









CDC's *Tips from Former Smokers*™ Campaign: Impact on Quitting Behaviors and its Cost Effectiveness

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Background

Tips From Former Smokers™ Campaign



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Tips™ Campaign Goals



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Tips™ Campaign Audiences



Primary Audience

- Smokers of Low Socio-Economic Status, 18 to 54 years old

Secondary Audiences

- Families
- Health care providers
- Military members
- Faith-based groups (religious organizations)

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Tips™ Key Messages



Smoking causes immediate damage to your body which can lead to long-term health problems



For each person who dies from a smoking-related illness, 30+ people are living with illnesses caused by smoking



Now is the time to quit smoking. Free help is available.

Source: U.S. Department of Health and Human Services. *The Health Consequences of Smoking: 50 Years of Progress. A Report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014. Printed with corrections, January 2014.

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About the Ads

Feature a wide variety of people

All include a call to action

5 Categories of Content:

- Health outcomes
- Loss of loved one
- Secondhand smoke
- Mental health
- Supportive cessation



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TipsTM Campaign Channels

- TV
- Radio
- Print
- Out-of-home
- Digital Media
- Social Media



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Brian's TV Ad



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Evaluations and Results

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*Tips*TM Evaluation Methods and Principles

- Evaluation designs capable of detecting campaign effects that are scientifically defensible
- Rely on external measures of campaign exposure, supplemented with self-reported exposure data
- Secondary data, such as quitline call volume data

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*Tips*TM Survey Data and Samples

- Nationally representative online surveys of cigarette smokers and nonsmokers
- Online mode allows *Tips* media content to be shown to assess exposure and reactions
- Large address based probability samples of U.S. households
- Cost-efficient relative to more complex methods such as in-person surveys

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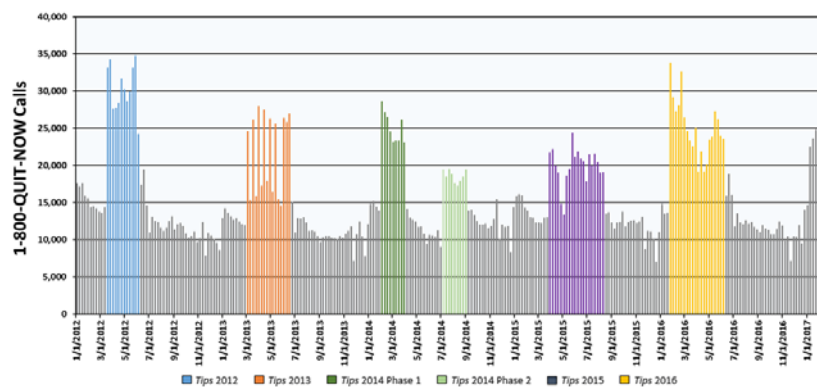
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Quitting Behaviors

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National 1-800-QUIT-NOW Call Volume March 2012 – July 2016



Source: NCI quitline call volume weekly reports

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2012 *Tips*TM Evaluation Design

- Pre-post cohort design
- 3,051 adult smokers completed baseline and follow-up surveys
- Primary outcome measure: Incidence of a quit attempt in past 3 months
 - Incidence of a quit attempt in past 3 months among smokers
- Statistical analysis
 - Quit attempts estimated as function of post-campaign time
 - Analysis adjusts for individual-, market-, and state level confounders used in other similar analyses

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2012 *Tips* Results

☐ Smokers

- 1.64 million attempted to quit
- 100,000 quit for good

☐ Non-Smokers



Talking to others
about the dangers
of smoking



Recommending
cessation resources to
friends or family

Articles

Effect of the first federally funded US antismoking national media campaign

ToniAlto, Kevin C. Davis, Robert L. Alexander, Teryl Pechacek, Rebecca Bunnell

Summary
Background Every year, smoking kills more than 5 million people globally, including 460 000 people in the USA, where the long-term decline in smoking prevalence has slowed. The US Centers for Disease Control and Prevention (CDC) delivered a national, 3-month antismoking campaign called *Tips From Former Smokers* (*Tips*) that started in March, 2012, in which hard-hitting, emotionally evocative television advertising was featured, depicting smoking-related suffering in real people. We aimed to assess the effects of the *Tips* campaign.

Methods We conducted baseline and follow-up surveys of nationally representative cohorts of adult smokers and non-smokers. The national effect of the *Tips* campaign was estimated by applying rates of change in the cohort before and after the campaign to US census data.

Findings 3051 smokers and 2220 non-smokers completed baseline and follow-up assessments. 2395 (78%) smokers and 1632 (74%) non-smokers recalled seeing at least one *Tips* advertisement on television during the 3-month campaign. Quit attempts among smokers rose from 11.1% (95% CI 10.3–12.1) at baseline to 14.4% (14.4–15.7) at follow-up, a 32% relative increase. The prevalence of abstinence at follow-up among smokers who made a quit attempt was 13.4% (95% CI 12.5–14.2). Nationally, an estimated 1.64 million additional smokers made a quit attempt, and 220 000 (95% CI 159 000–282 000) remained abstinent at follow-up. Recommendations by non-smokers to quit grew from 2.4% at baseline to 5.1% at follow-up, and the prevalence of people talking with friends and family about the dangers of smoking rose from 11.9% (95% CI 11.3–12.5) to 15.2% (14.4–16.0), resulting in an estimated 4.7 million additional non-smokers recommending cessation services and more than 6 million talking about the dangers of smoking.

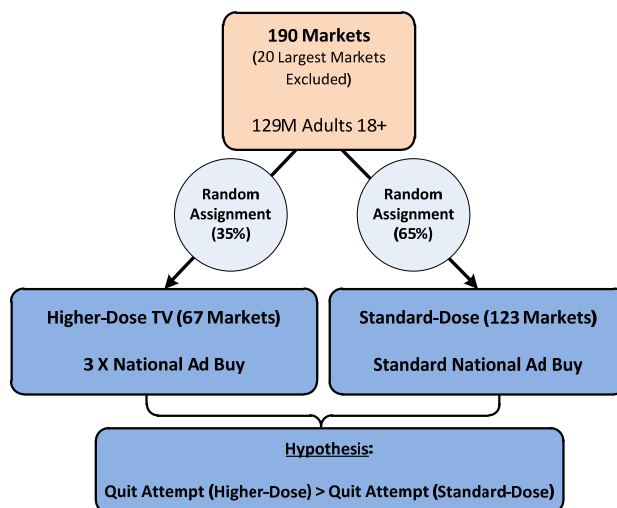
Copyright © 2013 Elsevier Ltd. All rights reserved. [http://dx.doi.org/10.1016/S0140-6736\(13\)61686-4](http://dx.doi.org/10.1016/S0140-6736(13)61686-4)

Source: McAfee T, Davis KC, Alexander RL, Pechacek TF, Bunnell R. Effect of the First Federally Funded US Antismoking National Media Campaign. *The Lancet*. 2013 Sept 9. doi: [http://dx.doi.org/10.1016/S0140-6736\(13\)61686-4](http://dx.doi.org/10.1016/S0140-6736(13)61686-4)

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2013 *Tips*TM Higher-Dose Media Randomization



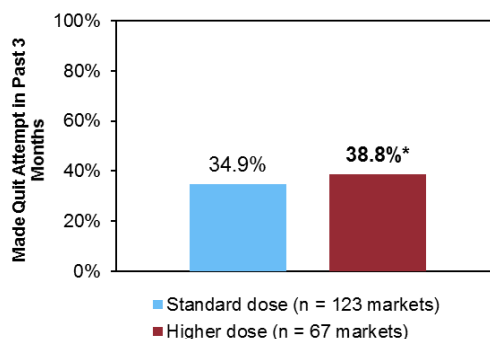
Source: McAfee T, Davis KC, Shafer P, Patel D, Alexander R, Bunnell R. Increasing the dose of television advertising in a national antismoking media campaign: results from a randomised field trial. *Tob Control*. 2015 Dec 16. doi:10.1136/tobaccocontrol-2015-052517.

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Higher-Dose Advertising: Quit Attempt Rates

- Higher-dose TV created a 3.9 percentage-point increase in quit attempts, based on probability sample of U.S. households



Source: McAfee T, Davis KC, Shafer P, Patel D, Alexander R, Bunnell R. Increasing the dose of television advertising in a national antismoking media campaign: results from a randomised field trial. *Tob Control*. 2015 Dec 16. doi:10.1136/tobaccocontrol-2015-052517.

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2014 *Tips*TM Evaluation Design

- Campaign aired in two 9-week phases
- Evaluation focused on pre-post cohort design for Phase 2, mirroring 2012 *Tips*TM evaluation
- Included new address-based panel of smokers that have never participated in similar surveys
- Long term follow-up to estimate 6 month quit rate

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Impact of 2014 *Tips*TM Phase 2 on Quit Attempts

Outcome	Baseline	Follow-up
Incidence of quit attempts in past 3 months (in cohort)	37.5% [36.8–38.2]	41.9% [41.2–42.7]
Campaign-attributable population increase in quit attempts	1.83M [1.81M–1.85M]	
Campaign-attributable sustained quits (based on 5.7% sustained quit rate)	104K [103K–106K]	

Source: Neff L, Patel D, Davis K, Ridgeway W, Shafer P, Cox S. Evaluation of the National *Tips From Former Smokers Campaign*: the 2014 Longitudinal Cohort. Preventing Chronic Disease 2016. Mar 24. doi: <http://dx.doi.org/10.5888/pcd13.150556>

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Cost Effectiveness

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2012 *Tips*[™] Cost Effectiveness

Cost of the
campaign per
smoker who quit
\$480

Cost of the 2012
Tips campaign
per year of life
saved: \$393

Premature
deaths averted:
at least 17,000

Source: Xu, X., Alexander, R.L., Simpson, S.A., Goats, S., Nonnemaker, J.M., Davis, K. C., & McAfee, T. (2014). A cost-effectiveness analysis of the first federally funded antismoking campaign. *American Journal of Preventive Medicine*, 48(3):318-325.

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2013 *Tips*™ Higher-Dose Cost Effectiveness

- Costs and incremental health benefits of higher-dose advertising in 67 local markets

Cost of higher-dose advertising per smoker who quit \$930

Cost of higher-dose advertising per year of life saved: \$1,400

Premature deaths averted: at least 2,563

- Costs and incremental health benefits of higher-dose advertising if implemented nationally

Cost of higher-dose advertising per smoker who quit \$480

Cost of higher-dose advertising per year of life saved: \$550

Premature deaths averted: at least 8,111

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Recent Findings

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*Tips*TM Impact on Cessation Behaviors and Intentions to Quit, 2012 – 2015

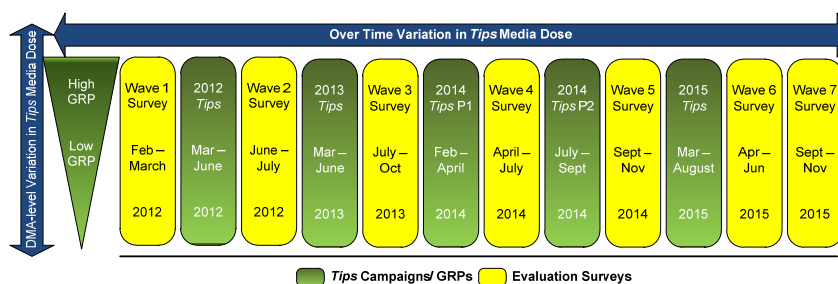
- Objective: Examine average, collective effect of Tips campaign over 4-year period, 2012–2015
- Calculate more specific dose-response effects and compare to similar campaigns in different geographic settings
- Draw conclusions and implications for best practices in antismoking campaign implementation

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Analytic Design

- Examine how varied doses of media campaign impact quit attempts and intentions to quit over time



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Model Results

- Increase of 1,000 GRPs per quarter associated with:
 - 14% increase in likelihood of a quit attempt
 - 12% increase in intention to quit in the next 30 days
- Effect of campaign GRPs does not differ across subgroups of race/ethnicity, mental health, or campaign year

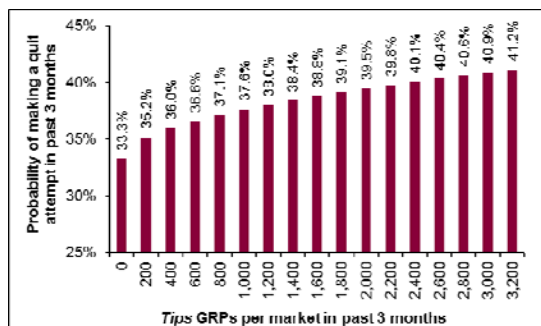
Odds Ratios for Impact of <i>Tips</i> GRPs on Quit Attempts and Intentions to Quit				
Independent Variable	Made Quit Attempt in Past 3 Months		Intends to Quit Smoking in Next 30 Days	
	Linear [95% CI]	Non-linear [95% CI]	Linear [95% CI]	Non-linear [95% CI]
Past-quarter <i>Tips</i> TV GRPs (in 1,000s)	1.14 [1.05–1.23]	1.23 [1.11–1.36]	1.12 [1.00–1.25]	1.17 [1.02–1.36]

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Dose-Response Curve for Quit Attempts

- Predicted probabilities of past 3-month quit attempts:
 - No campaign (0 GRPs) = 33.3%
 - Midpoint of CDC Best Practice recommendation (1,000 GRPs) = 37.6%
 - Doubling of CDC Best Practice recommendation (2,000 GRPs) = 39.5%
 - Maximum GRP observed during campaign (3,200 GRPs) = 41.2%



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Discussion of Dose-Response

- Significant positive relationship between GRPs and higher quit attempts and intentions over time
- Estimated effects are similar to those found in other studies and geographic settings
- Campaign effects did not differ by subgroups or across time

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Implications and Discussion of *Tips*TM Evaluation

- Evaluations show similar findings using multiple analytic methods
- Strong health consequences messages are effective when delivered at CDC-recommended levels (800–1,200 GRPs/quarter)
- Given large population of smokers in the United States (36.5M as of 2015), mass media campaigns to reduce smoking remain important for public health

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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.