

CAN WE CLEAR THE SMOKE?

WHAT ABOUT THE GUIDELINES, VAPING, AND COVID-19

Li-Shiun Chen, MD, MPH, ScD,
November 9, 2021



Electronic Health Record-enabled Evidence-based Smoking Cessation Treatment (ELEVATE)



Disclosures Li-Shiun Chen, MD, MPH, ScD

NIH/NIDA

Genetically Informed Smoking Cessation Trial

Siteman Investment Program

Implementing Multilevel Smoking Cessation Intervention to Reduce Cancer Disparity

NIH/NCI

Cancer Moonshot Tobacco Cessation Supplement

Siteman Cancer Center

Smoking Cessation for SCC/WU/BJC Healthcare and Collaborative Systems

NIH/NCI

Integrative Analysis of Lung Cancer Etiology and Risk

Clinical

BJC Behavioral Health Smoking Cessation Quality Initiative

NIH/NCI

Implementation Science Center for Cancer Control

Stock/Consulting/Speaker

None

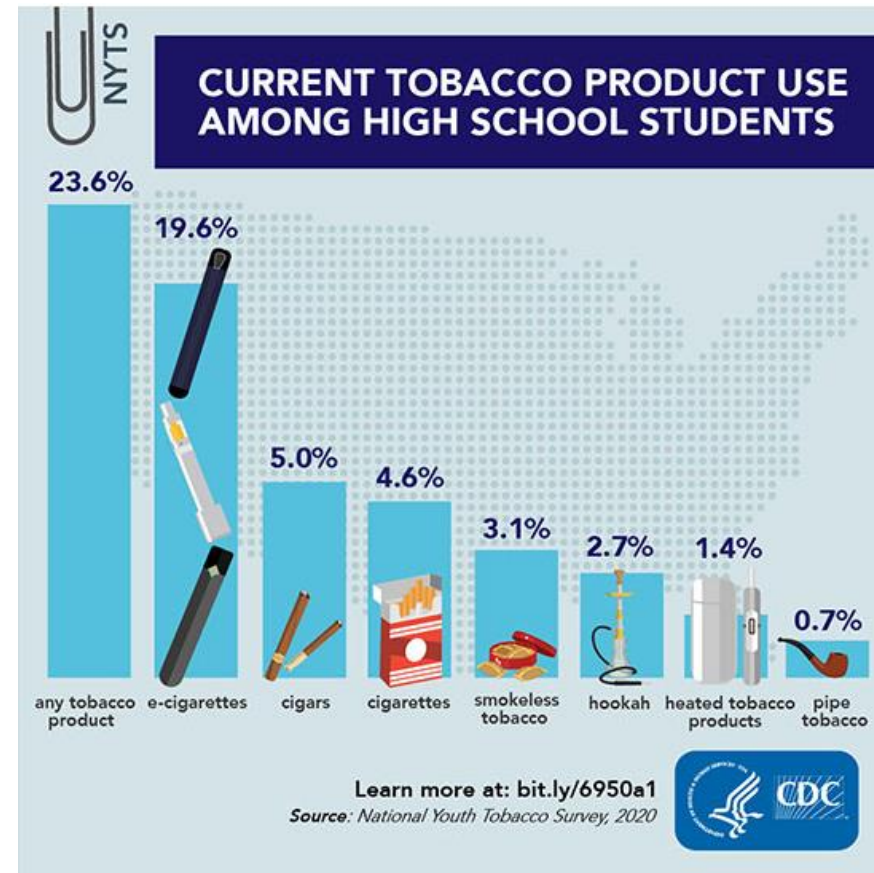
Acknowledgement

Washington U/BJC/SCC	Laura Bierut Ramaswamy Govindan Nicholas Fisher Steve Morris Jingling Chen Anne Stilinovic Christine Kelsoe	Alex Ramsey Gram Colditz Jessica Thein Stephanie Larson Nina Smock Angela Knight	Timothy Eberlein Ross Brownson Aimee James Paula Goldberg Ken Scholl Kaci Danat
EPIC	Kelsey Malone Keith Woeltje Kevin O'Bryan	Andrea Price Michelle Thomas Tina Lester	Michael Kriemelman Terry Bryant Glen D'sa
SIH	Angie Bailey Missy Lenzo	Kevin Oestmann Tim Hawe	Sarah Malone Many Clinic Teams
U Wisconsin	Timothy Baker	Douglas Jorenby	



Addiction Kills

- Opioid
 - 10 million misusers
 - 70,239 deaths/yr
- Tobacco
 - 39 million users
 - Kills half of its users
 - 480,000 deaths/yr
 - Causes >50% cancer death
- Nicotine in youth





Evidence is not implemented ... Covid-19 timely to quitting smoking

Smoking Cessation

A Report of the Surgeon General



U.S. Department of Health and Human Services

The New York Times

Surgeon General Says 'Shocking' Portion of People Aren't Told to Stop Smoking

In a new report, he cited a number of helpful smoking cessation methods but said that e-cigarettes haven't yet been proven to be an effective method.



"Far too many people who want to quit aren't getting access to the cessation treatments that we know work," said Dr. Jerome Adams, the surgeon general. Eric Baradat/Agence France-Presse — Getty Images

Now's the time to quit smoking: It could increase your odds of beating Covid-19

By Ryan Prior
Updated 11:25 AM ET, Fri April 3, 2020



More from CNN
Kiefer Sutherland remember his mom Shirley Douglas
Van Jones: Start screaming this to the black community

"THERE IS NO HIGHER MARK FOR A STORYTELLER THAN TO BOTH EDUCATE AND ENTERTAIN."

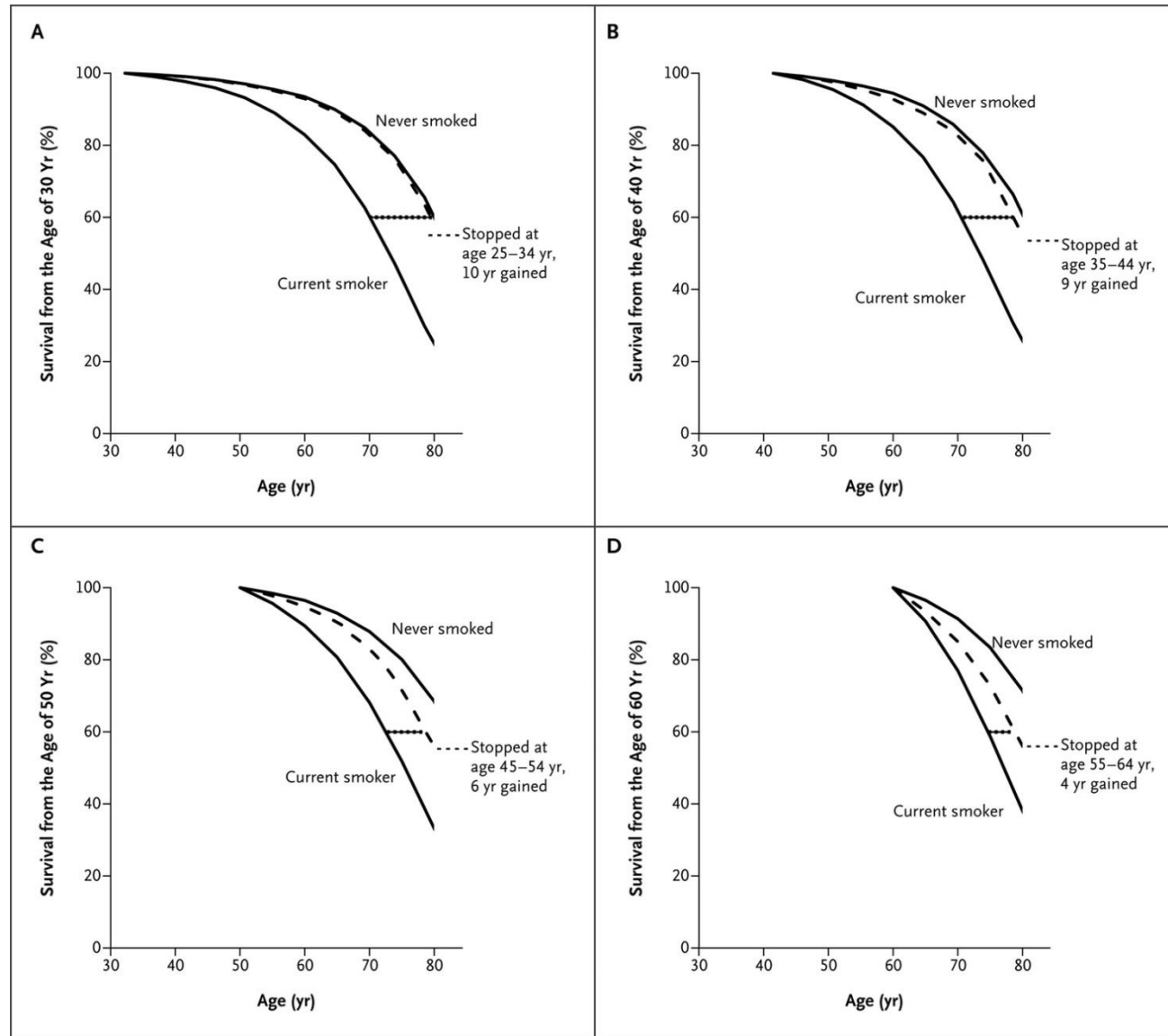
CNBC SIGN IN PRO WATCHLIST MAKE IT SELECT
MARKETS BUSINESS INVESTING TECH POLITICS CNBC TV USA IN

BREAKING NEWS delivered straight to your i
SIGN UP NOW

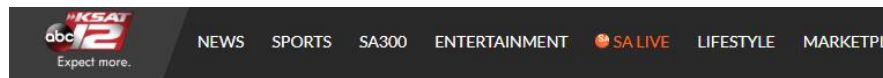
HEALTH AND SCIENCE CDC says diabetes, lung disease, heart disease and smoking may increase risk of severe coronavirus illness

PUBLISHED TUE, MAR 31 2020 5:11 PM EDT | UPDATED TUE, MAR 31 2020 6:05 PM EDT

Smokers die 12 years early - Never Too Late To Quit



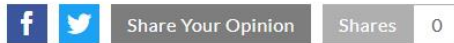
“Why did I wait so long?”



NEWS

Video: The Smoking and Health Connection

Posted: 5:44 PM, April 21, 2017
Updated: 5:44 PM, April 21, 2017



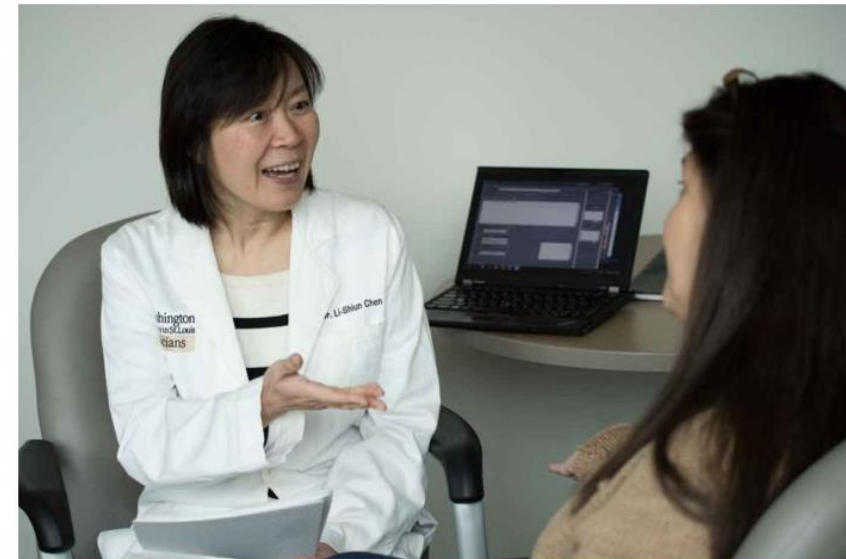
<https://abc30.com/1986104/>

NEWS RELEASE

Many smokers with serious mental illness want to kick habit

Few get treatments, counseling to help them quit

by **Jim Dryden** · December 29, 2016



ROBERT BOSTON

Li-Shiun Chen, MD, (left) meets with a patient at a BJC Behavioral Health Clinic. Chen led a study that found that although many smokers with serious mental illnesses would like to quit smoking, many psychiatrists and caseworkers aren't aware of their patients' wishes and, consequently, haven't prescribed medications or referred them to services to help them stop smoking.

“Today I will quit for Dr. Chen and Cole”



“I tried 13 times.
The support made a difference”

Treat the cause of cancer,
not just the consequence



NATIONAL CANCER INSTITUTE'S 'MOONSHOT' TOBACCO INITIATIVE

Posted on December 4, 2017



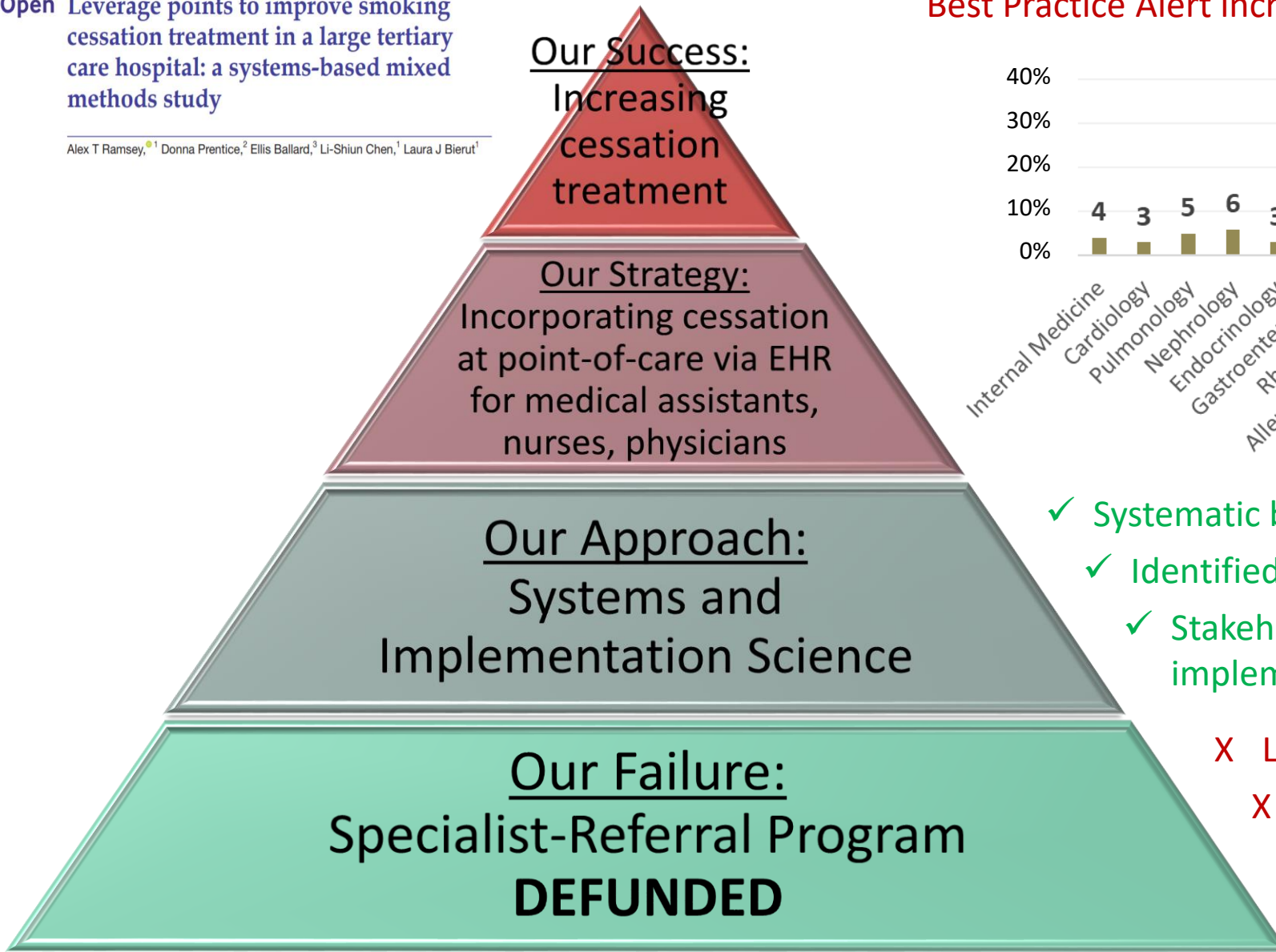
The SCC joined the Cancer Moonshot Tobacco Initiative in 2017
Reduce tobacco to prevent/treat cancer



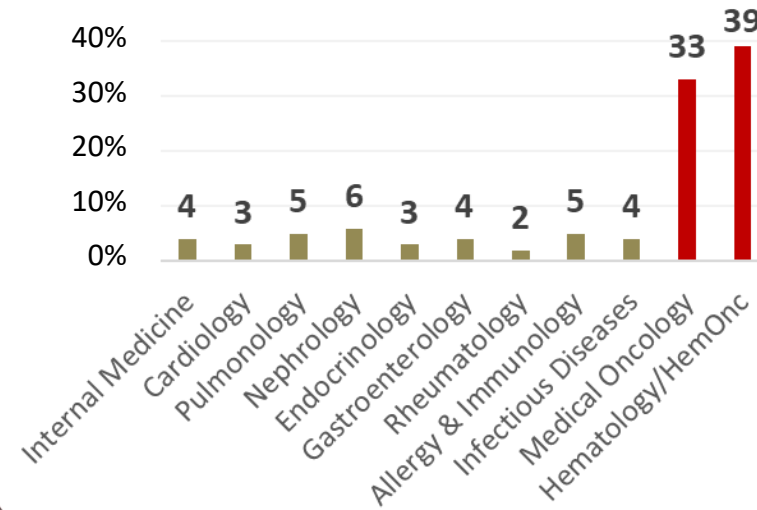
A care paradigm shift: Point-of-Care model

BMJ Open Leverage points to improve smoking cessation treatment in a large tertiary care hospital: a systems-based mixed methods study

Alex T Ramsey,¹ Donna Prentice,² Ellis Ballard,³ Li-Shiun Chen,¹ Laura J Bierut¹



Best Practice Alert increased cessation care (N = 229,852)



Scale-up across healthcare system (Oct 2019)

- ✓ Systematic barrier assessment
- ✓ Identified leverage points
- ✓ Stakeholder-driven implementation strategy

- X Low reach
- X Patients not referred
- X Patients missed appointments
- X Not cost-effective or scalable

More cancer patients get help to quit smoking

Siteman Cancer Center expands smoking-cessation efforts

by **Jim Dryden** • July 17, 2019



SCC Tobacco Treatment Initiative Phase 1 launch 2017



**Paradigm Shift to Point of
Care tobacco treatment**



**Smoking Module enabled by
Epic**

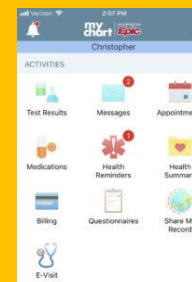


Learning Health System

SCC Tobacco Treatment Initiative Phase 2 launch 2020



**Nurse outreach via phone
post-appointment to offer treatment**



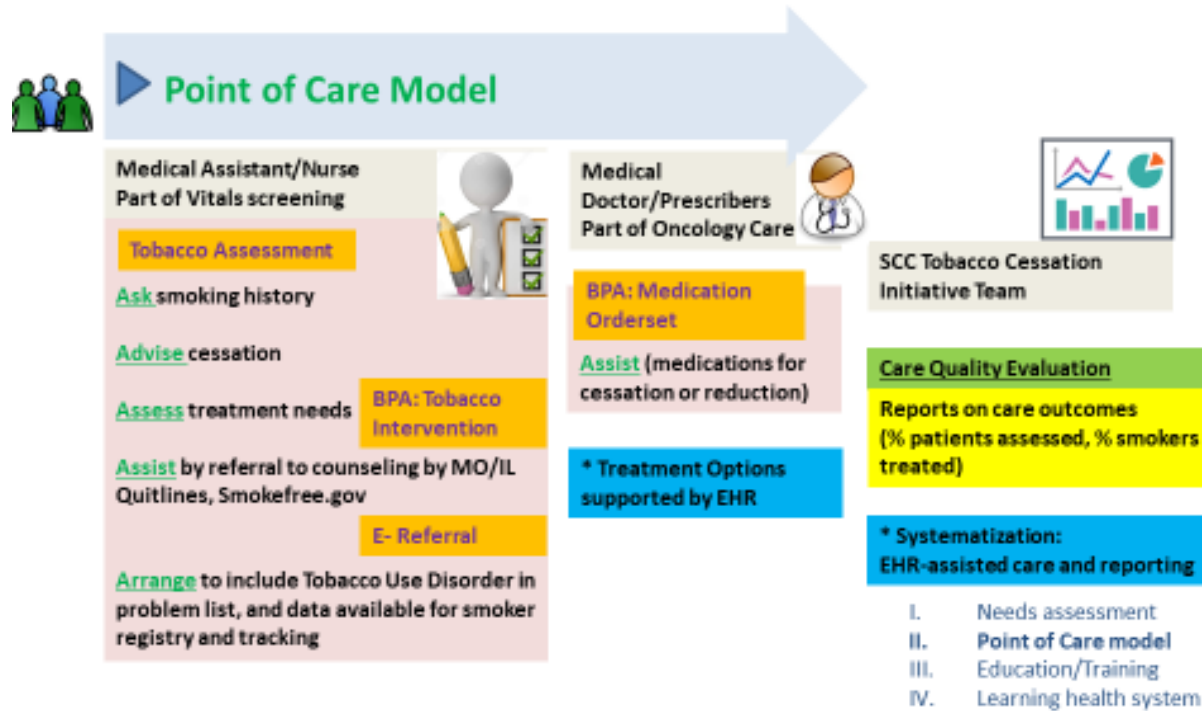
**Nurse outreach via MyChart
pre-appointment to offer treatment**

Point of Care Evidence-based Treatment enabled by EHR

Care-paradigm shift promoting smoking cessation treatment among cancer center patients via a low-burden strategy, Electronic Health Record-Enabled Evidence-Based Smoking Cessation Treatment

Alex T. Ramsey,¹ Ami Chiu,¹ Timothy Baker,^{2,3} Nina Smock,¹ Jingling Chen,¹ Tina Lester,⁴ Douglas E. Jorenby,^{2,3} Graham A. Colditz,^{5,6} Laura J. Bierut,^{1,6} Li-Shiun Chen^{1,6*}

All smokers are offered help at Point of Care



Everyone practices at the top of the license for collective competency

MA: "We have to do more, but patients like it and we are happy to offer something too!"

Nurses: "An encounter for a known tobacco user should not be allowed to close unless this has been addressed."

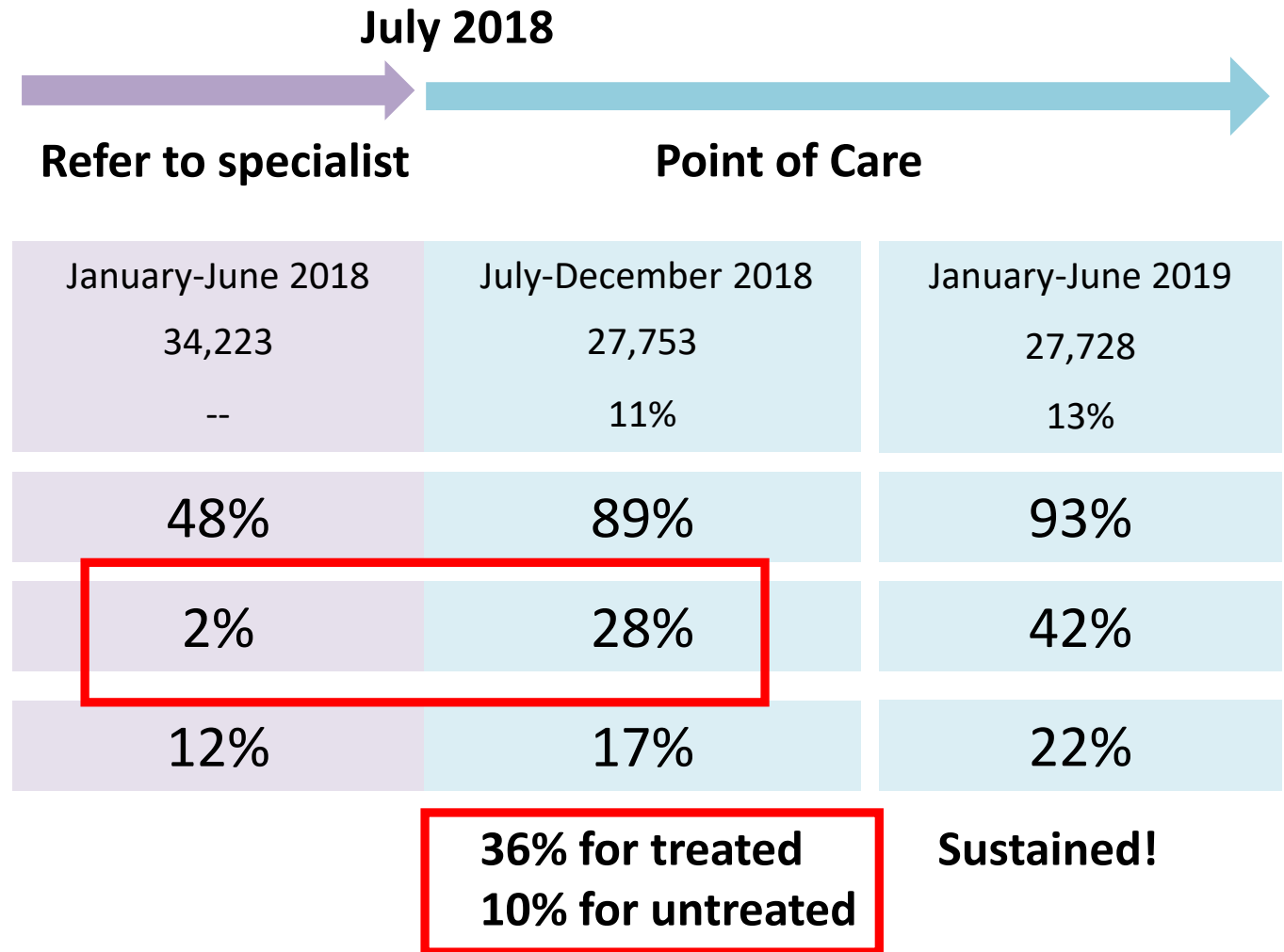


Success at SCC

Goals

- Every patient is assessed
- Every smoker is offered treatment
- Increased smoking cessation

	N patients
	Prevalence of smokers
Assessment	% patients assessed
Reach	% received treatment
Effectiveness	% smokers quit



Cancer Epidemiology
Available online 18 August 2021, 102005
In Press, Corrected Proof

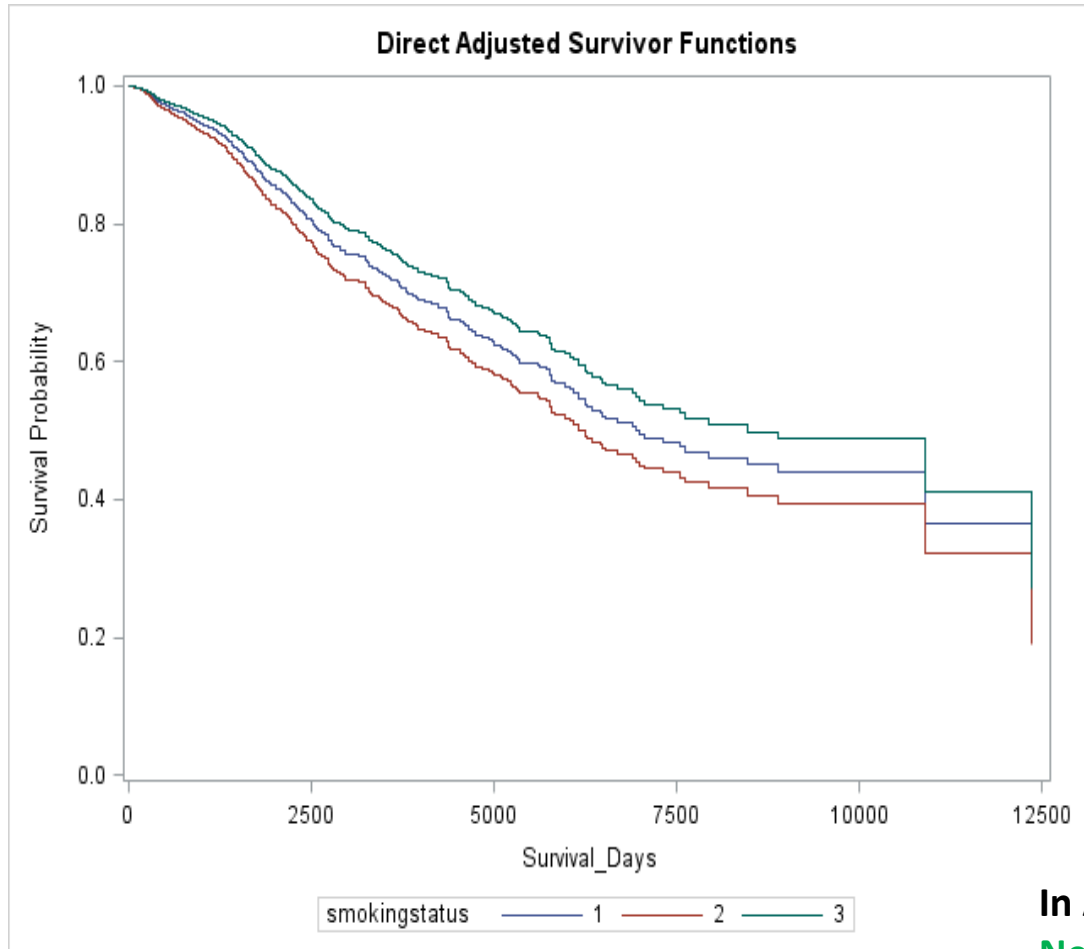


Point of care tobacco treatment sustains during COVID-19, a global pandemic

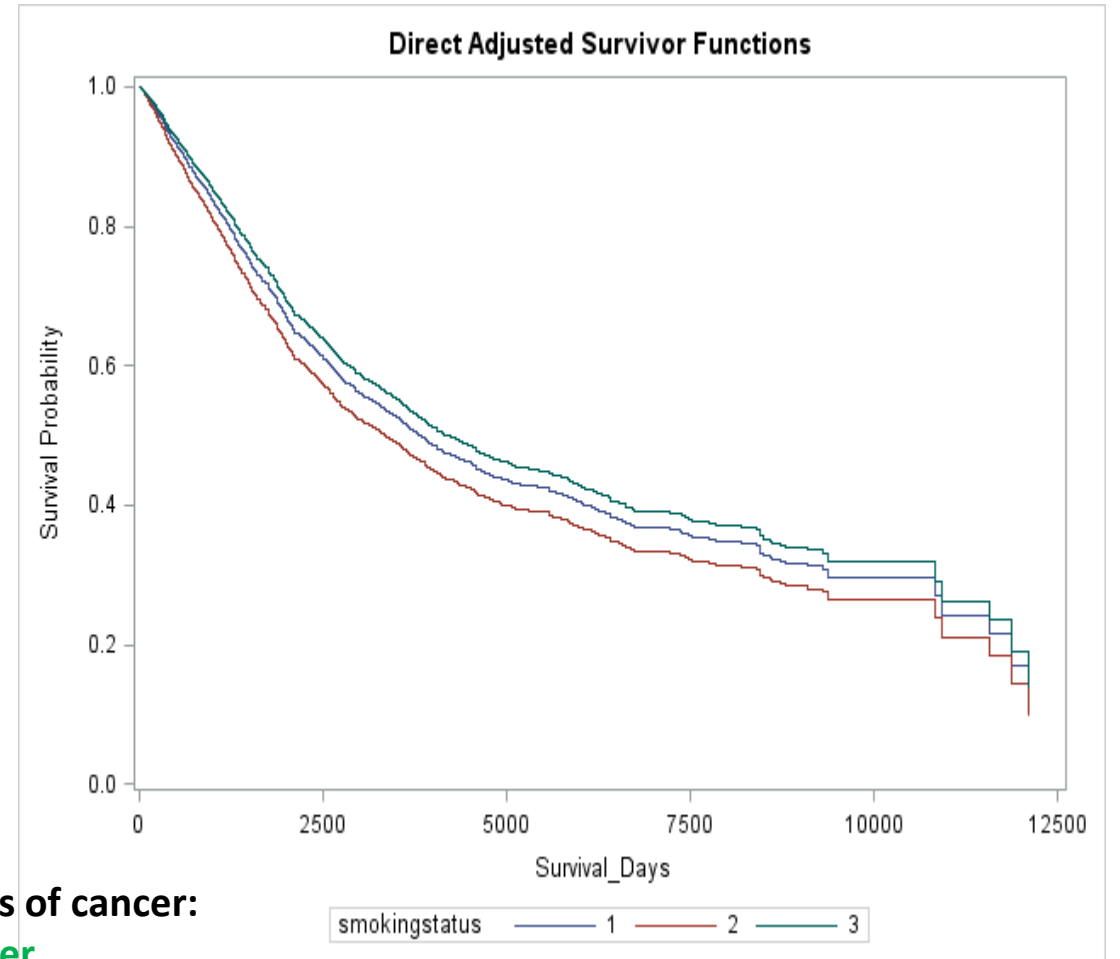
Ethan J. Craig^a, Alex T. Ramsey^b, Timothy B. Baker^c, Aimee S. James^{d, e}, Douglas A. Luke^f, Sara Malone^{g, h}, Jingling Chen^b, Giang Pham^b, Nina Smock^b, Paula Goldberg^{d, h}, Ramaswamy Govindan^{d, h}, Laura J. Bierut^{b, d}, Li-Shiun Chen^{b, d, g}

Quitting increases survival for All Cancer Stages

Cancer Stage 1 or 2 (in situ/local)



Cancer Stage 3 or 4 (regional/distant)



In ALL stages of cancer:

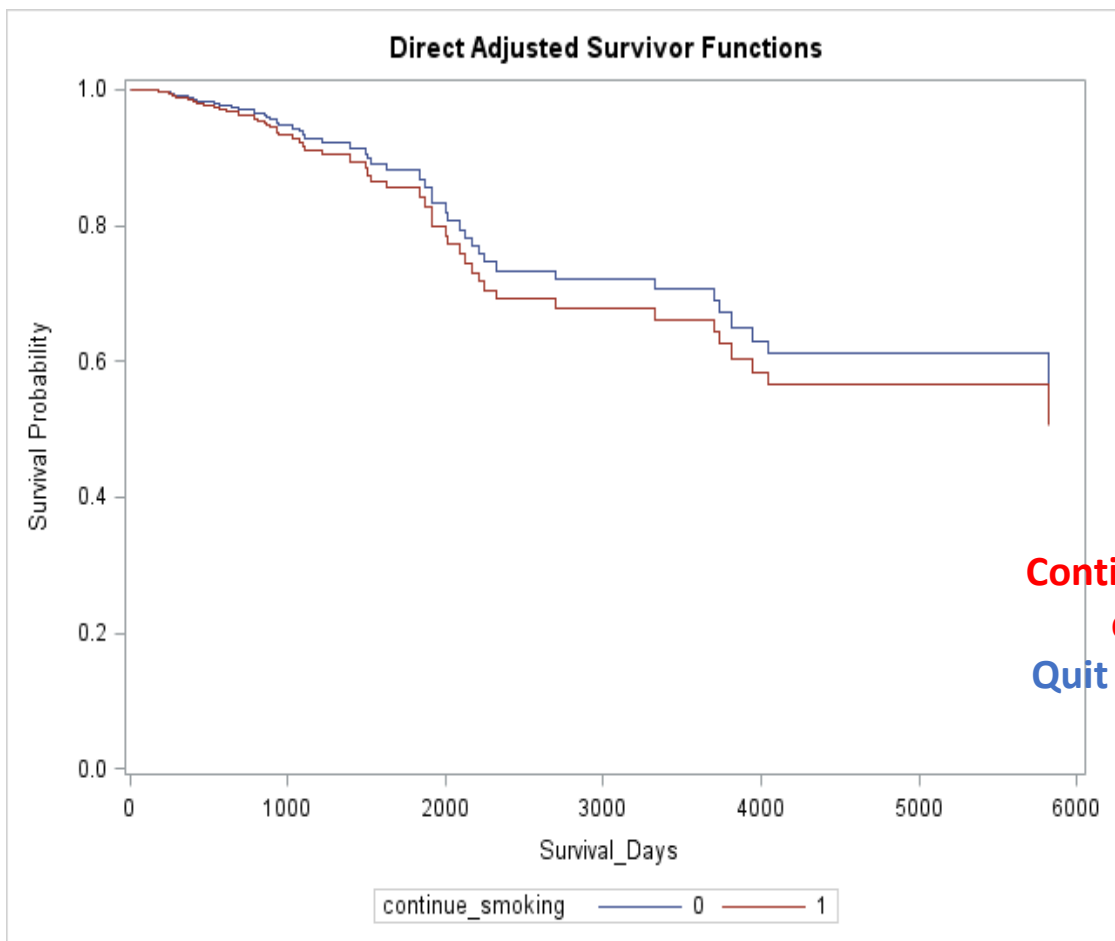
Never smoker

Former smoker

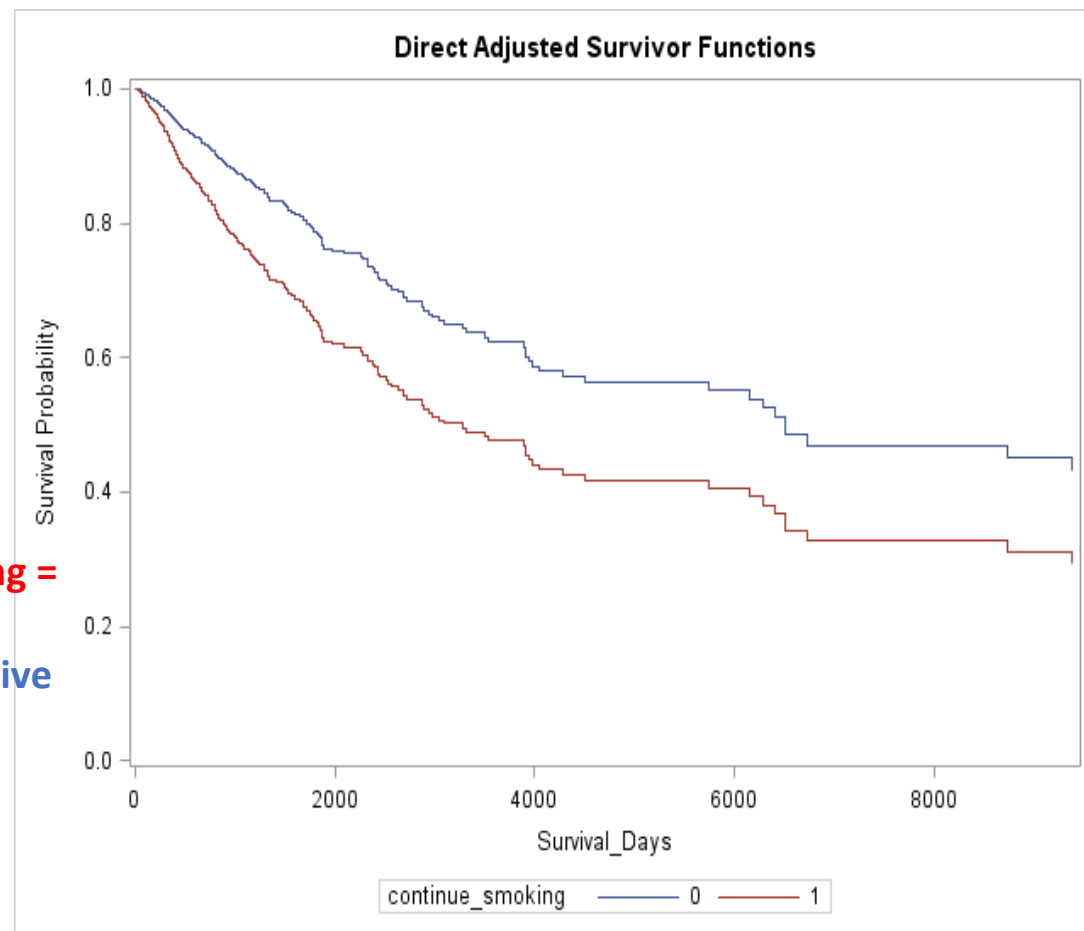
Current smoker

Smokers who quit after diagnosis live longer

Cancer Stage 1 or 2 (in situ/local)



Cancer Stage 3 or 4 (regional/distant)



Continue smoking =
die earlier
Quit smoking = live
longer

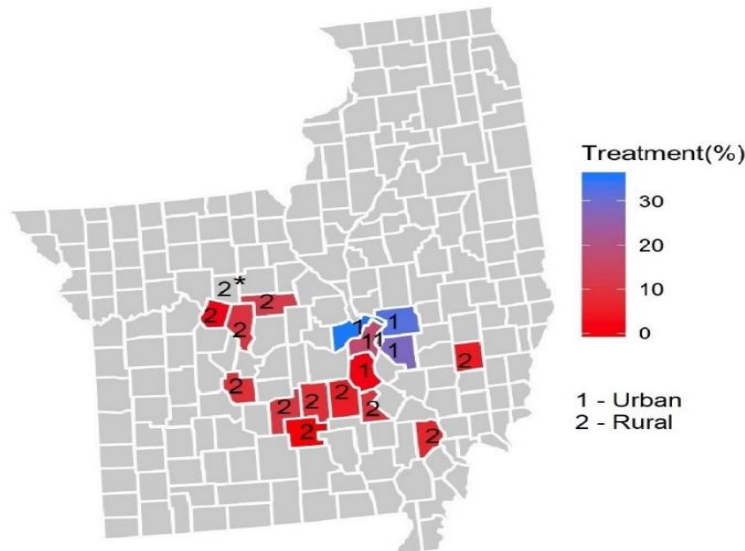
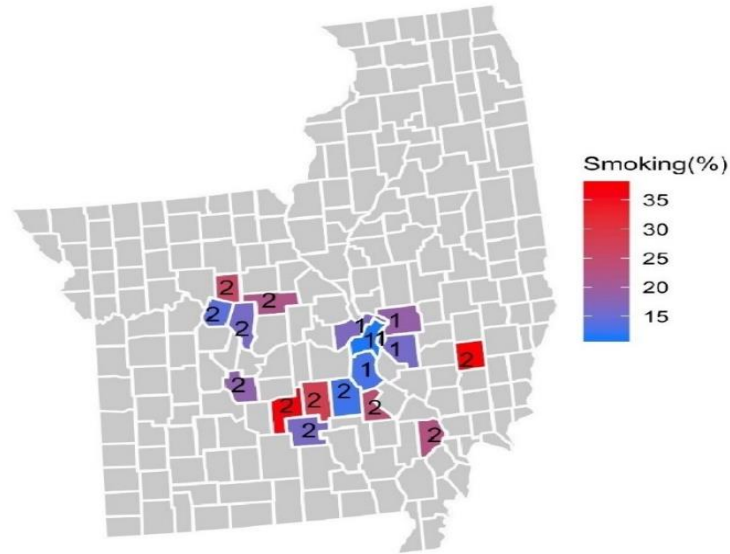
Unpublished data, ~15000 patients

A tremendous need in rural healthcare

Article

Low Burden Strategies Are Needed to Reduce Smoking in Rural Healthcare Settings: A Lesson from Cancer Clinics

Alex T. Ramsey ^{1,2,*}, Timothy B. Baker ³, Giang Pham ¹, Faith Stoneking ¹, Nina Smock ¹, Graham A. Colditz ^{2,4}, Aimee S. James ^{2,4}, Jingxia Liu ^{2,4}, Laura J. Bierut ^{1,2} and Li-Shiun Chen ^{1,2}



	Rural	Urban	
Total Patients	N=50,250	N=424,424	
Smoking	20.7%	13.9%	p < .0001
Total Smokers	N=9,751	N=52,369	
Any Treatment	9.6%	25.8%	p < .0001

Outline

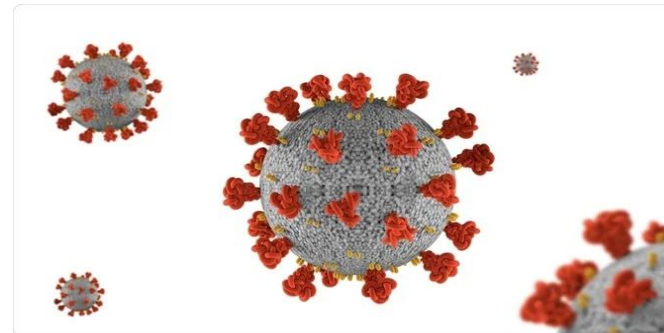
I. Treatment Guidelines



II. Smoking and Vaping



III. Smoking and Covid-19



Outline

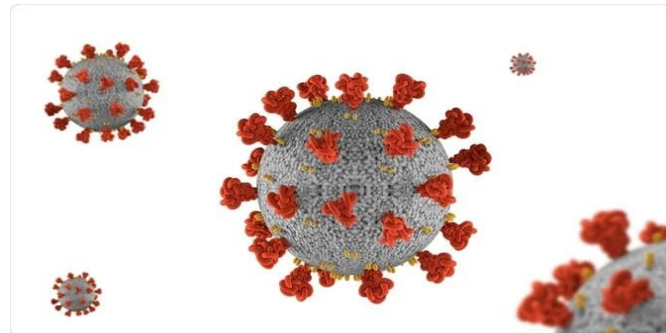
I. Treatment Guidelines



II. Smoking and Vaping



III. Smoking and Covid-19



Implementing Guidelines

Clinical Practice Guideline

Treating Tobacco Use and Dependence: 2008 Update

Guideline Panel

Michael C. Fiore, MD, MPH
(Panel Chair)

Carlos Roberto Jaén, MD, PhD, FAAFP
(Panel Vice Chair)

Timothy B. Baker, PhD
(Senior Scientist)

William C. Bailey, MD, FACP, FCCP

Neal L. Benowitz, MD

Susan J. Curry, PhD

Sally Faith Dorfman, MD, MSHSA

Erika S. Froelicher, PhD, RN, MA, MPH

Michael G. Goldstein, MD

Cheryl G. Heaton, DrPH

Patricia Nez Henderson, MD, MPH

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The NEW ENGLAND JOURNAL of MEDICINE

CLINICAL PRACTICE

Treating Smokers in the Health Care Setting

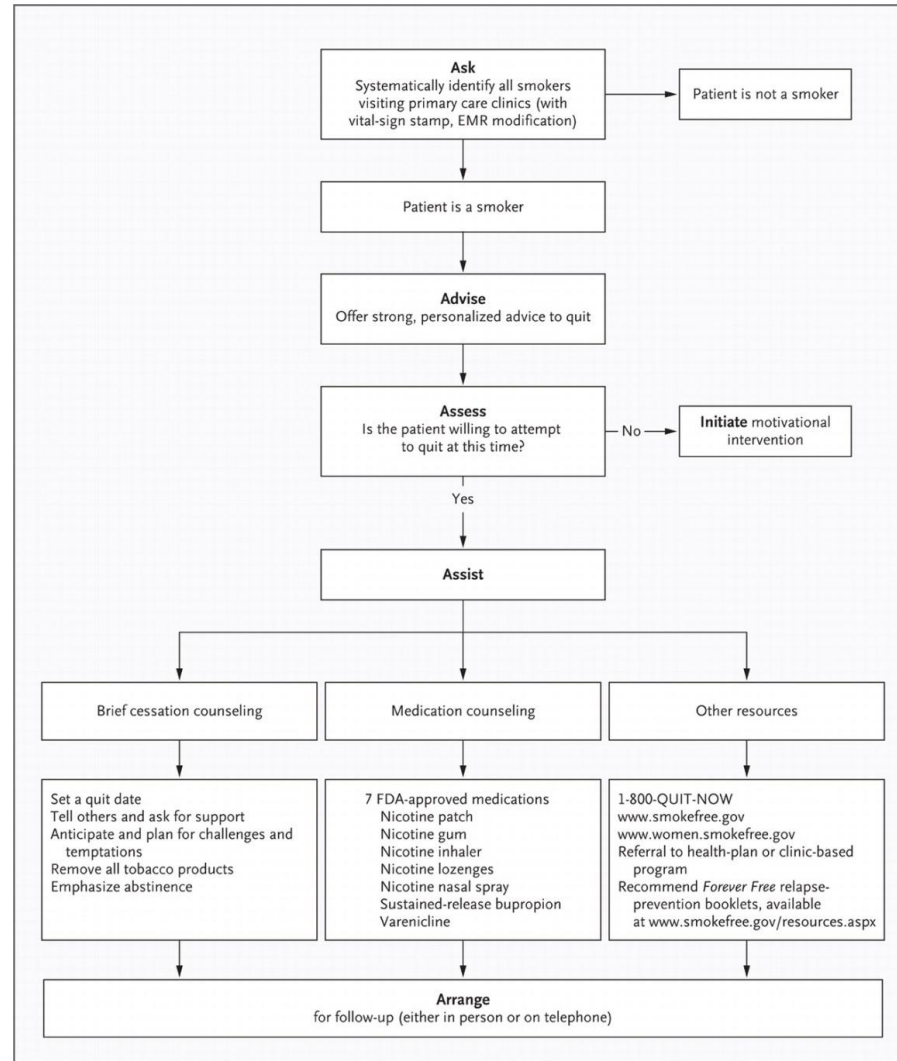
Michael C. Fiore, M.D., M.P.H., M.B.A., and Timothy B. Baker, Ph.D.

This Journal feature begins with a case vignette highlighting a common clinical problem. Evidence supporting various strategies is then presented, followed by a review of formal guidelines, when they exist. The article ends with the authors' clinical recommendations.

A 45-year-old overweight woman with a history of depression sees her physician with a recurrence of acute bronchitis. She began smoking at 15 years of age and now smokes 10 to 15 cigarettes per day. She smokes her first cigarette immediately on awakening. She has made multiple attempts to quit, once briefly using a nicotine patch, but she had a relapse because of strong urges to smoke and weight gain. She is bothered by the cost of cigarettes and is worried about the effects of smoking on her health and that of her children. However, she is reluctant to attempt to quit now, in part because she fears she will not succeed. What would you advise?

THE CLINICAL PROBLEM

5As - Ask, Advise, Assess, Assist, Arrange



FDA Approved Pharmacotherapy



Tobacco Dependence Treatment Medications

Medication	Cautions/Warnings	Side Effects	Dosage	Use	Availability
Combination Nicotine Replacement Therapy (NRT) 1) Patch + lozenge 2) Patch + gum	* Follow instructions for individual medications	See individual medications below	See below	See below	See below
Varenicline (Package insert)	Use with caution in patients: * With significant renal impairment * With serious psychiatric illness * Undergoing dialysis	* Nausea * Insomnia * Abnormal, strange dreams	* Days 1-3: 0.5 mg every morning * Days 4-7: 0.5 mg twice daily * Day 8-end: 1 mg twice daily	* Start 1 week before quit date & use for 3-6 months * Typically quit on day 8 * Optional: quit between days 8 - 35	Prescription only: * Chantix
Nicotine Patch (7 mg, 14 mg or 21 mg)	* Do not use if you have severe eczema or psoriasis	* Local skin reaction * Insomnia	* One patch per day * If ≥ 10 cigs/day: 21 mg 4 wks, 14 mg 2-4 wks, 7 mg 2-4 wks * If < 10 cigs/day: 14 mg 8 wks	* Post-quit: 12 weeks * OPTIONAL Pre-quit: Up to 6 months prior to quit date with smoking reduction	OTC or prescription: * Generic * Nicoderm CQ * Nicotrol
Nicotine Lozenge (2 mg or 4 mg)	* Do not eat or drink 15 minutes before or during use * One lozenge at a time * Limit 20 in 24 hours	* Hiccups * Cough * Heartburn	* If smoke > 30 minutes after waking: 2 mg * If smoke ≤ 30 minutes after waking: 4 mg * Weeks 1-6: 1 every 1-2 hrs * Wks 7-9: 1 every 2-4 hrs * Wks 10-12: 1 every 4-8 hrs	3-6 months * OPTIONAL Pre-quit: Up to 6 months before quit date with smoking reduction * Recommend <u>mini-lozenge</u> due to more rapid nicotine blood level and ease of use	OTC Only: * Generic * Commit
Nicotine Gum (2 mg or 4 mg)	* Caution with dentures * Do not eat or drink 15 minutes before or during use	* Mouth soreness * Stomachache	* 1 piece every 1 to 2 hours * 6-15 pieces per day * If smoke > 30 minutes after waking: 2 mg * If smoke ≤ 30 minutes after waking: 4 mg	* Post-quit: Up to 12 weeks * OPTIONAL Pre-quit: Up to 6 months before quit date with smoking reduction	OTC Only: * Generic * Nicorette
Nicotine Inhaler (Package Insert)	* May irritate mouth/throat at first (improves with use)	* Local irritation of mouth & throat	* 6-16 cartridges/day * Inhale 80 times/cartridge * May save partially-used cartridge for next day	* Post-quit: Up to 6 months; taper at end * OPTIONAL Pre-quit: Up to 6 months before quit date with smoking reduction	Prescription Only: * Nicotrol inhaler
Nicotine Nasal Spray (Package Insert)	* Not for patients with asthma * May irritate nose (improves over time) * May cause dependence	* Nasal irritation	* 1 "dose" = 1 squirt per nostril * 1 to 2 doses/hour; 8 to 40 doses/day * Do NOT inhale	3-6 months; taper at end	Prescription only: * Nicotrol NS
Bupropion SR 150 (Package insert)	Not for use if you: * Use monoamine oxidase (MAO) inhibitor * Use bupropion in any other form * Have a history of seizures * Have a history of eating disorders	* Insomnia * Dry mouth	* Days 1-3: SR 150 mg each morning * Days 4-end: SR 150 mg twice daily	Start 1-2 weeks before quit date; use 2 to 6 months	Prescription Only: * Generic * Zyban * Wellbutrin SR

FDA Approved Pharmacotherapy

Black box warning lifted

Indication for reduction

Randomized Controlled Trial > Lancet. 2016 Jun 18;387(10037):2507-20.
doi: 10.1016/S0140-6736(16)30272-0. Epub 2016 Apr 22.

Neuropsychiatric safety and efficacy of varenicline, bupropion, and nicotine patch in smokers with and without psychiatric disorders (EAGLES): a double-blind, randomised, placebo-controlled clinical trial

Robert M Anthenelli ¹, Neal L Benowitz ², Robert West ³, Lisa St Aubin ⁴, Thomas McRae ⁴, David Lawrence ⁴, John Ascher ⁵, Cristina Russ ⁴, Alok Krishen ⁶, A Eden Evins ⁷

Affiliations + expand

PMID: 27116918 DOI: 10.1016/S0140-6736(16)30272-0

FDA Approved Pharmacotherapy

Continued use despite relapse

Combination > mono therapy

Use training | Parking procedure

Tobacco & Medications

Drug Interactions with Tobacco Smoke

Many interactions between tobacco smoke and medications have been identified. Note that in most cases it is the tobacco smoke—not the nicotine—that causes these drug interactions. Tobacco smoke interacts with medications through pharmacokinetic (PK) and pharmacodynamic (PD) mechanisms. PK interactions affect the absorption, distribution, metabolism, or elimination of other drugs, potentially causing an altered pharmacologic response. The majority of PK interactions with smoking are the result of induction of hepatic cytochrome P450 enzymes (primarily CYP1A2). Smokers may require higher doses of medications that are CYP1A2 substrates. Upon cessation, dose reductions might be needed. PD interactions alter the expected response or actions of other drugs. The amount of tobacco smoking needed to have an effect has not been established, and the assumption is that any smoker is susceptible to the same degree of interaction. **The most clinically significant interactions are depicted in the shaded rows.**

Evidence

1. Combo NRT and varenicline are most effective
 2. Combining medication and counseling is most effective
 3. Nursing intervention is effective
 4. Print material has a small positive effect
- A. Phone counseling works
 - B. Mobile interventions/ texting is effective
 - C. Reduction and abrupt cessation are equally effective



Assist < 3 min works !

Table 12. Meta-analysis: Efficacy of and estimated abstinence rates for various intensity levels of person-to-person contact (n = 43 studies)

Level of contact	Number of arms	Estimated odds ratio (95% C.I.)	Estimated abstinence rate (95% C.I.)
No contact	30	1.0	10.9
Minimal counseling (< 3 minutes)	19	1.3 (1.01, 1.6)	13.4 (10.9, 16.1)
Low intensity counseling (3 - 10 minutes)	16	1.6 (1.2, 2.0)	16.0 (12.8, 19.2)
Higher intensity counseling (> 10 minutes)	55	2.3 (2.0, 2.7)	22.1 (19.4, 24.7)

Assist – more is better

Table 13. Meta-analysis: Efficacy of and estimated abstinence rates for total amount of contact time (n = 35 studies)

Total amount of contact time	Number of arms	Estimated odds ratio (95% C.I.)	Estimated abstinence rate (95% C.I.)
No minutes	16	1.0	11.0
1-3 minutes	12	1.4 (1.1, 1.8)	14.4 (11.3, 17.5)
4-30 minutes	20	1.9 (1.5, 2.3)	18.8 (15.6, 22.0)
31-90 minutes	16	3.0 (2.3, 3.8)	26.5 (21.5, 31.4)
91-300 minutes	16	3.2 (2.3, 4.6)	28.4 (21.3, 35.5)
>300 minutes	15	2.8 (2.0, 3.9)	25.5 (19.2, 31.7)

Counseling on Smoking Cessation

Phase-based chronic care approach

Motivation Phase	Cessation Phase	Maintenance Phase	Relapse Recovery Phase
Smokers are unwilling to make a quit attempt and require interventions that increase their quitting motivation and success such as a reduction goal	Smokers are challenged by severe withdrawal and treatment is aimed at both achieving complete early abstinence and withdrawal suppression	The abstinent smoker is challenged by flagging motivation, medication nonadherence, and environmental prods to smoke; treatment is aimed at provision of support, continued use of treatment, and coping with triggers	The smoker is faced with relapse-related demoralization, escalating smoking, and discontinuation of any attempt to control smoking. Treatment is focused on countering demoralization, smoking reduction vs. cessation, and ultimately a renewed quit attempt



1-866-QUIT-YES



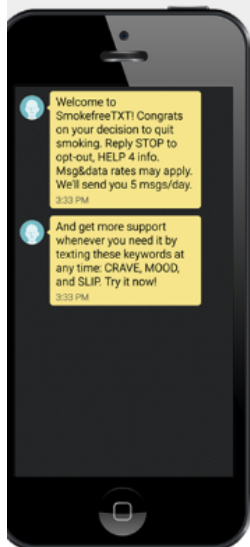
Chat Unavailable

MENU

YOUR LIFE IS ON THE LINE.

REQUEST A CALL





Smokefree.gov offers free text messaging programs that give 24/7 encouragement, advice, and tips for becoming smokefree and being healthier.

Find the program that meets your needs. You can sign up or opt-out at any time.

SmokefreeTXT

- SmokefreeTXT is for adults who want to quit smoking.
- The program lasts 6-8 weeks, depending on your quit date. You will receive 3-5 messages per day.
- The text messages provide tips, advice, and encouragement to help you overcome challenges and stay motivated.
- Use the keywords for extra help at any time. Text CRAVE, MOOD, or SLIP to 47848.

[Sign Up Now](#)

PRACTICE QUIT

Practice quitting for 1, 3, or 5 days at a time and build up to quitting for good.

[Sign Up Now](#)

DAILY CHALLENGES

Build skills without quitting with a challenge each day for one week.

[Sign Up Now](#)

ON-DEMAND SUPPORT

Skip the sign-up and get a special message right now.

Text a keyword to 47848:

- Text **CRAVE** if you need help beating a craving
- Text **MOOD** if you need an emotional boost
- Text **SLIP** if you need help getting back on track after you smoke



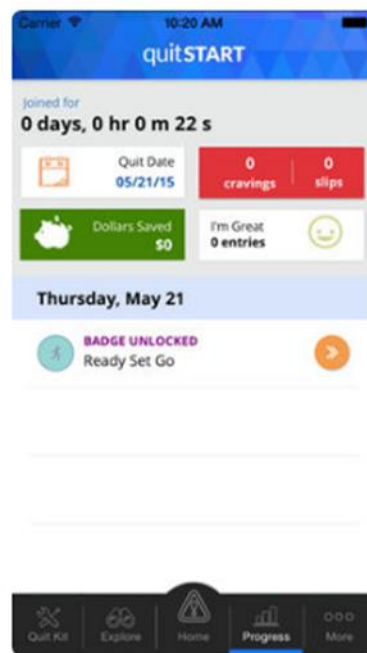
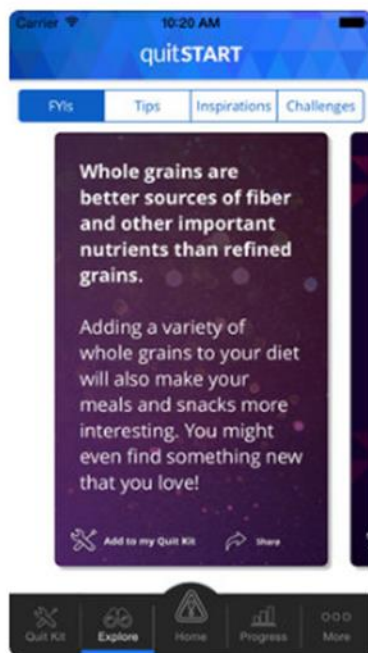
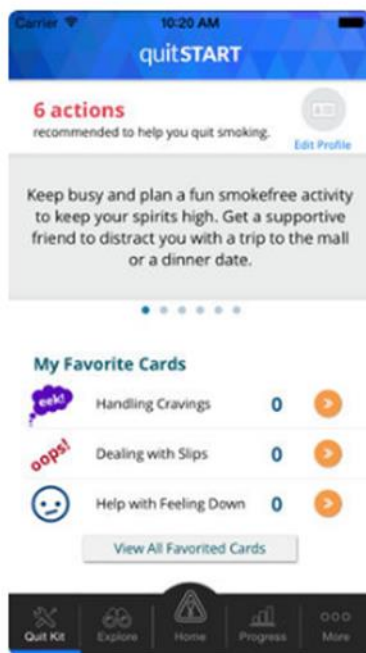
quitSTART - Quit Smoking 12+

ICF International

★★★★☆: 13 Ratings

Free

iPhone Screenshots



Outline

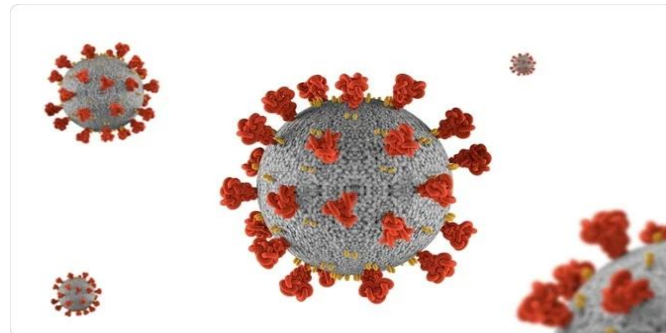
I. Treatment Guidelines



II. Smoking and Vaping

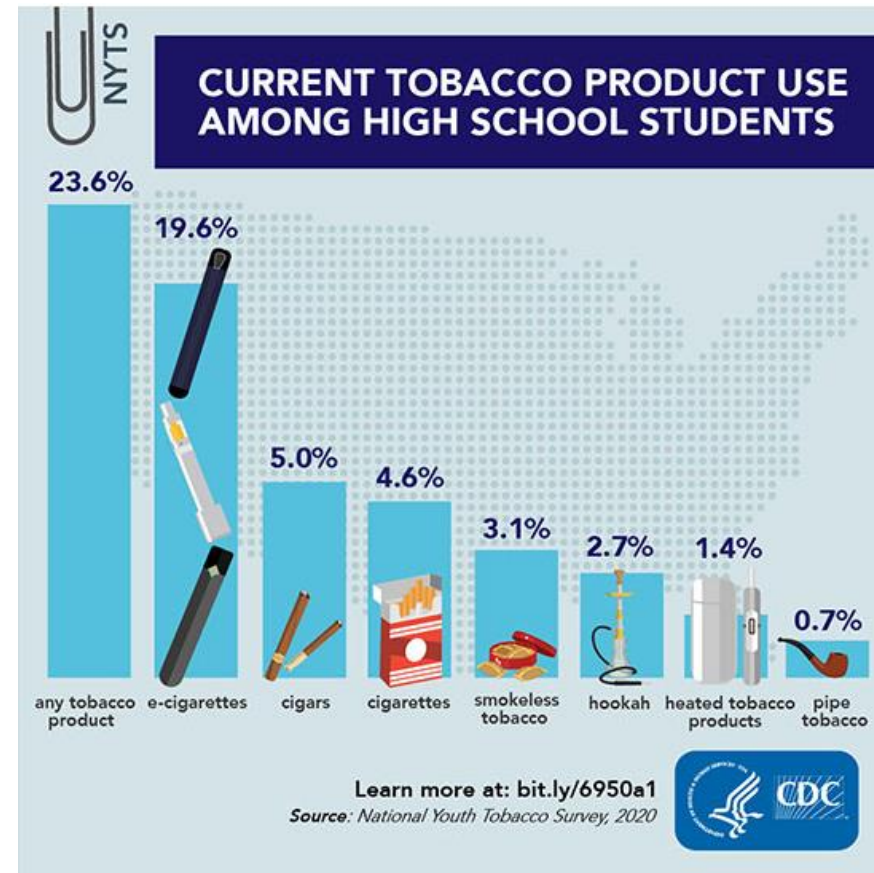


III. Smoking and Covid-19



Vaping is Common

- Opioid
 - 10 million misusers
 - 70,239 deaths/yr
- Tobacco
 - 39 million users
 - Kills half of its users
 - 480,000 deaths/yr
 - Causes >50% cancer death
- Nicotine in youth



Vaping



Who vapes – younger never smokers

Table 1. Prevalence of Current Vaping by Cigarette Smoking Status, 2018-2019 Tobacco Use Supplement to the Current Population Survey^a

Group	No. (weighted %)	Current vaping		Current cigarette smokers (n = 15 982) ^b		Former cigarette smokers (n = 28 890) ^c		Never cigarette smokers (n = 90 339) ^d		
		All (N = 135 211)	Unweighted No.	Weighted No (%) [95% CI] ^e	Unweighted No.	Weighted No. (%) [95% CI] ^f	Unweighted No.	Weighted, No. (%) [95% CI] ^g	Unweighted No.	Weighted No. (%) [95% CI] ^h
Overall	135 211 (100.0) ⁱ	2747	5 666 729 (2.3) [2.2-2.4]	1158	2 214 741 (8.1) [7.6-8.7]	1142	2 145 059 (4.8) [4.5-5.1]	447	1 306 929 (0.8) [0.7-0.8]	
Age group, y										
18-24	7557 (11.9)	459	1 555 926 (5.3) [4.8-6.0]	127	392 325 (18.4) [15.0-22.3]	108	334 704 (26.8) [21.5-32.8]	224	828 896 (3.2) [2.7-3.8]	
25-34	21 248 (17.9)	753	1 566 900 (3.6) [3.3-3.9]	286	628 406 (11.9) [10.6-13.4]	330	626 856 (13.5) [11.8-15.4]	137	311 637 (0.9) [0.8-1.1]	
35-44	22 131 (16.3)	518	925 398 (2.3) [2.1-2.6]	228	390 590 (7.7) [6.6-8.9]	251	450 511 (7.2) [6.1-8.4]	39	84 297 (0.3) [0.2-0.4]	
45-54	20 632 (16.3)	403	693 564 (1.7) [1.5-2.0]	209	349 453 (6.6) [5.6-7.7]	168	294 972 (4.6) [3.8-5.5]	26	49 139 (0.2) [0.1-0.3]	
55-64	25 563 (16.8)	385	61 293 (1.5) [1.3-1.7]	202	316 195 (5.3) [4.4-6.3]	169	270 736 (2.9) [2.4-3.5]	14	26 001 (0.1) [0.1-0.2]	
≥65	38 080 (20.7)	229	312 010 (0.6) [0.5-0.7]	106	137 772 (3.9) [3.1-4.8]	116	167 279 (1.0) [0.8-1.2]	7	6959 (0.0) [0.0-0.1]	

From: Demographic Characteristics, Cigarette Smoking, and e-Cigarette Use Among US Adults

Prevalence of Current Vaping by Cigarette Smoking Status, 2018-2019 Tobacco Use Supplement to the Current Population Survey^{aa} Current vaping was defined as ever use of an e-cigarette and now vaping every day or some days. Current smokers had smoked 100 lifetime cigarettes and now smoked every day or some days; former smokers had smoked 100 lifetime cigarettes and now smoked not at all; never smokers had not smoked 100 lifetime cigarettes.

Any Harm ?

What are the health effects of using e-cigarettes?

E-cigarettes are still fairly new, and scientists are still learning about their long-term health effects. Here is what we know now.

Most e-cigarettes contain nicotine, which has known health effects.¹

- Nicotine is highly addictive.
- Nicotine is toxic to developing fetuses.
- Nicotine can harm adolescent and young adult brain development, which continues into the early to mid-20s.
- Nicotine is a health danger for pregnant women and their developing babies.




Besides nicotine, e-cigarette aerosol can contain substances that harm the body.¹

- This includes cancer-causing chemicals and tiny particles that reach deep into lungs. However, e-cigarette aerosol generally contains fewer harmful chemicals than smoke from burned tobacco products.



E-cigarettes can cause unintended injuries.¹

- Defective e-cigarette batteries have caused fires and explosions, some of which have resulted in serious injuries. Most explosions happened when the e-cigarette batteries were being charged.
 - The Food and Drug Administration (FDA) collects data to help address this issue. You can report an e-cigarette explosion, or any other unexpected health or safety issue with an e-cigarette, [here](#) .
- In addition, acute nicotine exposure can be toxic. Children and adults have been poisoned by swallowing, breathing, or absorbing e-cigarette liquid through their skin or eyes.



Vaping or Cigarette

Are e-cigarettes less harmful than regular cigarettes?

Yes—but that doesn't mean e-cigarettes are safe. E-cigarette aerosol generally contains fewer toxic chemicals than the [deadly mix of 7,000 chemicals in smoke from regular cigarettes](#).³ However, e-cigarette aerosol is not harmless. It can contain harmful and potentially harmful substances, including nicotine, heavy metals like lead, volatile organic compounds, and cancer-causing agents.¹



Switch vs. Dual Use

Can e-cigarettes help adults quit smoking cigarettes?



E-cigarettes are not currently approved by the FDA as a quit smoking aid. The U.S. Preventive Services Task Force, a group of health experts that makes recommendations about preventive health care, has [concluded](#) that evidence is insufficient to recommend e-cigarettes for smoking cessation in adults, including pregnant women.³

However, e-cigarettes may help non-pregnant adult smokers if used as a complete substitute for all cigarettes and other smoked tobacco products.



American Cancer Society Position Statement on Electronic Cigarettes

Outline

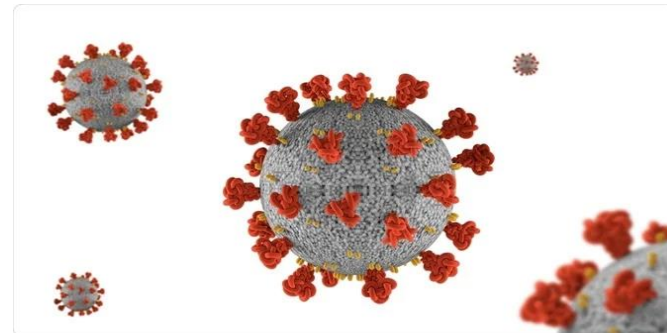
I. Treatment Guidelines



II. Smoking and Vaping

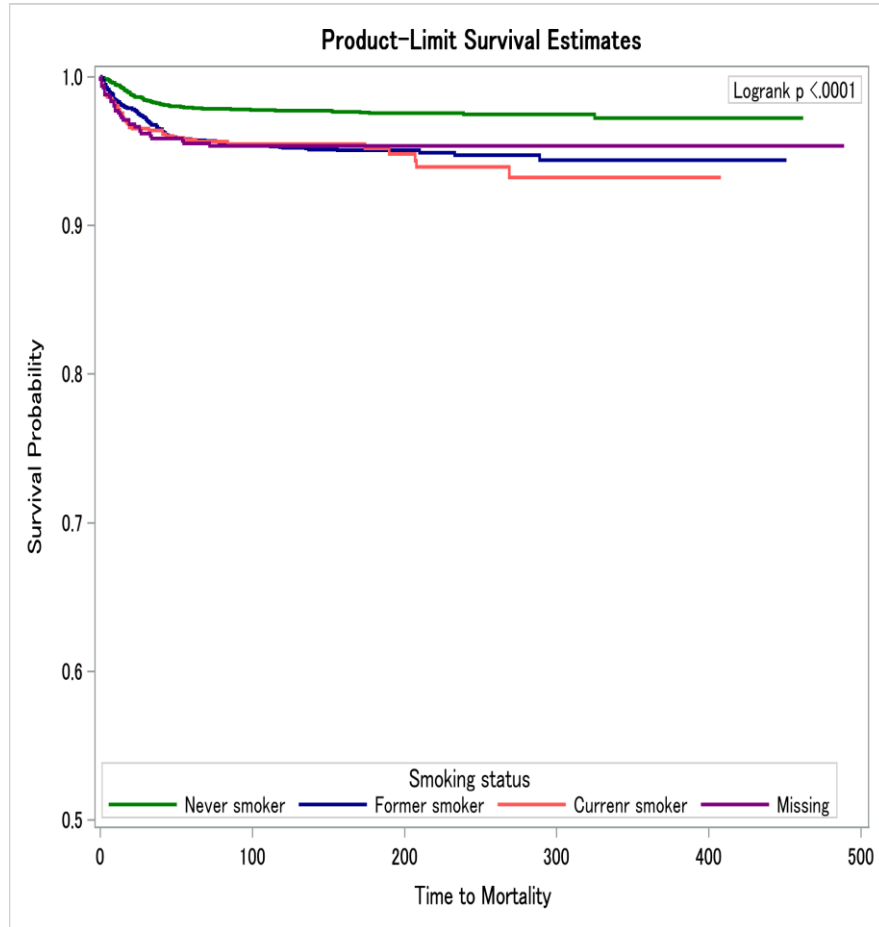


III. Smoking and Covid-19

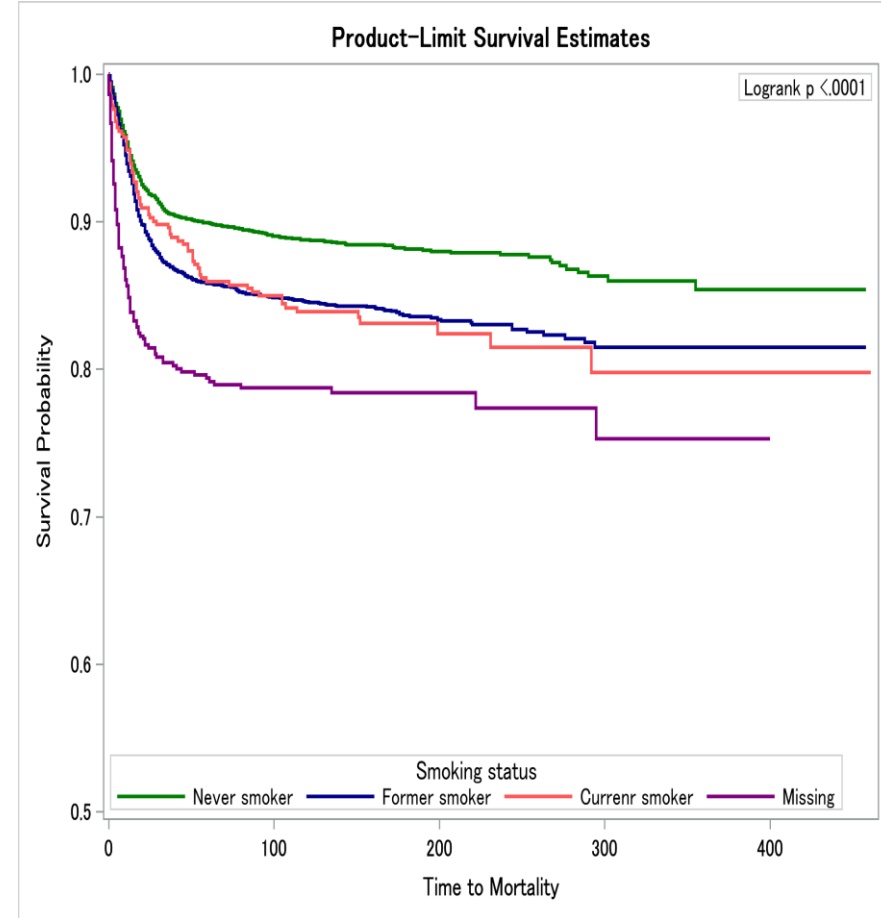


Tobacco smoking and Covid survival

Age 51-65



Age >65



Vision

Every patient receives support to quit smoking for the best treatment and quality of life.

Contribution

- Tobacco treatment saves lives
- Innovate to incorporate tobacco treatment into healthcare
- Reduce healthy disparity in rural communities

