

North Carolina Health and Wellness Trust Fund Tobacco Initiatives

Independent Outcomes Evaluation 2009–2010 Annual Report

Prepared for: North Carolina Health and Wellness Trust Fund

Prepared by: UNC School of Medicine Tobacco Prevention and Evaluation Program



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Executive Summary

The North Carolina Health and Wellness Trust Fund (HWTF), created by the General Assembly in 2001 with 25% of the state's share of the tobacco Master Settlement Agreement, works to reduce and prevent tobacco use among youth and young adults in North Carolina through three major Tobacco Initiatives and two media campaigns:

- Teen Tobacco Use Prevention and Cessation Initiative (Teen Initiative) and the Tobacco.Reality.Unfiltered. (TRU) media campaign
- Tobacco-Free Colleges Initiative (Colleges Initiative)
- North Carolina Tobacco Quitline (QuitlineNC) and the “Call it Quits” media campaign

HWTF launched the Teen Initiative in 2003, began funding components of QuitlineNC in 2005, and expanded to the Colleges Initiative in 2006. HWTF has allocated the Tobacco Initiatives a total of \$94,327,664 in funding through 2010. Comprehensive, evidenced-based state tobacco control programs are a proven method, along with policy initiatives, to reduce tobacco consumption among youth and adults.

The University of North Carolina Tobacco Prevention and Evaluation Program (TPEP) provides independent outcomes evaluation of the HWTF Tobacco Initiatives. This evaluation report documents substantial accomplishments during fiscal year 2009–10 from the Tobacco Initiatives and makes recommendations to address current program challenges and opportunities.

The Tobacco Initiatives, in collaboration with other statewide programs and organizations, continue to play a large role in major tobacco control and cessation policy successes:

- Data from the 2009 NC Youth Tobacco Survey (NCYTS) show that since the HWTF began their Tobacco Initiatives in 2003, the state has over 53,000 fewer students who smoke cigarettes, reaching the lowest point ever in 2009. As of spring 2010, 218 youth groups across North Carolina are actively engaged in tobacco prevention efforts, the largest number in the state's history. The TRU media campaign appears to be reaching youth at greatest risk of smoking.
- The 2009 NCYTS shows that youth have historically low levels of exposure to secondhand smoke. Additional reductions in secondhand smoke exposure occurred in January 2010 with the implementation of HB2, North Carolina's comprehensive smoke-free restaurant and bar legislation.
- The Colleges Initiative has received national recognition as it continues to advance 100% tobacco-free college policy adoption across North Carolina, now protecting more than 175,000 college students and thousands of employees, staff, and visitors on over 40 campuses from secondhand smoke exposure.¹
- The state's tobacco cessation quit line, QuitlineNC, reaches youth, young adults and adults in all North Carolina counties, with cessation services that would not be available for many (i.e., tobacco users with no insurance or limited access to healthcare) through other means. In 2009–10 QuitlineNC reached 8,539 tobacco users, an 18% increase over the previous year. The State Health Plan comprehensive wellness initiative's new premium structure for tobacco users and provision of Nicotine Replacement Therapy (NRT) via the quitline was the primary driver of increased caller volume during Year 5. Estimates from the QuitlineNC vendor survey of callers seven months after Quitline registration show that between 742 and 2,322 callers successfully quit last year for at least 30 consecutive days.
- HWTF leadership continues to attempt implementation of many programs to strengthen existing services and improve outcomes. North Carolina's funding for its tobacco control programs continued in 2009–10 despite severe state fiscal uncertainties.

North Carolina's Tobacco Initiatives face challenges:

- The greatest challenge is maintaining sufficient funds to provide an effective comprehensive statewide program. Currently, HWTF funds the Tobacco Initiatives at 19% of the annual investment recommended by the Centers for Disease Control and Prevention (CDC) for North Carolina.
- The lack of continuous media campaigns for TRU and QuitlineNC have hurt overall program impact. QuitlineNC this year had substantially lower caller volumes during the first six months of the year, during which time there were no statewide media or other promotional efforts.
- The Teen Initiative's Community and Schools Grant program overemphasizes general prevention messages at the expense of more targeted, policy focused outcomes.
- Few successful efforts occur at counter-marketing of industry promotional practices, including the marketing of newer smokeless tobacco products.

Recommendations to improve programmatic outcomes include:

- Expand the tobacco mission to include funding for programs that target adult populations at high risk of tobacco-related diseases (e.g., adults with severe and persistent mental illness).
- Support pilot tobacco cessation treatment programs that target high risk adult tobacco users (e.g., cancer, chronic obstructive pulmonary disease diabetes, HIV, heart disease, etc.).
- Use independent evaluation results from the HWTF Colleges NRT pilot and the State Health Plan NRT project to inform potential expansion of free NRT distribution through the QuitlineNC.

Recommendations to improve policy outcomes include:

- Supporting statewide measures that result in further tobacco policy changes
- Expanding clean air legislation to private worksites.
- Implementing a tobacco tax stamp in NC to reduce smuggling (North Carolina is one of only two states in the nation without such a verification stamp).



Introduction

Tobacco use causes 12,200 deaths, 181,566 years of potential life lost and \$3.5 billion in lost productivity annually in North Carolina.^{2,3}

Nearly 90% of adult smokers start before age eighteen. North Carolina data show that 25.8% of high school students currently use tobacco products and 16.7% smoke cigarettes.⁴ Young adults in North Carolina, ages 18 to 24, have the highest smoking rate of any age group, at 24.1%.⁵ While 70% of adult smokers want to quit, only 4–7% of those who try on their own are successful each year.⁶

Multiple evidence-based strategies exist to prevent and reduce tobacco-related disease, including tobacco pricing policies, media campaigns, and implementation of comprehensive state tobacco programs. New research shows that smoke-free public spaces lead to substantial declines in hospital admissions for heart attacks and asthma.^{7,8}

HWTF Tobacco Initiatives include the components outlined by the CDC for effective tobacco control programs: state and community interventions, media campaigns, services to help smokers quit, and collecting data to track progress. The Tobacco Initiatives address four goals for tobacco prevention outlined by the CDC as they relate to youth and young adults:

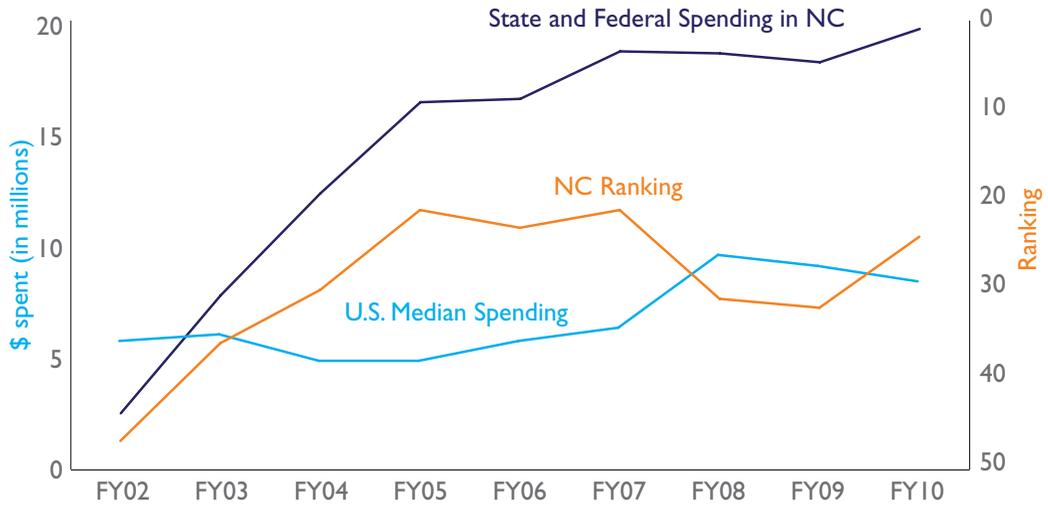
- (1) prevent youth and young adult initiation of tobacco use,
- (2) eliminate youth and young adult exposure to secondhand smoke,
- (3) promote cessation among youth and young adults, and
- (4) reduce health disparities attributable to tobacco use among youth and young adults.

The HWTF works to prevent youth initiation, protect North Carolinians from secondhand smoke exposure, and help smokers quit through three major Tobacco Initiatives: the Teen Initiative, Colleges Initiative, and QuitlineNC. The total funding allocated for the Tobacco Initiatives' for July 2009 through June 2010 was \$18.3 million.

Figure 1 shows North Carolina spending for tobacco control since the beginning of the Tobacco Initiatives and North Carolina's national rank in annual tobacco control spending. Total annual spending as represented in the figure includes funding from both the HWTF and CDC for other state tobacco initiatives. North Carolina's funding for tobacco prevention and cessation has remained stable the last year, and its national ranking improved from 32 to 24 as state median spending declined nationally.

This report highlights outcomes of the Teen Initiative, Colleges Initiative, and QuitlineNC for fiscal year 2009–10, assesses program progress in meeting objectives, and proposes recommendations for future directions and growth of the Initiatives. The University of North Carolina Tobacco Prevention and Evaluation Program (TPEP) provides an independent evaluation of the Tobacco Initiatives.

Figure 1. North Carolina's Annual Tobacco Prevention and Control Expenditures

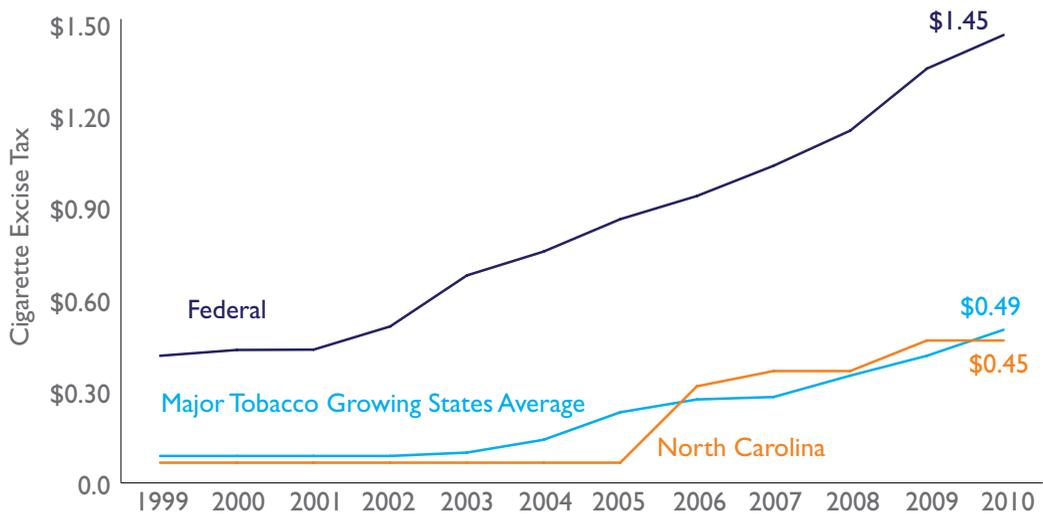


Source: CDC State System,⁹ Campaign for Tobacco-Free Kids¹⁰

North Carolina's Tobacco Prevention and Control Landscape, 2009–10

The HWTF continues to play a major role in leading and supporting tobacco prevention efforts in NC. In 2009–10, North Carolina became the 26th state to pass comprehensive smoke-free indoor air legislation. Tobacco use is also heavily influenced by the cost of tobacco products. In April 2009, the federal excise tax increased by one dollar per pack. North Carolina's current tobacco excise tax rate, compared to the national rate and other tobacco producing states, is shown in Figure 2.

Figure 2. North Carolina State Cigarette Excise Tax, 1999–2010



*Major tobacco growing states include: North Carolina, Kentucky, Tennessee, Virginia, South Carolina, and Georgia. Source: Campaign for Tobacco-Free Kids¹¹

The HWTF created the Teen Initiative in 2003 and began the fourth round of grant funding in July 2009. During fiscal year 2009–10, the Teen Initiative funded 42 local community and school grantees and four additional disparities-focused grantees. All 46 grantees conducted events designed to address the problem of youth tobacco use in North Carolina by focusing efforts towards prevention of tobacco initiation, promoting tobacco use cessation, and eliminating exposure to secondhand smoke.

In 2006, the HWTF launched the Tobacco-Free Colleges Initiatives, which entered its second phase in January 2008 and third phase in July 2010. The Colleges Initiative works to prevent and reduce tobacco use among North Carolina young adults through the promotion of tobacco-free policies and cessation services on college campuses across the state.

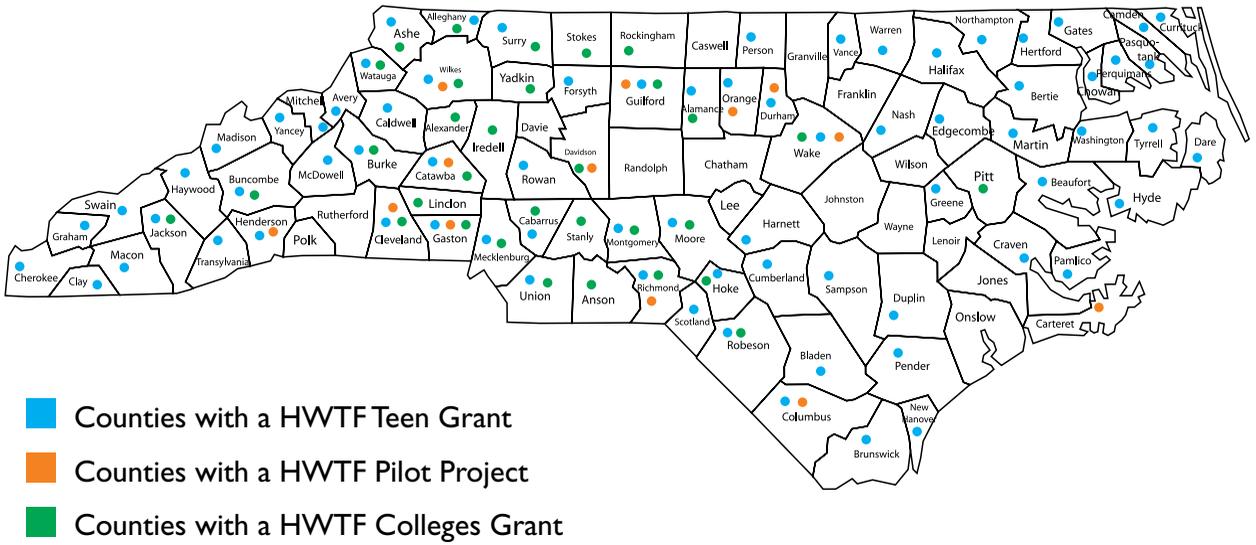
QuitlineNC was created in November of 2005 as a joint effort supported by the NC Tobacco Prevention and Control Branch and the HWTF. QuitlineNC is a telephone-based, tobacco cessation service that provides free coaching and support to all North Carolina residents who want to quit using tobacco.

Table 1 represents a timeline of important HWTF events since program inception and Figure 3 shows the geographic locations of the HWTF Tobacco Initiatives and pilot projects.

Table 1. Major HWTF Tobacco Program Events

Year	Key Program Events
2001	Master Settlement Agreement and creation of HWTF Commission.
2002	First allocation of state funds for tobacco prevention.
2003	HWTF-funded Teen Initiative begins work in schools and communities.
2004	Statewide TRU tobacco prevention television campaign launches HWTF increases funding for the Teen Initiative.
2005	QuitlineNC launches.
2006	North Carolina Tobacco-Free Colleges Initiative starts.
2007	Tobacco Free Schools legislation passes; all primary and secondary schools are tobacco free.
2008	Special legislative provision passes to permit recommendation and supply of over-the-counter NRT through QuitlineNC.
2009	HWTF launches “You Quit, Two Quit” pilot project for pregnant women. HWTF launches “Breathe Easy, Live Well” pilot project for severely and persistently mentally ill adults.
2010	\$94.3 million allocated by HWTF for Tobacco Initiatives through 2010 since inception.

Figure 3. Locations of HWTF Grantees and Pilot Projects



Methods

UNC TPEP utilizes multiple data sources for its outcomes evaluation, including the NC Youth Tobacco Survey (NCYTS), the tobacco evaluation and management system (“TEAMS”), the colleges online reporting system (“CORES”), the NC Behavioral Risk Factor Surveillance System, the TRU Media Evaluation survey, QuitlineNC call data (provided by the QuitlineNC vendor Free & Clear), and interviews and surveys across multiple pilot projects (Table 2). Previous Annual Outcomes Evaluation Reports of the HWTF Tobacco Initiatives can be found at www.tpep.unc.edu.

Table 2. TPEP Tobacco Initiatives Evaluation Data Sources

Evaluation Data Source	Initiative
Behavioral Risk Factor Surveillance System	Colleges, Teen, QuitlineNC
CORES indicator tracking system, policy surveillance	Colleges
Call data from Quitline vendor Free & Clear	QuitlineNC
TRU Media Evaluation Survey	Teen
TEAMS indicator tracking system <ul style="list-style-type: none"> • Monthly Data Entry • Semi-Annual Survey 	Teen
North Carolina Youth Tobacco Survey	Teen, QuitlineNC
Special Projects	Breathe Easy, Live Well; Old North State; TFS Compliance Study; Colleges NRT; ATS Study
Alcohol and Law Enforcement Annual Data	Youth Access to Tobacco Compliance



Grantees in the Teen Initiative Program submit monthly progress reports using a customized, web-based database system, TEAMS. Each quarter, using established criteria and reporting procedures, grantees enter data directly into the TEAMS database. Data entered by the grantees are compiled and analyzed by TPEP. Grantees also complete a semi-annual survey within TEAMS providing data on additional indicators such as perceptions of program progress and resources, support, and technical assistance. Indicator data are incorporated into quarterly and annual reports for the HWTF.

Colleges Initiative grantees submit monthly activities and progress using a customized online database, CORES. TPEP staff clean data each month and obtain verification of policy changes. Data are then compiled into quarterly and annual reports to the HWTF.

The QuitlineNC vendor, Free & Clear, collects, cleans, and manages all QuitlineNC caller intake data, utilization data, and end-of-program survey data on quit rates and caller satisfaction. Free & Clear sends raw data extracts for each month to TPEP, and TPEP extracts records for each unique caller for analysis.

In 2008, the HWTF started funding pilot projects including:

- *Breathe Easy, Live Well* — a project that supports the Southern Regional Area Health Education Center to pilot wellness groups promoting motivation to quit, physical activity, and improved nutrition among adults living with severe and persistent mental illness through psychosocial rehabilitation centers,
- *Colleges NRT Demonstration Project* — a pilot project to test the effectiveness of unpaid media combined with free NRT via QuitlineNC on increasing call volume among young adult college students,
- *Old North State Medical Society* — a pilot program to expand the focus of a Teen Initiative grantee to a stand-alone program designed to address tobacco use disparities by improving cessation services offered by African American physicians,
- *Teen Initiative Compliance Study* — a special evaluation to assess outcomes associated with Tobacco Free Schools policy compliance, and
- *Alternative to Suspension (ATS) Study* — a special evaluation to look at the success and challenges of implementing the ATS program across NC.

Results

Teen Initiative

Overview

The Teen Tobacco Use Prevention and Cessation Initiative (Teen Initiative) began in 2003 and continues to grow in the number of policy outcomes, organizations involved, and completed activities. Teen Initiative grantees plan and carry out activities designed to reduce tobacco exposure and use among youth in North Carolina. Grantee action plans, activities, and media events are aligned with the CDC’s best practices as defined by the Best Practices for Comprehensive Tobacco Control Programs.¹²

Smoking Prevalence among Youth

Efforts by the Teen Initiative, combined with state and federal tobacco control policy changes such as increased excise taxes and efforts by other state entities, have contributed to decreased youth smoking, decreased exposure to secondhand smoke and high levels of youth support for smoke free policies.

Smoking among North Carolina youth has continued to decline more rapidly than other groups in the state. Analyses of the NCYTS show that the prevalence of cigarette smoking among middle and high school students significantly decreased from 1999–2009 (15% to 4% and 32% to 17%, respectively). Prevalence decreased significantly more from 2003–2009 than 1999–2003 (Figures 4 and 5). This change is consistent with the initiation of a statewide youth prevention and cessation program funded by the NC Health and Wellness Trust Fund Commission and multiple state and federal tobacco excise tax initiatives. The prevalence of cigarette smoking among North Carolina youth is now consistent with or below national rates.

Figure 4. Declines in Cigarette Use among North Carolina Middle School Youth

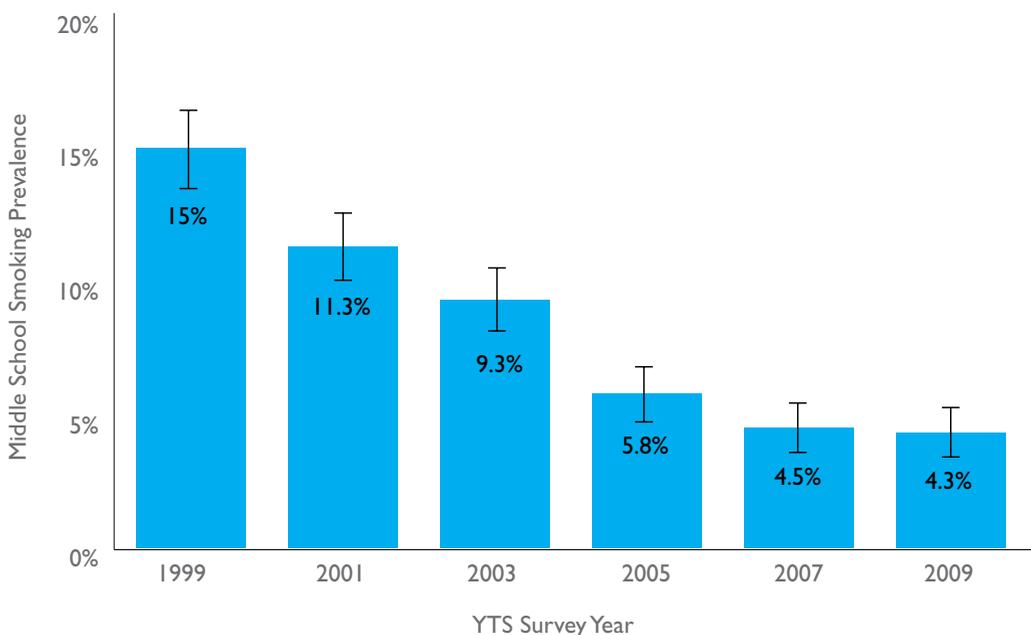
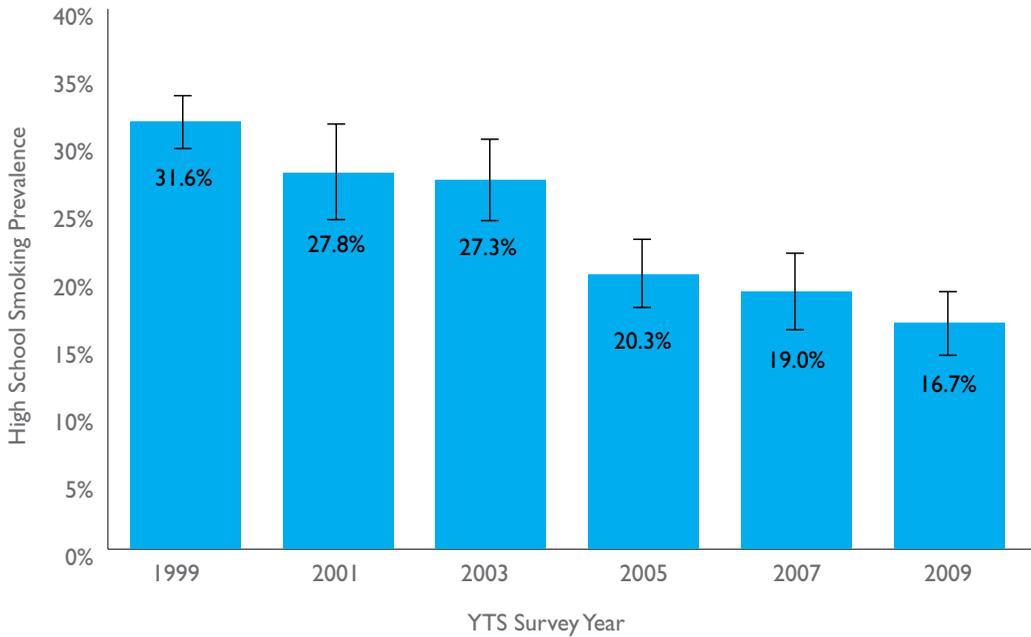


Figure 5. Declines in Cigarette Use among North Carolina High School Youth



Susceptibility to use cigarettes is defined as self-reported plans to use cigarettes in the near future among non-smoking middle and high school students. The 2009 NCYTS shows that students who are susceptible are more likely to report willingness to use or wear tobacco industry promotional items, believe it is safe to smoke for a year or two, and report having friends who use tobacco. Exposure to smoking environments and depictions of smoking in media also increase susceptibility.

While the 2009 NCYTS indicates that tobacco use has declined among middle and high school students, this has not occurred uniformly for all tobacco products. New smokeless products (snus, orbs, strips) are viewed as less risky alternatives to regular smokeless tobacco by a third of students. Students who have tried cigarettes, regular smokeless tobacco, cigars, pipes, and/or bidis, are more likely to view the new smokeless products as less risky. Prevention campaigns should be aware that new products and changing attitudes about these products may put youth at increased risk of tobacco use.

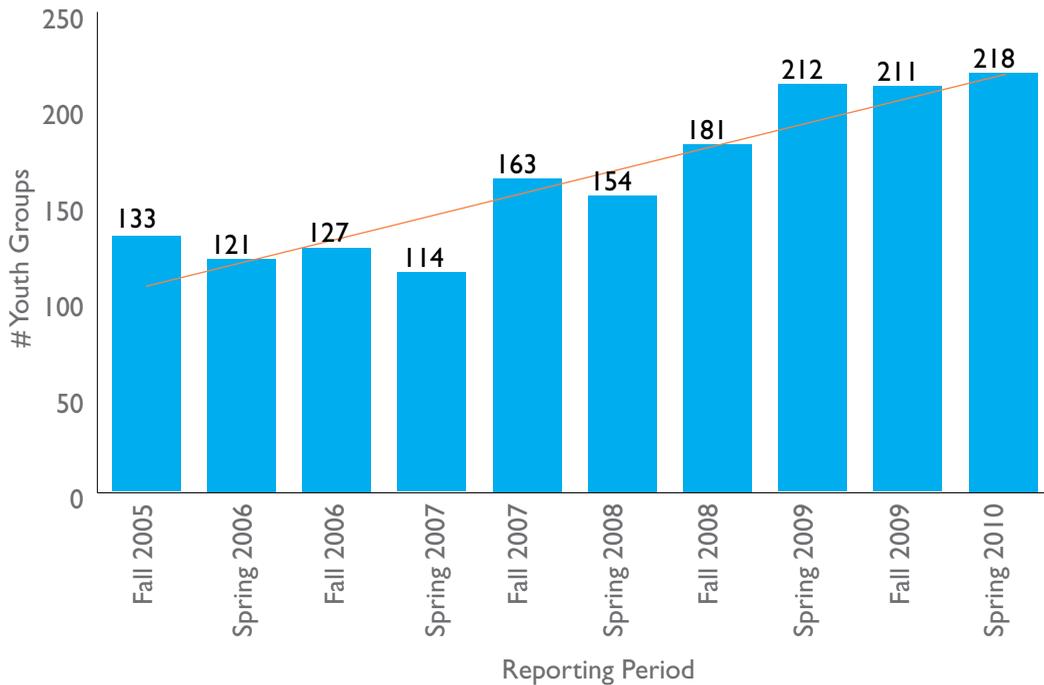
Teen Initiative Tobacco Use Prevention

Prevention of tobacco use is the broadest goal within the Teen Initiative. Grantees focus on providing youth empowerment opportunities, promoting awareness of the link between tobacco pricing and youth initiation, reducing tobacco sales to youth, and eliminating tobacco advertisements. Two new areas of focus highlighted by HWTF for Phase IV of the Teen Initiative include increasing awareness and adoption of evidence-based tobacco curriculums and educating parents and caregivers about youth tobacco risk and reduction.

Since the inception of the Teen Initiative, grantee efforts on providing opportunities to educate and empower youth has been an integral focus. Of all events targeted to the prevention of youth tobacco initiation, 86% were conducted within the area of youth empowerment. Grantees also focus on providing opportunities for youth to become leaders in conducting prevention activities across the Teen Initiative. Within the initiation goal area, youth led or implemented 64% of all activities.

The number of active youth groups funded by the Teen Initiative is steadily increasing, as shown by Figure 6. There has been an 80% increase in the number of reported active youth groups since spring 2006.

Figure 6. Number of Active North Carolina Tobacco Prevention Youth Groups, 2006–10



Teen Initiative TRU Media Campaign

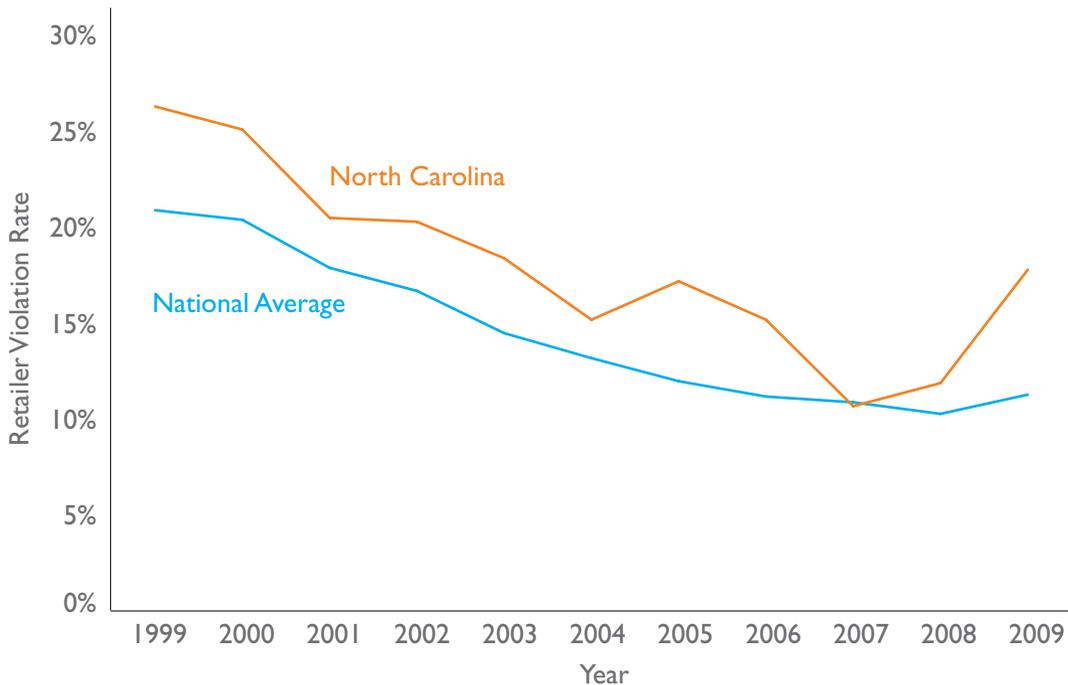
North Carolina’s tobacco youth tobacco prevention media campaign, Tobacco.Reality.Unfiltered. (TRU), did not run during the first eight months of the 2009–10 year. Television ads from the 2008–09 campaign began airing across the state in March and were on air for ten of the last 15 weeks of the fiscal year. Ads from the 2008–09 campaign featuring Reena, a young woman who began smoking at 13, developed cancer at 19, and underwent a tracheotomy at 21, were used again during this time. In addition to television spots, TRU ads were shown on Channel One in select schools, in 39 movie theaters across the state, and were featured on popular teen social and gaming websites. In addition to the Reena ads, a TRU group recruitment ad featuring real TRU youth aired between April and June 2010.

The 2008–09 TRU media survey reported high awareness of the TRU media campaign among North Carolina youth, with 77% of youth reporting confirmed awareness. Recognition of the TRU brand surpassed youth recognition of the national “truth” campaign brand for the first time. Results from the NCYTS, conducted in October 2009 three months after TRU ads went off the air, suggest that youth awareness of the campaign may have begun to decline. Sixty-three percent of middle school students reported awareness of TRU campaign ads in 2009 compared to 85% in 2007 and 62% of high school students reported awareness in 2009, compared to 89% in 2007. Recognition of TRU campaign slogans also decreased from 62% to 39% for middle school students and 68% to 49% for high school students. These results suggest potential negative consequences of the eight month media blackout (from July 2009 through February 2010) on overall TRU campaign reach and impact among North Carolina youth.

Access to Cigarettes among Youth

Limiting youth access to tobacco is one factor in youth smoking prevention efforts. Over the past ten years, retailer violations of youth access laws in NC have consistently declined. North Carolina violation rates remain higher than the national average (Figure 7). However, few youth report purchasing cigarettes directly; instead, most youth obtain cigarettes through “borrowing” them from acquaintances or asking adults to purchase them.

Figure 7. Reported Retailer Violation Rates, 1999–2009



Source: SAMHSA Synar Reports

Teen Initiative Tobacco Cessation

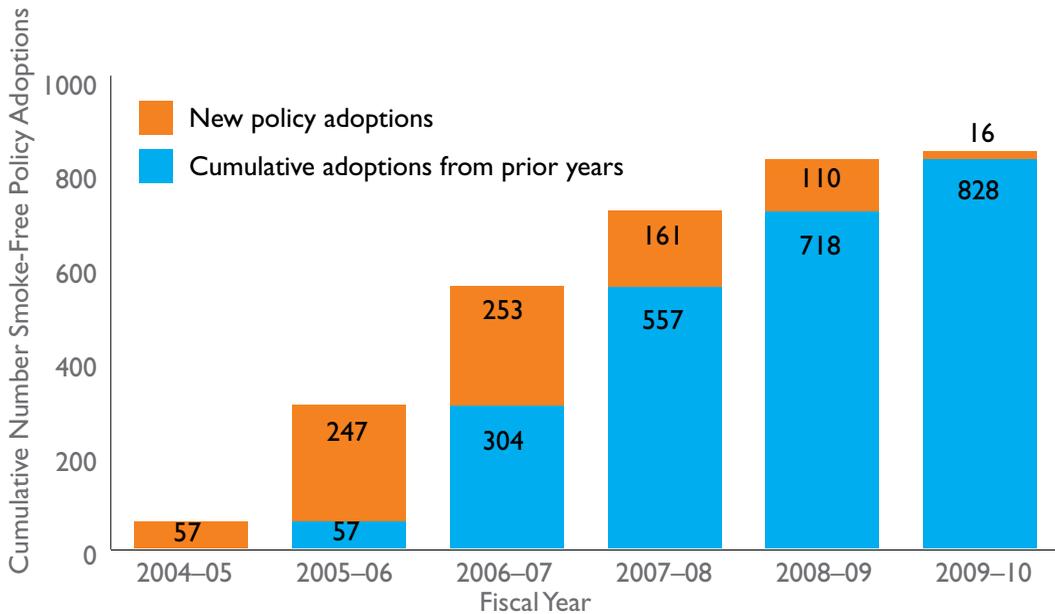
Tobacco cessation in the Teen Initiative focuses on providing access to effective tobacco cessation resources for youth. Activities include media and promotional messages, presentations, promoting community resources (e.g., QuitlineNC, counseling, etc.), and trainings for healthcare professionals. Grantees conducted 536 cessation events during fiscal year 2009–10, accounting for 8% of all Teen Initiative activity and media events conducted.

Youth Support for Smoke-Free Policies

Middle and high school youth report broad support for indoor and outdoor smoke-free policies. This support, even among young smokers, is normative and includes smoke-free cars and homes. This support can form the basis for renewed policy efforts at secondhand smoke exposure elimination in worksite and outdoor environments. Because knowledge about dangers of secondhand smoke remains consistently high, emphasizing health effects of secondhand smoke in campaigns may not result in additional gains.

Teen Initiative grantees reported 16 additional smoke-free policy adoptions this fiscal year. Since the inception of the Teen Initiative in 2003, grantees have contributed to 844 smoke-free policy adoptions in North Carolina. Figure 8 shows the cumulative total policy adoptions from 2004–10. Examples of venues that adopt smoke-free policies include restaurants, places of worship, recreational facilities, government and municipal facilities, healthcare facilities and tribal facilities.

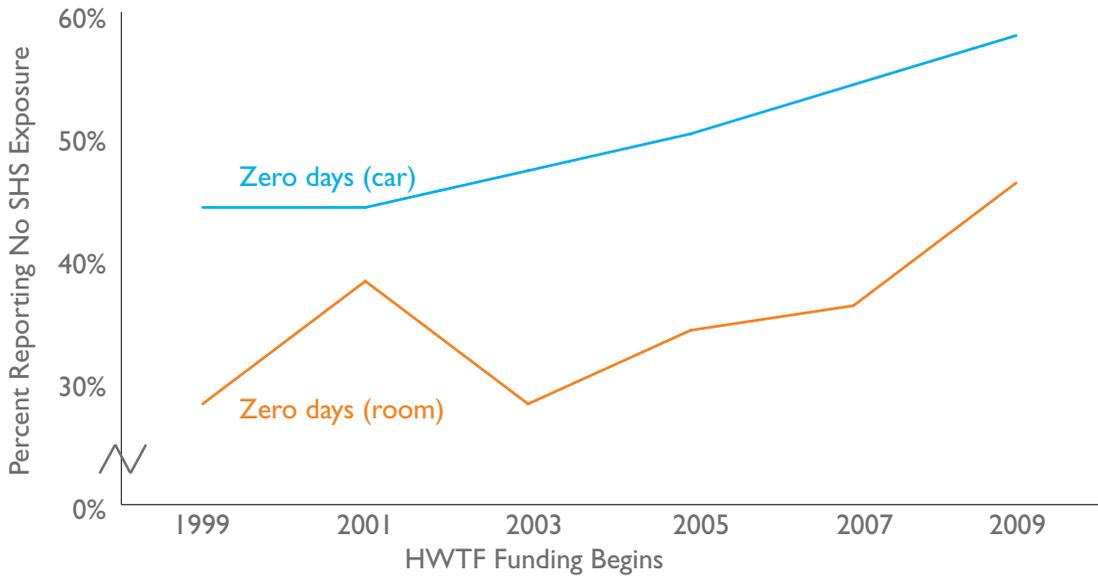
Figure 8. North Carolina Smoke-Free Policy Adoptions, 2004–2010 Total



Fewer smoke-free policy adoptions occurred because of the passage of House Bill 2 earlier in the year. A small number of outcomes occurred for policy adoption of tobacco use prevention curriculum in schools, removal of tobacco ads in stores, or adoption of ATS programs.

While the Teen Initiative has made many positive contributions, the absence of the TRU Media Campaign for much of the fiscal year combined with an overemphasis of general tobacco prevention activities and an underemphasis on policy outcomes, limited progress.

Figure 9. Youth Exposure to Secondhand Smoke in Rooms and Cars, 1999–2009



Declines in Secondhand Smoke Exposure for Youth

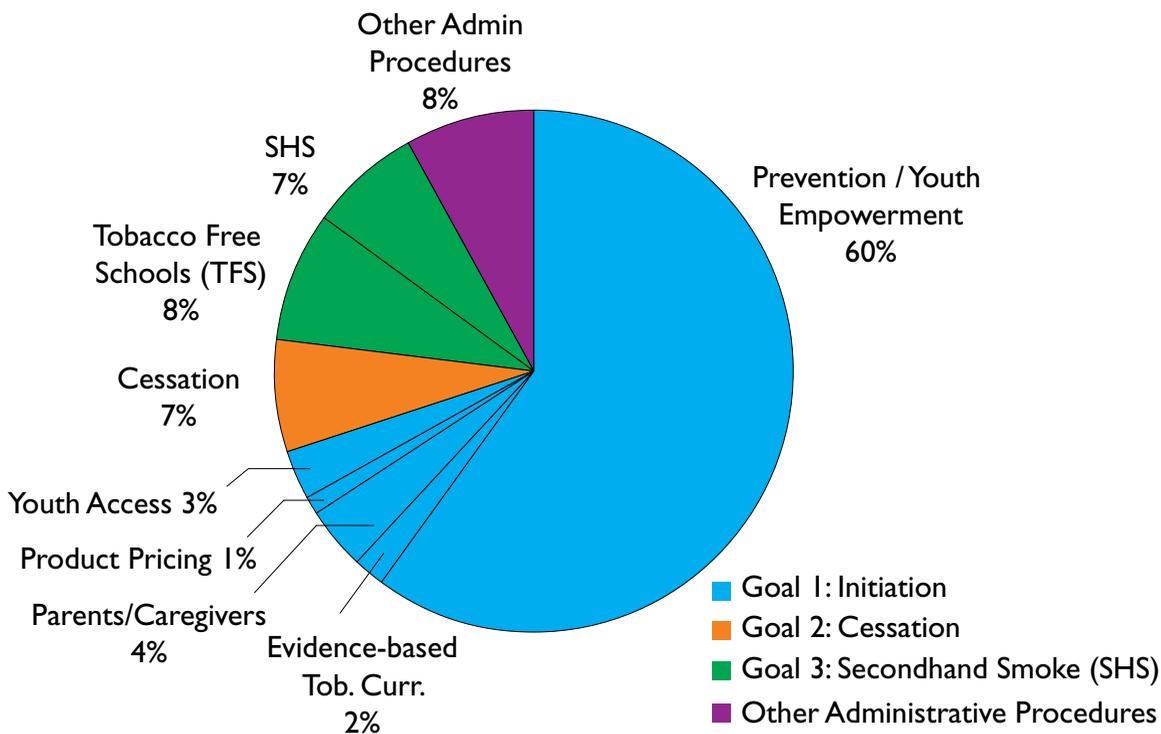
North Carolina youth report significant declines in exposure to secondhand smoke in cars and in homes over time. The percent of high school youth reporting not being in a room with a smoker has significantly increased since 1999 from 28% to 46% (Figure 9). By 2009, 58% of high school students reported no exposure in the past week in cars; this has significantly increased from 44% in 1999 (Figure 9). Declines in exposure appear to have accelerated since the HWTF started funding the Teen Initiative in 2003. Since these changes occurred before North Carolina’s recent implementation of comprehensive smoke-free restaurant and bar legislation, these improvements should accelerate.



Teen Initiative Progress toward Policy Outcomes

Grantees reported 7,128 activity and media events across all four goal areas. Events mainly occurred in the prevention of youth tobacco initiation, mostly within the youth empowerment focus area, while the remaining goal areas received less attention. All grantees worked in initiation and secondhand smoke, and most in cessation. Figure 10 represents the actual events conducted by focus area within the larger goal areas for all grantees as a proportion of all events conducted for fiscal year 2009–10.

Figure 10. Actual Events Conducted by Grantees by Goal Area, Fiscal Year 2009–10



While over three-quarters of all grantees report that they have achieved their overall program goals (86%) and are on target to achieve their program goals during the future (93%), extensive variation exists among grantees' perceptions of progress by focus area with nearly all reporting goal achievement within youth empowerment and just over half in the secondhand smoke and cessation focus areas (Table 3).

Table 3. Grantees' Reported Progress Toward Goals, 2008–2010

AAP Progress	Spring 2008 (N = 45)	Fall 2008 (N = 45)	Spring 2009 (N = 44)	Fall 2009 (N = 46)	Spring 2010 (N = 44)
On target to achieve program goals in the next six months	80%	73%	73%	80%	93%
Achieved overall program goals in the last six months	67%	36%	66%	65%	86%
Achieved goals related to Focus Areas:					
Youth tobacco prevention and empowerment	71%	60%	75%	89%	93%
100%Tobacco-free Schools (TFS)	49%	40%	59%	48%	66%
Product Pricing and Youth Initiation	16%	9%	23%	20%	48%
Smoke-free policies/ Second-hand smoke	20%	9%	36%	54%	57%
Cessation	31%	16%	52%	63%	75%
Priority Populations	29%	29%	34%	24%	41%

Teen Initiative Priority Populations

During the fiscal year 2009–10, the NC Health and Wellness Trust Fund reemphasized the need for grantees to tailor interventions to target nine identified populations that experience tobacco-specific health disparities. The program shifted its focus from activities/media events reaching priority populations to culturally tailoring activities and events targeting a specific priority population. The nine identified priority populations for the Teen Initiative include African Americans, Native Americans, Asian Americans, Latino/Hispanic, LGBT (Lesbian, Gay, Bisexual and Transgendered), Pregnant Teens, Low SES, Low Literacy, and Disabled. Research Triangle Institute (RTI) is responsible for providing health disparity and cultural tailoring technical assistance to grantees. During fiscal year 2009–10, RTI has primarily reached the four priority population grantees. Additional technical assistance for other non-priority population grantees will occur during fiscal year 2010–11.

Nearly half of grantees reported culturally tailoring at least one activity/media event during fiscal year 2009–10, accounting for 4% of all reported activity and media events.

Tobacco-Free Colleges Initiative

Overview

The Colleges Initiative works to prevent and reduce tobacco use among North Carolina young adults through the promotion of tobacco-free policies and cessation services on college campuses across the state. Phase I of the Colleges Initiative began in January 2006 with \$1.6 million in grant funding. After two successful years and 53 policy adoptions on North Carolina campuses, the Initiative was expanded in January 2008 with an additional \$1.4 million in Phase II funding.

Twenty-six funded grantees worked with 64 accredited public and private colleges, universities, and community colleges. Phase I funded 18 programs on 47 campuses from 2006 and 2007 and Phase II funded 14 programs on 42 campuses from January 2008 through June 2010. Six grantees and 26 campuses have participated throughout the Initiative.

Tobacco Use Is Higher among 18 to 24 Age Group

Young adults, age 18 to 24, continue to have the highest rates of smoking among all age groups in North Carolina, with 24% identified as current smokers.⁵ Even with recent declines in smoking among this population, national statistics report one quarter (25%) of college students smoked during 2008.¹³ Over 80% of North Carolina college students reported weekly exposure to secondhand smoke in 2006.¹⁴ Nearly 67% of North Carolina young adult smokers have made quit attempts in the last year.⁵ Young adults attending college are exposed to intensive marketing by the tobacco industry.¹⁵

North Carolina Leads the Nation in Voluntary Tobacco-Free Policy Adoption on College Campuses

As of June 2010, 40 North Carolina campuses have adopted 100% Tobacco-Free Policies (i.e., no tobacco use anytime, anywhere or, for UNC System campuses, the most protective policy allowed by law: no smoking within 100 feet of each building, Table 4).

Grantee efforts make the Colleges Initiative a national leader in voluntary smoke- and tobacco-free policy adoption on college campuses.¹ The 40 smoke- or tobacco-free policies in North Carolina (Figure 11) now protect over 175,700 North Carolina college students.¹⁶ Twenty-nine (73%) of the 100% tobacco-free policy adoptions occurred with the support of HWTF grantees. Prior to the Colleges Initiative, only one campus in North Carolina had adopted a 100% tobacco-free policy.

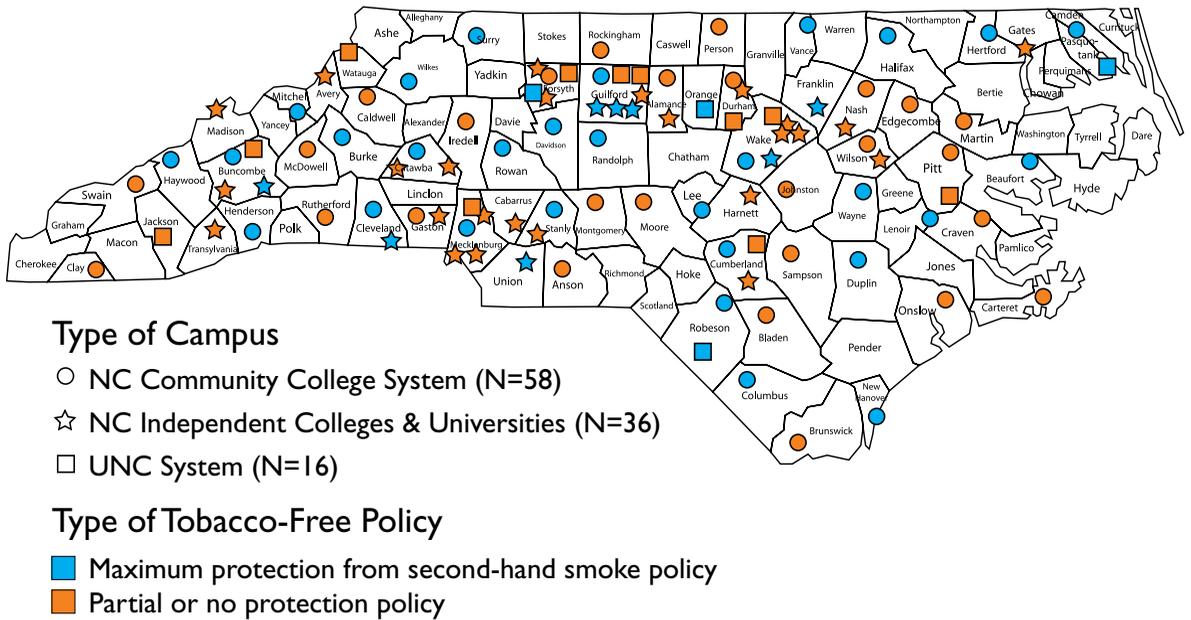
In the 2009–10 fiscal year:

- Five Phase II grantees reported five new 100% tobacco-free campus policies adopted at Central Piedmont Community College, Forsyth Technical Community College, Rowan-Cabarrus Community College, Wilkes Community College, and Surry Community College.
- Three campuses that participated in Phase I adopted new 100% tobacco-free campus policies: Lenoir Community College, Halifax Community College, and Beaufort County Community College.
- Three additional colleges independent of the Initiative's grantees adopted 100% tobacco-free policies: Randolph Community College, Mayland Community College, and Southeastern Community College.
- Grantees reported six additional policy changes, including new perimeter, off-campus venue, prohibition on tobacco sales, prohibition on tobacco marketing, or campus organization policies.

Table 4. 100% Tobacco- or Smoke-Free Policies, North Carolina, June 2010

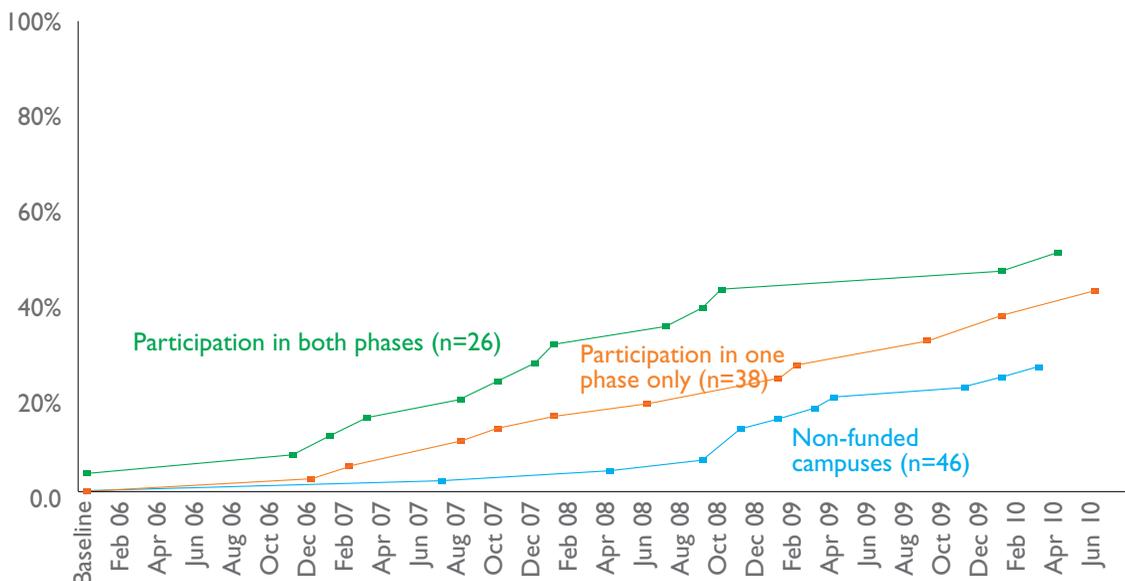
#	Campus	Date Enacted
1	Bennett College	Pre-grant: 2004
2	Gardner-Webb University	November 2006
3	College of the Albemarle	December 2006
4	Stanly Community College	January 2007
5	Asheville-Buncombe Technical CC	February 2007
6	Cleveland Community College	March 2007
7	Haywood Community College	July 2007
8	Greensboro College	August 2007
9	Wake Technical Community College	August 2007
10	Roanoke-Chowan Community College	August 2007
11	UNC-Chapel Hill	October 2007
12	Guilford Technical Community College	October 2007
13	Winston Salem State University	December 2007
14	Wingate University	January 2008
15	Montreat College	January 2008
16	Louisburg College	April 2008
17	Elizabeth City State University	June 2008
18	UNC-Pembroke	July 2008
19	Peace College	September 2008
20	High Point University	September 2008
21	Catawba Valley Community College	October 2008
22	Blue Ridge Community College	November 2008
23	Central Carolina Community College	November 2008
24	Wayne Community College	November 2008
25	Davidson County Community College	January 2009
26	Cape Fear Community College	January 2009
27	Richmond Community College	January 2009
28	Western Piedmont Community College	February 2009
29	Vance-Granville Community College	March 2009
30	Central Piedmont Community College	September 2009
31	Forsyth Technical Community College	September 2009
32	Randolph Community College	November 2009
33	Lenoir Community College	January 2010
34	Rowan-Cabarrus Community College	January 2010
35	Wilkes Community College	January 2010
36	Mayland Community College	January 2010
37	Southeastern Community College	March 2010
38	Surry Community College	April 2010
39	Halifax Community College	June 2010
40	Beaufort County Community College	June 2010

Figure 11. Map of 100% Tobacco-Free Policies and Comprehensive Campus Tobacco Policies as of June 2010



A higher percentage of campuses participating in the Initiative adopted tobacco-free policies than among non-participating campuses (Figure 12).

Figure 12. Percent of North Carolina Campuses Adopting Tobacco-Free or Comprehensive Policies from Phase I Baseline to June 2010



During the 2009–10 fiscal year, grantees reported substantial work building support for policy adoption, addressing policy compliance, and promoting QuitlineNC.

- Grantees reported 4 new policies placed under formal consideration by campus administrators.
- Grantees reported collecting 3,098 petition signatures showing support for campus policy adoption in 60 petition drives.
- Grantees reported a total of 278 meetings/presentations, 56 earned media messages, and five paid media messages to build support for policy adoption.
- Grantees reported a total of 319 meetings/presentations, 96 earned media messages, and nine paid media messages building support for policy compliance.
- Grantees held 466 QuitlineNC promotions (e.g., campus-wide events, presentations at meetings) and 150 media messages to promote QuitlineNC.
- Grantees reported 37 meetings with campus-based health providers to promote QuitlineNC fax referral service and 28 meetings to promote the 5A's.
- Administratively, grantees reported recruiting 125 new coalition members, 56% of whom were upper level administrators, faculty or staff members on campus.

In addition to smoke- and tobacco-free policy adoptions, the Initiative's grantees have helped campuses adopt 70 policies that helped provide healthier environments for college students (Table 5). Each X represents a policy adopted between 2006 and June 2010.



Table 5. Policies Promoting Healthier Environments on Participating Campuses — Type and Location, 2006–June 2010

Campus	Type of Policy Restriction			
	Area [#]	Off-Campus	Industry Promotion ⁺	Campus Org.
Appalachian State University	X	X	XX	
Beaufort Community College	X			
Belmont Abbey College	XX			
Caldwell Community College	XX		XX	
Carolinas College of Health Sciences and Mercy School of Nursing	X			
College of the Albemarle		XX		
East Carolina University	XX			
Forsyth Technical Community College			X	
Greensboro College, Bennett College, Guilford Technical Community College, Guilford College		XX		
High Point University	XX		X	
Montreat College		X	XX	
NC Central University	X			
Rockingham Community College	X			
Sandhills Community College	X			
South Piedmont Community College	X			
Stanly Community College	XX			
Surry Community College	X	XXXXXX	XX	
UNC-Chapel Hill	X			XXXXX
UNC-Charlotte	XX			
UNC-Greensboro			X	
UNC-Pembroke	X			
Wake Forest University	X			
Western Piedmont Community College			XX	XX
Wilkes Community College	XXX	X	XX	XXXXXXXX
Wilson Technical Community College	XX			
TOTAL: 70 Policies Adopted	28	13	15	14

[#] Perimeter and designated area policies, ⁺bans on sales, promotions, and/or marketing activities

Note: Campuses can report multiple policies. Each new policy change (e.g., certain areas made smoke-free, limiting smoking near campus health, residential housing smoke-free policy, etc.) was counted. Campus organization policy changes were counted once per organization (e.g., student government, Spanish club, etc.).

QuitlineNC

Overview

More than half of all adult and young adult smokers in North Carolina have attempted to quit smoking in the last year and the percentage of smokers who report a quit attempt in the past year continues to steadily increase.⁵ Ongoing changes in tobacco control policies at both the state and federal level will likely continue to encourage more smokers to make a quit attempt. While most tobacco users want to quit, many are unsuccessful without support. Thus, it is critically important to have the policies and programs in place to improve access to resources that support quitting.

Program Approach

The North Carolina Tobacco Quitline (QuitlineNC) is a telephone-based, tobacco cessation service that provides free support to all North Carolina residents who want to quit tobacco. Research shows that quitlines are an effective and evidence-based approach to tobacco cessation. Proactive quitlines, like QuitlineNC, significantly increase quit rates even further.¹⁷

Fiscal year 2009–10 constitutes QuitlineNC Year 5. From its launch in late 2005 through June 2009, QuitlineNC was jointly funded by the HWTF and the Tobacco Prevention and Control Branch (TPCB) in the NC Department of Health and Human Services. The HWTF provided funding for all QuitlineNC callers for the first six months of fiscal year 2009–10. During the second six months, the State Health Plan (SHP) funded all calls from SHP members and, beginning in April 2010, an American Recovery and Reinvestment Act (ARRA) grant to the TPCB funded all callers who had no health insurance or were covered by Medicaid.

QuitlineNC completed its first year of operation in October 2006. Due to changes in the HWTF's fiscal year for QuitlineNC, the eight month period between November 2006 and June 2007 constituted Year 2. Data from the 20-month start up period of Years 1 and 2 are combined for evaluation purposes. Beginning in Year 5, callers who registered for Quitline services more than once during the fiscal year are counted only once. Previous year reports did not account for multiple registrations per caller and may thus provide slight overestimates of caller volume.

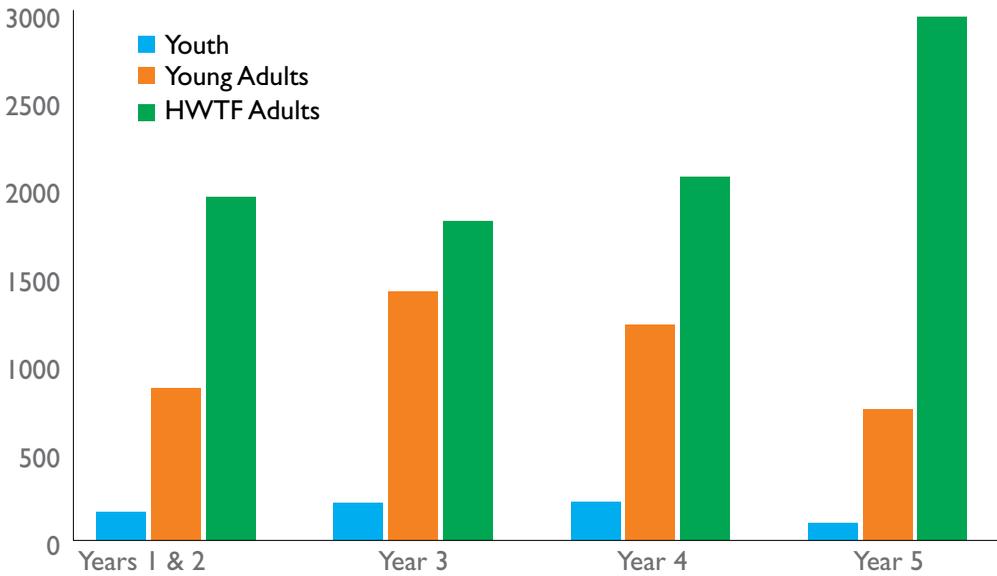
QuitlineNC HWTF Group Caller Volume

Since its launch in November 2005, QuitlineNC has provided services to over 28,000 North Carolinians who use tobacco, including 13,778 tobacco users from HWTF target populations (Figure 13). In Year 5, 8,539 tobacco users called QuitlineNC from all 100 counties, an 18% increase over Year 4. Among all tobacco using callers, 45% (3,822) were from target HWTF caller groups:

- 98 youth ages 17 and younger,
- 745 young adults ages 18–24,
- 2,660 adults who are primary caregivers, teachers, or childcare providers to youth, and
- 319 women who are pregnant, planning a pregnancy, or within 12 months post-partum (among pregnancy-group callers, eight were youth and 131 were young adults).

The number of HWTF group callers increased 8% between Years 4 and 5. However, substantially fewer youth and young adults called QuitlineNC in Year 5 compared to previous years. With the highest prevalence of smoking, young adults are a critical group to reach with cessation services and have traditionally been a target population for HWTF promotional efforts. The decline in young adult caller volume during Year 5 warrants attention in planning ongoing promotion and outreach.

Figure 13. Total HWTF Group Callers by Year, (N=13,778)*



*Youth and young adult callers who fall into a pregnancy category are counted in age group categories for purposes of trend analysis.

Source: Free & Clear

QuitlineNC reach remains lower than the national median for adult callers. In Year 5, 0.46% of North Carolina’s adult smokers called QuitlineNC (median = 1.2%) and 0.45% completed at least one coaching call (median = 0.68%). Year 5 reach for youth and young adult callers was lower, with 0.12% of all North Carolina youth smokers calling QuitlineNC and 0.09% completing a coaching call, and 0.34% of all young adult smokers calling and 0.27% completing a coaching call.

QuitlineNC Promotional Efforts and Monthly Caller Volume

No wide scale HWTF funded promotional efforts or media occurred during the first eight months of Year 5. As a result, during the first six months caller volumes were dramatically lower than observed in the same months during Year 4 (Figure 14).

Beginning in January, all members of the SHP could receive free nicotine replacement therapy (NRT) through QuitlineNC. Additionally, changes to the SHP premium structure allowed members who smoke to avoid being placed in a higher premium plan if they registered for QuitlineNC coaching services. The SHP comprehensive wellness initiative’s new premium structure for tobacco users and provision of NRT via QuitlineNC was the primary drive of increased caller volume during Year 5. Caller volume spiked most dramatically during the SHP plan enrollment period in March and April, during which time SHP members accounted for 60% to 70% of all callers and of HWTF-group callers (Figure 15). Overall, 36% of all QuitlineNC callers were SHP member in Year 5, compared to only 5.8% in Year 4.

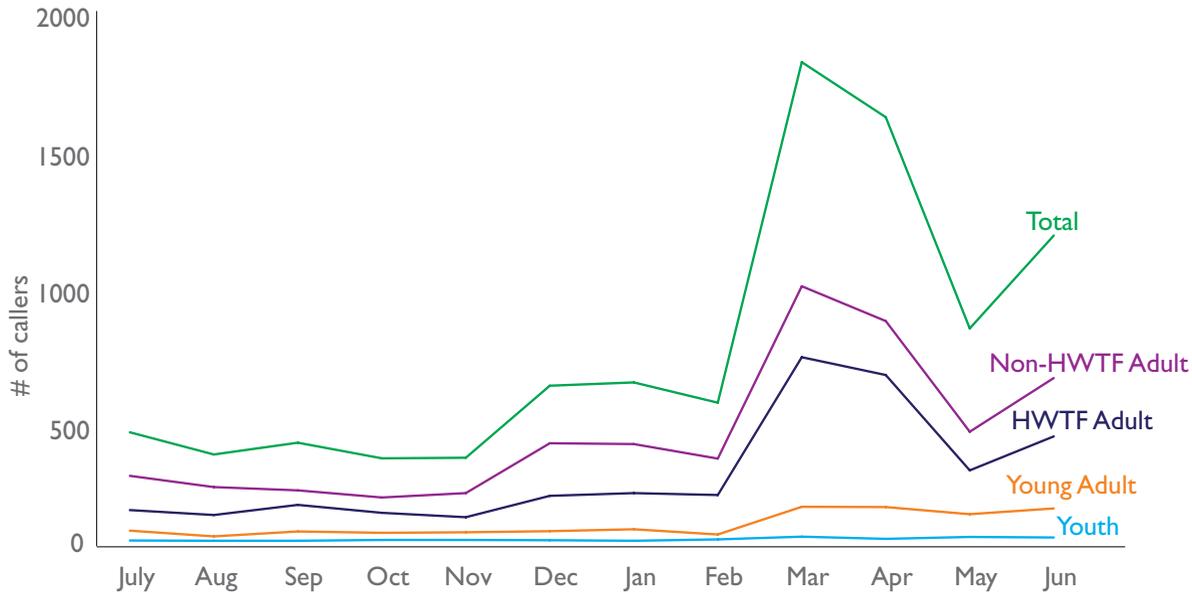
Television and radio ads from the HWTF “Call It Quits” media promotional campaign used during Year 4 began airing in March and continued through the end of the fiscal year. While the campaign was targeted to young adults, the media buy emphasized ad placements that would reach both young adults and adults when

possible. From March to June 43%–63% of young adult callers reported hearing about QuitlineNC via radio or television ads, suggesting that the Call It Quits campaign reached its target audience. The media campaign appears to have increased adult caller volumes, with 38.5% of adult callers not covered by the SHP citing TV or radio as the source for hearing about QuitlineNC in March through June.

The HWTF piloted two promotional efforts in Year 5 that resulted in limited numbers of calls to QuitlineNC. Beginning in October, full time students ages 18–29 at five North Carolina college campuses could receive free NRT through QuitlineNC, and 34 students enrolled from October through March. Eligibility was expanded to all college students ages 18–29 at the end of March, slightly increasing utilization to 145 callers. The HWTF piloted a mobile texting promotion in the Raleigh Durham Chapel Hill market during June. The pilot was promoted via radio ads promoting QuitlineNC and encouraging tobacco users to sign up for a series of free text messages with tips for quitting and additional encouragement to call QuitlineNC. While 740 people signed up for the text messages, only 10 of those called QuitlineNC.

Among all callers to QuitlineNC, the five most frequently cited sources of information about the Quitline were health professionals, health insurance, employer or worksite, TV commercial, and family or friends. The “top five” list clearly reflects the influence of the SHP benefit change and the lack of a media campaign presence for much of the year. During Year 4 health insurance and employer/worksites were listed by only 3.7% of all QuitlineNC callers and TV ads were listed by 33.7% of callers.

Figure 14. Overall QuitlineNC Caller Volume, July 2009–June 2010 (N=8,539)



Source: Free & Clear

Figure 15. Adult (25 and over) Caller Volume by SHP Group, July 2009–June 2010 (N=7,696)



QuitlineNC Awareness Growing

Data from the NC Behavioral Risk Factor Surveillance System indicate that QuitlineNC awareness reached a high of 57% in 2009, a significant 21% increase over 2008 awareness and the first time awareness has reached over 50%.^{18,5} Awareness among North Carolina middle and high school students is lower, at 40% for middle school students and 37% for high school students (2009 NCYTS). While increases of awareness have occurred concurrently with increases in utilization of QuitlineNC among adult smokers, utilization does not appear to be as high as should be expected given that over half of North Carolina smokers are aware of QuitlineNC.

HWTF Target Populations Using QuitlineNC

QuitlineNC reached 3,882 youth, young adults, primary caregivers, school and childcare employees, and women in various stages of pregnancy between July 2009 and June 2010. Among these HWTF group callers:

- 26% (1,000) of callers were African American,
- 2% (79) were American Indian,
- 3.5% (138) of callers were Hispanic,
- 2% completed calls in Spanish,
- 23% (874) of callers had no health insurance coverage,
- 13% (501) or were covered by Medicaid,
- 86% indicated they were ready to quit within 30 days, and
- 88% of callers who smoked cigarettes smoked every day.

Among all callers, QuitlineNC had less success reaching populations who experience disparities in tobacco use, effects of tobacco-related diseases, and limited access to healthcare and other cessation resources, compared to Year 4. Black smokers are the only disparity caller group utilizing QuitlineNC in numbers equal to or higher than their proportion of adult North Carolina smokers.

Fax Referral Utilization Increases

QuitlineNC's fax referral service allows health professionals to connect their patients to the Quitline. HWTF grantees engage in varying levels of outreach to healthcare providers to promote the fax referral service. No large-scale fax referral specific promotions were conducted by the HWTF during Year 5. The NC Tobacco Prevention and Control Branch conducts outreach and educational efforts related to the fax referral with healthcare providers around the state. NC Prevention Partners leads an ongoing "Fax Referral Challenge" to encourage hospital-based healthcare providers to use the fax referral service. In Year 5, providers across the state sent nearly 2,300 fax referrals, resulting in 1,011 callers registering with QuitlineNC. The high number of fax referrals not resulting in QuitlineNC registration highlights the challenges involved in training providers to use the fax referral service in an optimal way (i.e., providing sufficient information and support and ensuring that tobacco users are motivated to quit) as well as in reaching potential callers who are highly mobile and may not answer initial QuitlineNC calls for a number of reasons.

Twelve percent of all callers entered QuitlineNC via fax referral in Year 5, slightly higher than Year 4 (10%). Among HWTF group callers, 10% entered via fax referral, a slightly greater percentage than Year 4 (7.4%). Pregnancy group callers were more likely than other groups to enter via fax referral. Monthly fax referral patterns for adult callers were similar to patterns in caller volume, with higher number of referrals occurring during the second half of the fiscal year; it is likely that the SHP changes heavily contributed to this increase.

Quit Rates and Satisfaction

Quit rates are estimated by the QuitlineNC vendor, Free & Clear, using results from a seven month end-of-program survey conducted with a sample of QuitlineNC callers. Estimated quit rates are based on the number of HWTF-group callers who responded to a follow-up survey and reported being tobacco-free for 30 days. Quit rates are reported in two ways. Respondent quit rates use only those callers who complete a follow-up survey and thus provide an overestimate of the actual quit rate. Intent-to-treat quit rates include all callers in the survey sample, assume that non-respondents are continued tobacco users, and thus provide an underestimate of the actual quit rate.

The accuracy of each quit rate measure depends on the survey response rate. Because of the low survey response rate achieved in the Year 5 follow-up survey, both respondent and intent-to-treat quit rates are reported.

Analysis by QuitlineNC vendor, Free & Clear, shows an intent-to-treat 30-day quit rate of 8.7% for all callers, unchanged from the 8.6% rate reported in Year 4. Intent-to-treat quit rates assume that all survey non-respondents are continued smokers, and thus underestimates the true quit rate among all QuitlineNC callers. The respondent quit rate was 27.2%, comparable to the 25.9% rate observed in Year 4. The respondent rate does not account for the smoking status of survey non-respondents and thus overestimates the true quit rate among all QuitlineNC callers.

The true quit rate for QuitlineNC callers lies between the 8.7% intent-to-treat estimate and the 27.2% respondent estimate. Using these estimates, between 724 and 2,322 QuitlineNC callers quit their tobacco use in Year 5.

Special Projects

Breathe Easy, Live Well: A Pilot Project to Promote Tobacco Cessation and Wellness in Mental Health Clubhouses

Individuals with severe and persistent mental illness are substantially more likely to use tobacco.¹⁹ Despite similar motivation to quit and successful quit attempts when services are provided, few programs address tobacco use in this underserved population. HWTF and the Southern Regional Area Health Education Center piloted “Breathe Easy, Live Well” a project to implement groups that promote wellness and tobacco cessation in clubhouses across North Carolina. Clubhouses are voluntary day centers for individuals with severe and persistent mental illness. TPEP conducted an evaluation by interviewing staff and surveying participating clubhouse members (i.e., clients).

Staff and members viewed the groups as effective, beneficial and successful. Staff reported new policies limiting tobacco use, and participating members reported substantial interest in tobacco-free spaces and quitting or reducing tobacco consumption at the end of the program. Participating members also reported high levels of knowledge about the harms of tobacco use and the perception of increased discussions about tobacco with medical providers (Table 6). Achievements of Breathe Easy, Live Well seem particularly impressive given the nature of service delivery after changes to the state’s mental health systems.

Table 6. Clubhouse Member’s Attitudes and Self-reported Behaviors (n=107)

Participating members’ perceptions of all clubhouse members after the curriculum	% Yes
More awareness of bad health effects of secondhand smoke among members	79%
More interest in quitting because of the group	77%
More likely to talk to medical providers about quitting because of the group	66%
More interest in new “no-tobacco” areas	64%
Participating members’ self-reported behaviors	
Would attend clubhouse even if tobacco banned inside and outside (non tobacco user)	91%
Would continue attending clubhouse even if tobacco banned inside and outside (tobacco user)	86%
Quit or cut down on tobacco use because of the group (tobacco users)	81%
Tobacco-free clubhouse policies make quitting easier (tobacco users)	73%



Colleges NRT Demonstration Project

HWTF launched a Colleges Nicotine Replacement Therapy (NRT) Demonstration Project in October 2009 to test the feasibility of increasing QuitlineNC call volume from young adults using small-scale, unpaid media and free NRT during a six month period. Other states have successfully increased call volume by adding free or heavily subsidized NRT to quitlines, but all factors determining success are not known.

Call volume increased during the intervention period compared to the baseline period. A control group of colleges saw no changes in the same time period. The changes in call volume achieved statistical significance when compared to the prior three months. Unpaid, small-scale media can increase call volume. In spite of this finding, the Demonstration Project failed to make a programmatic impact even after it was expanded to cover all colleges in the state. Because of the scale of unpaid media and the small study population, the total call volume was small (34 college students) during the six month evaluation period ending in March 2010. Resources allocated to provide NRT to up to 4,800 college student smokers remain underutilized and underpublicized.

Old North State Medical Society “My Doc Cares” Project

Disparities in use and negative health impacts of tobacco persist among African Americans. As the nation’s third oldest African American medical society, Old North State Medical Society represents 1,200 African American physicians in North Carolina. The “My Doc Cares” Project provides technical assistance to support systems level changes — such as the implementation of smoking vital signs or a routine system for providing cessation counseling — in physician practices across the state. Such changes are designed to support increased screening and improve the provision of both prevention and cessation counseling with patients of all ages. Fiscal year 2009–10 represented Year 1 of the “My Doc Cares” Project.

TPEP collaborated with project staff and other project partners to develop an activity tracking process oriented evaluation system. Evaluation results demonstrated that a significant amount of the project coordinator’s efforts in Year 1 were dedicated to meetings and activities related to defining and refining the project framework and scope of work. While outputs related to development of project materials and completion of provider trainings were met, outputs and related outcomes connected with primary technical assistance project components were not achieved during Year 1. Documentation of barriers related to project partner communication challenges and limited available resources informed a refocusing of project activities for Year 2.

Alternative to Suspension Assessment Study

The Alternative to Suspension (ATS) program is offered as an alternative to in/out school suspension for youth violating the TFS policy. ATS program adoptions were thought to be a key indicator of how well a school district enforces the TFS policy. This study examined the awareness, adoption and implementation of the ATS program in North Carolina middle and high schools. The goal was to better understand the extent to which the ATS program was successfully diffused into North Carolina schools.

An online survey was conducted with 115 North Carolina Safe and Drug Free School Coordinators (SDFSC) to assess the knowledge, awareness, and implementation practices of ATS programs across the state. Half of SDFSC reported awareness of the ATS program while only a quarter of SDFSC reported personally receiving or knowing of others who received training/materials on the ATS program. Very few SDFSC reported knowledge of a school within their school district offering ATS and 60% of SDFSC reported no awareness schools in their district offering the ATS program. The results of this study suggest that the state's ATS program, sponsored by the NC American Lung Association, has not penetrated sufficiently into North Carolina school districts. Additionally, efforts are needed to create a standard statewide policy outlining discipline procedures for students caught using or possessing tobacco products on school grounds.



Tobacco-Free Schools Compliance Study

School-based interventions targeting youth ages 5–17 are integral to reducing tobacco use prevalence and associated detrimental health outcomes among youth, young adults, and adults alike. One such intervention is the creation of tobacco-free school (TFS) environments.^{20–23} In response to the 2007 passage of NC Senate Bill 1086, all public schools in North Carolina were required to adopt, implement, and enforce a written 100% TFS policy by August 1, 2008. In an effort to discern the degree to which North Carolina public local education agencies (districts) are complying with the criterion set forth in the legislation, the degree to which schools are enforcing the district-specific policies, and the extent to which students, faculty, and staff are complying with the school policies, TPEP designed and implemented an evaluation of TFS policy compliance among public school personnel at the district and individual school levels.

Three web surveys, administered to samples of district personnel, school administrators, and school teachers and staff, showed that:

- high levels of support for TFS policies exist among all groups surveyed,
- compliance is high for teachers and staff but could be improved for students and visitors,
- inconsistency exists across schools for administrative enforcement of TFS policies,
- inconsistency exists for systematic methods of communicating TFS policies for students and visitors,
- low levels of tobacco cessation support exists for students, and
- tobacco curriculum implementation in schools is low.

Efforts to increase TFS compliance should include clearer and more systematic methods of communication of the policy and enforcement among students and visitors, cessation support for teacher, staff, and students, implementation of evidenced-based tobacco curriculums in the schools, and adoption of ATS programs as a non-punitive method of dealing with violators of TFS policies.



References

1. Lee, J. G., Goldstein, A. O., Kramer, K. D., Steiner, J., Mathew, M., Ezzell, M. M., et al. (2010). Statewide diffusion of 100% tobacco-free college and university policies. *Tob Control, 19*(4), 311–317.
2. Campaign for Tobacco-Free Kids. Toll of Tobacco in North Carolina (2010). Retrieved 05, Oct., 2010, from <http://www.tobaccofreekids.org/reports/settlements/toll.php?StateID=NC>
3. CDC (2009). State-specific smoking-attributable mortality and years of potential life lost—United States, 2000–2004. *MMWR Morb Mortal Wkly Rep, 58*(2), 29–33.
4. NC Tobacco Prevention and Control Branch. 2009 NC Youth Tobacco Survey (2010). Retrieved 05, Oct., 2010, from <http://www.tobaccopreventionandcontrol.ncdhhs.gov/data/yts/index.htm>
5. NC State Center for Health Statistics. 2009 Behavioral Risk Factor Surveillance System Survey. (2010). Retrieved 05, Oct., 2010, from <http://www.schs.state.nc.us/SCHS/brfss/2009/>
6. Fiore, M. C., Jaen, C. R., & Baker, T. B. (2008). *Treating Tobacco Use and Dependence: 2008 Update*.
7. IOM (2009). Secondhand Smoke Exposure and Cardiovascular Effects: Making Sense of the Evidence. Retrieved 05, Oct., 2010, from <http://www.iom.edu/Reports/2009/Secondhand-Smoke-Exposure-and-Cardiovascular-Effects-Making-Sense-of-the-Evidence.aspx>
8. Mackay, D., Haw, S., Ayres, J. G., Fischbacher, C., & Pell, J. P. (2010). Smoke-free legislation and hospitalizations for childhood asthma. *N Engl J Med, 363*(12), 1139–1145.
9. CDC (2010). State Tobacco Activities Tracking and Evaluation (STATE) System Retrieved 12 Oct., 2010, from <http://apps.nccd.cdc.gov/statesystem/>
10. Campaign for Tobacco-Free Kids. History of State Spending FY10. (2010). Retrieved 05 Oct., 2010, from <http://www.tobaccofreekids.org/reports/settlements/FY2010/History%20of%20Tobacco%20Prevention%20Spending.pdf>
11. Campaign for Tobacco-Free Kids. State Cigarette Excise Tax Rates & Rankings. (2010). Retrieved 05 Oct., 2010, from <http://www.tobaccofreekids.org/research/factsheets/pdf/0097.pdf>
12. CDC (2007). *Best Practices for Comprehensive Tobacco Control Programs*. from http://www.cdc.gov/tobacco/tobacco_control_programs/stateandcommunity/best_practices/.
13. Johnston, L., O'Malley, P., Bachman, J., & Schulenberg, J. (2009). *Monitoring the Future: National Survey Results on Drug Use, 1975–2008*. from http://monitoringthefuture.org/pubs/monographs/vol2_2008.pdf.
14. Wolfson, M., McCoy, T. P., & Sutfin, E. L. (2009). College students' exposure to secondhand smoke. *Nicotine Tob Res, 11*(8), 977–984.
15. Rigotti, N. A., Moran, S. E., & Wechsler, H. (2005). US college students' exposure to tobacco promotions: prevalence and association with tobacco use. *Am J Public Health, 95*(1), 138–144.
16. NCES (2008). College Navigator: Accredited Colleges in North Carolina. Retrieved 9 Sept. 2008, from National Center for Education Statistics: <http://nces.ed.gov/collegenavigator/default.aspx?s=NC&xp=1>
17. Stead, L. F., Perera, R., & Lancaster, T. (2006). Telephone counselling for smoking cessation. *Cochrane Database Syst Rev, 3*, CD002850.
18. NCSCHS (2009). NC State Center for Health Statistics: BRFSS 2008. from <http://www.schs.state.nc.us/SCHS/brfss/2008/>: <http://www.schs.state.nc.us/SCHS/brfss/2007/index.html>
19. Ziedonis, D., Hitsman, B., Beckham, J. C., Zvolensky, M., Adler, L. E., Audrain-McGovern, J., et al. (2008). Tobacco use and cessation in psychiatric disorders: National Institute of Mental Health report. *Nicotine & tobacco research : official journal of the Society for Research on Nicotine and Tobacco, 10*(12), 1691–1715.
20. Evans-Whipp, T., Beyers, J. M., Lloyd, S., Lafazia, A. N., Toumbourou, J. W., Arthur, M. W., et al. (2004). A review of school drug policies and their impact on youth substance use. *Health Promot Int, 19*(2), 227–234.
21. Lantz, P. M., Jacobson, P. D., Warner, K. E., Wasserman, J., Pollack, H. A., Berson, J., et al. (2000). Investing in youth tobacco control: a review of smoking prevention and control strategies. *Tob Control, 9*(1), 47–63.
22. Moore, L., Roberts, C., & Tudor-Smith, C. (2001). School smoking policies and smoking prevalence among adolescents: multilevel analysis of cross-sectional data from Wales. *Tob Control, 10*(2), 117–123.
23. Wakefield, M. A., Chaloupka, F. J., Kaufman, N. J., Orleans, C. T., Barker, D. C., & Ruel, E. E. (2000). Effect of restrictions on smoking at home, at school, and in public places on teenage smoking: cross sectional study. *Bmj, 321*(7257), 333–337.

UNCTPEP's clinical Nicotine Dependence Program has received unrestricted educational funding from Pfizer Pharmaceuticals to support dissemination of comprehensive tobacco cessation programs.

For more information about the North Carolina Health and Wellness Trust Fund Tobacco Initiatives, contact:

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