

NORTH CAROLINA  
Department of Health and Human Services  
Tobacco Prevention and Control Branch

# QuitlineNC

YEAR 7 ANNUAL REPORT

*July 2011 – June 2012*

PREPARED FOR:

North Carolina Department of Health and Human Services

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## 1

## EXECUTIVE SUMMARY

The North Carolina (NC) Tobacco Quitline (QuitlineNC) is a free telephone-based, tobacco cessation service for all NC residents who want to quit tobacco. Quitlines are an effective and evidence-based approach to tobacco cessation, increasing quit rates by 56% compared to quitting with no support<sup>1</sup>. Combining cessation coaching with free nicotine replacement therapy (NRT) increases Quitline caller volume, caller satisfaction, and quit rates<sup>2-5</sup>. Marketing campaigns promoting Quitline services effectively increase utilization<sup>2,6,7</sup>. The University of North Carolina at Chapel Hill School of Medicine Tobacco Prevention and Evaluation Program has provided independent evaluation of QuitlineNC since 2005.

From its launch in 2005 through June 2011, QuitlineNC was jointly funded by the NC Health and Wellness Trust Fund (HWTF) and the Tobacco Prevention and Control Branch (TPCB) of the NC Department of Health and Human Services. Beginning in July, 2011, QuitlineNC has been funded solely through the TPCB.

From July, 2011 through June, 2012 (Year 7 of QuitlineNC operation), total QuitlineNC funding was \$6.45 million. QuitlineNC services were funded at \$4.2 million from three sources:

- \$170,000 from a federal American Recovery and Reinvestment Act grant to cover callers with Medicaid or no insurance;
- \$899,997 from the State Health Plan, to cover State Health Plan members;
- \$3.178 million transferred from post-dissolution HWTF funds, to cover all other callers.

QuitlineNC promotion was funded at \$2.25 million of HWTF transfer funds.

Year 7 saw record caller volume growth, with 22,072 North Carolinians who use tobacco calling, an increase of 110% over

the previous year. In Year 7, QuitlineNC promotion reach was 1.4%, compared with 0.64% in Year 6, and treatment reach was 1.1%, compared with 0.52% in Year 6. This was the first year these measures have reached 1% or higher and been on par with national reach estimates (1.22% promotion reach and 1.15% treatment reach)<sup>8</sup>.

This record caller volume appears to be driven by a strong media presence and free NRT for all callers from January through May. Callers came from every county. QuitlineNC continues to reach callers from groups with disparities in tobacco use or related health outcomes, with callers who report Black/African American race, lower educational attainment, and/or having no health insurance calling at rates equal to or higher than their proportion of adult NC smokers.

Quit rates among QuitlineNC callers remain strong, with between 10% and 24% self-reporting being quit for at least 30 consecutive days seven months after initiating QuitlineNC services. Since QuitlineNC launched in 2005, between 3,366 and 9,322 tobacco users who utilized this resource have quit, resulting in between \$30.9 and \$113 million in net medical cost savings (costs of healthcare savings minus cost of services).

**Evaluation data demonstrate that QuitlineNC continues to provide a valuable and necessary service to North Carolinians in every county of the state and to reach tobacco users from groups with disparities in tobacco use and health related outcomes. The combination of strong media promotion and free NRT dramatically increased the number of North Carolina tobacco users contacting QuitlineNC. Continuing to offer evidence based coaching and medication for all callers and maintaining compelling and consistent promotion to the public and healthcare professionals should extend the reach of QuitlineNC services, a critical strategy for achieving the ambitious Healthy People 2020 target of reducing adult smoking prevalence in North Carolina to 13%.**

# 2

## KEY FINDINGS AND OUTCOMES

All data presented in this report reflect only those Quitline callers who use tobacco and completed a registration call, excluding any callers who contacted Quitline as a proxy for a tobacco user (e.g. healthcare professionals or family members).

### A. QuitlineNC Caller Volume and Service Utilization

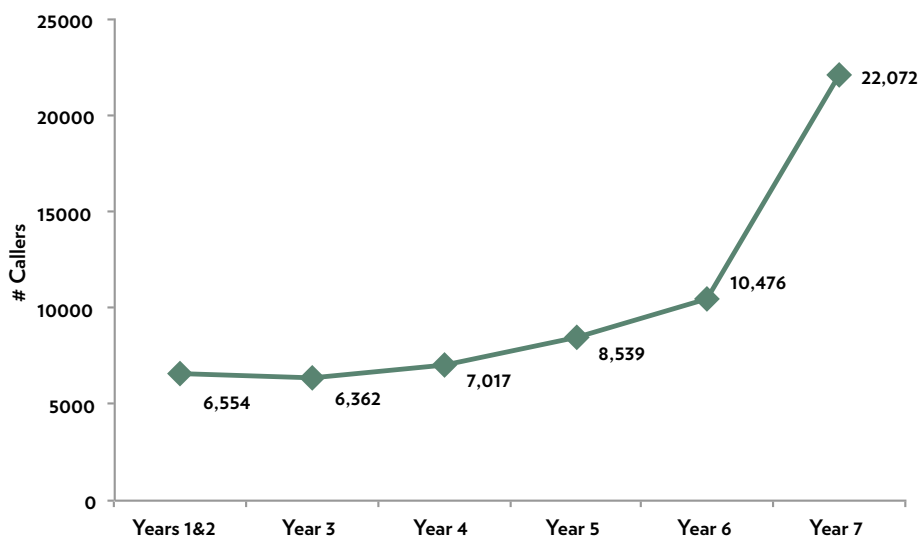
Since it launched in 2005, QuitlineNC has fielded more than 60,000 registration calls with North Carolina tobacco users (FIGURE 1). Overall caller volume increased by 110% in Year 7 compared to Year 6, a substantially greater increase than that previously observed in any year for QuitlineNC.

Adequately funding and promoting state Quitlines should result in between 1% - 2% of adult tobacco users completing a registration call in a given year, a measure known as promotion reach<sup>6,8</sup>. Treatment reach provides a measure of the proportion

of the state's smokers who receive evidence-based cessation treatment in the form of a completed cessation coaching call. In Year 7, QuitlineNC promotion reach was 1.4%, compared with 0.64% in Year 6, and treatment reach was 1.1%, compared with 0.52% in Year 6. This was the first year these measures have reached 1% or higher and been on par with national reach estimates (1.22% promotion reach and 1.15% treatment reach)<sup>8</sup>.

From January 1st through May 19th, a free eight week supply of NRT (nicotine patches, nicotine gum, or nicotine lozenges) was available for any caller who registered for the multi-call program, a series of four cessation coaching calls. For the entire year, callers who were insured through the State Health Plan and registered for the multi-call program were eligible to receive a free eight week supply of nicotine patches. The majority of QuitlineNC callers (72%) registered for the multi-call program,

FIGURE 1: OVERALL TOBACCO USER CALLER VOLUME, 2005-2012



and 50% of all callers received free NRT in Year 7. Most callers (82%) who registered for either the multi-call or single-call program completed at least one coaching session.

**B. Promotion and Caller Volume**

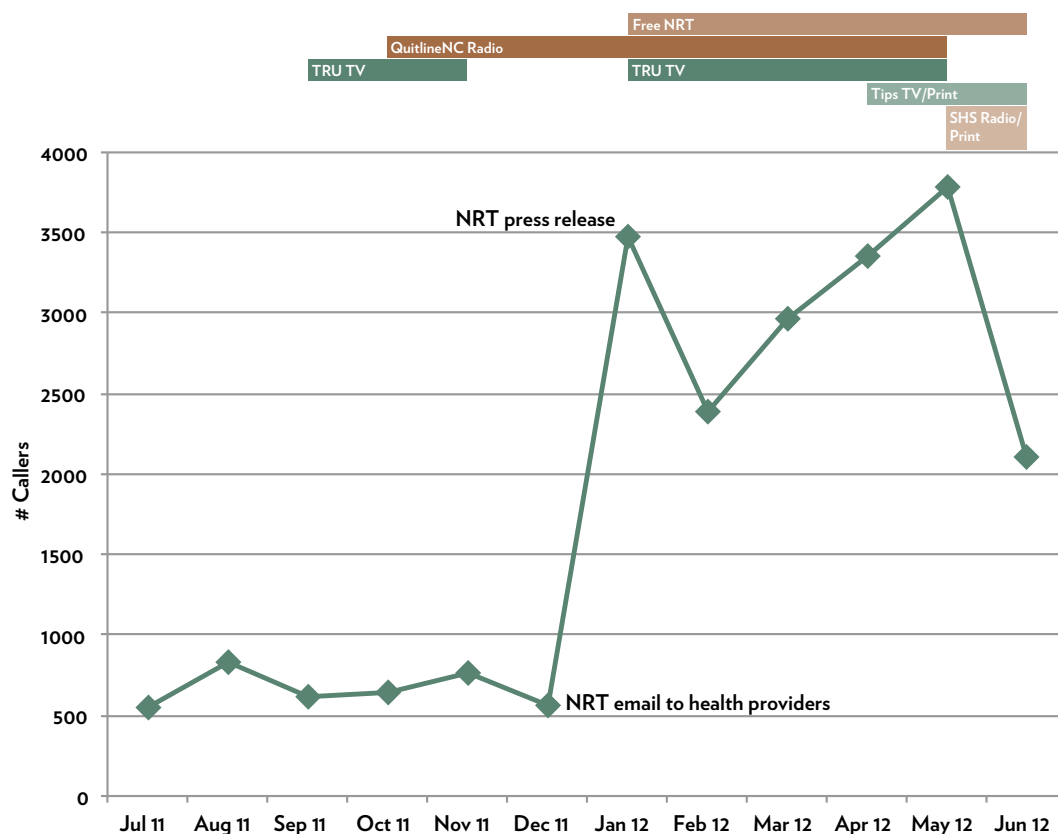
QuitlineNC promotion occurred via multiple campaigns and mediums in Year 7. Prevention themed TV ads from the North Carolina TRU campaign aired from September through November, 2011 (FIGURE 2); these ads had been pre-purchased and targeted to youth/young adult audiences by the HWTF. The QuitlineNC number was added to the end of these ads throughout the fall. QuitlineNC specific radio ads, also pre-purchased and targeted by HWTF, were on the air consistently from September through December, 2011. Similar ad placement schedules from this and other state campaigns have previously been shown to have good “spill over” effect to adult populations. As has been demonstrated in previous years, the steady presence of TV and radio advertising supported consistent month-to-month call volumes that were comparable to the same period in Year 6.

A dramatic increase in monthly caller volumes began in January, 2012 and persisted through the spring, peaking in May, 2012. This shift was driven by a confluence of multiple tobacco prevention and QuitlineNC specific promotions and the availability of free eight week courses of NRT (patch, gum,

or lozenge) for all callers that extended through late May, 2012. The NRT benefit was promoted to healthcare providers via an email blast in late December and to the general public via a press release in mid-January. TRU ads tagged with the QuitlineNC number continued to air across the state from January through April, along with QuitlineNC radio ads from January through May. In early April, the national CDC sponsored “Tips From Former Smokers” television ad campaign launched, with approximately two-thirds of ads tagged with the QuitlineNC number. In late April, DHHS supplemented the national ad buys with additional statewide buys from the campaign along with print materials and gas pump toppers; all of these ads were tagged with the QuitlineNC number. In May, DHHS launched a statewide secondhand smoke prevention campaign via radio ads, online advertising, and gas pump toppers, all of which included QuitlineNC information.

The multiple prevention and cessation media campaigns in place in April and May resulted in substantially higher volume of QuitlineNC related messaging than previously experienced in North Carolina. It is likely that this alone would have driven higher monthly caller volumes than previously recorded for QuitlineNC, as 25% of all callers reported hearing about QuitlineNC from a TV (17%) or radio (9%) ad (FIGURE 3). The provision of free NRT seems to have also been highly influential in achieving record caller volumes. Nearly one

**FIGURE 2. CALLER VOLUME BY MONTH**



quarter (21%) of callers reported hearing about QuitlineNC from healthcare providers, to whom the NRT benefit was promoted. More callers (17%) reported hearing about QuitlineNC from a family member or friend than in previous years, suggesting a strong word of mouth promotion effect related to the free NRT benefit.

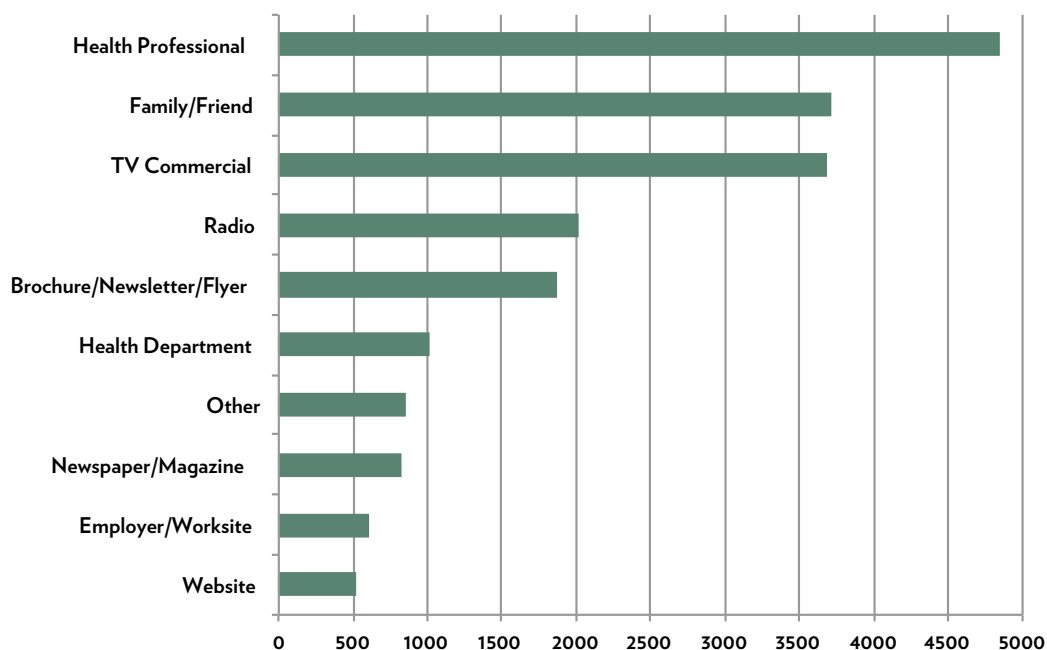
In Year 7, 9.2% of callers entered QuitlineNC via a fax referral, a smaller percentage compared to the previous year (17%). However, a greater number of callers entered via fax referral

in Year 7 (2,038) compared to Year 6 (1,780). Only 226 callers (1%) of callers entered via the QuitlineNC website web enrollment or click to call options, though the website appears to be an important source of information for many callers (FIGURE 3).

**C. Caller Demographics and Characteristics**

Tobacco users from every county in NC called QuitlineNC (FIGURE 4), with over 1,000 callers from Mecklenburg, Guilford, Wake, and Forsyth counties.

**FIGURE 3. HOW CALLERS HEARD ABOUT QUITLINE NC**



**FIGURE 4. CALLER VOLUME BY COUNTY**

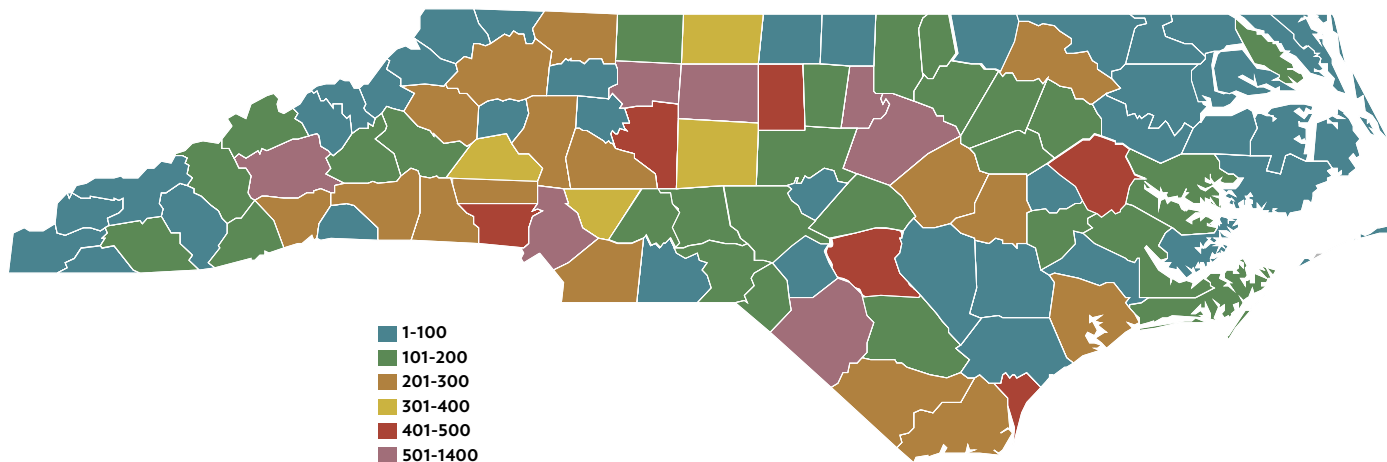


TABLE 1. QUITLINE NC CALLER DEMOGRAPHICS\*

Demographic Characteristic	QuitlineNC Callers (n=22,072)	
	#	%
<b>Gender</b>		
Female	13380	60.6
Male	8195	37.1
Unknown	497	2.3
<b>Age</b>		
17 and under	114	0.5
18 to 24	2099	9.5
25 to 64	17694	80.2
65 and older	1349	6.1
Unknown	816	3.7
<b>Race<sup>†</sup></b>		
White	13096	59.3
Black or African American	5816	26.4
American Indian or Native Alaskan	646	2.9
Other Race	713	3.2
Unknown	1801	8.2
<b>Ethnicity</b>		
Hispanic	513	2.3
Non-Hispanic	19722	89.4
Unknown	1836	8.3
<b>Insurance Group</b>		
State Health Plan	824	3.7
Other Private Insurance	4560	20.7
Medicare	2289	10.4
Medicaid	4519	20.5
Uninsured	8571	38.8
Unknown	1309	5.9
<b>Education Level</b>		
Less than High School	4300	21.8
High School or GED	6611	33.6
More than High School	8777	44.6
<b>Pregnancy Status (Female callers only n=13380)</b>		
Planning Pregnancy, Pregnant or Breastfeeding	521	3.9
<b>Disease Status</b>		
Multiple Chronic Conditions (e.g. COPD)	10341	46.8%

\* Unknown includes numbers classified as refused, not collected, not asked, does not know, and missing

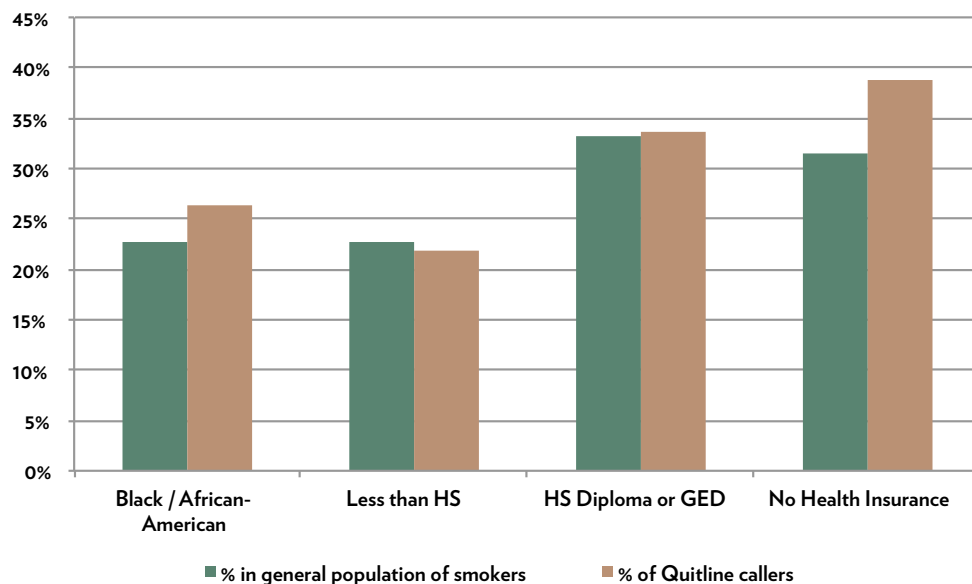
† "Other" includes callers who reported Arab or Arab American, Asian, Native Hawaiian/Other Pacific Islander, or Other. Not collected includes Not Asked, Not Collected, and Refused.

QuitlineNC callers were predominantly female (62%), over the age of 25 (83.2%), and white (59.3%) (TABLE 1). Most callers (88%) smoked cigarettes; 3% used multiple tobacco products. Many QuitlineNC callers reported having costly chronic medical conditions that are either a risk factor for tobacco use (e.g. mental health diagnoses) or related to

tobacco use (e.g. COPD) (TABLE 1). Over 500 women callers were planning a pregnancy, pregnant, or breastfeeding at the time of their Quitline call; reaching these women with effective cessation services has the potential for significant health benefits and medical cost savings for the women and their infants.



FIGURE 5. QUITLINE NC CALLERS FROM DISPARATE POPULATIONS\*



\*Based on estimates from the 2011 NC Behavioral Risk Factor Surveillance Survey and the 2012 American Community Survey

QuitlineNC is successfully reaching callers from groups with disparities in tobacco use and related health outcomes, with callers who report Black/African American race, lower educational attainment, and/or being uninsured calling at rates equal to or higher than their proportion of NC adult smokers (FIGURE 5).

#### D. Satisfaction and Quit Rates

Analyses by QuitlineNC vendor, Alere, show that 76% of seven-month follow-up survey respondents report being very or mostly satisfied with QuitlineNC<sup>9</sup>, consistent with previous years (75.6% in Year 6). Alere reported an intent-to-treat 30 day quit rate of 10%, compared with 12.2% in Year 6. This rate gives the percentage of callers who had been quit for 30 consecutive days at the time of the seven month follow-up survey, assuming that all survey non-respondents continue to use tobacco. Thus, it is an underestimate of actual quit rates among QuitlineNC callers. The respondent 30-day quit rate was 24%, compared to 29.9% in Year 6. The respondent rate does not account for survey non-respondents and thus is an overestimate of actual quit rates. The true 30-day quit rate lies somewhere between these two estimates. The difference in respondent rates between Years 6 and 7 may be related to oversampling for callers with Medicaid in Year 7. Quit rates for this group were significantly lower compared to callers with commercial insurance, which may have reduced the overall reported quit rates.

Using these estimates, between 1,772 and 4,253 QuitlineNC callers quit their tobacco use for at least 30 days in Year 7.

Since QuitlineNC launched in 2005, between 3,366 and 9,322 tobacco users who utilized this resource have quit, resulting in

between \$30.9 and \$113 million in net medical cost savings (costs of healthcare savings minus cost of services). Savings estimates apply current quit rates to the total number of unique QuitlineNC callers over time and assume a \$9,500 medical cost savings per tobacco user who quits<sup>10</sup>.

#### E. NC Surveillance Data

Data from the 2011 NC Behavioral Risk Factor Surveillance Survey (BRFSS) indicate that 21.8% of North Carolinians smoke<sup>11</sup>. Due to changes in survey methodology and analysis, 2011 BRFSS data are not comparable to previous years. Among smokers, 61.7% reported making a quit attempt in the previous year, 53.8% were aware of QuitlineNC, and 29% reported using cessation medication during their most recent quit. Building awareness of QuitlineNC and continuing to offer free NRT could improve the number of North Carolina smokers attempting to quit and succeeding in quitting.

#### F. Conclusions

Year 7 data and outcomes show that the combination of strong media promotion and free NRT dramatically increased the number of North Carolina tobacco users contacting QuitlineNC.

Efforts to expand the reach of QuitlineNC should continue to focus on statewide promotion of services to the public and to healthcare professionals and maintaining availability of free NRT. Continuing to increase the number of North Carolina tobacco users who utilize QuitlineNC services is a critical strategy for achieving the ambitious Healthy People 2020 target of reducing adult smoking prevalence in North Carolina to 13%.

## 3

## REFERENCES

1. Stead LF, Lancaster T, Perera R. Telephone counseling for smoking cessation. *Cochrane Database Syst Rev* 2003: CD002850
2. Centers for Disease Control and Prevention (CDC). Telephone Quitlines: A Resource for Development, Implementation, and Evaluation. Atlanta, GA: U.S. Dept. of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on smoking and Health, Final Editions, September 2004.
3. An LC, Schillo BA, Kavanaugh Am, Lachter RB, Luxenburg MG, Wendling AH, Joseph AM. Increased reach and effectiveness of a statewide tobacco Quitline after the addition of access to free nicotine replacement therapy. *Tob Control*. 2006; 15:286-293.
4. Bush TM, McAfee T, Deprey M, Mahoney L, Fellows JL, McClure J, et al. The impact of a free nicotine patch starter kit on quit rates in a state quit line. *Nicotine & Tobacco Research* 2008;10(9):1511 - 1516.
5. Deprey M, McAfee T, Bush T, McClure JB, Zbikowski S, Mahoney L. Using Free Patches to Improve Reach of the Oregon Quit Line. *Journal of Public Health Management and Practice* 2009;15(5):401-408 10.1097/PHH.0b013e3181952345.
6. Centers for Disease Control and Prevention (CDC). Telephone Quitlines: A Resource for Development, Implementation, and Evaluation. Atlanta, GA: U.S. Dept. of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on smoking and Health, Final Editions, September 2004.
7. An LC, Schillo BA, Kavanaugh Am, Lachter RB, Luxenburg MG, Wendling AH, Joseph AM. Increased reach and effectiveness of a statewide tobacco Quitline after the addition of access to free nicotine replacement therapy. *Tob Control*. 2006; 15:286-293.
8. North American Quitline Consortium. 2012. Results from the 2011 Annual Survey of Quitlines. Available at <http://www.naquitline.org/?page=2011Survey>
9. Alere Wellbeing, Inc. QuitlineNC Year 7 Standard Annual Evaluation. Prepared by Evaluation Services Division; Research, Training & Evaluation. March 29, 2013.
10. Lifetime Health Costs of Smokers vs. Former Smokers vs. NonSmokers. Campaign for Tobacco Free Kids. Available at <http://www.tobaccofreekids.org/research/factsheets/pdf/0277.pdf>
11. North Carolina State Center for Health Statistics. 2011 BRFSS Survey Results. Available at <http://www.schs.state.nc.us/schs/brfss/2011/>