

# **Tobacco Quitline:**

## **Implications for Reduction of Alcohol Use**

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**Moore's Cancer Center  
University of California, San Diego**

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# What is a Quitline?

- **Telephone counseling for tobacco cessation**
  - Accessibility
- **Centralized operation: operation efficiency**
  - 1-800 number, extended hours



# Bridging Clinical and Public Health Approaches

**Clinical  
Model**



**Public Health  
Model**



SPECIAL ARTICLE



# Evidence of Real-World Effectiveness of a Telephone Quitline for Smokers

**Authors:** Shu-Hong Zhu, Ph.D., Christopher M. Anderson, B.A., Gary J. Tedeschi, Ph.D., Bradley Rosbrook, M.S., Cynthia E. Johnson, B.A., Michael Byrd, M.A., and Elsa Gutiérrez-Terrell, M.A. [Author Info & Affiliations](#)

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## ABSTRACT

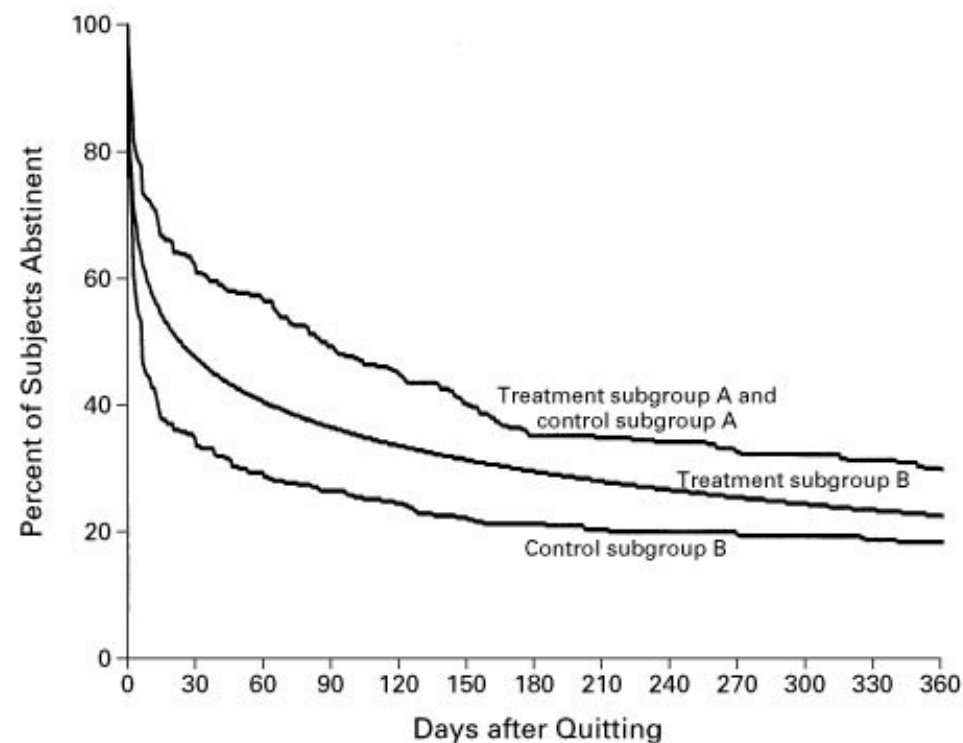
**Background** Telephone services that offer smoking-cessation counseling (quitlines) have proliferated in recent years, encouraged by positive results of clinical trials. The question remains, however, whether those results can be translated into real-world effectiveness.

**Methods** We embedded a randomized, controlled trial into the ongoing service of the California Smokers' Helpline. Callers were randomly assigned to a treatment group (1973 callers) or a control group (1309 callers). All participants received self-help materials. Those in the treatment group were assigned to receive up to seven counseling sessions; those in the control group could also receive counseling if they called back for it after randomization.

**Results** Counseling was provided to 72.1 percent of those in the treatment group and 31.6 percent of those in the control group (mean, 3.0 sessions). The rates of abstinence for 1, 3, 6, and 12 months, according to an intention-to-treat analysis, were 23.7 percent, 17.9 percent, 12.8 percent, and 9.1 percent, respectively, for those in the treatment group and 16.5 percent, 12.1 percent, 8.6 percent, and 6.9 percent, respectively, for those in the control group ( $P < 0.001$ ). Analyses factoring out both the subgroup of control subjects who received counseling and the corresponding treat-

**A**MONG services recommended by the U.S. Preventive Services Task Force, tobacco-cessation counseling is ranked in the highest priority category with the lowest delivery rate.<sup>1</sup> The clinical guidelines of the Public Health Service recommend use of the telephone to deliver cessation-counseling services, in part because such "quitlines" have the potential to reach large numbers of smokers.<sup>2</sup> In recent years, such programs have proliferated. Thirty-three states have established quitlines, and more are preparing to do so. Many other countries have established national quitlines.

The Public Health Service recommendation is based on positive results of clinical trials,<sup>2-5</sup> but the question remains whether quitlines can translate these results into real-world effectiveness. Proven treatments sometimes fail in practice, because translation from clinical trials to service settings may involve changes in the conditions under which the original results were obtained.<sup>6,7</sup> The staff may differ in skills and enthusiasm, and quality control, a critical element in behavioral interventions, may suffer under the pressure to meet clients' expressed needs. Given the increasing public investment in quitlines, it is therefore important to determine whether such services can maintain



# Quitlines' Success with Hard-to-Reach Populations

- **African Americans**

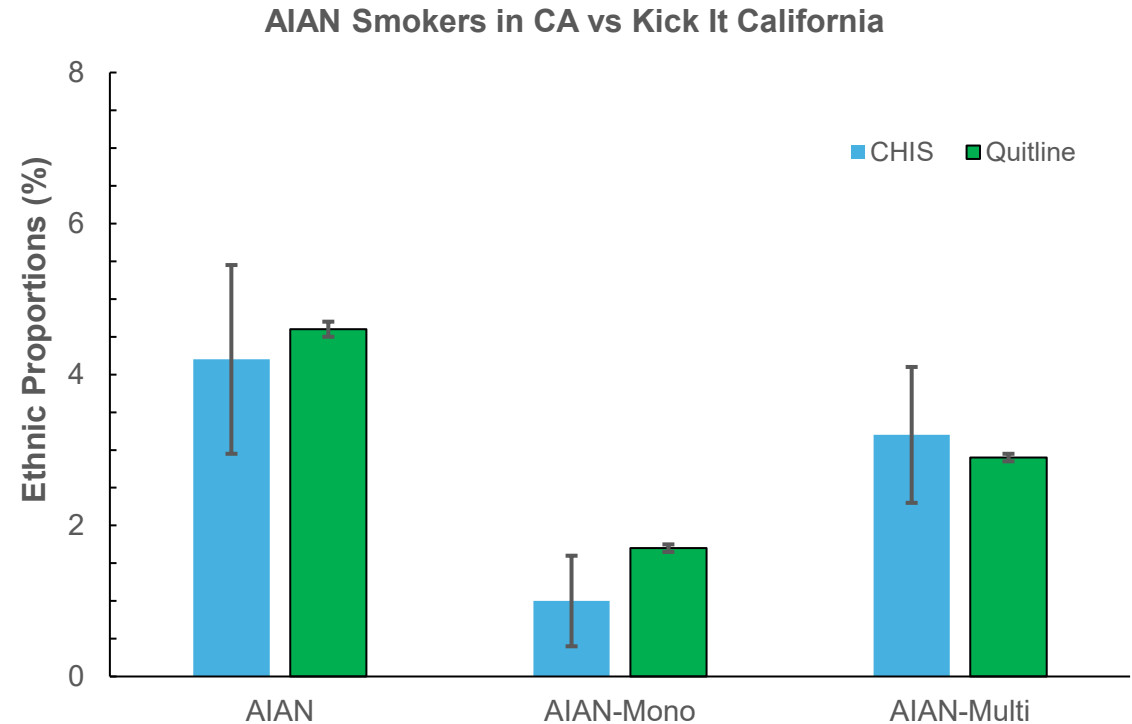
- Rabinus et al (2011) <https://academic.oup.com/ntr/article/14/2/240/1038876>
- Zhu et al (2011) <https://pubmed.ncbi.nlm.nih.gov/21510787/>
- Kulak et al (2016) [https://academic.oup.com/ntr/article/18/suppl\\_1/S79/250973](https://academic.oup.com/ntr/article/18/suppl_1/S79/250973)

- **American Indians**

- Lienemann et al. (2019) <https://doi.org/10.1093/ntr/ntz205>

- **Low-income/Medicaid population**

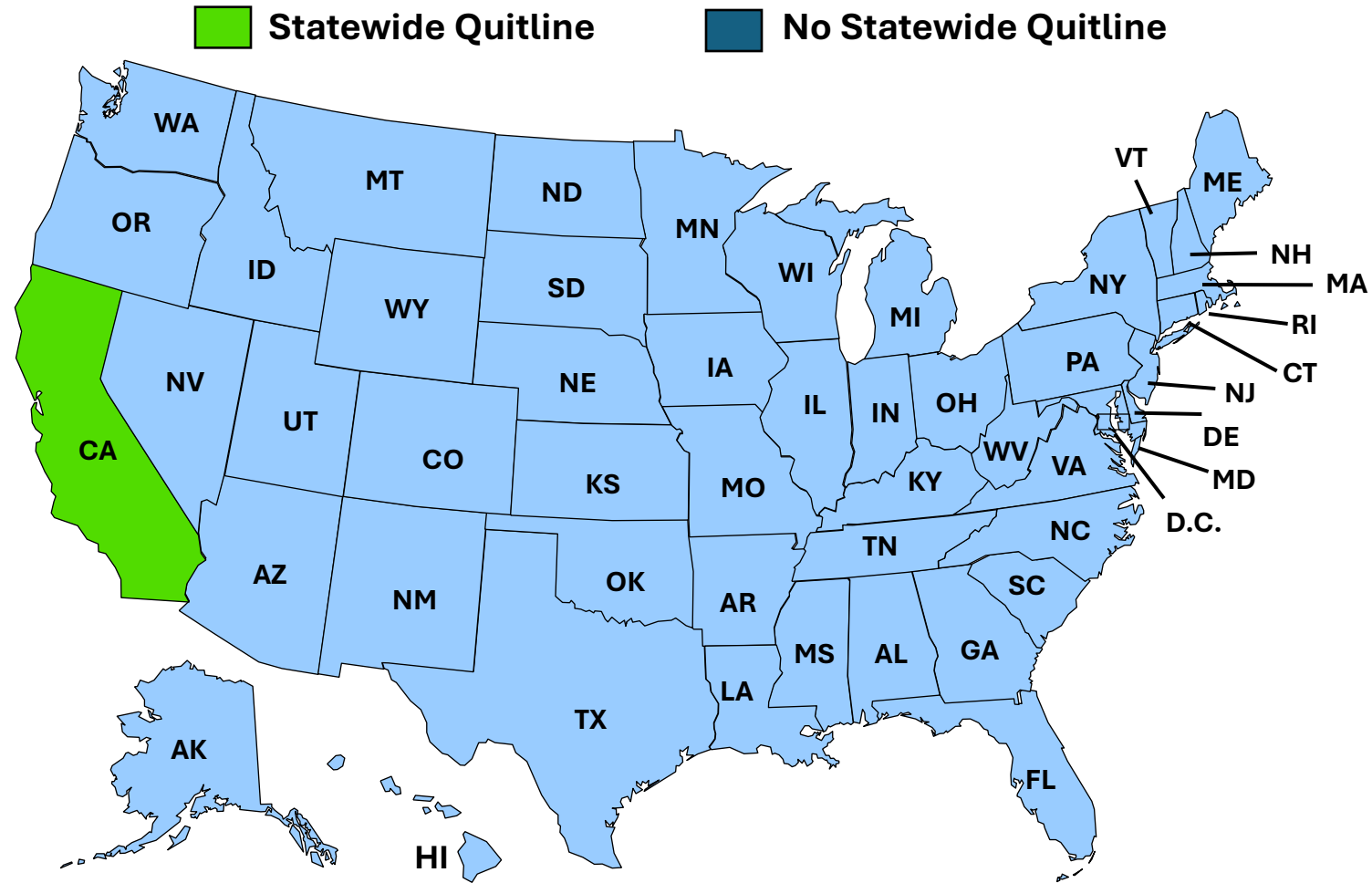
- Tong et al 2023 - <https://pubmed.ncbi.nlm.nih.gov/36319510/>



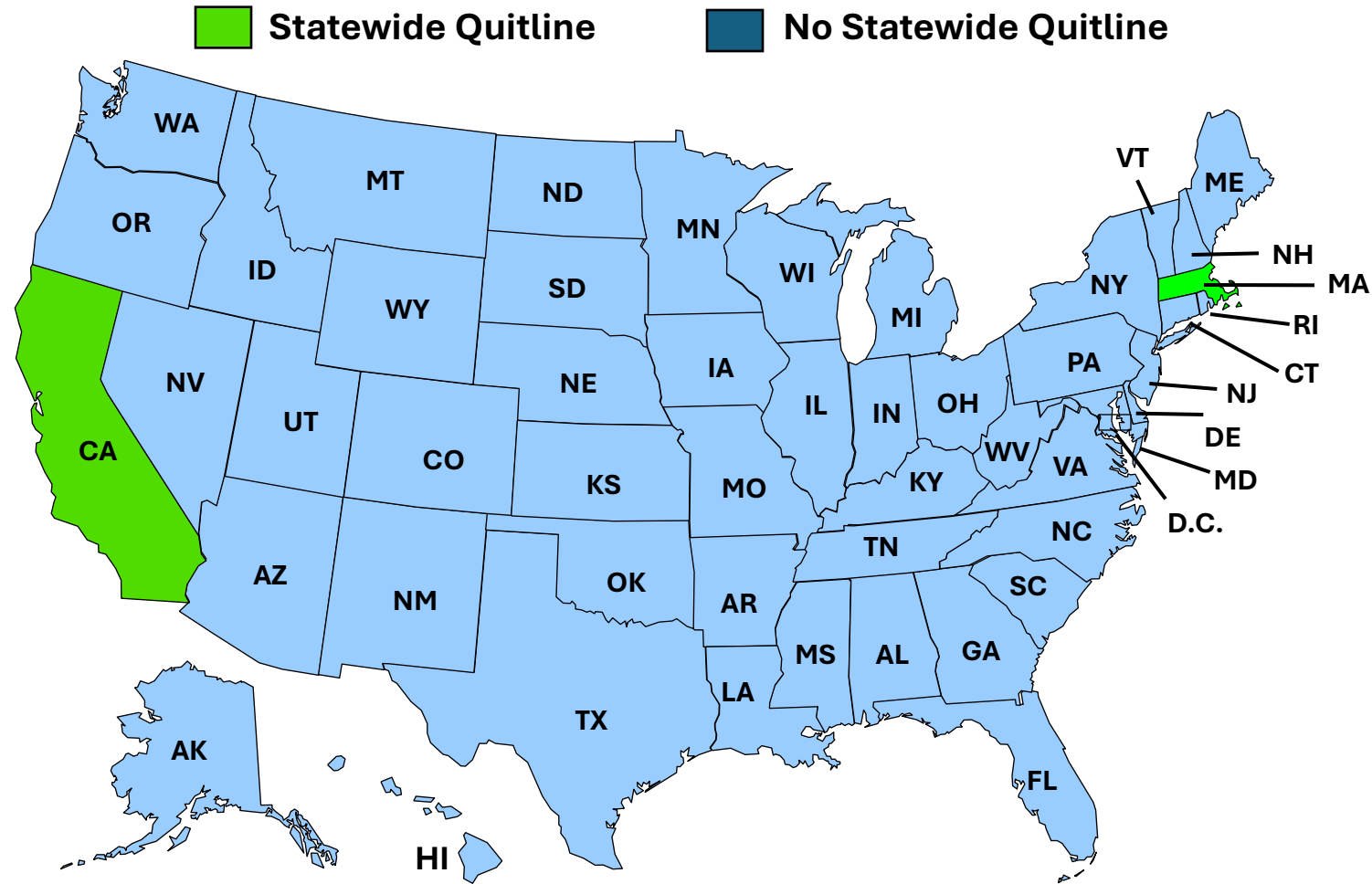
Lienemann et al. (2019) <https://doi.org/10.1093/ntr/ntz205>

One state quitline served more than 16,000  
American Indian Tobacco Users in a 10-year period

# State Quitlines in 1992

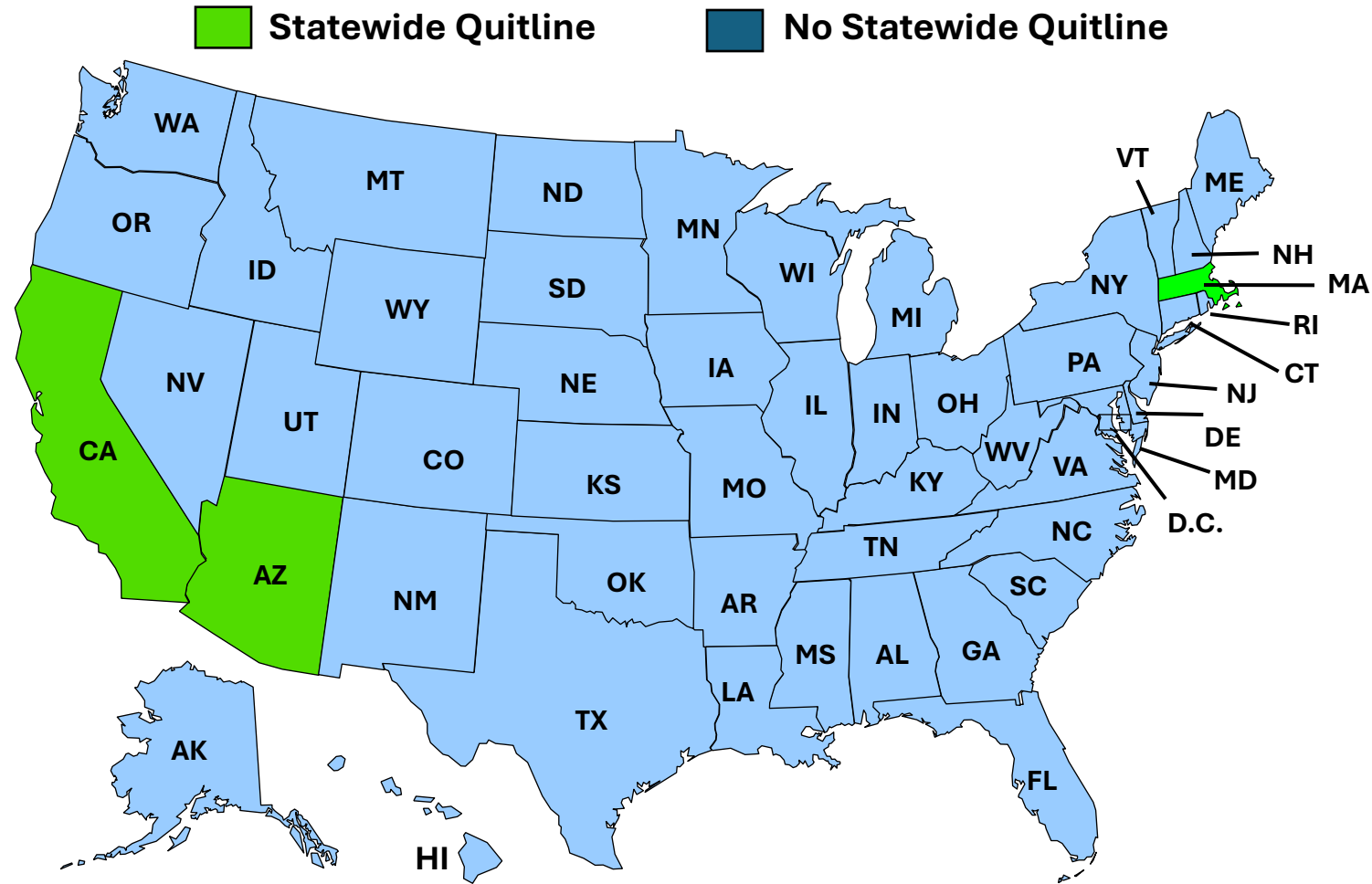


# State Quitlines in 1994

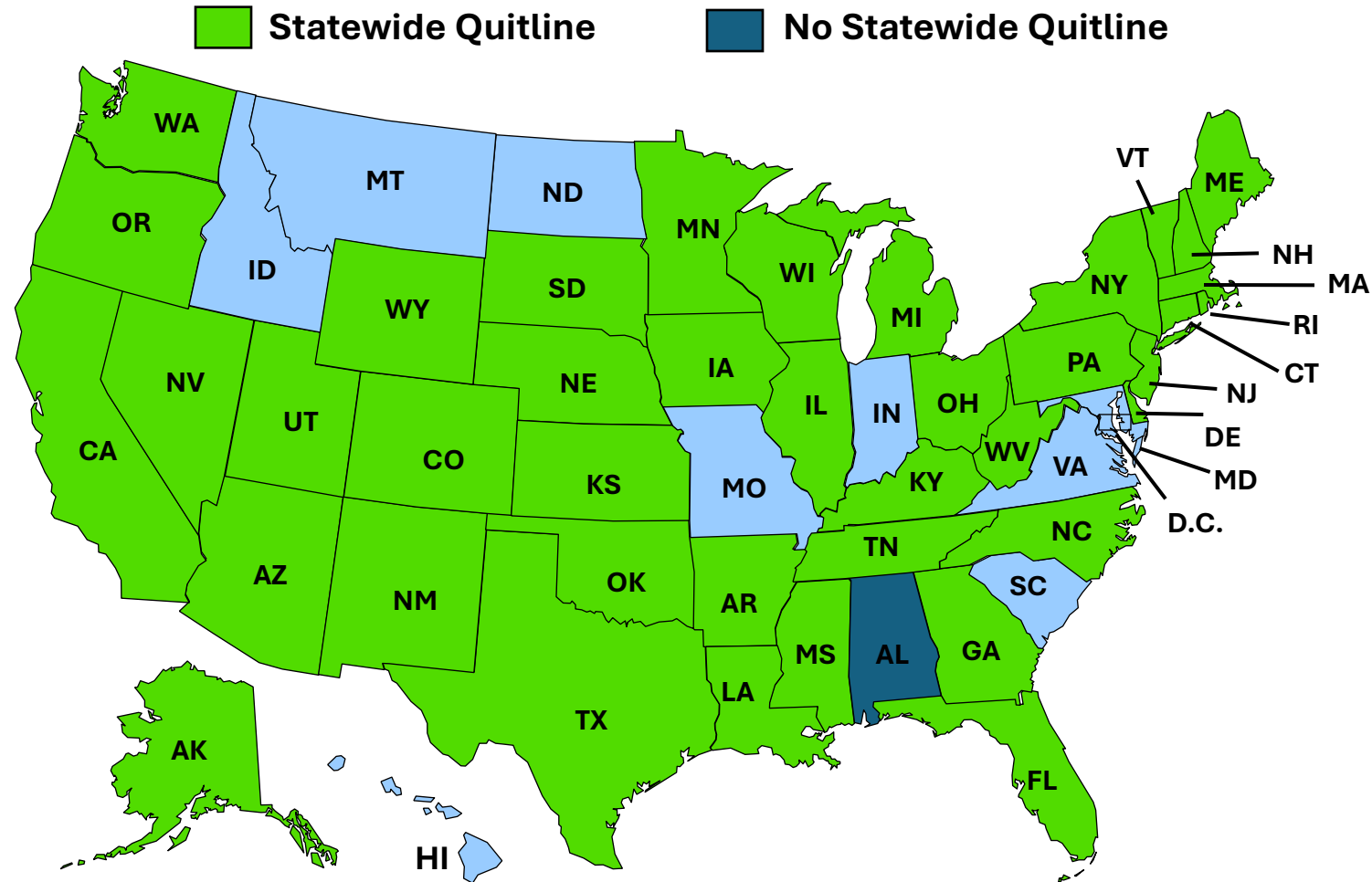




# State Quitlines in 1996

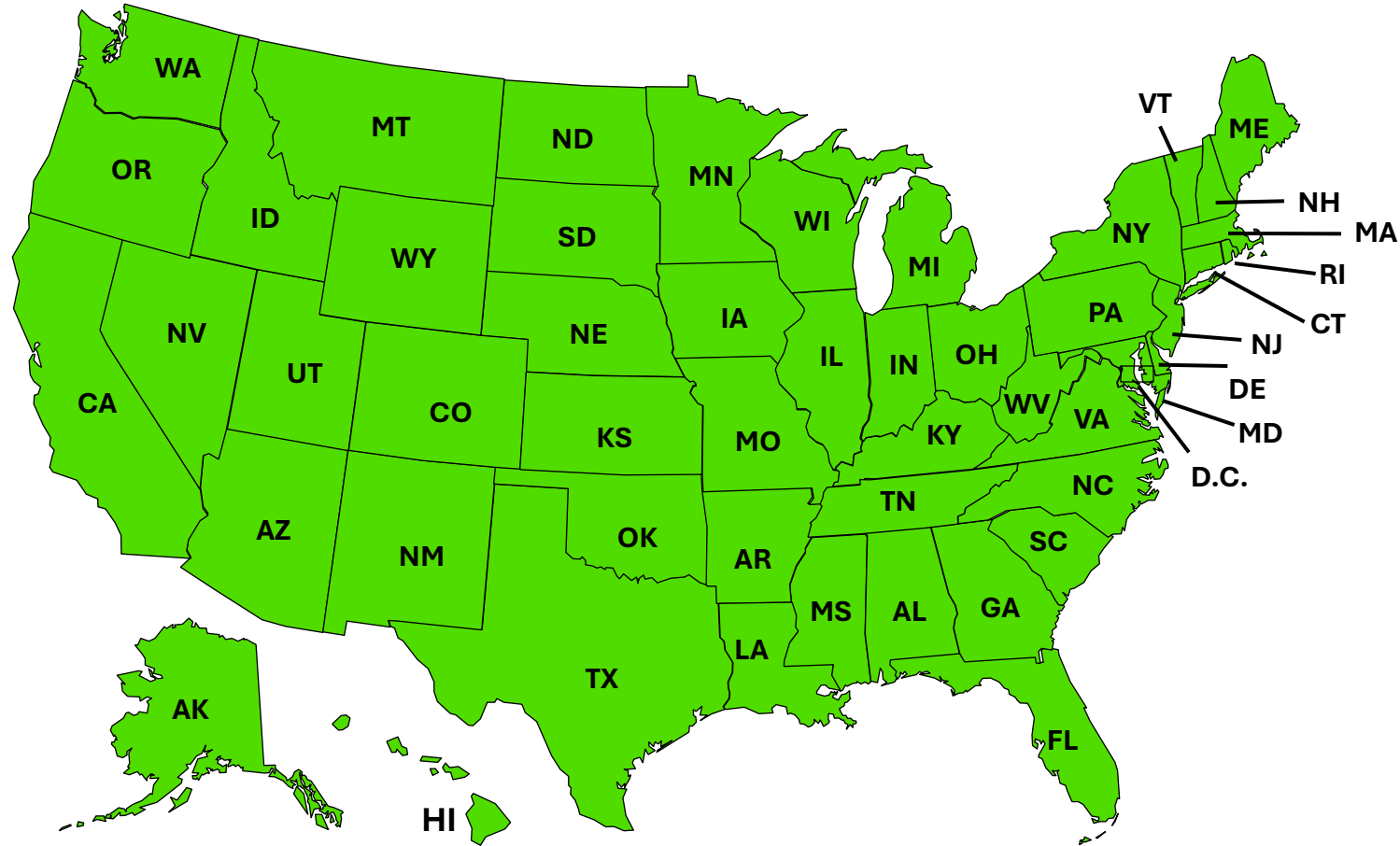


# State Quitlines in 2004



Source: CDC Office on Smoking and Health (<http://www.NAQC.org>).

# 1-800-QUIT-NOW Available in Every State, 2004



# NAQC (North American Quitline Consortium)

[ABOUT NAQC ▾](#)[ABOUT QUITLINES ▾](#)[RESOURCES ▾](#)[WEBINARS AND EVENTS ▾](#)

## Mission, Goals and Vision

[More in this Section... ▾](#)

### NAQC's Mission


Maximize the access, use, and effectiveness of quitlines;  
Provide leadership and a unified voice to promote quitlines; and  
Offer a forum to link those interested in quitline operations.

### Strategic Vision 2025

Over the next five years, through 2025, NAQC will advance population-based tobacco cessation through focused strategies in three areas:

**Expanding Medicaid Coverage:** NAQC will support the expansion of Medicaid coverage and reimbursement for tobacco cessation services, including quitlines. This includes: Reducing barriers to

## Best and Promising Practices

[More in this Section... ▾](#)

A mainstay of our work has been identifying best and promising practices for quitlines and encouraging their adoption by the field.

Over the years NAQC has accomplished this work by developing guides and recommended best practices on issues related to quitline operations. Most of these papers focus on a single topic. In 2018, NAQC assessed adoption of 21 best practices in a paper titled "[Adoption of Recommended Best Practices among State Quitlines](#)."

These important resources are available for your review below:  
[Guides and Issue Papers](#)

# Evolution and Innovation in Quitline Service



> [Lancet](#). 2005;365(9474):1849-54. doi: 10.1016/S0140-6736(05)66615-9.

## Effectiveness of a large-scale distribution programme of free nicotine patches: a prospective evaluation

Nancy Miller<sup>1</sup>, Thomas R Frieden, Sze Yan Liu, Thomas D Matte, Farzad Mostashari, Deborah R Deitcher, K Michael Cummings, Christina Chang, Ursula Bauer, Mary T Bassett

Affiliations + expand

PMID: 15924980 DOI: [10.1016/S0140-6736\(05\)66615-9](#)

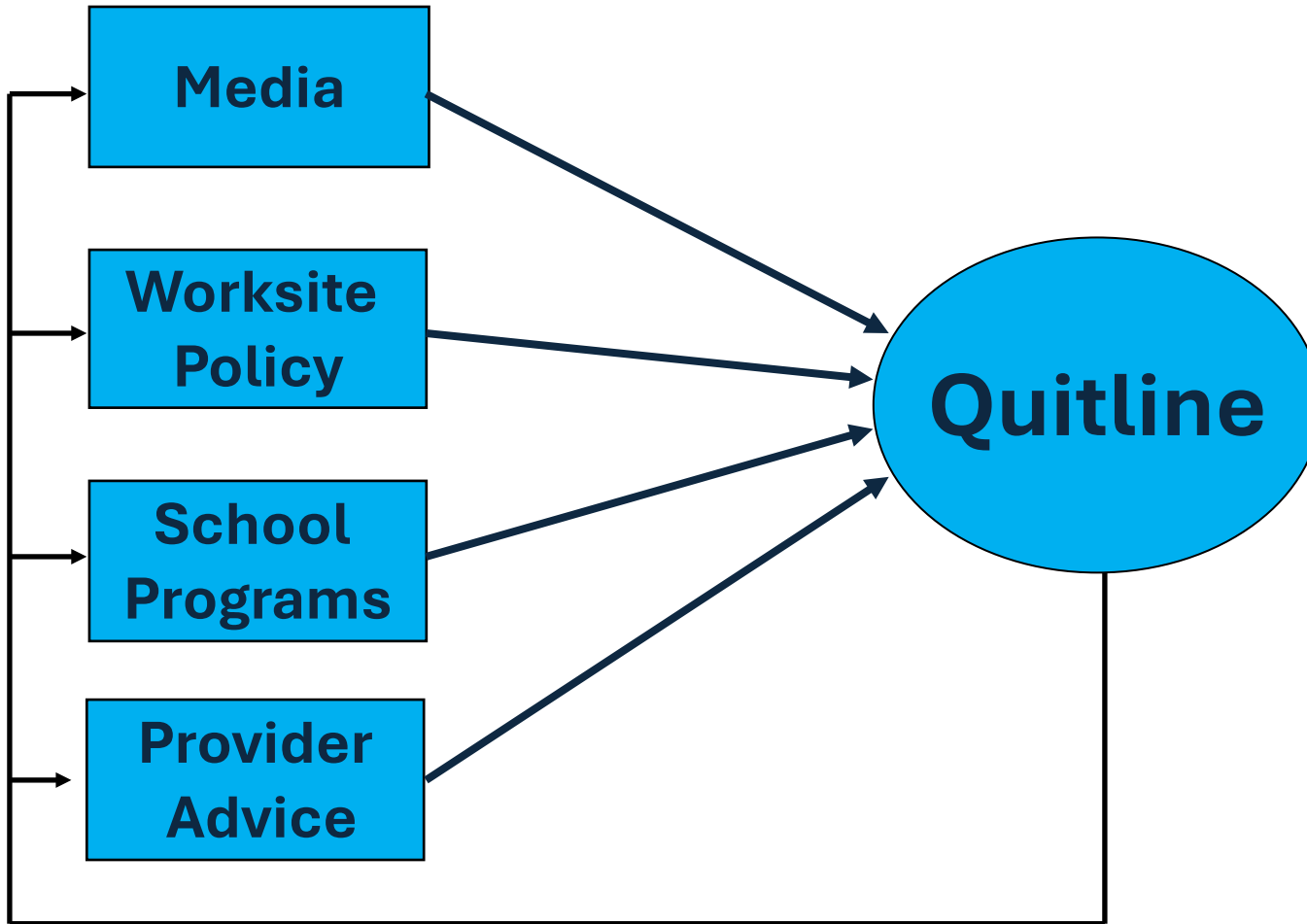
### Abstract

**Background:** After an increase in cigarette taxes and implementation of smoke-free workplace legislation, the New York City Department of Health and Mental Hygiene, the New York State Department of Health, and the Roswell Park Cancer Institute undertook large-scale distribution of free nicotine replacement therapy (NRT). We did a 6 month follow-up survey to assess the success of this programme in improving smoking cessation on a population basis.

**Methods:** 34,090 eligible smokers who phoned a toll-free quitline were sent a 6-week course of nicotine patches (2 weeks each of 21 mg, 14 mg, and 7 mg per day). Brief follow-up counselling calls were attempted. At 6 months after treatment, we assessed smoking status of 1305 randomly sampled

## An Innovation in Quitline Service

# Quitline in a Population-Based Framework: The Quit Attempt Model



$$C = aT(1-H)$$

Source: Zhu (2006)

## Effect of the first federally funded US antismoking national media campaign

Tim McAfee, Kevin C Davis, Robert L Alexander Jr, Terry F Pechacek, Rebecca Bunnell

### Summary

**Background** Every year, smoking kills more than 5 million people globally, including 440 000 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 undertook 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 31·1% (95% CI 30·3–31·9) at baseline to 34·8% (34·0–35·7) at follow-up, a 12% relative increase. The prevalence of abstinence at follow-up among smokers who made a quit attempt was 13·4% (95% CI 9·7–17·2). 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 2·6% 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 31·9% (95% CI 31·3–32·5) to 35·2% (34·6–35·9), resulting in an estimated 4·7 million additional non-smokers recommending cessation services and more than 6 million talking about the dangers of smoking.

**Interpretation** The high-exposure Tips media campaign was effective at increasing population-level quit attempts. The growth in smokers who quit and became sustained quitters could have added from a third to almost half a million quality-adjusted life-years to the US population. Expanded implementation of similar campaigns globally could accelerate progress on the WHO Framework Convention on Tobacco Control and reduce smoking prevalence globally.

**Funding** CDC, US Department of Health and Human Services.



Lancet 2013; 382: 2093–11

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See [Comment](#) page 1964

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# Quitlines and Anti-Smoking Media Campaign



# 211 Services

**7.4M**

People call 211 for assistance with  
housing, homelessness, and utility bills  
every year.

**1M+  
Smokers**



# Utilization of Counseling Service: A Comparison between the 211-Referred and the HP-Referred

Nicotine and Tobacco Research, 2025, XX, 1–8  
<https://doi.org/10.1093/ntr/ntae294>  
Advance access publication 14 January 2025  
Original Investigation



## Increasing a Quitline’s Reach to Low-Income Tobacco Users Through 211 Agencies

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### Abstract

**Introduction:** Low-income individuals bear a disproportionate share of the burden of tobacco use. This study tested the feasibility of increasing a quitline’s reach to low-income tobacco users by collaborating with 211 information and referral agencies, which primarily serve people experiencing economic hardship.

**Aims and Methods:** Study participants ( $N = 114\,888$ ) were adult tobacco users referred to the California quitline by 211 agencies, referred by healthcare clinics, or self-referred from April 17, 2021 to December 31, 2023. All were offered telephone counseling. Those referred by 211 received \$20 for completing one counseling session. A subset ( $n = 2021$ ) was followed up at 7 months. Referral outcomes, baseline characteristics, counseling and quitting aid utilization, and quitting outcomes were analyzed by referral source in 2024.

**Results:** Over a 2.7-year period, 211 agencies referred 55 151 clients to the quitline. Participants referred by 211 were more than twice as likely as healthcare-referred participants to enroll in quitline services (34.0% vs. 15.9%,  $p < .0001$ ). They were more likely than healthcare- and self-referred participants to be female, lesbian, gay, bisexual, transgender, or queer/questioning, Black or multiracial, younger, less educated, and Medicaid-insured; more likely to complete a first counseling session (64.2% vs. 59.7% and 55.7%; both  $ps < .0001$ ); and completed a similar number of sessions, 2.4. They were less likely to use quitting aids. Quit rates (ie, 30-day point prevalence abstinence) at 7-month follow-up were similar for all three groups.

**Conclusions:** A collaboration between a quitline and 211 agencies connected large numbers of underserved, low-income tobacco users to evidence-based cessation treatment.

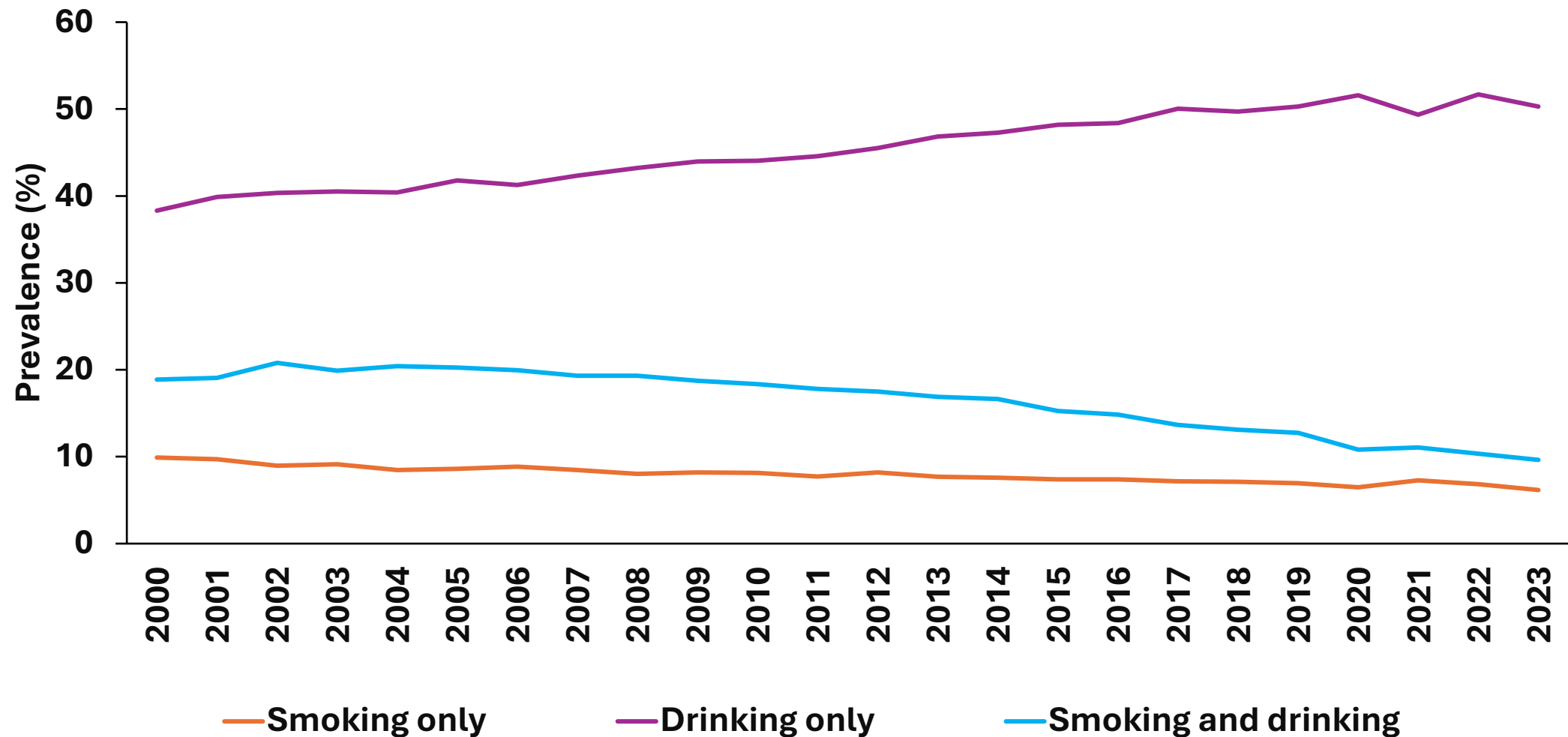
**Implications:** The study shows that quitlines and 211 agencies can collaborate effectively to help low-income tobacco users quit. It shows that when offered a modest incentive, 211-referred participants engage in counseling as much as healthcare- and self-referred participants and are as likely to quit. If 211 agencies across the US referred at the same rate as agencies in this study, an estimated 65 000 additional tobacco users annually would receive treatment. Total reach at full implementation would likely be much higher. Quitline and 211 funders and other supporters should find ways to sustain these gains and expand their reach.

April 2021–Dec. 2023	Referral from Thirteen 211 Centers	Referral from 294 Physician Offices
	(\$20 Offered)	(No \$ offered)
	n=18,742	n=5,070
% received at least 1 session	64.2	59.7
% received follow-up call	56.0	58.2
# of FU calls	2.4	2.5

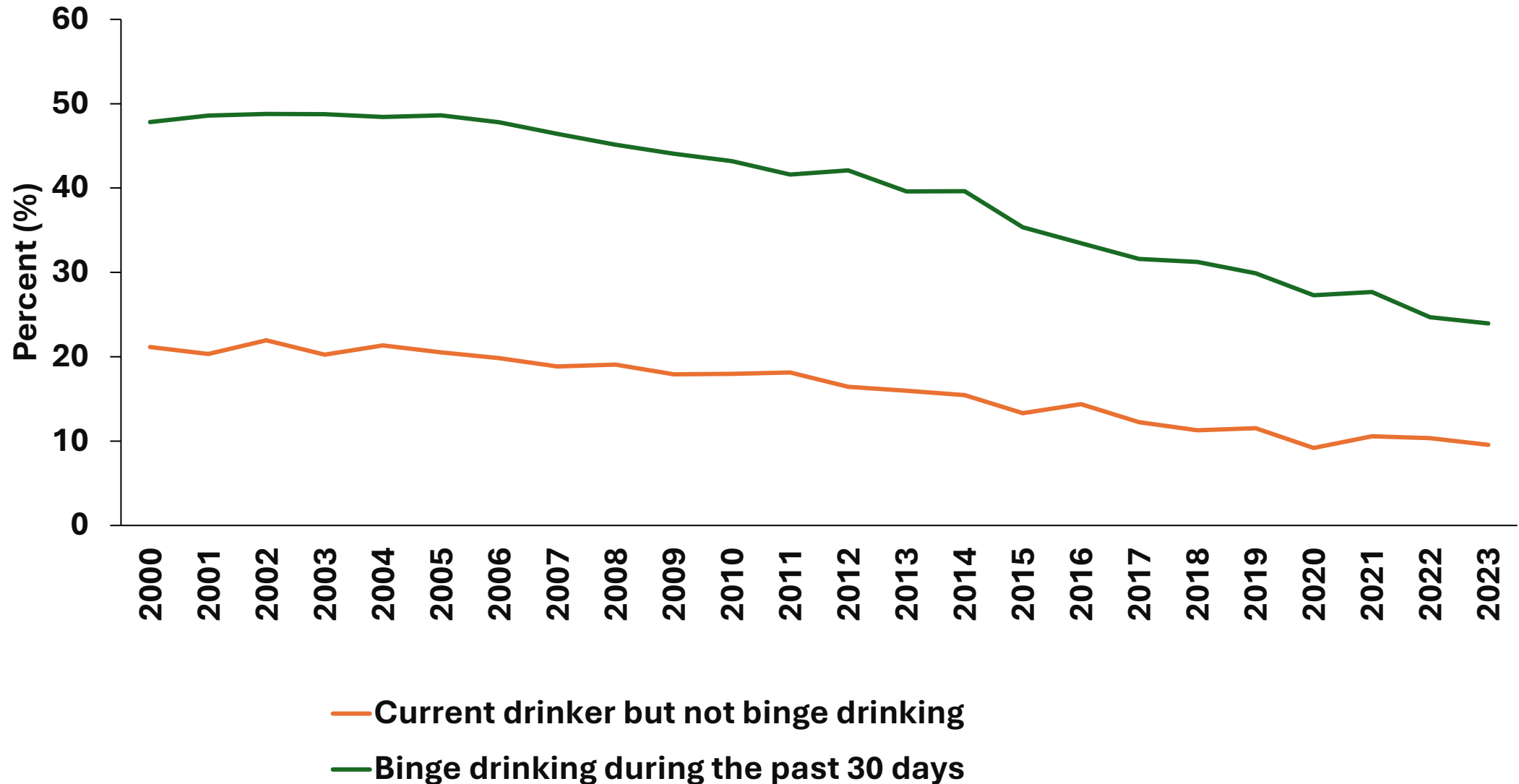
# Summary and Implications

- **Quitline is a success story in translating research into public health service.**
- **Quitline has evolved from focusing on reaching more smokers for counseling services to using an accessible, centralized operation as a key tool to increase quit attempts among the general smoking population.**
- **Implications for alcohol treatment: changing social norms around alcohol use and increasing quit attempts will be key to helping alcohol users stop drinking.**

# Current Smoking and Drinking (2000-2023, NSDUH)



# Percept of Current Smoking among Drinkers (2000-2023, NSDUH)





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