Tobacco Dependence



Learning Objectives

List	2 key reasons why tobacco use disorder is characterized as a chronic disease
Identify	3 demographic groups that experience tobacco-related disparities and understand the importance of tailored clinical approaches for addressing tobacco dependence with these populations
Describe	3 evidence-based treatments for tobacco dependence, including their respective effectiveness
Recognize	at least 1 benefit to quitlines as a resource for tobacco cessation
Understand	the Ask-Advise-Refer and Ask-Advise-Connect models for tobacco dependence intervention and tools available to implement them in the workplace

Tobacco Use Disorder



Commercial Tobacco Products

Non-exhaustive list:

- Cigarettes
- Smokeless tobacco
- Pipe tobacco
- Cigars, little cigars, and cigarillos
- Hookahs
- Electronic Nicotine Delivery Systems (ENDS; e.g., E-cigarettes, vapes)

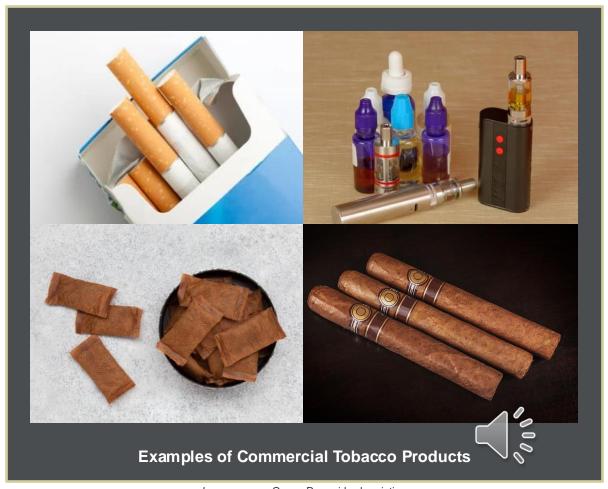


Image source: Canva Pro paid subscription

Nicotine

- **Highly addictive** chemical compound (i.e., substance)
- Naturally occurs in tobacco plants but can be made in a laboratory
- Repeated exposure leads to brain changes associated with dependence

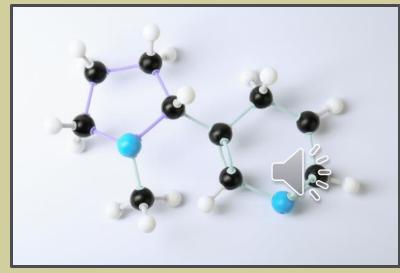


Image source: Canva Pro paid subscription

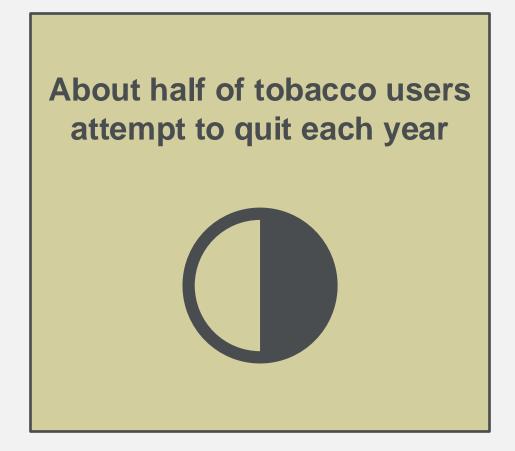
Tobacco Use Disorder

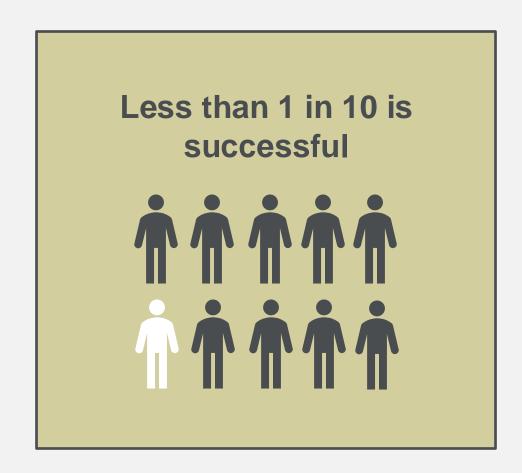
- Classified as a **chronic disease** in 2000
- Long-term nature
- Periods of remission and relapse
- Requires repeated intervention and support



Image source: Canva Pro paid subscription

Quit Attempts and Success

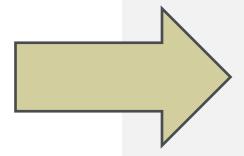






Nicotine Withdrawal

- Symptoms:
 - Intense urges or cravings
 - Irritability or feelings of grouchiness
 - Restlessness and jumpiness
 - Difficulty concentrating
 - Sleep disturbances
 - Anxiety, sadness, or depression



Difficult to quit

Easy to relapse

Health Hazards of Tobacco Use

Smoking cigarettes harms nearly every organ of the body and causes many diseases

Cancer

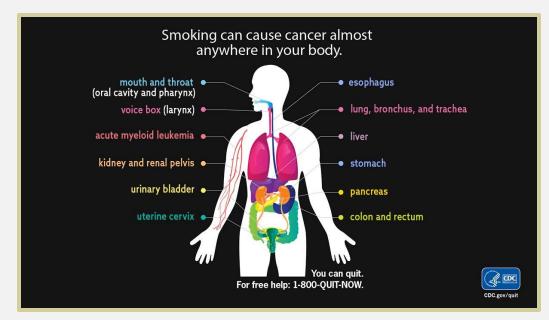


Image source: Centers for Disease Control and Prevention

- Heart disease and stroke
- Lung disease like chronic obstructive pulmonary disease
- Type 2 diabetes
- Other diseases (e.g., eye disease, immune system issues, etc.)
- Harmful reproductive health effects

#1 Preventable Cause of Disease and Death



Image source: Centers for Disease Control and Prevention

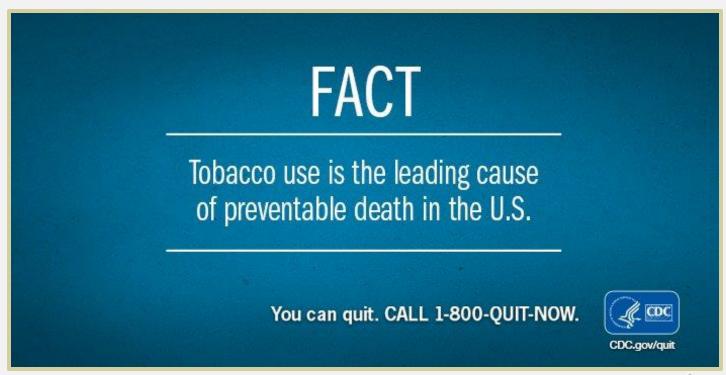


Image source: Centers for Disease Control and Prevention



Toll of Tobacco in the US

Deaths related to smoking



Annual deaths related to smoking and second-hand smoke exposure

More than AIDS, alcohol, car accidents, illegal drugs, murders and suicides combined

People suffering from a smoking-related illness



Tobacco Use Trends

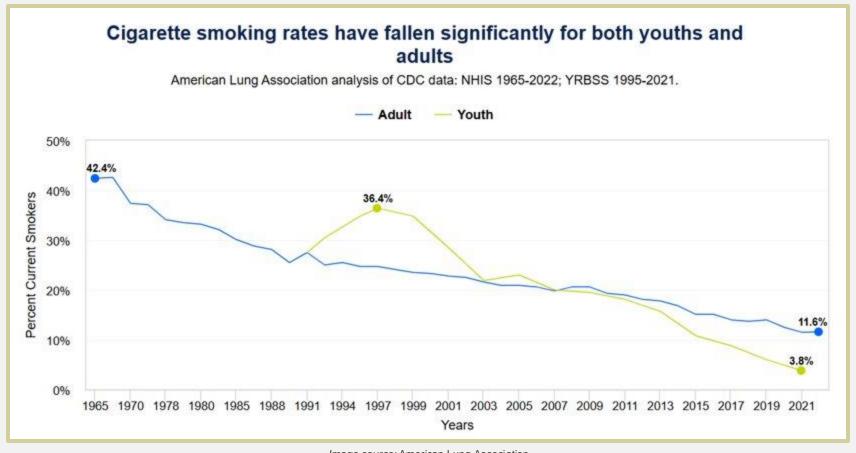




Image source: American Lung Association

Tobacco-Related Disparities



Tobacco-Related Disparities

Commercial tobacco use

Exposure to secondhand tobacco smoke

Exposure to marketing of tobacco products

Smoking-related health outcomes

Race and ethnicity

Sexual and gender orientation

Income and educational levels

Occupation

Geography

Behavioral health conditions















Race and ethnicity







Sexual and gender orientation

Sexual Orientation	Any Tobacco Use
Lesbian, gay, and bisexual adults	27.4%
Heterosexual adults	18.4%

Gender Identity	Cigarette/cigar/e-cigarette use
Transgender adults	39.7%
Cisgender adults	25.1%







Income and educational level



By Education (adults aged ≥25 yrs)	Percentage
0-12 yrs (no diploma)	20.1%
GED	30.7%
High school diploma	17.1%
Some college, no degree	16.1%
Associate degree (academic or technical/vocational)	13.7%
Undergraduate degree (bachelor's)	5.3%
Graduate degree (master's, doctoral or professional)	3.2%

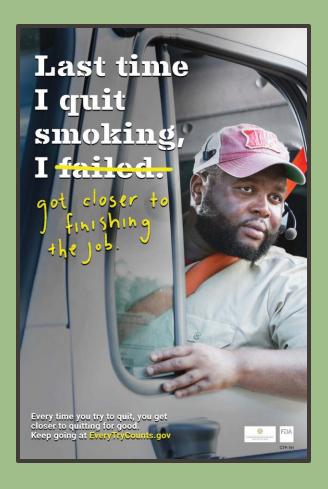
By Annual Household Income	Percentage
Low Income	18.3%
Middle Income	12.3%
High Income	6.7%



Occupation









Geography



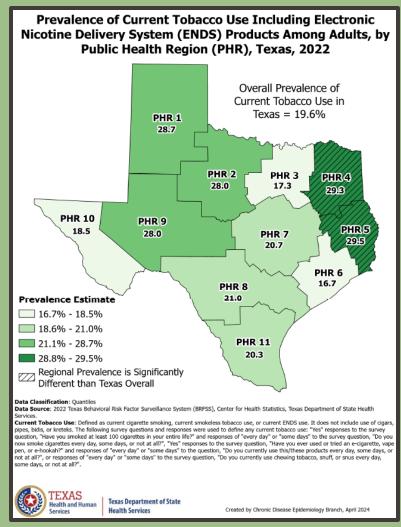




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Geography



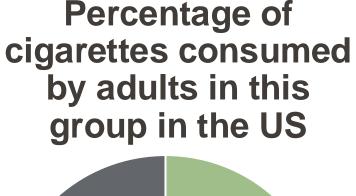


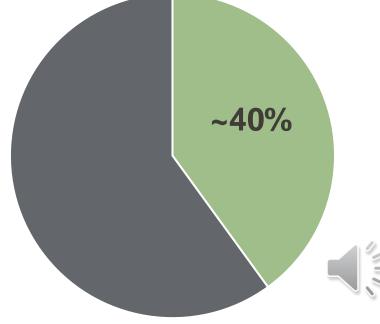


Behavioral health conditions

Adults in the US with a mental illness or substance use disorder



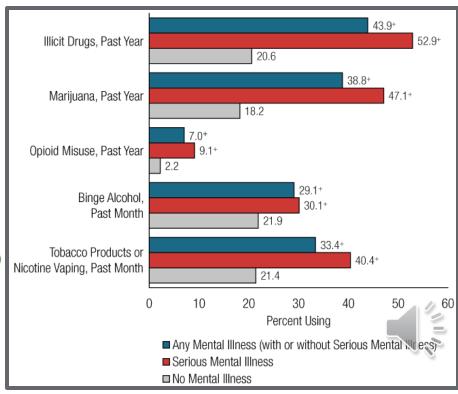




Behavioral health conditions

- Adults with any or serious mental illness are more likely to use tobacco products or vape
 - Any mental illness (33.4%)
 - Serious mental illness (40.4%)
 - No mental illness (21.4%)

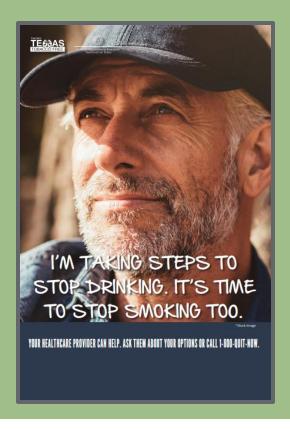




Behavioral health conditions



People with alcohol use disorders smoke at rates between 34% and 80%



People with other substance use disorders smoke at rates between 49% and 98%



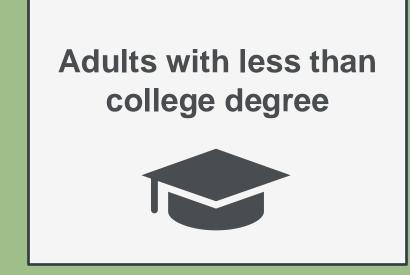


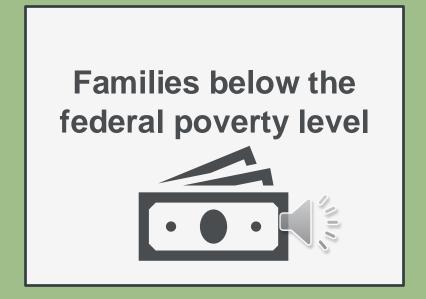
Disparities in Secondhand Smoke Exposure

Exposure is MORE THAN 2X

greater among







Disparities in Tobacco Marketing

Advertising is more common in neighborhoods with:

- Black adults
- Lower-income communities

Products are cheaper in areas with:

- Diverse racial and ethnic groups
- Youth
- Lower-income communities

Tobacco coupons are more frequently used by:

- LGBTQ+ communities
- Adults with lower socioeconomic statuses



Image source: Stanford Research into the Impact of Tobacco
Advertising

Disparities in Smoking-Related Health Outcomes

Lung Cancer

- Incidence and death highest among Black men
- Among women, incidence highest among American Indian/Alaska Native women

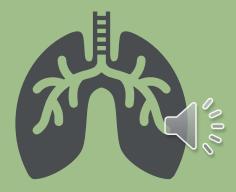
Heart Disease

- Prevalence highest among Black and White men
- Among women, highest among Black women



Chronic Obstructive Pulmonary Disease (COPD)

 Prevalence highest among American Indian and Alaska Native adults



Quitting Tobacco

Quitting tobacco lowers the risk for early death and of developing related diseases



Evidence-based Treatments for Tobacco Dependence



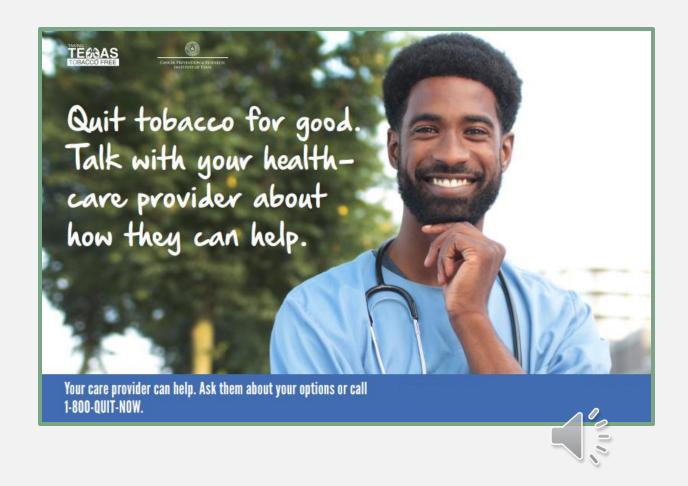
United States Preventive Services Task Force

Recommendation Grade Nonpregnant adults: Ask about tobacco use **Grade A** Provide **behavioral interventions** and **pharmacotherapy** for cessation to those who use tobacco Tobacco **Pregnant persons: Cessation in** Ask about tobacco use **Grade A** Adults: Provide **behavioral interventions** for cessation to those who use tobacco Interventions Pregnant persons who use tobacco: The evidence is insufficient to assess the balance of benefits and harms of Insufficient pharmacotherapy for tobacco cessation Adults and pregnant persons who use tobacco: The evidence is insufficient to assess the balance of benefits and harms of Insuffici using e-cigarettes for tobacco cessation

3. Lancaster & Stead (2017). PMCID: PMC6464359

Behavioral Interventions

- Effective interventions include:
 - Brief advice from a healthcare provider
 - Individual counseling
 - Group counseling
 - Telephone counseling
 - Mobile phone-based interventions



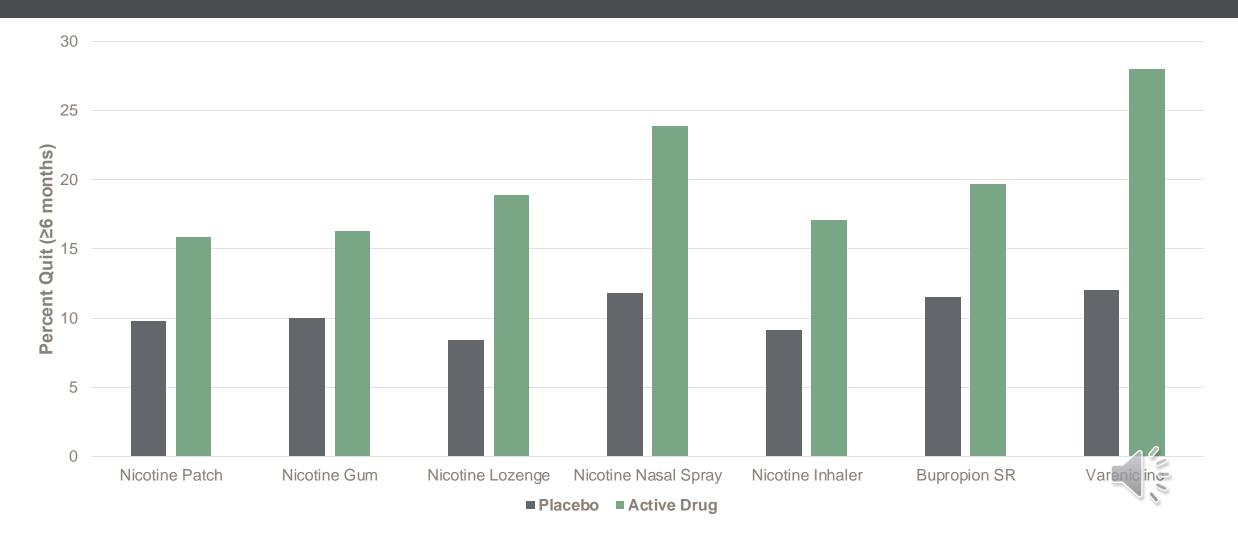
Pharmacotherapy

FDA-Approved Medications	Availability	
Nicotine Replacement Therapy (NRT)		
1. Nicotine patch	Over-the-counter	
2. Nicotine gum	Over-the-counter	
3. Nicotine lozenge	Over-the-counter	
4. Nicotine nasal spray	Prescription	
5. Nicotine inhaler (discontinued)	Prescription	
Oral Medications		
6. Bupropion sustained release (SR)	Prescription	
7. Varenicline	Prescription	



3. Hughes et al. (2014). PMCID: PMC7027688.

Pharmacotherapy: Effectiveness



Pharmacotherapy: Nicotine Replacement Therapy



Delivers clean nicotine

Addresses the physiological need

Relieves physical withdrawal symptoms



Pharmacotherapy: Nicotine Replacement Therapy

	Patch	Gum	Lozenge	Nasal Spray	Inhaler
Strength	21, 14, 7 mg / patch	2, 4 mg / piece		0.5 mg / spray	10 mg / cartridge
Dosing	1 patch every 24 hours	1 piece every 1-2 hours		1-2 sprays in each nostril 1-2 times an hour	6-16 cartridges every 24 hours
	Discreet	Offset cravings and withdrawal symptoms			
Advantages	Once a day	Oral fixation	Oral fixation Doesn't require chewing	Works fast	Keeps hands busy
Adverse Reactions	Skin reaction Sleep disturbance	Mouth soreness Hiccups	Indigestion Hiccups Insomnia	Nasal and throat irritation Sneezing Coughing Watery eyes	Mouth and three irritation

Pharmacotherapy: Combination or Dual NRT

Long-Acting PLUS Short-Acting

Dosing/Duration	Medication
Long-Acting	Nicotine patch
Short-Acting	Nicotine gum
	Nicotine lozenge
	Nicotine nasal spray
	Nicotine inhaler (discontinued)

17-37% HIGHER
long-term quit rates vs. single NRT



Pharmacotherapy: Oral Medications



Bupropion SR

- Originally approved as an antidepressant
- Decreases cravings for cigarettes and symptoms of nicotine withdrawal



Varenicline

- Most effective single agent for tobacco cessation
- Decreases symptoms of nicotine withdrawal



Pharmacotherapy: Oral Medications

	Bupropion SR	Varenicline		
Strength	150 mg	0.5, 1 mg		
Dosing	Start 1-2 weeks before quit date: Days 1–7: 150 mg once in AM Day 8–end of treatment: 150 mg twice daily	Start at least 1 week before quit date: Days 1–3: 0.5 mg every morning Days 4–7: 0.5 mg twice daily Day 8–end of treatment: 1 mg twice daily		
Advantages	Treats depression	High success rates		
Adverse Reactions	Dry mouth, insomnia, decreased appetite Do not use with seizure disorder, eating disorders, Tamoxifen, Monoamine Oxidase Inhibitors (MAOIs), or abrupt discontinuation of alcohol, benzodiazepines, or antiepileptic medication	GI upset (nausea, vomiting, constipation, gas) Abnormal, strange, or vivid dreams Very rare but should monitor for depressed mood, agitation, changes in thoughts/behavior, and suicidal ideation		



Bupropion SR: Effectiveness

Studies demonstrate a higher relative risk (RR) for bupropion SR compared to the control group

TOTAL RR= 1.64

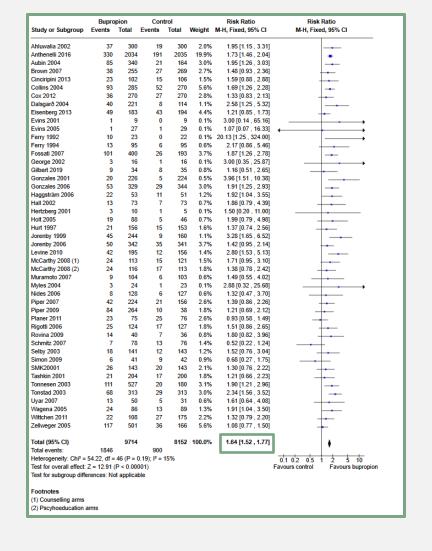
[95% CI, 1.52 to 1.77]

Recent work suggests that Bupropion XL has similar effectiveness and adverse event profiles for smoking cessation

Dosing

Start 1-2 weeks before quit date:

Days **1–7**: 150 mg once in AM Day **8–end of treatment**: 300mg once in AM





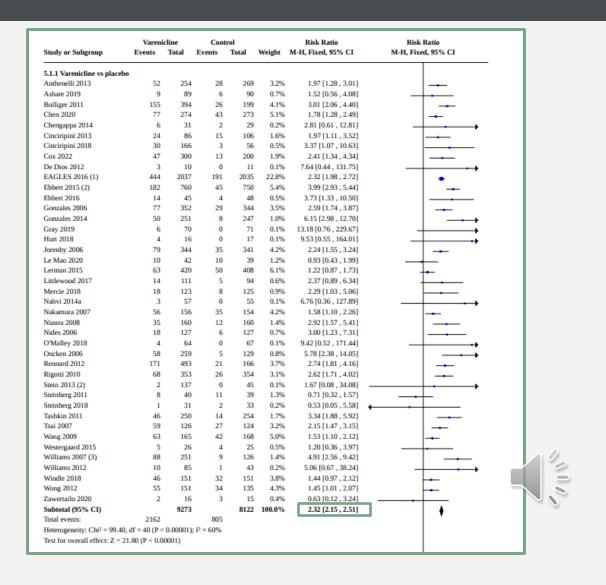
Varenicline: Effectiveness

Most effective single agent for tobacco cessation

Studies demonstrate a higher relative risk (RR) for varenicline compared to the control group

TOTAL RR= 2.32

[95% CI, 2.15 to 2.51]



Pharmacotherapy: FDA-Approved Medications

Dosing/Duration	Medication	Over-the- Counter	Prescription	Contains Nicotine	Non- Nicotine
	Nicotine patch	•		•	
Long-Acting	Varenicline		•		
	Bupropion SR		•		
	Nicotine gum	•		•	
Short-Acting	Nicotine lozenge				
	Nicotine nasal spray				100
	Nicotine inhaler (discontinued)			•	

Behavioral Intervention + Pharmacotherapy



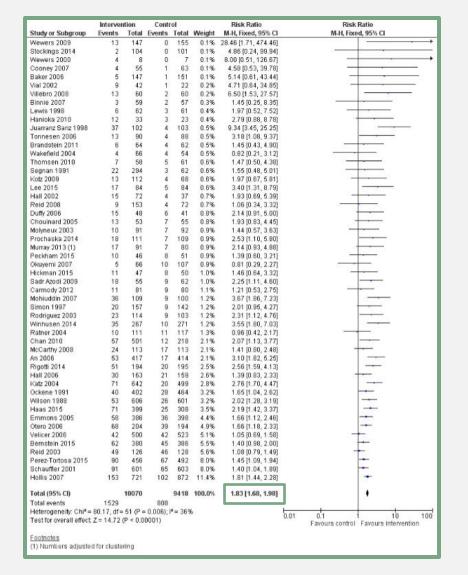


Behavioral + Pharmacotherapy: Effectiveness

Studies demonstrate a higher relative risk (RR) for behavioral interventions and pharmacological treatments compared to the control group (usual care, brief advice, less intensive behavioral support)

TOTAL RR= 1.83

[95% CI, 1.68 to 1.98]





Behavioral + Pharmacotherapy: Effectiveness

Studies demonstrate a higher relative risk (RR) for more intensive (face-to-face or telephone) behavioral interventions provided with pharmacological treatments compared to the control group (less intensive/different personal contact, written information, no behavioral support)

TOTAL RR = 1.15 [95% Cl, 1.08 to 1.22]

More intensive behavioral support is likely to increase chances of success by 10-20%

Behavioral Intervention + Pharmacotherapy

United States Preventive Services Task Force

Pharmacotherapy should be accompanied by behavioral intervention that includes:

4+ sessions

90-300 minutes



Delivery of Care to Address Disparities

Behavioral + Pharmacotherapy





Tobacco Use Disparities

Commercial tobacco use

Exposure to marketing of tobacco products

Exposure to secondhand tobacco smoke

Smoking-related health of the mes

Tobacco Cessation Quitlines



Tobacco Cessation Quitlines

Available in all 50 states, the District of Columbia, each US territory, and all ten Canadian provinces





National Calling Network

1-800-QUIT-NOW (784-8669) 1-855-DÉJELO-YA (335-3569) US 1-866-366-3667

CANADA





Additional US National Quitlines

Asian Smokers' Quitline

Cantonese/Mandarin: 1-800-838-8917

Korean: 1-800-556-5564

Vietnamese: 1-800-778-8440

AsianSmokersQuitline.org

QuitVET for Veterans Receiving VA Healthcare

- 1-855-QUIT-VET (784-8838)
- MentalHealth.VA.gov/Quit-Tobacco/Quit-Vet.asp

You can quit smoking. We can help.

华语戒烟专线 1-800-838-8917

www.asg-chinese.org

Trung Tâm Cai Thuốc Lá Dành Cho Người Việt 1-800-778-8440

www.asg-viet.org

한인금연센터 1-800-556-5564

www.asg-korean.org

7am - 9pm, PT (10am - Midnight, ET) Mon - Fri









YOU WANT TO GO THE DISTANCE. WE CAN HELP YOU STAY ON TRACK.

The Quit VET tobacco quitline is a free* program that provides ongoing, individualized support and confidential, one-on-one counseling, Call 1-855-QUIT-VET (1-855-784-8838) to get started.

*Standard telephone rates apply



Tobacco Cessation Quitlines

- Free evidence-based support to quit tobacco
- Support offered:
 - A customized quit plan
 - Counseling
 - Motivation and problem-solving advice
 - Educational materials
 - Referral to local resources or health plan benefits
 - Information about cessation medications



Tobacco Cessation Quitlines

Who can receive support...

- Pregnant tobacco users?
- Vapers/e-cigarette users?
- Smokeless tobacco users?

Yes, but tailored support may vary!

- Various states of readiness to quit?
- Relapse prevention support?

It depends!



NAQuitline.Org

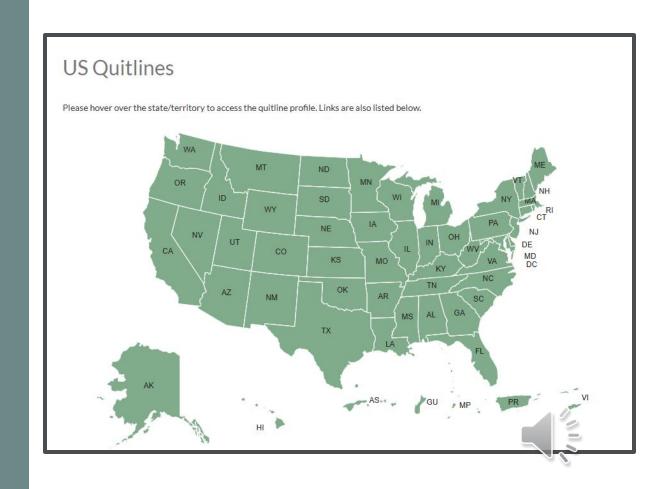
- Promotes evidence-based quitline services across diverse communities in North America
- Members include organizations and individuals that provide quitline services, fund quitlines, conduct research around quitline-related topics, and work in other areas of tobacco control



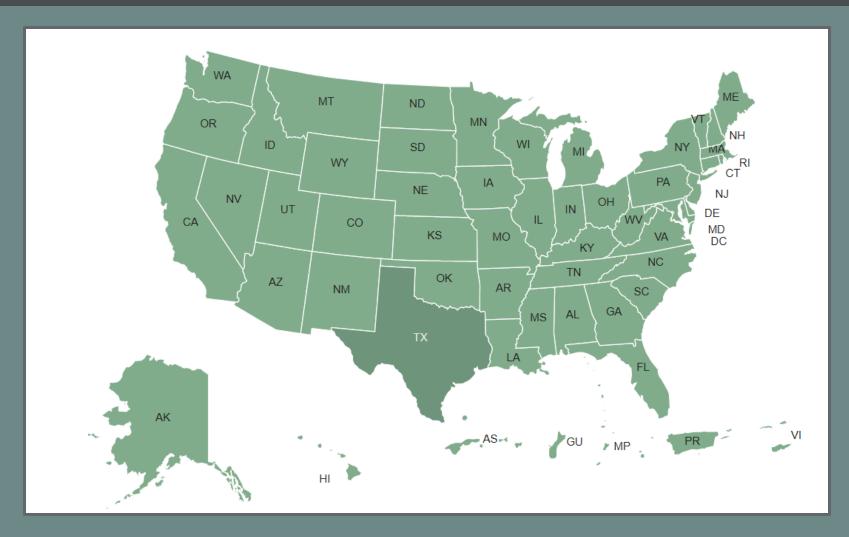


NAQuitline.Org/Page/QuitlineProfiles

- Hours of operation
- Telephone numbers
- Supported languages
- Services offered
- Eligibility criteria
- Specialized materials
- Specialized protocols
- Provider referral program

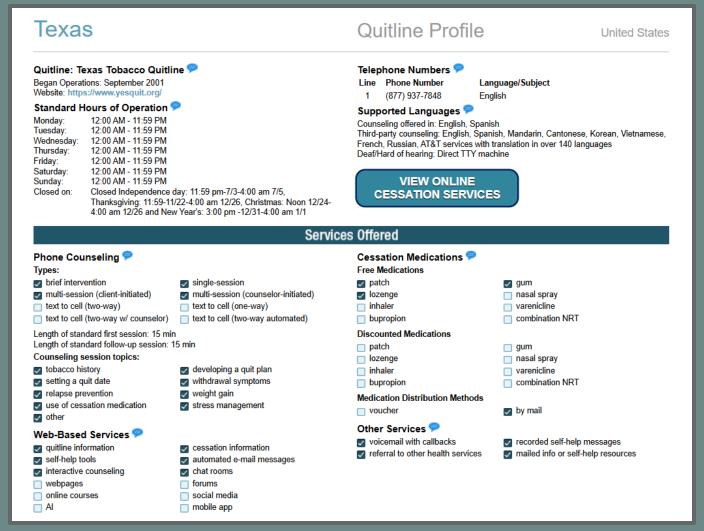


NAQuitline.Org/Page/QuitlineProfiles





Texas Quitline Profile





Texas Quitline Profile

Eligibility Criteria		Specialized Materials		
To receive counseling: To receive medication:	13 years of age or older; Texas resident; Readiness to quit Participants, a minimum of 18 years, who: self identify as: pregnant, diagnosed with a mental health disorder, diagnosed with a chronic tobacco-related health condition, are uninsured, referred from a health care provider or a resident of a county served by a DSHS-funded tobacco control coalition	Specialized Materials ✓ youth, under 18 older tobacco users, 55+ ✓ pregnant tobacco users ✓ racial/ethnic populations ✓ chronic health conditions low literacy mental health disorders includes		
Specialized Protocols		Cost-Sharing Partnerships		
Specialized Protocols pregnant tobacco users youth, under 18	behavioral health	Cost-Sharing Partnershi Medicaid state as employer commercial insurer	ps >>	
	Provider Ref	ferral Program		
Fax or electronic referral progeneral progen	atients: atient	Referred patients contacted with Other services available to reversely quitline and/or referral broch customized referral/consent patient progress reports customized provider feedbackstaff training quitline/referral program new Referral program contact:	ferring providers: 🤛 nures forms ck reports	



Tobacco Cessation Quitlines: Effectiveness

- Quitline counseling increased quit rates by about 60% (compared to minimal counseling, no counseling, or self-help)
- Quitline counseling + FDA-approved medication increased quit rates by
 30% (compared to medication alone)
- Other work suggests there may be a more modest effect, but still a clear benefit



Tobacco Cessation Quitlines: Benefits

Potential for wide reach

Virtual support

Addresses disparities

Removes barriers



Workplace Intervention Implementation



Why?

- Provider interventions ~3 minutes are impactful
- Enhance patient motivation and increase likelihood of future quit attempts
- Increase satisfaction with care
- Cost-effective
- 50% of long-term smokers will die from a smoking-related disease





The Basics for **Every Healthcare Encounter**

Ask about tobacco use

Current: Do you use any tobacco or electronic nicotine delivery products, even once in awhile?



Advise to Quit & Assess Interest in Quitting



Ready to Quit



Not Ready to Quit



Former: Have you ever used tobacco or electronic nicotine delivery products?



Former User



Why Every Healthcare Encounter?

Capture patients at varying levels of motivation



 Provide consistent messaging about the importance of quitting



- Address tobacco use in high-impact settings:
 - Pulmonary and cardiology clinics
 - Lung nodule programs
 - Community health clinics
 - Dental offices
 - Rural health clinics
 - Behavioral healthcare settings
 - LGBTQ+ healthcare and community centers





5A's: For Tobacco Users Willing to Quit

<u>A</u>sk

Identify and document tobacco use status for every patient at every visit

<u>A</u>dvise

In a clear, strong, and personalized manner, urge every tobacco user to quit

<u>A</u>ssess

Is the tobacco user ready to make a quit attempt currently?

<u>A</u>ssist

Provide or connect to counseling and pharmacotherapy

<u>A</u>rrange

Schedule a follow-up preferably within the first week after the quit date



Quitline Connection: From Refer to Connect

Ask

Ask

Advise

Advise

Refer

Quit card

Connect

Fax, online, e-referral, app



Ask-Advise-Connect: Effectiveness

Study 1

Family Practice Clinics

Study 2

Safety-Net Clinics

Enrollment Rates

Refer

0.6%

Connect

7.8%

Refer

0.5%

Connect

14.7%

Quitline Connection: E-Referral and Warm Handoffs



Connect: Fax referrals, E-Referral, Online system, App

- Gold standard: E-Referral
 - Through the Electronic Health or Medical Record
 - Can increase referrals 3-6 X versus fax
 - Closed loop process where healthcare providers can see patient progress reports
 - Reminds providers to follow up with patient on quit attempt



- Provider connects patient to quitline during the visit
- Proactive counseling promotes social support
- Facilitates patient engagement



e-Tobacco Protocol: Texas Quitline Connection

Texas Healthcare Systems—Free Technical Assistance



Exploration & Training

- · Host informational conference call with decision makers
- Workflow planning
- · Training for healthcare professionals and Community Health Workers
- · Continued maintenance support after integration

Contact:

uttobacco@utexas.edu



Quitline Referral

- Technical support to assist with implementing the electronic tobacco referral through the EMR
- \$4000 mini grant opportunities during testing phase*
- · Share monthly report for referrals made from Quitline

*Based on funding



Patient Material

- · Handout for patients on what to expect after a referral is made
- Various tobacco prevention handouts



5R's: For Tobacco Users Not Ready to Quit

Relevance

Encourage the patient to indicate why quitting is personally relevant

Risks

Ask the patient to identify potential negative consequences of tobacco use

Rewards

Ask the patient to identify potential benefits of stopping tobacco use

Roadblocks

Ask the patient to identify barriers or impediments to quitting

Repetition

Repeat at each interaction and reassure patient that most people need multiple attempts before succeeding



Relapse Prevention: Former Tobacco Users





Relapse to Tobacco use

Lapse vs. relapse

Return to tobacco use after a quit attempt

Can occur at any time



Proactive Relapse Prevention



Start at the beginning of treatment



Create a plan



Determine strategies



Share resources

Counseling session topics:

- tobacco history
- setting a quit date
- relapse prevention
- use of cessation medication
- other

- developing a quit plan
- withdrawal symptoms
- weight gain
- stress management



Strategies for Relapse Prevention

Skills approach

Alternative behavioral interventions

Extending duration of initial cessation treatment

Pharmacological intervention

Quitting smoking is a challenge. Less than one out of every 10 people who try to quit will be successful.

Returning to smoking after quitting is called relapsing. The good news is that there are ways to prevent and recover from relapse.

Plan for relapse, even before you try to quit.

Get a quit smoking plan from your doctor:

- The best way to stop smoking is with medication and counseling.
- Medications such as varenicline, bupropion and nicotine replacement therapy are effective at helping people guit smoking.
- Using some medications for a longer period of time may prevent relapse.

Plan for situations that might place you at high risk of relapse, such as:

- Drinking alcohol or being around others drinking alcohol
- Stressful situations like work, interpersonal conflict and financial stress
- Places where you used to smoke
- · People who smoke or who you used to smoke with
- Weight gain

Use one of these strategies to help you cope when you feel like smoking:

- Leave the situation
- · Take a few deep breaths
- Count to 10
- Chew gum
- · Eat something, like candy or a meal
- · Go for a walk
- Call someone who supports your guit smoking plan
- Exercise
- Do something you enjoy, like fishing, painting or crafts
- Listen to music
- · Watch TV or a movie
- Read a book

You can also use your thoughts to help prevent a relapse:

- Tell yourself that you can succeed
- · Remember why you chose to quit
- Remind yourself of the progress you've made so far
- Picture the life you want to live smoke-free
- Remind yourself that cravings typically only last 3–20 minutes
- Remember that cravings will decrease over time if you stay smoke-free

Relapse is not failure.

If you do smoke a cigarette, be kind to yourself:

- Think of that cigarette as a slip that you can change
- · Learn from the experience:
- Identify factors that led to smoking the cigarette
- Make a plan for what you can do differently next time
- · Try again:
 - Consider talking to your doctor about how you can get back on track

Reduce your risk of lung cancer.

Quit smoking today. Smoking cigarettes is the number one risk factor for lung cancer.

The best way to quit is by using medication and counseling.

- Call 1-800-784-8669 or tex. 0 JIT >> 47848.
- Talk to your doctor about treatment options.
- Visit <u>SmokeFree.gov</u> for more information.
- · You can find additional resources here: Lung.org.

Relapse Prevention: Quitline Referral

Check Your Quitline Profile

Provider Referral Program



Tobacco users can be referred if they: 🤛



- are thinking about quitting
- indicate a readiness to quit within 30 days
- are ready to make a quit attempt
- are quit and seek help to stay quit



Next Steps

IN THE US

smoking cigarettes accounts for

90% of lung cancer

diagnoses



80-90%

of lung cancer deaths

LEARN MORE

about lung cancer screening

How to determine patients' eligibility

How to deliver counseling and shared decision making

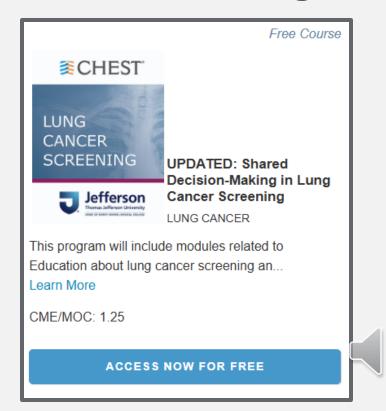
2. American College of Chest Physicians. Shared decision-making in lung cancer screening. Glenview, Illinois. [Accessed: February 3, 2025].

Lung Cancer Screening Education

LungScreenEducation.Org



CHESTNet.Org



Thank you!

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