



North Carolina Health and Wellness Trust Fund



QuitlineNC

QuitlineNC Evaluation July 2008 — June 2009

Prepared for:
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A. EXECUTIVE SUMMARY

A.1. Overview

The North Carolina Tobacco Quitline (QuitlineNC) is a telephone-based, tobacco cessation service that provides free support to all NC residents who want to quit their tobacco use. Research shows that quitlines are an effective and evidence-based approach to tobacco cessation. Proactive quitlines, like QuitlineNC, are shown to significantly increase quit rates compared to quitting without support.¹

QuitlineNC started operations in North Carolina in 2005 and is jointly funded by the NC Health and Wellness Trust Fund (HWTF) and the NC Department of Health and Human Services (DHHS). The HWTF funds services for callers ages 24 years and younger; callers who are school or childcare employees; callers who live with and/or are the primary caregiver of a child under 18 years old; and callers who are planning a pregnancy, pregnant, or within 12 months of giving birth.

DHHS funds all other callers. The Centers for Disease Control and Prevention (CDC) recommends that minimum funding for state quitlines be sufficient to fund call services for 2% of the state's smoking population.²

The University of North Carolina School of Medicine Tobacco Prevention and Evaluation Program (UNC TPEP) evaluates the outcomes of the HWTF-funded portion of QuitlineNC. A framework for this evaluation is outlined in the HWTF Quitline logic model developed by UNC TPEP in collaboration with the HWTF and DHHS and updated yearly as appropriate (Appendix A).

QuitlineNC completed its first year of operation in October 2006 (Year 1). This report summarizes findings from UNC TPEP's analysis of HWTF-funded caller data for QuitlineNC Year 4, between July 2008 and June 2009.

The HWTF funded its portion of QuitlineNC at \$2.81 million in Year 4 (approximately \$1.61 million was directed towards promotion and approximately \$1.2 million towards direct program services). HWTF funded the quitline at \$3.02 million in Year 3, a 100% increase compared to the first 20 months of operation in which \$2.03 million was allocated to the Quitline and only \$430,000 was directed to promotion).

In the first two quarters of Year 4, the HWTF continued airing promotional TV and radio ads from Phase 1 of the "Call it Quits" campaign, a multimedia, statewide QuitlineNC promotional campaign targeted to young adults that launched in September 2007. The HWTF launched Phase 2 of "Call it Quits" in March of 2009. New TV and radio ads featured young adults interacting with their quit coaches and quit coaches describing their role in supporting successful quit attempts. Additional HWTF Quitline promotional efforts were conducted as part of other HWTF initiatives, including grassroots marketing from the Teen and College initiatives and a statewide mailing to Obstetrical providers through the You Quit Two Quit project. Major promotions by DHHS included TV ads from the national "Become an Ex" campaign featuring information about QuitlineNC and a QuitlineNC ad in a major NASCAR event program.

The following section highlights key outcomes of the HWTF-funded portion of QuitlineNC in Year 4 and makes recommendations for Year 5.

Quitline Operation and Call Volume

- **At least one HWTF-funded caller from 99 of North Carolina's 100 counties called QuitlineNC during Year 4.**
- **In total, 7,910 callers called QuitlineNC during Year 4, an average of 659 callers per month. Average monthly call volume for all callers to QuitlineNC in Year 4 was 8% higher than in Year 3 (611 callers per month).**
- The majority of callers (89%) to QuitlineNC in Year 4 were North Carolinians who used tobacco (average 584 calls per month); other calls were from providers, family members, etc.
- Forty-seven percent (3,520) of callers who used tobacco were youth, young adults, primary caregivers/school employees, or women in various stages of pregnancy (average 293 calls per month). In Year 4, 99.6% of all these HWTF-funded callers used tobacco.
- In Year 4, almost one-half percent of North Carolina's adult (0.45%) and young adult (0.48%) smoking populations called QuitlineNC. A smaller percentage of youth smokers (0.21%) called the quitline.
- QuitlineNC call volumes from HWTF-funded callers peaked and remained higher during the seven months in which television and radio ads from the HWTF-funded "Call it Quits" promotional campaign were aired. Sixty-eight percent of all HWTF callers registered with QuitlineNC during these months.

HWTF Target Populations

- The total number of HWTF-funded callers in Year 4 (3,520) was comparable to the total number of HWTF-funded callers in Year 3 (3,448).
- In Year 4, QuitlineNC reached many adults who are caretakers and role models for children and youth in their home and school environments. Twenty-six percent (1,828) of all callers who used tobacco were primary caregivers and/or childcare/school employees supported by HWTF funds (a similar number and proportion of HWTF callers as in Year 3). Three percent (220) of all callers who use tobacco were youth (ages 13-17) and 17.5% (1,230) were young adults (ages 18-24).
- In the first six months of Year 4, 10% (108) of all female, HWTF-funded callers were either planning a pregnancy, pregnant, or breastfeeding (65% of these callers were young adults and 4% were youth), compared to 6% (218) of female HWTF-funded callers in Year 3.

- In the second six months of Year 4, all callers who were planning a pregnancy, pregnant, or within six months of giving birth were tracked as a separate population of interest funded by the HWTF. This population was added in conjunction with a pilot project focused on improving tobacco use screening and cessation counseling for women in various stages of pregnancy. Between January and July of 2009, 14% (242) of all HWTF-funded callers were part of this pregnancy group. Pregnancy group callers came from 63 of North Carolina's 100 counties.
- QuitlineNC achieved wide reach to North Carolina young adults, with young adult callers from 87 of North Carolina's 100 counties.
- The majority of young adult callers (55%) were not in school at the time of registration with QuitlineNC. Thirty-one percent reported current school enrollment however this information was missing for 13.5% of young adult callers.
- Youth from 60 of North Carolina's 100 counties called QuitlineNC during Year 4. Nine of the top ten counties received direct support from a HWTF Teen Tobacco Use Prevention and Cessation Initiative Community or School grantee.
- **QuitlineNC reached a substantial number of HWTF-funded callers from populations that experience disparities in tobacco use, effects of tobacco-related diseases, and access to healthcare or other cessation resources:**
 - **30% of HWTF-funded callers were African American and 2% were American Indian.**
 - **33 % of HWTF-funded callers had no health insurance and 19.5% were covered by Medicaid. Young adult callers were more likely to have no health insurance (44%) compared to HWTF-funded adult callers (29.5%).**
- At registration, 59.5% of HWTF-funded callers enrolled in the Multi-Call Program and 37% enrolled in the One-Call Program.
- **The majority of HWTF-funded callers (87%) were in the preparation stage of quitting, indicating they were ready to quit, and most callers who smoked cigarettes (89%) smoked cigarettes each day, suggesting that QuitlineNC successfully reached everyday smokers who are ready to quit in the next 30 days.**

Promotion

- **Call volumes for all HWTF-funded target populations increased during months in which “Call it Quits” ads aired, suggesting that the campaign reached its young adult target audience and also had spillover influence on youth and adult callers.**
- HWTF-funded callers reported that they most frequently heard about QuitlineNC via TV, radio, health professionals, and a family member or friend. Youth and young adults were more likely to hear about the quitline from a family member or friend than from a health professional. Pregnancy group callers were more likely to hear about the quitline from a health department than from the radio or a family or friend.

Fax Referral Service

- **Use of the fax referral service increased 150% in Year 4. Ten percent (723) of all tobacco users who called QuitlineNC entered via a fax referral, compared to only 4% (265) in Year 3.**
- Callers from 80 of North Carolina’s 100 counties were fax referred during Year 4.
- HWTF-funded callers were 36% of all fax referred callers during Year 4.
- The number of fax referrals for HWTF-funded callers more than doubled from Year 3 (from 122 to 261). Seven percent of all HWTF-funded callers were referred by fax in Year 4, compared to 3.5% in Year 3.
- Pregnancy group callers accounted for 7% (242) of all HWTF callers but made up 18% (48) of all HWTF callers referred by fax.

Satisfaction and Quit Rates

- Analysis by QuitlineNC vendor, Free & Clear, Inc. shows an intent-to-treat 30-day quit rate of 6.6%, somewhat lower than the 10.8% quit rate reported for Year 3.³ (Intent-to-treat quit rates assume that all survey non-respondents are continued smokers, and thus may underestimate the number of QuitlineNC callers who quit tobacco). Estimated intent-to-treat 30-day quit rates were 4.3% for young adults and 7.7% for youth who responded to the follow up survey,³ compared to 7.5% and 14.5%, respectively, for Year 3. The very small sample sizes used in these samples, however, suggest that these results should be interpreted cautiously.
- Ninety percent of HWTF survey respondents reported satisfaction with QuitlineNC services. Overall, 88% of young adults and 100% of youth reported satisfaction with QuitlineNC services.³

A.3. Recommendations

QuitlineNC recommendations are based on an expected increase in demand for services with continued quitline promotion, implementation of smoke-free air policies, increases in cigarette excise taxes, new research in cessation agents, and hospital-based efforts to promote cessation. Additionally, in Year 5 (fiscal year 2009-2010), the HWTF will fund all callers.

The following recommendations are offered to guide planning and provision of QuitlineNC services to all callers, with special focus on traditional HWTF target populations:

Program Services

- Establish annual objectives for the target number of callers and fax referrals to better link call volumes and program budgets.

Promotion

- Implement an ongoing promotional strategy, building on the success of the “Call it Quits” campaign, to maintain steady call volumes from month to month.
- Expand the “Call it Quits” media buy to more adult oriented outlets to broaden the reach of promotional activities.
- Continue TV and radio ads targeted to young adults to capture the large proportion of this population not enrolled in college.
- Support efforts by state tobacco control and health promotion organizations (e.g. Prevention Partners and Tobacco Prevention and Control Branch) to promote the quitline and the fax referral service to health professionals.
- Based on evaluation of current NRT pilot projects, closely examine how to most effectively promote QuitlineNC through statewide distribution of NRT.

Evaluation

- Evaluate the HWTF pilot NRT program to expand QuitlineNC reach through distribution of free nicotine replacement therapies (e.g. gum or patch).
- Evaluate the cost-effectiveness of QuitlineNC (quit rates, satisfaction, and reach) compared to other state quitlines.
- Ensure that Free & Clear achieves survey response rates above 60% to improve data accuracy and quality.
- Carefully review quit rates and satisfaction in 2009-2010 to determine if any downward trends exist.

B. BACKGROUND

Tobacco use continues to be the leading cause of preventable death and disability in North Carolina. Approximately 12,000 North Carolina adults die from smoking each year, and an estimated 193,000 youth currently under age 18 will die prematurely from smoking. Thousands more survive with chronic, tobacco-related illnesses. Each year, North Carolina spends \$2.5 billion in health care costs directly related to smoking and loses an estimated \$3.5 billion in smoking-related productivity losses.⁴

In North Carolina, approximately 1.5 million (20.9%) adults over age 18 smoke;⁵ 19% of NC high school students smoke, and 4.5% of NC middle school students smoke.⁶ About 40% of youth live in homes where others smoke.⁶ Smoking rates are highest among young adults, ages 18-24 years old, at 26.1%.⁵ The need for policies and programs that encourage quitting and improve access to proven cessation resources has increased as declines in smoking rates have slowed in the past decade.

Changes in the tobacco control policy environment in North Carolina, including an increase in the cigarette excise tax and the passage of legislation prohibiting smoking in restaurants and bars, may encourage cessation attempts for more North Carolina smokers and make the need for access to cessation resources increasingly critical. After a \$1 increase in the federal cigarette excise tax was implemented in April of 2009, QuitlineNC callers were asked at registration “Did the increase in the cost of tobacco products influence your decision to call?” In April, 22% of callers answered yes. This increased to 36% in May and reached 44% by June, a strong indication of the influence of tobacco control policies on the demand for quitline services.

Helping tobacco users quit is a critical step to improving public health and reducing tobacco-related morbidity and mortality in North Carolina. More than half of all North Carolina youth, young adult and adult smokers have attempted to quit in the past year.⁵⁻⁷ While studies show that most tobacco users want to quit, many are unable to successfully quit without support.

B.1. The North Carolina Tobacco Quitline (QuitlineNC)

In October 2005, the NC Health and Wellness Trust Fund and the NC Department of Health and Human Services jointly funded the NC Tobacco Quitline, or QuitlineNC (1-800-QUIT-NOW). QuitlineNC is a proactive telephone service that helps tobacco users quit their tobacco use by offering callers coaching, support, and referrals to local cessation resources.

Research has shown that quitlines are an effective and evidence-based approach to tobacco cessation. A meta-analysis of 13 studies reported that proactive quitlines increase quit rates by 56% compared to quitting with no support.¹ Studies show higher quit rates for quitlines that offer pharmacotherapy in conjunction with telephone support services.^{2,8} As of the end of fiscal year 2008-2009, QuitlineNC does not provide pharmacotherapy as part of its cessation support services. A HWTF-funded pilot program that will distribute NRT to young adult callers enrolled in select colleges is planned for October 2010. Research has also shown that marketing campaigns promoting quitlines effectively increase utilization.^{2,9,10} One study reported that young adults respond to mass media quitline promotion, even when it does not target them.¹¹

Recently updated clinical guidelines from the US Department of Health and Human Services highlight quitlines as an effective support in quitting.¹²

Call volume varies widely among state quitlines. The expected number of unique callers who call a quitline, often referred to as the utilization reach of a quitline, is associated with several factors including state population, tobacco prevalence rates, quitline resources, years in operation, and level of promotion. Data collected by researchers at the North American Quitline Consortium (NAQC) showed that the utilization reach of quitlines to adult smokers averaged around 1% in the United States in 2005, with a range among quitlines from 0.01% to 4.28%.¹³ This study included new state quitlines as well as quitlines that had been in operation for several years. The CDC estimates that with sufficient promotion and referral from healthcare professionals, along with availability of NRT through the quitline, state quitlines could reach 8% of adult tobacco users.¹⁴

According to a 2007 study published in the *American Journal of Public Health*, quitlines are a viable means of reaching young adult smokers.¹¹ The study showed that young adult smokers used the California Smoker's Helpline (one of the most established quitlines in the U.S.) in proportion to their numbers in the state. Young adults from populations that experience disparities in tobacco use, the effects of tobacco-related disease, and access to healthcare resources (e.g. racial and ethnic minorities, low income groups) were also well represented among young adult callers.

Although there is limited research on the effectiveness of quitlines for youth populations, empirical studies on youth-focused quitlines in Utah and California have shown promising results. An evaluation of the Utah Youth Tobacco Quitline demonstrated an 43%, 30-day smoking abstinence rate among youth callers (using a responder quit rate in which survey non-responders are excluded from the calculation).¹⁵ The 2008 Clinical Practice Guidelines identify the kind of support provided through quitlines as an appropriate resource for assisting youth smokers in quitting.¹²

QuitlineNC is the first state-funded quitline in North Carolina. Prior to the launch of QuitlineNC in November 2005, North Carolina residents could access a national tobacco cessation quitline provided through the National Cancer Institute (NCI) at 1-800-44U-QUIT. Callers to QuitlineNC are routed to Seattle-based quitline vendor, Free & Clear, Inc. for services. Free & Clear was selected through a national Request for Applications (RFA) process in the spring of 2005 to provide services for QuitlineNC. The contract was officially awarded in July 2005.

Free & Clear is a national leader in phone-based tobacco dependence treatment. The company currently operates several state quitlines in the U.S. including Utah, Oregon, and South Carolina. Free & Clear has experience providing quitline services to youth and helping states build public-private partnerships. Free & Clear reports a 43% one-year responder quit rate for their cessation program.¹⁶ All quitlines included in this study offered only the Multi-Call Program; QuitlineNC offers both a single and multi-call program. Quit rates for commercial quitlines (i.e. those sponsored by an employer) are typically higher than state quitlines due to differences in the types of callers and available services (i.e. pharmacotherapy).

The HWTF funds two statewide prevention and cessation initiatives targeting teens and college students in North Carolina: the Teen Tobacco Use Prevention and Cessation Initiative (begun in 2003) and the Tobacco-Free Colleges Initiative (begun in 2006). Additional pilot projects launched in Fiscal Year 2008-2009 focus on special populations, including women who are planning a pregnancy, pregnant, or within 12 months postpartum. In an effort to supplement these initiatives, the HWTF funds QuitlineNC research and provision of services to the following four populations:

- 1) All callers ages 24 years and younger;
- 2) All callers who are identified as school or childcare employees;
- 3) All callers who live with and/or are the primary caregiver of a child under the age of 18, and thus are a role model for children/youth;
- 4) All callers who are planning a pregnancy, pregnant, or have given birth in the past 12 months (beginning in January, 2009).

Services for all other QuitlineNC callers are paid for through state funds received and administered through the NC DHHS, Division of Public Health, Tobacco Prevention and Control Branch. A DHHS priority is marketing QuitlineNC services to at-risk populations and those who are least likely to have coverage for services (e.g. low income populations).

B.2. QuitlineNC Services

QuitlineNC was officially launched on November 1, 2005. All interested tobacco users, providers, and proxies (e.g. family members) are eligible for free telephone assistance from one of Free & Clear's expert tobacco treatment specialists, or quit coaches. Services are provided in English and Spanish (as well as many other languages), seven days a week between 8:00 am and 3:00 am.

Callers may request information about quitting for themselves, a friend, or a family member. Tobacco users may choose to participate in One-Call or Multi-Call Programs, ask general questions, and/or receive self help materials. All interested callers receive printed cessation support materials and a referral to local programs.

QuitlineNC is a proactive quitline service. As a proactive service, quit coaches can initiate calls to tobacco users to answer questions and offer program services. Following the first call of the *Multi-Call Program*, tobacco users are offered an additional three proactive calls. Research has demonstrated that quitline callers who participate in multi-call interventions are more likely to succeed at quitting than callers who participate in single-call interventions.¹

QuitlineNC offers a *customized youth program* to serve callers 17 years of age and younger. Free & Clear's youth program involves specialized youth protocols including specialized call timing, "Youth Coaches," program incentives, and materials designed and tested for youth by the California Smokers' Helpline.

QuitlineNC also offers a *fax referral service*. This service is designed to assist health professionals in connecting their patients to QuitlineNC using a special fax referral form.

When QuitlineNC receives the fax referral, a quit coach initiates a call to the patient to assist them with their cessation needs. Information about QuitlineNC and its fax referral service is accessible to the public via the internet at www.quitlinenc.com.

B.3. Evaluation

The UNC School of Medicine Tobacco Prevention and Evaluation Program (TPEP) conducts the outcomes evaluation for the HWTF-funded portion of QuitlineNC. UNC TPEP responsibilities include logic model development and evaluation planning, analyzing QuitlineNC data, providing recommendations, and disseminating results. The purpose of this report is to examine QuitlineNC outcomes during the fourth year of operation (fiscal year 2008-2009), particularly in relation to the goal of reaching tobacco-using youth and young adult populations in North Carolina, and to comment on overall trends in quitline usage over the first four years of operation.

C. METHODS

In January 2006, UNC TPEP, in cooperation with the HWTF and DHHS, developed a logic model to guide the outcomes evaluation for the HWTF-funded portion of QuitlineNC (Appendix A). This model outlines the resources, activities, outputs, and short-term, intermediate, and long-term outcomes for the HWTF-funded portion of QuitlineNC, and is updated yearly as appropriate.

The QuitlineNC vendor, Free & Clear, collects, cleans, and manages all QuitlineNC caller intake data, call utilization data, and end-of-program survey data. Intake data collection includes Minimal Data Set (MDS) questions outlined by the North American Quitline Consortium. Additional custom questions were added based on recommendation of the HWTF, DHHS, and UNC TPEP to ensure that all data necessary for the evaluation are collected.

Free & Clear sends raw data extracts for each month to UNC TPEP. The extracts include data on callers, demographic information, tobacco use, and use of various quitline services. The data sets sent by Free & Clear contain information on every call made to the quitline; TPEP extracts records for each unique caller for analysis for this evaluation. TPEP analyzes data using SPSS with a specific focus on data for callers who use tobacco from populations supported by HWTF funding (i.e. youth, young adults, primary caregivers, school/childcare employees, and women who are planning a pregnancy, pregnant, or within 12 months of giving birth). Some analysis of program utilization data (i.e. how many callers who registered with QuitlineNC complete at least one coaching call) is also conducted.

D. SUMMARY OF FINDINGS

D.1. Call Volume

QuitlineNC completed its fourth year of operation between July 1, 2008 and June 30, 2009. During this period, QuitlineNC served 7,910 callers (Table 1). The majority of callers (7,017 or 88.7%) were tobacco users. On average, 584 tobacco users registered for QuitlineNC services each month. Data on call volume reflects the number of unique callers to QuitlineNC (e.g. reporting 400 calls in the month of March reflects that 400 unique callers completed registration calls with QuitlineNC in March).

Callers from HWTF target populations accounted for 46.7% (3,520) of all tobacco-using callers in Year 4. Ninety-nine percent of all HWTF-funded callers were tobacco users. Eighty percent of DHHS-funded callers were tobacco users. Ninety-seven percent (6,793) of all tobacco users were adults (18 years old and older) and 3% (224) were youth (13-17 years old). Ninety-two percent (6,470) of all tobacco users smoked cigarettes exclusively or in conjunction with use of another tobacco product.

Table 1. Total Callers by Type of Caller and Funding Source, Jul 08 – Jun 09 (n=7910)

Type of Caller	Funding Source				Total	
	HWTF		DHHS			
	#	%	#	%	#	%
Tobacco User	3520	99.6	3497	79.9	7017	88.7
General Public	4	0.1	599	13.7	603	7.6
Proxy	10	0.3	114	2.6	124	1.6
Provider	0	0.0	166	3.8	166	2.1
Total	3534	100.0	4376	100.0	7910	100.0

Call Volume Remains Steady During Year 4

Year 4 marked a period of stabilization in call volume to QuitlineNC. Following significant increases in promotional activity and call volume in Year 3, efforts were made in Year 4 to maintain a steady presence of Quitline promotion to encourage constant call volumes from month to month.

QuitlineNC provided services to 3,520 HWTF-funded callers who use tobacco, a similar number as in Year 3 (3,448). Average monthly call volumes were also comparable between Year 4 (293 calls per month) and Year 3 (287 calls per month). An average of 152 primary caregivers/school employees, 103 young adults, and 18 youth callers registered with QuitlineNC each month in Year 4. An average of 40 callers from the pregnancy group registered with QuitlineNC between January and June 2009 (the six months in which they were counted as a separate population). Average monthly call volumes for all HWTF-funded populations during Year 4 were comparable to those observed in Year 3.

Figure 1 shows the total number of callers from HWTF-funded populations; figure 2 shows trends in monthly call volume since the inception of QuitlineNC. A dramatic spike in caller volume in January 2007 coincided with a period of heavy TV and radio promotion by the HWTF, DHHS, and the National Cancer Institute.

Figure 1. Number of HWTF Callers by QuitlineNC Year (Tobacco Users Only, n=9921)

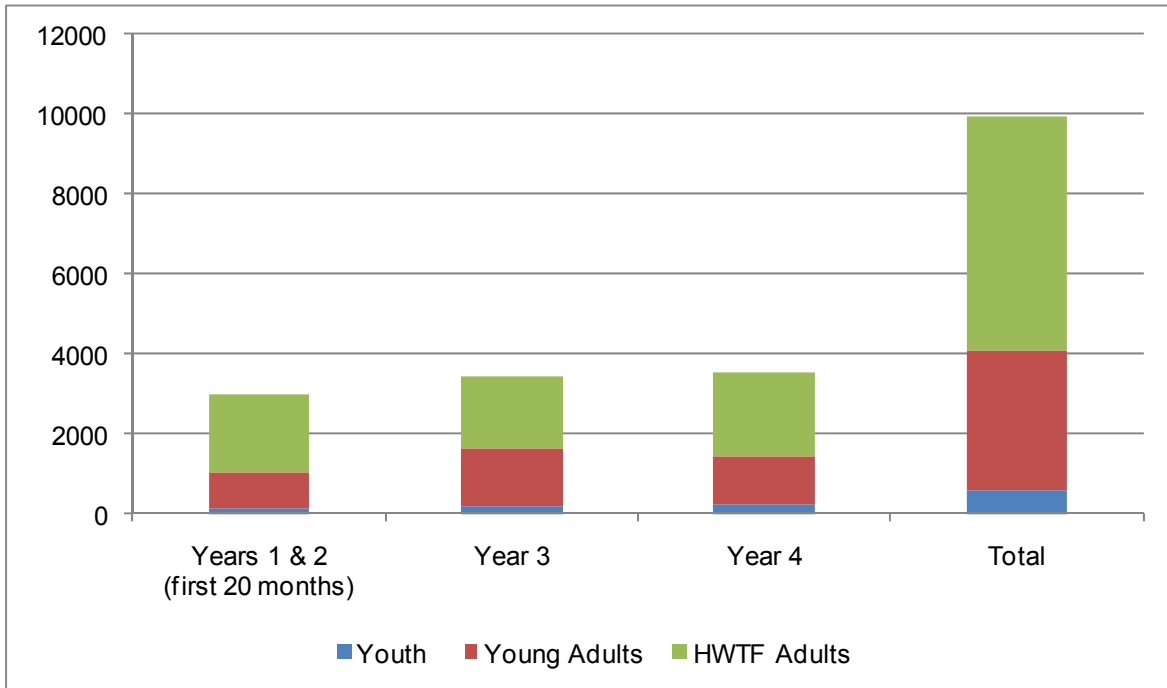


Figure 2. Total Monthly HWTF Call Volume, Year 1 – Year 4 (n=9956)

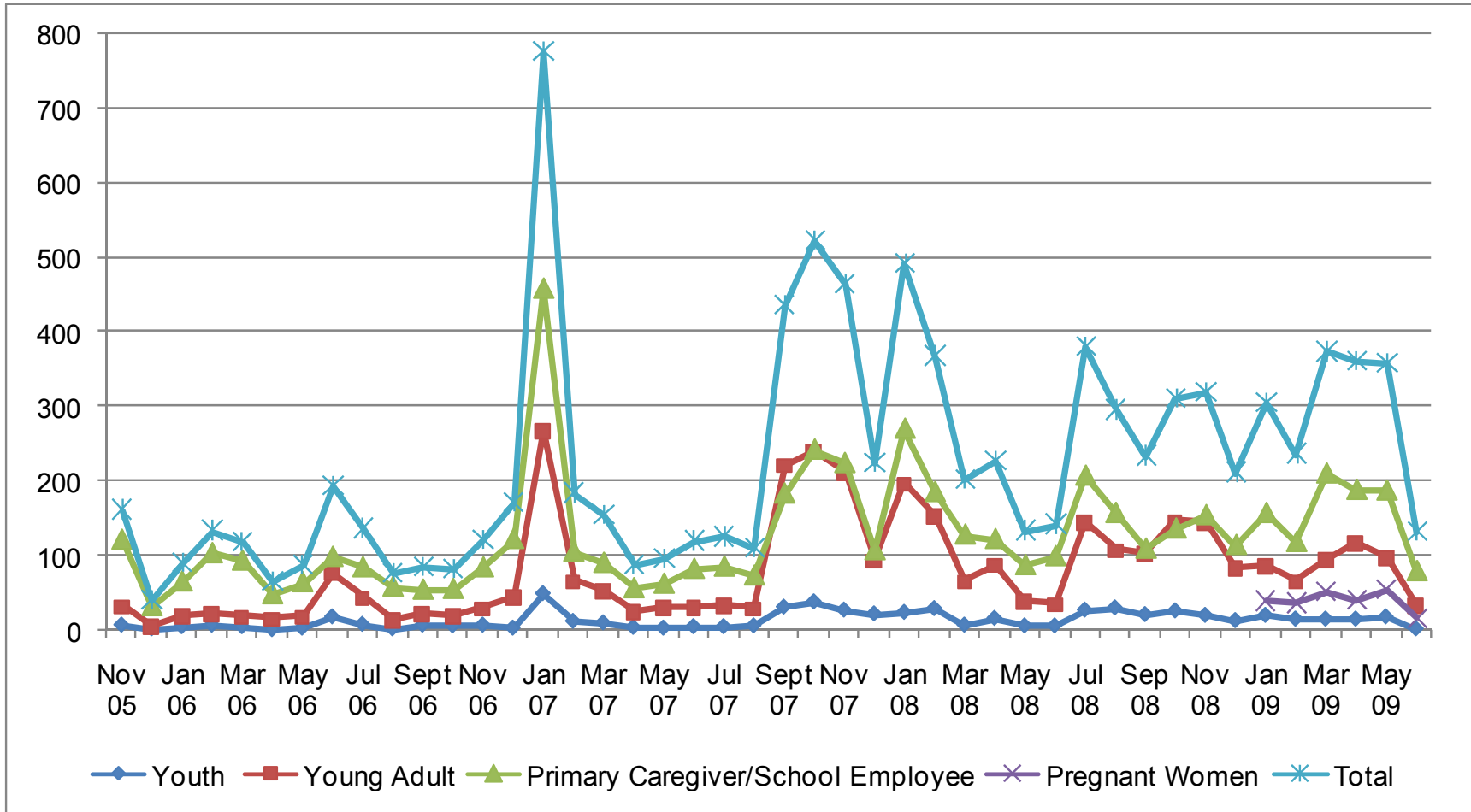


Figure 3 highlights the breakdown of HWTF-funded callers among all QuitlineNC callers during Year 4. Overall, HWTF funded half (50%) of all callers who use tobacco, 18% of whom were young adults and 3% of whom were youth.

Figure 3. Percentage of HWTF Callers Among All Callers, Year 4 (Tobacco Users Only, n=7017)

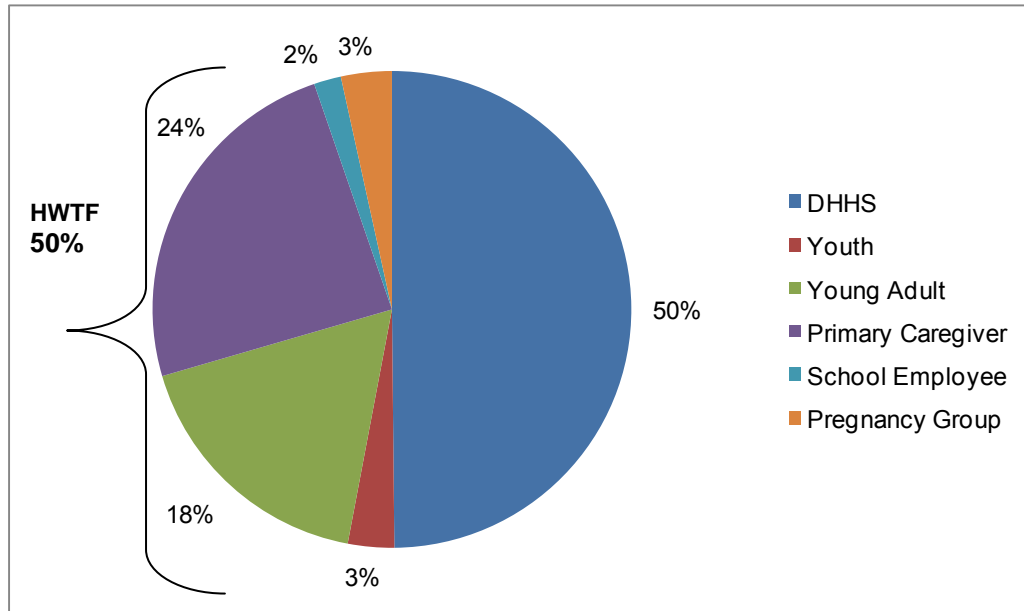
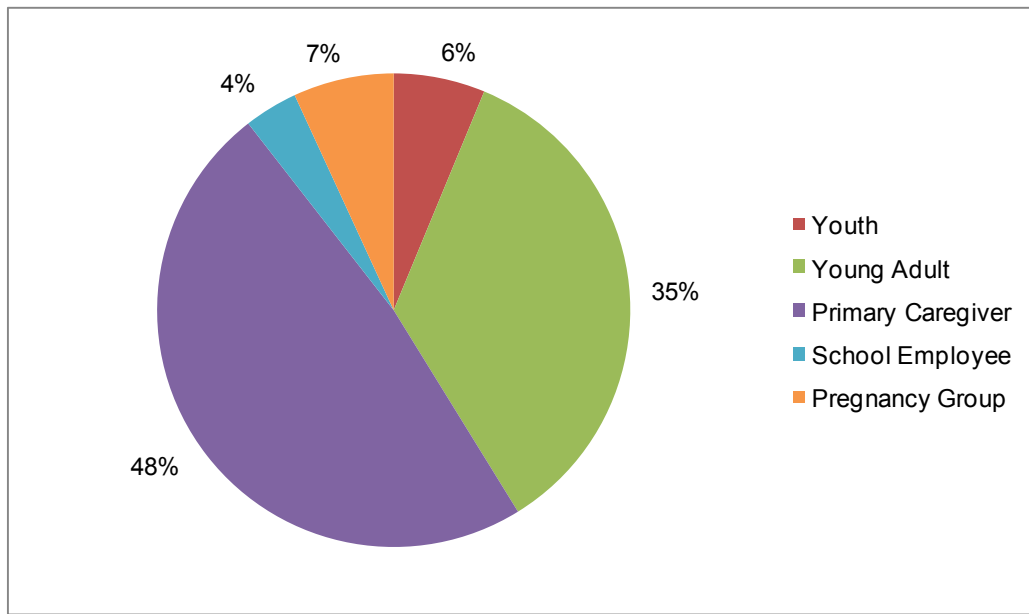


Figure 4 highlights the percentage of HWTF target populations (i.e., primary caregivers, school/childcare employees, pregnancy group callers, young adults, and youth) among all HWTF-funded callers. The largest number of HWTF-funded callers were adult primary caregivers and school employees (1828 or 52%)*, followed by young adults (1,230 or 35%), pregnancy group (242 or 7%) and youth (220 or 6%). The proportion of HWTF-funded callers from each group in Year 4 is comparable to the distribution observed in Year 3.

Figure 4. Callers from HWTF Target Populations, Year 4 (Tobacco Users Only, n=3520)



* 3.7% (121) of HWTF-funded, tobacco-using callers were both childcare/school employees and primary caregivers of children in their homes. For the purposes of this report, these callers are categorized as primary caregivers.

Quitline Promotion Drives Increased Calls

Figure 5 shows the total number of new HWTF-funded callers to QuitlineNC during each month of Year 4. Figure 6 shows the total number of new callers to QuitlineNC by all tobacco using callers during Year 4. As observed in Year 3, call volumes were substantially higher during months in which both television and radio ads from HWTF's "Call it Quits" campaign were aired. TV ads were aired more consistently in Year 4 compared to Year 3 and fluctuations in monthly call volumes were less extreme. Call volumes were not as high during months in which only radio ads were aired, with the exception of January (a month in which call volumes often increase, and during which DHHS aired "Become an Ex" TV ads with an added QuitlineNC promotion). Section D.4 contains more detailed information about QuitlineNC promotions and associated changes in call volume.

Figure 5. HWTF Call Volume Over Time, Year 4 (n=3520)

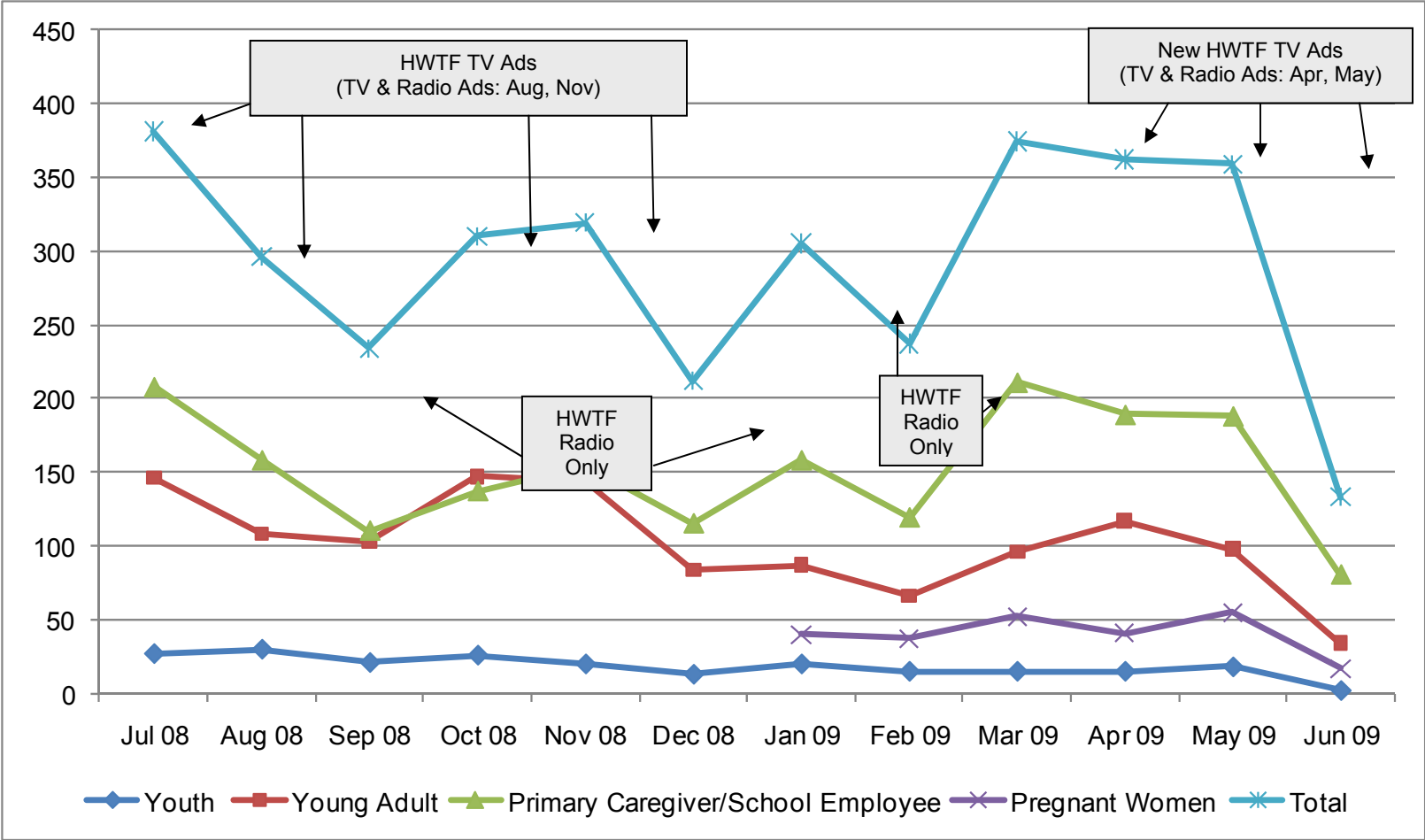
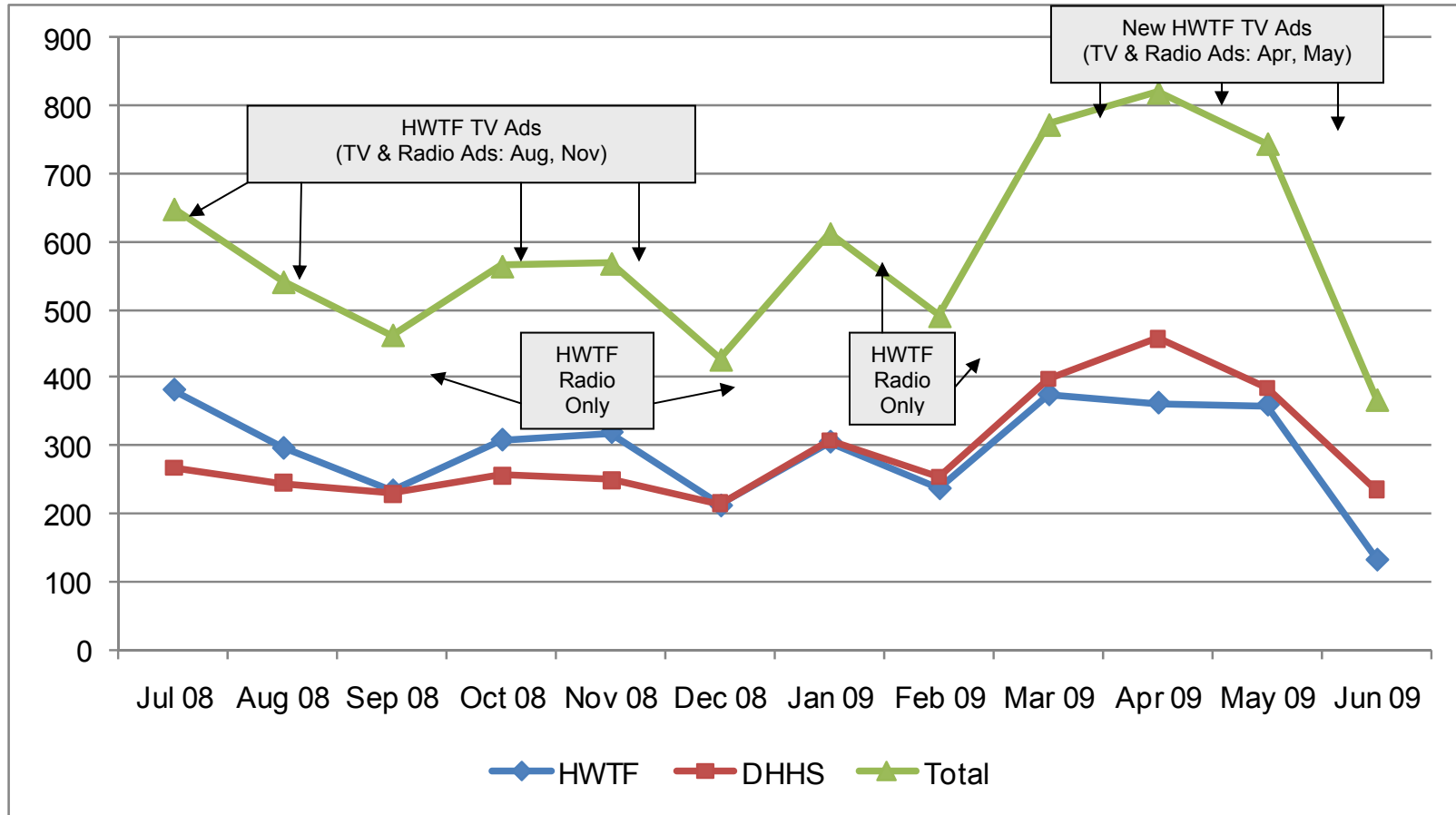


Figure 6. HWTF and DHHS Call Volume Over Time, Year 4 (Tobacco users only, n = 7017)



Quitline Reach

CDC guidelines recommend that state quitlines receive adequate funding to provide services to a minimum of 2% of tobacco users in their state each year.² The most recent data in the literature indicate that, on average, adequately promoted quitlines result in between 1% - 2% of tobacco users calling their state quitlines for help.⁹

The reach of QuitlineNC can be measured in two ways. The first, “utilization reach,” provides a measure of the proportion of North Carolina smokers who call the Quitline for any reason (e.g. to get self help materials, receiving coaching, etc). The second, “treatment reach,” provides a measure of the proportion of North Carolina smokers who receive evidence based cessation treatment in the form of a completed cessation coaching call, and is a more conservative estimate than utilization reach. Each measure provides information related to short-term outcomes for QuitlineNC (see logic model in Appendix). Smoking data are used for calculations of both utilization and treatment reach as overall tobacco-use prevalence rates are not available.

The utilization reach for QuitlineNC is calculated based on the number of unique callers to QuitlineNC who smoke cigarettes as a percentage of the total smoking population of North Carolina. In Year 4, approximately 0.45% of North Carolina’s adult smoking population, 0.48% of NC young adult smokers, and 0.21% of NC youth smokers called QuitlineNC to receive coaching, self-help materials, or ask general questions. (Table 2) Utilization reach rates in Year 4 are comparable to those observed in Year 3 (0.36% for adults, 0.45% for young adults, and 0.22% for youth). QuitlineNC has yet to reach the CDC funding target of 2% adult reach, likely due in part to insufficient funding for quitline promotion and services to support that volume of callers.

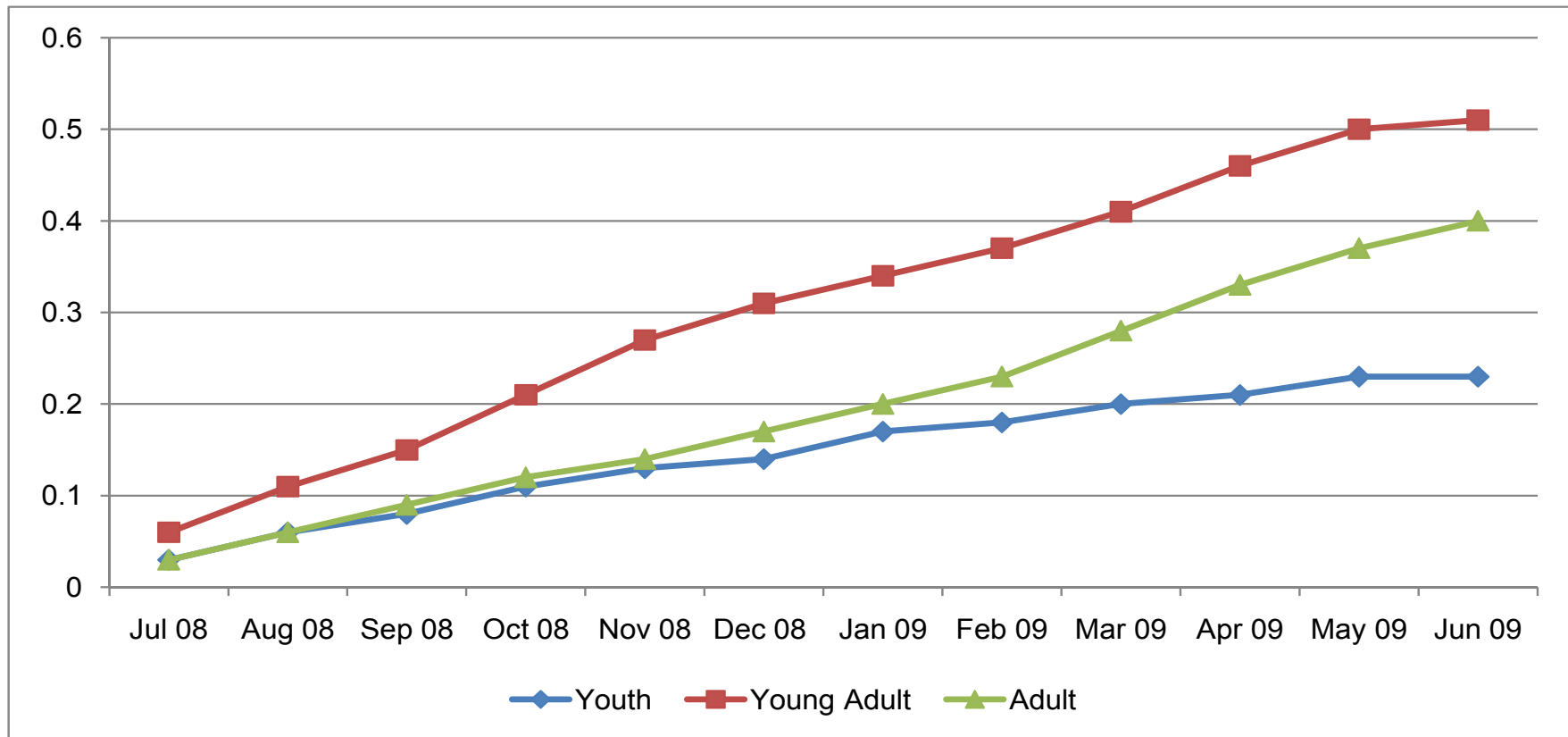
Figure 7 highlights the annual utilization reach for NC adult, young adult, and youth smokers for Year 4.

Table 2. Utilization Reach for QuitlineNC, Year 4.

NC Population ¹⁷	Prevalence of Current Smoking ^{5,6}	# of Callers Who Smoke	% Annual Utilization Reach	Target % Annual Reach*
Adults, 18 & older (6,703,910)	20.9% (1,401,117)	6,274	0.45%	2.0
Young Adults, 18-24 (918,787)	26.1% (239,803)	1,151	0.48%	--
High School Aged Youth, 14-17 (483,189)	19.0% (91,805)	196	0.21%	--

* Targets for youth and young adult smokers have not been established.

Figure 7. Annual Utilization Reach for Quitline NC, Year 4



The treatment reach for QuitlineNC is calculated based on the number of unique callers to QuitlineNC who smoke cigarettes and who complete at least one coaching call as a percentage of the total smoking population of North Carolina. In Year 4, approximately 0.32% of North Carolina's adult smoking population, 0.34% of NC young adult smokers, and 0.17% of NC youth smokers completed at least one cessation coaching call with a QuitlineNC quit coach. The numbers of callers used in these calculations are based on a conservative method for determining if a caller completed a coaching session (some callers who completed a coaching call may be missed using this method due to the structure of caller data collection); actual cumulative treatment reach may be slightly higher. Comparison treatment reach rates for Year 3 are not available.

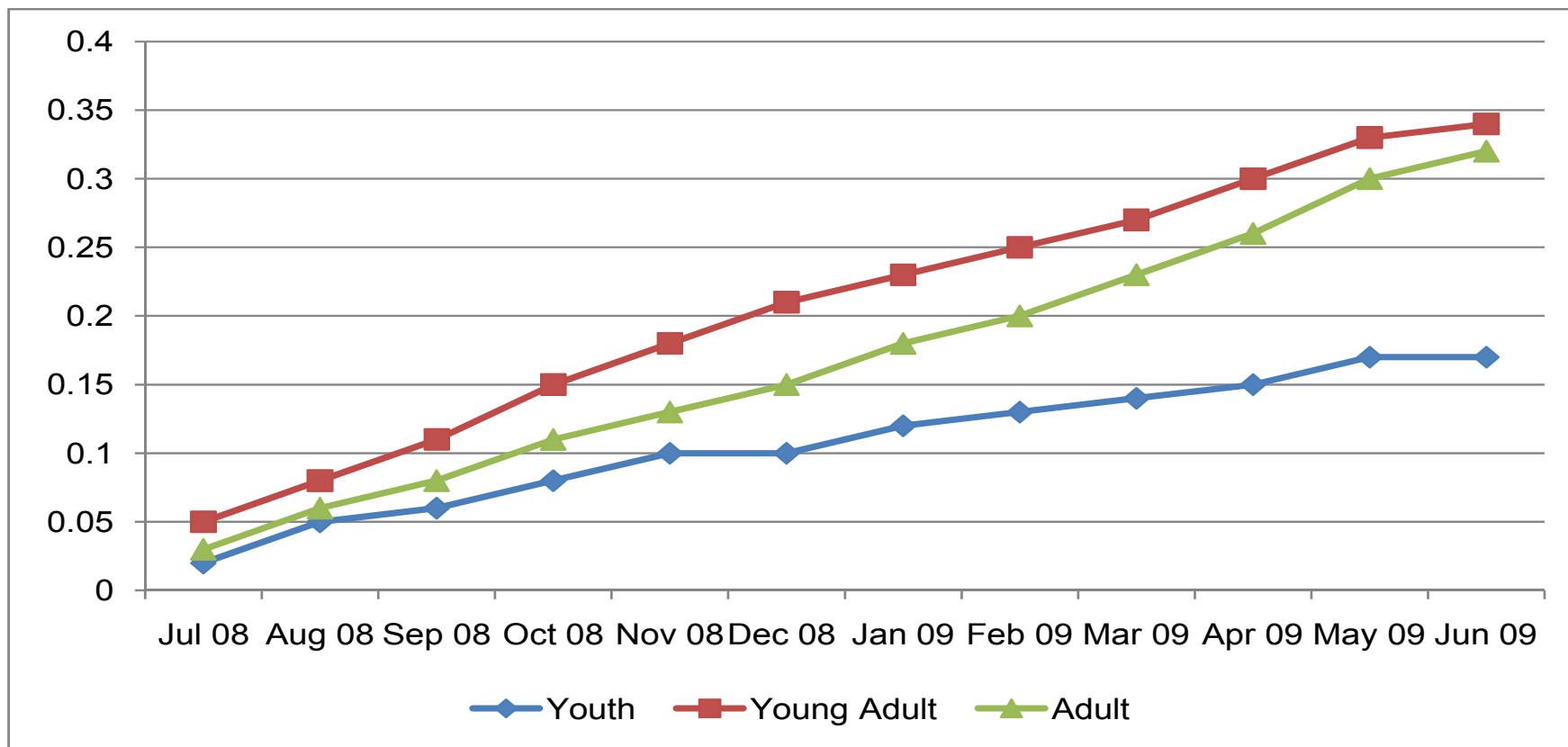
Figure 8 highlights the annual treatment reach for NC adult, young adult, and youth smokers for Year 4.

Table 3. Treatment Reach for QuitlineNC, Year 4.

NC Population ¹⁷	Prevalence of Current Smoking ^{5,6}	# of Callers Who Smoke & Complete a Coaching Call	% Annual Treatment Reach	Target % Annual Reach*
Adults, 18 & older (6,668,948)	20.9% (1,401,117)	4,509	0.32%	2.0
Young Adults, 18-24 (918,787)	26.1% (239,803)	824	0.34%	--
High School Aged Youth, 14-17 (483,189)	19.0% (91,805)	153	0.17%	--

* Targets for youth and young adult smokers have not been established.

Figure 8. Annual Treatment Reach for Quitline NC, Year 4



D.2. Characteristics of HWTF Callers

The following section highlights the characteristics of tobacco users from HWTF-supported populations who called QuitlineNC between July 2008 and June 2009. During Year 4, the HWTF-funded portion of QuitlineNC reached a substantial number of callers from populations who experience disparities in tobacco use, effects of tobacco-related diseases, and limited access to healthcare or other cessation resources (e.g., racial and ethnic minority groups and people with low socio-economic status).

Table 3 shows selected demographic characteristics, tobacco-use behaviors, and Quitline use for each of the four HWTF target populations. Sections D.2.a through D.2.d describe each population in greater detail. Additional data tables to accompany this section are included in Appendix B.

Highlights of HWTF-funded caller demographics include:

- A substantial number of HWTF-funded callers were African-American, indicating that QuitlineNC is providing cessation services to a population that experiences disparities in negative health outcomes associated with smoking.
- A higher percentage of young adult callers (44%) had no health insurance, compared with primary caregivers/school employees (29.5%) and pregnancy group callers (28.9%). The relatively high number of young adult and HWTF-funded adult callers without health insurance suggests that QuitlineNC is providing cessation support to North Carolinians with limited access to other cessation aids or support.
- The vast majority of HWTF callers reported being in the preparation stage of quitting, indicating that QuitlineNC is reaching its target audience of smokers ready to quit within 30 days.
- A much higher percentage of pregnancy group callers (20%) entered the quitline via fax referral, compared to other HWTF-funded caller groups, suggesting that healthcare providers for this population have been reached more effectively with fax referral promotion and educational efforts.

Table 4. Characteristics of HWTF-Funded Callers, Year 4 (Tobacco users only, n=3520)*

Demographic & Tobacco-Use Information		Youth (% of total, n=220)	Young Adult (% of total, n=1230)	Primary Caregiver/School Employee (% of total, n=1828)	Pregnancy Group (% of total, n=242)
Gender	Female	42.3	48.6	63.2	100.0
	Male	57.7	51.4	36.8	0
Language	English	99.5	98.7	96.7	99.2
	Spanish	0.5	1.3	3.3	0.8
Ethnicity	Non-Hispanic	90.5	87.3	91.1	93.8
	Hispanic	3.2	6.2	5.5	2.5
Race	White	64.1	57.1	54.6	57.9
	Black/African American	16.8	26.3	33.6	28.9
	American Indian	2.7	2.3	2.0	2.9
	Other Race	8.6	7.6	5.9	7.0
Health Insurance	Commercial	2.8	17.6	27.7	21.6
	Medicaid	2.3	16.7	20.6	40.9
	Medicare	0.0	0.6	3.7	0.4
	No Insurance	1.8	44.1	29.5	28.9
Pregnancy Status (% of female callers, first six months)	Planning Pregnancy	0	3.8	0.8	-
	Currently Pregnant	5.4	7.0	1.6	-
	Breastfeeding	0	0.8	0.5	-
Pregnancy Status (% of pregnancy group callers, second six months)[†]	Planning Pregnancy	-	-	-	23.6
	Currently Pregnant	-	-	-	35.9
	Breastfeeding	-	-	-	3.8
Tobacco Use	Cigarettes Exclusively	80.6	85.3	92.7	95.4
	Smokeless	5.2	1.5	2.0	0.0
	Cigar	1.4	1.6	0.9	1.3
	Multiple	12.3	11.4	4.3	3.4
Stage of Change	Preparation	88.6	87.3	86.4	90.1
	Action	2.7	5.9	10.0	7.4
Method of Entry to QuitlineNC	Inbound English Call	88.6	86.7	76.1	64.5
	Inbound Spanish Call	0.5	1.1	2.8	0.4
	Fax Referral	0.5	2.8	9.7	19.8
Type of Intervention Requested	One-Call Program	32.3	38.9	34.1	45.9
	Multi-Call Program	61.8	57.0	63.6	50.8
	General Questions	4.5	3.5	1.4	1.7
	Materials Only	1.4	0.1	0.3	0.8

* Data on callers with missing information and categories with few respondents are not reported, thus percentages do not sum to 100%.

† 89 (36.8%) callers in the pregnancy group were missing information on this category; information specific to whether the caller was within 12 months of giving birth was not collected, and it is likely many of these callers fit that category.

D.2.a. Primary Caregivers and School/Childcare Employees (25 years and older)

The majority (79%) of all QuitlineNC callers who used tobacco were adults 25 years or older. Twenty-six percent (1,828) of all QuitlineNC tobacco using callers were primary caregivers of youth and/or school or childcare employees whose service were funded by the HWTF. Primary caregivers/school employees made up 52% of all HWTF-funded callers.

In this group of callers, most (86%) were primary caregivers of a child under age 18 and 7% were school or childcare employees.

Most primary caregiver/school employee callers (71.3% or 1,303) were between the ages of 25-44. Sixty-three percent (1,156) were female. Among female primary caregivers/school employees 5.6% (33) were either pregnant, planning a pregnancy, or breastfeeding in the first six months of Year 4.

Over half (55%) of all primary caregiver/school employee callers reported their race as white, and about one-third (34%) reported their race as black or African American. Five and a half percent of primary caregivers/school employee callers reported Hispanic ethnicity. Ninety-seven percent of callers in this group completed calls in English and 3% completed calls in Spanish.

Sixty-one percent of all primary caregiver/school employee callers had achieved a GED certificate, high school degree, or had some college education (but no degree). Eighteen percent had a college degree. Eighteen percent had a level of education less than grade nine or had completed some high school but not earned a high school degree.

Thirty percent of all primary caregiver/school employee callers had no health insurance coverage. Twenty-one percent had Medicaid coverage and 4% had Medicare coverage. Twenty-eight percent of primary caregivers/school employees had some type of commercial insurance. Ten percent of all primary caregiver/school employee callers had chronic asthma, 6% had diabetes, 3% had chronic obstructive pulmonary disease (COPD), and 2% had coronary artery disease. Eight percent had more than one of these conditions.

Primary caregiver/school employees from 96 of North Carolina's 100 counties called QuitlineNC during Year 4. Counties with the highest number of primary caregiver/school employee callers include Mecklenburg (185 callers), Wake (146), and Guilford (107). Alamance, Cumberland, Forsyth and Durham each had 50 or more callers from this group.

The majority (92%) of primary caregiver/school employee callers smoked cigarettes exclusively. Eighty-eight percent of cigarette smokers smoked every day. Two percent of primary caregivers/school employees used smokeless tobacco, 1% used cigars, and 4% used multiple forms of tobacco. Most (97%) callers who used multiple forms of tobacco smoked cigarettes in conjunction with the use of other tobacco products.

The majority (86%) of all primary caregiver/school employee callers were in the preparation stage of quitting, indicating they were ready to quit in the next 30 days. Ten percent were in the action stage (i.e., had quit in the last six months).

Most (76%) primary caregiver/school employee callers entered QuitlineNC via an

inbound English call. Ten percent (178) were referred by fax and 10% entered via a web based registration tool used during times of high caller volume. Nearly two-thirds of primary caregiver/school employee callers enrolled in the Multi-Call Program and 34% enrolled in the One-Call Program at the time of intake. The rate of enrollment in the Multi-Call Program was 68% for callers who entered via an inbound English call, compared to 46% for callers who used the web based registration tool, and 44% for fax referred callers.

See Figures 9-11 for visual highlights of primary caregiver/school employee callers.

Figure 9. Primary Caregiver/School Employee Race, Year 4 (n=1828)

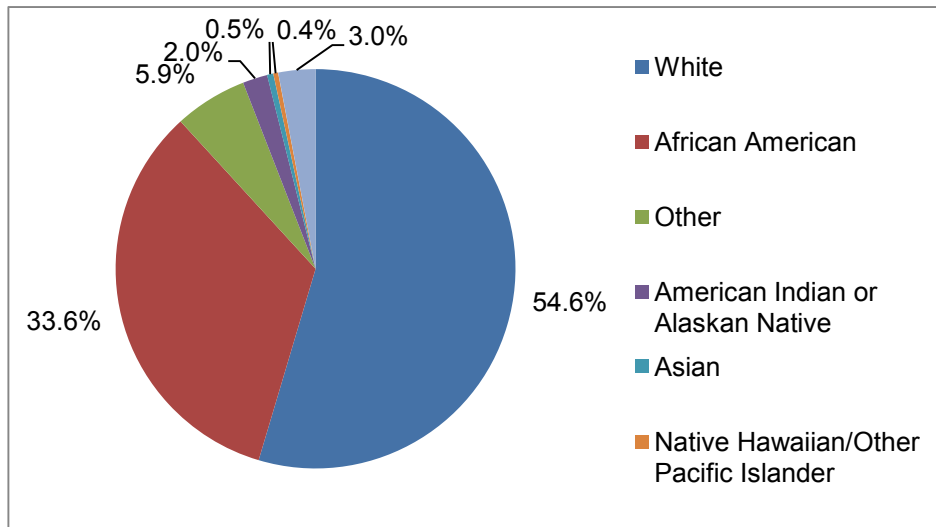
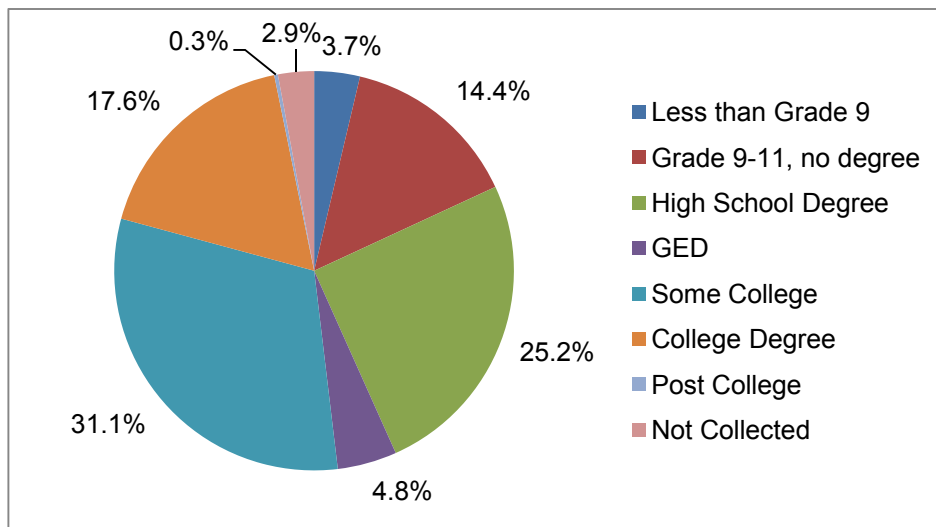


Figure 10. Primary Caregiver/School Employee Education, Year 4 (n=1828)



D.2.b. Young Adults (18 to 24 years old)

Young adults, ages 18-24, continue to have the highest prevalence of smoking among all age groups in North Carolina, with 26% identified as current smokers. The latest available data indicate that nearly 60% of NC young adult smokers have made quit attempts in the last year.¹⁸

In Year 4, young adults accounted for 17.5% (1,230) of all QuitlineNC callers who used tobacco, compared to 22% (1,414) during Year 3. Young adult callers constituted 35% of all HWTF-funded callers who used tobacco during Year 4, compared to 41% during Year 3.

Approximately half (49%) of young adult callers were female. Of all female young adult callers, 18% (70) were planning a pregnancy, currently pregnant, or breastfeeding in the first six months of Year 4.

Over half (57%) of young adult callers reported their race as white, 26% as black or African American, and 2% as American Indian or Alaskan Native. Eight percent reported their race as "other." Six percent of young adult callers reported Hispanic ethnicity, and 1% completed calls in Spanish.

Compared to HWTF-funded adult callers over age 25, young adult callers were less likely to have health insurance (44% of young adults had no health insurance, compared to 29.5% of HWTF-funded adults). Seventeen percent of young adult callers had Medicaid and eighteen percent had commercial health insurance. Thirteen percent of young adult callers had chronic asthma. Less than 2% of young adults had diabetes, COPD, coronary artery disease, or multiple chronic illnesses.

Young adults from 87 of North Carolina's 100 counties called QuitlineNC during Year 4. Slightly more (93) counties were reached during Year 3. Counties with the highest number of calls include Mecklenburg (122), Wake (123), Guilford (86), and Forsyth (65). Seven of the top 10 counties have college campuses with support from a HWTF Tobacco-Free Colleges Initiative grantee, who work to promote QuitlineNC to young adults and healthcare professionals on NC college campuses.

Most (94%) young adult callers smoked cigarettes exclusively or in conjunction with use of another type of tobacco. Ninety-one percent smoked every day. Eleven percent of young adult callers used multiple forms of tobacco, 1.5% used smokeless tobacco, and 1.5% used cigars. Most (99%) young adult callers who used multiple forms of tobacco smoked cigarettes in conjunction with use of other tobacco products. The majority (87%) of young adult callers were in the preparation stage of quitting tobacco and 6% were in the action stage, indicating that they had quit in the last six months.

The majority (87%) of young adult callers entered QuitlineNC via an inbound English call. Eight percent (97) entered the Quitline via a web-based registration option used during times of peak call volume, 3% (35) were referred by fax. Fifty-seven percent of young adult callers accepted participation in the Multi-Call Program and 39% accepted the One-Call program at registration. The rate of enrollment in the Multi-Call program was 58% for callers who entered via an English inbound call registered for the multi-call program, compared with 47% for callers who used the web based registration tool, and 34% for fax referred callers.

Figures 12-14 provide visual highlights of young adult callers.

Figure 12. Young Adult Race, Year 4 (n=1230)

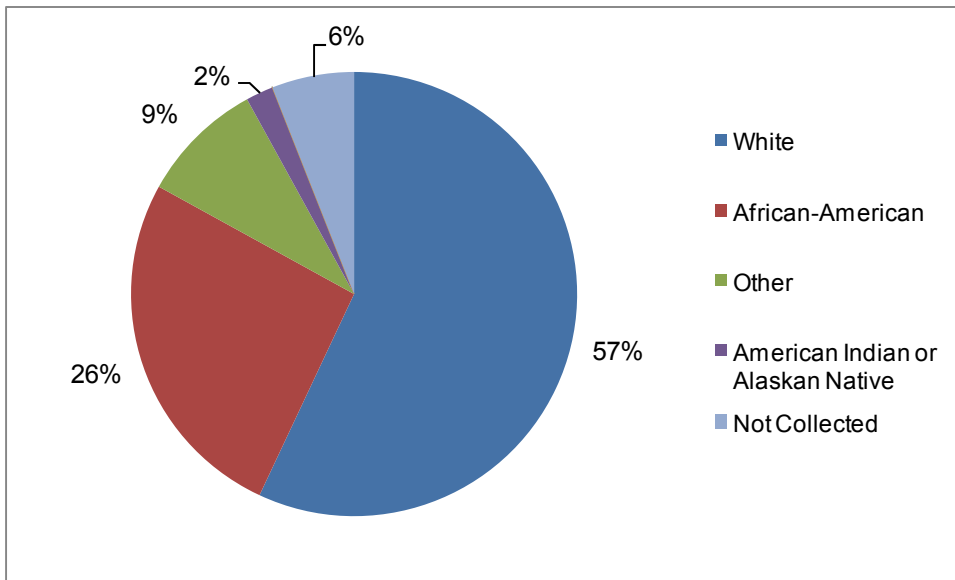


Figure 13. Young Adult Health Insurance, Year 4 (n=1230)

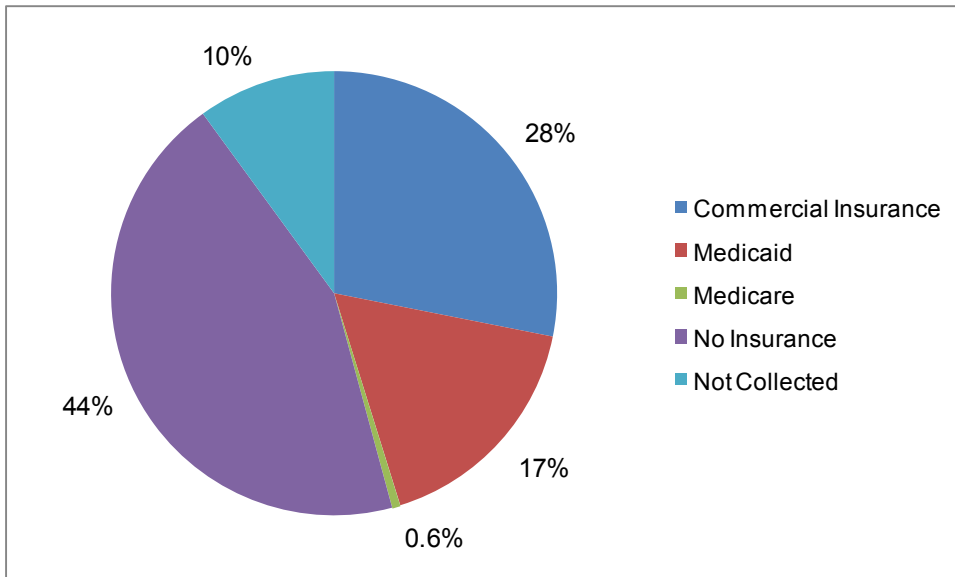


Figure 14. Young Adult Call Volume by County of Residence, Year 4 (n=1230)

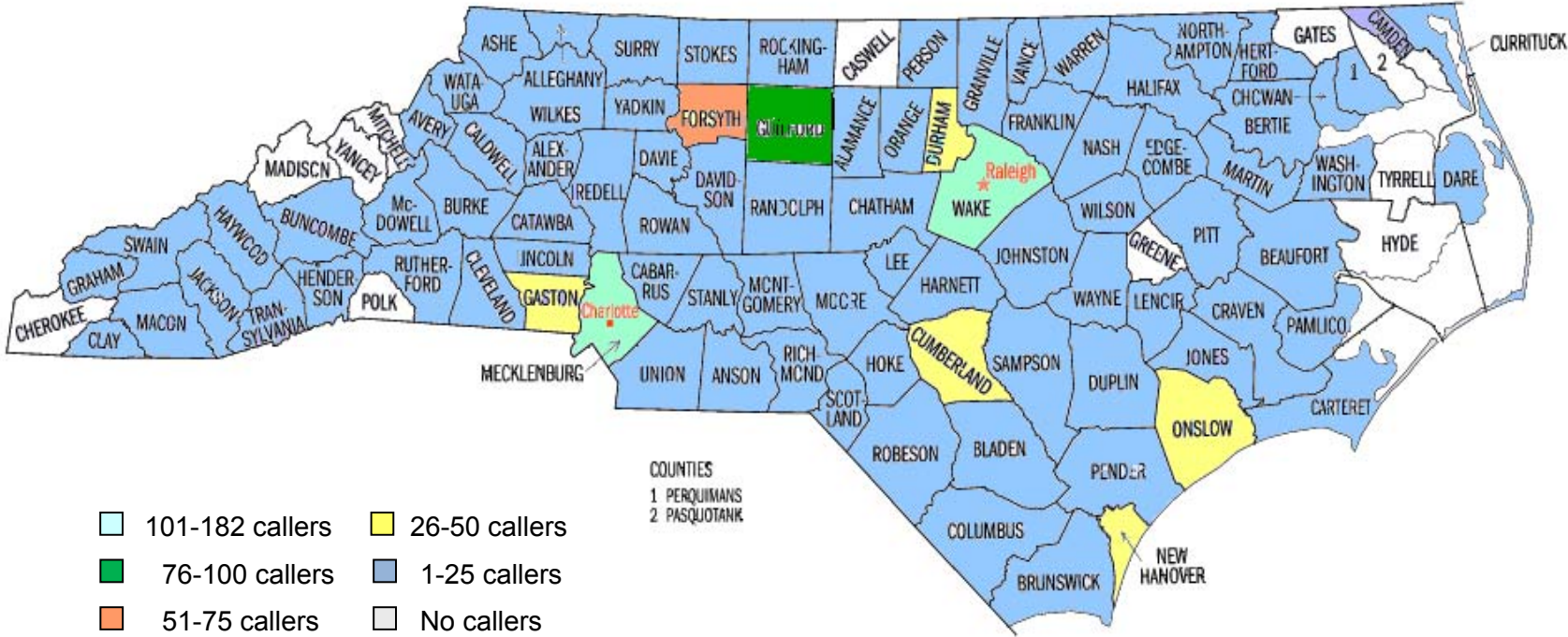


Figure 15 highlights the current employment status of young adult callers. Forty-nine percent (824) of all young adult callers reported they were currently employed. Of those who were currently working, 65% worked full-time and 35% worked part-time. Thirty-seven percent of young adult callers were not currently working. Employment status information was missing from fourteen percent of young adult callers.

Figure 15. Young Adult Employment Status, Year 4 (n=1230)

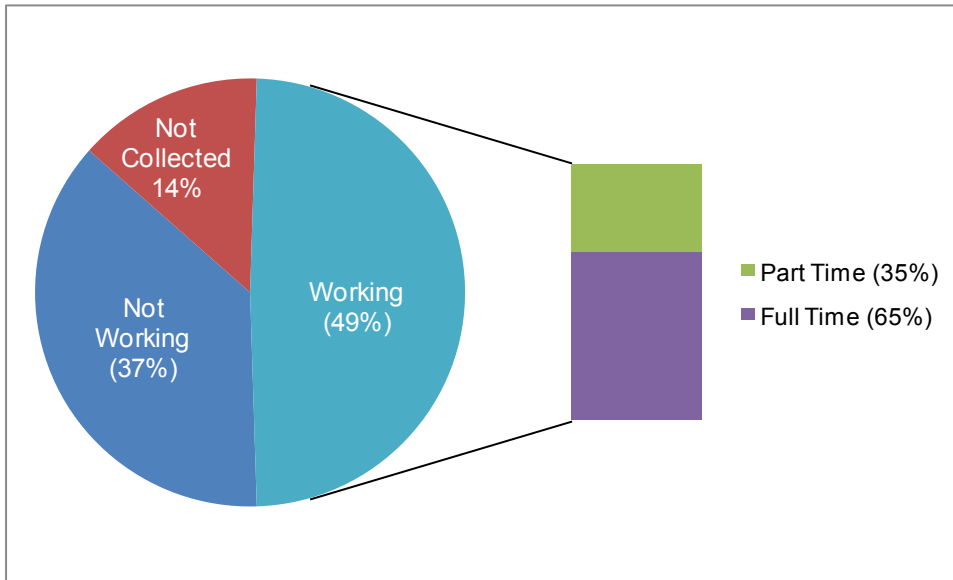


Figure 16 illustrates the current school status of young adult callers. The majority (55% or 678) reported that they were not currently attending school. Thirty-one percent (386) reported currently attending school. Data on school attendance were missing for 13.5% (166) of all young adult callers.

Among young adults who reported current school enrollment, most (70.5% or 272) were in college and 29.5% (113) were in high school. Fewer college enrolled young adults called during Year 4 compared to Year 3 (332).

Figure 17 highlights the highest level of education achieved by those young adult callers not currently attending school.

Figure 16. Young Adult School Status, Year 4 (n=1230)

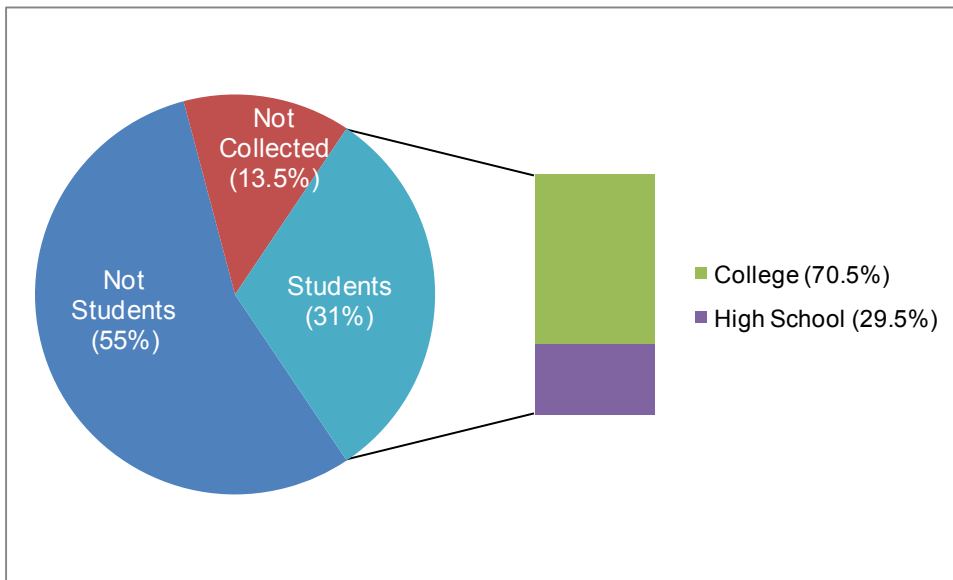


Figure 17. Young Adult Highest Education Completed, Year 4 (Young Adults not currently in school, n=678)

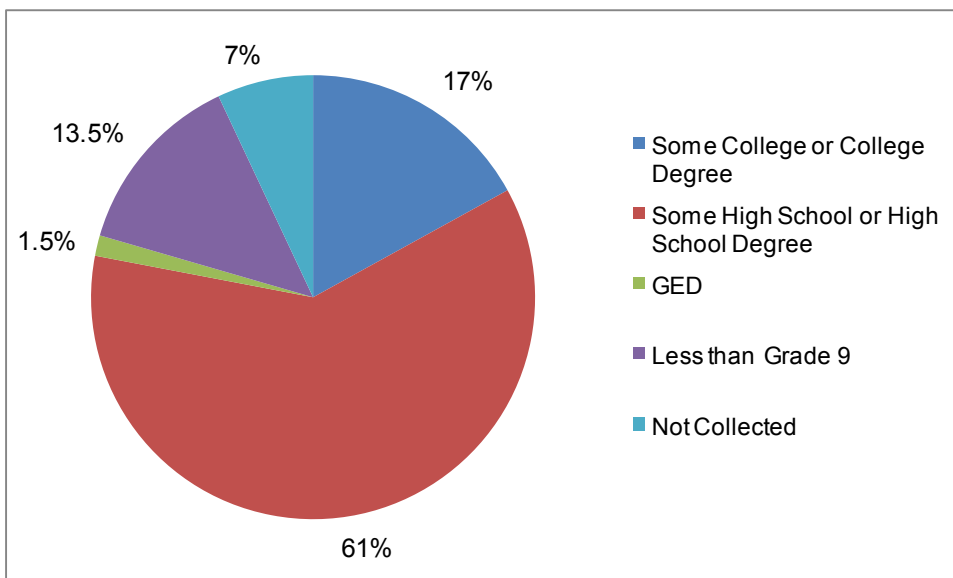


Table 4 compares characteristics of young adult callers who currently attend college with young adult callers who do not currently attend school (i.e., non-college students). Slightly more female college students called than male college students, while slightly more male non-college students called than female non-college students. Female non-college students were more likely to be in a stage of pregnancy than female college students. Female non-college students in this age group made up 16% (46 of 280) of all female callers who reported that they were either planning a pregnancy, pregnant, or breastfeeding (female college students made up 7% of the same group). A greater percentage of non-college students reported having no health insurance or using Medicaid. Non-college students were more likely to work full time than college students.

Table 5. Demographic Comparison of College and Non-College Students

Characteristic	College Students* (n=272)		Non-College Students** (n=678)	
	#	%	#	%
Gender				
Female	146	53.7	337	49.7
Male	126	46.3	341	50.3
Age				
18	50	18.4	72	10.6
19	57	21.0	96	14.2
20	46	16.9	87	12.8
21	34	12.5	122	18.0
22	37	13.6	112	16.5
23	20	7.4	91	13.4
24	28	10.3	98	14.5
Race/Ethnicity				
White	170	62.5	397	58.6
Black/African American	66	24.3	205	30.2
American Indian/Alaskan Native	2	0.7	17	2.5
Other	28	10.3	49	7.2
Hispanic	21	7.7	44	6.5
Pregnancy Status (First six months, Females, n=146 and n=240)				
Planning Pregnancy	6	4.1	14	5.8
Pregnant	9	6.1	27	11.3
Breastfeeding	-	-	5	2.1
Health Plan				
Uninsured	90	33.1	362	53.4
Medicaid	31	11.4	132	19.5
Commercial Insurance	124	45.5	162	23.9
Tobacco Use[†]				
Cigarettes	232	85.3	579	85.4
Cigars	4	1.5	14	2.1
Smokeless Tobacco	5	1.8	9	1.3
Multiple	30	11.0	75	11.1
Currently Working				
Yes	159	58.5	395	58.3
<i>Full Time</i>	72	26.5	302	44.5
<i>Part Time</i>	87	32.0	93	13.7

*18-24 year old callers who currently attend school and reported college as the school level

**18-24 year old callers who report that they do not currently attend school (166 young adult callers were missing data)

[†] Callers who used cigarettes and some other form of tobacco are classified as multiple tobacco users only

D.2.c. Youth (13 to 17 years old)

In Year 4, youth ages 13 to 17 accounted for 3% (220) of all QuitlineNC callers who used tobacco. Youth were 6% of all callers supported by HWTF funding.

Nearly three-quarters (74%) of youth callers were 16 to 17 years old. Only 3% were middle school age (13 years old). Slightly more male youth called than female youth (58% vs. 42%). Five youth (8% of all female youth callers in the first six months of Year 4) were pregnant.

The majority (64%) of youth callers reported their race as white, 17% as black or African American youth, and 3% as American Indian or Alaskan Native. About 9% of youth reported their race as "other." Three percent (7) of youth callers reported Hispanic ethnicity, and one youth caller completed calls in Spanish.

Information about health insurance was not collected for most (91%) youth callers. Nineteen percent (41) of all youth callers reported having chronic asthma.

Youth from 60 of NC's 100 counties called QuitlineNC during Year 4 (61 counties were reached in Year 3). Counties with the highest number of youth callers included Wake (17), Mecklenburg (15), and Forsyth (12). Nine counties had between 5 and 8 callers; the remaining counties each had fewer than 5 callers. Nine of the top ten counties for youth callers received direct support from a HWTF Teen Tobacco Use Prevention and Cessation Initiative Community/School grantee. Community/School grantees work to promote tobacco-free policy adoption and cessation among youth in local schools and communities across the state and include information about QuitlineNC in some of their activities.

Most youth callers (89%) smoked cigarettes exclusively or in combination with use of another tobacco product. Among all youth callers who used cigarettes, 90% smoked every day and 7% smoked some days. Twenty-six youth callers (12%) reported using multiple forms of tobacco and eleven callers (5%) reported using smokeless tobacco. All youth callers who reported using multiple forms of tobacco smoked cigarettes in conjunction with use of other tobacco products. The majority (89%) of youth callers were in the preparation stage of quitting. Three percent were in the action stage, indicating that they quit in the past six months.

The majority (89%) of youth callers entered QuitlineNC via an inbound English call. Nine percent (20) enrolled via a web based registration process made available during times of heavy call volume. Only 1 youth caller entered the Quitline via a fax referral. Over two-thirds (61%) of youth callers enrolled in the Multi-Call Program and 32% accepted the One-Call Program at intake. Six percent called with general questions or requested written materials only.

Figures 18 – 20 provide visual highlights for youth callers.

Figure 18. Youth Age, Year 4 (n=220)

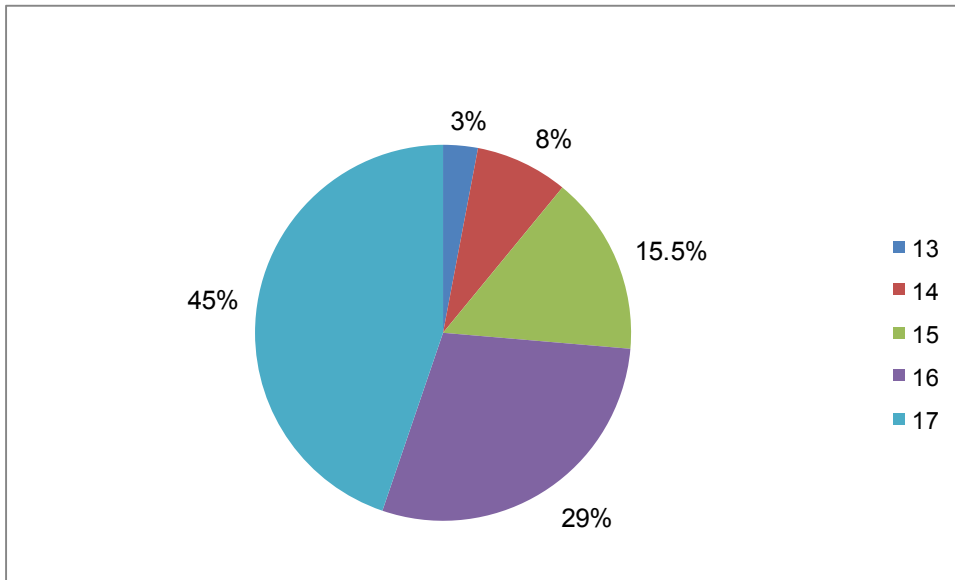


Figure 19. Youth Race, Year 4 (n=220)

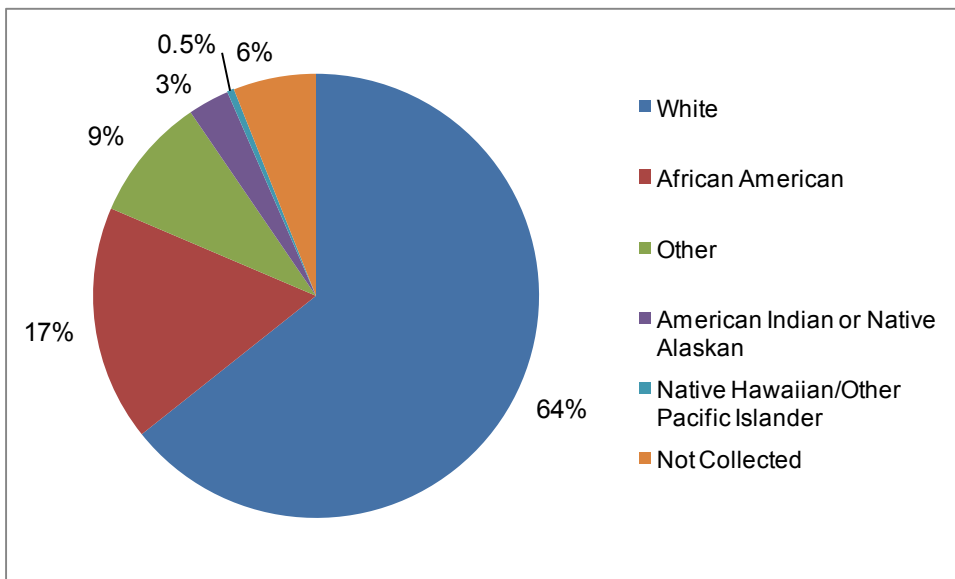
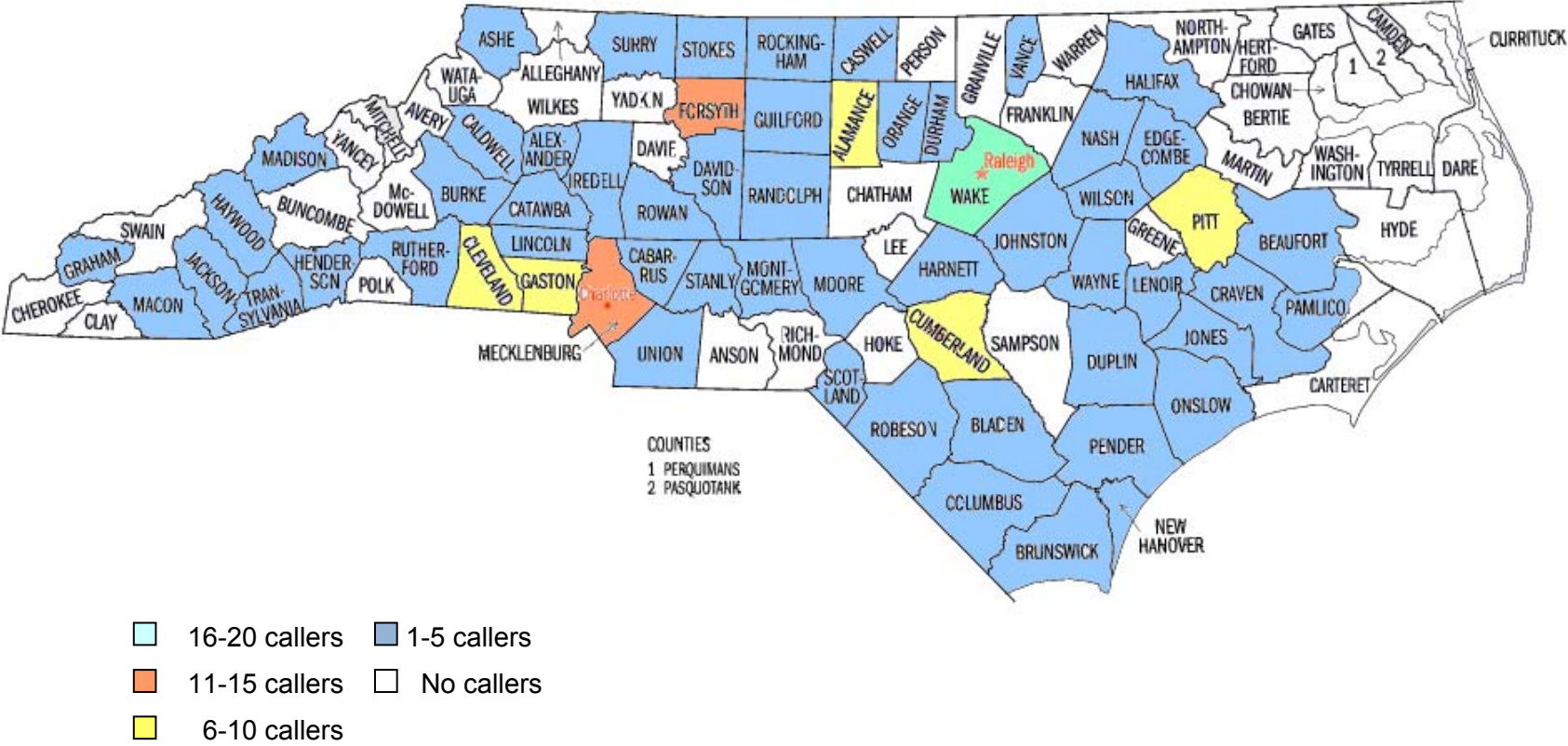
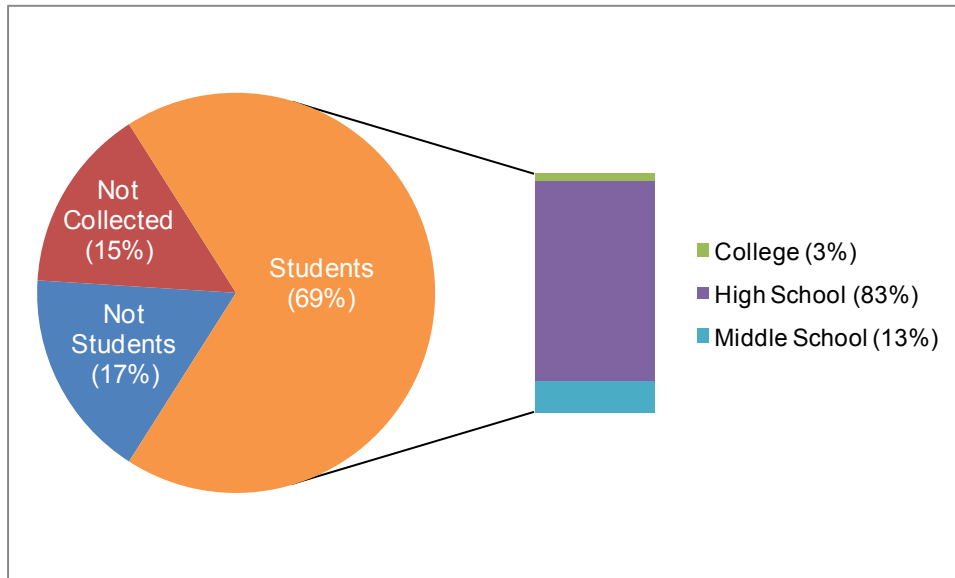


Figure 20. Youth Call Volume by County of Residence, Year 4 (n=220)



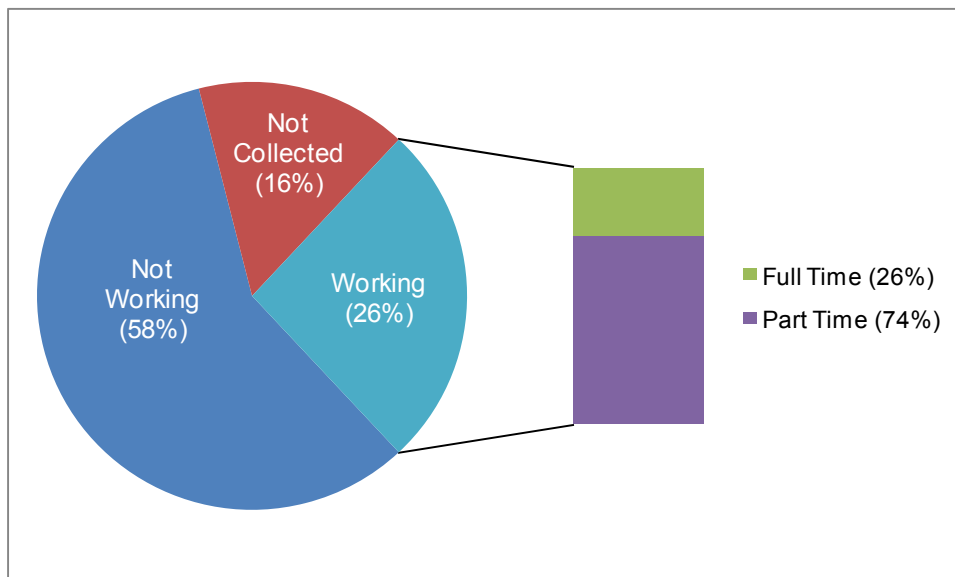
Most youth callers (69% or 151) reported that they currently attended school (Figure 21). Among youth currently attending school, 83% (125) were in high school; 13% (20) were in middle school; and 3% (5) were in college.

Figure 21. Youth School Status, Year 4 (n=220)



Less than one-third (26% or 57) of youth callers reported that they were currently employed (Figure 22). Of those who reported working, most (74% or 42) worked part time and 26% (15) worked full time.

Figure 22. Youth Employment Status, Year 4 (n=220)



D.2.d. Pregnancy Group Callers

In January 2009, the HWTF began funding all female callers who used tobacco and fit into one of three pregnancy related groups: planning a pregnancy, currently pregnant, or within 12 months postpartum. The addition of these callers as a HWTF-funded population occurred in conjunction with the launch of You Quit 2 Quit, a pilot project focused on improving screening and cessation services for prenatal, pregnant, and postpartum women who smoke.

Between January and June 2009, 242 women who were planning a pregnancy, pregnant, or within 12 months postpartum called the Quitline. Callers from the pregnancy group accounted for 14% of all HWTF-funded callers between January and June 2009 and 7% during Year 4.

Over one-third of pregnancy group callers (36% or 87) were currently pregnant at the time of registering with QuitlineNC. Twenty-three percent (57) were planning a pregnancy and 4% (9) were currently breastfeeding. Thirty-seven percent (89) of pregnancy group callers were missing information on their specific pregnancy related status. It is likely that many of those callers missing information were designated as pregnancy group callers because they were within 12 months of giving birth, a screening variable characteristic that the current Free & Clear registration system does not specifically track.

Most (86% or 208) pregnancy group callers were between the ages of 18 and 34. (Callers who fit criteria for both the pregnancy group and the youth or young adult groups were counted as part of the pregnancy group.)

Over half (58%) of pregnancy group callers reported their race as white and nearly one-third (29%) reported their race as African-American. Six callers (2.5%) reported Hispanic ethnicity and less than 1% of callers completed calls in Spanish.

Sixteen (7%) pregnancy group callers reported current enrollment in school. Among all pregnancy group callers, slightly more than half (52%) reported some high school or a high school degree and one-third reported some college or a college degree as the highest level of education achieved.

Forty-one percent (99) of women in the pregnancy group had Medicaid insurance coverage, a greater percentage than any other HWTF-funded caller group, and nearly one-third (29% or 70)) had no insurance coverage. Eighteen percent had health insurance through a commercial provider. Seventeen percent of women in the pregnancy group had chronic asthma.

Pregnancy group callers called from 63 of North Carolina's 100 counties. Counties with the highest number of callers from this group include Davidson (22), Wake (20), and Mecklenburg (18). Among the ten counties with the highest call volume from this group, three were counties involved with the HWTF-funded pilot project focused on improving tobacco use screening and cessation counseling for prenatal and postpartum women: Davidson (22 callers), Richmond (11 callers), and Wilkes (5 callers).

The majority of pregnancy group callers (97% or 235) smoked cigarettes exclusively or in conjunction with use of another tobacco product, 3% (8) used multiple tobacco products, and no callers used smokeless tobacco. Ninety percent (218) of callers were in the preparation stage of quitting, indicating they were ready to quit in the next 30 days. Seven

percent (18) were in the action stage (i.e., had quit in the last six months).

Sixty-five percent (156) of pregnancy group callers entered QuitlineNC via an inbound English phone call and 14.5% (35) entered via the web. Twenty percent (48) of callers in this group entered QuitlineNC via a fax referral, a substantially higher proportion of fax referred callers than other HWTF-funded caller groups. Pregnancy group callers from 17 counties entered the quitline via a fax referral. Three of the four counties in which the You Quit 2 Quit program operates accounted for 58% (28) of all fax referrals in the pregnancy group, suggesting that efforts to promote the fax referral service through this project are paying off.

Fifty-one percent of pregnancy group callers enrolled in the Multi-Call Program and 46% enrolled in the One-Call Program at the time of intake, a more even distribution of program enrollment than observed in other HWTF-funded caller groups.

Figures 23 and 24 provide visual highlights for pregnancy group callers.

Figure 23. Pregnancy Group Callers Race, Year 4 (n=242)

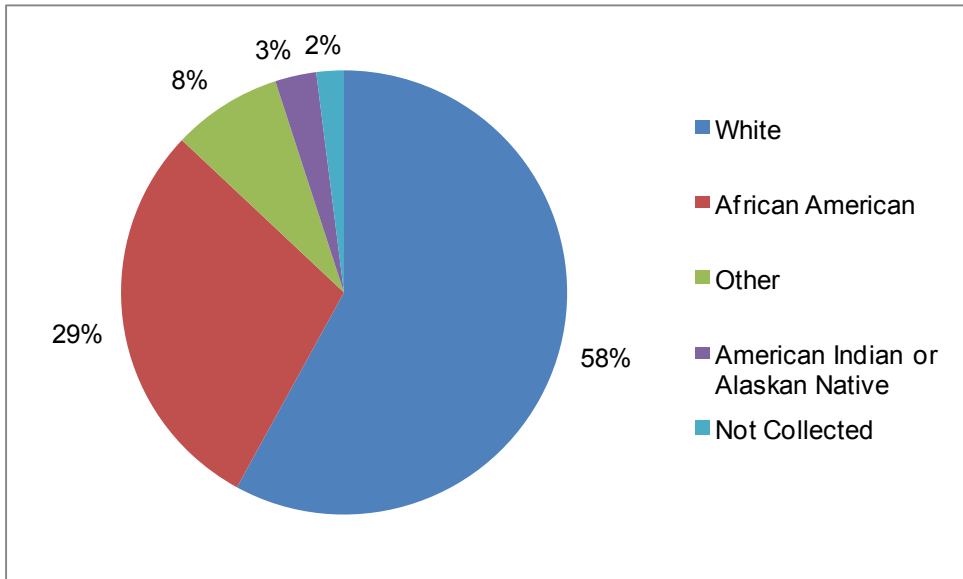


Figure 24. Pregnancy Group Callers Health Insurance, Year 4 (n=242)

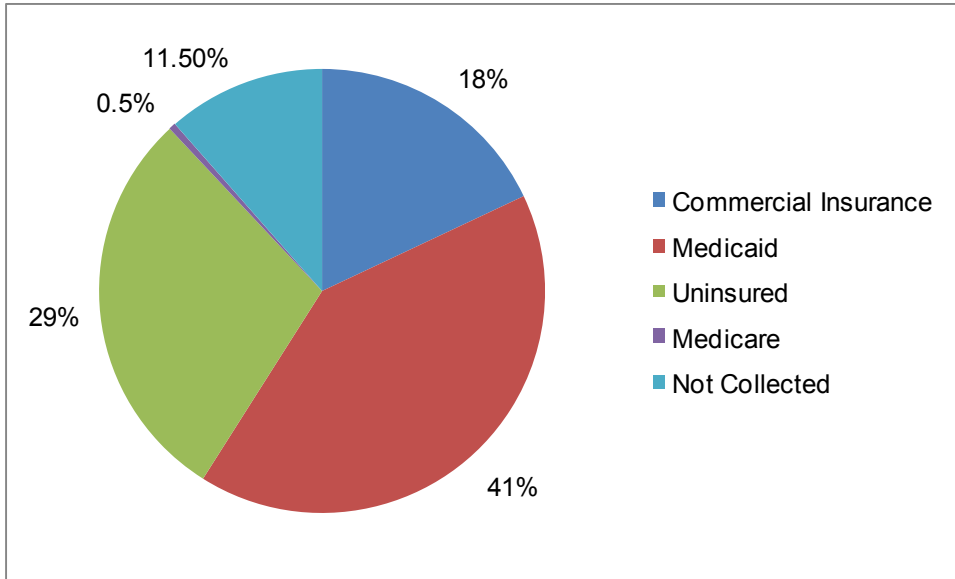
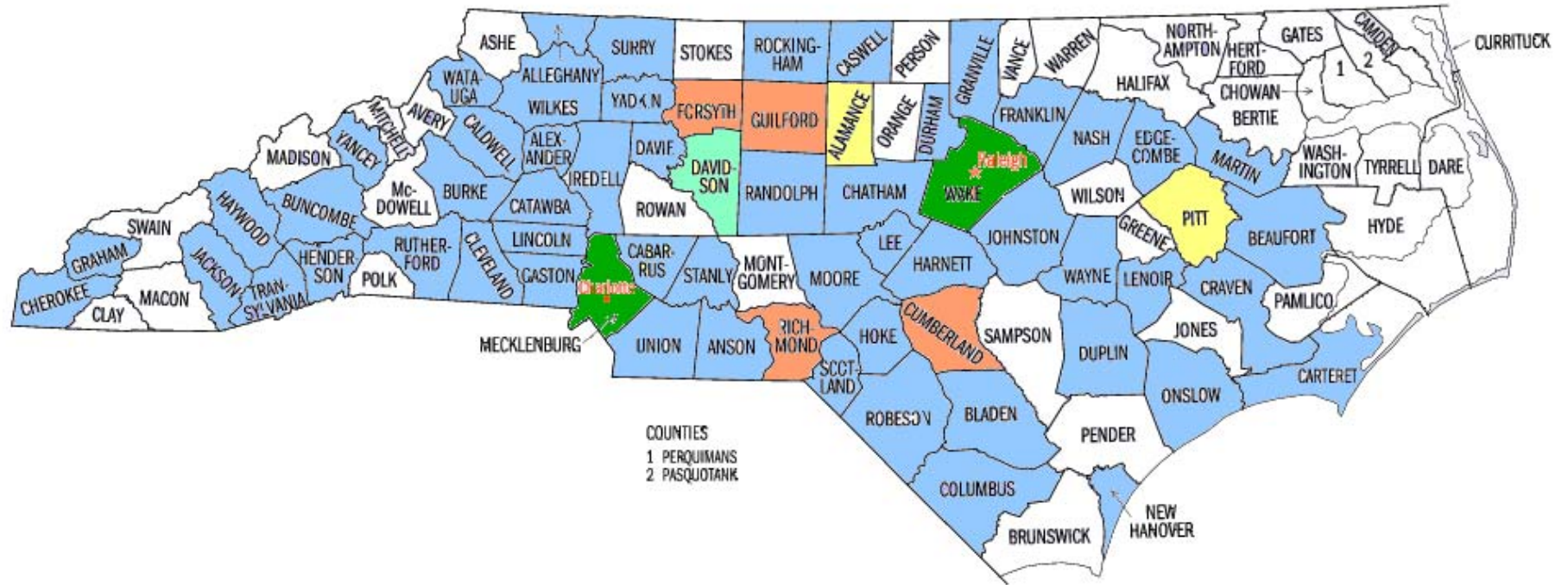


Figure 25. Pregnancy Group Call Volume by County of Residence, Year 4 (n=242)



- | | |
|-----------------|----------------|
| □ 22 callers | □ 6-10 callers |
| ■ 16-20 callers | ■ 1-5 callers |
| ■ 11-15 callers | □ No callers |

D.3. Fax Referral Service

The fax referral service is a special feature of QuitlineNC designed to assist health professionals in connecting their patients to the quitline. The fax referral program allows physicians and medical staff to directly refer patients who sign a waiver form and are ready to quit within 30 days. After the referral form is faxed to the quitline, a QuitlineNC coach initiates an intake call to the patient to offer assistance with cessation.

In total, 10% (723) of all tobacco users who called QuitlineNC during Year 4 entered via the fax referral service (Figure 26). This is a substantial increase compared to Year 3, when only 4% (265) of tobacco users entered QuitlineNC via fax referral. Thirty-six percent (261) of all callers who entered the quitline via fax referral were supported by HWTF funding. The majority (68%) of HWTF-funded fax referred callers were primary caregivers and school employees (Figure 27). While pregnancy group callers were included as a HWTF population for only the last six months of Year 4 and accounted for only 7% of all HWTF-callers, they were 18% of all fax referred HWTF-funded callers.

While the number of fax referrals from HWTF populations is still lower than fax referrals for DHHS callers, the number of HWTF fax referrals more than doubled from Year 3 (from 122 to 261). No major promotional efforts by HWTF or DHHS focused solely on the fax referral during Year 4. NC Prevention Partners, a statewide non-profit organization, conducted a year long “Fax Referral Challenge” to encourage hospitals across the state to use the fax referral system. The increases in fax referrals for both HWTF and DHHS-funded callers observed in Year 4 suggest that the overall promotional efforts of HWTF and other QuitlineNC partners, as well as the ongoing work of other organizations to promote the fax referral service are working to make the fax referral option more familiar to North Carolina medical providers. It is also possible that fax referral increases observed in Year 4 are lagging indicators of the impact of fax referral promotional efforts during Year 3.

Fax referrals for HWTF-funded callers fluctuated throughout Year 4, peaking at 30 in July 2008 and reaching a low of 12 in August 2008 (Figure 28). HWTF-funded fax referrals increased and remained steadily higher for much of 2009 after the addition of pregnancy group callers. Fax referrals for youth and young adults fluctuated throughout Year 4 and did not exceed six referrals per month.

Callers (both HWTF and DHHS-funded) from 80 of North Carolina’s 100 counties were fax referred to the quitline during Year 4. Counties with the highest number of fax referrals included Mecklenburg (177), Durham (45), Orange (37), Wilkes (29), Carteret (25) and Cumberland (25).

The majority (82% or 214) of HWTF-funded callers who entered the quitline via fax referral were in the preparation stage of quitting, indicating they were ready to quit in the next 30 days. This is slightly lower than the 88% of HWTF-funded callers entering the quitline via an inbound English call who were in the preparation stage.

Figure 26. Entry Method for All QuitlineNC Callers, Year 4 (Tobacco Users Only, n=7017)

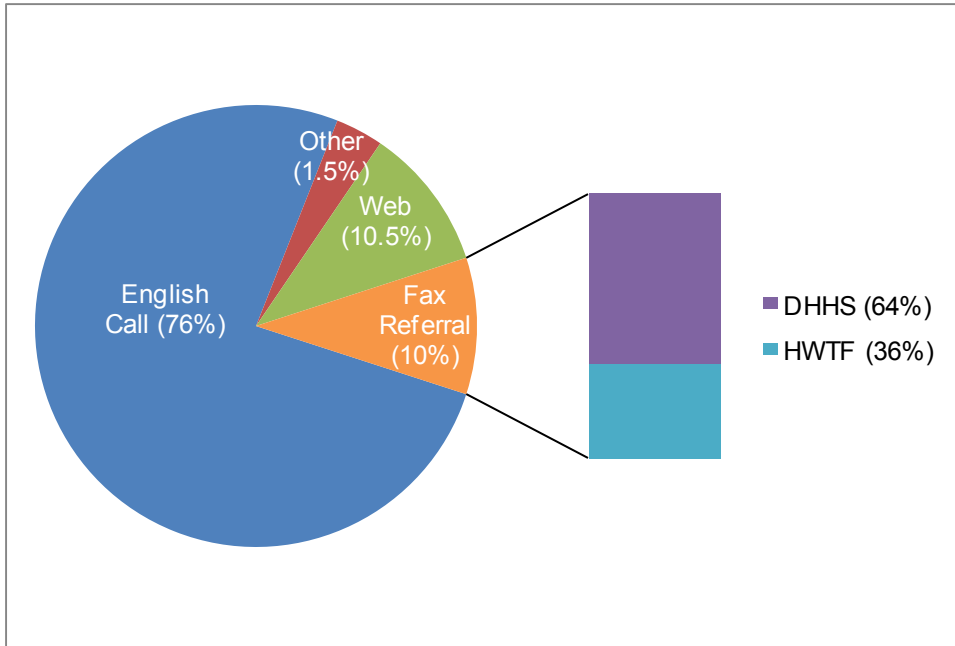


Figure 27. Fax Referrals for all HWTF-Funded Callers, Year 4 (Tobacco Users Only, n=261)

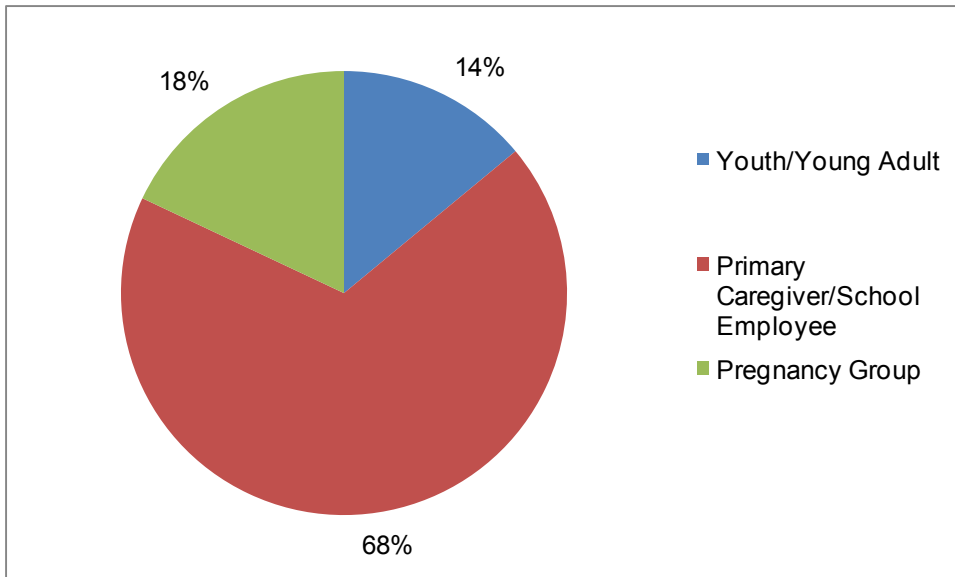
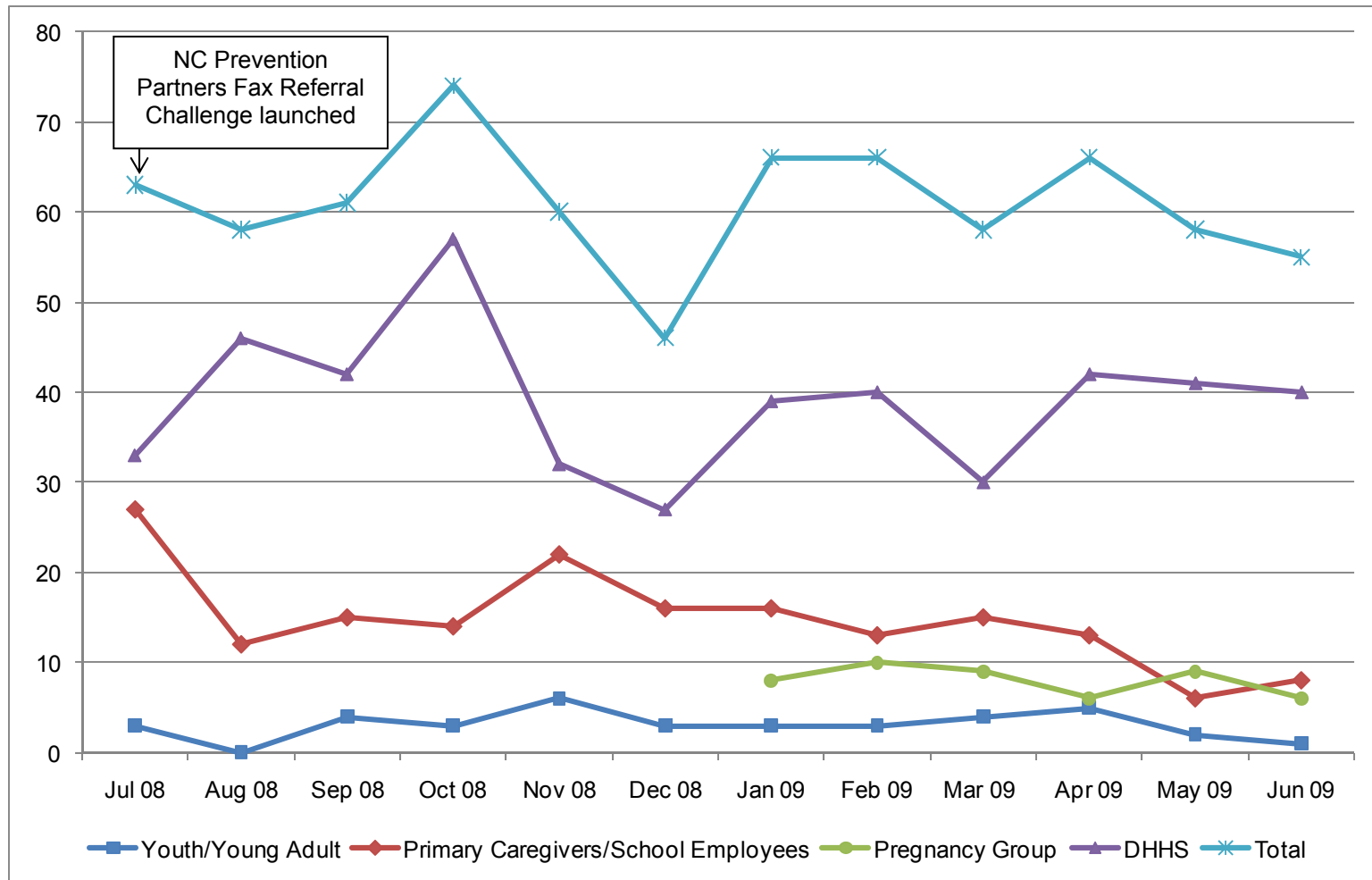


Figure 28. Number of Fax Referrals Over Time, Year 4 (n=723)



D.4. Promotion

Research indicates that targeted quitline promotional campaigns are effective at driving callers to the quitline.^{2,8-10} During the first 20 months of operation, between November 2005 and June 2007, the HWTF and the DHHS ran several small-scale statewide and local promotions for QuitlineNC. During this period the HWTF also invested in market research and the development of a new paid media campaign targeted to young adult tobacco users. In September 2007, the HWTF launched the “Call it Quits” multimedia promotional campaign targeted to young adults. TV and radio ads from phase 1 of the “Call it Quits” campaign ran through April, 2008 during Year 3. The “Call it Quits” campaign also included print and online components including a redesigned QuitlineNC website (www.QuitlineNC.com).

The HWTF ran TV and radio ads from phase 1 of the “Call it Quits” campaign during the first two quarters of Year 3. In March 2009, the HWTF launched phase 2 of “Call it Quits,” with new TV ads featuring interactions between young adults and QuitlineNC quit coaches and radio ads with quit coaches describing their role in the Quitline experience for young adults.

From January, 2009 through March, 2009, the DHHS ran ads from the national American Legacy Foundation “Become an Ex” campaign. These ads ran on cable television only and featured a special QuitlineNC informational “tag” at the end of the advertisement. The HWTF intentionally did not air additional TV promotions during these months in order to avoid spikes in call volume during times of heavy promotion. Other major DHHS promotional efforts include a full page ad in “Poll Position” magazine in May at a large NASCAR event.

Table 6. HWTF-funded “Call it Quits” QuitlineNC Media Promotion, Year 4

Type of Media	Market	Time Period
TV	Six regional television markets across the state	<u>Phase 1:</u> July 08 August 08 October 08 November 08 <u>Phase 2:</u> March 09 April 09 May 09
Radio	Six regional radio markets across the state	<u>Phase 1:</u> August 08 September 08 November 08 December 08 <u>Phase 2:</u> January 09 February 09 April 09 May 09

HWTF Teen and College Initiative Grantee Promotions

The HWTF currently funds two statewide tobacco initiatives targeted to youth and young adults: the Teen Tobacco Use Prevention and Cessation Initiative and the Tobacco-Free Colleges Initiative. In addition to policy advocacy, grantees are encouraged to promote QuitlineNC to youth and young adults in their communities, schools, and college campuses through the use of media (e.g., TV interviews, school newspapers), publicity at community events, college class presentations, and meetings with student health services. College Initiative grantees reported 516 QuitlineNC promotions between July 2008 and June 2009. Promotional activities specific to QuitlineNC are not tracked as an indicator for the Teen Initiative.

How Callers Heard About QuitlineNC

TV, radio, health professionals, and family/friends were the four most frequently reported ways HWTF callers heard about QuitlineNC during Year 4. These four sources of information were also the four most frequently reported in Year 3. Other frequent sources of information about the quitline included brochures/newsletters/flyers, websites, health insurance, or other sources not listed in the caller intake process. Figure 29 shows how all HWTF-funded callers heard about QuitlineNC in Year 4.

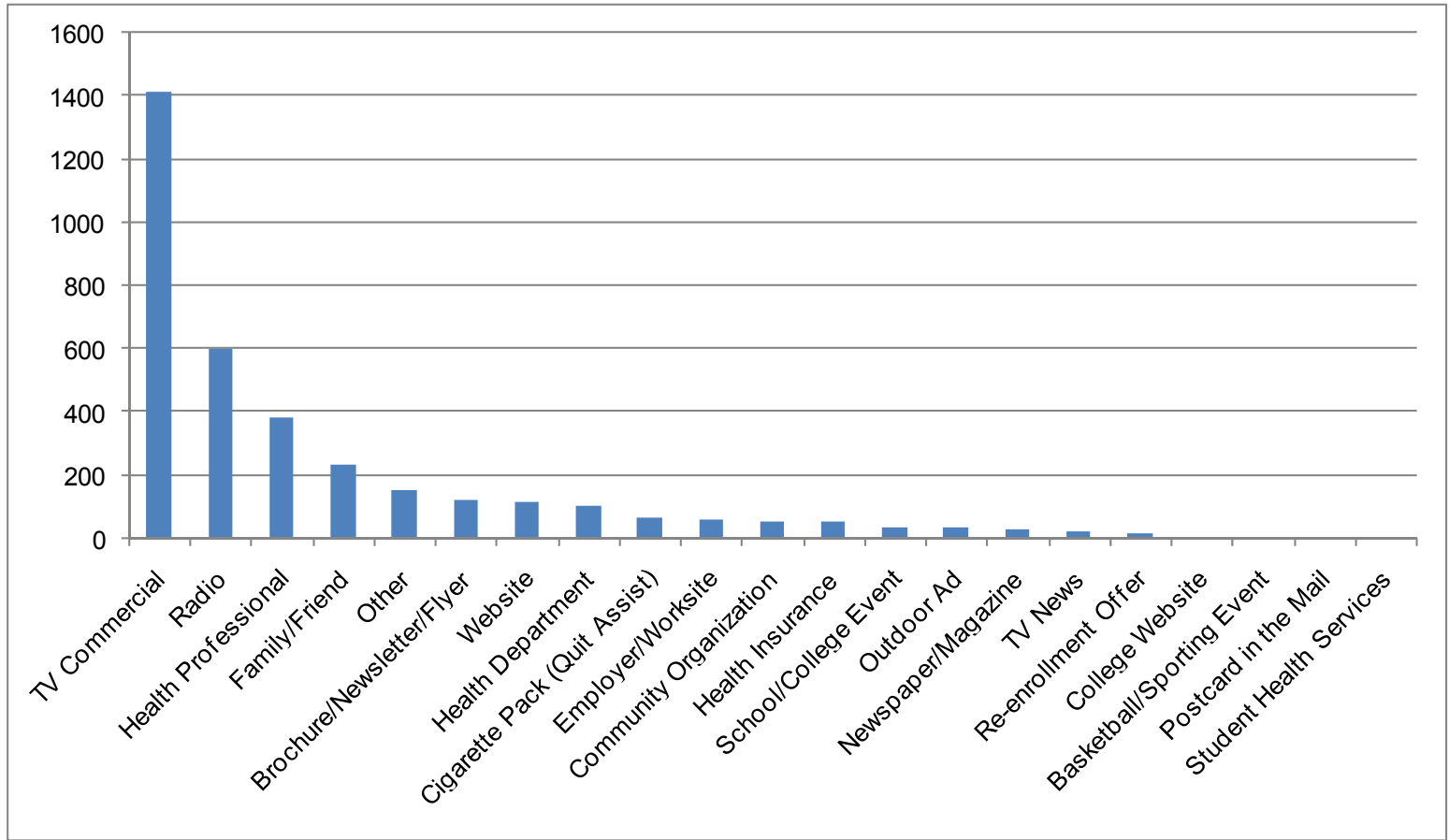
Figures 30 – 33 show the top ten promotions for each group of HWTF callers. TV, radio, and health professionals were among the top four sources of information about the quitline for each age group. Information from family or friends was cited as one of the top four information sources for youth, young adults, and primary caregivers/school employees. Youth and young adult callers were more likely to hear about the quitline from a family member or friend than a health professional. Conversely, adult callers were more likely to hear about the quitline from a health professional than a family member or friend. Information from health departments was the third most common source of information for pregnancy group callers.

TV and radio ads from the “Call it Quits” campaign had the greatest impact on young adult call volume. Seventy-two percent of young adult callers reported that they heard about the quitline from TV or radio, compared to 63% of youth callers and 49% of primary caregiver/school employee callers. The proportion of young adult callers who reported TV and radio ads as their primary source of information about the quitline, and the spikes in young adult call volume during months in which these ads aired, suggest that the “Call it Quits” media promotion was successful in reaching young adults.

The majority of HWTF callers who heard about QuitlineNC from TV, radio, or health professionals were in the preparation stage of quitting (90%, 89%, and 86%, respectively). This implies that the top three methods of promotion are reaching the quitline’s target audience of tobacco users who want to quit in the next 30 days.

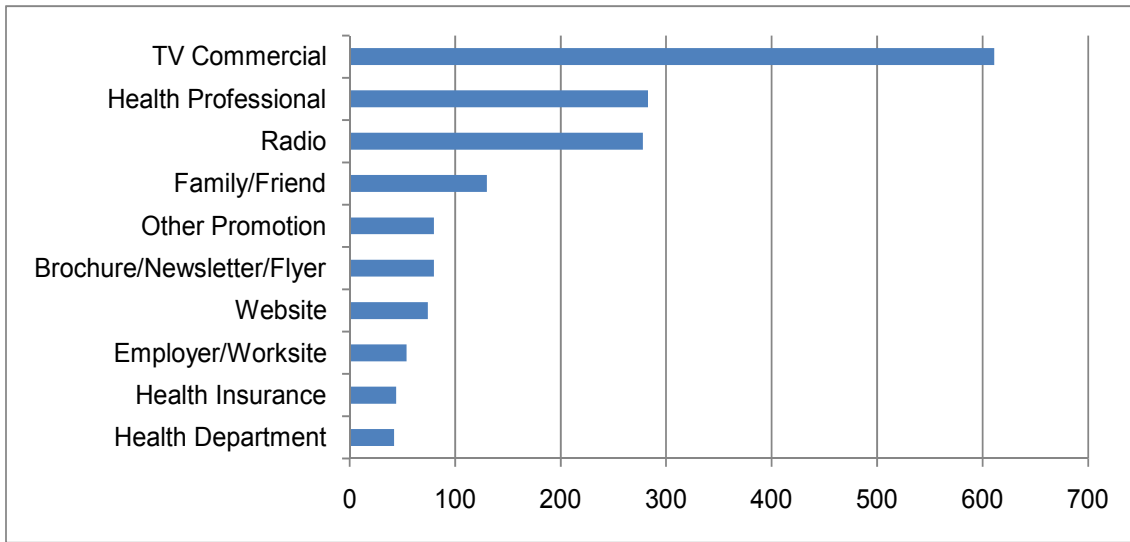
Additional data tables to accompany this section are included in Appendix C.

Figure 29. How HWTF Callers Heard About QuitlineNC, Year 4 (Tobacco users only, n=3480*)



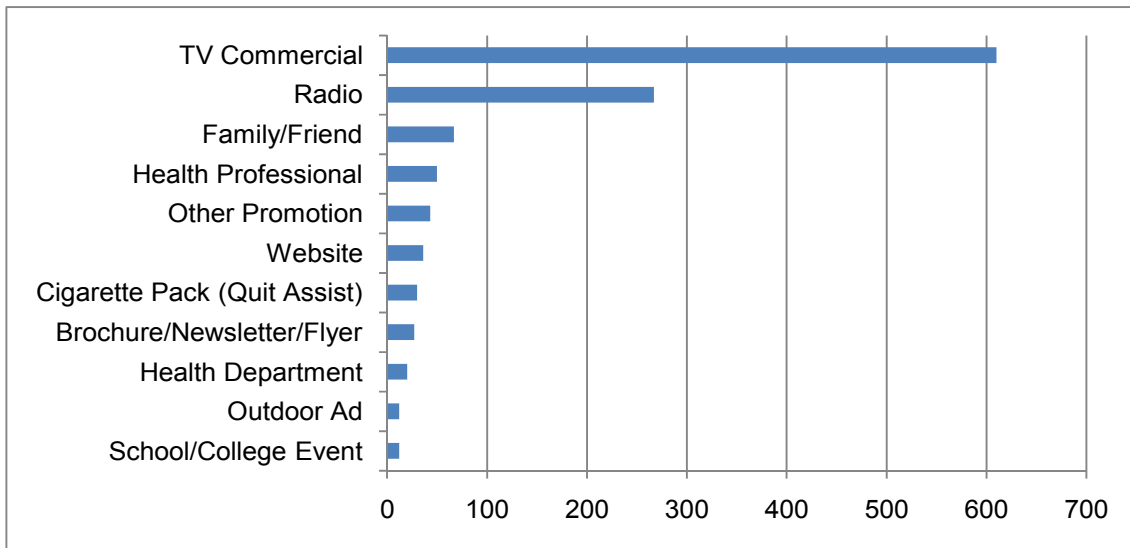
*40 HWTF-funded callers were missing information for the "How Heard About" variable

Figure 30. Top Ten “How Heard About” Responses for Primary Caregiver/School Employee Callers, Year 4 (n=1807*)



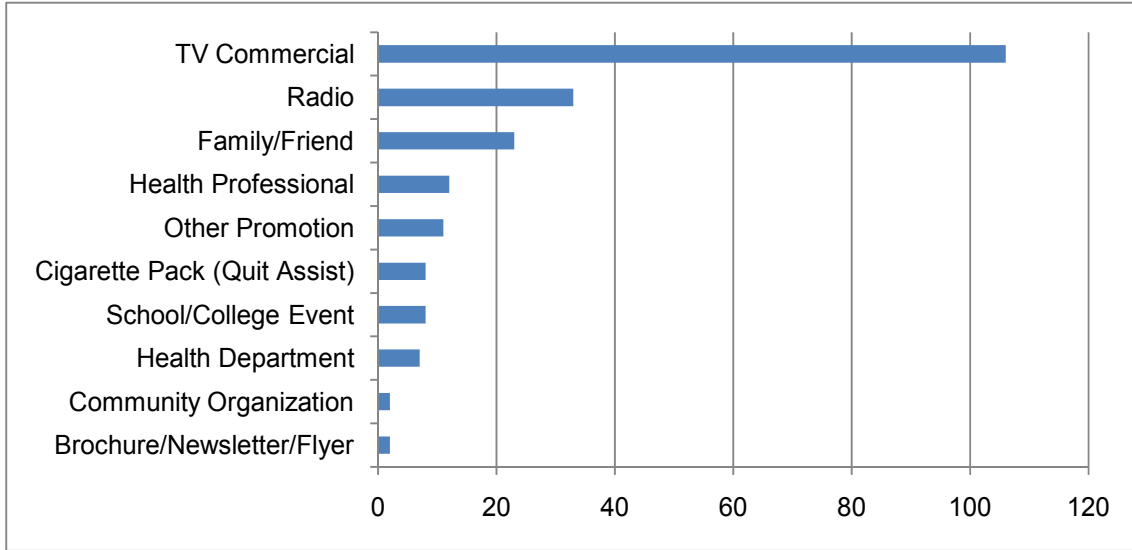
*21 Primary Caregivers/School Employees were missing information for the “How Heard About” variable

Figure 31. Top Ten “How Heard About” Responses for Young Adult Callers, Year 4 (n=1215*)



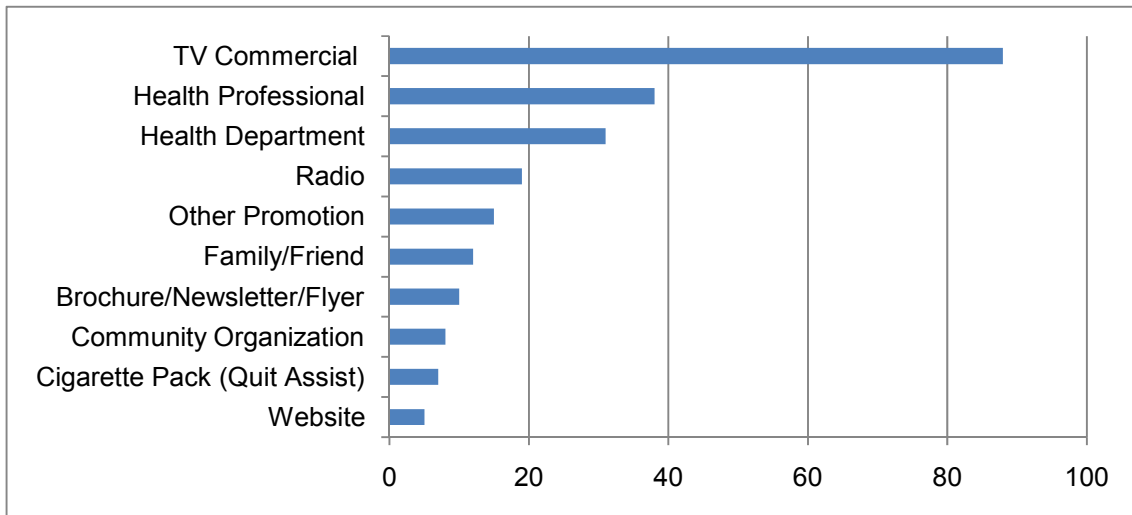
*15 Young Adult callers were missing information for the “How Heard About” variable

Figure 32. Top Ten “How Heard About” Responses for Youth Callers, Year 4 (n=218*)



*2 Young Adult callers were missing information for the “How Heard About” variable

Figure 33. Top Ten “How Heard About” Responses for Pregnancy Group Callers, Year 4 (n=240*)



* 2 Pregnancy Group callers were missing information for the “How Heard About” variable

Figures 34 – 36 show trends in the number of HWTF callers who reported hearing about QuitlineNC from one of the top three QuitlineNC promotions (i.e., TV, radio, health professionals) during Year 3.

Television: Television ads from Phase 1 of the “Call it Quits” campaign were aired across the state for one or two week segments in the months of July, August, October and November of 2008. Television ads from Phase 2 of the “Call it Quits” campaign launched in March, 2009 and continued through April and May, with ads on the air one or two weeks per month. While the campaign targeted young adults, increases in callers reporting hearing about the quitline via TV occurred for all age groups during this month, suggesting that the campaign had some spillover influence to youth and adult callers. The number of Year 4 callers who heard about the quitline via a TV commercial reached similar levels during Phase 1 and Phase 2 of the “Call it Quits” campaign.

Radio: Radio ads were aired across the state in one or two week segments in the months of August, September, November, and December of 2008 and January, February, April, and May of 2009. The number of HWTF callers who heard about the quitline via radio peaked in February, the month in which radio ads from Phase 2 of “Call it Quits” debuted. Higher numbers of young adult and primary caregiver/school employee callers reported hearing about the quitline via radio during the months in which “Call it Quits” radio ads aired compared to months in which ads did not air. Like the TV ads, the “Call it Quits” radio ads were targeted to young adults and appeared to have similar spillover influence on youth and adult callers, as evidenced by increased numbers of callers who heard about QuitlineNC via radio during months in which radio ads aired.

Health Professionals: During Year 4 HWTF Tobacco-Free Colleges grantees reported 56 meetings with campus healthcare providers to promote QuitlineNC and the fax referral system during Year 4. The HWTF did not have a wide scale outreach effort to physicians during Year 4. Staff from DHHS work to educate healthcare providers about QuitlineNC throughout the year. Increases in July of 2008 and April and May of 2009 of HWTF-funded callers who heard about the quitline from a healthcare provider may be a function of overall higher call volumes during those months.

Figure 34. HWTF Callers Who Heard About QuitlineNC via TV, Year 4 (n=1420)

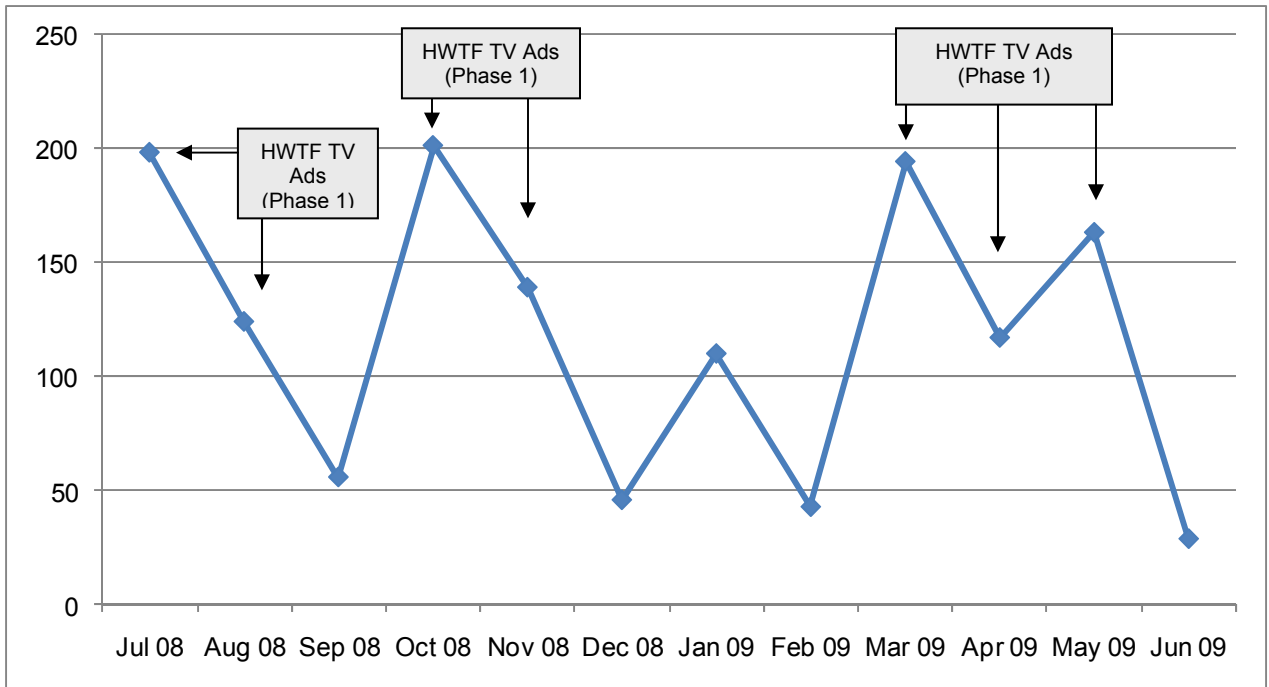


Figure 35. HWTF Callers Who Heard About QuitlineNC via Radio, Year 4 (n=599)

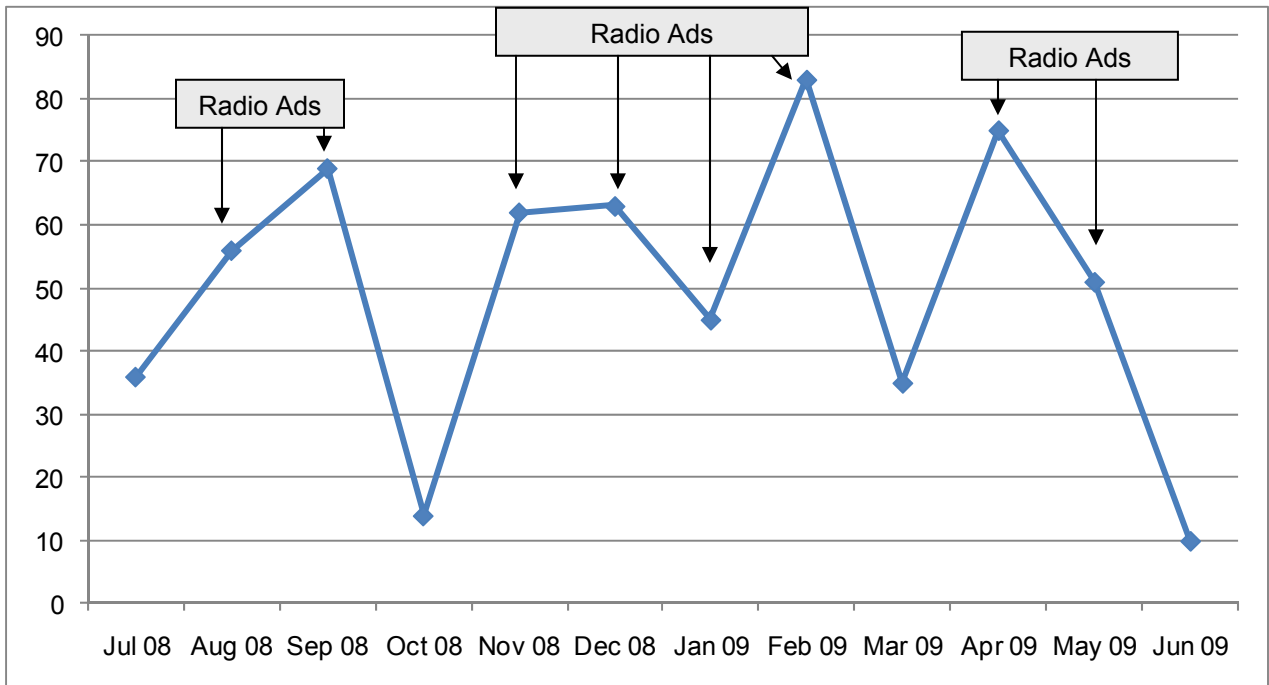
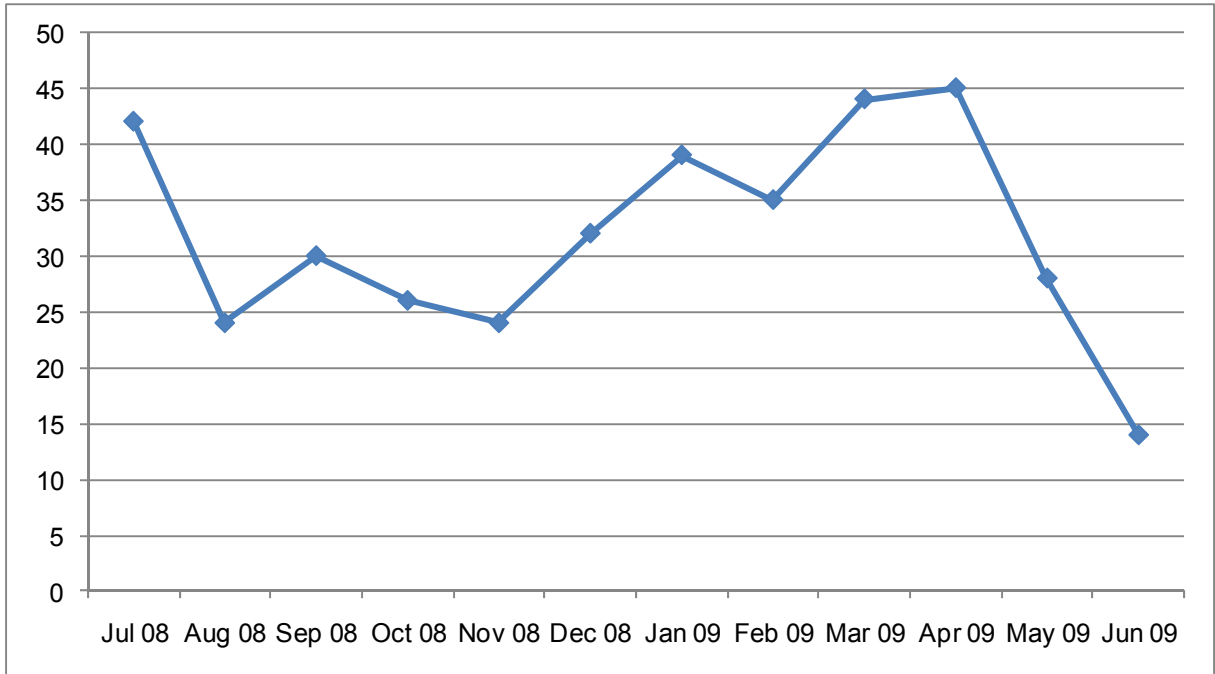


Figure 36. HWTF Callers Who Heard about QuitlineNC via Health Professionals, Year 4 (n=383)



D.5. Satisfaction and Quit Rates

The QuitlineNC vendor, Free & Clear, assesses QuitlineNC callers' success with quitting and satisfaction with quitline services through an End-Of-Program (EOP) survey administered to a group of callers seven months post-registration. The survey is administered via telephone to a randomly selected sample of QuitlineNC callers.

Quit rate and satisfaction results for Year 4 callers were summarized in the North Carolina Tobacco Use Quit Line Evaluation Report Year 4 published by Free & Clear in May 2009. UNC TPEP did not complete any additional analyses on EOP survey data. The following section summarizes results for HWTF callers documented in Free & Clear's Report.

For this evaluation, Free & Clear attempted to survey 1000 individuals who called QuitlineNC between April 1, 2008 and September 30, 2008, in order to obtain a sample of 540 callers (270 HWTF-funded callers and 270 DHHS-funded callers). Five hundred HWTF participants were attempted, with 145 (29%) completing the survey. In total, 91 youth were sampled with 31 (34%) completing the survey; 187 young adults were sampled with 43 (23%) completing the survey; and 222 primary caregivers/school employees were sampled with 71 (32%) completing the survey. Pregnancy group callers were not sampled as a specific population of interest in the Year 4 EOP report; they will be included for separate analyses in the Year 5 EOP report. Response rates for HWTF-funded caller groups were lower than in other states served by Free & Clear that used similar sampling methods (response rates for three states ranged from 34% to 42%).¹⁹

Table 6 summarizes satisfaction and quit rate data for HWTF-funded callers.

Respondent quit rates are calculated by dividing the number of respondents who report quitting by the total number of respondents to the EOP survey. *Intent-to-treat quit rates* are calculated by dividing the number of respondents who reported quitting by the total number of survey respondents and non-respondents (i.e. those in the sample who did not complete the survey), and are thus a more conservative estimate. Intent-to-treat analysis treats all non-respondents as current smokers. The overall satisfaction rate is defined as being "somewhat" to "very" satisfied with QuitlineNC services.

Among all HWTF-funded callers who responded to the survey (n=145), there was an estimated 6.6% intent-to-treat 30-day quit rate, somewhat lower than the 10.8% quit rate reported for Year 3.³ Estimated intent-to-treat 30-day quit rates for primary caregivers/school employees was 8.1%, compared to 12.5% in Year 3. Estimated intent-to-treat 30-day quit rates were 4.3% for young adults and 7.7% for youth who responded to the follow up survey,³ compared to 7.5% and 14.5%, respectively, in Year 3. The very small sample sizes used in these samples, however, suggest that these results should be interpreted cautiously.

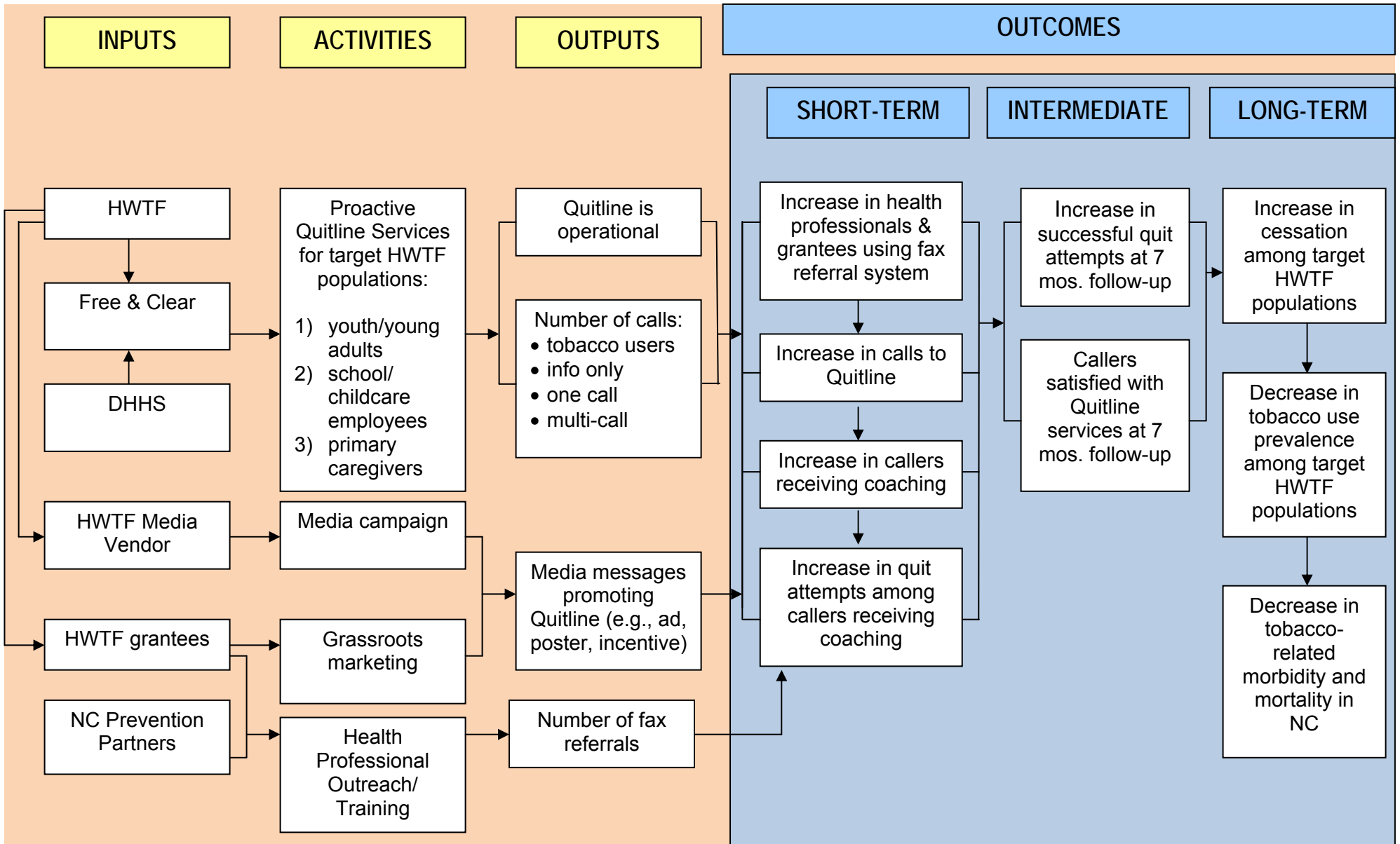
Ninety percent of HWTF survey respondents reported satisfaction with QuitlineNC services. Overall, 87% of primary caregivers/school employees, 88% of young adults and 100% of youth reported satisfaction with QuitlineNC services.³

Table 7. Summary of Satisfaction and Quit Rates for HWTF Callers from Free & Clear Report* (n=145)³

	All HWTF Callers (n=155)		Youth (n=31)		Young Adults (n=43)		Primary Caregivers/ School Employees (n=71)	
	N	%	N	%	N	%	N	%
Satisfaction Rate								
Satisfied	122	90.4	30	100.0	38	88.4	54	87.1
Not Satisfied	13	9.6	0	0.0	5	11.6	8	12.9
Number of Serious Quit Attempts Lasting >24 hours								
0 time	11	9.6	6	21.4	4	12.1	7	13.0
1 time	27	23.5	5	17.9	8	24.2	13	24.0
2 times	26	22.6	7	25.0	9	27.3	12	22.2
3 times	23	20.0	10	35.7	5	15.2	11	20.4
4 or more	28	24.3	6	21.4	7	21.2	11	20.4
7-Day Point Prevalence Tobacco Abstinence Rates								
Respondent 7-Day Quit Rate	38	26.4	8	25.8	9	20.9	21	30.0
Intent-to-treat 7-Day Quit Rate	38	7.6	8	8.8	9	4.8	21	9.5
30-Day Point Prevalence Tobacco Abstinence Rates								
Respondent 30-Day Quit Rate	33	22.9	7	22.6	8	18.6	18	25.7
Intent-to-treat 30-Day Quit Rate	33	6.6	7	7.7	8	4.3	18	8.1

* Some respondents did not answer all questions. Free & Clear reports percentages calculated based on the number of respondents to each question.

Appendix A
Logic Model for the HWTF-funded Portion of QuitlineNC (2009)



Appendix B
Data Tables for Characteristics of Callers

Table B-1. Callers by Age (Tobacco Users Only, n=6786)*

Age	Funding Source				Total	
	HWTF		DHHS			
	#	%	#	%	#	%
0 to 17 years old	231	6.6	0	0.0	231	3.4
18 to 24 years old	1364	38.8	3	0.1	1367	20.1
25 to 34 years old	841	23.9	686	21.0	1527	22.5
35 to 44 years old	582	16.5	544	16.7	1126	16.6
45 to 54 years old	355	10.1	1044	32.0	1399	20.6
55 to 64 years old	122	3.5	699	21.4	821	12.1
65 years and older	25	0.7	290	8.9	315	4.6
Total	3520	100.0	3266	100.0	6786	100.0

* 231 DHHS callers missing age data

Table B-2. Callers by Gender (Tobacco Users Only, n=7017)

Ethnicity	HWTF Status								DHHS		Total	
	Youth		Young Adults		Primary Caregivers/ School Employees		Pregnancy Group					
	#	%	#	%	#	%	#	%	#	%	#	%
Female	93	42.3	598	48.6	1156	63.2	242	100.0	1942	55.5	4031	57.5
Male	127	57.7	632	51.4	672	36.8	0	0.0	1469	42.0	2900	41.3
Not Collected	0	0	0	0.0	0	0.0	0	0.0	86	2.5	86	1.2
Total	220	100.0	1230	100.0	1828	100.0	242	100.0	3497	100.0	7017	100.0

Table B-3. Callers by Pregnancy Status (Female Tobacco Users Only, n=4013)

Pregnancy Group	HWTF Status								DHHS		Total	
	Youth		Young Adults		Primary Caregivers/ School Employees		Pregnancy Group					
	#	%	#	%	#	%	#	%	#	%	#	%
Not in Pregnancy Group	88	94.6	528	88.3	1123	97.1	0	0.0	1918	98.8	3657	91.1
Planning Pregnancy	0	0	23	3.8	9	0.8	57	23.6	14	0.7	103	2.4
Pregnant	5	5.4	42	7.0	18	1.6	87	36.0	10	0.5	162	4.0
Breast Feeding	0	0	5	0.8	6	0.5	9	3.7	0	0.0	20	0.4
Missing (likely in category "given birth in last 12 months")	0	0.0	0	0.0	0	0.0	89	36.8	0	0.0	89	2.1
Total	5	5.4	598	100.0	1156	100.0	242	100.0	1942	100.0	4013	100.0

Table B-4. Callers by Ethnicity (Tobacco Users Only, n=7017)

Ethnicity	HWTF Status								DHHS		Total	
	Youth		Young Adults		Primary Caregivers/ School Employees		Pregnancy Group					
	#	%	#	%	#	%	#	%	#	%	#	%
Hispanic	7	3.2	76	6.2	100	5.5	6	2.5	114	3.3	303	4.3
Non-Hispanic	199	90.5	1074	87.3	1665	91.1	227	93.8	2977	85.1	6142	87.5
Not Collected	14	6.3	80	6.5	63	3.4	9	3.8	406	11.6	572	8.2
Total	220	100.0	1230	100.0	1828	100.0	242	100.0	3497	100.0	7017	100.0

Table B-5. Callers by Race (Tobacco Users Only, n=7017)

Race	HWTF Status								DHHS		Total	
	Youth		Young Adults		Primary Caregivers/ School Employees		Pregnancy Group					
	#	%	#	%	#	%	#	%	#	%	#	%
White	141	64.1	702	57.1	998	54.6	140	57.9	1987	56.8	3968	56.5
Black or African American	37	16.8	324	26.3	615	33.6	70	28.9	895	25.6	1941	27.7
Other Race	19	8.6	94	7.6	107	5.9	17	7.0	135	3.9	372	5.3
American Indian or Alaskan Native	6	2.7	28	2.3	36	2.0	7	2.9	77	2.2	154	2.2
Asian	3	1.4	9	0.7	9	0.5	1	0.4	23	0.7	45	0.6
Native Hawaiian/Other Pacific Islander	1	0.5	5	0.4	8	0.4	2	0.8	6	0.2	22	0.3
Not Collected	13	5.9	68	5.6	55	3	5	2.1	374	10.7	515	7.4
Total	220	100.0	1230	100.0	1828	100.0	242	100.0	3497	100.0	7017	100.0

Table B-6. Callers by Language (Tobacco Users Only, n=7017)

Language	HWTF Status								DHHS		Total	
	Youth		Young Adults		Primary Caregivers/ School Employees		Pregnancy Group					
	#	%	#	%	#	%	#	%	#	%	#	%
English	219	99.5	1214	98.7	1768	96.7	240	99.2	3425	97.9	6866	97.8
Spanish	1	0.5	16	1.3	60	3.3	2	0.8	72	2.1	151	2.2
Other	0	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total	220	100.0	1230	100.0	1828	100.0	242	100.0	3497	100.0	7017	100.0

Table B-7. Callers by Highest Level of Education Attained (Tobacco Users Only, n=6797) *

Highest Level of Education	HWTF Status								DHHS		Total	
	Youth		Young Adults		Primary Caregivers/ School Employees		Pregnancy Group					
	#	%	#	%	#	%	#	%	#	%	#	%
Less than grade 9	-	-	2	0.2	67	3.7	7	2.9	163	4.7	239	3.5
Grade 9-11, no degree	-	-	15	1.2	264	14.4	22	9.1	454	13.0	755	11.1
High School degree	-	-	39	3.2	461	25.2	45	18.6	842	24.1	1387	20.4
GED	-	-	13	1.1	88	4.8	6	2.5	148	4.2	255	3.8
Some College or Univ.	-	-	30	2.4	569	31.1	39	16.1	932	26.7	1570	23.1
College or Univ degree	-	-	15	1.2	321	17.6	18	7.4	578	16.5	932	13.7
Post College	-	-	0	0.0	6	0.3	0	0.0	10	0.3	16	0.2
Other**	-	-	1116	90.7	52	2.8	105	43.4	370	10.6	1643	24.2
Total	-	-	1230	100.0	1828	100.0	242	100.0	3497	100.0	6797	100.0

* From Intake Question asked primarily to callers age 25 and older. See Sections D.2.b and D.2.c for accurate young adult and youth data

**Refused or not collected.

Table B-8. Callers by Chronic Disease Status (Tobacco Users Only, n=7017)

Chronic Condition	HWTF Status								DHHS		Total	
	Youth		Young Adults		Primary Caregivers/ School Employees		Pregnancy Group					
	#	%	#	%	#	%	#	%	#	%	#	%
Asthma	41	18.6	160	13.0	173	9.5	41	16.9	237	6.8	652	9.3
Chronic Obstructive Pulmonary Disease	0	0.0	4	0.6	54	3.0	6	2.5	261	7.5	325	4.6
Coronary Artery Disease	3	1.4	13	1.1	44	2.4	1	0.4	120	3.4	181	2.6
Diabetes	0	0.0	17	1.4	103	5.6	9	3.7	226	6.5	355	5.1
Multiple Diseases	3	1.4	10	0.3	138	7.5	15	6.2	481	13.8	647	9.2
None	162	73.6	982	79.8	1289	70.5	166	68.6	1870	53.5	4469	63.7
Not Collected/Missing	11	4.5	44	3.6	27	1.5	4	1.7	302	8.6	388	5.5
Total	220	100.0	1230	100.0	1828	100.0	242	100.0	3497	100.0	7017	100.0

Table B-9. Callers by Type of Health Insurance (Tobacco Users Only, n=7017)

NC Health Plan	HWTF Status								DHHS		Total	
	Youth		Young Adults		Primary Caregivers/ School Employees		Pregnancy Group					
	#	%	#	%	#	%	#	%	#	%	#	%
Uninsured	4	1.8	543	44.1	540	29.5	70	28.9	948	27.1	2105	30.0
Medicaid	5	2.3	206	16.7	376	20.6	99	40.9	529	15.1	1215	17.3
Blue Cross/Blue Shield	3	1.4	114	9.3	191	10.4	16	6.6	314	9.0	638	9.1
Other Health Plan	4	1.8	131	10.7	191	10.4	13	5.4	353	10.1	692	9.9
Medicare	0	0.0	7	0.6	67	3.7	1	0.4	417	11.9	492	7.0
United Health Care	0	0.0	22	1.8	48	2.6	6	2.5	93	2.7	169	2.4
Cigna	2	0.9	18	1.5	46	2.5	1	0.4	60	1.7	127	1.8
State Employees Plan	0	0.0	34	2.8	176	9.6	6	2.5	189	5.4	405	5.8
Aetna	1	0.5	24	2.0	34	1.9	2	0.8	49	1.4	110	1.6
Well Path	0	0.0	3	0.2	11	0.6	0	0.0	20	0.6	34	0.5
First Carolina Care	0	0.0	0	0.0	2	0.1	0	0.0	1	0.0	3	0.04
Not Collected	201	91.4	128	10.4	146	8.0	28	11.5	524	15.0	1027	14.6
Total	220	100.0	1230	100.0	1828	100.0	242	100.0	3497	100.0	7017	100.0

Table B-10. Callers by NC County (Tobacco Users Only, n=7017)

County	HWTF Status				DHHS	Total	
	Youth	Young Adults	Primary Caregiver/ School Employees	Pregnancy Group		#	%
ALAMANCE	9	20	50	7	67	153	2.2
ALEXANDER	3	3	12	1	17	36	0.5
ALLEGHANY	0	4	3	1	9	17	0.2
ANSON	0	6	7	2	10	25	0.5
ASHE	2	1	10	0	17	30	0.4
AVERY	0	1	1	0	6	8	0.1
BEAUFORT	2	2	11	3	15	33	0.5
BERTIE	0	1	2	0	10	13	0.2
BLADEN	1	3	8	1	16	29	0.4
BRUNSWICK	3	15	15	0	45	78	1.1
BUNCOMBE	0	21	33	2	70	126	1.8
BURKE	2	6	19	1	36	64	0.9
CABARRUS	1	17	37	4	56	115	1.6
CALDWELL	2	11	13	1	31	58	0.8
CAMDEN	0	0	2	0	1	3	0.04
CARTERET	0	2	15	2	47	66	0.9
CASWELL	2	0	0	1	9	12	0.2
CATAWBA	3	23	25	4	44	99	1.4
CHATHAM	0	3	9	3	10	25	0.5
CHEROKEE	0	0	3	1	4	8	0.1
CHOWAN	0	2	4	0	18	24	0.3
CLAY	0	1	0	0	1	2	0.02
CLEVELAND	6	17	32	2	36	93	1.3
COLUMBUS	5	6	14	2	14	41	0.6
CRAVEN	1	13	27	2	26	69	1.0
CUMBERLAND	7	48	60	12	104	231	3.3
CURRITUCK	0	3	0	0	4	7	0.1
DARE	0	1	2	0	6	9	0.1
DAVIDSON	5	15	33	22	52	127	1.8
DAVIE	0	2	11	3	11	27	0.4
DUPLIN	1	4	7	1	18	31	0.4
DURHAM	2	28	67	4	125	226	3.2
EDGECOMBE	1	12	17	4	20	54	0.8
FORSYTH	12	65	71	12	132	292	4.2
FRANKLIN	0	7	13	1	16	37	0.5
GASTON	8	34	47	2	46	137	1.9
GATES	0	0	2	0	3	5	0.07
GRAHAM	1	4	1	1	1	8	0.1
GRANVILLE	0	8	11	3	26	48	0.7
GREENE	0	0	6	0	1	7	0.1
GUILFORD	4	86	107	12	184	393	5.6
HALIFAX	1	2	12	0	10	25	0.5

Table B-10 contd. County	HWTF Status				DHHS	Total	
	Youth	Young Adults	Primary Caregiver/ School Employees	Pregnancy Group		#	%
HARNETT	1	15	23	4	22	65	0.9
HAYWOOD	5	4	8	3	23	43	0.6
HENDERSON	1	10	14	3	36	64	0.9
HERTFORD	0	1	4	0	17	22	0.3
HOKE	0	5	8	1	10	24	0.3
HYDE	0	0	1	0	5	6	0.3
IREDELL	2	13	21	3	34	73	1.0
JACKSON	2	4	3	1	9	19	0.3
JOHNSTON	2	17	24	2	30	75	1.1
JONES	1	1	4	0	0	6	0.08
LEE	0	11	13	2	15	41	0.6
LENOIR	1	7	11	1	22	42	0.6
LINCOLN	2	6	4	2	15	29	0.4
MACON	1	4	6	0	14	25	0.5
MADISON	1	0	2	0	6	9	0.1
MARTIN	0	6	9	1	15	31	0.4
MCDOWELL	0	2	4	0	15	21	0.3
MECKLENBURG	15	122	185	18	404	744	10.6
MITCHELL	0	0	2	0	2	4	0.06
MONTGOMERY	1	3	7	0	12	23	0.3
MOORE	2	10	13	1	23	49	0.7
NASH	2	10	13	3	36	64	0.9
NEW HANOVER	5	34	17	2	77	135	1.9
NORTHAMPTON	0	3	1	0	4	8	0.1
ONslow	2	27	25	3	48	105	1.5
ORANGE	2	20	32	0	64	118	1.7
PAMLICO	1	2	2	0	5	10	0.1
PASQUOTANK	0	0	1	0	10	11	0.1
PENDER	2	2	8	0	8	20	0.3
PERQUIMANS	0	1	1	0	3	5	0.06
PERSON	0	3	7	0	13	23	0.3
PITT	6	23	27	8	59	123	1.7
POLK	0	0	0	0	2	2	0.02
RANDOLPH	5	10	23	2	48	88	1.2
RICHMOND	0	10	15	11	16	52	0.7
ROBESON	4	6	40	5	41	96	1.4
ROCKINGHAM	4	11	14	3	33	65	0.9
ROWAN	1	9	22	0	49	81	1.1
RUTHERFORD	1	5	10	1	19	36	0.5
SAMPSON	0	3	6	0	19	28	0.4
SCOTLAND	1	2	9	1	11	24	0.3
STANLY	1	13	8	1	20	43	0.6
STOKES	1	3	13	0	15	32	0.5

Table B-10 contd.	HWTF Status				DHHS	Total	
	Youth	Young Adults	Primary Caregivers/ School Employees	Pregnancy Group		#	%
SURRY	3	5	12	2	29	51	0.7
SWAIN	0	2	2	0	2	6	0.07
TRANSYLVANIA	1	2	8	1	18	30	0.4
TYRRELL	0	0	1	0	2	3	0.04
UNION	2	16	30	1	33	82	1.2
VANCE	1	6	11	0	17	35	0.5
WAKE	17	123	146	20	242	548	7.8
WARREN	0	6	4	0	10	20	0.3
WASHINGTON	0	0	4	0	1	5	0.06
WATAUGA	0	12	9	2	15	38	0.5
WAYNE	4	20	29	5	66	124	1.8
WILKES	0	6	26	5	42	79	1.1
WILSON	1	14	23	0	31	69	1.0
YADKIN	0	6	10	2	18	36	0.5
YANCEY	0	0	3	1	2	6	0.08
Unknown	35	77	29	4	266	411	6.0
Total	220	1230	1828	242	3497	7017	100.0

Table B-11. Callers by Age Started Using Tobacco (Tobacco Users Only, n=6680)*

Start Age	HWTF Status								DHHS		Total	
	Youth		Young Adults		Primary Caregivers/ School Employees		Pregnancy Group		#	%	#	%
	#	%	#	%	#	%	#	%				
0-11 years old	45	21.3	77	6.5	103	5.7	16	6.7	204	6.3	445	6.7
12-17 years old	163	77.3	843	70.7	1033	52.7	167	70.1	1736	53.7	3942	59.0
18-24 years old	0	0.0	257	21.5	514	28.4	50	21.0	890	27.5	1711	25.6
25 years old or older	0	0.0	0	0.0	144	7.9	5	2.2	323	10.0	472	7.1
Not Collected	3	1.4	16	1.3	13	0.7	0	0.0	77	2.5	109	1.6
Total	211	100.0	1193	100.0	1807	100.0	238	100.0	3231	100.0	6680	100.0

* 414 callers missing data

Table B-12. Callers by Type of Tobacco Use (Tobacco Users Only, n=7017)

Type of Tobacco Use	HWTF Status								DHHS		Total	
	Youth		Young Adults		Primary Caregivers/ School Employees		Pregnancy Group					
	#	%	#	%	#	%	#	%	#	%	#	%
Cigarette	170	77.3	1016	82.6	1675	91.6	227	93.8	3020	86.4	6108	87.0
Multiple*	26	11.8	136	11.1	78	4.3	8	3.3	121	3.5	369	5.3
Smokeless	11	5.0	18	1.5	36	2.0	0	0.0	53	1.5	118	1.7
Cigar	3	1.4	19	1.5	16	0.9	3	1.2	34	1.0	75	1.1
Other type of tobacco	1	0.5	2	0.2	1	0.1	0	0.0	4	0.1	8	0.1
Unknown	9	4.1	39	3.2	22	1.2	4	1.7	265	7.5	339	4.8
Total	220	100.0	1230	100.0	1828	100.0	242	100.0	3497	100.0	7017	100.0

* Callers who reported using cigarettes and some other form of tobacco were categorized as multiple tobacco users only.

Table B-13. Callers by Cigarette Frequency (Cigarette Users Only, n=6470)

Cigarette Use Frequency	HWTF Status								DHHS		Total	
	Youth		Young Adults		Primary Caregivers/ School Employees		Pregnancy Group					
	#	%	#	%	#	%	#	%	#	%	#	%
Every day	176	89.8	1043	90.6	1548	88.4	212	90.2	2646	84.3	5625	86.9
Some days	13	6.6	46	4.0	62	3.5	7	3.0	148	4.7	276	4.3
Not Collected	7	3.6	62	5.4	141	8.0	16	6.8	343	10.9	569	8.8
Total	196	100.0	1151	100.0	1751	100.0	235	100.0	3137	100.0	6470	100.0

Table B-14. Callers by Stage of Readiness to Change (Tobacco Users Only, n=7017)

Stage	HWTF Status								DHHS		Total	
	Youth		Young Adults		Primary Caregivers/ School Employees		Pregnancy Group					
	#	%	#	%	#	%	#	%	#	%	#	%
Precontemplation	5	2.3	7	0.6	6	0.3	0	0.0	17	0.5	35	0.5
Contemplation	5	2.3	26	2.1	25	1.4	2	0.8	89	2.5	147	2.1
Preparation	195	88.6	1074	87.3	1580	86.4	218	90.1	2696	77.1	5763	82.1
Action	6	2.7	73	5.9	183	10.0	18	7.4	385	11.0	665	9.5
Maintenance	0	0.0	3	0.2	5	0.3	0	0.0	19	0.5	27	0.4
Unknown	9	4.1	47	3.8	29	1.6	4	1.7	291	8.3	380	5.4
Total	220	100.0	1230	100.0	1828	100.0	242	100.0	3497	100.0	7017	100.0

Table B-15. Callers by Type of Service Requested (Tobacco Users Only, n=7017)

Call Program	HWTF Status								DHHS		Total	
	Youth		Young Adults		Primary Caregivers/ School Employees		Pregnancy Group					
	#	%	#	%	#	%	#	%	#	%	#	%
One-Call Program	71	32.3	479	38.9	624	34.1	111	45.9	1199	34.3	2484	35.4
Multi-Call Program	136	61.8	701	57.0	1168	63.6	125	51.7	1975	56.5	4105	58.5
General Questions	10	4.5	43	3.5	26	1.4	4	1.6	271	7.7	354	5.0
Materials Only	3	1.4	1	0.1	6	0.3	2	0.8	36	1.0	48	0.7
All Transfer Types	0	0.0	6	0.5	4	0.2	0	0.0	16	0.5	26	0.4
Total	220	100.0	1230	100.0	1828	100.0	242	100.0	3497	100.0	7017	100.0

Table B-16. Callers by First Call to QuitlineNC in 12 Months (Tobacco Users Only, n=7017)

Stage	HWTF Status								DHHS		Total	
	Youth		Young Adults		Primary Caregivers/ School Employees		Pregnancy Group					
	#	%	#	%	#	%	#	%	#	%	#	%
Yes	190	86.4	1044	84.9	1394	76.3	152	62.8	2404	68.7	5184	73.9
No	3	1.4	46	3.7	76	4.2	6	2.5	227	6.5	358	5.1
Not Collected	27	12.3	140	11.4	358	19.6	84	34.7	866	24.8	1475	21.0
Total	220	100.0	1230	100.0	1828	100.0	242	100.0	2497	100.0	7017	100.0

Table B-17. Youth and Young Adult Callers Who Currently Attend School (Tobacco Users Only, n=1450)

Currently Attending School?	HWTF Status				Total	
	Youth		Young Adults			
	#	%	#	%	#	%
Yes	151	68.6	386	31.4	537	37.0
No	37	16.8	678	55.1	715	49.3
Other*	32	14.6	166	13.5	198	13.7
Total	220	100.0	1230	100.0	1450	100.0

* Refused and not collected.

Table B-18. Current School Attended by Youth and Young Adult Callers (Tobacco Users Only, n=537)*

Current School Level	HWTF Status				Total	
	Youth		Young Adults			
	#	%	#	%	#	%
College	5	3.3	272	70.5	277	51.6
High School	125	82.8	108	28.0	233	43.4
Middle School	20	13.2	4	1.0	24	4.5
Grade School	0	0.0	1	0.3	1	0.1
Not Collected	1	0.7	1	0.3	2	0.4
Total	151	100.0	386	100.0	537	100.0

* Includes callers under 24 years old responding "Yes" to "Are you Currently Attending School?"

Table B-19. Youth and Young Adult Callers Who Are Currently Working (Tobacco Users Only, n=492)

Currently Working?	HWTF Status				Total	
	Youth		Young Adults			
	#	%	#	%	#	%
Yes	57	25.9	159	58.5	216	43.9
No	127	57.7	112	41.2	239	48.6
Other*	36	16.4	1	0.4	37	7.5
Total	220	100.0	272	100.0	492	100.0

Unknown, does not know, refused, and not collected.

*

Table B-20. Type of Employment for Youth and Young Adult Callers (Tobacco Users Only, n=216)*

Current Type of Employment	HWTF Status				Total	
	Youth		Young Adults			
	#	%	#	%	#	%
Part Time	42	73.7	87	54.7	129	59.7
Full Time	15	26.3	72	45.3	87	40.3
Total	57	100.0	159	100.0	216	100.0

* Includes callers under 24 years old responding "Yes" to "Are you Currently Working?"

Appendix C Data Tables for Fax Referral Service

Table C-1. How Callers Entered the Quitline (Tobacco Users Only, n=7017)

	HWTF Status								DHHS		Total	
	Youth		Young Adults		Primary Caregivers/ School Employees		Pregnancy Group					
	#	%	#	%	#	%	#	%	#	%	#	%
Fax Referral	1	0.5	35	2.8	178	9.7	48	19.8	463	13.2	725	10.3
Inbound English Phone Call	195	88.6	1066	86.7	1391	76.1	156	64.5	2487	71.1	5295	75.5
Inbound Spanish Phone Call	1	0.5	14	1.1	51	2.8	1	0.4	57	1.6	124	1.8
Web	20	9.1	97	7.9	180	9.8	35	14.5	404	11.6	736	10.5
Outbound Electronic Consult	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0
Outbound Self Referral	0	0.0	7	0.6	2	0.1	2	0.8	18	0.5	29	0.4
Re-enrollment	3	1.4	11	0.9	25	1.4	0	0.0	65	1.9	104	1.5
Inbound Warm Transfer	0	0.0	0	0.0	1	0.1	0	0.0	2	0.1	3	0.0
Total	220	100.0	1230	100.0	1828	100.0	242	100.0	3497	100.0	7017	100.0

Table C-2. Number of Fax Referrals by Month and Funding Source (Tobacco Users Only, n=723)

Month	Funding Source				Total	
	HWTF		DHHS			
	#	%	#	%	#	%
JUL 08	30	11.5	32	6.9	62	8.6
AUG 08	12	4.6	46	10.0	58	8.0
SEP 08	19	7.3	42	9.1	61	8.4
OCT 08	17	6.5	56	12.1	73	10.1
NOV 08	28	10.7	32	6.9	60	8.3
DEC 08	19	7.3	27	5.8	46	6.4
JAN 09	27	10.3	39	8.4	66	9.1
FEB 09	25	9.6	40	8.7	65	9.0
MAR 09	28	10.7	29	6.3	57	7.9
APR 09	24	9.2	38	8.2	62	8.6
MAY 09	17	6.5	41	8.9	58	8.0
JUN 09	15	5.7	40	8.7	55	7.6
Total	261	100.0	462	100.0	723	100.0

Appendix D
Data Tables for Promotion

Table D-1. How Year 4 Callers Heard About QuitlineNC (Tobacco Users Only, n=7017)

How Heard About Quitline	HWTF Status								DHHS		Total	
	Youth		Young Adults		Primary Caregivers/ School Employees		Pregnancy Group					
	#	%	#	%	#	%	#	%	#	%	#	%
Basketball/sporting event	1	0.5	1	0.1	3	0.2	0	0.0	0	0.0	5	0.1
Brochure/Newsletter/Flyer	2	0.9	27	2.2	80	4.4	10	4.1	149	4.3	268	3.8
Cigarette Pack (Quit Assist)	8	3.6	30	2.4	22	1.2	7	2.9	78	2.2	145	2.1
College Website	0	0.0	3	0.2	2	0.1	0	0.0	2	0.1	7	0.1
Community Organization	2	0.9	9	0.7	35	1.9	8	3.3	106	3.0	160	2.3
Employer/Worksite	0	0.0	3	0.2	54	3.0	1	0.4	58	1.7	116	1.7
Family/Friend	23	10.5	67	5.4	130	7.1	12	5.0	259	7.4	491	7.0
Health Department	7	3.2	20	1.6	42	2.3	31	12.8	88	2.5	188	2.7
Health Insurance	0	0.0	5	0.4	44	2.4	0	0.0	90	2.6	139	2.0
Health Professional	12	5.5	50	4.1	283	15.5	38	15.7	737	21.1	1120	16.0
Newspaper/Magazine	0	0.0	6	0.5	21	1.1	0	0.0	66	1.9	93	1.3
Other Type of Promotion	11	5.0	43	3.5	80	4.4	15	6.2	235	6.7	384	5.5
Outbound Re-enrollment Offer	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0
Outdoor Ad	1	0.5	12	1.0	15	0.8	2	0.8	36	1.0	66	0.9
Postcard in the Mail	0	0.0	1	0.1	1	0.1	0	0.0	0	0.0	2	0.0
Radio	33	15.0	267	21.7	278	15.2	19	7.9	314	9.0	911	13.0
Re-enrollment	2	0.9	5	0.4	10	0.5	0	0.0	41	1.2	58	0.8
School/College Event	8	3.6	12	1.0	10	0.5	2	0.8	14	0.4	46	0.7
Student Health Services	1	0.5	1	0.1	0	0.0	0	0.0	3	0.1	5	0.1
TV/Commercial	106	48.2	610	49.6	611	33.4	88	36.4	953	27.3	2368	33.7
TV/News	0	0.0	7	0.6	12	0.7	2	0.8	33	0.9	54	0.8
Website	1	0.5	36	2.9	74	4.0	5	2.1	90	2.6	206	2.9
Other*	2	0.9	15	1.2	21	1.1	2	0.8	144	4.1	184	2.6
Total	220	100.0	1230	100.0	1828	100.0	242	100.0	3497	100.0	7017	100.0

* Refused, does not remember, and not collected.

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