

TREATMENT FOR TOBACCO USE AND DEPENDENCE: SMOKING CESSATION SERVICES IN THE PRIMARY CARE SETTING

Thomas Michael Golden, MD, MPH | EIS Officer, Lieutenant Commander

Equity Access to Smoking Prevention and Treatment; Friends Research Institute; 3/25/2022



Centers for Disease Control and Prevention

National Center for Chronic Disease Prevention and Health Promotion

Office on Smoking and Health





Introduction

A bit about me ...





Smoking and COVID-19

- Available scientific evidence largely indicates that current and former cigarette smoking increases the risk of severe COVID-19 disease.
- Available scientific evidence is inadequate to infer whether cigarette smoking is associated with risk of SARS-CoV-2 infection.
- Further research is warranted to assess the relationship between smoking and COVID-19 outcomes, as well as the potential role that nicotine could play in this relationship, including nicotine exposure through combustible tobacco smoking (cigars, hookah, other pipes), e-cigarette use, and secondhand smoke or secondhand aerosol exposure.

Tobacco Use Is the Leading Cause Of Preventable Disease, Disability, and Death



47M



Based on 2020 data, more than **47 million** U.S. adults use some form of commercial tobacco products, including cigarettes, e-cigarettes, cigars, smokeless tobacco, and pipes. Of those who use tobacco, nearly **31 million** U.S. adults smoke cigarettes.¹



480,000

Cigarette smoking and secondhand smoke exposure kill about **480,000** people in the U.S. each year.²



16M

For every one smoking-related death, at least 30 people – **16 million** Americans – live with a serious smoking-related illness.²



\$300B

Each year, cigarette smoking costs in the United States exceed **\$300 billion**, including \$226.7 billion in smoking-attributable healthcare spending.^{2,3}



All Organs

Smoking impacts **nearly every organ system** in the body and causes **disease and death**.

Sources:

1. Cornelius ME; Loretan CG; Wang, TW; et al. Tobacco Product Use Among Adults – United States, 2020. MMWR Morb Mortal Wkly Rep 2022;71: 397–405.
2. U.S. Department of Health and Human Services. The Health Consequences of Smoking – 50 Years of Progress: A Report of the Surgeon General. Atlanta, 2014.
3. Xu X, Shrestha SS, Trivers KF, et al. U.S. healthcare spending attributable to cigarette smoking in 2014. Prev Med March 2021.



What Are the Challenges to Cessation?

- ✓ Disparities in tobacco use and cessation
- ✓ Underutilization of tobacco cessation treatment
- ✓ Evolving tobacco product landscape

Disparities in Cigarette Smoking Among United States Adults, NHIS, 2020



Race/Ethnicity

27.1% American Indian/Alaska Native
13.3% White



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
22.7% Medicaid
9.2% Private
10.2% Medicare



Disability

19.8% Yes
11.8% No



Sexual Orientation

16.1% Lesbian/Gay/Bisexual
12.3% Heterosexual



Regularly Had Feelings of Anxiety

21.4% Yes
11.3% No

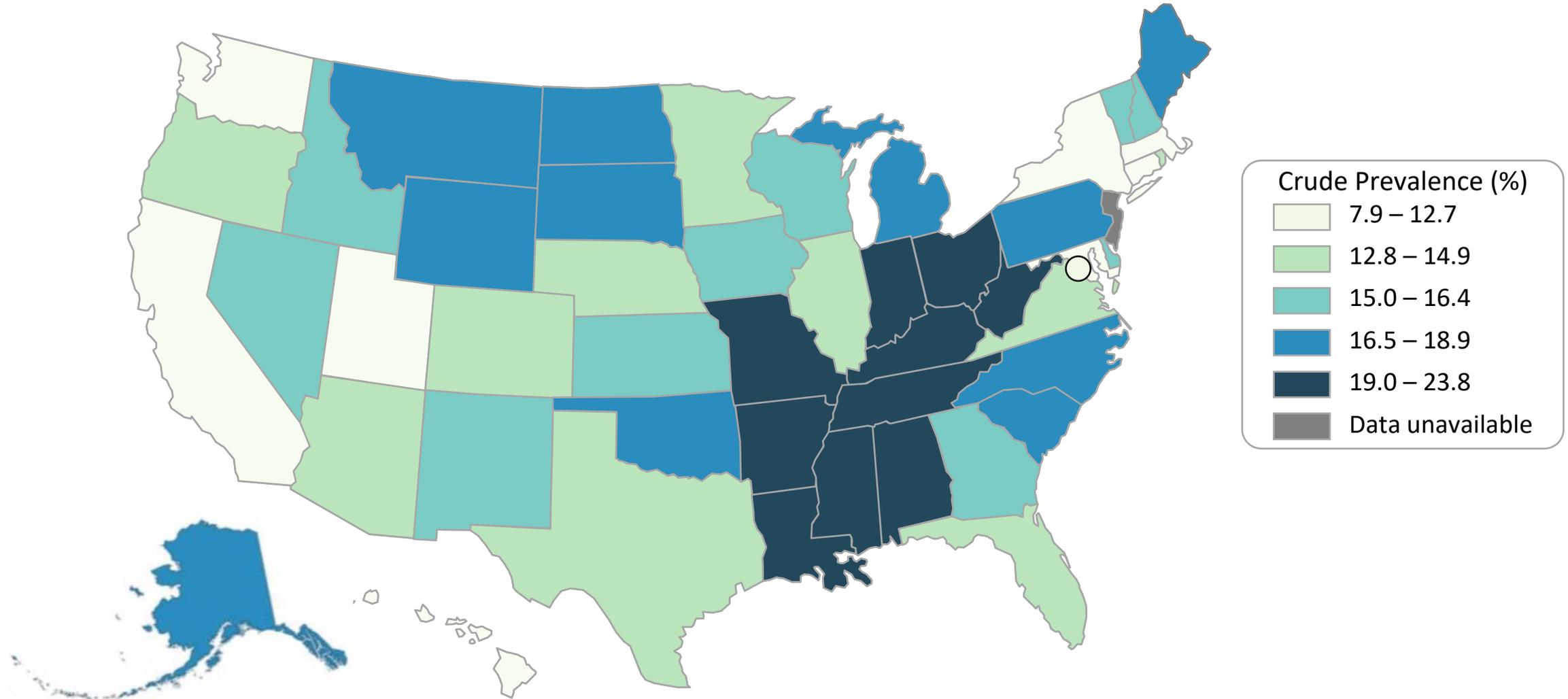


Rural/Urban

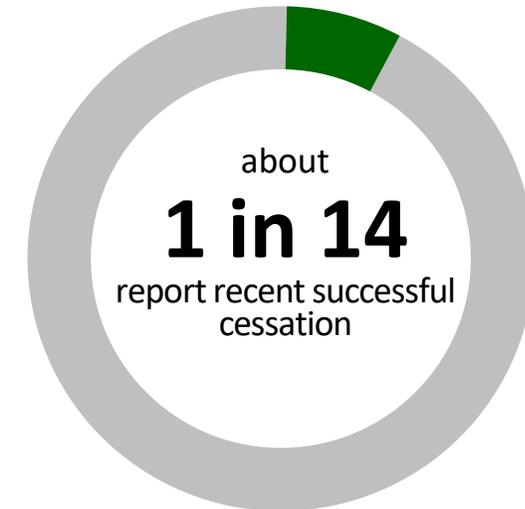
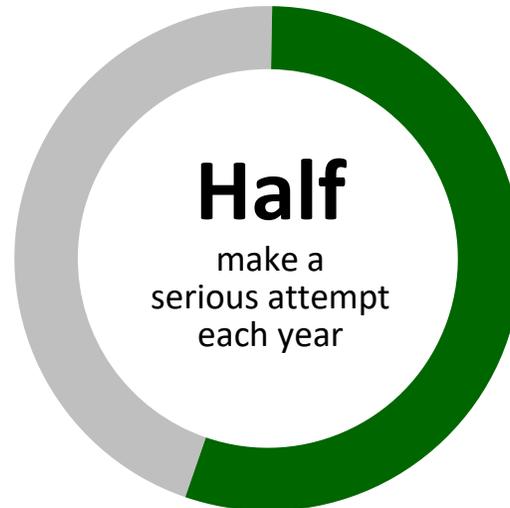
19.0% Rural
11.4% Urban

Smoking Prevalence Varies Across the United States

Current Cigarette Smoking Among U.S. Adults, BRFSS, 2019

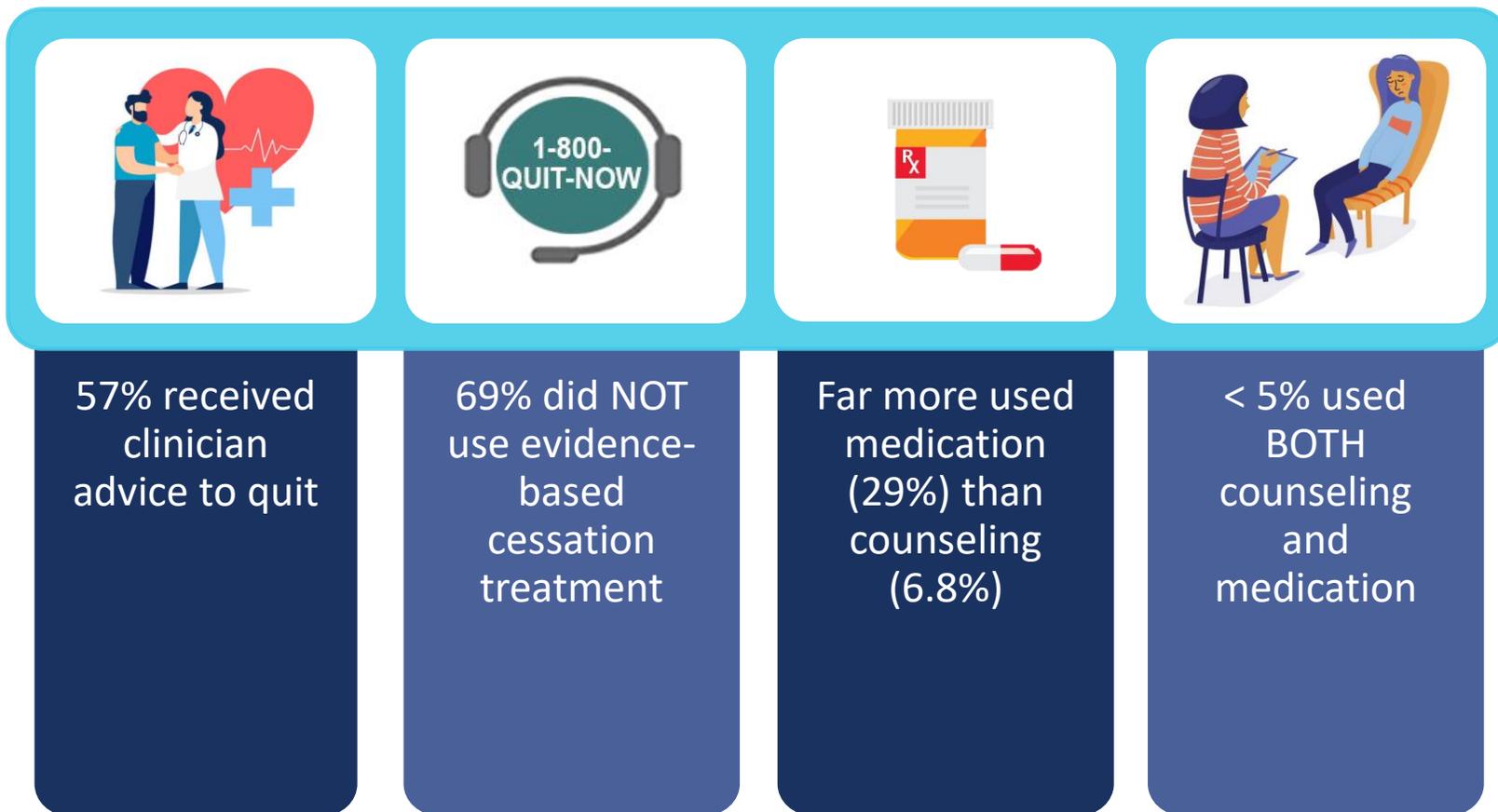


Cessation Remains a Challenge



Tobacco Cessation Interventions Are Underutilized

How U.S. Adults Tried to Quit Smoking, 2015



Disparities in Quitting

QUIT ATTEMPT

69.4%	Asian
63.4%	Black
53.3%	White

QUIT SUCCESS

9.4%	Private insurance
5.9%	Medicaid
5.2%	Uninsured

USE OF EVIDENCE-BASED TREATMENT

34.3%	White
20.5%	Asian
19.2%	Hispanic
31.7%	Straight
14.5%	LGB
32.1%	Private insurance
21.4%	Uninsured

CLINICAL ADVICE

60.2%	White
42.2%	Asian
34.2%	Hispanic
32.1%	Private insurance
21.4%	Uninsured

U.S. Adults – NHIS, 2015



The Tobacco Product Landscape Is Evolving



Health Benefits Of Quitting Smoking



IMPROVES
health and
INCREASES life
expectancy



LOWERS
risk of 12 types
of cancer



LOWERS
risk of
cardiovascular
diseases



LOWERS
risk of Chronic
Obstructive
Pulmonary Disease
(COPD)



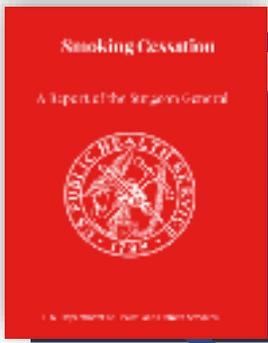
LOWERS
risk of some poor
reproductive
health outcomes



BENEFITS
people who have already been
diagnosed with coronary heart
disease or COPD



BENEFITS
people at any age — even people who
have smoked for years or have smoked
heavily will benefit from quitting



2020 Surgeon General's Report



More than **150** individuals involved, including 32 chapter authors, 46 peer reviewers, 20 senior scientists, contributed to the compilation and review of the report



8 Comprehensive chapters consisting of more than **700** pages of the latest scientific evidence on smoking cessation



10 Major Conclusions



101 Chapter Conclusions





Medical Research Service
National Institutes of Health
U.S. Department of Health and Human Services
1998

Smoking Cessation

A Report of the Surgeon General



U.S. Department of Health and Human Services

10 Major Conclusions

1. Smoking cessation is beneficial at any age. Smoking cessation improves health status and enhances quality of life.
2. Smoking cessation reduces the risk of premature death and can add as much as a decade to life expectancy.
3. Smoking places a substantial financial burden on smokers, healthcare systems, and society. Smoking cessation reduces this burden, including smoking-attributable healthcare expenditures.
4. Smoking cessation reduces risk for many adverse health effects, including reproductive health outcomes, cardiovascular diseases, chronic obstructive pulmonary disease, and cancer. Quitting smoking is also beneficial to those who have been diagnosed with heart disease and chronic obstructive pulmonary disease.
5. More than three out of five U.S. adults who have ever smoked cigarettes have quit. Although a majority of cigarette smokers make a quit attempt each year, less than one-third use cessation medications approved by the U.S. Food and Drug Administration (FDA) or behavioral counseling to support quit attempts.
6. Considerable disparities exist in the prevalence of smoking across the U.S. population, with higher prevalence in some subgroups. Similarly, the prevalence of key indicators of smoking cessation — quit attempts, receiving advice to quit from a health professional, and using cessation therapies — also varies across the population, with lower prevalence in some subgroups.
7. Smoking cessation medications approved by the U.S. Food and Drug Administration (FDA) and behavioral counseling are cost-effective cessation strategies. Cessation medications approved by the FDA and behavioral counseling increase the likelihood of successfully quitting smoking, particularly when used in combination. Using combinations of nicotine replacement therapies can further increase the likelihood of quitting.
8. Insurance coverage for smoking cessation treatment that is comprehensive, barrier-free, and widely promoted increases the use of these treatment services, leads to higher rates of successful quitting, and is cost-effective.
9. E-cigarettes, a continually changing and heterogeneous group of products, are used in a variety of ways. Consequently, it is difficult to make generalizations about efficacy for cessation based on clinical trials involving a particular e-cigarette, and there is presently inadequate evidence to conclude that e-cigarettes, in general, increase smoking cessation.
10. Smoking cessation can be increased by raising the price of cigarettes, adopting comprehensive smokefree policies, implementing mass media campaigns, requiring pictorial health warnings, and maintaining comprehensive statewide tobacco control programs.



What Are the Strategies to Improve Cessation?

- ✓ Contemporizing comprehensive treatment
- ✓ Systems-level change
- ✓ Population-level interventions



Treatments For Smoking Cessation

- Behavioral counseling and cessation medication interventions increase smoking cessation compared with self-help materials or no treatment.
- Behavioral counseling and cessation medications are independently effective in increasing smoking cessation, and even more effective when used in combination.
- Proactive quitline counseling, when provided alone or in combination with cessation medications, increases smoking cessation.





Treatments for Smoking Cessation

The evidence is sufficient to infer that:



Short text message services about cessation are independently effective in increasing smoking cessation, particularly if they are interactive or tailored to individual text responses.



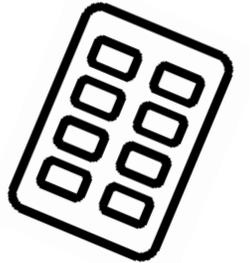
Web or Internet-based interventions increase smoking cessation and can be more effective when they contain behavior change techniques and interactive components.



The evidence is inadequate to infer that:

Smartphone apps for smoking cessation are independently effective in increasing smoking cessation.

Seven FDA-Approved Medications



MEDICATION	Over the Counter	Prescription	Short Acting	Long Acting
Nicotine patch	✓			✓
Nicotine gum	✓		✓	
Nicotine lozenge	✓		✓	
Nicotine nasal spray		✓	✓	
Nicotine inhaler		✓	✓	
Bupropion		✓		
Varenicline		✓		

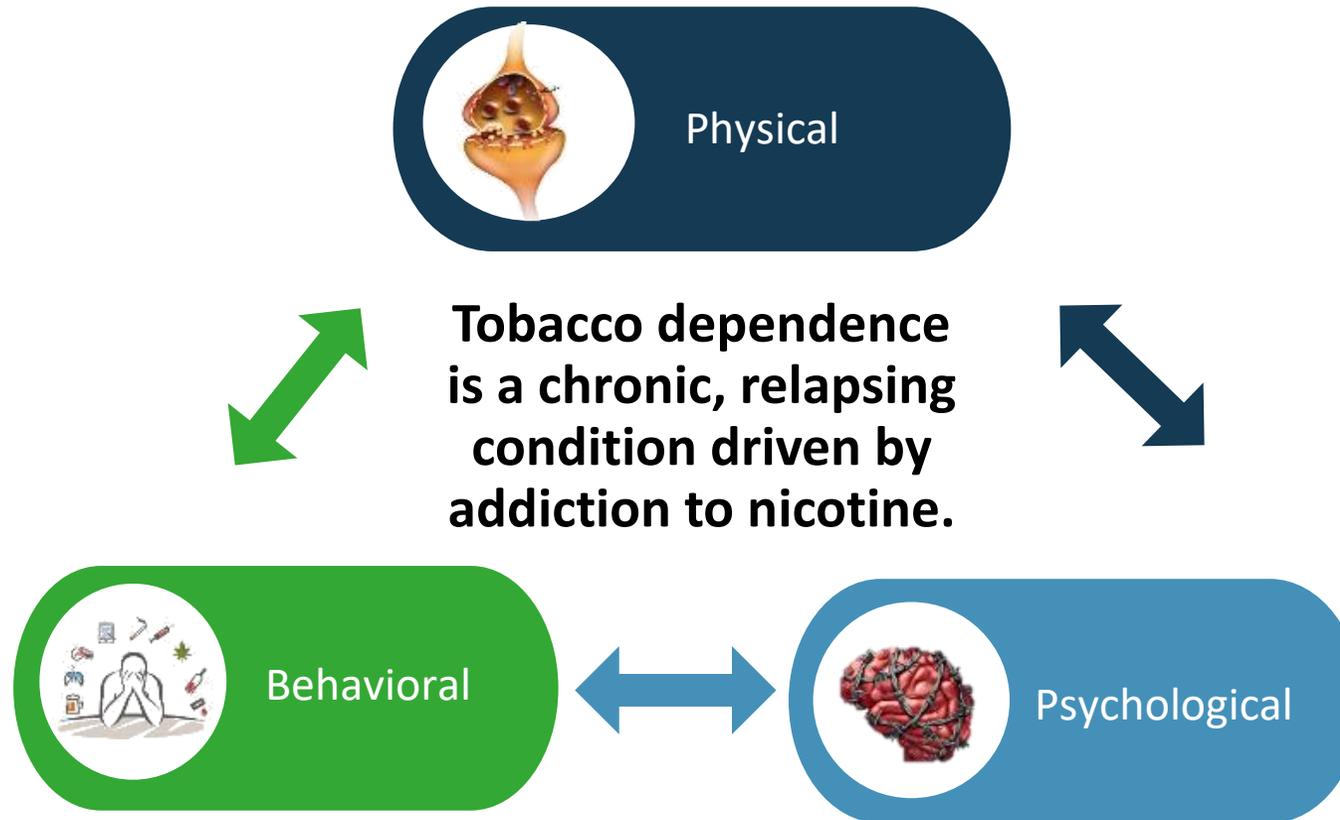


Combination Nicotine Replacement Therapy

The evidence is sufficient to infer that combining short- and long-acting forms of nicotine replacement therapy increases smoking cessation compared with using single forms of nicotine replacement therapy.



Contemporizing Comprehensive Treatment Approaches

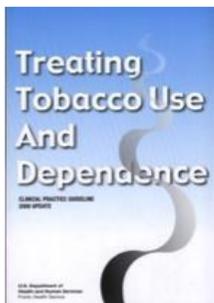




Systems-Level Strategies Promote Smoking Cessation



“Strategies that **link** smoking cessation-related **quality measures with payments** to clinicians, clinics, or health systems increase the rate of delivery of clinical treatments for smoking cessation.”



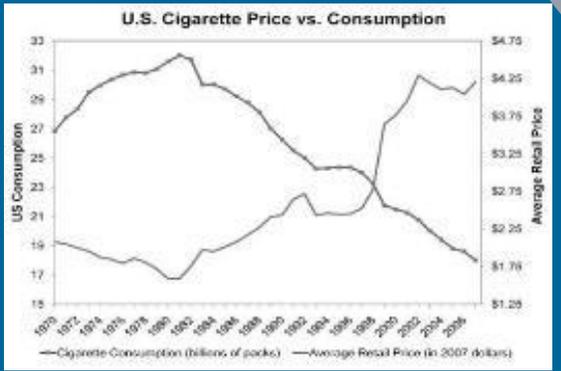
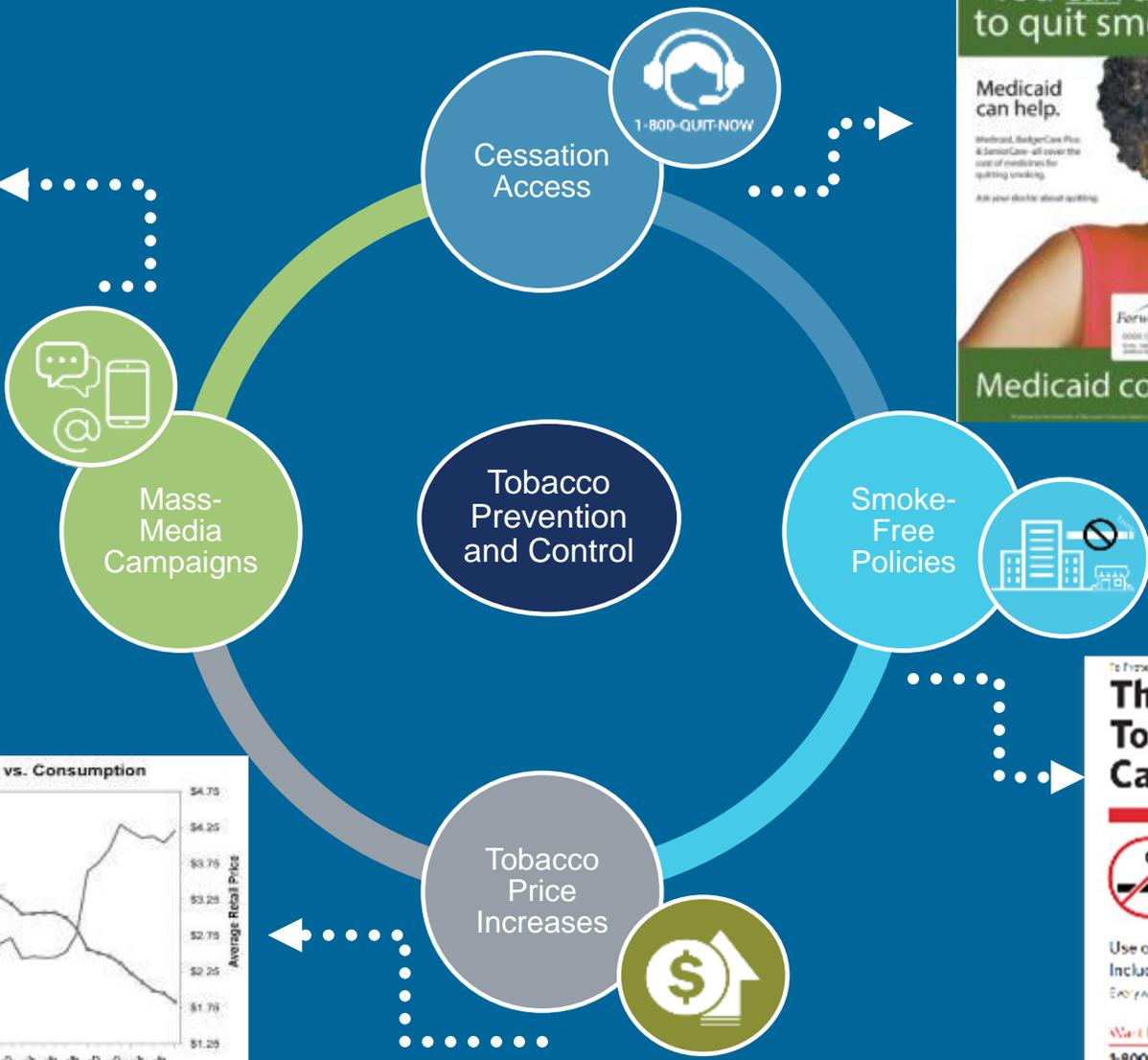
“Development and dissemination of **evidence-based clinical practice guidelines** increase the delivery of clinical interventions for smoking cessation.”



“Evidence is **suggestive**, but not sufficient, to infer that **electronic health record** technology increases the rate of delivery of smoking cessation treatments.”



Population-level Strategies Promote Smoking Cessation



Sources: 1) King BA, Graffunder C. The Tobacco Control Vaccine: a population-based framework for preventing tobacco-related disease and death. Tobacco Control 2018;27:123-124. 2) Kong AY, King BA. Boosting the Tobacco Control Vaccine: recognizing the role of the retail environment in addressing tobacco use and disparities. Tobacco Control 2020.

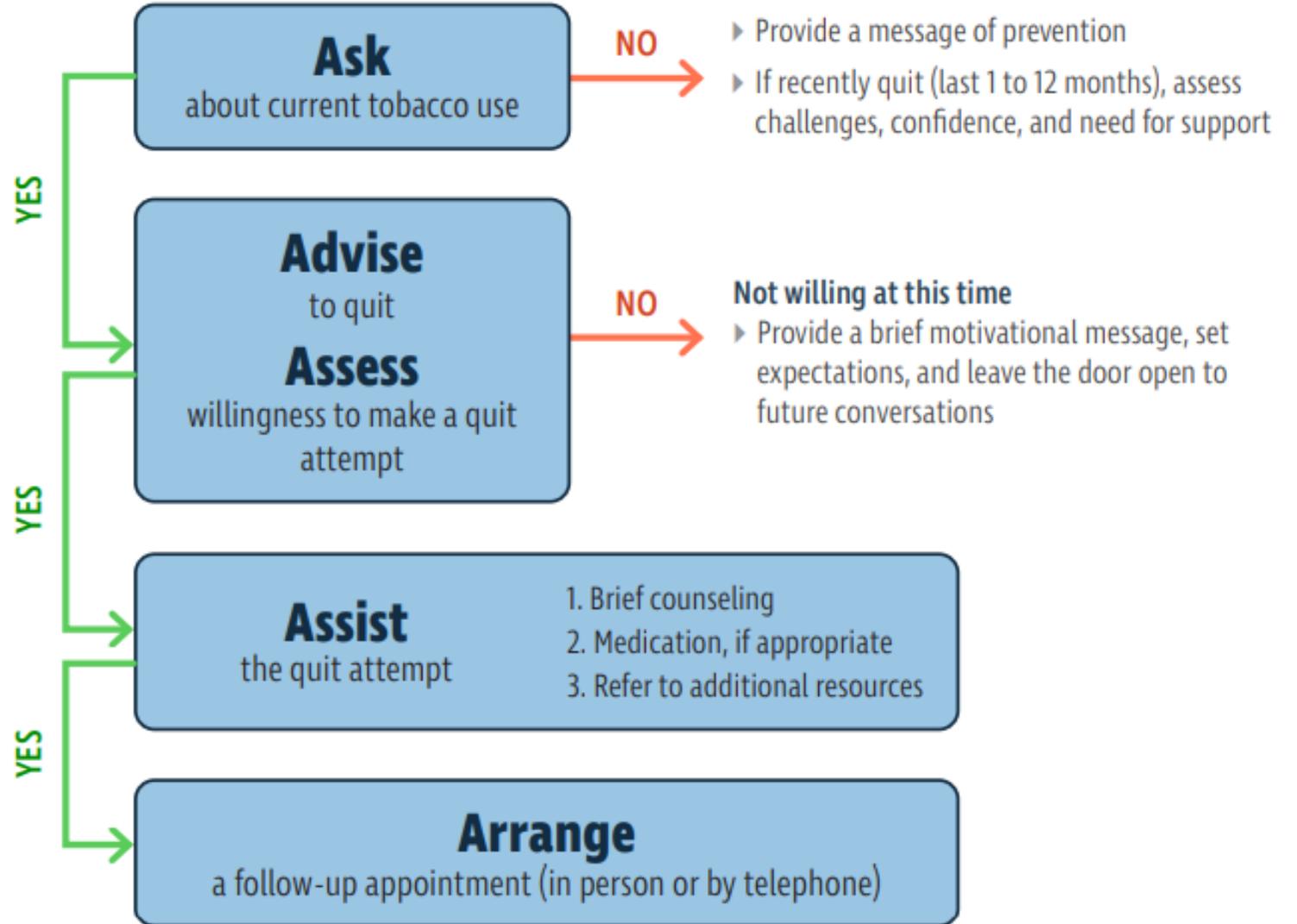
Benefits of Clinician Intervention



- Patients expect it
- Increases satisfaction with care
- Improves patient outcomes
- Can help meet certain quality measures
- Reimbursable
- Covered as a preventive service
- Cost effective

Can Double the Odds that a Patient Will Successfully Quit.

Tobacco Cessation Brief Clinical Intervention



My Research



Data

- Cross-sectional analyses that used data from DocStyles 2018 and DocStyles 2020
- DocStyles is a web-based panel survey conducted by Porter Novelli.



Cessation Services

- CDC's OSH fielded questions related to delivery of tobacco cessation services and treatments in the clinical context in both DocStyles 2018 and DocStyles 2020.



Comfort

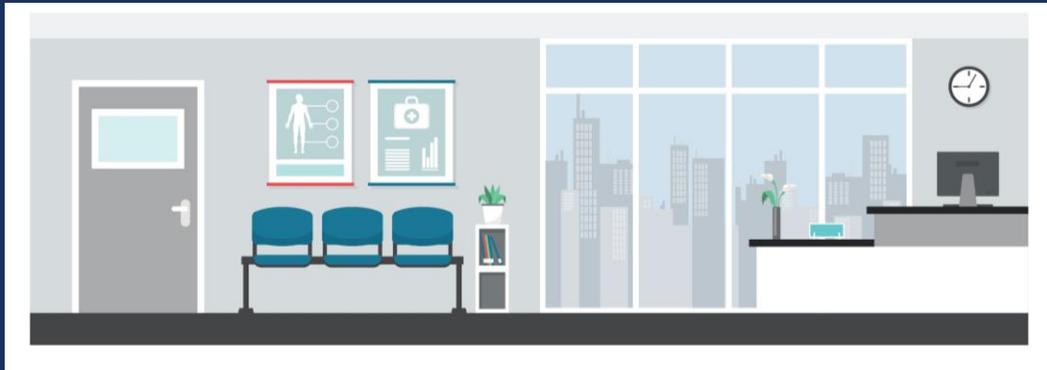
- DocStyles 2018: Assessed provider comfort with providing tobacco cessation services and relationship between comfort and training



Knowledge

- DocStyles 2020: Assessed provider knowledge of evidence-based treatment for tobacco dependence.

DOCSTYLES 2018



Key findings:

- 90.2% reported comfort counseling; comfort in counseling varied by specialty
- 85.3% reported comfort prescribing nicotine replacement therapy; comfort with this varied by specialty
- 83.6% reported comfort prescribing non-nicotine cessation medication; comfort with this varied by practice setting

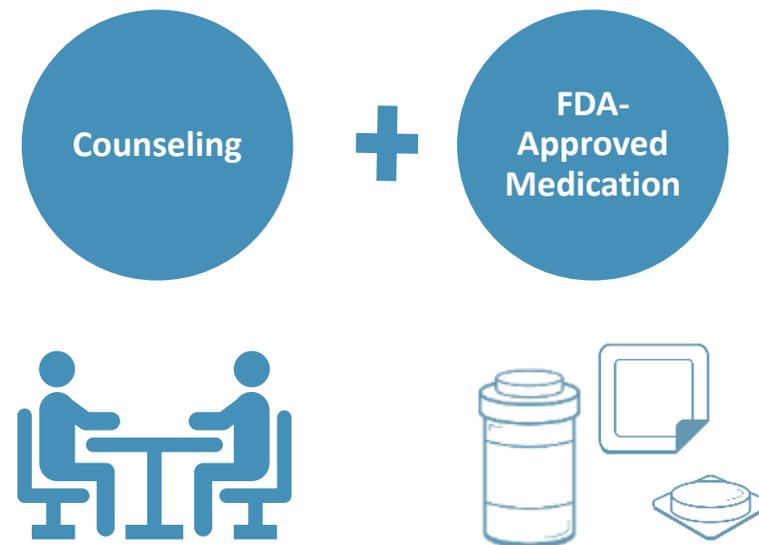
Source

1. Golden TM, VanFrank B, Courtney-Long E (2022). *Primary Care Providers' Perspectives and Training on Delivery of Tobacco Dependence and Treatment*. Manuscript in preparation.

DOCSTYLES 2020

Providers were asked directly about knowledge of evidence-based smoking cessation treatment methods and medications.

- Overall, providers scored poorly.
- **Only 5.6%** of providers scored high in their knowledge on smoking cessation counseling modalities.
- **Only 40.1%** received high scores on smoking cessation medications.





Key Takeaways

- Nearly 31 million adults in the United States smoke cigarettes and, therefore, continue to be at risk of developing smoking-related diseases.
- One of the most important actions people can take to improve their health is to quit smoking — this is true regardless of their age or how long they've been smoking.
- There are proven treatments and strategies to help people quit smoking successfully. Healthcare providers have an important role to play in assisting their patients with smoking cessation efforts
- There is more work to be done to improve access to and utilization of proven cessation interventions

We Know What Works For Cessation

Evidence-based interventions that increase quit rates:

I'm Ready to QUIT!



Advice to quit from a health care professional



Counseling: individual, group, telephone, web, text



7 FDA-approved medications



Barrier-free insurance coverage of evidence-based treatment



Health systems changes to integrate treatment into routine care

Contact: Thomas Golden, MD, MPH
Epidemic Intelligence Officer, Class of 2022
qdw0@cdc.gov



www.cdc.gov/tobacco

Thank You!

For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

“ I wish I had known how much strength I really had in me. ”

-Smokefree Michele

