

Increasing Reach of Tobacco Cessation Quitlines

A Review of the Literature and Promising Practices

INTRODUCTION

Background

About 45.3 million Americans (20.8%) smoke cigarettes (CDC, 2007), which is double the Healthy People 2010 goal of 10% (USDHHS, 2000a). About 43.5% of smokers have reported trying to quit within the last year, and 64.2% have tried to quit without the use of any cessation treatments (Shiffman, Brockwell, Pillitteri & Gitchell, 2008). Unfortunately, many former cigarette smokers have difficulty staying quit, with about 70% to 90% resuming smoking within the first year of quitting (Fiore, et al., 2000; Garvey, Bliss, Hitchcock, Heinold & Rosner, 1992). Data from the *2008 Treating Tobacco Use and Dependence Clinical Practice Guideline (Guideline)* suggest that smokers are more likely to quit successfully if they use evidence-based counseling or medication treatment than if they tried to quit on their own (Fiore, et al., 2008).

Quitlines provide such evidence-based counseling. Quitlines encourage tobacco users to quit by providing them with services such as counseling that is conducted by trained and qualified professionals, medications, information, self-help materials and referrals to community-based cessation programs (NAQC, 2006). Evidence proves that telephone counseling helps people quit (Stead, Perera & Lancaster, 2006). Because of this, the *Guideline* recommends telephone counseling as a proven and effective method for tobacco cessation (Fiore, et al., 2008). In addition, the Task Force on Community Preventive Services' Guide to Community Preventive Services strongly recommends providing telephone-based counseling along with other systems changes (2000).

Drawing similar conclusions, the 2007 Institute of Medicine report *Ending the Tobacco Problem: A Blueprint for the Nation* recommends strengthening and fully implementing currently proven tobacco control measures, including quitlines. The report states, "These comprehensive state programs, as well as their individual components, have been shown to be effective. Failure to sustain these efforts will cost lives", (Bonnie, Stratton & Wallace, 2007). The authors of the National Action Plan have suggested that quitlines could reach as many as 16% of tobacco users annually (Fiore, et al., 2004). The recent *Best Practices for Comprehensive Tobacco Control Programs – 2007* report recommends funding cessation services at a level of \$3.43 per capita in each state, enough to serve 6% of all tobacco users with evidence-based programs and services (USDHHS, 2007).

Fortunately, the tobacco control community is well positioned to put this advice into practice. Due to their effectiveness and ability to reach and serve tobacco users, regardless of location, quitlines have spread quickly across North America. Today, residents in all 50 states, the District of Columbia, U.S. territories, all ten Canadian provinces, Nunavut, the Northwest Territories, and Mexico have access to free, public quitline services.

In 2004, in an effort to build quitline infrastructure in the U.S., 1-800-QUIT-NOW was established. 1-800-QUIT-NOW is a single toll-free portal number that provides smokers with easy access to their local telephone quitline. This service was made possible through a partnership between States, the Centers for Disease Control and Prevention's Office on Smoking and Health (CDC OSH), the National Cancer Institute's Cancer Information Service and the North American Quitline Consortium (NAQC). Canada is exploring use of a similar national portal number for its quitlines.

Call to Action

Despite all we know about the effectiveness of quitlines, they continue to serve less than 2% of tobacco users each year (NAQC, 2006; Cummins, Bailey, Campbell, Koon-Kirby & Zhu, 2007; Ossip-Klein & McIntosh, 2003) and are not funded at levels recommended by numerous national health agencies as noted above. CDC and NAQC recommend by 2015 each quitline should achieve a reach of at least 6% of its total tobacco users. NAQC believes this can be achieved

NAQC Issue Paper: *Increasing Reach of Tobacco Cessation Quitlines*

through both significantly increasing funding to quitlines and continued focus on improved quitline practices. With adequate funding, a reach goal of 6% is possible and would increase overall health, save lives lost to tobacco-related deaths and diseases and decrease direct medical costs. With renewed focus on healthcare reform and cost containment, cost-effective services like quitlines will become more and more necessary and valuable.

At presently funded levels, while we know many strategies work for increasing quitline reach – as are demonstrated in this paper – without additional funds for quitlines, such approaches offer challenges and opportunities. Unlike other public health interventions, promoting quitlines requires staffing of the quitline which correspond to the intensity and net effectiveness of an overall campaign (S. H. Zhu, 2000; S H Zhu, Johnson, Tedeschi & Roeseler, 2000). One key consideration that may impair a quitline’s ability to effectively serve its participants is that exceptionally large promotions can result in very high call volume and not enough staffing or, in the alternative, lack of promotion can result in low call volume, which could lead to staff underutilization (Mosbaek, Austin, Stark & Lambert, 2007).

One thing marketers have learned is that constant promotions lose their ability to command attention. The solution to this “burn out” effect is to keep promotions fresh as well as varied (Zhu, 2000; Zhu, et al., 2000). What is needed is a relatively constant level of varied promotion so all calls can be handled and all staff members fully utilized. Such an approach requires additional funding, so that quitlines can explore and implement promising practice strategies, such as the ones highlighted in the paper, to improve quitline effectiveness and reach.

Results

This document provides an overview of the published literature as well as examples from practice on ways to increase the reach of quitlines. It is divided into several sections by topic area. Each section summarizes the published literature first and supplements that information with examples from the field to show how each strategy is being used in practice. Literature examples were found using PubMed and by recommendations from NAQC members.

Key findings include:

TV advertising still cost effective way to reach tobacco users

Television advertising appears to be the most effective means of reaching the largest number of people at once. Several states such as California, Nevada, Utah, Vermont and Wisconsin have seen increases in call volume after the airing of television ads. While television ads may be the most effective means of advertising, they are also the most costly. Television ads may be taxing on the quitline’s budget and have great potential to overwhelm quitline staff not prepared for a large influx of calls.

Other cost-effective media options

Media avenues such as radio, newspapers and direct mailings may offer quitlines a more cost effective strategy for the recruitment of smokers. Quitlines in Minnesota, Alabama and Vermont found direct media sources of advertising to be a useful and cost-effective strategy for increasing call volume.

Online advertising offers great potential

Given the accessibility, versatility and popularity of the Internet, online advertising has great potential to reach smokers trying to quit. Several avenues exist to advertise online such as banner ads on websites, pay per click advertising, email marketing, blogs and text links and social networking sites. States and provinces such as British Columbia, Delaware, Idaho, Minnesota, New Jersey, Utah and Vermont use online advertising to recruit smokers to their Web-assisted tobacco interventions (WATI) and quitlines.

Building referral networks

Healthcare and community services system changes are policies and practices designed to promote smoking cessation that can be integrated into patient care in a hospital, dental practice, physician office or any setting where healthcare providers or community services professionals see tobacco users regularly. States such as California, Illinois, Maine, Massachusetts, Ohio and Wisconsin have found great success with building referral programs designed to refer smokers to the quitline from natural settings like their health provider’s office, community organizations, barbers and hairdressers, schools, etc.

NRT programs increase call volumes

Seventy percent of U.S. quitlines have offered free nicotine replacement therapy (NRT). States have reported at least a twofold increase in the number of calls during a free NRT promotional program, yet they have found these types of

NAQC Issue Paper: *Increasing Reach of Tobacco Cessation Quitlines*

programs to be expensive to implement. However, they have been found an effective strategy to help many smokers at one time and increase reach and quit rates.

Quit and Win contest raise awareness and reach

Quit and Win contests are programs designed to help motivate smokers to remain abstinence during periods where relapse is most likely to occur (within the first month of quitting). These programs provide incentive for individuals to stay quit by offering opportunities for individuals to win a prize for pledging to stay quit.

Linking ad campaigns to tobacco policy changes can spike call volumes

Quitlines found advertising campaigns in conjunction with state tobacco policy changes, such as clean indoor air laws and tobacco tax increases, increased the number of calls to their quitlines.

Mixed data on message tailoring for special promotions

Research is mixed regarding the use of tailored messages in recruitment of special populations of smokers to research studies and quitlines. Some studies show that mainstream messages are equally effective at attracting members of priority populations. At the same time, other work has shown tailored messages to be effective at generating calls from those populations.

In conclusion, quitlines have a number of strategies available to increase reach. The remainder of this paper will explore these possibilities in-depth, offering the most recent information from published literature along with real-life examples from the field to illustrate these various approaches in action and how they can be used to improve quiline practices and help move the field toward the goals of an -8% reach and 6% service delivery to all tobacco users.

PAID, EARNED AND NEW MEDIA

Review of the Literature

In general, television advertising is the most effective means of generating calls to quitlines, albeit the most expensive. According to a report by the Global Dialogue, “When [television] ads with a quitline tag are aired/placed, people will call. In fact, when TV ads are aired, people typically call immediately, causing significant spikes in number of calls to the quitline” (2006). Evidence of this relationship between television advertising and call volume has been reported by many research studies; (Erabas, Bui, Huggins, Harper & White, 2006; Erbas, Bui, Huggins, Harper, & White, 2006; Wilson, Grigg, Graham & Cameron, 2005). In one Massachusetts study, recent quitters found television advertising to be more helpful than any other quitting aid, due, in part, to the large numbers of people exposed to the advertising (Biener 2006, cited in Global Dialogue, 2006). In England, another study reported that television advertising had out-performed advice from health professionals or encouragement from friends and family as the trigger to making a quit attempt (BMRB, 2004).

Due to the potential scale of the impact of television advertising, managing staffing levels in coordination with television advertising schedules is critical to providing consistent high-quality service to tobacco users wanting to quit (CDC, 2004; California Department of Health Services, 2000; both cited in Global Dialogue, 2006). Television ads are so effective that quitline programs must often scale back advertising to avoid overloading counselors. Due to quitline staffing budgets, staffing levels are often capped, making it difficult to effectively manage high-volume call periods (NAQC 2005, cited in the Global Dialogue, 2006).

Studies have been conducted focusing on the cost-effectiveness as well as the reach of television advertising buys and calls to quitlines. The findings suggest that television advertising increases calls to quitlines for both smokers as well as smokeless tobacco users (Wilson, et al., 2005). Researchers have assessed the cost-effectiveness of advertising by looking at changes in call volume relative to the time the ad was aired (Miller, Wakefield & Roberts, 2003; Hurd, Auguston, Backinger, Deaton & Bright, 2007). Television ads have been found to be both more cost-effective than radio (Mosbaek 2002) and less cost-effective than radio (Farrelly, Hussin & Bauer, 2007). Consistently, those tobacco users who call the quitline in response to television ads are those users who plan to stop tobacco use within the next 30 days (Mosbaek, et al., 2007). In another study, those smokers in the higher economic bracket were as equally likely to call during a television ad campaign as those in lower economic brackets (Siahpush, 2006).

NAQC Issue Paper: *Increasing Reach of Tobacco Cessation Quitlines*

While more research is needed to better understand the relationship between media placements and call volume, some examples of successful campaigns can provide models to build on. In one example, television watchers were more likely to respond to television ads shown during the day than other ad placements during other times of the day (Wilson, et al., 2005). Similarly, another study found that overall cost and cost return for daytime television placements were one third of the cost (\$70 per call) of the evening buys (\$332 per call) (Mosbaek, et al., 2007). The authors hypothesized the cost per viewer was higher for evening television buys because evening television viewers are generally paying more attention to the TV broadcast than daytime viewers. Another factor playing into the low call volume for evening ads are that most quitlines aren't staffed 24-hours, and typically callers who do not reach a staff member the first time they call are unwilling to leave their information or call back (Mosbaek, et al., 2007).

In Australia, Monday through Wednesday television ad placements were more effective at generating calls than ads placed on other days (Erabas, et al., 2006; Erbas, et al., 2006) Carroll and Rock (2003) also found that Australian smokers were more likely to call the quitline when ads were placed during shows considered to be light entertainment (e.g., game shows, reality television) compared to higher-involvement programming (e.g. dramas, documentaries or movies). Another study also found that ads placed in reality or game shows ("light entertainment") were perceived to be more credible than those placed in comedy shows (Durkin and Wakefield, 2005).

Targeting the message so that it gets the highest response is critical. Several countries and U.S. states have had great success using a combination of "why to quit" and "how to quit" messages (Carroll & Rock, 2003; Wilson, et al., 2005); Wilson et al, 2005; Biener et al, 2006; Norwegian Directorate for Health and Social Affairs, 2003). According to the Global Dialogue, "why to quit" messages "should be hard-hitting about the consequences of tobacco use, eliciting negative emotions (anger, loss, sadness, guilt, fear) that prompt smokers to make a quit attempt now" (Wakefield, Freeman & Donovan, 2003; Wilson, et al., 2005; Hutchison et al, 2005; Biener, McCallum-Keeler, Nyman, 2000). "How to quit" messages, on the other hand, "should be supportive and positive, emphasizing available quitting resources and giving smokers hope they can succeed" (Global Dialogue, 2006). Testimonials provide messages from real-life people, putting a "face" on the desired message. Testimonials can be cost-effective means of reaching specific populations through messengers who are like the target group. They can be either "how to quit" or "why to quit" ads. In one study, ads that showed real life testimonials by people who lost family members to tobacco related diseases and advertisements that were practical about how to quit smoking were most effective in recruiting smokers to quitlines (Mosbaek, et al., 2007). Further, ads with a "call to action" such as showing a smoker picking up the phone or giving the messages to quit were also most effective at generating calls to the quitline (Haviland, et al., 2004).

Examples from Practice

Television ads to increase call volumes

Quitlines have found success in using television ads to increase the number of calls to their quitlines. For instance, the Vermont quitline found television advertisements the most common referral source to their quitline (14.5%) among smokers who called between February 2001 and June 2005. In addition, members from Nevada partnered with the Southern Nevada Health District to run television ads about the quitline and saw increases in the number of calls received. Members from Utah found one television ad titled "Make Life Easier" generated more calls from men than any other ad. Finally, Wisconsin experienced increases in calls from African Americans, Latinos and uninsured callers when television ads were aired focusing on these populations.

Ads emphasizing quit help effective

Quitlines have found that television ads that emphasize the importance and effectiveness of using help to quit have been effective at generating calls to quitlines. New South Wales, Australia doubled calls to the quitline by stating in ads that smokers are twice as likely to quit if they use the callback service offered (Global Dialogue, 2006). California and other states have had success with the "quitting takes practice" ad, emphasizing it often (usually) takes more than one quit attempt to be successful. One qualitative study in New Zealand found that smokers want to know that quitting can be a long-term process (The Quit Group 2005, cited in Global Dialogue, 2006). This suggests that ads emphasizing the need for multiple quit attempts in combination with the resources that are available might also focus on the spectrum of available resources to encourage smokers to try something else if they have been unsuccessful in the past.

NAQC Issue Paper: *Increasing Reach of Tobacco Cessation Quitlines*

Strategies to mirror staffing levels to promotion

Several members have used strategies to more effectively match staffing levels with television promotions. California alternates tags on its ads in Los Angeles and the rest of the state – one week the LA tag is for the quitline and the tag for the remainder of the state is for the Web site, while the next week the tags are reversed. (C. Stevens, personal communication, May 2006, cited in the Global Dialog 2006). Many programs have also used flighting, where ads are on the air only during certain periods of the year (NAQC 2005).

It is important to note that while television advertising is likely the most effective means of reaching the largest number of people at once, it is the most costly type of advertising to use. Some programs will not be able to afford sustained television advertising or even any advertising. For example, in 2005 only two quitline programs in Canada were able to afford television advertisements (NAQC, 2005). Due to the current and anticipated budget cuts for tobacco control programs, quitlines will need to make decisions about which promotional strategies to employ based on the resources available to them. Other vehicles such as news media coverage, healthcare provider referral networks, word of mouth, websites, radio and print ads should also be considered as tools to increase quitlines' reach. In the NAQC 2008 Annual Survey of Quitlines, NAQC found that some quitlines were quite successful at generating reach higher than the 1% average with quite low per-smoker media expenditures.

Level of Advertising Exposure

While there is no “recommended” level of media exposure for quitlines, several successful programs try to maintain a presence of 400-600 TARPs/GRPs per four weeks during the periods when the campaigns are on-air (Global Dialogue, 2006). The CDC recommends a funding level of between \$1.30 and \$3.90 per capita for health communications campaigns in major media markets. The campaigns should address cessation, including promotion of the quitline, general education about the health hazards of tobacco use and secondhand smoke exposure as well as youth prevention (CDC, 2007). This is consistent with the study that simulated models based on successful U.S. campaigns and predicted that \$3 per capita would yield optimal tobacco prevalence reductions over time (Levy and Friend, 2001). In nearly all studies and reports reviewed for this document, the most successful campaigns were those that were sustained over time (Global Dialogue, 2006, Hyland et al, 2005; McVey and Stapleton, 2000; Erbas, 2006; Levy and Friend, 2001; CDC, 2007).

RADIO, NEWSPAPER AND DIRECT MAIL

Radio - A Review of the Literature

Dollar for dollar, costs for generating a radio campaign are similar to the costs for mounting a televised campaign (Farrelly, et al., 2007). However, the cost to buy the time and air the radio advertisement is cheaper than television. A study looking at the cost of an advertising campaign for television, radio and print, found radio advertising does help increase calls to the quitline (Farrelly, et al., 2007). There was limited information about the rate of calls generated from the print campaign, and at this time, there is little by way of findings as to whether newspaper campaigns increase quitline call volume. One group found classified ads to be a cost-effective strategy for quitlines (e.g., \$0.96 per recruit) to reach smokers at all stages of change (McDonald, 2004). While increases in expenditures for television are the most effective at generating calls, its relatively high costs suggests that television is not as cost-effective to promote a quitline as radio or newspaper advertising might be (McDonald, 2004). While television appears to be a cost-effective method for recruiting callers to the quitline (Mosbaek, et al., 2007) other media advertising such as radio or newspaper may be a cheaper means of advertising.

For every \$1,000 spent to air a radio advertisement, approximately a 5.7% increase in call volume would be expected as compared to television which would see a 0.1% increase for every \$1,000 spent (Farrelly, et al., 2007). This suggests a more cost-effective strategy would place a greater emphasis on radio than television. With limited resources, program directors may want to look into advertising in local media channels and radio rather than television to promote their quitline.

Direct Mail - A Review of the Literature

The advantage of direct mail for marketers represents an opportunity for public health and quitline managers to promote the quitline. As O'Connor et al. pointed out, commercial markets, including the tobacco industry, have increasingly relied on direct mail advertising to target their customers (2008). Direct mail advertising may also prompt smokers to call a quitline, but response rates for this form of media campaign are significantly lower than other forms of media outreach

NAQC Issue Paper: *Increasing Reach of Tobacco Cessation Quitlines*

(R. J. O'Connor, et al., 2008). Research has found direct mailings are most successful when concrete messages such as the availability of free nicotine replacement therapy (NRT) are provided (Holtrop, Wadland, Vansen, Weismantel & Fadel, 2005; R. J. O'Connor, et al., 2008). For instance, O'Connor and colleagues found that unsolicited direct mailings increased calls to the New York State Smokers Helpline an average of 36% (R. J. O'Connor, et al., 2008).

In the study by O'Connor and colleagues, respondents to direct mailings tended to be women, middle aged who had attempted a quit prior to initiating the call (R. J. O'Connor, et al., 2008). Mailings that provided concrete messages and supplied information about the availability of free NRT were perceived as being more helpful and motivated more smokers to call (R. J. O'Connor, et al., 2008). The average cost of the New York direct mail campaign was \$27,515, which translated into between \$9.70 to \$60.87 per caller (R. J. O'Connor, et al., 2008). Costs per caller varied because other media campaigns were conducted at the same time making it difficult for the smoker to recall exactly where they had learned about the quitline. Even though the cost per caller varied, direct media mailings can be a competitively priced way to reach and educate smokers about the quitline (R. J. O'Connor, et al., 2008).

Examples from Practice

Use of humor

The Minnesota quitline found large call increases after airing the “Loon on my Back” radio advertisement, a humorous spin on the “monkey on my back” image associated with addictions.

Creative approach coupled with earned media

In Alabama a 3 x 3 inch yellow post it note was placed on the front pages of seven major newspapers in the state in the summer of 2007. The note featured the California character ads and quitline number with the words “Free call, free counseling, free nicotine patches.” This ad cost a total of \$37,000 and increased calls for one month. Also, the Alabama quitline distributed a press release in local newspapers about how the quitline could support New Year’s resolutions. The Associated Press picked up the release and ran it across the state. Due to this advertising, the Alabama quitline had to bring in extra help and rearrange holiday schedules to keep up with calls.

Overall impact of direct mail

The Vermont quitline ran a direct mail campaign and saw a 13% increase in the number of smokers calling between February 2001 to June 2005. They assessed the effects of direct mailings on call volume and estimated the Vermont quitline would have received over 1,000 fewer calls during this time period if direct mailings were not utilized.

ONLINE RECRUITMENT

A Review of the Literature

Approximately 147 million U.S. adults access the Internet each day (Madden, 2006), and at least 63% of Americans report having access to high speed Internet services in their homes (Horrigan, 2009). Internet users have become incredibly diverse in terms of race, age, income and education level (Horrigan, 2009). For instance, a majority of African Americans (62%), Latinos (78%) and individuals with an annual household income below \$30,000 (55%) report using the Internet (Horrigan, 2009). Also, broadband Internet usage has increased over the last year among individuals over the age of 65 by 11% (Horrigan, 2009). Currently, 61% of American adults use the Internet to search for health related information (Fox & Jones, 2009), with about 12 million U.S. adult Internet users reporting having searched online for information on how to quit smoking (Fox, 2005; Madden, 2006). Several avenues exist to advertise online such as banner ads on websites, pay per click advertising, email marketing, blogs and text links. Social networking sites are just one aspect of new and promising avenues for recruitment and promotion of quitlines and are virtually untapped. Given the accessibility, versatility and popularity of the Internet, online advertising has a great potential to reach smokers trying to quit (Bock, et al., 2004; McClure, et al., 2006).

The Internet has been used to successfully help recruit smokers to Web-based cessation programs (An, et al., 2007; Etter & Perneger, 2001; Feil, Noell, Lichtenstein, Boles, & McKay, 2003), yet little published information exists about the cost- effectiveness of using online advertisements to enroll smokers. Only one study to date has compared more traditional recruitment methods (e.g., television or radio ads, billboards, direct mailings, etc.) with online methods to recruit smokers for a smoking cessation program (Graham, Milner, Saul & Pfaff, 2008). Researchers placed banner ads and on national

NAQC Issue Paper: *Increasing Reach of Tobacco Cessation Quitlines*

websites (e.g. WebMD), local websites (e.g., local newspaper websites) and search engines (e.g. Google). In addition, paid search ads were purchased on a per click basis, meaning that costs of advertising are associated with the number of times an ad is clicked on by the user. Results found 9.1% of the study sample registered for some form of smoking cessation treatment came from online advertising. Compared to other traditional forms of media, online ads recruited more men, ethnic minorities, dependent smokers and individuals with a high school education or less. The cost-effectiveness of online advertising was as low as \$7 and as high as \$476 per enrolled smoker. Online advertisements placed on six different websites for a total of six months cost about \$36 per enrolled caller to the quitline (Graham, et al., 2008).

Examples from Practice

Email campaigns

Members from the Washington quitline rented an email list of self-identified smokers in their state and a large number of commercial accounts from an independent vendor of opt-in consumer lists. Two email drops were sent to 220,000 self-identified smokers. The email message contained information about the quitline, the quitline number and an option to enroll in the quitline through the Internet. The email was viewed by 30,656 people with an open-rate of 6%, with 481 “click-throughs.” The cost per email was 2.75 cents. Because the list was rented and quickly implemented, the Washington quitline was unable to track call volume and registration numbers. There did not seem to be an increase in call volume during this time period. While emailing smokers appeared to be a low-cost strategy for advertising the quitline, contacting all smokers, regardless of their motivation to quit, may not be an efficient method of recruitment.

Pay per click advertising

Minnesota: The Minnesota quitline has used online advertising (e.g. online banner ads) to recruit smokers for the past five years. Through the use of online banner ads, Minnesota has been able to track the number of smokers recruited through this medium and is able to obtain demographic information on the individuals clicking on the ad. In addition to online banner ads, Minnesota uses paid search on Google, MSN and Yahoo. Through paid search, when someone searches for terms like “quit smoking” a sponsored text ad appears. With the paid search ads, Minnesota only pays when someone clicks on it. Thus far, approximately 30% of visitors to their website come from the paid searches.

Healthways QuitNet: Healthways QuitNet has assisted states and provinces such as British Columbia, Delaware, Idaho, Minnesota, New Jersey, Utah and Vermont in using online advertising to recruit smokers to their WATI and to their quitlines. The number of clicks an ad receives depends on ad type and how much money is in the advertising budget. For instance, a budget of \$100,000 receives approximately 70,000 clicks and 6,000 registrations when using a combination of paid search ads and ad placements on free email sites such as Yahoo Mail. Of those 6,000 registered smokers, about 3,000 choose WATI interventions, 2,000 choose WATI and phone and about 1,000 chose the phone intervention. Advertising online is a cost-effective strategy to recruit smokers. For example, these states have found paid search ads cost approximately \$8 per registrant, while ads on websites tend to cost more (\$20-\$200 per registrant). As a general low-cost recruitment strategy, paid search ads should be purchased. For broader coverage, email ads and ads on general-purpose websites should be purchased in addition to paid search ads.

BUILDING REFERRAL NETWORKS

A Review of the Literature

Health systems changes are policies and practices designed to promote smoking cessation that can be integrated into patient care in a hospital, dental or physician practice or any setting where tobacco users are regularly seen by healthcare providers. These forms of change can be direct, such as regular training of clinicians in brief cessation interventions, which include educating healthcare professionals about the availability of a state supported quitline (Fiore, Keller, & Curry, 2007). Physician referral programs can be proactive, where health professionals prompt the quitline to contact tobacco users; and reactive in nature, where the patient makes contact with the quitline (Lichtenstein, Glasgow, Lando, Ossip-Klein & Boles, 1996). A majority of research has shown proactive measures to be a successful strategy for enrolling callers to a quitline (Stead, Lancaster, & Perera, 2003; S. H. Zhu, et al., 1996), while reactive methods have been shown indirectly helpful to recruiting tobacco users to quitlines (Stead, et al., 2003).

Proactive strategies

Proactive strategies such as physician fax referrals to a state supported quitline or follow-up calls by the provider using an

NAQC Issue Paper: *Increasing Reach of Tobacco Cessation Quitlines*

in-house cessation support program have been shown to increase abstinence rates compared with reactive use quitline approaches (where the tobacco user initiates all contact) (Ebbert, Carr, Patten, Morris, & Schroeder, 2007). Physician referral to the quitline service via fax referral can cost less than \$2 per patient and has been shown acceptable by clinical office staff as well as patients (Wolfenden, et al., 2008). A proactive approach has also been shown to increase satisfaction by the tobacco users calling into the quitline as well as increase abstinence rates at six-month follow ups (Wolfenden, et al., 2008). Key for success with this type of intervention is a quitline's support of proactive referrals as well as an easy-to-use, quick-to-fill-out form for office staff to complete (Wolfenden, et al., 2008). One study found that through proactive (fax referrals) and reactive approaches (informational brochures), approximately 15,700 smokers were identified by 19 clinics and 745 were referred to the Oregon quitline during a period of one year. The program cost \$15-\$22 per patient connected with the quitline (Bentz, et al., 2006). Studies also show approximately 50% to 70% of patients referred to the quitline were contacted by a quitline counselor (Gordon, Andrews, Crews, Payne, & Severson, 2007; Wolfenden, et al., 2008).

Proactive strategies and 3A's versus 5A's

Another form of health systems change that can encourage calls to the quitline are a combination of proactive use of the quitline with the adoption of the 3A's of tobacco cessation intervention versus the 5A's of intervention currently being advocated for at the provider level (Gordon, et al., 2007). The 5A's of intervention currently include 1) Ask; 2) Advise; 3) Assess; 4) Assist; and 5) Follow-up. Adoption of the 5A's in routine clinical practice has been slow (Fiore, et al., 2008). Many providers accept responsibility for the first 2 A's, but resist the other 3A's because they are time consuming and many providers do not feel they have the counseling skills required (Gordon, Lichtenstein, Severson & Andrews, 2006). Quitlines can assist providers by taking responsibility for the follow up calls to the smoker (Borland & Segan, 2006). This form of change requires a partnership with clinical providers, education and the availability of a proactive quitline. In these settings either a phone or fax referral to the quitline is set up after the provider determines that the tobacco user might benefit from a proactive follow up for cessation counseling (Mahabee-Gittens, Gordon, Krugh, Henry & Leonard, 2008).

Partnerships key to systems change

In terms of overall impact on calls to the quitline, health systems changes work best when quitlines partner with the organization undergoing change. Quitlines who partner early in the system change process see calls to the center increase and can reduce resistance and costs as well (Bentz, et al., 2006). It does little good to enact an organizational or system-wide change if people aren't aware of the available services. Drawbacks to organizational changes include resistance by employees, cost and time associated with implementation (Bentz, et al., 2006).

Examples from Practice

Niche marketing

California advertised the quitline among medical providers, local health departments, schools, friends and family members in order to promote word of mouth through the community. Non-media referrals have increased over time in California from less than 200 calls in 1992 to over 1,600 calls in 2000.

Referral sources

Illinois reported that 69% of their callers heard about the quitline from a referral source such as a health professional, family, friends, their workplace, a community organization or their health insurance company.

Physician fax referral

Physician and fax referrals have proven a successful way to increase calls to the quitline. The Ohio quitline developed three ways to expand healthcare providers utilization of the fax referral. First, the "fax five" was a direct marketing campaign aimed at health professionals encouraging a grass roots promotion effort among health professionals. Second, an outreach program was developed with 51 local hospitals in order to establish a fax referral process. Each hospital received a small stipend to institute a fax referral process and undergo training. Finally, members conducted a health professional training program and distributed professional quit kits. The three initiatives greatly increased fax referrals to the quitline. The program originally averaged 68 referrals per month during the year before the initiatives began and averaged 412 referrals per month during the study period. The direct marketing campaign was the most cost-effective method, but least sustainable, while the community effort to train health professionals was slow growing, yet more

sustainable.

Quitline outreach specialists

In Wisconsin, the quitline reported 25% of its direct callers are referred by healthcare providers. In addition, fax referrals in the state of Wisconsin accounted for about 56% of callers in November 2008. Success with the physician and fax referral programs in Wisconsin may be related to the use of outreach specialists or individuals hired to educate physicians about the quitline and their fax referral program.

NICOTINE REPLACEMENT THERAPY AND OTHER MEDICATIONS

A Review of the Literature

Smokers who use medications are over twice as likely to quit than those who do not (Silagy, Lancaster, Stead, Mant & Fowler, 2004). *Thirty-seven U.S. quitlines (70%) have offered free NRT or other medications to at least some of their callers (NAQC, 2008). State quitlines that implemented a free NRT program saw an increase in calls ranging from twofold to eightfold during the promotional period (An, Schillo, Kavanaugh, Lachter, Luxenberg, Wendling & Joseph, 2006; Bush, et al., 2008; Cummings, et al., 2006; Miller, et al., 2005; Silagy, et al., 2004; Campbell, Lee, Haugland, Helgeson & Harwell, 2008). For instance, within six months of a free NRT giveaway program, the Minnesota quitline saw an increase in the number of calls from 155 to 679 per month (An, et al., 2007). Other studies confirmed similar findings with a 47% increase in calls in Oregon and a 49% increase in calls in Maine (Swartz, Cowan, Klayman, Welton & Leonard, 2005) from smokers during free NRT programs. In addition, states have seen decreases in the mean number of registered callers once the free NRT program was discontinued (Campbell, Ossip-Klein, Bailey & Saul, 2007; Campbell et al., 2008).*

For the studies included in this paper, new callers to quitlines during free NRT programs tended to be uninsured (Fellows, Bush, McAfee & Dickerson, 2007; Swartz, et al., 2005), an ethnic minority (Miller, et al., 2005; Swartz, et al., 2005) and between the ages of 25 to 44 (Miller, et al., 2005; Tinkelman, Wilson, Willett & Sweeney, 2007). Individuals participating in free NRT programs were more likely to be quit at six months (15% to 35%) compared to people who received counseling alone (6% to 12%) (An, et al., 2007; Miller, et al., 2005; Swartz, et al., 2005).

The cost of implementing a free NRT program is greater than offering counseling services alone. For instance, quitlines saw an increase in the total program costs ranging from \$1,362 to \$2,688 to \$1,934 to \$3,738 (An, et al., 2007; Fellows, et al., 2007). This may be the result of more individuals accessing the quitline during these promotions in addition to the cost of maintaining the program (e.g. shipping the NRT, purchasing the NRT, etc.). Further, the cost per successful quit in programs which offer free NRT ranges from \$215 to \$464, which is cost-effective but difficult to implement with a tight budget. Therefore, if resources are limited, programs need to balance reaching/serving more people with programs that are potentially less effective (e.g. follow-up counseling with no free NRT program) versus serving fewer people but serving them more intensely and perhaps more effectively (e.g. counseling with free NRT). In fact, some states found their free NRT promotion overwhelmed the available response lines and staffing during the first few days of the program (Fellows, et al., 2007).

Examples from Practice

NRT programs can be cost effective

The New York quitline has conducted several free NRT offerings in their state. Between April and May of 2003, smokers living in the New York City area were offered a six-week supply of nicotine patches. To be eligible callers needed to be over the age of 18, willing to quit in 7 days, have no contraindications for the nicotine patch and smoke more than 10 cigarettes per day (CPD). At 12 months people who received the nicotine patches were 1.78 times more likely to quit than the callers receiving counseling services alone. The estimated cost of producing one additional quitter as a result of the patch giveaway was \$420, indicating this was a highly cost-effective program (Cummings, et al., 2006).

Effectiveness of free NRT programs

In an article assessing the effectiveness of four separate free NRT programs across various regions of the state of New York, Cummings and colleagues (2006) offered nicotine gum or nicotine patches to smokers who wanted to quit. The first program offered vouchers redeemable at a local pharmacy for a two- to three-week supply of the gum or patches. The second program offered a one-week supply of the nicotine patches, which were sent to the caller's home. The third program offered a two-week supply of nicotine patches sent to the caller's home. Finally, a fourth program offered a

NAQC Issue Paper: *Increasing Reach of Tobacco Cessation Quitlines*

six-week supply of nicotine patches sent to caller's homes. A total of 40,090 smokers from New York were sent either patches or vouchers. The reach of the free NRT programs was estimated between .5% (two-week voucher program) to 4.8% (six-week supply of patches) of New York smokers in various regions of the state. The New York quitline received 400,000 calls within the first three days, overwhelming the ability of counselors to respond. The estimated cost per quit was between \$274 to \$374, which is lower than what has been reported in the literature for free NRT programs (Cummings, et al., 2006).

QUIT AND WIN CONTESTS

A Review of the Literature

Another promotional effort to increase calls to quitlines is presenting smokers with an opportunity for action through Quit and Win contests. These programs can bolster the association between a smoker's desire to stop smoking and actually making a quit attempt. Public health professionals and managers of a quitline may implement such programs intending to encourage smoking cessation attempts and increase calls to the quitline.

The goals of Quit and Win contests are to motivate large numbers of quit attempts and provide incentives for abstinence during the period in which most relapse occurs (usually within the first 30 days of a quit attempt) (Hawk, et al., 2006). Consistent with its goal of reaching large numbers of diverse smokers, Quit and Win contests reach between 1% and 5% of smokers in a targeted community (Pechacek, Lando, Nothwehr & Lichtenstein, 1994). Large-scale media campaigns are frequently used to increase the reach of the contest, which typically offers daily smokers the opportunity to participate in a lottery in return for a pledge of one-month of smoking abstinence (Pechacek, et al., 1994). Therefore, in terms of cost considerations, quitlines need to consider the cost of the prize(s) for the contest as well as media and staffing costs associated with promotion of the program.

Quit and Win contests may motivate smokers to make a quit attempt. During the contest period quitline calls will likely increase (R. O'Connor, et al., 2006). Cessation rates can be boosted among participations with follow-up counseling calls to encourage smoking abstinence. According to one study, average Quit and Win participants tend to be younger and lighter smokers (Hawk, et al., 2006). In 11 studies looking at Quit and Win contests, nine out of 10 participants reported making a quit attempt, with 31% of participants remaining quit at four to six months (O'Connor et al., 2006). Finally, combining NRT and Quit and Win contests do not generally increase abstinence rates (Cahill & Perera, 2008; Hawk, et al., 2006). However, having both as an option may reach different smoking populations and therefore prompting calls to the quitline from diverse smokers and a broader segment of the smoking population.

Examples from Practice

NAQC members from British Columbia conducted a quit and win contest, which began on November 23, 2008 and ran through February 20, 2009. There were 500,000 eligible tobacco users in British Columbia and 7,100 registered for the contest. The goal of the contest was to raise awareness of the quitline and its website while trying to help smokers quit. The contest was advertised using multiple media strategies such as Facebook, paid TV PSA, word of mouth and community detailing. Interestingly, prior to the start of the television advertisements, Facebook was a top referral source through a paid ad and a Facebook page. For the Facebook ads, the British Columbia quitline implemented multiple versions. Using Google Analytics, they were able to monitor and identify which ad variations drove the highest registrations and which ones were underperforming. Consequently, they were able to refine ad choices throughout the campaign and move closer towards maximizing their budget. The "pay per click" advertisement cost only \$3.81 per registration. There were a total of 6,675 pay per click visits to the contest website with 10% filling out the registration form. British Columbia quitline staff reported the success of the program came from the importance of building relationships with contestants, encouraging the relationships between contestants and strong contest promoters.

CLEAN INDOOR AIR LAWS AND CIGARETTE WARNING LABELS

A Review of the Literature

Clean indoor air policies and more detailed warning labels on cigarette packs are an effective strategy targeted at reducing tobacco use. New information is being learned that each of these interventions can drive calls to a quitline and, in some cases, dramatically. But more importantly, findings suggest these regulations should be coupled with media campaigns letting smokers know about the quitline's availability as a free, cessation resource (Thomson & Wilson, 2006).

NAQC Issue Paper: *Increasing Reach of Tobacco Cessation Quitlines*

More detailed warning labels on cigarette packages and cartons, including the quitline number, can increase calls to the quitline (Willemsen, Simons & Zeeman, 2002). For instance, in the Netherlands, researchers examined the effectiveness of putting the quitline number on cigarette packages along with warning messages. Smokers who contacted the quitline in their country in response to cigarette labeling tended to call at night or in the evening and tended to be from lower socioeconomic groups (low SES) (Willemsen, et al., 2002). Callers tended to be more uncertain about quitting and many had questions related to the accuracy of the label's health warnings. Data showed that callers sometimes confused the quitline with the organization responsible for requiring the warning labels. However, findings suggest that after the initial confusion is cleared up, many of those callers are willing to talk to counselors and learn more about smoking cessation (Willemsen, et al., 2002). While this is still an emerging area, call rates to the quitline after the labels took effect were 3.5 times higher than before (Willemsen, et al., 2002).

Examples from Practice

Combining tobacco tax increases with media and NRT promotion

Wisconsin: In January 2008, typically a period of high call volume for quitlines, members from Wisconsin conducted a promotion which offered callers a two-week starter kit of NRT during a cigarette tax increase of \$1. The combination of the media campaign, tax increase and the New Year holiday resulted in the quitline receiving 27,000 calls during the first three months of 2008, reaching about 3% of adult Wisconsin smokers during those three months.

Michigan: Michigan's approach was to combine a press release and free NRT (eight-week supply of gum, patches or lozenges) to individuals who were uninsured or on Medicaid with extensive media coverage about the Federal tax increase from 39 cents to \$1.01 per packs. Callers received their first month supply of NRT after the first call and were required to complete an additional four calls of counseling to receive a second month supply. The Michigan quitline typically received 20-40 calls every 15 minutes. During the promotion, it received 4,300 on the first day (March 11, 2008) and 21,000 on the second day (March 12, 2008). This averaged out to be approximately 200 calls every 15 minutes. By the fifth day of the promotion, the quitline had to stop accepting new calls due to the high call volume. During this time the quitline reported receiving a total of received 66,000 phone calls and enrolling 2,100 people for quitline counseling.

TARGETING PRIORITY POPULATIONS

A Review of the Literature

Targeting and supporting priority populations such as adolescents, pregnant smokers and ethnic minorities in their smoking cessation efforts is a national health priority (USDHHS, 2006). Due to their flexibility, availability and convenience, state quitlines have the potential to assist diverse groups of tobacco users in quitting smoking (Borland & Segan, 2006; Cummins, et al., 2007). Research suggests quitlines are effective and well received by callers across different ethnic groups, education levels, ages and genders (USDHHS, 2005; Maher, et al., 2007). Many quitlines have tailored counseling protocols for pregnant smokers (92.1%), smokeless tobacco users (69.8%), racial/ethnic populations (42.9%) and adolescents (57.1%) (NAQC, 2008, unpublished data). Additionally, in 2008, 87.3% of North American quitlines disseminated specialized tobacco cessation materials to one or priority populations (e.g. pregnant smokers, smokeless tobacco users, racial/ethnic populations, adolescents, lesbian/gay/bisexual/transgendered (LGBT) groups, people with chronic conditions, people with multiple addictions, etc) (NAQC, 2009). Determining the most effective means for recruiting priority populations to quitline services ensures these services are made available and utilized. In addition, 51 of 53 U.S. quitlines provide counseling services (without a third-party translator) in Spanish, and eight of 10 Canadian quitlines provide counseling in French. However, only one quitline provides direct-language counseling in any other language (NAQC, 2009).

The effectiveness on tailoring messages for special populations appears mixed (Niederdeppe, Kuang, Crock, Skelton, 2008). A recent review of the literature indicates that varying the advertising message does not have as significant an impact on the recruitment of smokers from lower socioeconomic status, education or stage of quit (Haviland, et al., 2004). In addition, Carlini, Zbikowski, Deprey, Cummins and Zhu (2008) showed that tailoring to ethnic groups was not effective in re-enrolling quitline callers. Yet, other studies have shown that members of ethnic minority groups hold different beliefs and attitudes about the social appropriateness of smoking, the associated risks and the acceptability of using professional help (Perez-Stable, Marin, & Posner, 1998). Media campaigns are believed to be more effective if they are tailored to the cultural values of different racial and ethnic groups and actively involve community-based organizations (e.g. churches).

NAQC Issue Paper: *Increasing Reach of Tobacco Cessation Quitlines*

(USDHH, 1998; Yancy, Ortega, & Kumanyika, 2006). For instance, Hawk and colleagues reported successfully recruiting a higher percentage of minority smokers compared to the general population during a Quit and Win program using ethnically tailored advertisements (2006). Tailoring messages to other smoking populations also appears to be an effective method of recruitment. For example, 76% of the calls made by pregnant women to the Great Start program came from television ads emphasizing quitting during pregnancy (Haviland, et al., 2004).

Examples from Practice

How quitlines are reaching priority populations

In a project entitled QUEST (Quitlines and the Underserved: Engaging Smokers for Telephone Counseling), Ossip and colleagues conducted interviews with quitline staff and administrators to determine how quitlines reach underserved smokers. Based on data provided by quitlines, they calculated “reach ratios,” defined as the percentage of callers from an underserved group who call a quitline divided by the percentage of smokers in that state who are from that underserved group. Reach ratios provided a first look at the extent to which quitlines were reaching various groups in proportion to their distribution in the smoking population. Overall, reach ratios were highest for African American (AA) and Native American (NA) smokers (both reached at or above their presence in the smoking population), next for low socioeconomic status (low SES) and Asian Pacific Islanders (API) and lowest for Hispanic/Latino (HL) groups (much lower than their presence in the smoking population). Considerable variability was found across states.

Interviews were conducted with select states that have been successful in reaching the highest (AA) and lowest (HL) reach ratio groups for strategies that they had used. For AA smokers, targeting may not be necessary if reach ratios are high in response to general promotions. However, for states that wanted to boost their reach even higher or that had lower reach ratios, strategies reported included networking with churches, schools, Head Start programs, chronic disease organizations and other community groups. Further, messages thought to be of particular interest to AA smokers (e.g. how the tobacco industry targets Black communities, health disparities among African Americans due to the effects of smoking, a description of how quitlines maintain confidentiality, etc.) were perceived to be the most helpful in engaging this group. For HL smokers, strategies thought to be successful were face-to-face encounters through HL health workers (including lay and door-to-door health workers like Promotoras), use of focus groups to frame relevant promotional messages and using a comprehensive approach with multiple modalities. Messages that focused on the impact on families, particularly for fathers as well as the impact of premature death were thought to be particularly effective. The degree to which the success of these approaches varied across quitlines ranged from observations of changes in call rates following implementation to more formal pre-post evaluations.

Focus groups with quitline counselors

Chin, Ossip-Klein, Padmore, Garcia & Gale (2008) conducted a focus group with 29 quitline counselors from New York about what promotional strategies they believed would work best with underserved smokers. Based on their experience with callers from these populations, quitline counselors reported advertising the quitline on Spanish television networks and promoting the quitline in churches, community groups and schools serving a high proportion of Latinos would most likely increase the number of calls to the quitline from Latino smokers. To increase calls from African American smokers, the quitline counselors suggested advertising on African American television networks and using word of mouth to promote the quitline. In general, the quitline counselors felt printing advertisements in local newspapers, offering free NRT to quit and getting spouses involved in the quitting process would help attract low-income smokers to the quitline.

Reaching LGBT population

The Rainbow Health Initiative in Minnesota assessed the prevalence of tobacco use, issues related to cessation and attitudes regarding smoke-free initiatives among Lesbian, Gay, Bisexual and Transgender (LGBT) individuals. In order to best achieve their goals, the Rainbow Health Initiative conducted 13 focus groups, two annual surveys, interviews with community leaders and a literature review pertaining to issues surrounding tobacco in LGBT communities. Results indicated LGBT individuals would prefer tobacco cessation materials and advertisements related specifically to issues in the LGBT community (e.g. how factors like stress associated with homophobia and targeting by the tobacco industry can lead LGBT people to smoke). However, the project’s survey component indicated only 5% of the LGBT population surveyed would want to seek treatment from a LGBT tailored program (Bye, Gruskin, Greenwood, Albright & Krotki, 2005). In addition, LGBT individuals reported barriers to quitting smoking were related to stress management, craving

NAQC Issue Paper: *Increasing Reach of Tobacco Cessation Quitlines*

and weight gain. Community leaders felt smoking served as a means of socialization for LGBT individuals. Finally, a majority of LGBT smokers reported they would prefer to quit using some sort of assistance such as NRT. The recommendation of this report suggests that quitlines may better serve this population by addressing specific issues related to smoking among LGBT individuals and targeting media advertisements accordingly.

CONCLUSION

Quitlines can increase calls using a number of strategies as evidence in this paper. Increased promotion of any kind will generally result in increased calls. While increasing promotions of the quitline can certainly be valuable, the benefit of additional promotions may be reduced if quitlines do not have the capacity to serve the tobacco users who are motivated to call the quitline. As quitlines consider strategies to increase reach, policy makers and funders must also ensure adequate resources exist to serve those who call, both in terms of funding and capacity and infrastructure to provide services.

NAQC has recommended a standardized method for measuring quitline treatment reach and utilization of services in order to promote comparison within each quitline and across different state quitlines. By having a standard method for analyzing quitline data, the development of goals, assessment of recruitment strategies and methods for program evaluation become easier and more efficient for quitline organizations, funders and vendors (NAQC, 2008). Additionally, tracking caller information and recruitment strategies from quitlines may provide researchers with useful information towards understanding how current policy is affecting smoking cessation rates and predict what methods may be useful to further increase cessation rates (Levy, Abrams & Mabry, 2006).

Finally, as noted earlier in this paper, if funding to quitlines is not increased, their vast potential to reach and help tobacco users through evidence-based counseling and other services will be lost. With a renewed emphasis on containing healthcare costs, cost-effective services like quitlines will become more and more important. Much hard work within the quitline community has been done to prepare quitlines for reaching the CDC and NAQC recommended goal of 6% reach of their smoking population. Given adequate funding and continued focus on improved practices, quitlines are just steps away from saving direct medical costs and helping many more tobacco user live longer, healthier lives.

Resources

Center for Disease Control and Prevention Media Campaign Resource Center:
www.cdc.gov/tobacco/media_communications/countermarketing/mcrc/index.htm

CDC Online Media Campaign Resource Database:
<http://apps.nccd.cdc.gov/MCRC/Apps/QuickSearch.aspx>

Campaign for Tobacco-Free Kids, Tobacco Advertising Gallery:
<http://www.tobaccofreekids.org/adgallery/>

Global Dialogue on Effective Stop Smoking Campaign:
<http://www.stopsmokingcampaigns.org/index.php?page=background>

NAQC Policy Playbook:
<http://naquitline.org/playbook/>

References

- An, L. C., Hennrikus, D. J., Perry, C. L., Lein, E. B., Klatt, C., Farley, D. M., et al. (2007). Feasibility of Internet health screening to recruit college students to an online smoking cessation intervention. *Nicotine Tob Res*, 9 Suppl 1, S11-18.
- Bentz, C. J., Bayley, K. B., Bonin, K. E., Fleming, L., Hollis, J. F., & McAfee, T. (2006). The feasibility of connecting physician offices to a state-level tobacco quit line. *Am J Prev Med*, 30(1), 31-37.
- Bock, B., Graham, A., Sciamanna, C., Krishnamoorthy, J., Whiteley, J., Carmona-Barros, R., et al. (2004). Smoking cessation treatment on the Internet: content, quality, and usability. *Nicotine Tob Res*, 6(2), 207-219.
- Bonnie, R. J., Stratton, K., & Wallace, R. B. (Eds.). (2007). *Ending the Tobacco Problem: A Blueprint for the Nation*. Washington, DC: National Academic Press.
- Bush, T. M., McAfee, T., Deprey, M., Mahoney, L., Fellows, J. L., McClure, J., et al. (2008). The impact of a free nicotine patch starter kit on quit rates in a state quit line. *Nicotine Tob Res*, 10(9), 1511-1516.
- Bye, L., Gruskin, E., Greenwood, G., Albright, V., & Krotki, K. (2005). *California lesbians, gays, bisexuals and transgender (LGBT) tobacco use survey-2004*. Sacramento, CA: California Department of Health Services.
- Cahill, K., & Perera, R. (2008). Quit and Win contests for smoking cessation. *Cochrane Database Syst Rev*(4), D004986.
- Campbell, H. S., Ossip-Klein, D., Bailey, L., & Saul, J. (2007). Minimal dataset for quitlines: a best practice. *Tob Control*, 16 Suppl 1, i16-20.
- Carroll, T., & Rock, B. (2003). Generating Quitline calls during Australia's National Tobacco Campaign: effects of television advertisement execution and programme placement. *Tob Control*, 12 Suppl 2, ii40-44.
- CDC. (2007). Cigarette smoking among adults-United States 2006. *Morbidity and Mortality Weekly Report*, 56, 1157-1161.
- Consortium, N. A. Q. (2006). *Quitlines of North America and Europe 2006*. In N. A. Q. Consortium (Ed.). Phoenix: North American Quitline Consortium.
- Cummings, K. M., Hyland, A., Fix, B., Bauer, U., Celestino, P., Carlin-Menter, S., et al. (2006). Free nicotine patch giveaway program 12-month follow-up of participants. *Am J Prev Med*, 31(2), 181-184.

References cont.

- Cummins, S. E., Bailey, L., Campbell, S., Koon-Kirby, C., & Zhu, S. H. (2007). Tobacco cessation quitlines in North America: a descriptive study. *Tob Control*, 16 Suppl 1, i9-15.
- Ebbert, J. O., Carr, A. B., Patten, C. A., Morris, R. A., & Schroeder, D. R. (2007). Tobacco use quitline enrollment through dental practices: a pilot study. *J Am Dent Assoc*, 138(5), 595-601.
- Erabas, B., Bui, Q., Huggins, R., Harper, T., & White, V. (2006). Investigation the relation between placement of Quit antismoking advertisements and number of telephone calls to Quitline: a semiparametric modelling approach. *Journal of Epidemiology and Community Health*, 60, 180-182.
- Erbas, B., Bui, Q., Huggins, R., Harper, T., & White, V. (2006). Investigation the relation between placement of Quit antismoking advertisements and number of telephone calls to Quitline: a semiparametric modelling approach. *Journal of Epidemiology and Community Health*, 60, 180-182.
- Etter, J. F., & Perneger, T. V. (2001). A comparison of cigarette smokers recruited through the Internet or by mail. *Int J Epidemiol*, 30(3), 521-525.
- Farrelly, M. C., Hussin, A., & Bauer, U. E. (2007). Effectiveness and cost effectiveness of television, radio and print advertisements in promoting the New York smokers' quitline. *Tob Control*, 16 Suppl 1, i21-23.
- Feil, E. G., Noell, J., Lichtenstein, E., Boles, S. M., & McKay, H. G. (2003). Evaluation of an Internet-based smoking cessation program: lessons learned from a pilot study. *Nicotine Tob Res*, 5(2), 189-194.
- Fellows, J. L., Bush, T., McAfee, T., & Dickerson, J. (2007). Cost effectiveness of the Oregon quitline "free patch initiative". *Tob Control*, 16 Suppl 1, i47-52.
- Fiore, M. C., Bailey, W. C., Cohen, S. J., Dorfman, S. F., Goldstein, M. G., Gritz, E. R., et al. (2000). Treating tobacco use and dependence (Clinical Practice Guideline).
- Fiore, M. C., Croyle, R. T., Curry, S. J., Cutler, C. M., Davis, R. M., Gordon, C., et al. (2004). Preventing 3 million premature deaths and helping 5 million smokers quit: a national action plan for tobacco cessation. *Am J Public Health*, 94(2), 205-210.
- Fiore, M. C., Jaen, C. R., Baker, T. B., Bailey, W. C., Benowitz, N. L., Curry, S. J., et al. (2008). Treating Tobacco Use and Dependence: 2008 Update. Clinical Practice Guideline.
- Fiore, M. C., Keller, P. A., & Curry, S. J. (2007). Health system changes to facilitate the delivery of tobacco-dependence treatment. *Am J Prev Med*, 33(6 Suppl), S349-356.
- Garvey, A. J., Bliss, R. E., Hitchcock, J. L., Heinold, J. W., & Rosner, B. (1992). Predictors of smoking relapse among self-quitters: a report from the Normative Aging Study. *Addict Behav*, 17(4), 367-377.
- Gordon, J. S., Andrews, J. A., Crews, K. M., Payne, T. J., & Severson, H. H. (2007). The 5A's vs 3A's plus proactive quitline referral in private practice dental offices: preliminary results. *Tob Control*, 16(4), 285-288.
- Gordon, J. S., Lichtenstein, E., Severson, H. H., & Andrews, J. A. (2006). Tobacco cessation in dental settings: research findings and future directions. *Drug Alcohol Rev*, 25(1), 27-37.
- Graham, A. L., Milner, P., Saul, J. E., & Pfaff, L. (2008). Online advertising as a public health and recruitment tool: comparison of different media campaigns to increase demand for smoking cessation interventions. *J Med Internet Res*, 10(5), e50.

References cont.

- Haviland, L., Thornton, A. H., Carothers, S., Hund, L., Allen, J. A., Kastens, B., et al. (2004). Giving infants a great start: launching a national smoking cessation program for pregnant women. *Nicotine Tob Res*, 6 Suppl 2, S181-188.
- Hawk, L. W., Jr., Higbee, C., Hyland, A., Alford, T., O'Connor, R., & Cummings, K. M. (2006). Concurrent quit & win and nicotine replacement therapy voucher giveaway programs: participant characteristics and predictors of smoking abstinence. *J Public Health Manag Pract*, 12(1), 52-59.
- Holtrop, J. S., Wadland, W. C., Vansen, S., Weismantel, D., & Fadel, H. (2005). Recruiting health plan members receiving pharmacotherapy into smoking cessation counseling. *Am J Manag Care*, 11(8), 501-507.
- Mahabee-Gittens, E. M., Gordon, J. S., Krugh, M. E., Henry, B., & Leonard, A. C. (2008). A smoking cessation intervention plus proactive quitline referral in the pediatric emergency department: a pilot study. *Nicotine Tob Res*, 10(12), 1745-1751.
- Maher, J. E., Rohde, K., Dent, C. W., Stark, M. J., Pizacani, B., Boysun, M. J., et al. (2007). Is a statewide tobacco quitline an appropriate service for specific populations? *Tob Control*, 16 Suppl 1, i65-70.
- McClure, J. B., Greene, S. M., Wiese, C., Johnson, K. E., Alexander, G., & Strecher, V. (2006). Interest in an online smoking cessation program and effective recruitment strategies: results from Project Quit. *J Med Internet Res*, 8(3), e14.
- McDonald, P. W. (2004). A low-cost, practical method for increasing smokers' interest in smoking cessation programs. *Can J Public Health*, 95(1), 50-53.
- Miller, N., Frieden, T. R., Liu, S. Y., Matte, T. D., Mostashari, F., Deitcher, D. R., et al. (2005). Effectiveness of a large-scale distribution programme of free nicotine patches: a prospective evaluation. *Lancet*, 365(9474), 1849-1854.
- Mosbaek, C. H., Austin, D. F., Stark, M. J., & Lambert, L. C. (2007). The association between advertising and calls to a tobacco quitline. *Tob Control*, 16 Suppl 1, i24-29.
- O'Connor, R., Fix, B., Celestino, P., Carlin-Menter, S., Hyland, A., & Cummings, K. M. (2006). Financial incentives to promote smoking cessation: evidence from 11 quit and win contests. *J Public Health Manag Pract*, 12(1), 44-51.
- O'Connor, R. J., Carlin-Menter, S. M., Celestino, P. B., Bax, P., Brown, A., Cummings, K. M., et al. (2008). Using direct mail to prompt smokers to call a quitline. *Health Promotion Practice*, 9(3), 262-270.
- OSSIP-Klein, D. J., & McIntosh, S. (2003). Quitlines in North America: evidence base and applications. *Am J Med Sci*, 326(4), 201-205.
- Pechacek, T. F., Lando, H. A., Nothwehr, F., & Lichtenstein, E. (1994). Quit and Win: A community-wide approach to smoking cessation. *Tobacco Control*, 3(3), 236-241.
- Perez-Stable, E. J., Marin, G., & Posner, S. F. (1998). Ethnic comparison of attitudes and beliefs about cigarette smoking. *J Gen Intern Med*, 13(3), 167-174.
- Services, G. t. C. P. (2000). Increasing tobacco use cessation: multicomponent interventions that include telephone support. Retrieved April 15, 2009, from www.thecommunityguide.org/tobacco/cessation/multicomponent_interventions.html

References cont.

- Shiffman, S., Brockwell, S. E., Pillitteri, J. L., & Gitchell, J. G. (2008). Use of smoking-cessation treatments in the United States. *Am J Prev Med*, 34(2), 102-111.
- Silagy, C., Lancaster, T., Stead, L., Mant, D., & Fowler, G. (2004). Nicotine replacement therapy for smoking cessation. *Cochrane Database Syst Rev*(3), CD000146.
- Stead, L. F., Lancaster, T., & Perera, R. (2003). Telephone counselling for smoking cessation. *Cochrane Database Syst Rev*(1), CD002850.
- Stead, L. F., Perera, R., & Lancaster, T. (2006). Telephone counselling for smoking cessation. *Cochrane Database Syst Rev*, 3, CD002850.
- Swartz, S. H., Cowan, T. M., Klayman, J. E., Welton, M. T., & Leonard, B. A. (2005). Use and effectiveness of tobacco telephone counseling and nicotine therapy in Maine. *Am J Prev Med*, 29(4), 288-294.
- Tinkelman, D., Wilson, S. M., Willett, J., & Sweeney, C. T. (2007). Offering free NRT through a tobacco quitline: impact on utilisation and quit rates. *Tob Control*, 16 Suppl 1, i42-46.
- USDHHS. (2000a). *Healthy People 2010: Understanding and Improving Health*.
- USDHHS. (2000b). *Reducing tobacco use: A report of the Surgeon General*. Atlanta, Georgia: 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.
- USDHHS. (2007). Cigarette smoking among adults--United States, 2006. *MMWR Morb Mortal Wkly Rep*, 56(44), 1157-1161.
- Willemsen, M. C., Simons, C., & Zeeman, G. (2002). Impact of the new EU health warnings on the Dutch quit line. *Tob Control*, 11(4), 381-382.
- Wilson, N., Grigg, M., Graham, L., & Cameron, G. (2005). The effectiveness of television advertising campaigns on generating calls to a national Quitline by Maori. *Tobacco Control*, 14, 284-286.
- Wolfenden, L., Wiggers, J., Campbell, E., Knight, J., Kerridge, R., Moore, K., et al. (2008). Feasibility, acceptability, and cost of referring surgical patients for postdischarge cessation support from a quitline. *Nicotine Tob Res*, 10(6), 1105-1108.
- Zhu, S. H. (2000). *The California Smokers' Helpline: A Case Study*. Retrieved April 15, 2009, from [http://www.californiasmokershelpline.org/Papers/HelplineCaseStudyMay2000_\(2\)%5B1%5D.pdf](http://www.californiasmokershelpline.org/Papers/HelplineCaseStudyMay2000_(2)%5B1%5D.pdf)
- Zhu, S. H., Johnson, C. E., Tedeschi, G., & Roeseler, A. (2000). A centralised telephone service for tobacco cessation: The California Experience. *Tobacco Control*, 9(Supplement 2), ii48-ii55.
- Zhu, S. H., Stretch, V., Balabanis, M., Rosbrook, B., Sadler, G., & Pierce, J. P. (1996). Telephone counseling for smoking cessation: effects of single-session and multiple-session interventions. *J Consult Clin Psychol*, 64(1), 202-211.

ACKNOWLEDGEMENTS

Authors:

NAQC would like to acknowledge the authors of this paper, Carrie Bronars, MA, University of Kansas Medical Center, Department of Preventive Medicine & Public Health and Jessie Saul, PhD, NAQC. The authors were responsible for conceptualizing the paper, conducting the literature review, collecting examples from practice and drafting the original paper.

Contributors:

NAQC acknowledges Cydney D. Boler, Esq, University of Kansas Medical Center Research Institute, for her significant contributions to an early draft of this paper. For serving as editor and managing the layout and production of this paper, NAQC would like to acknowledge Brenda Bryan, MAdmin, NAQC.

Funders:

NAQC's *Quality Improvement Initiative* is made possible with funds from the Centers for Disease Control and Prevention, The American Cancer Society and The American Legacy Foundation. The contents of this publication are under the editorial control of NAQC and do not necessarily represent the official views of the funding organizations.

Recommended Citation:

NAQC. (2009). *Increasing Reach of Tobacco Cessation Quitlines: A Review of the Literature and Promising Practices*. (C. Bronar, MA, J.Saul, PhD). Phoenix, AZ.