REACHING PROVIDERS WITH CESSATION MESSAGING
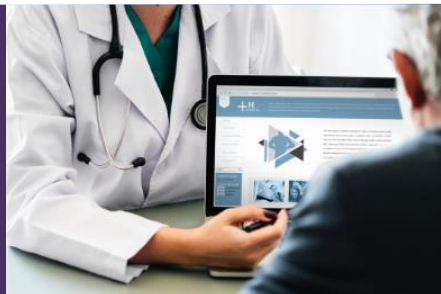
NEW YORK'S HEALTH CARE PROVIDER MEDIA CAMPAIGN

Reaching Providers with Cessation Messaging:

New York's Health Care Provider Media Campaign

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Prepared for

New York State Department of Health

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Foreword

In 2015, the New York State Department of Health was one of five state tobacco control programs awarded a grant from the Centers for Disease Control and Prevention for an innovative project to further tobacco control efforts that might accelerate the decline in adult smoking. We used that grant to develop a media campaign specifically targeting health care professionals to encourage them to recognize the needs of their patients who use tobacco. This could further the program's goal of increasing the delivery of tobacco dependence treatment by health care professionals to the 80 percent of smokers who see a provider annually, but for whom fewer than half currently receive evidence-based cessation assistance, especially FDA-approved medications and counseling. This campaign complements a broader health systems change approach that is working to develop and leverage public health/health care partnerships and elevate tobacco dependence treatment to a level commensurate with the human and economic toll that tobacco has on society.

As an innovative approach, it is critical that the health care provider campaign be subject to comprehensive evaluation to determine if the campaign is having its intended impact, and if not, why not. This report is a review of the evaluation findings for the first two phases of the campaign and results are promising. But reaching busy providers with messages that resonate enough to change behavior is challenging. A challenge we embrace moving forward.

Harlan R. Juster, Ph.D.
Director, Bureau of Tobacco Control

New York State Department of Health
health.ny.gov/prevention/tobacco_control

NEW YORK STATE | Department of Health

Executive Summary

Although most smokers visit a health care provider annually, only half report being provided evidence-based assistance with quitting. The New York State Department of Health's Tobacco Control Program (NY TCP) implemented a media campaign to increase the delivery of counseling and U.S. Food and Drug Administration-approved cessation medications by health care providers to patients who use tobacco. In this report, we describe NY TCP's campaign and RTI's evaluation approach and findings.

The campaign, funded by a competitive grant from the Centers for Disease Control and Prevention (CDC), complements other health systems interventions and smoker-targeted media. NY TCP designed the campaign with insights from peer-reviewed literature, focus groups, and ad testing. The initial campaign launched in 2016 and included digital and social media placement (e.g., LinkedIn), regional inclusion of ads in academic journals specific to health care providers in the New York area (e.g., the *New England Journal of Medicine*), and out-of-home ads in settings likely to be frequented by health care providers. NY TCP further developed messaging and conducted another round of the campaign in 2018.

Providers' reactions to the campaign ads were positive, and ad awareness was associated with beliefs and behaviors targeted by the campaign.

- In 2016, awareness of the campaign was associated with provider assistance with quitting. Providers who had seen the campaign were twice as likely to assist their patients with a quit attempt.

- Providers aware of the campaign in 2018 reported greater increases in awareness that the nicotine patch and gum are effective treatments for helping patients quit than providers not aware of the campaign.

NY TCP successfully developed and implemented a provider-targeted media campaign that aimed to encourage providers to treat their patients' nicotine addiction as any other chronic medical condition that requires medical intervention. This effort demonstrated that media campaigns can reach health care providers with tobacco dependence intervention messaging through print, digital, and out-of-home ads. This approach complements the NY TCP's efforts to promote cessation via health systems change intervention activities to institute systems, policies, and protocols that integrate tobacco dependence identification and treatment into workflows.

Overview

This report describes how New York's provider-targeted media campaign was developed and the impact it had on providers.

The purpose of this report is to describe an innovative health care provider-targeted media campaign conducted by the New York State Department of Health's Tobacco Control Program (NY TCP) and funded by the Centers for Disease Control and Prevention (CDC). NY TCP developed and implemented a campaign to motivate health care providers to deliver evidence-based tobacco dependence treatment to their patients. NY TCP partnered with RTI International, an independent not-for-profit research organization, to conduct formative and outcome evaluations regarding the campaign. This report describes media campaigns implemented in 2016 and 2018 and shares highlights from the evaluation. This report is intended for public health professionals interested in designing, implementing, and evaluating provider-targeted media.
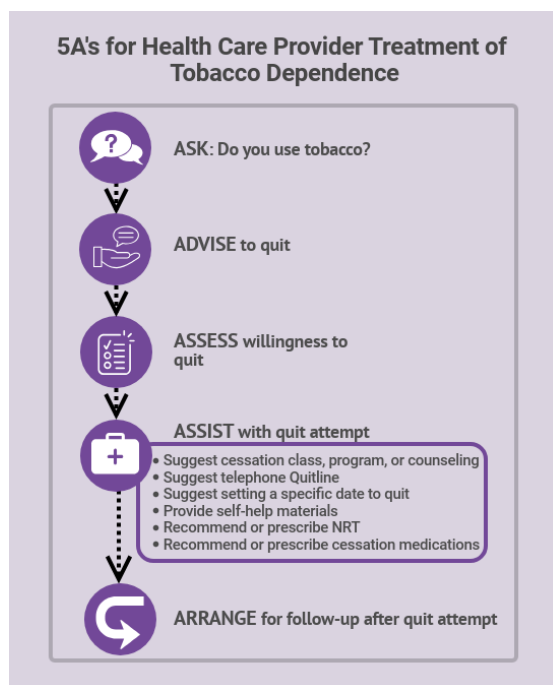
Background

NY TCP conducts a range of activities to help tobacco users quit. The provider-targeted media campaign complements the Program's other cessation activities, which include:

- health communications encouraging tobacco users to quit,
- quitline services to help tobacco users with a quit attempt,
- policy efforts to promote smoke-free norms,
- increased coverage and reduced cost for tobacco dependence treatments, and
- health systems change to support provider interventions with patients who use tobacco.

Four out of five smokers visit a health care provider each year, making the health care delivery system an important avenue to

help smokers quit. Evidence-based methods for tobacco cessation include clinical tobacco dependence treatment by health care providers; brief clinical intervention has been found to double smokers' ch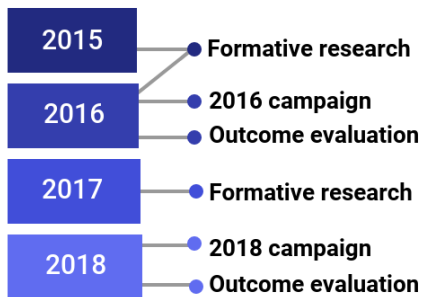ances of quitting (Fiore, et al., 2008). The CDC and the U.S. Public Health Service recommend that health care organizations use systems-level strategies such as tobacco user identification systems and feedback systems to providers to ensure that tobacco use is addressed at every clinical encounter (CDC, 2014; Fiore et al., 2008). NY TCP's health systems change initiative aims to ensure that environments and work flows in the health system setting reinforce tobacco dependence treatment, particularly among populations disproportionately affected by tobacco use. Specifically, literature supports providers performing the "5 A's" with patients – encouraging them to **Ask** about tobacco use, **Advise** tobacco users to quit, **Assess** readiness to quit, **Assist** with a quit attempt, and **Arrange** follow-up about quitting.

5A's for Health Care Provider Treatment of Tobacco Dependence

ASK: Do you use tobacco?

ADVISE to quit

ASSESS willingness to quit

ASSIST with quit attempt
- Suggest cessation class, program, or counseling
- Suggest telephone Quitline
- Suggest setting a specific date to quit
- Provide self-help materials
- Recommend or prescribe NRT
- Recommend or prescribe cessation medications

ARRANGE for follow-up after quit attempt

Although studies have established the effectiveness of anti-smoking ads that target smokers (Davis et al., 2012; Durkin et al., 2012, National Cancer Institute, 2008), little research has been published on whether provider-targeted media campaigns are effective at changing provider behavior. NY TCP's earliest provider-targeted campaign launched in 2008, and is one of the few provider-targeted campaigns available on the CDC's Media Campaign Resource Center website (https://www.cdc.gov/tobacco/multimedia/media-campaigns/index.htm). NY TCP built on its previous experience to launch a new provider-targeted media campaign. This report describes the process of designing, implementing, and evaluating the 2016 and 2018 campaigns.

Initially funded in 2015 for 2 years through a competitive grant from CDC, NY TCP began developing a health care provider-targeted media campaign to motivate health care providers to offer evidence-based tobacco dependence treatment to their patients. After initial success, CDC awarded NY TCP an additional 2 years of funding to continue the project. NY TCP implemented two main rounds of their provider-targeted campaign during the full four years of the project, from 2015 through 2018. RTI conducted formative evaluation activities to inform the campaign development and outcome evaluation activities to assess the campaign's impact. The outcome evaluation efforts included surveying providers prior to and after each phase of the campaign. We further describe each component in the following sections.

Timeline of campaign and evaluation activities

Year	Activity
2015	Formative research
2016	2016 campaign
	Outcome evaluation
2017	Formative research
2018	2018 campaign
	Outcome evaluation

Designing the 2016 Campaign

NY TCP began the campaign creative development in 2015 with a review of published literature and prior evaluation findings relevant to provider beliefs and barriers regarding providing tobacco dependence treatment to their patients. Based on these resources, NY TCP developed several key message concepts related to tobacco dependence treatment. NY TCP collaborated with RTI to gauge how New York health care providers react to these concepts using focus groups and surveys.

Focus Groups

During fall 2015, RTI conducted focus groups with primary health care providers in New York. We asked about barriers to providing clinical tobacco intervention, specific message concepts being considered as a framework for the campaign, and places that providers access information (to inform media placement). For the written message concepts shown below, providers wrote responses in individual booklets and discussed what they liked, what they did not like, and what they found confusing about each message concept.

Themes from these focus groups helped inform further media message development by detailing provider preferences and concerns:

- Providers preferred brief, direct points rather than text-heavy sentences.

- Providers did not respond well to implications that they were not doing their job if they were failing to help their patients quit. For example, some of the phrasing in the message concept that starts with, "If you don't bring it up, patients might think it's not important," was off-putting to some providers.

Initial Message Concepts Tested in Focus Groups in 2015

Tobacco use harms all bodily systems	**If you don't bring it up, patients might think it's not important**
Tobacco use exacerbates other illnesses, including ones not traditionally thought of as tobacco-related; chemicals in cigarettes may affect efficacy of medications being used for other conditions; and tobacco use affects healing time.	Patients, including tobacco users, expect providers to help them maintain and improve their health. If you don't directly address the importance of quitting tobacco, patients might interpret it as a low risk or low priority.
No matter why they have come in to be seen, addressing tobacco use is a critical first part of their care	*Don't let them down-- addressing tobacco use at every visit keeps the message strong and consistent*
Tobacco dependence treatment doesn't take that long to do	**Quitting tobacco is a process which takes time and may need repeating**
Time with your patients is limited, but a meaningful conversation can happen in a relatively short time. Evidence shows that provider assistance with quitting improves patients' likelihood of quitting successfully. Helping patients quit using tobacco can mean a lifetime to them.	Most tobacco users want to quit, but have trouble overcoming physiological and psychological dependence. It takes most tobacco users many quit attempts before they are successful, so your patients will have multiple failed quit attempts.
Even a few short minutes can help a tobacco user quit	*As discouraging as it may feel, it is important to always offer counseling and resources so that tobacco users are reminded of their options for support*

- Providers confirmed that they look to journals and websites for new information in their field. They mentioned websites including UpToDate.com, a subscription online evidence-based clinical decision support resource; journals such as the *Journal of the American Medical Association*, *American Journal of Family Practice,* and *Obstetrics & Gynecology*; and conferences. Providers frequently mentioned using the internet via their phones or computers in their daily lives and did not recommend direct mail materials.

NY TCP used the focus group findings to design initial drafts of campaign ads and to make decisions about where to place those ads.

Testing Potential Ads

RTI tested a set of draft ads using an online panel survey of providers to see how the messages resonated with them. The ads focused on smoking as an addiction to nicotine and encouraged providers to treat patient tobacco dependence with medications

and counseling. Providers were asked to answer questions about the extent to which the ads were worth remembering, grabbed their attention, and were relevant, informative, and meaningful. Providers ranked ads (both text only and with images), indicating which they liked best and least, and told us why they rated the highest and lowest ads the way they did. We also included an ad from the 2008 provider-targeted media campaign to serve as a comparison. The survey findings included the following.

- Overall, providers reported that the ads were easy to understand.

- Providers reported that few of the ads provided new information about treating nicotine addiction but indicated that they served as a reminder.

- Providers reported that the ads generally motivated them to initiate conversations with patients about smoking cessation.

An ad with a provider talking with a patient was ranked best overall, while an ad showing someone smoking was given low ratings. The comparison ad from an earlier campaign was polarizing, receiving strong positive responses and strong negative reactions. The quantitative and qualitative survey data provided insights regarding how providers reacted to the ads that were tested.

One key component of our ad testing was a scale of perceived effectiveness of the ads designed to determine which ads evoke a combination of reactions likely to indicate that they will be noticed, attended to, and provide meaningful information. This scale has been validated and used extensively with antitobacco advertising targeting smokers (Davis et al., 2011, Davis et al., 2012). Our initial analyses using data from this evaluation found that this scale may also be applicable to providers. Providers answered

2016 Message Testing: Ads Tested and Key Findings

- Ranked best overall
- Described as showing communication

- Rated as effective
- Described as straightforward, emphasizing prescription medications

- Rated as effective
- Described as hopeful, but some said the image was disconnected from the message

- Rated highly, but was polarizing (also received strong negative response)
- *Note: from 2008, this ad was included for comparison purposes.*

- Performed poorly overall
- Described as boring by providers

- Received lowest ratings
- Received negative comments because it showed someone smoking and the text was negative

questions about the extent to which each ad is worth remembering, grabbed their attention, is powerful, is informative, is meaningful to them, and is convincing. Based on provider responses of 1 (strongly disagree) to 5 (strongly agree) for each question for each ad, we combined survey data to calculate a combined perceived effectiveness score for each ad. These individual responses and combined scores, together with open-

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text entries about what they liked and did not like about the ads, provided helpful information to narrow down and adapt ads for the actual campaign.

Perceived effectiveness scores for ads	
These scores offer a combined measure of how the ads resonated with providers, relative to the other ads.	

 3.40   3.48   3.44

 3.57   3.25   3.16

2016 Campaign

NY TCP used the message testing results to select and refine the final set of ads, which included refined versions of the 3 most highly rated ads of those developed for this campaign. These ads focused on framing smoking as a nicotine addiction and encouraging health care providers to treat smoking. Two of the ads focused on direct, factual information about evidence-based clinical tobacco dependence treatment, which is consistent with focus group findings that providers preferred direct statements. Based on providers' open-text responses regarding the ads in the message testing survey, NY TCP changed the image on the "Thanks Doc!" ad.

One ad emphasized the treatment of nicotine addiction with medications and counseling, with a visual of a provider writing a prescription.

Another ad aimed to motivate providers to treat nicotine addiction with a positive message and family-oriented image.

Smoking is an addiction.
Treat it with medicine and brief counseling.

New York State Department of Health   TalkToYourPatients.org

The third ad showed a provider connecting with a patient, reminding providers that smoking is an addiction that should be treated.

The ads encouraged providers to visit the campaign website (talktoyourpatients.ny.gov), which included additional information regarding identifying and treating patient tobacco use. The website included information about nicotine addiction, nicotine interactions with prescription medications, smoking cessation medication dosage, counseling, and additional external resources on tobacco dependence treatment and smoking cessation.

NY TCP ran the provider-targeted media campaign from March to July 2016 with a budget of $776,205. The campaign included print ads in journals, digital ads, and out-of-home ads. Approximately half of the media budget went to digital ads.

- **Trade journal ads**. Ads were placed in journals including the *New England Journal of Medicine, Journal of the American Medical Association*, *Journal of Family Practice, American Family Physician, Obstetrics & Gynecology,* and *The Nurse Practitioner.* These ads were placed specifically in copies of the journals being mailed to the New York region, when possible.

- **Digital ads**. Placements included the American Academy of Family Physicians website, and social media sites such as Facebook and LinkedIn. The digital ads included banner ads and newsfeed-style ads.

- **Out-of-home ads**. Placements included doctor's office exam room digital wall boards, medical building elevator screens, bus shelters, and subway entrances.

Evaluating the 2016 Campaign

NY TCP and RTI collaborated on conducting an outcome evaluation of the campaign to measure providers' awareness of the ads, beliefs about tobacco dependence treatment effectiveness, awareness of cessation resources, and tobacco intervention behaviors such as the 5 A's. NY TCP regularly uses evaluation findings to inform future strategic planning, identify areas for improvement, assess challenges, and document successes. The main questions that the study addressed were:

- To what extent were providers aware of the campaign?

- Was campaign awareness associated with tobacco treatment-related beliefs and awareness of cessation resources?

- Was campaign awareness associated with provider tobacco intervention?

By addressing these questions, we understand whether New York State providers saw the ads and whether providers who saw the ads believe cessation resources are effective and assist patients with quitting.

Methods

RTI evaluated the 2016 provider-targeted campaign using surveys of health care providers via an online survey panel vendor. An online panel is a list of pre-screened individuals willing to take surveys. We selected an online panel survey for several reasons. First, because this campaign and approach was new, we wanted to demonstrate the potential effectiveness of the approach in a relatively quick and cost-efficient way before scaling up evaluation efforts to a more rigorous test of the intervention.

Online surveys are generally less expensive and quicker to implement than phone or mailed surveys.

To assess changes over time that could be attributable to NY's campaign, we conducted surveys at two time points. We conducted a pre-campaign survey of 400 providers in February 2016, prior to the launch of the media campaign. The post-campaign survey, also of 400 providers, was conducted in July 2016.

Providers were eligible to participate if they: were a physician, nurse practitioner, or physician assistant; worked in New York State at the time of the study; and had provided patient care to adults in the past 12 months. We provide additional detail on methods in Appendix A.

Findings

Approximately 43% of providers reported seeing any of the campaign ads in 2016. This level of awareness is relatively high for this type of campaign. Among providers who saw the ads, perceptions of the ads were positive. Most providers reported that the ads were worth remembering, meaningful, informative, and relevant.
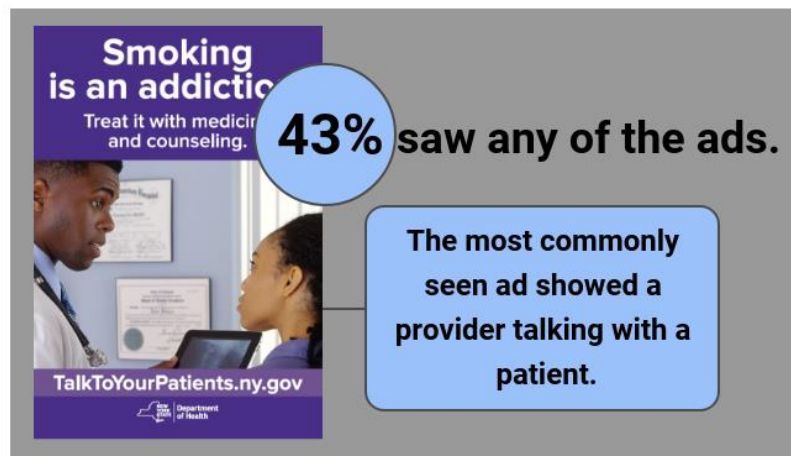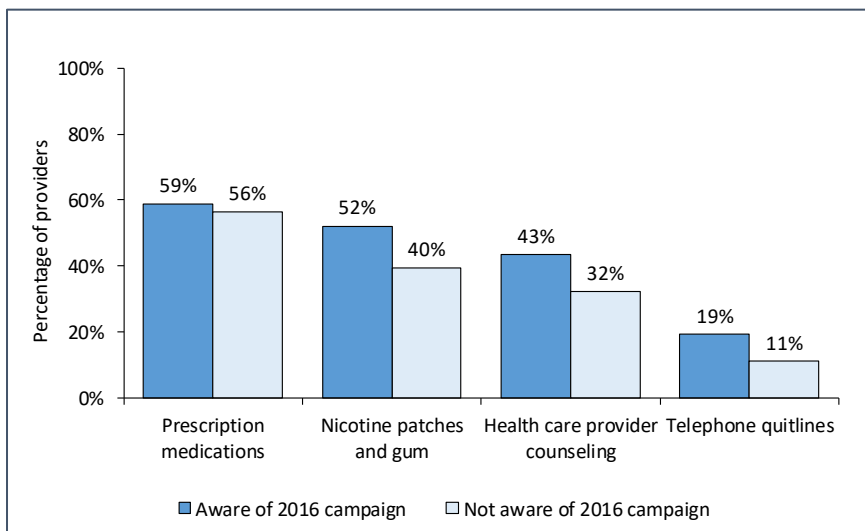
We asked providers who saw the ads where they recalled seeing them. Providers reported seeing the ads evenly across campaign channels. Approximately 30% of providers saw the ads in a medical journal, 28% on a medical website, 23% in a medical building, 23% in a public place, and 19% on Facebook or LinkedIn.

Providers agreed that patients using tobacco are addicted to nicotine and that patients struggle with quitting due to nicotine addiction. Reports of agreement with these statements did not change from baseline to follow-up, which indicates that this belief was not influenced by the campaign. Because it was already high before the campaign, this is not surprising.

Patients who use tobacco are addicted to nicotine

6% disagree or have no opinion

43% strongly agree

51% agree
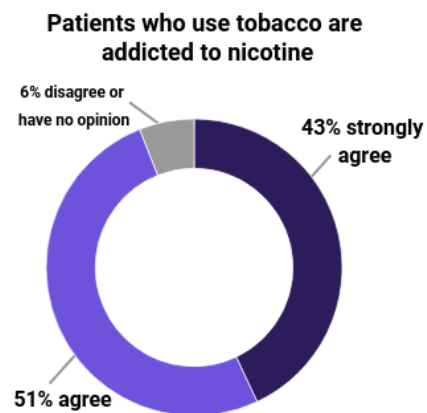
Providers aware of the campaign had similar beliefs about cessation service effectiveness as providers not aware of the campaign. Close to 60% of providers reported surveys sent out after the 2016 campaign that prescription medications are effective at helping patients quit.

Percentage of providers who reported cessation services were "effective" or "very effective" by awareness of ads, 2016.

Percentage of providers

	Prescription medications	Nicotine patches and gum	Health care provider counseling	Telephone quitlines
Aware of 2016 campaign	59%	52%	43%	19%
Not aware of 2016 campaign	56%	40%	32%	11%

■ Aware of 2016 campaign   □ Not aware of 2016 campaign

Awareness of ads was associated with higher rates of provider assistance with quitting, such that approximately 8 in 10 providers who had seen the ads reported assisting their patients with quitting, compared with 6 in 10 providers who had not seen the ads. Even when we controlled for age, gender, race and ethnicity, past 5-year training in cessation methods, and provider type, the association between awareness and assistance remained. Specifically, higher rates of ad awareness was associated with providers suggesting a cessation class or program, suggesting patients call the Quitline, providing self-help materials, and recommending or prescribing nicotine replacement therapy (NRT). These findings were promising. However, because of the cross-sectional study design, we cannot determine whether providers were already assisting their patients or whether the ads directly improved their behavior.

Awareness of ads was associated with higher rates of provider assistance with quitting.

Percentage of providers assisting patients with quitting, by awareness of ads, 2016.
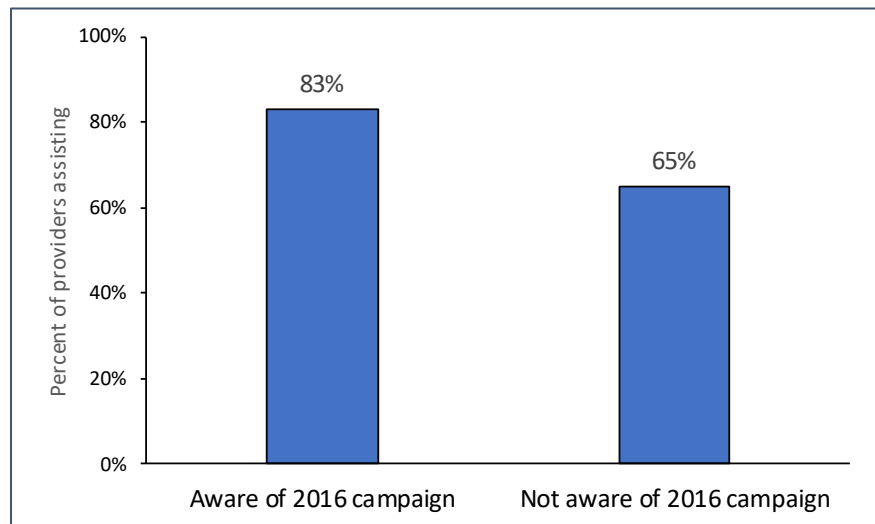
Percentage of providers offering specific types of assistance with quitting, by awareness of ads, 2016.

Type of assistance with quitting	% of providers assisting patients	
	Aware of campaign	Not aware of campaign
Suggesting a class	63%	46%
Suggesting Quitline	44%	17%
Providing self-help materials	37%	16%
Recommending NRT	55%	42%
Suggesting setting a quit date	51%	39%

Overall, the 2016 provider-targeted media campaign resulted in fairly high awareness among the target group. Providers believe that patients using tobacco are addicted to nicotine and that they struggle with quitting because of nicotine addiction. Provider agreement about nicotine addiction was high before the 2016 campaign, with little room for improvement in this measure, but high provider agreement about nicotine addiction might help providers identify with and attend to the ads. Provider awareness of the ads was associated with providers assisting patients with quitting. NY TCP was encouraged by these findings and made plans to continue the provider-targeted campaign efforts.

Designing the 2018 Campaign

NY TCP refined campaign messaging and developed a new set of potential ads for the 2018 provider-targeted media campaign. RTI tested a new set of ads to inform decisions on which ads to run.

Testing Potential Ads

To test potential ads, we surveyed 400 New York State health care providers in August 2017 via an online panel. Similar to the preparation of the 2016 campaign, we asked providers to share their reactions to several ads that included images and text, and we also collected their responses to five options of message text (without images).

When seeing only text, providers preferred messages that were specific about how to treat tobacco dependence rather than vague reminders, and they rated scientific, formally worded messages more highly than informal ones. This is clear from their rankings of the text and their descriptions about why they assigned the rankings they did.

- Text rated most convincing: "Combine nicotine patch and gum to triple your patents' chances of quitting. Treat your patients' nicotine addiction. For other effective combinations, go to TalkToYourPatients.health.ny.gov."

- Text rated least convincing: "Thanks Doc! I quit smoking because you treated my nicotine addiction."

Integrating images with the text made a difference in provider responses. The ad text that included "Thanks Doc!" was rated poorly on its own, but much higher when paired with heartwarming images like a mother and child.
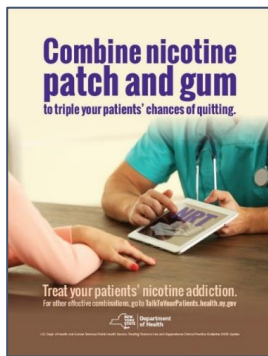
One ad (shown at left) stood out in the message testing results. Provider ratings of this ad were consistently most favorable, most effective, and most likely to motivate providers to take actions consistent with the intent of the campaign. These included provider reports that the ads motivated them to provide tobacco cessation counseling to patients, write prescriptions to help patients quit, and to follow up with patients about smoking cessation efforts.

2017 Message Testing: Ads Tested and Key Findings
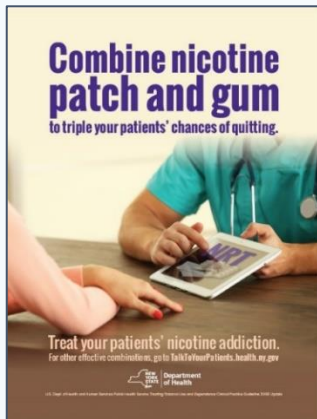
- Rated highest on most measures
- "Clearest, easy to understand, attractive"
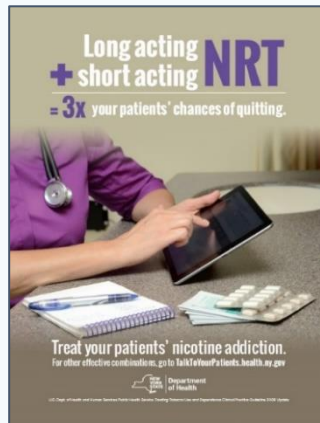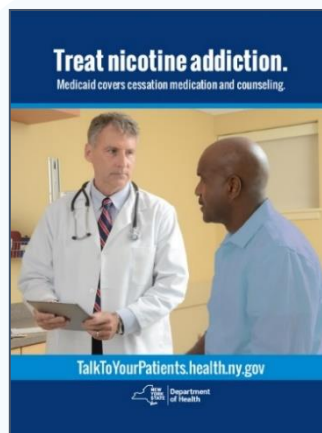

- Considered informative, but confusing

- Described as having an appealing image, but not convincing overall
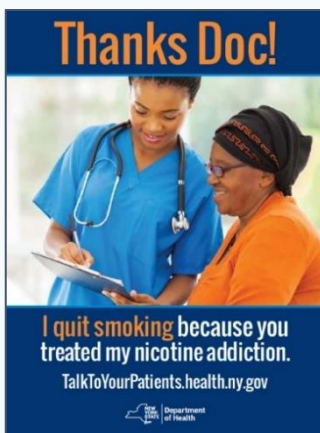
- Described as positive, but not informative
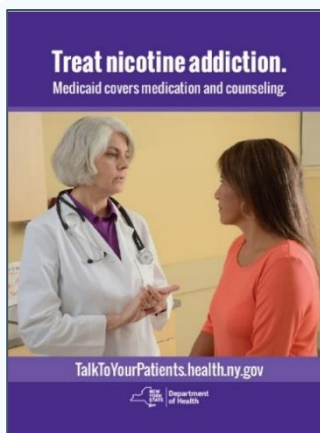
- Described as less useful than other ads

- Rated least convincing

In the 2017 ad testing, we used a scale of perceived effectiveness of the ads designed to determine which ads evoke a combination of reactions likely to indicate that they will be noticed, attended to, and provide meaningful information. Based on provider responses of 1 (strongly disagree) to 5 (strongly agree) for each question for each ad, we combined survey data to calculate a combined perceived effectiveness score for each ad.

Perceived effectiveness scores for ads
These scores offer a combined measure of how the ads resonated with providers, relative to the other ads.

 3.89   3.58   3.65

 3.52   3.44   3.04

During the testing of potential ads, we took advantage of the opportunity to assess whether providers were familiar with the abbreviation NRT (for nicotine replacement therapy). Nearly half of providers (48%) correctly identified NRT as nicotine replacement therapy, but 42% offered no response or responded that they do not know. This indicated that any future ads should spell out NRT for clarity.

NY TCP reflected on provider responses to the text options, draft ads, and related questions as they determined the final set of ads for the 2018 campaign.

2018 Campaign

NY TCP's 2018 provider-targeted ads continued to focus on encouraging providers to offer evidence-based tobacco dependence treatment to treat their patients' nicotine addiction. In 2018, the campaign messaging more specifically emphasized recommending the combination of nicotine patches and gum, which has been shown to be more effective than using a single product. The two print ads had similar images and style, with one being a single-page ad and the other being a two-page ad that provides additional detail about brief intervention.

NY TCP ran the 2018 print campaign ads January through March and digital ads January through May with a budget of $230,724. Approximately three-quarters of the budget was spent on print ads. Similar to the 2016 campaign, NY TCP placed print ads in trade journals targeting health care providers such as the *New England Journal of Medicine*. They placed digital ads on medical websites including sites of the American Association of Family Practitioners and eHealth; in social media with targeting to reach providers (via Facebook and LinkedIn); and distributed via email (using AdFire). Based on lessons learned from the 2016 campaign, NY TCP slightly modified their media placement approach on websites. In the 2016 campaign, NY TCP advertised on websites using an opt-out approach. For example, NY TCP provided lists of websites on which they did not want their ad to appear. However, some providers called to report they had seen an ad on websites that included content contradictory to NY TCP's overall message. Because it was easier to ensure the ads were only seen on pre-approved websites rather than trying to identify all possible websites that may not be desirable, in 2018 NY TCP changed their approach by specifically naming websites on which they wanted their ads to run.

The one-page version of the ad (left) provided an informative message to motivate providers. The two-page version (below) added details about the 5 A's intervention and included the Quitline phone number.

Evaluating the 2018 Campaign

For the 2018 campaign phase, RTI identified opportunities to improve the evaluation approach and ultimately selected a more rigorous, longitudinal study design. Although the 2016 outcome evaluation findings were promising, because we assessed provider outcomes among two different groups of providers rather than the same providers at two points in time, we could not conclude that providers aware of the campaign assisted patients at a higher rate *as a result of* seeing the campaign ads. Perhaps those providers already assisting patients were more likely to pay attention to the ads because the messaging resonated with their existing behavior. The 2018 longitudinal study design allows for a more direct assessment of the impact of the campaign because we surveyed the same providers prior to the campaign launch and after the campaign ended, which allowed us to assess the extent to which individual providers changed their beliefs or behavior after seeing the ads. In addition, we took the opportunity to refine our measures of campaign awareness.

The main questions that the study addressed were:

- To what extent were providers aware of the campaign?

- Was the campaign associated with changes in tobacco-related beliefs?

- Was the campaign associated with changes in provider tobacco intervention?

Methods

We surveyed New York State health care providers before and after the 2018 campaign to assess ad awareness and changes in campaign-targeted beliefs and behaviors. We conducted a

longitudinal study, meaning that we surveyed the same individuals before the campaign and after it ended. We obtained contact information for New York physicians, physician assistants, and nurse practitioners via a state licensure database, and mailed surveys to a sample of 6,000 providers. A total of 1,534 providers participated in the survey before the campaign launched, with data collected October 2017 to mid-January 2018. We sent follow-up surveys to all the providers who participated at baseline, with follow-up data collection occurring July to September 2018. A total of 851 providers completed both baseline and follow-up surveys. We provide additional detail on methods in Appendix A.

Findings

We found that 13% of providers were aware of the 2018 campaign. Providers more often reported seeing ads in journals than online, which is consistent with the media placement strategy.
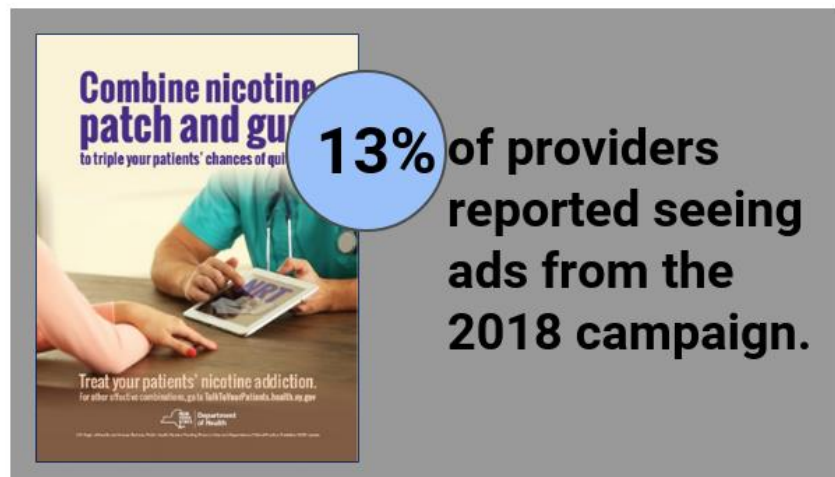

As previously mentioned, one key improvement to the 2018 campaign evaluation study design was the ability to assess individual-level change in key outcomes over time. The campaign

was associated with increases in beliefs related to key messages in the campaign, that the nicotine patch and gum are effective at helping patients quit. According to health behavior change theories, changes in beliefs are prerequisites to changes in behavior. Awareness of the campaign (as assessed at follow-up) was associated with increases from baseline to follow-up that the nicotine patch and nicotine gum are very effective at helping patients quit. Although we saw a general increase in beliefs about the effectiveness of tobacco dependence treatment from baseline to follow-up, the increase in beliefs that the patch and gum are very effective was greater among those aware of the campaign than those not aware, even after controlling for other provider characteristics that may influence these beliefs.

**Percentage of providers reporting that nicotine patch and gum are very effective, by awareness of ads and pre/post campaign**
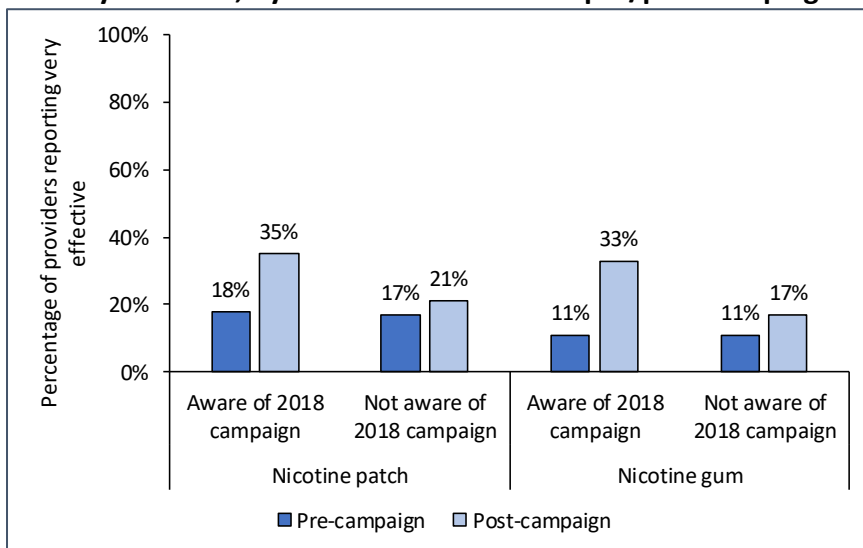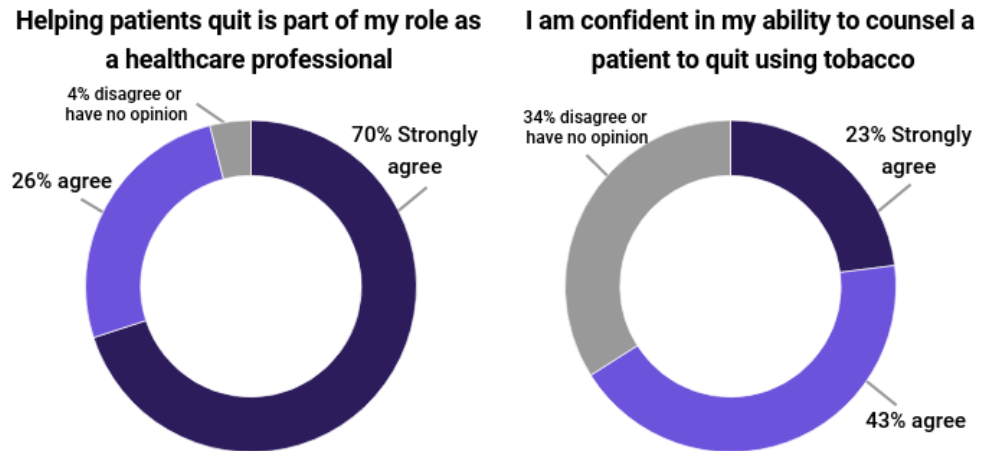

The percentage of providers recommending combination NRT increased from baseline to follow-up and differed by awareness, such that providers aware of the campaign reported higher rates of recommending combination NRT when compared with providers not aware of the campaign. Those differences were not

statistically significant when we controlled for other provider characteristics.

Percentage of providers recommending combination NRT, by awareness of ads, 2018.
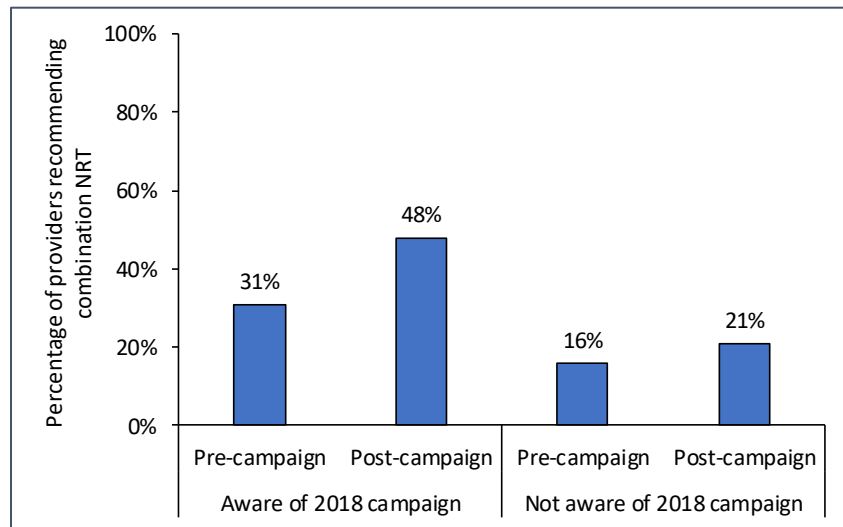
To provide additional context and insight regarding providers' attitudes and beliefs about tobacco dependence treatment, we asked whether they see helping patients quit as part of their role and whether they feel confident in counseling patients about quitting. Nearly all providers agreed that helping patients quit using tobacco is part of their role as a health care provider. However, fewer reported that they were confident in their ability to counsel patients to quit. These beliefs did not differ significantly by awareness of ads, nor did provider beliefs change overall from baseline to follow-up.

Helping patients quit is part of my role as a healthcare professional

4% disagree or have no opinion

26% agree

70% Strongly agree

I am confident in my ability to counsel a patient to quit using tobacco

34% disagree or have no opinion

23% Strongly agree

43% agree

The 2018 provider-targeted campaign was effective at influencing provider beliefs related to key message themes. However, awareness of the ads was fairly low, and we did not find changes in tobacco dependence treatment intervention behaviors by ad awareness. Changing provider beliefs is an important precursor to behavior change, and it is possible that the relatively low number of providers aware of the ads limited our ability to detect behavior changes in our analyses. The campaign findings are promising.

Conclusion

NY TCP successfully developed and implemented a provider-targeted media campaign that aimed to encourage providers to treat their patients' nicotine addiction as any other chronic medical condition that requires medical intervention. This effort demonstrated that media campaigns can reach health care providers with tobacco dependence intervention messaging through print, digital, and out-of-home ads. Campaign awareness was positively associated with provider beliefs and behaviors consistent with the intent of the campaign including reported effectiveness of cessation intervention treatments and provider assistance. The provider-targeted media campaign complements the NY TCP's efforts to promote cessation via health systems change intervention activities to institute systems, policies, and protocols that integrate tobacco dependence identification and treatment into workflows.

NY TCP used findings from focus groups to develop potential campaign messaging and ad placement strategies, which were tested by RTI through online message testing surveys. The message testing surveys generated useful summaries of provider responses to potential ads, and the open text entries regarding highest- and lowest-ranked ads provided valuable qualitative insights into how providers felt about the ads. Ultimately, NY TCP was able to use findings from the message testing to select the ads to which providers were most receptive.

As with all evaluation, there are some limitations to note. We rely on self-reported data, which can be subject to social desirability bias. Differences in the campaign and the evaluation in 2016 compared with 2018 limit our availability to compare results between the two campaigns.

The media landscape evolves over time, and NY TCP's campaigns used approaches including targeted digital and social media placement, regional inclusion of ads in academic journals specific

to health care providers in the New York area, and out-of-home ads in settings likely to be frequented by health care providers.

Based on initial success demonstrated by the evaluation, NY TCP anticipates continuing to use provider-targeted media as part of its comprehensive approach to promote cessation. This campaign and its integrated evaluation provide valuable lessons for future provider-targeted cessation-related media campaigns.

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Appendix A: Methods

In this Appendix, we provide some additional details on our study methods. For each data collection, eligibility criteria included that respondents provided patient care to adults in the past 12 months in New York State and were a physician, physician assistant, or nurse practitioner. When possible, we recruited primary care providers.

The **2015 focus groups** involved 9 focus groups with a total of 68 New York health care providers in October and November 2015 in Albany, Buffalo, and New York City. We asked about provider cessation interventions, barriers to delivering clinical tobacco intervention, message concepts developed by NY TCP, media preferences, and awareness of resources and insurance coverage. The focus group findings informed message development.

The **2016 message testing** involved online surveys of 300 New York health care providers in January 2016. We showed providers draft ads and asked for their reactions. We calculated descriptive statistics summarizing the message testing results, and these findings informed decisions about the 2016 campaign.

The **2016 campaign evaluation** used a pre-campaign online survey of 400 New York health care providers in February 2016 and a post-campaign online survey of 400 New York health care providers in July 2016, with both groups recruited by an online panel survey vendor. These surveys were cross-sectional, which means we did not survey the same providers post-campaign. We calculated descriptive statistics and used adjusted Wald tests to assess differences in key measures by ad awareness. In addition, we conducted multivariable analyses to assess the relationship between campaign awareness and key outcomes. The 2016 campaign evaluation helped NY TCP understand how well the

campaign was received and whether it was associated with the beliefs and behaviors targeted by the campaign.

- We assessed awareness with 2 questions:

  - "Have you seen this ad in the past 3 months?" for each ad, with response options of Yes and No.

  - "How often have you seen this ad in the past 3 months?" for those respondents indicating that they had seen the ad, with response options of Rarely, Sometimes, Often, and Very often.

- Individuals who responded that they had seen the ad and that they had seen it rarely, sometimes, often, or very often were considered to be aware of the ad.

- Individuals were considered aware of <u>any of the ads</u> if they had seen 1, 2, or all 3 of the 2016 campaign ads.

The **2017 message testing** involved online surveys of 300 New York health care providers recruited via an online panel survey vendor in August 2017. As in 2016, we showed draft ads and asked for provider reactions, and we calculated descriptive statistics summarizing our results. Qualitative and quantitative data analyses informed the 2018 media campaign ad selection and placement.

The **2018 campaign evaluation** used a longitudinal survey in which we mailed paper surveys to a sample of providers before the campaign and then sent follow-up surveys post-campaign to those who had completed a baseline survey. We identified New York health care providers by obtaining licensure lists from the University at Albany, State University of New York's Center for Health Workforce Studies. We selected a stratified random sample of 6,000 providers (primary care, as available) and sent them mailed surveys. A total of 1,534 providers participated in the

pre-campaign survey (with data collected October 2017 through mid-January 2018) and 851 of them also completed the post-campaign survey (July through September 2018). We weighted data to the population of health care providers in New York State and adjusted for non-response. We calculated descriptive statistics for key measures and assessed differences by campaign awareness. We used regression analyses to estimate the relationship between changes in key campaign-targeted outcomes between baseline and follow-up. In addition, we used regression analyses to estimate the extent to which any changes in key outcomes from pre- to post-campaign were greater among providers aware of the campaign. We controlled for age, gender, race and ethnicity, provider type, specialty, smoking status, past 5-year cessation intervention training, percentage of patients on Medicaid, and percentage of patients estimated to use tobacco. This study provided data to help NY TCP understand provider awareness and potential impacts on targeted outcomes.

- We assessed awareness with one question per ad, "How often have you seen this ad in the past 6 months?" with options of Never, Rarely, Sometimes, Often, and Very often.

- We considered respondents who reported seeing the ads sometimes, often, or very often as being aware of the campaign.

   - This more limited definition of awareness (excluding those who reported "rarely") takes into account the likelihood that some respondents may report that they saw the ads even if they did not.

- We considered respondents who were aware of either ad as being aware of the 2018 campaign.

Note regarding awareness estimates: Because the 2016 and 2018 campaigns were different and because the two campaigns' evaluations measured awareness differently, we cannot directly

compare the two estimates. The media buy for the 2018 campaign was much lower than the 2016 campaign, which limits the potential reach of the campaign. In addition, the media budget was proportioned differently, both because the 2018 campaign did not include out-of-home advertising and because a lower percentage went to digital ads. We measured awareness slightly differently in 2018 to better align our measures of awareness with best practices used in other media evaluations. Follow-up was conducted at a longer interval after the end of the campaign than for the timing of the 2016 campaign evaluation, and the 2016 evaluation used an online panel and the 2018 evaluation sampled providers from licensure lists. In the table below, we highlight some differences between the 2016 and 2018 campaigns and evaluations.

Comparison of 2016 and 2018 Campaigns and Evaluation Methods

Study Feature	2016 Campaign and Evaluation	2018 Campaign and Evaluation
Campaign spending	$776,205	$230,724
Media placement	Print (e.g., trade journals)	Print (e.g., trade journals)
	Digital (e.g., websites, LinkedIn)	Digital (e.g., websites, LinkedIn)
	Out-of-home (e.g., doctor's offices)	Out-of-home (e.g., doctor's offices)
Media buy	Approximately half of the budget went to digital ads	Approximately 3/4ths of the budget went to print ads
Study design	Cross-sectional pre-post survey	Longitudinal pre-post survey
Survey mode	Online	Mailed
Survey timing	1-month post-campaign	2-3 months post-campaign
Sample selection	Online panel (convenience sample)	Licensure database (randomly selected)
Sample size	400 in pre-campaign survey, 400 in post-campaign survey (not the same individuals)	1,534 in pre-campaign survey, 851 of those individuals participated in post-campaign follow-up survey
Awareness measure	Awareness measure asked if they had seen the ad, and if so, how often. Included "rarely" in awareness	Awareness measure assessed how often they saw each ad. Did not include "rarely" in awareness

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