

# WELCOME

## Addiction Medicine ECHO Clinic



The session will begin promptly at 12 pm.



Please mute the audio on your device.



Sessions take place Thursday on the 2<sup>cd</sup> and 4<sup>th</sup> week of the month.



Please connect your camera.

Need technical assistance? Call [907.729.2622](tel:907.729.2622) or text your phone number into the chat.



# Recording

We will record the **didactic portion** of every session. After the session, the didactic portion of this clinic will be available on the ANTHC Addiction Medicine ECHO page.

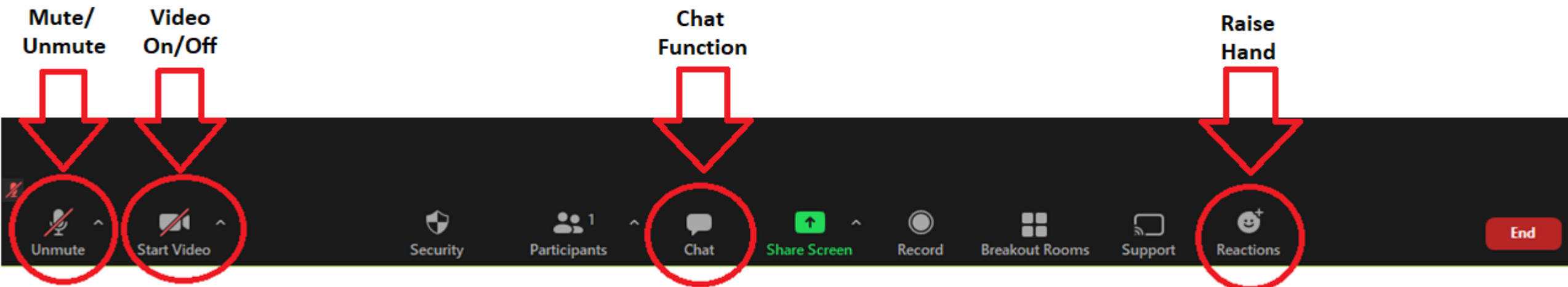
**By participating in this clinic you are consenting to be recorded.**

If you do not wish to be recorded, please email [behavioralhealth@anthc.org](mailto:behavioralhealth@anthc.org) at least one week prior to the ECHO Clinic you plan to attend.

# Some Helpful Tips

- ▶ Please mute microphone when not speaking
- ▶ Use chat function
- ▶ Position webcam effectively
- ▶ Test both audio & video

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# ANTHC Clinical ECHO Series

## Approved Provider Statements:



JOINTLY ACCREDITED PROVIDER™  
INTERPROFESSIONAL CONTINUING EDUCATION

In support of improving patient care, Alaska Native Medical Center (ANMC) is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

## Contact Hours:

ANMC designates this activity for a maximum of 25 contact hours, including 12 total pharmacotherapeutics contact hours, commensurate with participation.

## Financial Disclosures:

None of the presenters and planners for this educational activity have any relevant relationship(s) to disclose with ineligible companies whose primary business is producing, marketing, selling, re-selling, or distributing healthcare products used by or on patients.

Approved for 1 CHAP CE

## Conflict of Interest Disclosures:

None of the presenters and planners for this educational activity have any relevant relationship(s) to disclose with ineligible companies whose primary business is producing, marketing, selling, re-selling, or distributing healthcare products used by or on patients.

## Requirements for Successful Completion:

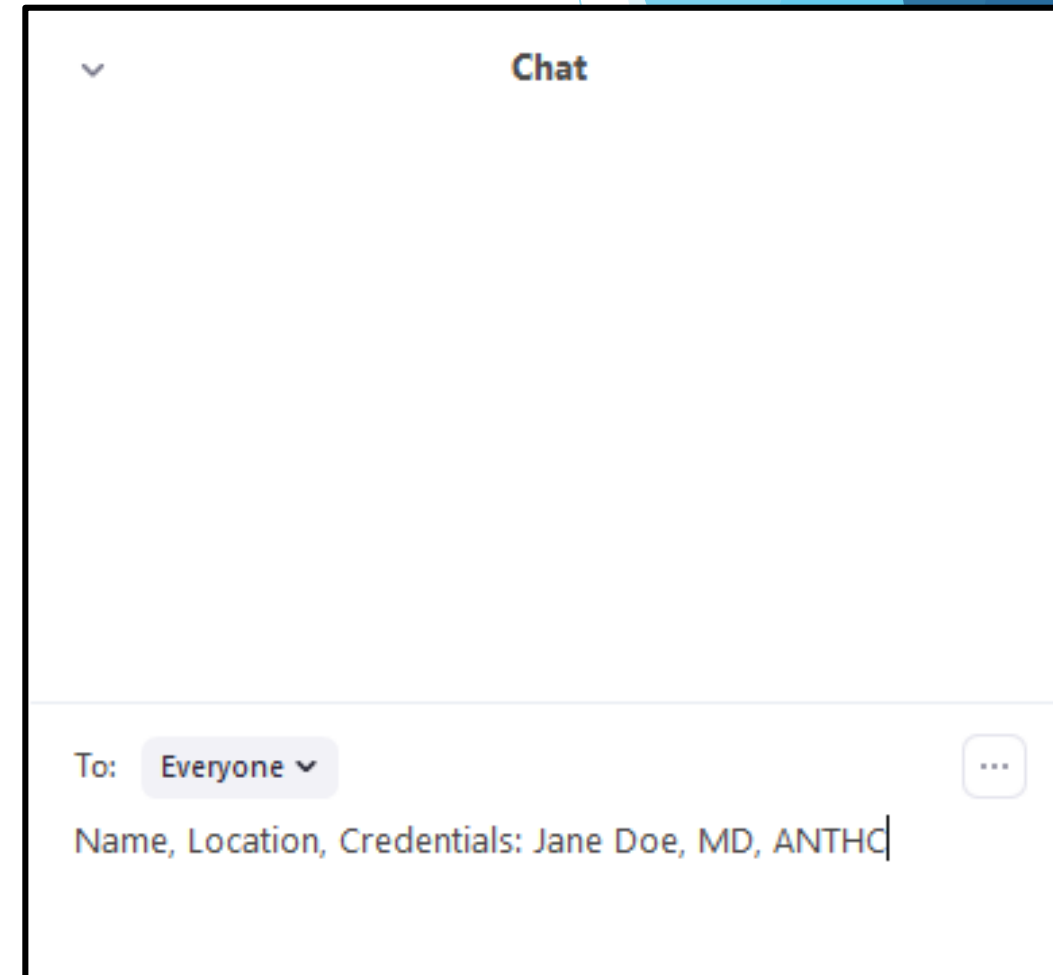
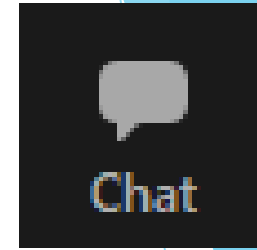
To receive CE credit be sure you are included in attendance record as directed by the facilitator/session moderator, and complete the course evaluation or post session survey via this link: <https://forms.gle/QhwCeGTf4zLNwpBX7>

For more information contact Jennifer Fielder at [jfielder@anthc.org](mailto:jfielder@anthc.org) or (907) 729-1387

# Introductions

## Addiction Medicine ECHO

- Please introduce yourself in the chat :
  - Name
  - Location
  - Profession/Credentials
  - *Note:* The chat will be saved as our attendance record for continuing education credits.



# Tobacco Cessation Medication Management

Sarah Spencer DO, FASAM

ANTHC Addiction Medicine ECHO

23 Feb 2023



# Conflict of Interest Disclosure

- ▶ I have no financial conflicts of interest to disclose

# Objectives

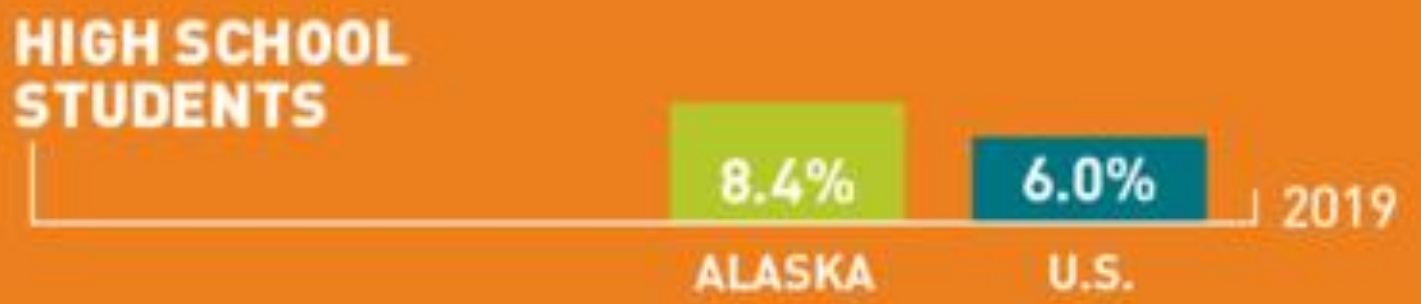
- ▶ Participants will broaden their understanding of the natural history of tobacco use disorder
- ▶ Participants will understand the science and evidence base behind medication for addiction treatment (MAT) for TUD with a focus on the recent changes to evidence based treatment in the past two years.
- ▶ Participants will demonstrate knowledge of FDA-approved medications for tobacco use disorder (TUD).





# CIGARETTE USE

among adults and high school students



A close-up photograph of a person's hand holding a lit cigarette. The hand is positioned on the left side of the frame, and the cigarette is held between the fingers. A thick plume of white smoke rises from the cigarette, filling the right side of the image. The background is dark and out of focus.

# INDIGENOUS POPULATIONS AND COMMERCIAL TOBACCO USE

American Indians/Alaska Natives smoke at a higher percentage than all other racial/ethnic groups in the U.S.

Indigenous populations smoke at a rate 1.5 times the national average.

Six of the 10 leading causes of deaths for American Indian/Alaska Native populations are linked to smoking.

American Indian/Alaska Native children are diagnosed with asthma at a rate 20 percent higher than other ethnic groups.

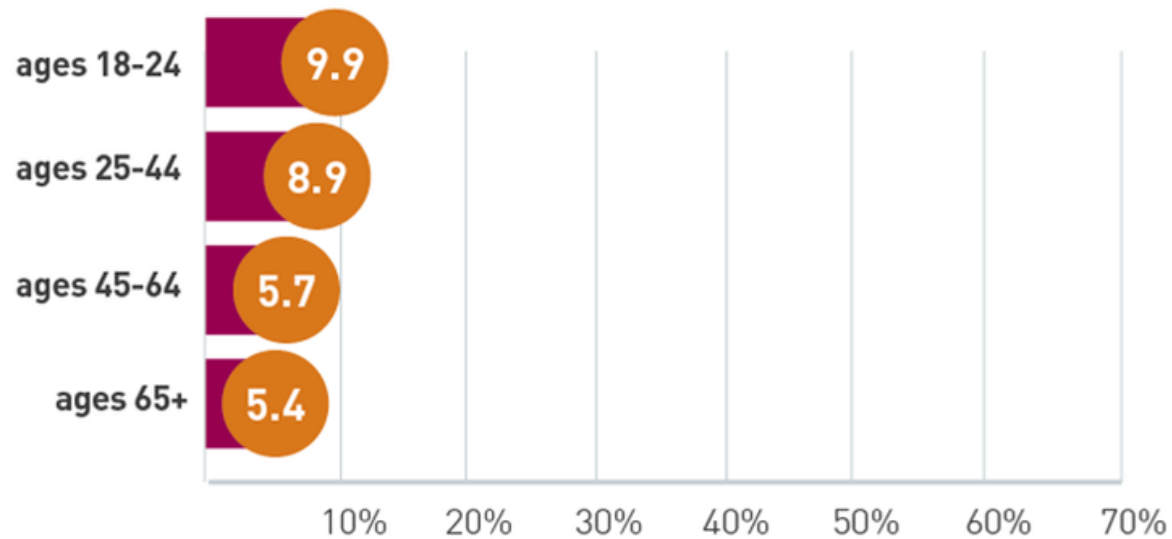
(\*Centers for Disease Control and Prevention & Keep It Sacred)

# Smokers who **made quit attempts** in the past year

## Smokers who made quit attempts in the past year:



## Smokers who successfully quit in the past year:





# Disparities Persist



## Race/Ethnicity

27.1% American Indian/ Alaska Native  
14.4% Black, NH  
13.3% White, NH  
8.0% Hispanic  
8.0% Asian, NH



## Education Level

32.0% GED  
3.5% Graduate degree



## Annual Household Income

20.2% <\$35,000  
6.2% ≥\$100,000



## Health Insurance Coverage

21.2% Uninsured 9.2% Private  
22.7% Medicaid 10.2% Medicare



## Disability/limitation

19.8% Yes  
11.8% No



## Sexual orientation

16.1% Lesbian/ Gay/ Bisexual  
12.3% Heterosexual



## Regularly Had Feelings of Anxiety

21.4% Yes  
11.1% No

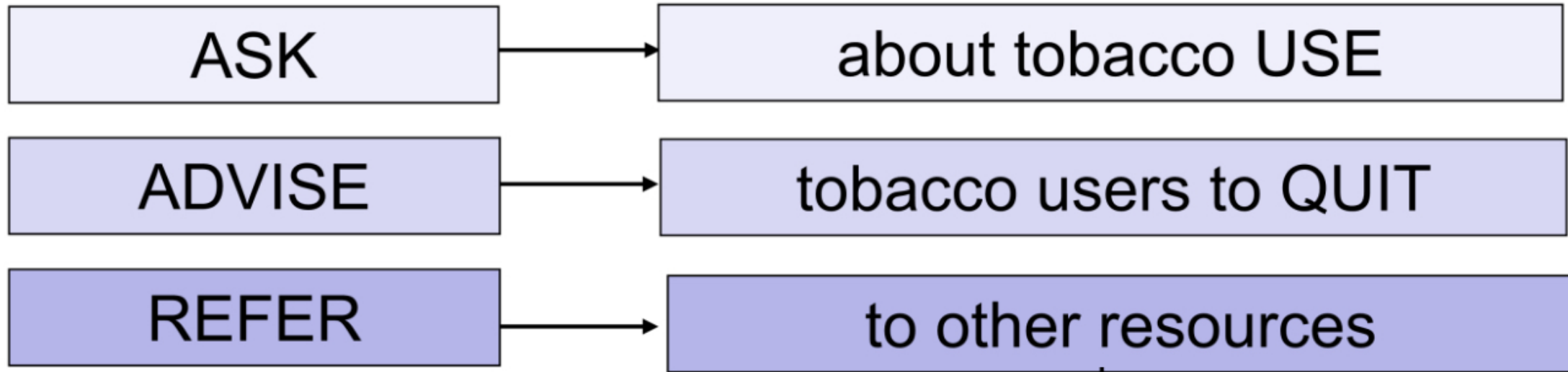


## Rural/Urban

19.0% Rural  
11.4% Urban



## BRIEF COUNSELING: ASK, ADVISE, REFER



Patient receives assistance from other resources, with follow-up counseling arranged

ASSIST

ARRANGE

# STRATEGIES FOR SMOKING CESSATION



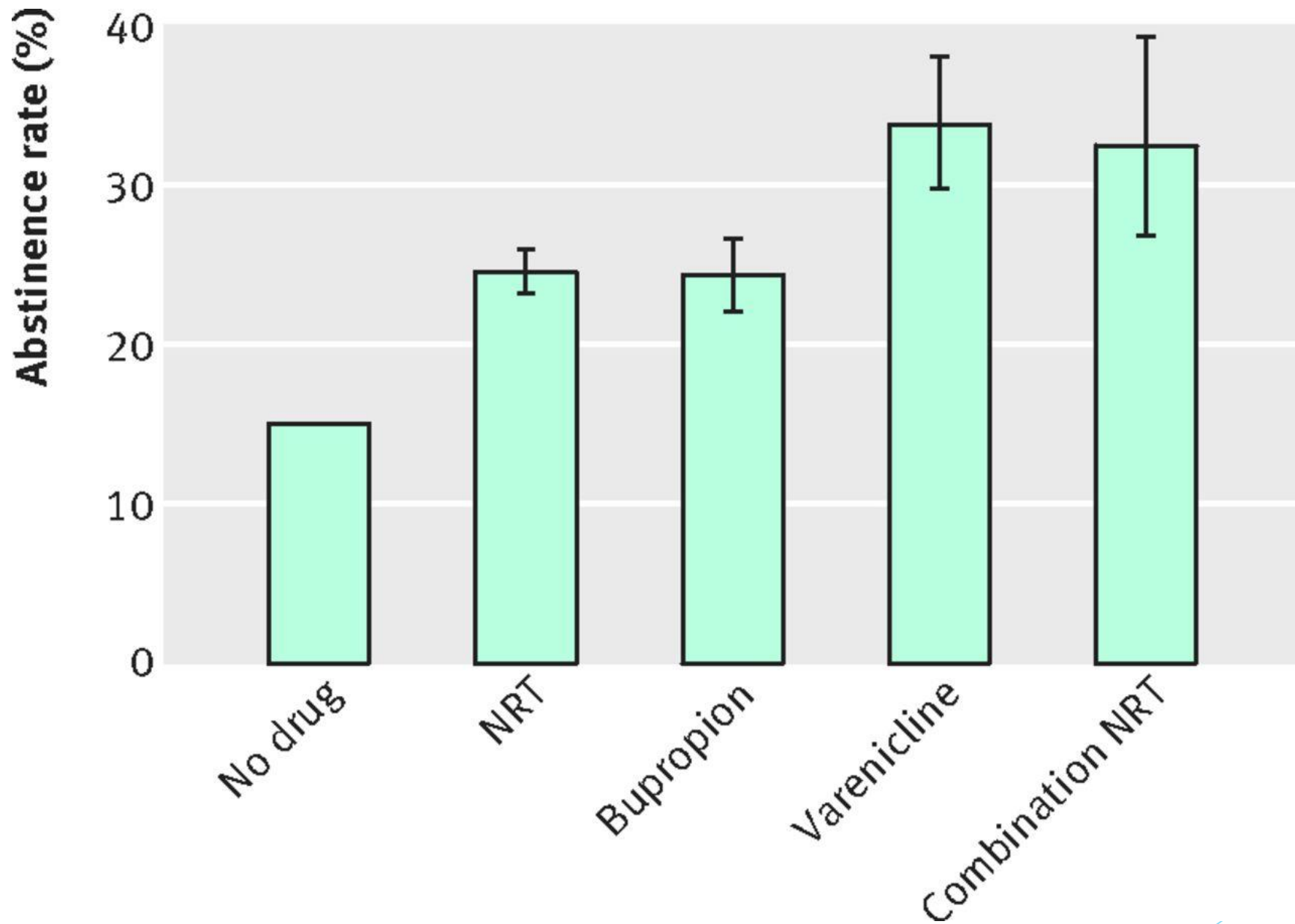
## Nicotine Replacement Therapy (NRT)

LONG ACTING NRT	SHORT ACTING NRTs. Combine with nicotine patch for best effect		
<p><b>Patch</b></p> <p>Wear for 24 hours at a time. Alternate sites to minimize skin irritation.</p> <p><b>Dose:</b> If &lt;10 cig/d, start with 14 mg/d If &gt;10 cig/d, start with 21 mg/d</p> <p>Taper down with a regimen that is easiest for the patient</p> <p><b>Side Effects:</b> vivid dreams, contact dermatitis</p>	<p><b>Mini Lozenge</b></p> <p>Allow to slowly dissolve. Do not chew or swallow lozenge.</p> <p><b>Dose:</b> 2mg/hr for patients who smoke their first cig &gt;30 mins after awakening 4 mg/hr for patients who smoke their first cig &lt;30 mins after awakening</p> <p><b>Frequency:</b> Every 1-2 hours. Try not to wait for cravings.</p>	<p><b>Gum</b></p> <p>Chew minimally, "park" between teeth and cheek. Rechew when tingling is gone and rotate sites. Avoid use with acidic foods.</p> <p><b>Dose:</b> 2mg/hr for patients who smoke their 1st cig &gt;30 mins after awakening 4 mg/hr for patients who smoke their 1st cig &lt;30 mins after awakening</p> <p><b>Frequency:</b> Every 1-2 hours. Try not to wait for cravings.</p> <p><b>Side Effects:</b> GI irritation when chewed</p>	<p><b>Nasal Spray</b></p> <p>Can be used once to each nostril every 1-2 hours.</p> <p><b>Side Effects:</b> can cause nostril irritation</p> <p><b>Inhaler</b></p> <p>Take short puffs but keep air in mouth. Do not inhale.</p>

## Non-nicotine Replacement Therapy

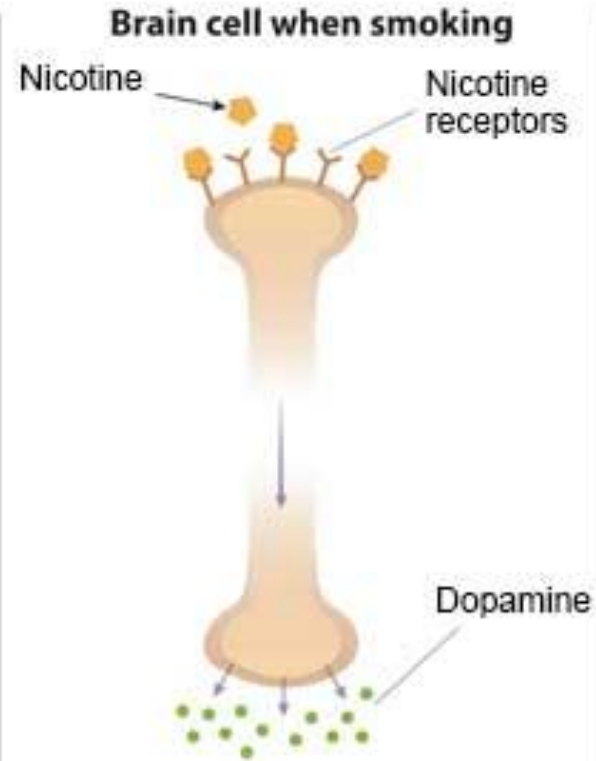
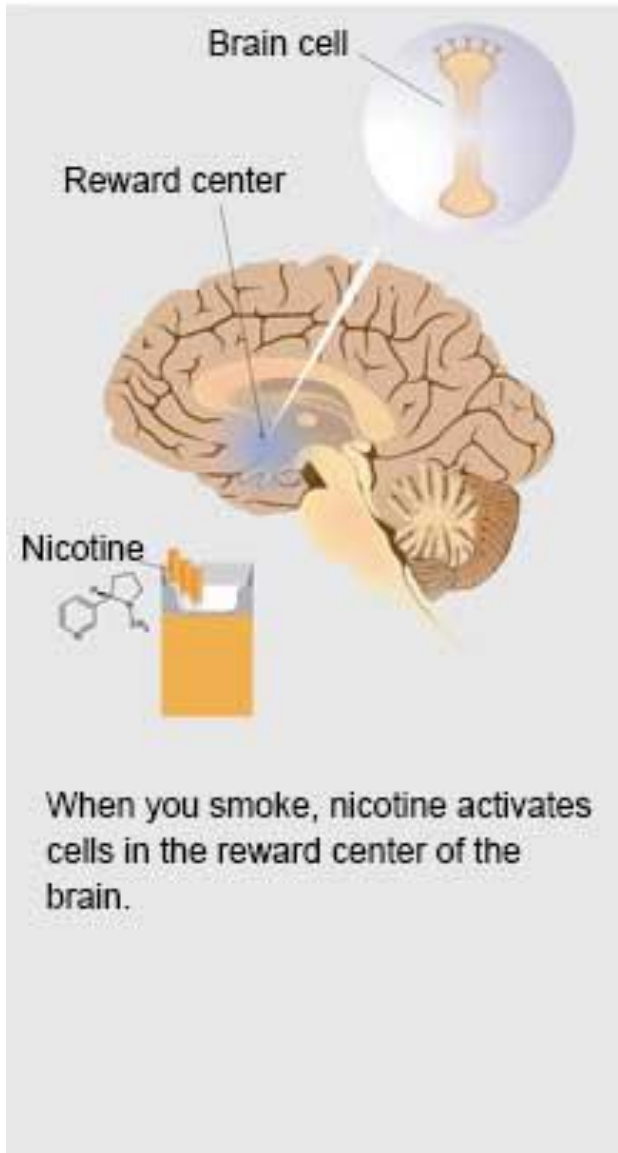
<p><b>Varenicline (Chantix)</b></p> <p>Nicotinic receptor partial agonist designed to decrease cravings, reduce withdrawal, and dampen nicotine-induced reward pathway.</p> <p><b>Dose:</b> Take one week before quit date 0.5mg daily x 3d, 0.5mg BID x 3d Then 1mg daily for 3-6 months</p> <p><b>Side Effects:</b> nausea, vivid dreams</p>	<p><b>Bupropion (Wellbutrin)</b></p> <p>Nicotinic receptor antagonist and norepinephrine &amp; dopamine reuptake inhibitor. Designed to reduce cravings and withdrawal.</p> <p><b>Dose:</b> Take one week before quit date 150mg tablet once daily x 3 days. Then 150mg tablet twice daily for 3-6 months</p> <p><b>Side Effects:</b> lowers seizure threshold, insomnia, dry mouth</p>	<p><b>Electronic Cigarettes</b></p> <p>Reserve use until after FDA-approved treatments have failed.</p> <p>Patients should avoid using traditional cigarettes with e-cigs (to minimize adding known harms to unknown harms).</p> <p>Before prescribing e-cigs, discuss a plan for duration of use and when to stop.</p>
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<https://www.coreimpodcast.com/2019/09/18/5-pearls-on-smoking-cessation/#:~:text=Five%20nicotine%20replacement%20therapies%20are,include%20nausea%20and%20vivid%20dreams.>



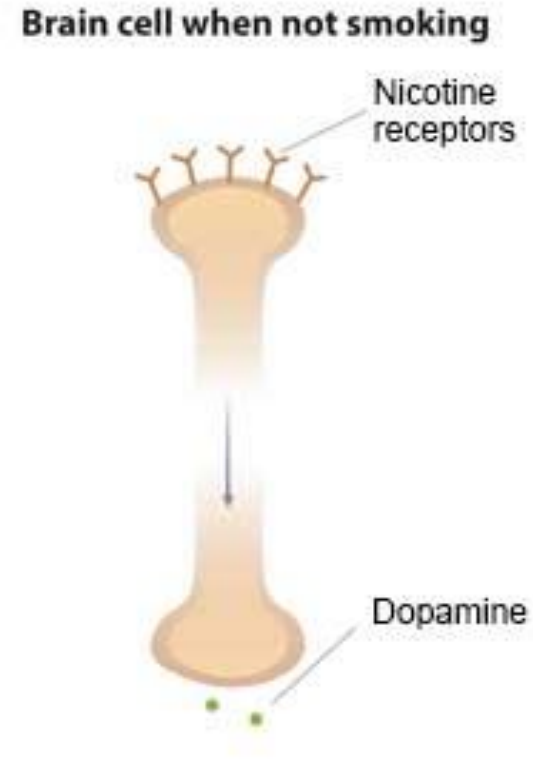


# How Varenicline Can Help You Quit Smoking



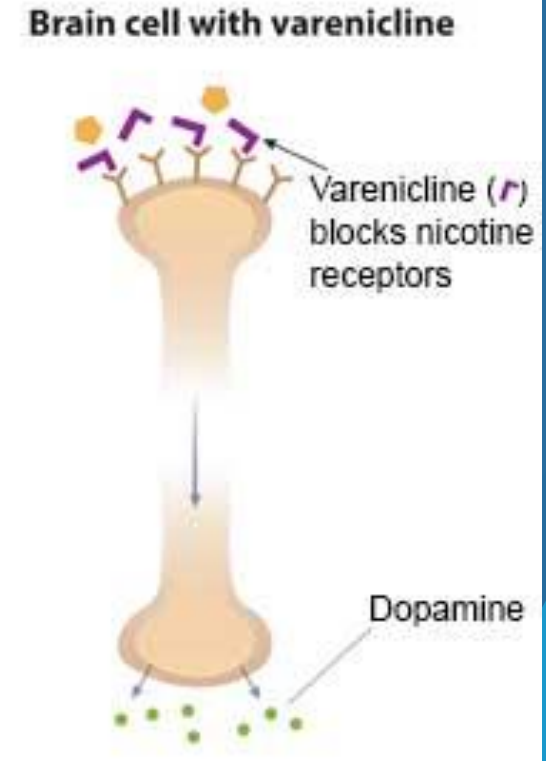
Nicotine attaches to brain cell receptors.

This causes dopamine to release, making you feel good.



When you quit smoking, there is no nicotine attaching to the receptors.

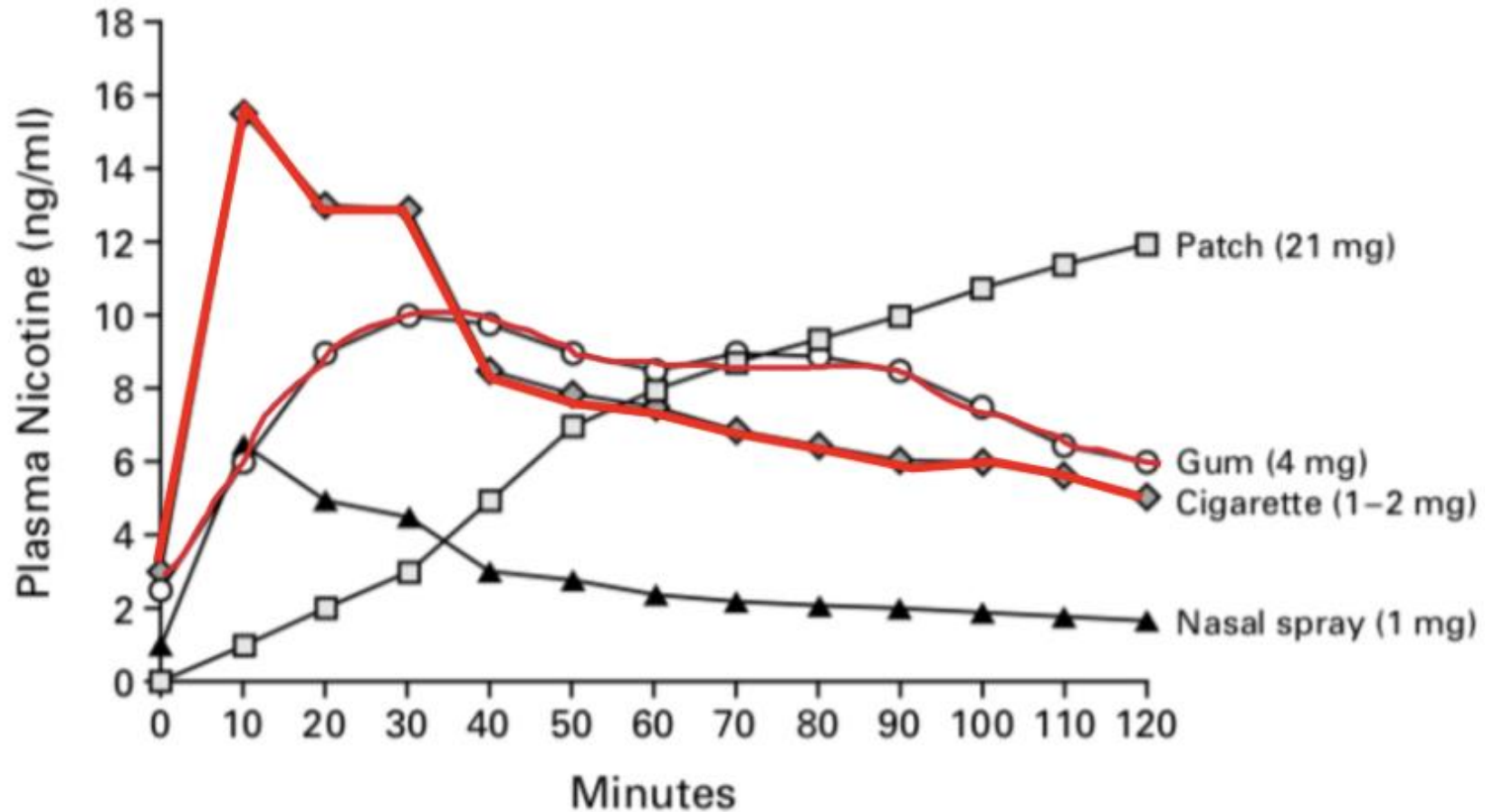
Less dopamine is released, which can cause withdrawal symptoms and cravings.



If you use varenicline to quit smoking, it blocks the nicotine receptors.

But varenicline still triggers some dopamine release, so you don't feel as bad.





**Figure 2.** Plasma Nicotine Levels after a Smoker Has Smoked a Cigarette, Received Nicotine Nasal Spray, Begun Chewing Nicotine Gum, or Applied a Nicotine Patch.

The amount of nicotine in each product is given in parentheses. The pattern produced by the use of the nicotine inhaler (not shown) is similar to that for nicotine gum. Modified from Garrett et al.<sup>12</sup>

# Approach to Pharmacotherapy in **SMOKING CESSATION**

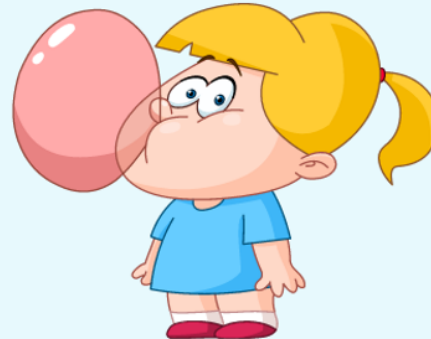
**THE CURB  
SIDERS  
INTERNAL  
MEDICINE**

## **LONG-ACTING MEDICATION**



- Patients should be prescribed **at least 1 long-acting, “controller” medication as a first line therapy.**
- Notably they **can be used in combination** (e.g.: varenicline and nicotine patch).

## **SHORT-ACTING MEDICATION**



- After selecting a long-acting medication, the addition of **short-acting nicotine replacement** can be added to **help control cravings.**

<https://thecurbsiders.com/podcast/252>

# LONG-ACTING MEDICATION



## Varenicline

- Initiate varenicline at 0.5mg daily.
  - **Titrate dose up to 1mg BID over period of 1 week** (FDA-Varenicline Dosing, 2016).
- Most patients require treatment for 1 year or more.
- **Not contraindicated in persons with well controlled psychiatric diagnoses.**

## Nicotine Replacement Patches

- (Baura, 2018)
  - $\geq 10$  cigarettes/day = 21mcg patch
  - $< 10$  cigarettes/day = 14mcg patch
  - $> 1$  pack/day = 21mcg patch x2
- Expert Opinion: Some patients may require NRT for over a year, some may need it for life.



## Bupropion

- In clinical trials, **varenicline is superior to bupropion** for smoking cessation (Nides, 2008).
- However, bupropion may be considered in patients concerned with **weight gain**, and/or have **coexisting depression**.

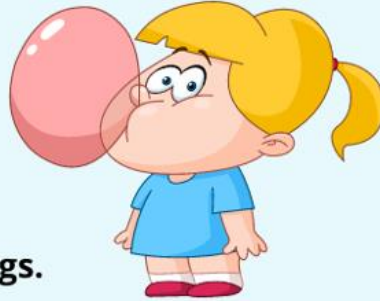


*Note: Do not stop any of these medications if patient is still smoking, instead increase dose or add additional treatment.*

# SHORT-ACTING MEDICATION

## Nicotine Gum

- (Baura, 2018)
  - time to 1st cigarette upon waking <30mins
    - 4mg nicotine gum
  - time to 1st cigarette upon waking >30mins
    - 2mg nicotine gum
- **Most patients will require 4mg to control cravings.**
- Peak nicotine levels within 1hr (Houezec, 2003).



## Intranasal Spray

- Intranasal spray **delivers nicotine the fastest** (peak levels in 15 mins), but often **poorly tolerated** due to side effects such as **nasal and throat burning** (Houezec, 2003).



## Inhalers



## Lozenges





# Using Combination NRT

How to use two NRTs together:

- Put on a new patch each morning to get a steady level of nicotine that will reduce your cravings and withdrawal symptoms throughout the day.
- Use a fast-acting nicotine medicine like lozenges or gum to quickly combat cravings.
- You can control how often you use the fast-acting medicine, so you won't get more nicotine than you want.
- This combination is easy to use. Using two NRTs together can help you quit more successfully than using a single medicine.



# Nicotine Gum

- ▶ Proper chewing of gum is important for optimal results. "Chew and park" is recommended: chew the gum until the nicotine taste appears, then "park" the gum against the buccal mucosa until the taste disappears, then chew a few more times to release more nicotine. Repeat this for 30 minutes, then discard the gum (because all nicotine in the gum has been released).
- ▶ In addition, gastric and esophageal irritation can occur if the gum is chewed too rapidly, because nicotine is released faster than it can be absorbed by the buccal mucosa and the nicotine is thus swallowed. Nicotine absorbed from the gastrointestinal tract is largely metabolized by the liver and is therefore relatively ineffective for smoking cessation.

# Intolerance of Side Effects

- ▶ Before discontinuing the medication due to a non-serious side effect, we suggest lowering the dose, since all three first-line medications (varenicline, NRT, and bupropion) can be effective at lower doses.
- ▶ For example, unpleasant dreams or insomnia can be ameliorated by removing the nicotine patch at bedtime or by eliminating the evening dose of varenicline.

# Second-line Medications

- ▶ Nortriptyline - Nortriptyline, a tricyclic antidepressant, is a second-line therapy that has shown moderate efficacy in aiding smoking cessation for individuals who cannot use a first-line agent or who need an adjunct to first-line therapy. In a meta-analysis of six trials and almost 100 patients, it increased the likelihood of abstinence compared with placebo (risk ratio [RR] 2.03, 95% CI 1.48-2.78). However, patients receiving nortriptyline were more likely to report side effects including dry mouth and sedation.
- ▶ Cytisine - Cytisine is a plant derivative that, like varenicline, is a partial agonist at the alpha-4 beta-2 nicotinic acetylcholine receptor. Cytisine appears to be a reasonable option for smoking cessation where available and may offer a low-cost pharmacologic alternative to therapies such as varenicline. It has been used for smoking cessation in Eastern Europe for decades and is not available in the United States or Western Europe.



# Length of Pharmacotherapy

- ▶ Ideally, we continue pharmacotherapy for at least three months and until patients feel confident that they will not relapse. Individuals who have successfully quit at 12 weeks may benefit from continuing on treatment for an additional 12 weeks, or even longer, to prevent relapse. Mixed evidence from a 2019 meta-analysis indicates that **continued pharmacotherapy (for up to 18 months) might help prevent relapse**. In the United States, most insurance companies do not cover smoking cessation medications after three months of pharmacotherapy, although increasingly they are extending coverage to six months

## CLINICAL CASE 2

NS is a 55 yo male with spinal cord injury, chronic leg ulcers with poor wound healing, opiate dependence on buprenorphine, currently smoking. In the past year, has reduced smoking from 10 to 2 CPD, but resistant to quitting completely: he says “I’m basically not smoking anymore” and “I’ve already tried everything.”

Today, mentions he has started using an “electric cigarette”

How do you respond?

- a. Great! Millions of people have quit smoking using e-cigarettes and you can too!
- b. E-cigarettes are just as dangerous as cigarettes. Don’t use it!
- c. Have we talked about the Quitline?
- d. What’s an electric cigarette?



## Electronic cigarettes for smoking cessation

✉ Jamie Hartmann-Boyce, Hayden McRobbie, Ailsa R Butler, Nicola Lindson, Chris Bullen, Rachna Begh, Annika Theodoulou, Caitlin Notley, Nancy A Rigotti, Tari Turner, Thomas R Fanshawe, Peter Hajek Authors' declarations of interest

Version published: 14 September 2021 Version history

<https://doi.org/10.1002/14651858.CD010216.pub6>

- Nicotine e-cigarettes superior to NRT (moderate)
  - *3 people for every 100*
- Nicotine e-cigarettes superior to non-nicotine e-cigarettes (moderate)
- Nicotine e-cigarettes superior to behavioral/no support (low)
  - *Serious adverse events were low in short term*
  - *Included only RCTs and uncontrolled intervention trials*

AJPH RESEARCH AND ANALYSIS

## E-Cigarette Use and Adult Cigarette Smoking Cessation: A Meta-Analysis

Richard J. Wang, MD, Sudhamayi Bhadriraju, MD, and Stanton A. Glantz, PhD

<https://doi.org/10.2105/AJPH.2020.305999>

- RCTs – benefit OR 1.56 [1.17, 2.06]
- Population observational studies  
No benefit for cessation OR 0.947 [0.77, 1.16]



## E-cigarettes help smokers quit

Vaping is positively associated with quitting smoking successfully. Findings from a recent report commissioned by Public Health England, (PHE) demonstrated that e-cigarettes are the most popular aid used in quit attempts.<sup>1</sup> In 2020, 27.2% of people used a vaping product in a quit attempt in the previous 12 months, compared with 15.5% who used NRT over the counter or on prescription (2.7%) and 4.4% who used varenicline.<sup>1</sup> In 2020, more than half (64%) of the e-cigarette users in Great Britain were ex-smokers. Among all ex-smokers, nearly one in ten (9.5%) regularly used e-cigarettes. It is abundantly clear that e-cigarettes have played, and continue to play, an important role in helping people quit smoking and stay smokefree.<sup>15</sup>

# Vaping is far safer than smoking

- ▶ Vaping an e-cigarette is much less harmful than smoking a tobacco cigarette because tobacco smoke is not inhaled. Most of the toxins in tobacco smoke are not found in the vapour of e-cigarettes and those that are present are at much lower levels - mostly below 1%.
- ▶ The active ingredient of e-cigarettes is nicotine. Nicotine, when inhaled in smoke, is a highly addictive drug, which absorbs the time, money and attention of its users.<sup>9</sup> But long-term use of nicotine consumed through NRT has not been found to increase the risk of serious health problems. A review of the efficacy and safety of NRT in pregnancy found that NRT increased smoking cessation rates, measured in late pregnancy, by approximately 40%.<sup>13</sup> The authors found no evidence that NRT used for smoking cessation in pregnancy has either positive or negative impacts on birth outcomes.
- ▶ There are some health risks associated with the other ingredients of e-cigarettes, but they are low compared to tobacco products. In particular:
  - ▶ Propylene glycol and glycerine, components of e-liquids, can produce toxic aldehydes if they are overheated. Fortunately overheating also creates a bad taste that puts off the user. At normal vaping temperatures, the quantity of aldehydes produced is only a small fraction of the levels inhaled by smokers.
  - ▶ Flavourings could pose a risk to health but there is currently no evidence that any flavourings used by e-cigarette manufacturers present a significant risk to their users.
  - ▶ Metals have been identified in e-cigarette vapour but at concentrations so low that their risk to health is minimal.
  - ▶ E-cigarettes are not completely safe. But compared to tobacco products, they are clearly the safer choice. For example, the lifetime cancer risk of vaping has been assessed to be under 0.5% of the risk of smoking.



# Concern Over High Nicotine Products



1 pod = 200 puffs = 1  
pack of cigarettes



1 unit = 3000 puffs = 15  
pack of cigarettes



Final Recommendation Statement

## Tobacco Smoking Cessation in Adults, Including Pregnant Persons: Interventions

January 19, 2021

“The current evidence is insufficient to assess the balance of benefits and harms of electronic cigarettes (e-cigarettes) for tobacco cessation in adults”

“The USPSTF recommends that clinicians direct patients who use tobacco to other tobacco cessation interventions with proven effectiveness and established safety.”

# Co-occurring Psychiatric Illness

- ▶ Despite concerns regarding treatment of those with concomitant mental illness with varenicline and bupropion, evidence suggests that these medications are safe in this population. As an example, in a trial including over 8000 patients with psychiatric disorders, treatment with varenicline and bupropion did not increase the risk of neuropsychiatric adverse effects compared with NRT



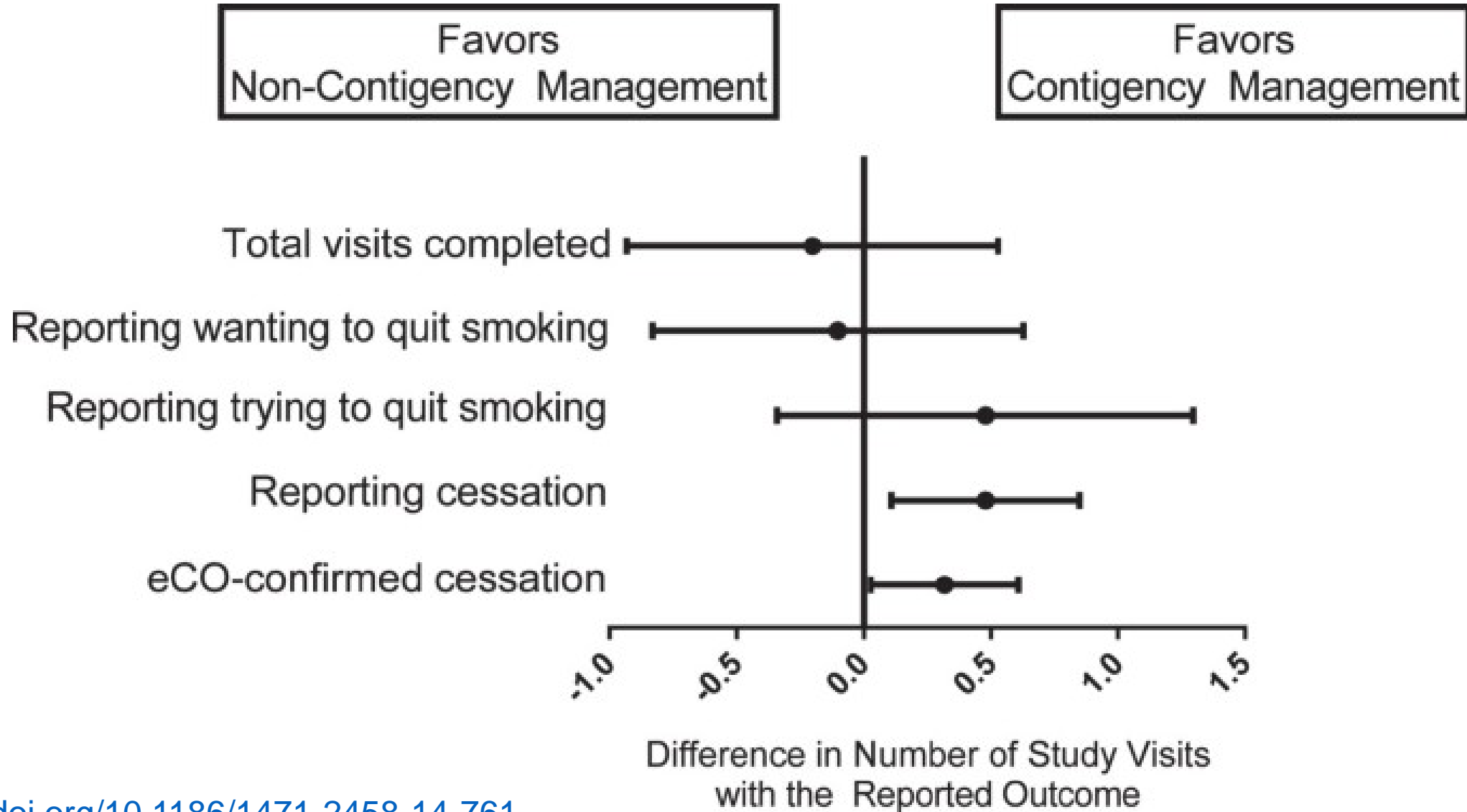
# Preoperative Management

- ▶ In the preoperative setting, there is often special urgency to stop smoking in order to reduce postoperative respiratory and infectious complications and to promote wound healing. The use of pharmacotherapy preoperatively has been found to increase smoking cessation rates and decrease postoperative complications . NRT and varenicline are suggested choices in this population;
- ▶ Despite these data, many orthopedic surgeons avoid NRT because of concern that it will impede bone healing, although there is little evidence from human studies that nicotine use impairs bone healing compared with smoking tobacco.

# Individuals Less Committed To Quitting

- ▶ For individuals who are considering quitting smoking but are not yet ready to discontinue tobacco use, we suggest offering the option of initiating pharmacotherapy, rather than waiting until they are ready to stop tobacco use.
- ▶ In a randomized trial including 1510 smokers who were not willing or able to make a quit attempt within the next month but who were willing to reduce smoking and make a quit attempt within the next three months, patients on varenicline for 24 weeks had a higher continuous abstinence rate compared with placebo during weeks 21 through 24 (37.8 versus 12.5 percent) and weeks 21 through 5.

# Contingency Management



# Follow-up

- ▶ Regardless of initial pharmacotherapy chosen, we schedule a follow-up visit (eg, telemedicine encounter, telephone call, or in-person office visit) one to two weeks after initiation of pharmacotherapy to monitor for adverse effects, reinforce adherence to medication, and provide support for smoking cessation

# Resources

# READY TO QUIT?

## THINKING ABOUT QUITTING?

No matter where you are in the process, Alaska's Tobacco Quit Line can help. Enroll by telephone, text or online.

Call Alaska's Tobacco Quit Line at 1-800-QUIT-NOW (1-800-784-8669).

Text READY to 34191 to get enrolled with Alaska's Tobacco Quit Line

 **Enroll Online**

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# INDIVIDUAL SERVICES

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This customized program is designed to fit your needs. Select some or all of the following services:



SUPPORTIVE TEXT MESSAGES

HELPFUL EMAILS

A QUIT GUIDE

A FREE STARTER KIT WITH A TWO-WEEK SUPPLY OF FREE  
PATCHES, GUM OR LOZENGE

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# Patient Care



Clinical Cessation Tools



Patient Cessation Materials



Quitlines and Other Cessation Support Resources



Clinical Education and Training



E-Cigarettes and Patient Care



Patient Care Settings and Smoking Cessation





You are here: [Home](#) / [Public Health](#) / [Chronic Disease Prevention and Health Promotion](#) / [Fresh Start](#) / Stop smoking, vaping or chewing

## Ready for change?

Alaska offers free programs for better health.

Find the program that's right for you or someone you know:

Lose weight

Lower blood sugar to manage diabetes

Lower blood pressure

Stop smoking, vaping or chewing

Be active with your children

## Stop smoking, vaping and chewing tobacco

Offered online

Offered by phone



<https://health.alaska.gov/dph/chronic/pages/freshstart/quit tobacco/>



ALASKA NATIVE  
TRIBAL HEALTH  
CONSORTIUM



## **Tobacco Prevention & Control**

(907) 729-4343

tobacco@anthc.org

<https://www.anthc.org/what-we-do/wellness/tobacco/>

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# Case Presentation

Project ECHO's goal is to protect patient privacy

- ▶ To help Project ECHO accomplish that goal, please only display or say information that doesn't identify a patient or that cannot be linked to a patient.
- ▶ **References: For a complete list of protected information under HIPAA, please visit [www.hipaa.com](http://www.hipaa.com)**

Thank you for joining us today.  
We appreciate your participation and hope  
to see you at the **NEXT ECHO Session:**  
**March 23<sup>rd</sup>, 2023 from 12pm -1 PM**

You will be receiving a follow up survey that we hope you will complete to help us improve. If you are requesting continuing education credits, you will be required to complete the survey to receive your CMEs.



