



Treating Dual Use of Cigarettes and E-cigarettes: A Quick Guide for Clinicians



About This Resource

This guide is intended to be a clinical resource for the treatment of the dual use of cigarettes and e-cigarettes*.

This guide can support professionals working across behavioral health, public health, and tobacco control systems in addressing dual use among the patients and individuals they serve. Dual refers to the regular use of both combustible cigarettes and e-cigarettes. This resource provides practical guidance to help providers and program leaders better understand, assess, and treat dual use. Research on dual use remains in its early stages, and ongoing studies may lead to changes in some of the findings presented in this report.

This guide includes:

- A definition of dual use and a summary of current use patterns
- Health implications and associated risks
- Recommendations for treatment goals based on motivation and readiness
- Evidence-based guidance on pharmacotherapy and counseling approaches
- Clinical insights on the role of e-cigarettes in smoking cessation
- An overview of current FDA regulations related to e-cigarette products

*E-cigarettes are sometimes called e-cigs, vapes, vape pens, and electronic nicotine delivery systems (ENDS).



“In the U.S., dual-use of combustible cigarettes and e-cigarettes is the most common multiple tobacco-use behavior. Some individuals try to cut back on cigarettes or work toward quitting cigarettes this way.”

- Zheng (Ashley) Xue,
Senior Associate Scientist,
American Cancer Society

About The National Center of Excellence for Tobacco-Free Recovery

This resource was developed by The National Center of Excellence for Tobacco Free Recovery, a project of Cicatelli Associates Inc. (CAI), in partnership with the Vermont Center on Behavior and Health. The National Center of Excellence for Tobacco-Free Recovery helps state public health departments and their partners reduce commercial tobacco use among people with behavioral health conditions. We strengthen organizational capacity by providing tailored technical assistance, delivering webinars on innovative and evidence-based strategies, curating high-quality resources, and convening Tobacco-Free Recovery Learning Communities to guide the development and implementation of state action plans.

This resource is supported by SAMHSA of the U.S. Department of Health and Human Services (HHS) as part of a financial assistance award 100% funded by SAMHSA/HHS. The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement, by SAMHSA/HHS, or the U.S. Government.

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Dual Use and its Health Implications

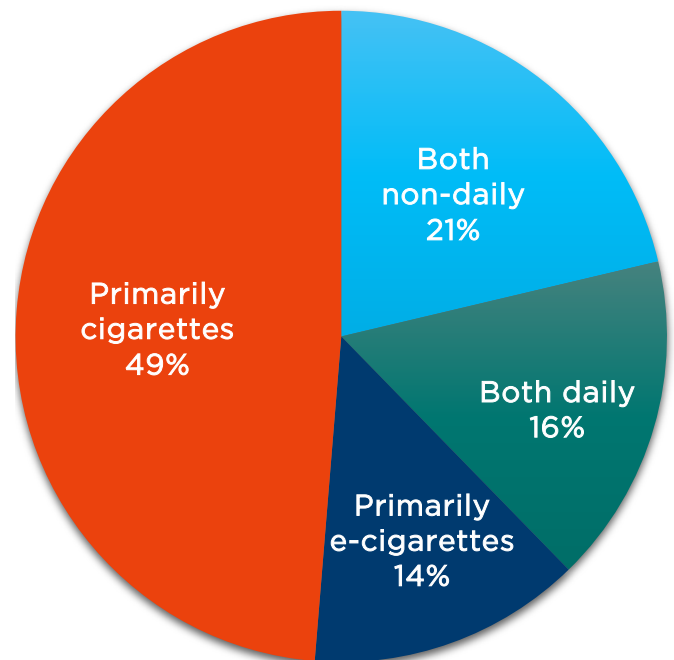
Figure 1. Patterns of dual use

What is dual use?

Dual use is a term broadly used to describe the regular use of cigarettes and e-cigarettes.¹

The most common pattern of dual use based on recent estimates is daily cigarette smoking and non-daily e-cigarette use. Although patterns vary among US adults (Figure 1),^{2,3}

Left untreated, the stability of dual use also varies. Over the course of one year, half of US adults continue dual use while 26% stop using e-cigarettes but continue smoking, 20% stop smoking cigarettes but continue vaping, and 4% stop using both products.⁴



What are the health implications of dual use?

Cigarettes are the most harmful tobacco product in the U.S.⁵

About half of all patients who continue to smoke cigarettes die prematurely from tobacco-related illness.⁶

E-cigarettes are not without risk but much less harmful than cigarettes (Figure 2).^{7,8}

Risks for EVALI (E-cigarette or Vaping Associated Lung Injury) appear to be primarily associated with vaping Vitamin E Acetate,¹⁰ an ingredient found in home-made vapes (often combined with cannabis extract) and not in FDA-authorized e-cigarettes.¹¹

The health effects of dual use appear to depend on the heaviness of cigarette smoking, with greater smoking associated with greater harm.^{12, 13}

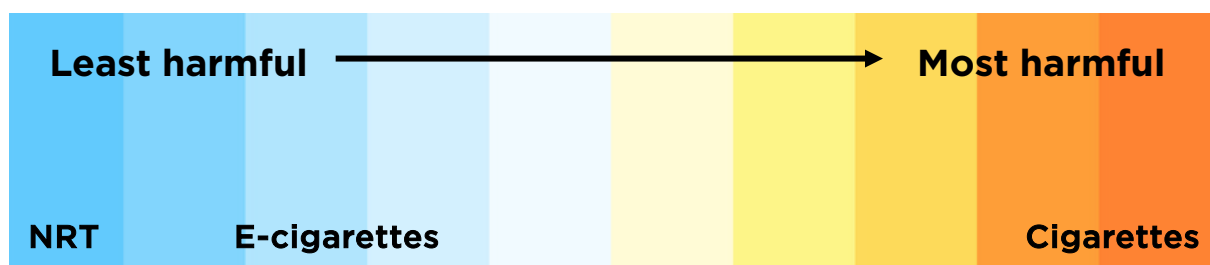


Figure 2. Estimated harm from cigarettes, e-cigarettes, and nicotine replacement therapy (NRT)



Dual Use Treatment Goals

What should dual use treatment goals be?



Cigarette cessation

Given the immense harm from smoking,⁵ **cigarette cessation is the most important treatment goal** for all who dually use cigarettes and e-cigarettes.



Complete abstinence

Complete abstinence (quitting both cigarettes and e-cigarettes) is the ideal long-term treatment goal for those motivated to quit both products.



Quit Cigarette Use while Continuing E-Cigarette Use

Quitting cigarettes and continuing e-cigarette use is a clinically meaningful goal for those unable or unmotivated to quit, especially if continued e-cigarette use helps to quit smoking cigarettes.^{14, 15}



Education can help develop treatment goals

Informing patients that cigarettes are the most harmful product and, though not without risk, e-cigarettes are less harmful could help develop treatment goals.



Effective Treatment of Dual Use

What kind of treatment should be provided for dual use?

Pharmacology & counseling is the most effective treatment for dual use

Varenicline	<ul style="list-style-type: none">• Varenicline is effective for adults who smoke,¹⁶ vape,⁷ and dually use both products.¹⁸• The strongest treatment effects for dual use have been shown with varenicline and counseling for smoking cessation.¹⁸
Nicotine Replacement Therapy (NRT)	<ul style="list-style-type: none">• Nicotine replacement therapy (NRT) is effective for adults who smoke¹⁹ and combination long (patch) + short (gum or lozenge) acting NRT with text message support has been found to be effective among young adults who dually use cigarettes and e-cigarettes.²⁰

Treatment can be effective regardless of motivation

- Treatment to quit cigarettes + e-cigarettes simultaneously appears to be most effective, especially among patients motivated to quit both products.²⁰
- Pharmacotherapy to reduce smoking is effective for adults who smoke and are not motivated to quit^{21,22} and could also help those with dual use who are not motivated to quit smoking.
- Though treatment should be provided if possible, written self-help material for dual use improves outcomes compared to providing no intervention.²³



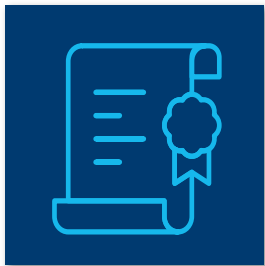
E-cigarettes and E-cigarette Regulations

Can e-cigarettes help my patients quit smoking?



- **Among adults who exclusively smoke cigarettes**, e-cigarettes can be an effective tool to quit smoking.^{24,25}
- **Less is known regarding the role of e-cigarettes among adults** who regularly use both cigarettes and e-cigarettes (dual use).
- **Observational research suggests** that using e-cigarettes every day to replace cigarette use is associated with better smoking cessation outcomes.²⁶

What about e-cigarette regulation?



- **The US FDA has authorized a number of e-cigarettes for sale in the US**, which include tobacco and menthol flavored products with nicotine concentrations up to 6%.²⁷
- **Additionally, a range of unauthorized e-cigarette products** are currently available to most US consumers which vary substantially in flavor and nicotine strength.
- **Among adults who continue to use e-cigarettes**, providers should recommend use of FDA-authorized products in order to reduce risks that could be associated with unregulated products.



Key Takeaways

Key takeaways to inform the clinical treatment of dual use of cigarettes and e-cigarettes

- 1** Evidence on dual use treatment is still emerging.
- 2** The most effective treatment for dual use combines **pharmacotherapy and counseling**. Varenicline and combination nicotine replacement therapy (NRT) (e.g., patch plus gum/lozenge) have been shown to be effective in treating dual use.
- 3** Cessation of both cigarette and e-cigarette use is the ideal long-term goal
- 4** Tailor tobacco use treatment to the patient's readiness and goals.
- 5** If patients are not ready to quit both products, **prioritize cigarette cessation as the most important treatment goal**. Help patients understand that cigarettes are the most harmful and e-cigarettes, while not risk-free, are less harmful than cigarettes.

Request Technical Assistance

Have additional questions about Dual Use? Complete our [TA request form](#) to request free technical assistance

To learn more about the National Center of Excellence for Tobacco-Free visit our website at <https://recovertobaccofree.caiglobal.org/>



About the Author

This guide was developed by Dr. Elias Klemperer from the Vermont Center on Behavior and Health in partnership with CAI.

Elias Klemperer, PhD is an Associate Professor of Psychiatry and Psychological Science at the Vermont Center on Behavior and Health, Larner College of Medicine, University of Vermont (UVM). As a behavioral scientist and licensed clinical psychologist, his research broadly falls within tobacco regulatory science and tobacco control. He primarily focuses on nicotine reduction, dual use of cigarettes and e-cigarettes, and interventions for people who are not ready to quit smoking.

Dr. Klemperer uses a range of research methodologies, including clinical trials, controlled laboratory studies, meta-analysis, and fine-grained naturalistic research. He has experience conducting both fully-remote and in-person trials. In addition to his work in tobacco, Dr. Klemperer has an emerging line of research examining the treatment of opioid use disorder among people who are incarcerated, which reflects his clinical work in correctional settings.

As the Associated Director of the Vermont Center on Behavior and Health (VCBH), he oversees pilot project programs which support fellows and junior faculty in conducting pilot research to seed future NIH funding. Dr. Klemperer is the primary mentor for one Clinical Psychology pre-doctoral fellow, serves on multiple Master's thesis and Doctoral dissertation committees, and works regularly with pre- and post-doctoral trainees within the VCBH. Dr. Klemperer received his PhD in clinical psychology from the University of Vermont and completed his clinical internship at Yale University in 2019. He joined the University of Vermont faculty in 2020.

Suggested Citation

Treating Dual Use of Cigarettes and E-cigarettes: A Quick Guide for Clinicians. Cicatelli Associates Inc. and Vermont Center on Behavior and Health. August 2025.



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