
Office of Mental Health & Suicide Prevention
Dana.Christofferson@va.gov

Jennifer Knoeppel, M.P.H
Health Science Specialist
Tobacco & Health: Policy and Programs
Office of Mental Health and Suicide Prevention
Jennifer.Knoeppel@va.gov