# NAQC Issue Paper

*NAQC's Issue Papers aim to provide critical knowledge on important quitline topics and guidance for decision making.*

# Quitlines in the U.S.: An Exploration of the Past and Considerations for the Future

## INTRODUCTION

2012 marks the 20th anniversary of the first state quitline in the U.S., the California Smokers' Helpline. This anniversary provides the U.S. quitline community, now 53 state quitlines strong, an opportunity to reflect on the lessons learned and the opportunities ahead that we must leverage in order to answer our highest call to action: to help tobacco users successfully quit.

In order to foster collaborative dialogue and active engagement of all members in developing constructive possibilities for future action, the North American Quitline Consortium (NAQC) Board of Directors developed a multi-pronged approach to defining the future vision of quitlines and most importantly, identifying the role NAQC may play in making that vision a reality. The work has not only engaged the Board, but NAQC's Advisory Council, members and staff, along with key national partners. Over the past two years, important ideas have emerged and evolved through group discussions, key informant interviews, a blog, webinars and a vision café, culminating in this paper, *Quitlines in the U.S.: An Exploration of the Past and Considerations for the Future.*

Our aim is that this paper serves to outline the current status of state quitlines and describe how, as a result of an extremely dynamic political and funding landscape and the opportunity of the Affordable Care Act, these quitlines are responding operationally to improve efficiency and becoming leverage points for broader cessation initiatives with new and existing partners. The paper is intended to illuminate best and promising practices for integrating quitlines into the broader healthcare landscape and in informing decisions on strategic planning, determining specific goals and objectives of a state quitline and sustainability planning for the future.

## THE BURDEN OF TOBACCO ON HEALTH

The ultimate burden of tobacco consumption on an individual is death. In a November, 2008 Center for Disease Control and Prevention's Morbidity and Mortality Weekly Report (MMWR) it was estimated that 443,000 deaths directly associated to cigarette smoking and exposure to tobacco smoke occurred in each year between 2001 and 2004. Of even more concern is that this number is higher than the 438,000 estimated annual deaths from smoking from the previous four-year survey.[1] Trends in mortality by gender from 1959 to 2010 were evaluated in a recently published paper by Thun et al. These authors found that the relative risk for women of dying from smoking-associated lung cancer from 1959 to 2010 has risen from 2.73 to 25.66 and for men it has risen from 12.22 to 24.97. In fact, more women die from tobacco-related lung cancer than breast cancer today.[2]

Despite the attention and efforts initiated in these 50 years (1959-2010), mortality and morbidity associated with tobacco use continue to rise at an alarming rate. While it is understood that the current mortality rate reflects a pattern of smoking over many years, it is unclear when tobacco control efforts of the recent past will have a substantial impact on reducing the mortality rate. It may take a decade or more for this to be observed and will also depend on the effectiveness of current efforts to help people quit their tobacco addiction in the near future.

Hundreds of thousands of premature deaths occur every year and it is not difficult to imagine there are many more people than reported who suffer from tobacco-related diseases. It is estimated that 90% of all lung cancers in men and 80% of all lung cancers in women are directly related to smoking.[1, 2, 3] Lung cancer is one of the most prevalent forms of cancer that result in death in the U.S.

We are all too familiar with the sight of elderly people pulling oxygen tanks behind them. These individuals are, and have been, suffering from the ravages of Chronic Obstructive Pulmonary Disease (COPD) for a long time. COPD is a slowly progressive, destructive disease that results primarily from long-term exposure to smoking tobacco. The damage may take years of exposure to manifest, as the cells of the lungs are slowly being destroyed. Approximately 90% of all deaths from COPD can be attributable to smoking.[1] However, COPD is not the only chronic illness directly associated with tobacco exposure. The effects from smoking are insidious. Smokers experience an increased risk of coronary heart disease and stroke at two to four times the general population risk.[2] A variety of cancers are more common in smokers including bladder, cervix, pharynx, kidney, uterus, stomach and the oral cavity.[2] The risk of developing lung cancer is 23% higher in men who smoke than nonsmokers and is 13 times higher in women who smoke.[2] As the rate of smoking is higher in specific vulnerable populations, the rate of having one or multiple disease states associated with the use of tobacco products is also higher in these groups. Smoking also has a dramatic negative effect on women who are pregnant and on their babies. For women who smoke there is a higher risk of infertility, pre-term delivery and stillbirth and their babies are at a higher risk for being of low birth weight and experiencing Sudden Infant Death Syndrome.[2]

Tobacco smoke not only affects those who use tobacco products. It is clear that exposure to secondhand smoke is associated with both acute and chronic illness. Children of smokers experience a higher incidence of ear infections and asthma[4] and it is estimated that 7,500 to 15,000 hospitalizations of children annually are directly related to the effects of being exposed to their parents' tobacco smoke.[2] Effects of side-stream smoke (smoke emitted between puffs of a burning cigarette, pipe, or cigar) are better understood every year, and it is clear that those who spend a lot of time around cigarette smoke are at higher risk of developing acute and chronic affects because of it. Too often the effects of tobacco on these innocent bystanders are not recorded in medical records and therefore do not become part of an accurate database of those who suffer from secondary tobacco exposure.

## ADDRESSING THE TOBACCO PROBLEM IN THE U.S.

Despite the use of tobacco products in the U.S. for hundreds of years, the science leading to the understanding of the health impacts of tobacco and its recognition as a public health issue has only been discussed openly for the past 50 years. In January 1964, the U.S. Surgeon General presented the results of a two-year effort by 150 consultants that included a review of 7,000 scientific articles about the harmful health effects of tobacco on smokers and non-smokers alike.[5] It was this singular event that transformed the health risks associated with tobacco use from being viewed as an individual problem and choice to being a major public health concern.[5] From that time, publicly-funded tobacco control efforts became formulated and adopted to some degree or another across the country.

Over the past two decades, efforts in this area have dramatically increased and positive results have been achieved toward the goal to eliminate tobacco consumption in the U.S. These efforts have been at both ends of the smoking continuum ranging from preventing children from starting to use tobacco products to helping people to stop their tobacco use. Some of the more common, evidence-based programs include: state and federal price and tax increases, smoke-free air laws, community-based face-to-face cessation counseling programs, school-based educational programs, employer-sponsored smoking cessation programs, state and private quitline programs and subsidized or free pharmacotherapy programs. All of these efforts, starting with the Surgeon General's Report, have gradually but dramatically reduced tobacco consumption from a nationwide smoking prevalence of 42.4% in 1965 to 20.9% in 2009.[6] However, in the 2011 National Health Interview Survey (NHIS) results for current national cigarette smoking prevalence the findings indicate that despite billions of dollars and decades of tobacco cessation programs, 19.0% of adults still smoked cigarettes in 2011 and sadly, there was no significant change in current adult smoking prevalence from 2010 (19.3%) to 2011 (19.0%).[7] Among daily smokers, the proportion who smoked ≥30 cigarettes per day (CPD) declined significantly, from 12.6% in 2005 to 9.1% in 2011, whereas the proportion of those who smoked 1–9 CPD (generally considered "light smokers") increased significantly, from 16.4% to 22.0%. It is important to note that even being a "light smoker" has health consequences and risks of future disease.[8] While initially over the past 10 years the rate of decline in smoking prevalence was fairly significant, the rate of decline in the number of smokers has

recently slowed.[9] This means that many people will continue to die prematurely and needlessly from the negative health effects related to their smoking. There are probably many reasons for this decline and while it is impossible to determine which factors are the most important, some might include the following:

- a reduction of available funds for cessation programs due to changes in the economy of the country in the past four years;
- the emergence and increased availability of quitlines across the country initially attracted tobacco users who were ready to quit and needed this new resource to help them. This would leave proportionally, if not in absolute numbers, a higher number of those who are ambivalent or totally resistant to quitting tobacco in the total population of tobacco users that exists today. This number, in addition to the number of new tobacco users over the past years, could effectively make it harder to continue to achieve the higher rates of tobacco cessation as seen in years past.
- although all years have some degree of economic stress related to them, the burden and stress resulting from the 2008 financial crisis may be impacting smokers' ability to quit;
- the rise in the number of "light smokers," many of whom are younger and may not consider themselves smokers, nor addicted and in need of cessation; and
- the tobacco industry's introduction of new products into the marketplace that include promotional messages that these newer products are safer than the older ones.

The effects of the efforts at eliminating tobacco use have reached a plateau. With tightening budgets all of these programs need to be evaluated with respect to cost effectiveness and their ability to reach vulnerable populations. A recent article by Levy et al. would suggest that evidenced-based cessation programs are the most effective in reducing prevalence of smoking, followed by governmental policies and taxes.[10] The remainder of this paper will focus on the past, present and future of state quitlines and related evidence-based services. Having an understanding of how these programs were developed and have evolved will help shape the vision for the future of these important tobacco cessation resources.

## STATE QUITLINES, PAST AND PRESENT

The first toll-free tobacco cessation service was developed as an extension of a toll-free cancer hotline in the early 1980's in Europe and Australia. In the following years, free telephonic programs were developed specifically to help smokers quit in both Australia (Quit Victoria) and in England (UK Quit). These programs became the model for the development of similar programs in Europe and the U.S.[11] Probably the single most important stimulus for states to implement their own tobacco cessation programs, including quitlines, was the positive outcome that occurred when State Attorneys General sued the four leading tobacco industry companies to pay for the healthcare costs associated with the use of tobacco. While only four states initially won their cases, a Master Settlement Agreement (MSA) was reached in 1998 between the four leading tobacco industry companies and 46 states. The MSA provided funding to these states, and an opportunity to create more robust tobacco control programs, including state quitlines. States receiving MSA funds allocated their funding according to state priorities which in some cases did not include tobacco cessation programming.[12]

Although providing a service to smokers, quitlines of the 1980's were not initially subject to scientific evaluation or evidence-based. The first publications evaluating the efficacy of telephonic smoking cessation studied programs launched in California and in Seattle, Washington.[13,14] Over the next decade, numerous scientific papers were published evaluating the efficacy of state quitlines and the use of pharmacotherapy as part of these programs. The scientific validation of quitlines led to their development in most states. As the proliferation of telephonic-based smoking cessation programs continued, organizations of funders, service providers and researchers of these programs were established in Europe (European Network of Quitlines) and in North America (the North American Quitline Consortium) to create a learning community to promote quality improvement and dissemination of best practices and emerging trends.[11] With the development of new programs and new services within these programs,

many scientific studies evaluating and comparing the effectiveness of each service provided were performed and published. This activity has resulted in a significant body of knowledge regarding telephone-based tobacco cessation services.

A major result of the scientific efforts to evaluate the effectiveness of state quitlines was the statement in the U.S. Department of Health and Human Services Clinical Practice Guideline, *Treating Tobacco Use and Dependence, 2008 Update* that quitlines are effective, citing a meta-analysis based on nine studies.[15] This statement was followed by the general recommendation that while telephonically-administered counseling and pharmacotherapy are both individually effective in tobacco cessation, the combination of the two is more effective than either alone in the battle against tobacco consumption.[15] As a result of the emphasis on reducing healthcare costs associated with tobacco use, funding from state and federal governments and the MSA, and the rigorous scientific validation of these programs, today there are 53 state quitlines that offer a variety of services to help current tobacco users quit in the U.S.

**Table 1**
**History of Quitlines in the U.S.**

| Date | Event |
|---|---|
| ***1983*** | National Cancer Institute's (NCI) Cancer Information Service (CIS) began helping callers with information about quitting strategies. |
| ***1992*** | California established the first statewide, state quitline in the U.S., the California Smokers' Helpline, at the University of California San Diego. |
| ***1992-1996*** | Arizona, Oregon and Massachusetts follow California's lead and established state quitlines in their states. |
| ***1997*** | The tobacco industry reached an agreement with four states (MN, FL, MS and TX) related to healthcare costs associated with tobacco in Medicaid populations. |
| ***1998*** | The lawsuit filed by 46 State Attorneys General against the tobacco industry results in Master Settlement Agreement. This led to revenue going to states for programs to help smokers. |
| ***2001*** | Department of Health and Human Services (HHS) convened the Interagency Committee on Smoking and Health to discuss cessation, including the recently established quitlines. This gave visibility to states' success with quitlines and brought them into the national agenda. |
| ***2002*** | A meeting on telephone-based tobacco cessation counseling was convened in Scottsdale, Arizona to highlight the recent and rapid adoption of quitlines by state health departments, learn about the European experience in developing quitlines, and assess the interest of state and national organizations in establishing a quitline consortium to focus on assessing and improving the quality of quitline services in the U.S..<br>NCI launches their dedicated number, 1-877-44U-QUIT. |
| ***2003*** | Center for Tobacco Cessation at American Cancer Society led an effort to develop a plan for a consortium and to establish a minimal data set for evaluation quitlines. |
| ***2004*** | North American Quitline Consortium established at American Legacy Foundation. Interagency Committee's Subcommittee report is issued with lofty recommendations http://www.ctri.wisc.edu/Researchers/NatActionPlan%2002-04.pdf.<br>NCI and Centers for Disease Control and Prevention (CDC) convene five regional meetings on quitlines.<br>HHS, NCI, CDC announce national network of state quitlines with NCI taking the lead in development of a national portal (800-QUIT-NOW) and CDC providing funding to improve or establish state quitlines. |
| ***2005*** | Through state innovations and strategic national support, a network of state quitlines is established across all states, District of Columbia and 2 U.S. territories, Guam and Puerto Rico. |

## GOALS OF STATE QUITLINES

To better understand and appreciate the goals of state quitlines in general and for each quitline specifically, an

assessment in several different contextual settings is necessary. On a more global level, the goal of state quitlines as implied in the designation "quitline" is to help individuals in their quest to quit tobacco use. It is hoped that as a consequence of attaining this goal healthcare costs across larger populations will be reduced, productivity increased and people will enjoy a better quality of life. Quitlines have the capability of reaching large numbers of individuals and, therefore, the potential to serve as an effective, population-based public health intervention reducing the impact of tobacco use on entire populations.

A more finite vision of how quitlines will pursue their quest to eliminate tobacco use was established two years ago when, in partnership with CDC and its members, NAQC established three strategic goals to be reached by 2015. These goals are shown in Table 2 below.

**Table 2**
**NAQC Strategic Goals and Objectives for 2015**

| Goals | Objectives |
|---|---|
| 1. Increase the use of quitline services in North America | 1. By 2015, each quitline should obtain a reach of at least 6% of its total tobacco users |
| 2. Increase the capacity of quitline services in North America | 2. By 2015, on average $2.19 per capita ($10.53 per smoker) should be invested in quitline services |
| 3. Increase the quality and cultural appropriateness of quitlines in North America | 3a. By 2015, each quitline should have an overall quit rate of at least 30%<br>3b. By 2015, each quitline should achieve a reach of 6% in priority populations |

However, when one tries to better understand the goals of individual state quitlines, it becomes much more important to focus on the specific tobacco control-related goals and objectives for each state. States have varied priorities which dictate the goals and objectives for their state quitlines. These priorities are shaped by many factors which may not be the same from state to state. Some of the more obvious factors that influence goals and priorities for state quitlines are:

- state demographics;
- tobacco-related healthcare costs affecting specific vulnerable populations within the state;
- relationships between public and private entities;
- Medicaid strategic goals;
- integration of the quitline into the public health policies of the state;
- political priorities; and most importantly
- the availability of funds to promote and perform quitline operations.

The differing goals between states shape the diverse services that are offered and influence the varied outcomes that are measured. The most important part of understanding these differences is to realize that while there are more global considerations for "quitlines" in general, each state quitline has its own unique characteristics shaped by many state-specific elements. Due to the variability in state priorities and the resultant services offered by state quitlines, there can be significant differences in the cost-effectiveness between various state programs.

## STATE QUITLINES ARE COST-EFFECTIVE

After almost 20 years of state quitlines and national recommendations for their utilization, it may seem intuitive that tobacco cessation programs are cost effective. However, because services are so varied, cost-effectiveness remains the first basic question for any funding agency. There have been many published papers that have either directly or indirectly evaluated this important question. In some studies the question of cost effectiveness was tied to the use of a pharmacologic product in addition to the basic quitline coaching services.[16] In the study by

Javitz et al., different doses of sustained-released buproprion were evaluated as part of a comparison of written smoking cessation materials mailed to participants and a series of proactive telephone calls related to smoking cessation. In the study, either dose of medication was effective when used in addition to proactive calls, but not as effective when used with mailed materials only.

Others, early in the development of state quitlines, evaluated their programs and concluded through rigorous scientific analysis that quitline services were cost effective in tobacco control.[17] Tomson et al. evaluated the cost effectiveness of the Swedish quitline primarily in terms of the cost per life-year saved.[18] The study analyzed one-year data and compared the results to published data of other smoking cessation methods. The results indicated that the quitline was a "cost-effective public health intervention compared to other smoking cessation interventions."[18]
In April 1996, the Agency for Health Care Policy and Research recommended 15 smoking cessation interventions.[19] The following year, Cromwell et al. evaluated the cost effectiveness of these interventions and concluded that the more intensive the intervention, the more cost effective the result.[20] The Clinical Practice Guideline reaffirms this finding of a dose-response relationship related to interventions. However, the guideline also states that there is point of diminishing cost-effectiveness that is associated with both the intensity (number) of interventions and the time spent during these interventions.[15] State quitlines, particularly those with more intensive counseling and pharmacotherapy, were highly cost effective in this analysis.

In December 2008, Kahende et al. published an extensive review of 42 papers that addressed the economics of tobacco control programs.[21] In their analyses, the authors clearly indicated that quitlines are cost effective and their cost-effectiveness increases when nicotine replacement therapy (NRT) is added to counseling. A recent review by Lichtenstein, Zhu and Tedeschi quite elegantly presented the accumulation of data to support the effectiveness of state quitline programs over the past 20 years.[22] On the basis of these and multiple other published individual study publications, it is apparent that state quitline efforts are indeed cost effective. Perhaps the best source for reviewing the scientific evidence related to effectiveness of quitlines, though not necessarily based upon cost-effectiveness data, is the U.S. Public Health Service's 2008 Clinical Practice Guideline, *Treating Tobacco Use and Dependence* which recommends the use of quitlines along with pharmacotherapy as one of the best interventions for treating tobacco dependence .[15]

## QUIT RATES ASSOCIATED WITH STATE QUITLINES

The cost for an individual to decide on their own to quit their tobacco use, irrespective of the costs associated with providing a stimulus for this decision, is probably very low. The CDC estimates that on any given day about 70% of smokers want to stop smoking.[23] Many of these individuals attempt to do this on their own. In a meta-analysis performed in 2008 evaluating the effectiveness of quitlines, the overall quit rate utilizing minimal or no counseling and primarily self-help means was only 8.5%.[15]

Clearly, for state quitlines to be cost effective they have to produce smoking cessation rates at a high enough rate and at a low enough cost to offset the healthcare costs associated with tobacco use. Cessation rates associated with quitlines are variable. This is to be expected given the large variability of service offerings among state quitlines. Trying to compare one quitline's quit rates to another's when each may serve a different population, employ a different coaching protocol and/or offer a different level of pharmacotherapy is a very difficult and imprecise task. However, the 2011 NAQC Annual Survey of Quitlines utilizes aggregate data to provide interesting and useful national data that spans across all state quitlines.

To better understand these aggregate data it is important to understand how quit rates are established. The definition of tobacco cessation is self-reported 30-day abstinence from any tobacco products measured as a point-prevalence at 7 months after entering the quitline program.[24] This is a relatively new measurement, replacing a 7-day point-prevalence measurement. It should be noted that states do not perform any biologic measurement validating the self-reported abstinence from tobacco products and therefore, this number is probably at the higher end of the range of reporting on cessation rates. While the number of individuals who self-report that they are not using tobacco products

for the past 30 days reflects the numerator in the quit rate calculation, the denominator may vary between quitlines. The last part of this statement is not as clearly defined.[24] Nevertheless, for states that reported quit rates for both Fiscal Years 2010 and 2011, the rate was almost identical for both years at 29.45%. This value includes programs with varied service offerings, including those that had one call and those that had five calls, and those that provided no pharmacotherapy and those that provided full courses of therapy in addition to the coaching.[25] Consistent with the literature, it was clear in both years that quit rates were significantly improved when NRT was added to counseling.

As indicated above, the goal established by NAQC for quitline quit rates for 2015 is 30%. It is more than likely that many states will have difficulty reaching this goal unless they increase the reach of their quitline through various promotion and outreach strategies and provide enhanced service offerings, such as NRT and an increased number of coaching interactions with participants. Over the past twenty years the "low hanging fruit" with respect to people ready to quit tobacco entered these programs and hopefully have been successful in their quit attempts. Today, it is a different demographic of smoker that makes up the targeted tobacco-using population. Those remaining include those who simply have no desire to quit, those who are severely addicted to nicotine from years of smoking, those who have smoked to help them through one of the worst economic conditions this country has ever faced, and those who have newly joined the ranks of tobacco users as a result of endless marketing efforts by the tobacco industry. An added factor in the changing demographics of the current smoking population is the increased awareness of the extremely high rates of smoking in those with mental health or substance abuse issues. A recent unpublished survey conducted within the Colorado QuitLine found that approximately 60% of callers requesting help indicated that they had a diagnosis or known problems with mental health issues. Although this may not occur across all states, quit rates even without NRT (approximately 24.8% in 2011) far exceed those shown in many studies where quit rates for those without coaching or pharmacotherapy is approximately 8.5%. It is clear that state quitlines play a significant role in state public health policies to control healthcare costs associated with tobacco use.

## THE ROLE OF QUITLINES IN STATE PUBLIC HEALTH POLICY AND TOBACCO CONTROL PROGRAMMING

Today in the U.S., quitlines predominantly operate within various state agencies and organizations. In some cases, state quitlines are the most significant form of statewide tobacco cessation programming with respect to funding and policy, while in others, quitlines play an important and integral part in a much larger public health framework for disease prevention and control. The following describes some of the many ways quitlines are being utilized by states to maximize and support tobacco control and public health efforts.

**Quitlines support state government in tobacco control policy implementation**. Most states have already enacted, or are in the process of developing, public policies related to clean-indoor air.[26] As a result of these policies and the associated press releases and media coverage about the health risks associated with tobacco use that precede and follow their passage and implementation, thousands of tobacco users have chosen to act upon their desire to quit tobacco. Additionally, both federal and state governments have legislated a variety of taxes on tobacco products that have resulted in a significant increase in the number of individuals finding a good reason to make a quit attempt.[27] Having an existing, evidence-based cessation resource readily available has allowed states the ability to offer tobacco users free help with quitting, while at the same time promoting policy change.

**Quitlines help state governments address the health needs of priority populations.** States across the country have identified priority populations that have higher tobacco use rates and that have had inadequate access to healthcare. For states these populations might include:

- *pregnant and parenting women;*
- *teens;*
- *those with poor access to medical care;*
- *those with lower incomes and levels of education;*

- *those with mental health or substance abuse disorders*
- *Native Americans and Alaska Natives;*
- *Asian Americans, Native Hawaiians and Pacific Islanders;*
- *African Americans;*
- *Hispanics/Latinos; and*
- *Lesbian, Gay, Bisexual, and Transgender (LGBT).*

Quitlines in these states allow for targeted promotion of tobacco cessation that is linguistically and culturally appropriate. In 2012, the Asian Smokers' Quitline (www.asiansmokersquitline.org), operated by the Moores Cancer Center at the University of California, San Diego with funding from the CDC, began providing free nationwide telephone assistance for Chinese, Korean, and Vietnamese speakers who want to quit smoking, including a two-week starter kit of nicotine patches. In addition, NCI established a Spanish portal for Spanish-speaking tobacco users (855-DEJELO-YA) that functions similarly to 1-800-QUIT-NOW, with callers being automatically routed to their state quitline where they can receive services in Spanish. Culturally- and linguistically-appropriate programs will no doubt help thousands of tobacco users within specific populations better reach their goals to quit tobacco. Across the country service providers are training staff to better serve priority populations through cultural competency and a clear understanding of how various issues may impact on quit success.

**Quitlines help state governments build relationships and partnerships with the private sector.** Many states have, or are in the process of, building partnerships with private health plans and large employers to provide effective, evidence-based smoking cessation programs to tobacco users covered by private insurance. Difficult economic times are preventing many states from offering quitline services to all residents. To address the gap in tobacco cessation programming, several states have reached out to private industry to develop partnerships that would provide the quitline as a valued resource for a broader population of tobacco users. With the passage of the Affordable Care Act, health plans and employers are looking for evidence-based, trusted cessation solutions to offer clients and employees. The common ground in many cases is the state quitline.[28]

**Quitlines help support broader state government public health strategies.** Several states are working toward integration of their quitlines into a more holistic approach to serving individuals with multiple medical problems. Quitlines are helping in disease prevention and management by providing messages to callers related to other diseases. Messages can relay simple, disease-related information and/or provide sources of referral information related to specific disease states. Currently there is great interest in determining how best to effectively assist smokers with mental health issues to reduce their tobacco use, and refer them to appropriate resources.[29] Since many of the tobacco users who call state quitlines have multiple chronic diseases, this type of program can be a model for other chronic disease states.

**Quitlines help states build relationships with health systems and providers**. There are many ways that state health departments work with health systems and providers in order to maximize their limited resources and obtain the best possible health outcomes for their residents. Tobacco cessation and the prevention of tobacco-related disease states are of paramount importance for most states. It is the number one cost-driver related to healthcare today. Health systems are always looking for cost-effective ways to improve their healthcare delivery. Often the means to communicate between health systems, providers and service vendors is challenging. As a result of federal funding, states in the past few years have reached out to systems to create secure, effective, electronic communication platforms. One of these efforts has been the development of electronic referrals from health systems to quitlines to enable easy, Health Insurance Portability and Accountability Act (HIPAA)-compliant communication of health information from providers to quitlines and quitlines back to providers. While still in the early stages of development, efforts in many states will lead to a national "electronic highway" in the relatively near future.

For a state quitline to be effective in the various roles it may play within the state's healthcare efforts it must be able to demonstrate that it is effective. For that to occur, the state quitline must have the necessary resources to reach its targeted tobacco-using populations. The following section addresses the challenges in doing so.

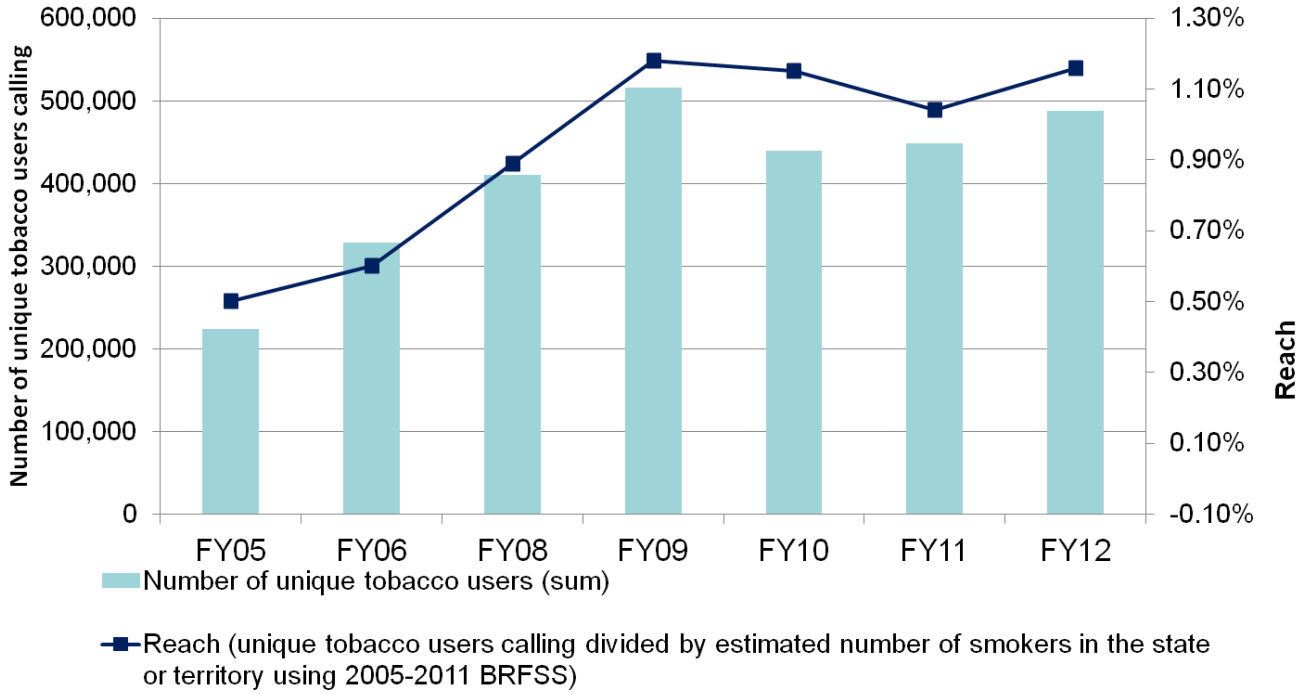
## STATE QUITLINE TREATMENT REACH TODAY

Reach can be defined in several different ways depending on the type of program or efforts being evaluated, the particular data being measured and how the information is to be used. For the purposes of this paper we will use the 2009 NAQC definition of quitline treatment reach: "the proportion of the target population which receives an evidence-based treatment from a quitline."[30] Quitlines have the global goal to reduce the use of tobacco products. Therefore, NAQC has chosen to define reach in terms of the possible impact of a variety of evidence-based tobacco cessation programs on the prevalence of tobacco use in the target population of tobacco users. For quitlines, "reach" has several components: 1) getting the message out to the target population with a call to action (defined as "promotional reach" as it relates to promotional effectiveness to communicate with a target population), 2) being able to handle the response to the call to action by the target population and 3) entering the responders into an evidence-based tobacco cessation program (defined as "treatment reach").[30]

Applying the concepts of "reach," although not specifically defining the term, and the ways that might be deployed to improve it as a means to positively affect the target population, is not a new concept as it relates to tobacco cessation. In 2002, at the request of the Secretary of the U.S. Department of Health and Human Services, a subcommittee of the U.S. Interagency Committee on Smoking and Health (ICSH) constructed *A National Action Plan for Tobacco Cessation*.[31] The goal for the first year of the plan was to help 5,000,000 smokers quit smoking, approximately 10% of the existing current smoking population of 50 million. This goal required a quit rate of approximately 20% across all callers to quitlines. By any standard this was an ambitious goal in 2003. Many recommendations in the *National Action Plan* were created to increase reach to accomplish their goals. One recommendation led to the development of the national tobacco quitline portal (1-800-QUIT-NOW) with the goal to serve callers throughout the U.S. either directly or by transferring them to their respective state quitline. This important asset is still in place today. The subcommittee understood the value of state quitline services and provided recommendations for enhanced quitline utilization. It recommended both counseling and medication for tobacco users and provided funding for significant national promotional efforts. Federal and state governments, along with private partnerships, were contemplated to create a national quitline network with a mass media advertising campaign to promote a single national quitline number. Although the term "reach" was not used specifically in the National Action Plan, the concepts put forth in the NAQC 2009 paper are throughout it. Understanding all aspects of improving the treatment reach of quitlines is essential to develop ongoing effective plans to improve cessation rates. We know that state quitlines are easy to access for most smokers but tobacco users have to learn about them.[32, 33] The future depends on understanding the most effective ways to communicate with targeted populations with appropriate messages and engaging responders to evidence-based services.

In 2004, the Interagency Committee contemplated a 10% reach for tobacco users. Two years ago, NAQC contemplated a 6% reach by 2015. In the figure below, NAQC analyzed treatment reach rates from 2005 to 2012. It is clear that before the economic crisis started in 2008, states were dramatically increasing their reach rate each year. However, subsequent to 2008 the treatment reach rate for 2009, 2010, 2011 and 2012 were relatively flat as promotional funds were cut and services were curtailed.

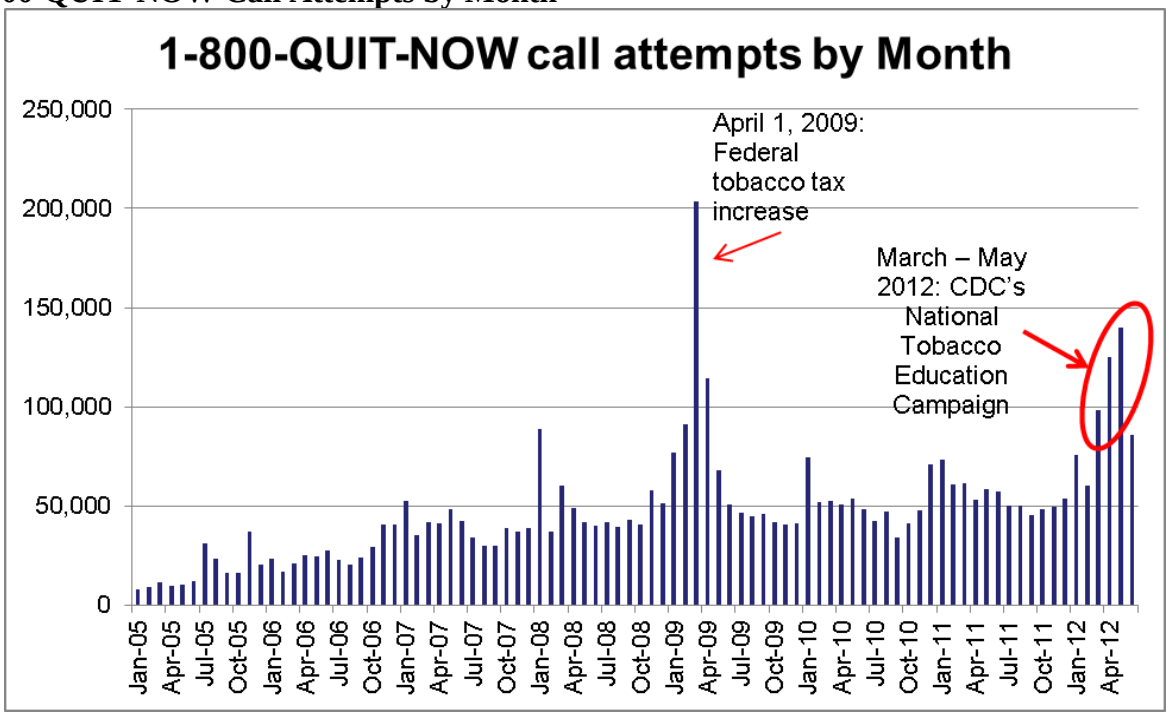
**Figure 1**
**U.S. Promotional Reach, FY 2005-2012**




*Data source: North American Quitline Consortium. 2013. Results from the 2012 NAQC Annual Survey of Quitlines. Available at http://c.ymcdn.com/sites/www.naquitline.org/resource/resmgr/2012_annual_survey/final1oct23pptnaqc_2012_fina.pdf*

There have been many different approaches to improving treatment reach over the last 10 years. One of these was to raise the cost of tobacco products.[34] In 2009, a federal tax was implemented which dramatically increased the calls to quitlines nationally. A major effect of the tax was that teen smoking rates fell over 10% almost immediately.[35] *(See Figure 2.)*

**Figure 2**
**1-800-QUIT-NOW Call Attempts by Month**




*Data source: Monthly NCI 1-800-QUIT-NOW reports*

While quitlines are interested in improving their treatment reach, there is no agreement about what represents a realistic or attainable reach in the current economic climate. In 2007, the CDC suggested that quitlines could serve 6% of adult tobacco users if they also provided NRT to callers. The CDC has been an active partner in trying to overcome the effects of state budget cuts on the reach of state quitlines. Following the lead of a 2003 Australian campaign[36] that resulted in an estimated reach rate of 3.6% of all Australian smokers, in early 2012 the CDC launched a nationwide tobacco education campaign using primarily television advertising.[37] While the *Tips from Former Smokers* campaign certainly increased both promotional reach and treatment reach during the time the program was in effect, its impact on tobacco cessation rates has not yet been demonstrated. Data on the specific effects of this campaign on reach will help to determine if quitlines will indeed achieve the projected treatment reach rate of 6% by 2015. CDC launched a second nationwide campaign on March 4, 2013 and the *2014 Tips from Former Smokers* on February 3, 2014.

## DIVERSITY OF STATE QUITLINE SERVICE OFFERINGS

Treatment reach for state quitlines is affected by many different factors, including the services offered. Funding for state quitlines varies considerably and quitline funding in a particular state may vary from year to year depending on the state budget and the availability of federal funding. For instance, the CDC has been a tremendous source of funding for quitlines for the past few years, starting with the availability of American Recovery and Reinvestment Act (ARRA) funds in 2009.[38]

The variety of services provided, as well as the variation in the populations that are able to utilize these publicly-provided services, depends for the most part on availability of funding by the states. While there are data to support certain interventions, the funding is simply not available to provide the full spectrum of available effective services. Across all quitlines in North America the median budget for medications and outreach declined between FY2011 and FY2012, while the median budget for services, promotions, evaluation, and "other" increased.[25] The types of services offered, as well as methods of specific promotional activities, may vary from state to state due to differences in scientific approaches, economic decisions and political perspectives. This variability is associated with a wide spectrum in the scope and magnitude of quitline services being offered today. This variability among state quitlines can be found in several different areas discussed below.

**Eligibility criteria:** Who is eligible to receive available and free quitline services varies significantly across the 53 state quitlines. For a variety of state-specific reasons, eligibility criteria can apply to: readiness to quit; age; socio-economic conditions; insurance status, including private insurance, Medicaid, Medicare, no insurance, and underinsurance; specific health risk criteria, such as providing services for those who are pregnant or have a mental health condition; and government employment. Differences in eligibility criteria have significant impact on the ability to reach the target populations, as well as the potential quit rates that are achieved within these different demographic groups.

**Referral systems:** As a service to healthcare providers, state quitlines have established communication systems that allow providers to refer smokers to quitlines for treatment. Although differences between quitlines have decreased in this area, there are some differences that exist in the ability to receive direct referrals from electronic medical systems. Almost all quitlines receive fax and email referrals from providers. However, within the multiple types of fax and email referral programs there are differences in the types of communications that occur between referring providers and the quitline systems. Some have bi-directional feedback, others only one-way and some, no feedback at all. Although the capability to directly link to electronic systems is sure to come in the future at a significant cost and timeframe, it is only available now in a limited number of states, not on a national basis. Additionally, some quitlines utilize interactive voice response systems (IVR) as a triage method to direct services and a few offer IVR to directly provide services.

**Web-based services:** Quitlines have been using web-based services as stand-alone programs or as adjuncts to their telephonic programs for about 10 years. Today, almost 80% of quitlines in the U.S. utilize web-based services in

one way or another.[25] Studies of these programs have had variable results but generally online smoking cessation support has proven to be more effective than booklets and other non-structured programs with the odds ratio of obtaining a successful outcome between 1.5 and 1.9 in published reviews.[39, 40] A Cochrane review indicated that there is wide variability in the delivery of web-based services, with those tailored to meet the specific needs of the participants having the best outcomes.[41]

New to this area of online support is the introduction of text messaging and social support networking. While there have been some initial studies, this is an evolving field and needs more scientific assessment related to its effects on behavioral change in general and tobacco cessation specifically. State quitlines across the country are looking at these varied electronic means of engaging their participants and doing so in many different ways. It is likely that more data will be available in the next few years and these programs will proliferate across state quitlines.

**Number of proactive calls offered:** There is tremendous variability in the number of proactive calls provided from state quitlines. Not only does the number vary between states, it may vary during the year within the same quitline depending on the availability of funding. The evidence is pretty robust that the higher the intensity of the intervention, the more effective the offering in obtaining higher tobacco cessation rates.[13, 42] In the NAQC 2011 survey, all quitlines are open at least 5 days a week for 8 hours a day and 94% had weekend hours.[25] Most quitlines provided multiple counseling sessions, although there are some that are only able to provide a single session at various times. This variability will no doubt provide different outcomes directly proportional the level of service provided.

**Types and amounts of medications offered:** While the recommendation for adding pharmacotherapy to counseling is clearly established, not all states have the funds to do so for their state quitlines and the types and amounts vary considerably. It is without question that the amount and types of medications affect the treatment reach, as well as the quit rates. As shown in Table 3 below, most states do provide pharmacotherapy, and the patch is the most-often used of the NRT varieties.[25]

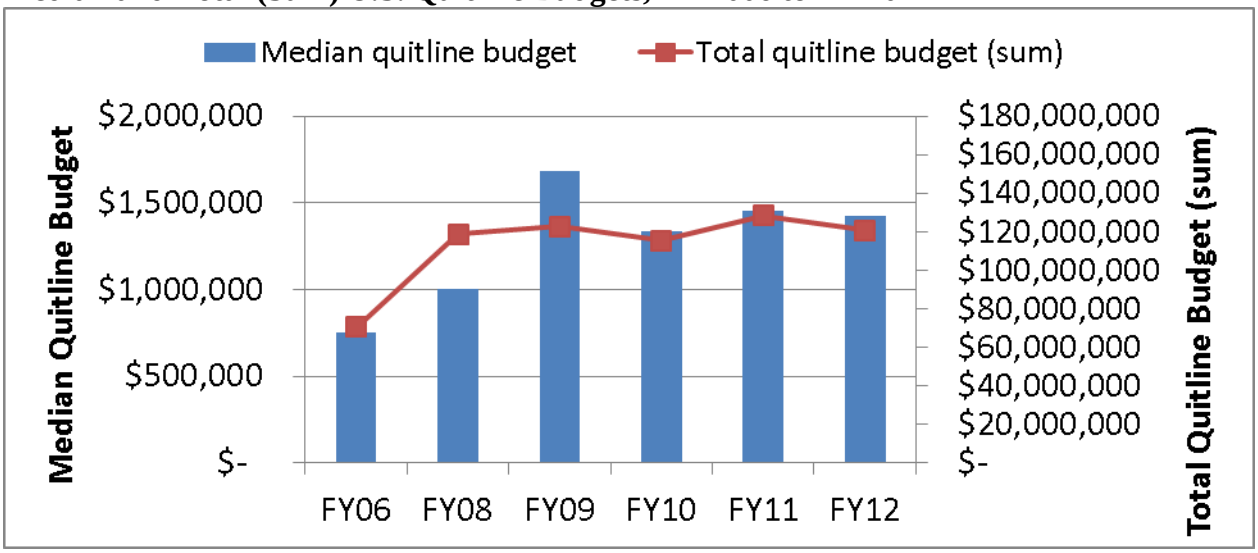
**Table 3**
**Free Medication Provision, U.S. Quitlines, FY 2011**

| Free Meds Type | # Providing Type of Free Meds | N (Providing weeks data for standard protocol) | Median # of Weeks Provided as Standard Protocol (min,max) | N (Providing weeks data for special populations) | Median # of weeks provided to special populations (min,max) |
|---|---|---|---|---|---|
| ***Patch*** | 44 | 43 | 4 (2, 12) | 8 | 8 (8, 8) |
| ***Gum*** | 36 | 35 | 4 (2, 12) | 7 | 8 (8, 8) |
| ***Lozenge*** | 20 | 20 | 5 (2, 12) | 3 | 8 (8, 8) |
| ***Bupropion*** | 3 | 3 | 8 (4, 8) | 0 | - |
| ***Varenicline*** | 3 | 3 | 8 (4, 8) | 0 | - |
| ***Inhaler*** | 2 | 2 | 6 (4, 8) | 0 | - |
| ***Nasal Spray*** | 2 | 2 | 6 (4, 8) | 0 | - |

*Data source: CDC Quarterly Services Survey*

**Promotion:** Probably the area most affected by the downturn in the economy has been the marketing and promotion of state quitline programs. State budgets were severely challenged after 2008 and reducing and/or eliminating promotional messaging for tobacco cessation programs was a common occurrence for many states. This reduction in promotional support can be seen in Figure 3 which demonstrates the dip nationally in 2010 and the significant reduction in the rate of quitline spending growth compared to that seen between 2006 and 2008.

**Figure 3**
**Median and Total (Sum) U.S. Quitline Budgets, FY 2006 to FY 2012**




*Data source: North American Quitline Consortium. 2013. Results from the 2012 NAQC Annual Survey of Quitlines. Available at http://www.naquitline.org/?page=2012Survey*

The real issue is how these budgetary changes affected state quitlines with respect to their programs. In the area of promotion there are two directly related factors affecting the overall effect. The first is the use of paid and earned advertising. The second is the use of free NRT to attract callers to the quitline,[43, 44] which also affects a caller's ability to succeed in their quit attempt.[45] The following table from the NAQC 2012 survey indicates that approximately 30% of quitlines did not see a change in their promotion or operating budgets.[25] While this table does not reflect the magnitude of earned media across quitlines, it is easy to see that the effects of challenging economic times seem to be quite variable. Undoubtedly, state quitlines are pursuing earned media as a means to offset promotional budget reductions.

**Table 4**
**Impact of Change in Budget, FY 2011 to FY 2012**

| | **U.S. (n=53)** |
|---|---|
| Decreased Services | Counseling sessions (6); NRT (6); Media/promotions (4) |
| Decrease in overall funding | 4 |
| Other decreases | 2 (1-decrease fax callbacks; 1-reduced staff/hours) |
| Shutdown of services | 2 (1 temporary, 1 of all phone except for special pops) |

| | |
|---|---|
| Restored services | 3 (1 after temp shutdown, 2 after lengthy shutdowns) |
| Increase in overall funding | 6 |
| Increase in media/promotion | 5 |
| Adding/expanding services | Add - 5 (text - 4; NRT - 3; online - 3); Expand - 1 (NRT) |
| No impact | 8 |
| No response/Not applicable | 22 |

*Data source: North American Quitline Consortium. 2013. Results from the 2012 NAQC Annual Survey of Quitlines. Available at http://www.naquitline.org/?page=2012Survey*

There is much discussion of state quitlines, how they function and how successful they are. What is often forgotten in these discussions is the role of various public (state and federal) and private entities in their functioning. To some degree most, if not all, of these entities affect the sustainability, operations, reach and outcomes of state quitlines. The following section will briefly discuss the most obvious roles these organizations may play. To be sure, not all organizations and agencies are included, as some are very state specific.

## THE ROLE OF ORGANIZATIONS IN THE FUNCTIONING OF QUITLINES

### Role of State Tobacco Programs

Over the past 20 years, state governments have played a critical role in creating a U.S. network of state quitlines. Without their forward-thinking action in the mid-90's in the midst of strong political pressure from the tobacco industry, we would not be where we are today in the fight against tobacco utilization. Despite only having a short track record for quitlines, states took economic and political risks to demand and create strategic, evidence-based programs and became good administrators, managers, and partners in the fight against big-tobacco interests. They funded, promoted and evaluated the efficacy of their quitlines and continue to play a critical role. Quitlines may function under state health departments, tobacco cessation agencies, as independent entities established by states as a result of the MSA with some state oversight, or as an agency residing within any of these but funded by state-regulated tobacco taxes. In all cases, state governments have influence over the organization and operations of the quitline for their state to a varying degree. The health-related costs associated with tobacco use affect every state and therefore the need for an effective, efficient state quitline that provides tobacco cessation access to specific populations is of critical interest to state governments.

State revenues, budgeting processes and even politics routinely affect state quitlines. As recently as four years ago, the State of Ohio abolished their Tobacco Prevention Foundation, established years earlier as a result of the MSA.[46] The result of this action brought the Ohio quitline directly under the auspices of the Department of Health and state budgeting process rather than functioning as an autonomous foundation with an independent budget. The court system within Ohio upheld the decision to abolish the Foundation. This action points to the importance of the state governments on the functioning of all quitlines, even if independent foundations have been established.

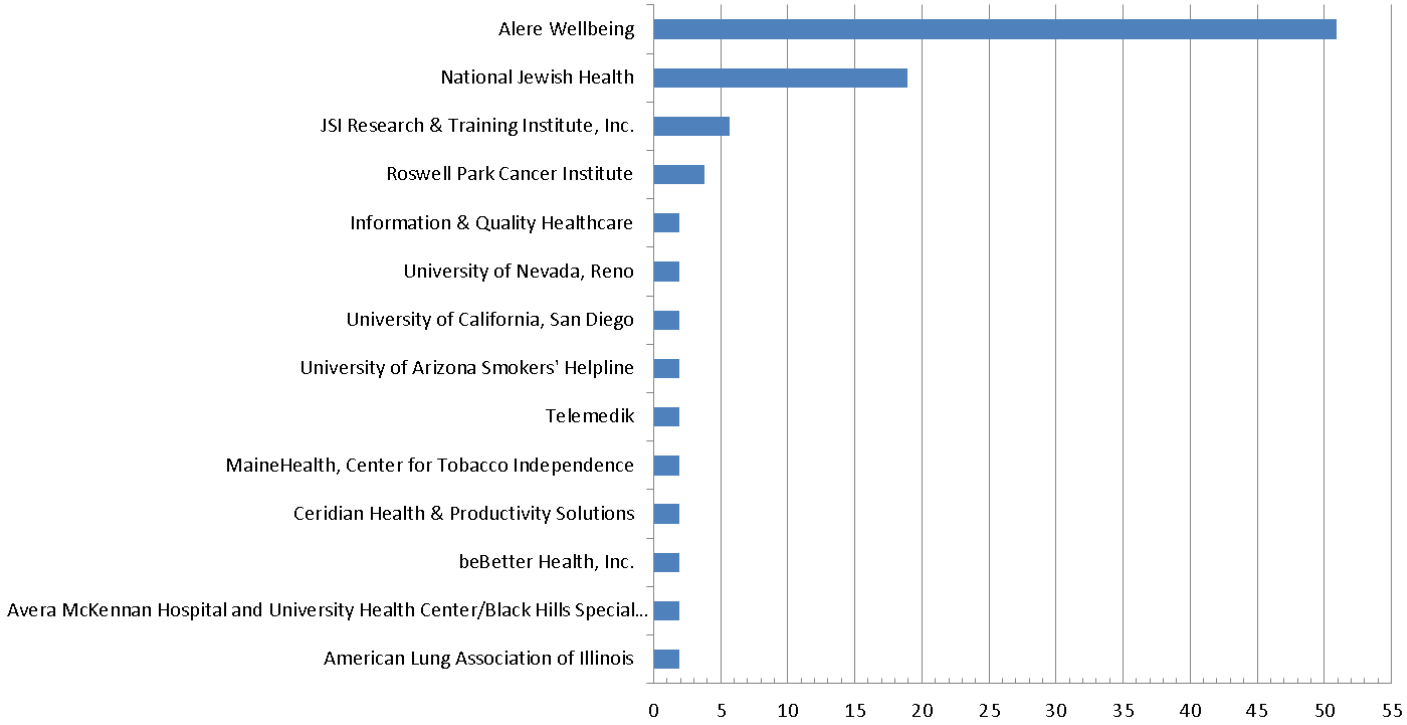
State quitlines function within the greater statewide framework of public health policies and systems and provide valuable tobacco cessation, disease prevention and information gathering services to the state. Some state tobacco programs play a role in coordinating the services of their quitlines with the state Medicaid agency, state or

government employee insurance, and private organizations, such as health plans and employers. As such, these programs are very involved in ensuring quality control of cessation offerings in their state, the coordination of efforts among other state government entities engaged in cessation and addressing sustainability through cost-sharing and other partnerships.

## Role of Quitline Service Providers

The primary function of state quitline service providers is to perform the operations of the quitline to help it attain the broad goal of tobacco cessation. Service providers vary throughout the U.S. with call centers operated by universities, academic medical centers, non-profit agencies, private for-profit companies, and large, publicly-traded corporations. The complete list of U.S. service providers as of April 8, 2014, and the percentage of their market share, is found in Figure 4 below.[25]

**Figure 4**
**Service Provider Market – United States (N=53)**
**November 26, 2013 – April 8, 2014**




*Data source: NAQC Quitline Profiles, April 2014*

Depending on the relationship between the state quitline funder and their service provider, the activities of service providers can vary considerably. In all cases, the service provider answers calls from the general public, mostly smokers or their friends and relatives, and provides guidance to callers on tobacco cessation. In most cases, providers have trained coaches (also called counselors) who provide direct information and support to help callers in their quit attempts. This may be through one or a series of telephone contacts and possibly utilize web-based services and/or provide pharmacotherapy either directly or through another pharmacotherapy vendor. Service providers can also provide other significant services to the quitline funder/client. This may be in the form of advice to clients on different ways to offer services to achieve their goals in a more cost-effective way. Often, service providers have technical and psychological expertise which allows discussion towards new innovative approaches to tobacco cessation. The field of tobacco cessation is rapidly evolving with new concepts about treating addiction and social approaches to supporting those who wish to quit their tobacco use. These advances create a need for more and better research to assess these innovations with respect to efficacy and costs. Service providers may have scientific expertise on staff and therefore are also involved with the assessment of these new programs. In some cases, evaluation of the services provided by the state quitlines is performed by the service provider though in most cases

evaluations are performed by external agencies or vendors to prevent inherent bias. However, even when using external evaluators, service providers may play a role in the presentation of data and interpretation of results.

## Role of the U.S. Department of Health and Human Services

HHS is the principal agency for protecting the health of all Americans. HHS' Medicare program is the nation's largest health insurer, handling more than 1 billion claims per year. Medicare and Medicaid together provide healthcare insurance for one in four Americans. HHS also works closely with state and local governments helping them to enact their public health policies.

HHS is comprised of the Office of the Secretary and 11 agencies. The agencies perform a wide variety of tasks and services, including research, public health, food and drug safety, grants and other funding, health insurance, and many others.[47] Three of the HHS agencies – the CDC, the NCI at the National Institutes of Health and the Food and Drug Administration (FDA) – all have played key roles in the development and advancement of state quitlines in a variety of ways, including as an important convener of multiple agencies and organizations to work on common interests, direct support for programs, and strategic leadership.

In 2001, Secretary Thompson asked the CDC to establish a Cessation Subcommittee under the Interagency Committee on Smoking and Health (ICSH). As a result of the deliberations of this subcommittee under the direction of Dr. Michael Fiore, tobacco cessation programming, with a special emphasis on evidence-based cessation services, such as state quitlines combining counseling with pharmacotherapy became national standards of care. It was from the recommendations of the subcommittee that: 1) taxes on cigarettes were levied with the proceeds directly funding education of consumers and providers; 2) a broad and balanced research agenda was established; 3) evidence-based counseling and medications to all federal beneficiaries and in all federally-funded healthcare programs was provided; and 4) partnerships between public and private organizations were established to ensure the provision of evidence-based tobacco dependence treatment as a standard of care in all healthcare delivery settings. In addition, as another outcome of the recommendations, in 2004 NCI established a national tobacco quitline portal (1-800 QUIT-NOW) that would direct telephone calls from anywhere in the U.S. to the appropriate state quitlines. A decade after its publication, the report continues to be relevant and provide a strong framework for improving cessation efforts in the U.S. HHS continues to provide direction, education and facilitation of federal and state funding support of state quitlines. In addition, HHS continues to be an important public voice in the fight against tobacco, as evidenced in the recently published National Prevention Strategy which calls for expanding the use of tobacco cessation quitlines.[48, 49]

Another important step in helping the underserved in tobacco cessation came from HHS in June 2011 when the Centers for Medicare & Medicaid Services (CMS) announced new guidance on ways states are required or can elect to expand tobacco cessation coverage.[50] The guidance actively promotes the utilization of tobacco cessation services by state Medicaid plans for their members, and encourages them, with financial incentives, to use their state quitlines as a key resource. The actual guidance can be found below in Table 5.

**Table 5**
**CMS Guidance Letter on Tobacco Cessation to State Medicaid Directors (SMDL #11-007)**

| |
|---|
| 1. Reminded states that their Medicaid programs must fully cover, without cost-sharing, comprehensive tobacco cessation services for pregnant women and amendments to their Medicaid state plans must be amended to implement the new benefit requirement. |
| 2. Described the multiple optional Medicaid benefit categories states may rely on to provide pharmacotherapy and counseling to non-pregnant Medicaid beneficiaries. |
| 3. Explained that CMS will regard tobacco quitlines as an allowable Medicaid administrative activity which can be claimed at the 50 percent administrative match rate. |
| 4. Encouraged states to actively promote the availability of tobacco cessation benefits to Medicaid beneficiaries and to providers. |

## Role of the Centers for Disease Control and Prevention

Although a part of HHS, the CDC deserves a specific section to describe its important role in the past and present functioning of state quitlines. Through its Office on Smoking and Health (OSH), the CDC is the lead federal agency for tobacco prevention and control. Its mission is to reduce the death and disease caused by tobacco use and exposure to secondhand smoke.

OSH has long played a key role in the federal government's tobacco control efforts. It provides expertise and advocacy for tobacco control within HHS, leads strategic planning activities, provides funding for public health activities, conducts applied research and surveillance activities, and offers technical assistance to the states, territories and national organizations.

Beginning in 2004, the CDC worked closely and collaboratively with NCI in advancing a national agenda for state tobacco cessation quitlines. Since 2004, the CDC has continued to provide funding to help support and improve state quitlines. This federal support has been a major part of state quitline budgets, peaking at 42.4% in fiscal year 2011, the time of a national economic crisis.[25] In addition, the CDC has also provided critical funding to NAQC (described in the following section).

The CDC also plays an important role in funding scientific research related to tobacco cessation efforts and provides education to many audiences on the results of this research. As one of these publications, the CDC produces the Guide to Community Preventive Services, a highly regarded publication on evidence-based interventions through its Epidemiology and Analysis Program Office.[51] The table below is a listing of these Guides which demonstrates both the positive and negative research findings concerning most of the topics of interest to all tobacco cessation stakeholders.

**Table 6**
**Guide to Community Preventive Services, Tobacco Cessation Related Recommendations**

| | |
|---|---|
| **Increasing the Unit Price of Tobacco Products** | ***Recommended February 1999*** |
| **Internet-Based Interventions** | ***Insufficient Evidence December 2011*** |
| **Mass Media Campaigns when Combined with Other Interventions** | ***Recommended October 2009*** |
| **Mass Media - Cessation Series** | ***Insufficient Evidence May 2000*** |
| **Mass Media - Cessation Contests** | ***Insufficient Evidence May 2000*** |
| **Mobile Phone-Based Interventions** | ***Recommended December 2011*** |
| **Provider Reminders when Used Alone** | ***Recommended February 2000*** |
| **Provider Reminders with Provider Education** | ***Recommended February 2000*** |
| **Provider Education when Used Alone** | ***Insufficient Evidence February 2000*** |
| **Provider Assessment & Feedback** | ***Insufficient Evidence February 2000*** |

| **Quitline Interventions** | ***Recommended August 2012*** |
|---|---|
| **Reducing Out-of-Pocket Costs for Evidence-Based Tobacco Cessation Treatments** | ***Recommended April 2012*** |

In 2010, OSH established the National Quitline Data Warehouse to collect and analyze state quitline data. The data are collected quarterly and provides information on the nearly 500,000 tobacco users who seek treatment through state quitlines annually. These data provide invaluable information about trends within the target population for state quitlines, as well as critical information about the types of services offered from the state quitlines. It is without question that this database will become a valuable research tool for scientists for years to come.
The national economy and its effects on state budgets were felt by many state quitline budgets starting in 2009. As mentioned earlier, one of the first effects was the reduction in promotion activities. To help quitlines, OSH launched the first national media campaign to promote cessation in the spring of 2012. The 12-week campaign generated nearly 200,000 calls to state quitlines. A second campaign launched in March, 2013 and a third campaign in February, 2014.

## Role of the National Cancer Institute

The NCI, the federal government's principal agency for cancer research and training, is located within the National Institutes of Health at HHS. Within NCI, both the Cancer Information Service (CIS) and the Tobacco Control Research Branch (TCRB) have been active in advancing state quitlines for many years.

As mentioned above, beginning in 2004 OSH and CIS worked closely and collaboratively to advance a national agenda for state quitlines. Since 2004, CIS has operated the national portal (1-800-QUIT-NOW) that directs telephone calls from anywhere in the U.S. to the appropriate state quitlines. Over 4.6 million calls have been routed through the portal since it began operating through January 2013. In 2013, CIS worked with OSH and the states to establish a new Spanish-language portal (1-855-DEJELO-YA). These language services, also including the Asian National Quitline funded by a CDC grant, help ensure that quitline services are more accessible to all smokers.

The TCRB has played a role in funding quitline research and program activities, convening meetings of tobacco cessation researchers, leading development and maintenance of www.smokefree.gov (the HHS website for smoking cessation), and developing social media applications for cessation. TCRB has also supported international quitline efforts, especially those in Asia.

## Role of the Food and Drug Administration

The FDA is responsible for protecting the public health by assuring the safety, efficacy and security of human and veterinary drugs, biological products, medical devices, the U.S. food supply, cosmetics, and products that emit radiation.[52] Two centers within FDA are relevant to the operations of state quitlines: the Center for Tobacco Products and the Center for Drug Evaluation and Research.

The Center for Tobacco Products (CTP) oversees implementation of the Family Smoking Prevention and Tobacco Control Act. Some of the Agency's responsibilities include setting performance standards, reviewing premarket applications for new and modified risk tobacco products, requiring new warning labels, and establishing and enforcing advertising and promotion restrictions. It should be noted that there has been an almost constant conflict between the tobacco industry and both the federal and state governments' tobacco control agencies with respect to the introduction of new tobacco products and advertising since the establishment of the MSA. The FDA, through the enactment of the Family Smoking Prevention and Tobacco Control Act, has the lead position from the federal standpoint in this conflict.[53]

As part of the authority vested within the Tobacco Control Act, on June 21, 2011, FDA announced its final rule on new cigarette warning labels. The new rule increased the size of health warnings, added graphics and messages, and included 800-QUIT-NOW, the national quitline portal, as part of the labeling. Warning labels that include quitline

telephone numbers are required in over 20 countries, including Canada. Experience has shown that the warning labels will double to triple the call volume to quitlines.[54] The rule was scheduled to take effect in September 2012. In August 2011, the tobacco companies filed a lawsuit to stop the FDA's implementation of new graphic health warnings, arguing that the regulations are not consistent with the First Amendment to the Constitution (free speech). In March 2013, after the Court of Appeals for the DC Circuit blocked the specific graphic cigarette warnings proposed by the FDA, the U.S. Department of Justice ended the lawsuit by announcing that it will not seek Supreme Court review of the ruling. The FDA will begin anew the process of developing new graphic warning labels.

The Center for Drug Evaluation and Research (CDER) performs an essential public health task by making sure that safe and effective drugs are available to improve the health of people in the United States. CDER regulates over-the-counter and prescription drugs, including tobacco cessation medications. CDER recently held public hearings on actions related to nicotine replacement therapies and smoking-cessation products.[55] The public made many recommendations related to the package labeling, size of the packages and use of the medications. CDER's action may have an impact on the ease with which quitlines and their clients use cessation medications.

## Role of Public Policy Makers

Although public policy -- the course of action adopted and pursued by a government -- is most often associated with the legislature, it is a responsibility carried out by all three branches of government. Public policy makers are high-level government officials who determine the course of action that will be pursued. They are responsible for adopting and implementing various aspects of tobacco control policy: clean-indoor air regulations, marketing restrictions, youth access laws, and taxation of tobacco products. In addition to setting and ensuring enforcement of these laws, policy-makers may also play a leadership or "influencer" role when it comes to tobacco use and quitting. They play a key role in presenting budgets and determining appropriations for tobacco control programs.

For state quitlines, policy-makers play a key role in ensuring funding and sustainability for services and promotion. As state tobacco control programs continue to experience challenging budgets in the midst of ever-increasing demand for state quitline services, the role of executive and legislative policy-makers in ensuring adequate budgetary resources for their state quitlines that are sustained over time cannot be overstated. More recently, both federal and state executive branch policy makers have begun to play a role in identifying new sources of funding for quitlines, such as the administrative match from Medicaid that was made possible by Drs. Koh (HHS) and Berwick (CMS) and the cost-sharing partnerships that have been pursued by health departments in Colorado, Oregon and elsewhere.

Such courses of action make quitlines less reliant on appropriations and build a more sustainable funding portfolio for promotion and service delivery. In its document *Best Practices for Comprehensive Tobacco Control Programs*, the CDC sets goals for state quitlines, which are achievable through adequate funding.[56] While best practices-level funding is $10.53 per smoker or above, only two states (Maine and South Dakota) currently fund their quitline at this level.[25] Policy-makers are essential partners in ensuring adequate funding for state quitlines and reaching recommended funding levels. To do so, policy-makers should:

- work with the tobacco control program to learn more about quitlines, effectiveness, and return-on-investment;
- broker collaboration between government agencies/departments, especially when collaboration may result in cost-sharing agreements;
- increase or at best sustain general revenues from state and federal budgets for statewide cessation services;
- propose earmarks on state and federal taxes so that a portion of funds raised through taxes are directed specifically to quitlines (or cessation services); and
- ensure quitlines are promoted during price increases or enactment of clear-indoor air laws and that funding for expected increased volume is provided.

While the current role of policy-makers varies within each state and within the various agencies of the federal government, it is clear that they are critical to the success and future sustainability of quitlines.

## Role of Advocates and Other Partner Organizations

National advocates and non-profit organizations have played, and continue to play, a key role in the establishment, maintenance and growth of state quitlines. Through national and state advocacy efforts, training and technical assistance, specific targeted strategic efforts and general leadership within the field, the work of these critical partners is viewed as both complimentary to, and encouraging of, governmental action on tobacco control. Organizations like American Cancer Society (ACS), American Lung Association (ALA), American Heart Association (AHA) and the Campaign for Tobacco Free Kids (CTFK) have been strong advocates for federal funding for tobacco control, including state quitlines. They also have spearheaded many national tobacco control policy initiatives related to federal tax on tobacco, FDA's authority to regulate tobacco, and others. More recently, the ALA led national strategic efforts on tobacco cessation, especially related to the Affordable Care Act, Essential Health Benefits, and Health Information Exchanges. Their annual report on state tobacco control efforts holds states accountable for advancing tobacco control.[57]

At the state level, the ACS, ALA and CTFK activities have focused on promoting the success of state tobacco control programs, making the case for maintaining state funding for tobacco programs (including state quitlines) and for advancing state tobacco control policies. Efforts of the Americans for Nonsmokers Rights (ANR) have been pivotal in advancing smoke-free laws among the states, thereby encouraging cessation. All of these organizations have been involved in taking advantage of partnering opportunities to promote tobacco cessation at the local level.

Other non-profit organizations have been very active on both the national and state levels with respect to education and training opportunities related to comprehensive tobacco cessation programs. Partnership for Prevention, the American Legacy Foundation (Legacy), Smoking Cessation Leadership Center, Center for Tobacco Research and Interventions (at University of Wisconsin) and the National Networks for Tobacco Control and Prevention have all provided strategic leadership on cessation and been leaders in the areas of cessation coverage for priority populations , such as those with mental health issues, African Americans, Latinos, Asian Americans, Native Hawaiians and Pacific Islanders, Native Americans and Alaska Natives, lesbian, gay, bisexual and transgender smokers, and smokers with low socio-economic status.

## Role of the North American Quitline Consortium

The idea for a consortium of quitline stakeholders in the U.S. and Canada emerged as a recommendation during a meeting of state quitline service providers and funders, national cessation experts and researchers convened in the spring of 2002. As a result of the meeting, two planning processes – one to develop a minimal data set for evaluating quitlines and one to establish the mission and structure for NAQC– were undertaken by the Center for Tobacco Cessation in the summer of 2003.

In March 2004, NAQC launched its activities as a special program within the American Legacy Foundation and shortly thereafter, the Minimal Data Set for Evaluating Quitlines (MDS) was implemented throughout North America. NAQC incorporated as an independent non-profit organization in April 2006 and continues operation as an international membership organization working to promote quality, evidence-based quitline services within the broader cessation agenda across diverse communities. NAQC has created a forum for communication between quitline professionals in North America and creates ongoing opportunities for professional development.

NAQC works to ensure quality quitline research, evaluation and service delivery. In addition to the MDS, NAQC has conducted an annual survey of quitlines in North America (since 2004) to advance understanding of quitline operations and services. By sharing information about quitline financing, counseling interventions, medication provision, utilization, staffing and evaluation, quitlines are better prepared to evaluate their own programs and contribute greatly to the field, thereby helping to achieve NAQC's mission.

More recently, NAQC has provided guidance to members and input for national policy-making efforts, such as input on graphic health warnings, Medicaid coverage for tobacco cessation treatment, meaningful use of electronic health records, labeling for over-the-counter cessation medications and essential health benefits.

NAQC often plays the role of the trusted neutral body for convening quitline stakeholders, brokering issues between and among these stakeholders and moving the field of quitlines forward. NAQC's responsibility is to the shared vision and common agenda of *all* members, which often transcends national origins, competition for funding, individual member agendas and diverse practices. NAQC plays an important part in presenting this common vision to national and state agencies and being the representative of quitlines to many of the stakeholders listed above.

## Role of Health Plans and Other Payers

Private sector payers provide a major part of the healthcare resources in the country. As such, they are faced with the same challenges as Medicare and Medicaid with respect to the healthcare cost effects of tobacco use by their members. As private entities, health plans must look at the most cost-effective means to meet these challenges and often do so in a variety of ways. Health plans work closely with their providers to establish better health outcomes. There is a movement to support providers through capitated payment for care coordination/case management, and having providers address cessation in their offices or referral to state quitlines, where appropriate. Now that healthcare reform mandates coverage for screening and counseling, providers will get paid for these activities. However, it is important to recognize that "required coverage" has not been clearly defined and this has, unfortunately, led to inconsistencies in the quality and quantity of benefits available and being provided. Lastly, almost all carriers have some incentive program which rewards Primary Care Physicians for high quality performance (per specific metrics) and lowering utilization (e.g., emergency department visits). Controlling tobacco use is an important part of these efforts.

Private health plans also utilize their own internal resources to help control tobacco use. In many cases it is a matter of which is more cost-effective: to build or buy resources. Health plans have been training internal staff members who have direct contact with patients to treat tobacco dependence including complex case managers, behavior change managers, care coordinators, and disease managers. In some cases, health plans have developed or contracted for their own state quitlines for their enrollees. All internal activities presume that their solution is the most cost-effective means to accomplish tobacco cessation. Most private health plans are open to building partnerships with public tobacco cessation agencies and provider organizations if the relationship can provide effective, low-cost, quality programs with good tobacco cessation results. Across the country these partnerships are fairly new for health plans and for states and new relationships require trust and some risk. The Colorado Department of Public Health and Environment has formed a successful partnership with private health plans that has now provided access to the state quitline to health plan members for the past several years. In the coming year, partnership members anticipate that approximately 25% of all callers to the Colorado QuitLine will have private insurance covered by the private health plan partners. This partnership has been highly successful for the health plans to cover their tobacco using members, for the state to extend their treatment reach to many more Colorado tobacco users and to the tobacco-using citizens of Colorado with private health insurance who now have a readily available, evidence-based tobacco cessation program at their fingertips. This relationship is expanding into other high risk medical areas for future cooperation. Public-private partnerships, similar to the one in Colorado, are being explored across the country in an effort to achieve greater levels of tobacco cessation in a more cost-effective and collaborative way.

Medicaid is the nation's health insurance program for low-income people, covering approximately 58 million Americans who represent one of the sickest and most vulnerable demographic groups in the nation.[58] Medicaid is a federal-state relationship that is delivered and controlled at the state level. The prevalence of smoking is 53% higher in the Medicaid population compared to the rest of the U.S. population, with healthcare costs directly associated with tobacco use for Medicaid recipients about $22 billion annually, representing 11% of all Medicaid expenditures.[59] As such, state quitlines play an important role in the tobacco cessation process for Medicaid.

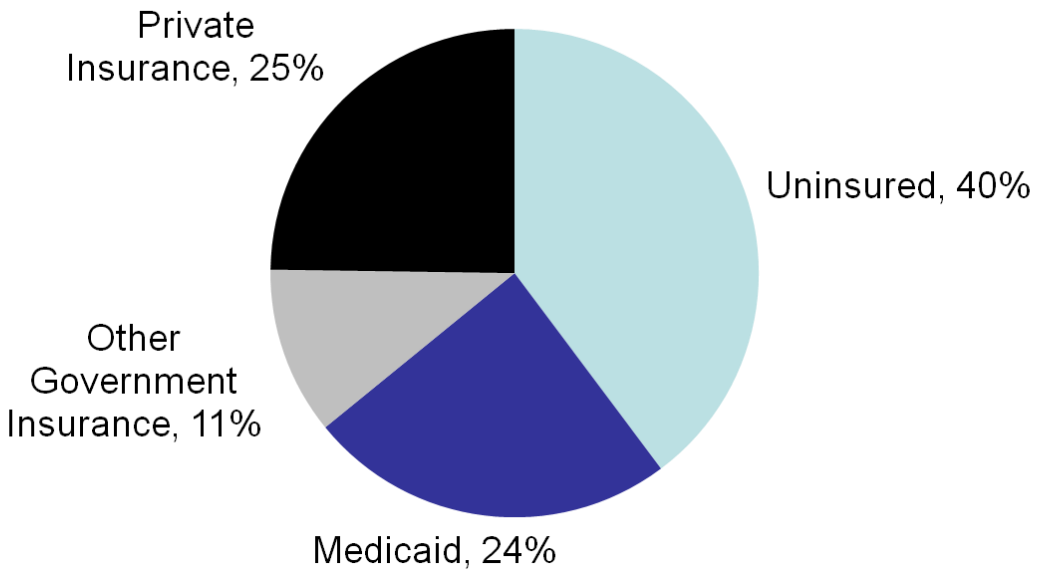
To help assure that smoking cessation services are covered by Medicaid and available to its members, in 2011 CMS issued a statement that "allowable quitline expenditures are claimable as administration at State option at the 50 percent Federal Medicaid matching rate specified at 42 Code of Federal Regulations 433.15(b)(7)".[49] The guideline has encouraged state Medicaid programs across the country to provide quitline services and then obtain the 50%

matching funds to help support the cost of these services. This was in addition to the section of the Affordable Care Act which provides Medicaid recipients who smoke and are pregnant with free tobacco cessation services. (Under section 4107 of the Affordable Care Act, section 1905(a)(4) of the Act is amended to add a new subsection (D) to require counseling and pharmacotherapy for cessation of tobacco use by pregnant women.)[60]

These measures have made a significant difference for Medicaid programs to better serve their members with state quitline services. Today, many states designate Medicaid members as one of their priority populations for quitline services. The services offered vary considerably from state to state, mainly in the number of times that individuals can enroll in a year or lifetime and in the medications offered. In most states, Medicaid offers free or reduced-cost NRT products through a prescription, although this is an over-the-counter medication. The requirement to contact their provider and obtain a prescription serves as a barrier for individuals to obtain the NRT. This barrier alone can reduce the effectiveness of quitline programs for this population.

**Figure 5**
**Insurance Status of U.S. Callers to State Quitlines, FY 2012**




*Data source: North American Quitline Consortium. 2013. Results from the 2012 NAQC Annual Survey of Quitlines. Available at http://www.naquitline.org/?page=2012Survey*

Healthcare systems have been expanding in number and scope over the last decade and will continue to do so as accountable-care becomes more engrained into our society. These systems can be private in nature such as Kaiser Permanente, or part of public programs such as the Federally Qualified Health Care Clinics. These systems basically are organizations of people, institutions, and resources to deliver healthcare services to meet the health needs of target populations. The rapid growth of these systems may be due to the impetus to form an Accountable Care Organization, which is defined by CMS as "an organization of healthcare providers that agrees to be accountable for the quality, cost, and overall care of Medicare beneficiaries who are enrolled in the traditional fee-for-service program who are assigned to it."

As tobacco use is the number one driver of healthcare costs in the U.S., it is more than likely that healthcare systems will be highly interested in ways to prevent and eliminate tobacco use. This is an even greater problem within systems that provide care for lower socio-economic demographics. The proven success and cost-effectiveness of state quitlines will be attractive features for these organizations. These systems are already building electronic resources to meet Meaningful Use requirements. The goal of Meaningful Use is to promote the spread of electronic health records (EHRs) to improve healthcare in the United States[61] and these electronic resources will enable simple, fast and safe referrals to state quitlines in the near future. What is presently lacking for these healthcare systems to be successful in their broader healthcare goals are: 1) the systematic education of the system providers of the importance and value of

quitlines; 2) the means of providing advice to tobacco users within their systems to utilize state quitline services; and 3) the means (electronic or otherwise) of safely and efficiently accessing and providing these tobacco cessations services to their constituents. This will undoubtedly come in the near future and referrals will become part of the routine workflow for providers within these healthcare systems. Information flow will go bi-directionally to and from state quitlines and EHRs which will enhance the ability of patients to reach care more effectively.

### Role of the General Public

The general public, comprised of smokers (approximately 19.3% of adults)[62] and non-smokers, plays a significant role in the existence and future of state quitlines. Unfortunately, while approximately 75% of smokers want to break their addiction to tobacco today, less than 2% of tobacco users actually utilize quitlines for a variety of reasons. In many states tobacco taxes support tobacco cessation programs, including quitlines. These taxes make it harder for tobacco users to purchase products and probably have the greatest impact on young smokers who find it difficult to pay the higher costs on a regular basis. On the other hand, the entire general public faces some increasing costs due to the staggering healthcare costs associated with diseases directly resulting from tobacco use. Governments have to tax their constituents to provide care for Medicaid recipients and private insurance companies raise their fees to provide care for rising healthcare costs from tobacco use. State quitlines are only one part of much broader tobacco cessation programs to help control these costs. In a recently published paper, Lightwood and Glantz reported on the enormous savings associated with the California Tobacco Control Program including the California Smokers' Helpline.[63] This paper clearly demonstrates the potential impact of broad public tobacco cessation programs over time. For these programs to exist however, the general public has to be informed of the dangers and costs of tobacco use and the potential for harm-reduction and cost-reduction resulting from cessation programs like quitlines.

## THE DYNAMIC LANDSCAPE WITHIN WHICH STATE QUITLINES OPERATE

Most state quitlines across the country have not been in place for more than 10 years. These organizations have seen many changes over this time - changes that continue today and continue to affect how quitlines function, their ability to reach their goals and their role within society. How state quitlines operate, their impact on tobacco use, and their roles within the broader healthcare policy arena are shaped in some ways by all of the entities described in the previous section. The interaction between the public and the private sectors is dynamic and results in a very fluid situation for most state quitlines. The following section discusses some of the more easily identifiable factors which produce effects on quitlines.

### Changing Demographics of the Smoking Population

Over the past decade, state quitlines and other tobacco cessation programs have dramatically reduced the number of tobacco users in most states. There is little doubt that these tobacco cessation efforts have helped tobacco users who were the most anxious to quit, were the easiest to reach, and were the most successful in their quit attempts. To some extent, many of the tobacco users who remain are those who do not view their tobacco use as an addiction and those who do recognize there is a problem but are not ready to do anything about it and therefore, are more difficult to reach (*treatment reach*) and have a harder time breaking their addiction. This is probably one of several of the reasons for flattening of the curves for both reach and cessation rates. In addition, over the past four years the global economy has affected tobacco users in several ways. There are less state funds available for tobacco cessation programming and the economic downturn has created a much more stressful situation for millions of people who have used tobacco products to help them deal with stress and have not been able to successfully quit. There are several studies that have been published that indicate that economic hard times, as well as other stressful conditions, are associated with increased alcohol and tobacco use. Concurrent with these trying economic times are increased efforts by the tobacco industry, as described below, to develop and market new products to broader, younger populations and employ new tactics to keep smokers addicted.

A significant factor in the changing demographics of tobacco users is the changing "face" of the potential tobacco user. There is significant growth within certain racial and ethnic populations in the U.S. today that is anticipated to continue. This will result in many new potential tobacco users within certain populations that already suffer

disproportionately from the health consequences and economic hardship caused by tobacco use. How to effectively prevent, reach and treat tobacco use within populations targeted by the tobacco industry and disparately impacted by tobacco's harm will require new paradigms for promotion, messaging and service delivery.

## The Introduction of New Products by the Tobacco Industry

Tobacco control programs, taxes and clean-indoor air regulations have been very successful over the past decade in reducing the number of tobacco users in the country. However, the tobacco industry has not sat by and watched their revenues go down without a fight. The industry spends approximately $27 million each day in advertising and promotions and has been trying to attract new tobacco users by promoting "safer" smokeless products.[64] This move is part of its continuing strategy to keep people addicted to tobacco and nicotine products and encourage youth and young adults to start on the insidious path to tobacco addiction. These products do not fall within the prohibitions established by clean-indoor air regulations, although many businesses and localities have policies banning "tobacco use" indoors or out, as well. Generally, new products have been classified as those that are novel and those that are traditional. Probably the most widely advertised and recognized new product is the electronic- or e-cigarette which vaporizes a liquid solution into an aerosol mist. Many of these products simulate the smoking of an actual cigarette and release the same amount of nicotine. Most researchers have found fewer carcinogens in these products, but they are just as addictive. There have been limited published scientific studies on their health risks for the individuals or bystanders, and there have been limited studies on the population impact. These products are not regulated by the FDA and are widely advertised commercially, particularly to teens and young adults.[65] Recent commercial information indicates that the tobacco industry, seeing a fall in the number of cigarettes consumed, have shifted a major part of their promotion dollars towards marketing e-cigarettes and resulting in recent significant increases in their utilization.

In addition to the e-cigarette or vapor products sold by the major tobacco companies, many "vapers" are purchasing their products from independent storefronts or the Internet, mixing their own "e-juice" and flavors, and even building their own vaping devices. This unregulated market is an entirely new frontier for nicotine addiction and thus, quitlines.

Snus, finely ground tobacco sold in a small pouch that resembles a tea bag that is placed between a user's cheek and gum much like traditional chewing tobacco, is among the new tobacco products. Ariva, another new smokeless tobacco product, is a dissolvable tobacco tablet shaped like a small breath mint, flavored as wintergreen or java, containing 1.5 grams of nicotine and is also placed in-between the upper gum and cheek. There are other new products that are in the form of dissolvable tobacco. With new flavors and marketing efforts of these products, it appears that they, too, have been packaged and marketed towards attracting teens and younger adults. The traditional smokeless tobacco products have also been repackaged and marketed, including chewing tobacco and snuff.[66, 67]

The emergence of new tobacco products presents a significant challenge to state quitlines to keep up with the new products, the marketing strategies that are employed by the tobacco industry to sell them and the changing younger demographic that feels these are safer alternatives to smoking cigarettes. As another consequence of the fact that these products are not regulated by the FDA, there are limited data on the frequency and magnitude in which these products are being used in multi-product combinations by consumers. Budgets for quitlines, as with other tobacco control programming, are stretched and programs are likely unable to create new cessation materials and programming for teens and younger adults that speak directly to the use of newly introduced products and the effects of using various combinations of these products.

## Healthcare Reform

Healthcare reform on both state and federal levels has presented many new opportunities for state quitlines to play a role in the broader context of tobacco control. Passage of the Affordable Care Act in 2011 has made wellness a mandate for both health plans and employers, which has placed tobacco cessation as a primary health benefit. This is almost certain to result in the offering of evidenced-based tobacco cessation services as part of the routine of traditional healthcare. In addition, the Joint Commission has placed tobacco cessation for in-patient discharge

planning onto its list of essential activities for hospitals for its tobacco-using patients.[68] As health plans and employers move toward compliance with the new law and hospitals work to meet Joint Commission standards, state quitlines become more important as a focal point in discussions between public and private sectors. Demands on both sides can potentially lead to more effective partnership discussions.

As the Affordable Care Act becomes the center of focus for the development of current and future healthcare programs, state quitlines again become even more important as they are integrated into the routine healthcare delivery process. Enabling members of health plans and employees who smoke to have easy access to tobacco cessation programs is in the best interest of all. There have been at least two significant nationwide efforts to integrate comprehensive evidence-based tobacco cessation into routine healthcare. The first is the publication by the American Lung Association of *Helping Smokers Quit Tobacco: Cessation Coverage 2012* which outlines for states and the federal government the essential areas to bring tobacco cessation into the mainstream of healthcare.[69] The second example, which can be a model for health plans across the nation, comes from the Federal Employee Health Benefits and provides four tobacco cessation counseling sessions of at least 30 minutes for at least two quit attempts per year. This includes proactive telephone counseling, group counseling and individual counseling. In addition to the counseling, federal employees may receive all 7 FDA-approved tobacco cessation medications with a doctor's prescription. At the time of this publication, there are nine states that have followed the federal lead and have required private insurance plans to cover tobacco cessation treatments and four states that cover a comprehensive tobacco cessation benefit for all of their state employees. It is important to note that political negotiations and interpretations of laws passed often result in laws that provide less than idea coverage for tobacco cessation services and products. With this result, it is not uncommon for insurance companies to provide the minimum requirements of the law. For these reasons, it is even more important for state tobacco programs to become more engaged in discussions both before and after laws are passed to highlight the evidence base for the various cessation interventions, the cost-effectiveness of state quitlines and the services that they can provide. For these states, as well as the rest of the country, state quitlines can be a partner to achieve the standards set by new laws and regulations.

An additional consequence of implementation of the Affordable Care Act may be changes in the scope of, and payment for, services provided. Should these changes occur, they will likely have some impact on the qualifications and credentialing of the workforce associated with providing quitline services. It is likely to result in the need for accreditation processes to be developed and licensing requirements at the state level. This new level of complexity will undoubtedly also affect the costs of implementing such programs in the future.

## Dollars and Funding Priorities

With the economic climate of the past four years state governments have had to look at their funding of tobacco cessation programs closely, resulting in significant cutbacks for some programs and the playing of more prominent roles of federal agencies in funding of state quitlines. The table below gives a snapshot of the funding for quitlines in 2011 and 2012. In addition to the amount of federal funding that supports quitlines directly, the CDC initiated a nationwide media campaign called “Tips from Former Smokers” in 2012, 2013 and 2014 to increase the reach of state quitlines nationally. This federally-funded national campaign has allowed states to shift promotional funds directly into quitline operations and pharmacotherapy when budgeting processes allow. The changing funding priorities within state budgets have forced state quitlines to seek out cost-sharing and other partnership relationships to help with operations and future sustainability.

**Table 7**
**Funding Sources for U.S. Quitlines, FY 2011 and FY 2012**

| | US FY11 (N=50) | US FY12 (N=50) |
|---|---|---|
| ***Public sector/government*** | | |
| Local government funds | 0% | 0% |
| State/provincial general funds | 30% | 24% |
| State/provincial dedicated tobacco tax funds | 20% | 20% |
| State Medicaid program | 6% | 6% |
| MSA funds | 36% | 34% |
| Tobacco settlement funds (not MSA) | 6% | 6% |
| Federal | | |
| CDC- ARRA/Stimulus funds | 92% | 78% |
| CDC - other (non-ARRA) funds | 66% | 72% |
| Health Canada | 0% | 0% |
| Other | 4% | 6% |
| ***Private sector/non-government*** | | |
| Third part reimbursement through healthcare institution | 0% | 0% |
| Third part reimbursement through insurance company | 10% | 10% |
| Charitable foundation | 2% | 0% |
| For-profit company | 0% | 0% |
| Non-governmental organization | 2% | 0% |
| Employer organization | 0% | 0% |
| ***Other*** | 0% | 2% |

*Data source: North American Quitline Consortium. 2013. Results from the 2012 NAQC Annual Survey of Quitlines. Available at http://www.naquitline.org/?page=2012Survey*

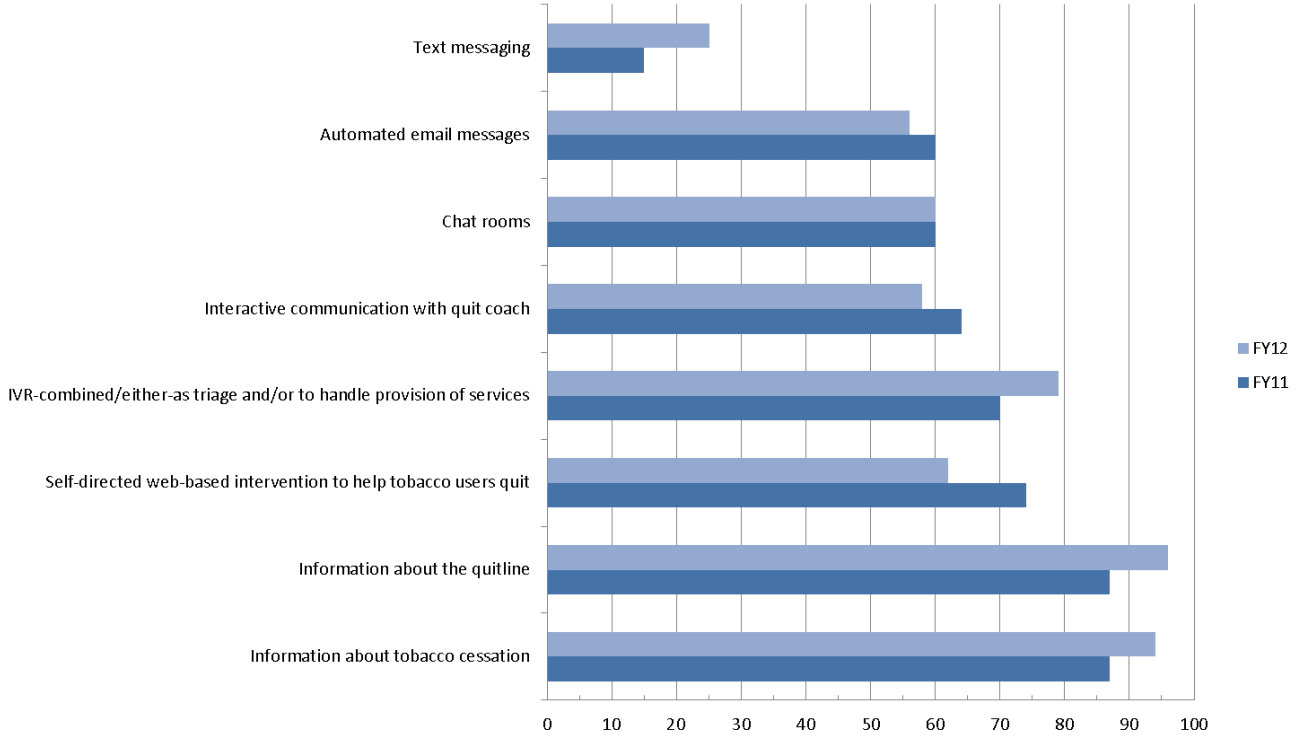
## Technology

Worldwide innovation in technology is occurring on an almost daily basis. Many of these innovations have led to new ways for people to communicate faster and easier. With the emergence of the commercial availability of these new advances, behavioral scientists have searched for new ways to utilize them to create positive behavioral change especially in the area of wellness. State quitlines have been introduced to, and struggled to assess scientifically, the effects of many of these innovations on their tobacco cessation programs. In the past few years, various studies have been performed looking at the use of mobile devices (m-health) and various programs launched on websites of

quitlines (e-health). A recent review of the studies employing mobile phones as adjuncts to other tobacco cessation programs suggested positive effect of this technology on smoking cessation, particularly short term cessation rates.[70] The papers in this review utilized a variety of different techniques including text messaging, emails, games to distract tobacco users during times of craving, chat rooms and other forms of social media. There were varying cessation rates among the different technologies used but overall results indicated that technology may have a role in enhancing the effectiveness of quit attempts. To date, we have not learned a lot about the cost-effectiveness of these new technologies but evaluation studies are expected.

One additional area of emerging technology is the ability to directly access electronic medical records to refer patients to state quitline programs, as well as receive data back to follow progress. Although no national communication technology exists today, a few states have received grants and have developed statewide electronic communications for referrals to quitlines. Undoubtedly, once this easy form of communication exists it will have an impact not only on reach rates but quit rates.

**Figure 6**
**Proportion of U.S. Quitlines Providing Interactive Web-Based Cessation Programs to Help Tobacco Users Quit, FY 2011 and FY 2012 (N=53)**




*Data source:*
*North American Quitline Consortium. 2012. Results from the 2011 NAQC Annual Survey of Quitlines. Available at http://www.naquitline.org/?page=2011Survey*
*North American Quitline Consortium. 2013. Results from the 2012 NAQC Annual Survey of Quitlines. Available at http://www.naquitline.org/?page=2012Survey*

## THE FUTURE OF STATE QUITLINES: CONSIDERATIONS AND POSSIBILITIES FOR MOVING FORWARD

State quitlines have done a terrific job in the past 20 years in providing tobacco cessation services to millions across the country. However, the viability of quitlines looking into the future depends on many different factors that vary from state to state. There are many different public and private entities that do and will continue to play important roles in shaping the future of state quitline structure, funding, operations and service offerings. However, there are certain specific common elements that will affect all quitlines, regardless of state, to some degree.

With all the factors that can affect state quitlines, they have to be flexible in their ability to meet challenges and to provide services in different ways to different populations. Quitlines must be able to evolve to meet the needs of their states, their state governing bodies and possibly the needs of private employers and health plans in the future. This flexibility requires being able to discuss needs and challenges in both private and public sectors. It requires developing strong relationships and bi-directional, open communications between quitline funders and their service providers to be prepared to make adjustments in service offerings and promotional activity.

Healthcare reform has already started and is playing an important role in how health plans and employers are looking at providing effective, evidence-based, low-cost tobacco cessation services. The Affordable Care Act will move tobacco cessation programs into the mainstream of routine healthcare. How this will occur will no doubt vary significantly between organizations and between states as implementation continues. Healthcare reform brings with it the need to be able to discuss new ways to reach and communicate with tobacco users in different situations and provide a broader scope of service offerings. The funding for these services, however, will present new challenges. It will also open new opportunities for creating relationships between the public and private sectors that bring more cost-effective solutions to the issue of tobacco control. It is likely that new relationships will also expand the opportunities for state quitlines in areas of disease education and management.

State quitlines need to begin planning now to be able to meet the needs of the future. Health officials, both public and private, are evaluating future needs facing their constituencies in all areas of health that may be related in some way to tobacco use and will likely want their quitlines to be partners in the broader public health arena. It is possible that quitlines will be incorporated beyond the tobacco control field. As states look at ways to balance their budgets with rising healthcare costs and limited chronic disease prevention budgets, they will be forced to look at options for bringing tobacco cessation programming into other major public health programs. The close association of both tobacco use and obesity with many other chronic medical conditions makes the coordination of services related to mental illness, substance abuse, diabetes and cardiovascular diseases with tobacco cessation and obesity a probable outcome for the near future. How this will occur is still unknown. It could take many different paths from simple sharing of information and providing for referral options like that being planned for the Colorado QuitLine today or a far more in-depth program where advice and care are offered directly.

**Table 8**
**Considerations for Integrating State Quitlines into Disease Management**

| Options | Pro | Con |
|---|---|---|
| Provide written information about disease states to callers. | Easy to create and to provide callers identified with disease state. | May take away from purpose of the caller to quitline; to quit tobacco, requires additional data integration into systems |
| Provide verbal advice to callers about disease state. | Callers with disease states are identified at intake and already open to receiving information and help. | Coaches not disease state experts to answer questions from callers. Definitely shifts emphasis from original intent of call into quitline. Requires creation of new software. |
| Provide advice or referral information by IVR resources. | Callers can choose this resource option when they call the quitline and be provided a menu of options. This is relatively easy to create at a low cost. | Limited amount of information can be provided in this setting. Callers expect a "live" response and often hang up when given this type of resource. |
| Refer callers with disease state to information on quitline website. | Callers with disease state identified at intake and easily referred to static information on website at little cost. | Most cost-effective and least intrusive to program. Requires updating of information on site to keep people engaged. |

The sustainability of state quitlines, as well as the ability to deliver existing and new programming will most likely push many, if not all, state quitlines to seek cost-sharing partnerships with other state agencies and with the private sector. Partnerships can and will be structured in many different ways to suit the needs, financial capabilities, governance and trust levels of the parties involved. As relationships evolve it is likely that control over the functioning and services provided by the state quitlines may expand somewhat into a more shared structure between public and private entities. This may not come easily to the players involved and will take time. At the highest level, quality of service, maintenance of evidence-based programs and quality of assessment of the programs must be maintained irrespective of the relationships that may be performed. Without such guarantees the value of the programs will suffer. However, it is clear that these partnerships are essential if state quitlines are going to be able to survive and dramatically expand their potential reach and drive closer to the CDC projections of 2008.
Beyond reaching these goals, it is essential for the field of tobacco cessation to continue to be current and utilize the newest concepts and technologies available. To accomplish this there must be ongoing scientific research. Research related to specific target populations to better understand their needs and best approaches for tobacco cessation and research designed to evaluate new methods for creating positive behavioral change to ensure sustained tobacco cessation are areas that will need to be addressed in the future. The need to perform these scientific studies is yet another reason for partnerships in a variety of areas. The federal government has long been the source of funding for research related to tobacco use and tobacco cessation. It has been a champion of ongoing scientific research projects. National non-profit organizations and academic institutions have mainly been the beneficiaries of this funding and have provided most of this scientific evidence in the field for the past fifty years.

State quitlines have a long and positive history of partnering with agencies within the federal government. This positive relationship has the chance to expand in the future. The CDC is a valued partner of state quitlines and of NAQC which maintains the singular voice of quality across all programs. Extending this relationship to build standards for the future, for coordinated promotional campaigns, for exchange of information are all ways to build upon the excellent foundation that exists today. State quitlines need federal support and the federal government needs quitlines to help tobacco users quit tobacco. State quitlines have the reach potential to deliver other chronic disease messages to callers to make a difference in their lives as well. The potential to reach those with mental health issues and those with addictive behaviors can be an invaluable asset to the federal government, as well as Medicaid and other health plan providers. This federal-state quitline partnership should be the role model for public-private partnerships.

The rapidly advancing field of technology will create opportunities and challenges for state quitlines into the future. The costs for keeping up with this technology are going to affect quitlines nationwide. Anticipating these advances today can allow for the planning and budgeting processes to begin in advance of their absolute need. Again, partnering with the private sector, as well as with the technology arms of government, is essential. Referral to a state quitline is only one way the electronic highway has to be developed and utilized. Quitlines do not want to be left behind. The rapidly growing area of communications will lead to new methods of social communication and networking which will be incorporated into ways to modify behavior in a positive way. Today, social media is being used in many settings to help people move through the “stages of change” using interactions with others facing the same behavioral health challenge. Quitlines will want to be part of these social advances. Discussions between state quitline funders, their service providers, and the research community now will help define the potential for implementation of these new advances in the near future. In many ways these are new and unproven advances in technology that remain to be scientifically investigated as ways to improve outcomes and not just increase costs.
State quitlines have varied priority populations they target within their constituencies and these vary from state to state. Current demographic and tobacco-use differences from tobacco users that have been targeted in the past demonstrate the changing demographics state quitlines are facing now and will face in the near future. It is clear that to create the best opportunity to maximize treatment reach into these populations requires building partnerships with leaders within target populations and enlisting their support in the development and the promotion of programs. Cultures, language, use of media for information, and reasons for tobacco use vary significantly between priority populations. We must change our strategies for reaching these communities of tobacco users and may also need to modify our approaches to coaching. Open and honest communication in both directions is essential for success to

occur.

Throughout this section dealing with the future of state quitlines there has been emphasis on three basic calls to action for quitlines: 1) it is never too early to start planning for the future; 2) there is a need to open lines of communication with all entities that are or may be involved with state quitlines; and 3) establishing open and trusting partnerships in both the public and private sectors are essential not only for success but survival in the future. It is not the purpose of states or the federal government to create thriving business enterprises with their state quitlines, but rather to sustain thriving effective and efficient tobacco cessation services to help tobacco users quit.

## SUMMARY

State quitlines have advanced in the past two decades in so many ways, from the number of programs, to the services offered, to the scientific evidence to support their use. This is due, in large part, to the efforts of federal and state government agencies, many non-profit organizations that have nurtured and supported their growth and the work of many academic scientists who have provided the needed scientific evidence. This paper has reviewed the past, discussed the present, and outlines the possible future for state quitlines and the various players that will help us get there. State quitlines have evolved considerably and will have to evolve further to continue to provide evidence-based, cost-effective tobacco cessation services to the millions of tobacco users who remain. To be able to do this successfully, state quitlines must look critically at the opportunities around them to partner with both public and private entities to maximize available resources and to achieve meaningful treatment reach to those who continue to need their support.

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