

NCI's Smokefree.gov Initiative: Using Digital Technology to Help Smokers Quit

Background

Tobacco Control

- Tobacco use remains the leading preventable cause of death in the U.S.¹
 - 40% of all cancer diagnoses²
 - One out of three cancer deaths¹
- Population-based interventions to reduce tobacco use³
 - High levels of tobacco taxes
 - Comprehensive smokefree policies
 - Complete bans on tobacco marketing
 - Prominent pictorial health warnings
 - Well-designed and implemented anti-tobacco mass media campaigns
 - Provision of population-wide tobacco cessation programs

¹ USDHHS. The Health Consequences of Smoking: 50 Years of Progress. A Report of the Surgeon General. Atlanta, GA: USDHHS, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014

² CDC Vital Signs, November, 2016

³ U.S. National Cancer Institute and World Health Organization. The Economics of Tobacco and Tobacco Control. National Cancer Institute Tobacco Control Monograph 21, USDHHS, National Institutes of Health, National Cancer Institute; and Geneva, CH: World Health Organization, 2016.

Tobacco Cessation Interventions

- Evidence-based cessation treatments
 - Counseling
 - Pharmacotherapy
- Historically, cessation treatment has been delivered via
 - Self-help
 - Face-to-face counseling
 - Telephone quitlines
 - NCI's Cancer Information Service (877-44U-QUIT)
 - 1-800-QUIT-NOW

Tobacco Cessation Interventions: Challenges

- Evidence-based cessation treatments are effective, but only a small percentage of smokers use them due to
 - Structural barriers
 - Lack of awareness
 - Lack of interest
- Capacity of traditional treatment modalities is limited
 - Cost
 - Staff/resources

Digital Technologies for Smoking Cessation

- Internet and mobile technologies can be leveraged to reach and engage smokers in assisted cessation efforts
 - Reduced structural barriers to treatment
 - Low cost
 - Scalable
 - Confidential/Anonymous
 - Treatment is available on-demand
 - Treatment can be highly tailored based on user data

Common Digital Health Platforms

- Mobile optimized websites
- Text message-based interventions
- Smartphone applications (mobile apps)
- Social media



Common Digital Health Platforms

- **Mobile optimized websites**
 - Sufficient evidence to support use¹
- **Text message-based interventions**
 - Sufficient evidence to support use²
- Smartphone applications (mobile apps)
- Social media



¹ Taylor et al; *Cochrane Database Syst Rev.* 2017

² Sassenburg et al.; *JMIR Mhealth Uhealth.* 2016 Apr-Jun; 4(2): e49

Opportunity for Broad Reach

- Widely available communication technologies
- 90% of adult Americans use the Internet¹
 - In 2017, one third of all smokers looked online for information about quitting smoking²
- 95% of adult Americans own a cell phone³
 - 77% have smartphones³
- Potential to reach groups that are traditionally underserved
 - Rural
 - Low-SES
 - Young adults

¹ <https://www.pewresearch.org/fact-tank/2019/04/22/some-americans-dont-use-the-internet-who-are-they/>

² Graham & Amato, *Nicotine Tob Res.* 2019 Feb; 21(2): 249–252.

³ Mobile Fact Sheet." Pew Research Center, Washington DC February 5, 2018. <http://www.pewinternet.org/fact-sheet/mobile/>.

Smokefree.gov Resources

Smokefree.gov Initiative: Overview

- **Smokefree.gov** is a suite of web- and mobile-based smoking cessation resources that provide **evidence-based** information and support to smokers who want to quit
 - Resources include:
 - Mobile optimized websites
 - Text-based intervention programs
 - Smartphone apps
 - Social media platforms
- Managed by NCI's Tobacco Control Research Branch
- Content follows US Clinical Practice Guidelines¹
- Freely available to the public

¹Treating Tobacco Use and Dependence—2008 Update. Content last reviewed October 2014. Agency for Healthcare Research and Quality, Rockville, MD.

<http://www.ahrq.gov/professionals/clinicians-providers/guidelines-recommendations/tobacco/clinicians/update/correctadd.htm>

Smokefree.gov Initiative: Reach

- Smokefree.gov resources reach ~6 million people per year
 - Smokefree.gov website: 3,618,942 users in 2018
 - SmokefreeTXT: 42,069 subscribers in 2018
 - quitSTART & QuitGuide: 56,809 downloads in 2018
 - Social media platforms: 1,682,899 people reached in 2018

¹Treating Tobacco Use and Dependence—2008 Update. Content last reviewed October 2014. Agency for Healthcare Research and Quality, Rockville, MD.

<http://www.ahrq.gov/professionals/clinicians-providers/guidelines-recommendations/tobacco/clinicians/update/correctadd.htm>



Federal Partners

- **FDA**

- Every Try Counts – Repeat Quitters
- The Real Cost – Teens
- This Free Life – LGBT people

- **CDC**

- Tips From Former Smokers



Smokefree.gov Web-based Resources



Quitting is a Journey.

On this site you'll find support, tips, tools, and expert advice to help you or someone you love quit smoking.

Get Support 24/7

Get quit smoking help on your smartphone! Our free quitSTART and QuitGuide apps offer personalized support and motivation to help you quit for good.



[Learn More](#)

Tools & Tips

Learn about different tools to help you quit and how to use them.



ARTICLES & INFORMATION



How To Manage Cravings

When you have a craving, it's important to have a plan to beat that urge to smoke.



Benefits Of Quitting

Quitting smoking can help most of the major parts of your body: from your brain to your DNA.



Tips For Slips

A lot of people slip and smoke a cigarette when trying to quit. Don't get discouraged, you can get back on track.

Smokefree.gov Web-based Resources

Mi familia, mi salud, mi vida. Mi tiempo para dejar de fumar. Búsqueda

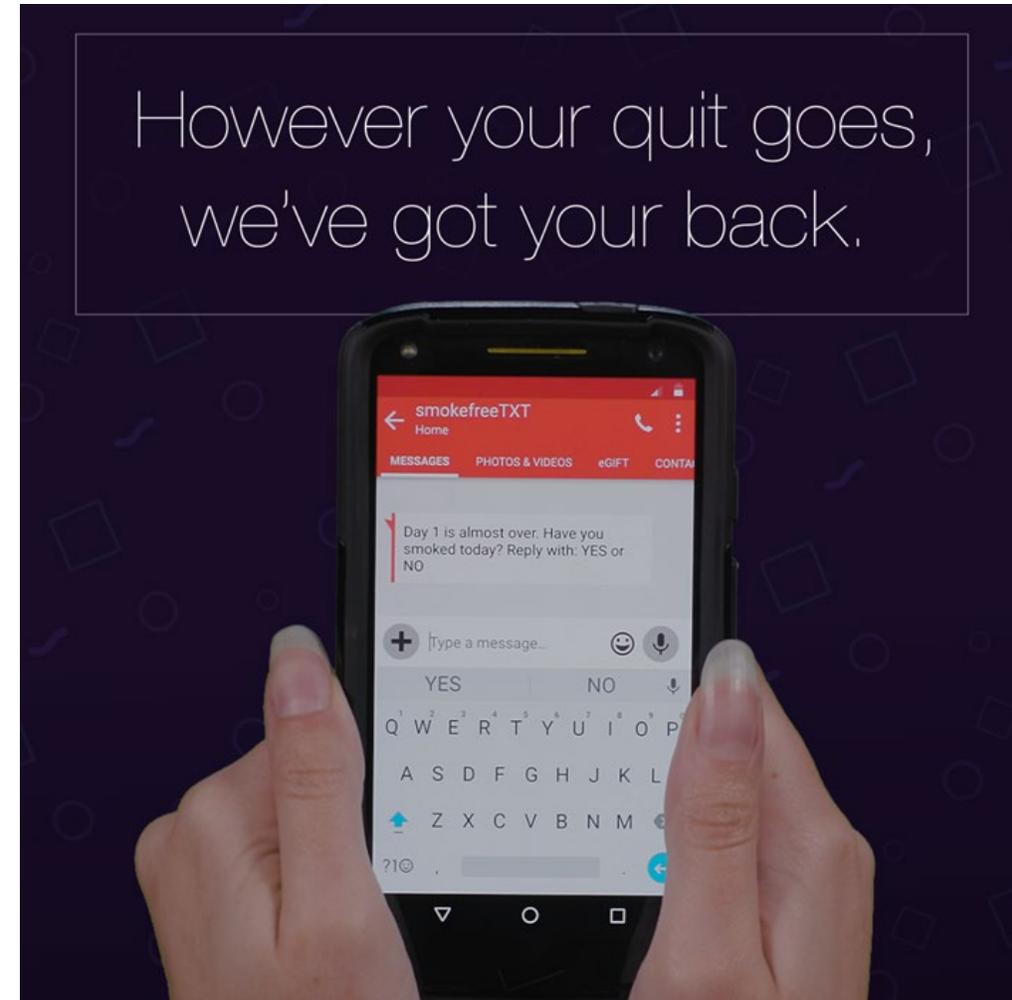
smokefreeespañol Deje de fumar hoy Prepárese para dejar de fumar Aprenda más Ayude a alguien

- Yo estoy listo para parar**
- Quiero ayudar a un fumador**
- Yo tengo antojos de tabaco**
- Haga un plan para dejar de fumar**
- Me deslicé**
- Quiero proteger a mi familia**
- Yo fumo a veces**
- Dejar de fumar con SmokefreeTXT**

SmokefreeTXT Plan Para Dejar smokefreewomen smokefreeteen smokefree.gov smokefree60+

SmokefreeTXT

- Designed for people who are prepared to set a quit date and make a long-term quit attempt
- Provides tips, encouragement, and support to smokers who are trying to quit
- 6-8 week program
- 3-5 messages per day
- Fully automated
- On-demand support via keywords
- >200,000 subscriptions to date



Smokefree Mobile Applications

- Two apps for iPhone and android
 - QuitGuide – Launched Dec 2010
 - quitSTART – Launched Jan 2012
- Real-time resources
 - On-demand craving and mood support
 - Tracking & monitoring
 - Geolocation-based & time-based messaging
 - Distractions & challenges
- Both apps are meta-tagged to allow tracking of user behavior
- Total downloads: 205,014



Social Media

- Raises awareness of Smokefree resources
- Enables targeted outreach to hard to reach populations
- Provides access to a community of other smokers trying to quit
- Builds the Smokefree brand



Future Directions

- Program optimization
 - Data-driven optimizations based on user data
- Integration of SmokefreeTXT with Electronic Health Records
 - Closed Loop Electronic Referral
 - Digital “Toolkit”
- Mobile Apps
 - Ecological Momentary Assessment
 - Just In Time Interventions
- Chatbots and natural language processing
 - Creating a sophisticated, automated resource



NATIONAL
CANCER
INSTITUTE

smokefree.gov