



# 2014 Prevention Outcomes Annual Report

South Carolina  
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Department of Alcohol and Other Drug Abuse Services

 **PIRE**  
Pacific Institute for Research and Evaluation

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## EXECUTIVE SUMMARY

This report summarizes prevention outcomes generated by the South Carolina county authority substance abuse prevention system in Fiscal Year 2013-2014. A large portion of the content of this report focuses on the outcomes generated through pre- and post-testing of multi-session youth prevention curricula, because those evaluation methods were the most standardized across sites.

The key outcome findings from these **youth prevention curricula** are:

- There were 1,749 participants with matched pre- and post-tests. Most (92.5%) participants were between the ages of 10 and 14. There was a slightly higher proportion of females (51.5%) than males (48.5%). Most participants identified as Black/African American (49.0%) or White (36.6%).
- The results showed statistically significant positive changes on two of the five risk factor measures: perceived risk and decision-making.
- For substance use, there was a 31.2% reduction in marijuana use which was statistically significant.
- For four substances, more than 95% of participants who were non-users at pre-test remained non-users at post-test for each substance. The large majority of substance users at pre-test were using less or not at all for that substance by post-test.
- Average ages of first use for cigarettes, other tobacco products, and alcohol were between 11 and 11.6. First use of marijuana averaged 12.7 years. First use of other illegal drugs averaged 13.3 years.
- There were 18 county program implementations analyzed representing 10 different curricula.
- 99.2% of the participants were served in an evidence-based program.

Key findings for prevention efforts other than youth prevention curricula are:

- County authority prevention staff returned forms on 9,043 alcohol compliance checks and 1,697 tobacco compliance checks. These are increases over FY '13 totals. For alcohol, 11.3% of attempts generated sales, compared to 9.1% for tobacco.
- 1,678 merchants were served in the Palmetto Retailer Education Program.
- AETs reported a total of 1,382 public safety checkpoints, an all-time high. More than 360 DUIs were given during the FY '13 checkpoints. In addition, there were

748 saturation patrols reported that generated another 7,096 tickets. This operation accounted for 211 DUIs.

- More than one thousand youth were in diversion program for youth alcohol offenses (564 served in the Alcohol Education Program) and tobacco offenses (468 served in the Tobacco Education Program).
- The FFY 2015 Youth Access to Tobacco Study (Synar) showed that 7.7% of retailers sell cigarettes to underage youth, which is down from 10.6% in FFY 2014.
- Many **other prevention activities** are not well suited to generating valid outcomes. A lack of outcomes is not necessarily an indication that an approach is unimportant or ineffective.

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# **SECTION I: EVALUATION REPORT OVERVIEW**

## **State Prevention Evaluation Efforts**

The South Carolina Department of Alcohol and Other Drug Abuse Services (DAODAS) is one of the primary funders for substance abuse prevention services in the state. The majority of DAODAS prevention funds are distributed to the county alcohol and drug authority system, 33 agencies serving the state's 46 counties. These 33 agencies were authorized to provide substance abuse services by South Carolina Act 301 of 1973. Every county authority offers prevention services, primarily using funds that pass through DAODAS and originate from the U.S. Substance Abuse and Mental Health Services Administration's (SAMHSA) Substance Abuse Prevention and Treatment Block Grant (SAPTBG).

## **Contents of This Report**

This report provides prevention data for Fiscal Year 2014 (July 1, 2013 – June 30, 2014) from a variety of data sources.<sup>1</sup> Much of the report focuses on prevention outcomes generated through pre- and post-testing of middle and high school youth who participated in prevention programs. The report also includes data related to county alcohol and tobacco environmental strategies (e.g., compliance checks, bar checks, and merchant education), the Youth Access to Tobacco Study (Synar), and the distribution of prevention services. Each section of the report is described below.

Section II focuses on the overall results generated by the DAODAS Standard Survey (pre- and post-tests). Section II also presents the pre- and post-test findings by demographic groups (i.e., age, gender, race, and ethnicity).

Section III presents and discusses analyses for the pre- and post-test results by prevention program.

Section IV discusses some of the methods and issues key to analyzing and interpreting the pre- and post-test results in Section II and Section III.

Section V presents data from county alcohol and tobacco environmental strategies with a focus on compliance checks and Alcohol Enforcement Team efforts.

Section VI covers results from the FY '15 Youth Access to Tobacco Study (Synar).

Section VII addresses other prevention interventions not included in the previous sections and the distribution of prevention services across CSAP service categories.

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<sup>1</sup> The one exception is the Youth Access to Tobacco Study, which was conducted from January – March of 2015 (FY 15).

Many of the more detailed data tables are included in Appendix A of this report to make the report more readable, while more succinct tables or summaries are presented in the narrative sections. Appendix B includes a copy of the DAODAS Standard Survey in effect for FY '14.

### **Focusing on State Data Indicators**

In many ways, this annual outcomes report serves as a companion document to the *South Carolina Profile on Alcohol, Tobacco, and Other Substance Related Indicators*, (<http://daodas.state.sc.us/SC%20Profile%202009.pdf>). This overview of data indicators related to youth and adult drug use, consequences, and risk factors is an important measuring stick for the overall direction of the state in addressing its ATOD issues. In particular, the report provides updates on progress for the four state ATOD priorities determined by the Governor's Council on Substance Abuse Prevention and Treatment:

- Underage drinking
- Alcohol-related car crashes (including youth crashes)
- Youth tobacco use (including smokeless tobacco use)
- Substance use during pregnancy

However, attributing the effectiveness, or lack thereof, of specific prevention efforts by the state or counties to any changes in the indicators found in the state profile is highly speculative. Therefore, this document focuses more on efforts with clearly attributable outcomes or in-depth analyses of process data to inform our efforts. Understanding and building upon our measurable efforts while working toward the goal of “moving the needle” on state indicators is a positive complementary approach.

## SECTION II: OVERALL PRE- AND POST-TEST FINDINGS

This section presents findings for the general state prevention system generated through youth participant pre- and post-testing (the DAODAS Standard Survey) when a valid pre- and post-test could be matched to the same participant. We present data on demographic characteristics of the participants, results for the risk factor measures, and results for substance use measures.

### The Pre-Post Test Outcome Evaluation Instrument

The DAODAS Standard Survey is comprised of SAMHSA National Outcome Measures (NOMs) and other measures from SAMHSA's Core Measure Initiative. The measures used were **perceived risk/harm of ATOD use, favorable attitudes toward ATOD use, decision-making, perceived peer norms regarding ATOD use, perceived parental attitudes regarding ATOD use, and 30-day use of cigarettes, other tobacco products, alcohol, marijuana, other illegal drugs, inhalant drugs, non-medical use of prescription drugs, and non-medical use of over-the-counter drugs.** The DAODAS Standard Survey is included in Appendix B.

Counties began using the Standard Survey in FY '05 for recurring programs delivered to youth between the ages of 10 and 20 years old. PIRE developed the original DAODAS Standard Survey after DAODAS prevention staff selected the SAMHSA core measures they wanted included. In response to the federally issued National Outcome Measures (NOMs) in 2006, DAODAS and PIRE, with significant input from local prevention staff, adapted the DAODAS Standard Survey for FY '08. The survey remained unchanged through FY '10.

In FY '11, there was only a minor change made in the content of the survey, one item was dropped, but the data entry process underwent a major change. Instead of local entry to student responses into the KIT Prevention online reporting system, PIRE created a "form" version of the survey where responses can be read by a batch scanner in the DAODAS office. No changes were made to the survey or to the surveying process through FY '14. The deadline for pre- or post-tests to be included in the final database for FY '14 was June 1, 2014.

Providers were instructed to administer the pre-test within two weeks prior to the start of the program content and administer the post-test within two weeks following the end of the content. Local staff then gave the surveys to DAODAS or PIRE staff to have the responses scanned. Providers were instructed on participant protection procedures that would likely ensure confidentiality.

It is important to note that the evaluation design is non-experimental. That is, pre- and post-surveys are required to be administered only to program participants and not to control groups, so we cannot tell what would have happened in the absence of the program. Despite this limitation, positive results are expected to provide some level of



comfort that the program seems to be leading to the outcomes anticipated for a program.<sup>2</sup> Negative results are expected to raise questions about the fidelity of program implementation and/or the fit of the program to the community but should never be taken as a conclusive indication of program ineffectiveness. Through this monitoring process, the hope is that program implementation receives the attention that is necessary to be of greatest benefit to the community. In addition, the analysis of pre-post data across multiple programs and sites will assist the state in further understanding which programs, implemented under which conditions, appear to be most and least effective.

### **Matched Participants**

For multiple reasons, not every pre-test completed by a participant could be matched to a valid post-test for that participant and vice-versa. This could happen because:

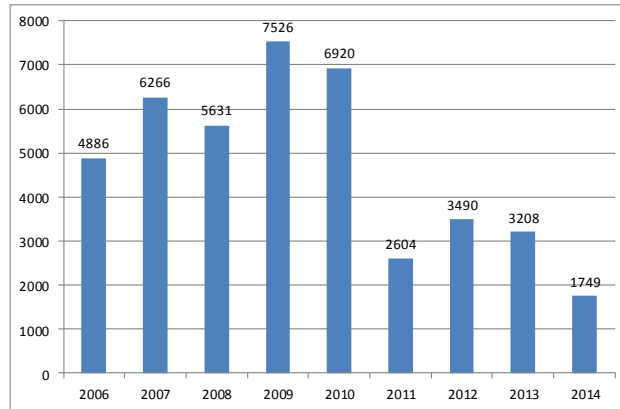
- The participant was absent at the time the pre-test or post-test was administered,
- Something in the test-coding process went wrong (participants were not to put their name on their surveys; a coding system was used to match the pre- and post-test at a later time),
- The participant left so much of the survey blank that it was removed from the analyses,
- The participant refused to take the pre- or the post-test, or
- Surveys were misplaced or not given to DAODAS/PIRE by local prevention staff.

If a participant did not have matched, valid pre- and post-tests, then neither test was included in the database that we analyzed. The final database had 1,749 matched participants (Figure 1). The ending of the Safe and Drug-Free Schools funding at the end of FY '10 accounts for much of the drop from earlier years.

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<sup>2</sup> Because adolescents in today's society generally become more tolerant of substance use and more likely to engage in some substance use behaviors as they grow older, it may be difficult to achieve positive changes among program participants over the time span between the pre- and post-surveys, even for a period as short as a few months. Therefore, even seeing no change on some risk factors and/or substance use behaviors may be viewed as a positive impact of program participation. This is particularly true for these data, where most respondents reported very low levels of risk and very low levels of substance use at the beginning of the programs.

**Figure 1. Matched Participants in Pre-Post Database, FY '06-'14**



The pre-test database contained 1,900 surveys while the post-test database contained 1860 cases, which resulted in 1,749 matched cases or 92.1% of pre-test cases. The 1,900 total youth that completed a pre-test do not necessarily reflect all school age youth to receive curriculum program services. DAODAS' prevention reporting system showed approximately 10,500 total participants in recurring services for FY '14, and most of these were school-aged youth. However, because elementary school programs and some other types of programs are allowed exceptions to not use the DAODAS Standard Survey, it is reasonable that a smaller total would have been given a pre-test, though this gap appears larger than it should be.

### **Demographic Breakdown**

The data in this section are from the participants' responses to the demographic items on their pre-test. The same items appeared on their post-tests but were not used.

*Age.* A majority (92.5%) of participants were between the ages of 10 and 14, with an average age of 12.4, which is very similar to the FY '13 average age of 12.3. Consistent with the last two years, middle school students make up a sizable portion of the total population. Table 1 shows the complete breakdown. The only programs that were primarily for older age students had small numbers of participants served.

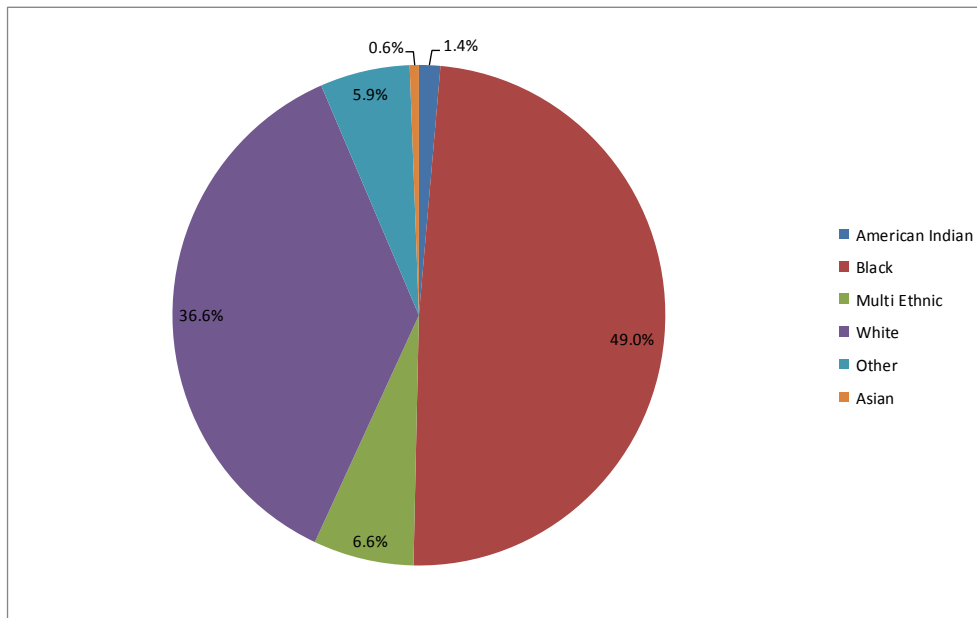
*Gender.* The matched participants were fairly evenly split by gender (48.5% male and 51.5% female). The only programs that did not have a relatively even gender breakdown were Girl Power, Project TND, and Why Try.

**Table 1. Age Distribution of Program Participants**

Age	% of Participants	
	FY '14	FY '13
10	13.2	11.7
11	17.6	21.6
12	19.6	23.3
13	30.0	22.1
14	12.1	13.4
15	3.3	4.8
16	2.6	1.4
17	1.0	1.0
18	.6	.6

*Race/Ethnicity.* Of the matched participants, 49.0% were Black or African American, 36.6% were White, 5.9% were of “other” race, 6.6% were in the multiethnic race category, 1.4% were American Indian or Alaskan Native, and 0.6% were Asian (Figure 2). These percentages are similar to those for FY '13. The percentage of Hispanic, Latino, or Spanish origin students increased from 5.0% to 7.5%.

**Figure 2. Matched Participants by Race/Ethnicity**



## Risk-Factor Measures

Table 2 shows the results for the five risk factors included on the DAODAS Standard Survey. As shown in the table, there was a statistically significant ( $p < .05$ ) positive change from pre- to post-test for four of the five measures (perceived risk, decision-making, favorable attitudes, and peer norms). The largest positive percentage change was for perceived risk (11.6% improvement). In FY '13, there were statistically significant changes in the desired direction in four of the five risk factors.

**Table 2. Overall Results, Risk-Factor Measures:  
County Authorities, FY '14 and '13**

Risk-Factor Measure (positive score is favorable)	Possible Range of Scores	Pre-Test Average	Post-Test Average	FY '14 % Change	FY '13 % Change
Perceived Risk	0-3	1.90	2.12	<b>11.58**</b>	<b>10.81**</b>
Decision-Making	0-3	1.79	1.86	<b>3.91**</b>	<b>4.63**</b>
Favorable Attitudes	0-2	1.54	1.58	<b>2.60**</b>	<b>3.67**</b>
Perceived Peer Norms	0-10	8.40	8.48	<b>0.95**</b>	<b>2.29**</b>
Perceived Parental Attitudes	0-3	2.83	2.84	<b>0.35</b>	<b>-0.53*</b>
** Pre- and post-test averages are statistically significantly different (significant at $p < .05$ level)					
* Approaching statistically significant difference ( $p < .10$ )					

*Demographic Differences in Risk-Factor Measures.* Tables A1 through A4 in Appendix A display risk factor measure and substance use rates separated by age group (middle school ages and high school ages), gender, race, and ethnicity.

*Age.* Table A1 shows results separated by age range: middle school age (ages 10 to 13) and high school age (ages 14 to 19). As expected, younger participants had higher pre-test scores. Middle school students reported significant changes in the desired direction on two three factors (perceived risk, decision-making, and favorable attitudes). High school students also had significant changes in the desired direction on three risk factors (perceived risk, decision-making, and peer norms), and a marginally significant change on one factor (favorable attitudes).

*Gender.* Table A2 shows data results separated by gender. Females reported significant positive changes on two risk factors (perceived risk and decision-making skills). Males, in contrast, reported positive changes on four risk factors (perceived risk, decision-making, attitudes, and peer norms).

*Race/Ethnicity.* Table A3 shows data results separated by race (for those race groups with 40 or more participants), and Table A4 shows the results by ethnicity. African-American, White, and Native American participant groups all had significant positive change on one risk factor (perceived risk). Participants of Hispanic, Latino, or Spanish descent or origin had a marginally statistically significant positive change for perceived risk.

## Participant Substance Use

The DAODAS Standard Survey asked participants to indicate the extent of their cigarette, other tobacco, alcohol, marijuana, other illegal drug, inhalant, non-medical prescription drug, and non-medical over-the-counter drug use in the past 30 days. Using these responses, the percentage of participants that used each substance at any amount was calculated at pre- and post-test. FY' 14 results, along with the corresponding changes in use for FY '13, are shown in Table 3.

**Table 3. Overall Results, Substance Use Rates, FY '13-'14**

Risk-Factor Measure: 30 Day Use	% Using at Pre-Test	% Using at Post-Test	FY '14 % Change	FY '13 % Change
Cigarettes	6.67	5.81	-12.89	-15.60
Other Tobacco	5.91	4.54	-23.18	-6.25
Alcohol	9.60	8.13	-15.31	-23.82**
Marijuana	8.03	5.96	-25.78**	-9.37
Other Illegal Drugs	3.52	3.37	-4.26	-12.17
Inhalants	4.97	4.79	-3.62	-20.35**
Non-Medical Prescription Drugs	4.55	3.48	-23.52	-15.97
Non-Medical OTC Drugs	4.37	3.72	-14.87	12.89

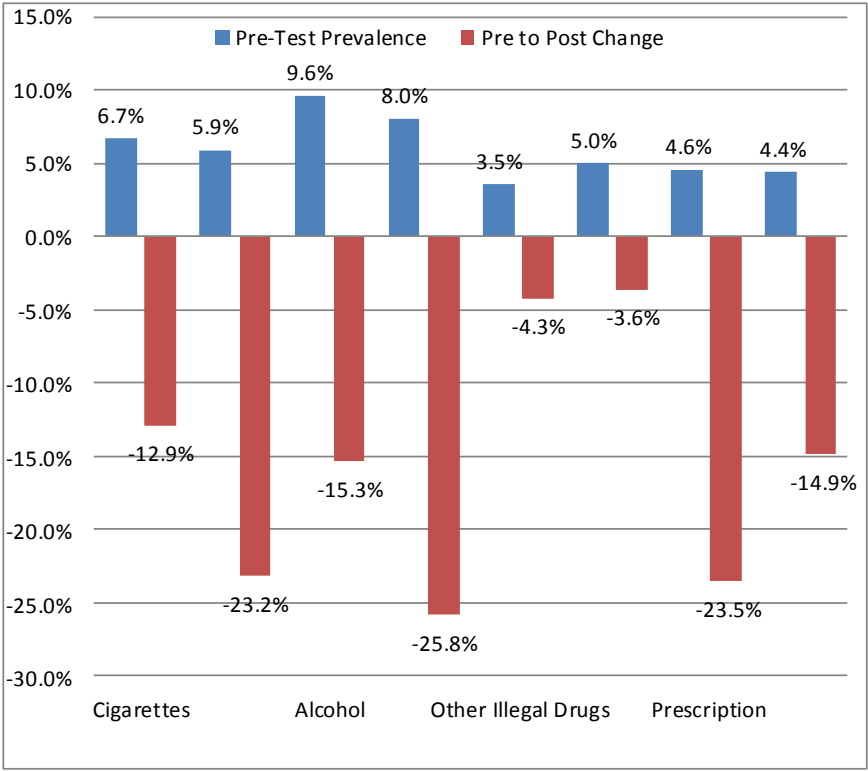
Negative changes are desired for these items

\*\* Pre- and post-test averages are statistically significantly different (significant at  $p < .05$  level)

For FY '14, there was one statistically significant change in substance use—a reduction in marijuana use from 8.03% to 5.96% (a decrease of 25.8%). There were reductions of at least 10% on five other substance use variables (cigarettes, other tobacco, alcohol, non-medical prescription drugs, and non-medical OTC drugs), but they were not statistically significant. The results are similar to last year, when there were statistically significant reductions for two substances (alcohol and inhalants), plus a 10% reduction on four other substances.

Figure 3 depicts the pre-test prevalence for each of the eight substances along with the percentage decreases from pre- to post-test in users.

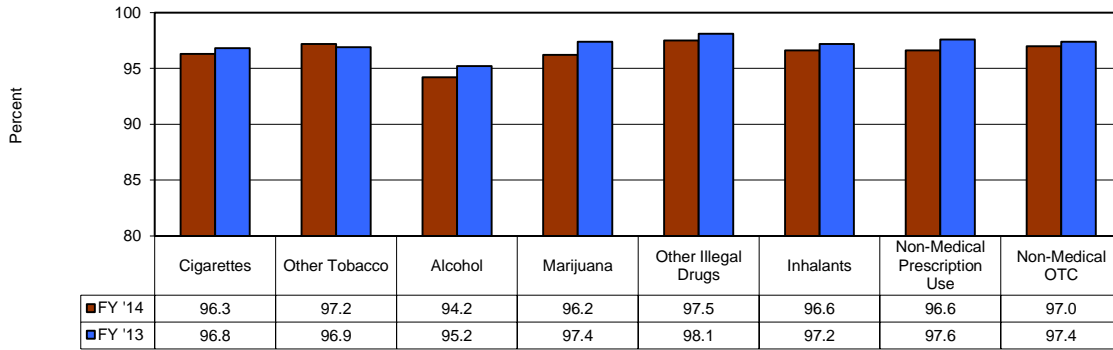
**Figure 3. Substance Use, Pre-Test Rates and Percentage Change in Users from Pre-to Post-Test, FY '14**



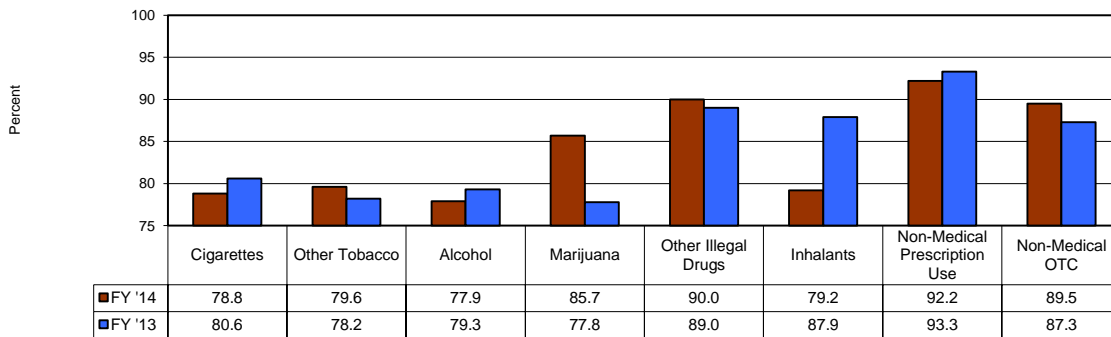
*Maintenance/Reductions.* Responses regarding past-30-day use were analyzed to determine (1) the percentage of participants who were not using a substance at pre-test that were still not using at post-test and (2) the percentage of participants who were using a substance at pre-test that were using less (or not at all) by post-test. The former, in particular, may be the most accurate assessment of the “preventive” effect of the programs.

Figure 4 shows that the vast majority of participants who began programs as non-users remained non-users. Across all substances, the rate of those remaining non-users range from 94.2% (alcohol) to 97.5% (other illegal drugs). The results are similar to FY '13. Figure 5 shows that, across the board, rates of reduction ranged from 77.9% (alcohol) to 92.2% (non-medical prescription drug use). Notably, rates of reduction were considerably higher for marijuana but lower for inhalants compared to FY '13.

**Figure 4. Percent of Pre-Test Non-Users Who Remained Non-Users, FY '14 and '13**



**Figure 5. Percent of Pre-Test Users Who Reduced Their Level of Use, FY '14 and '13**

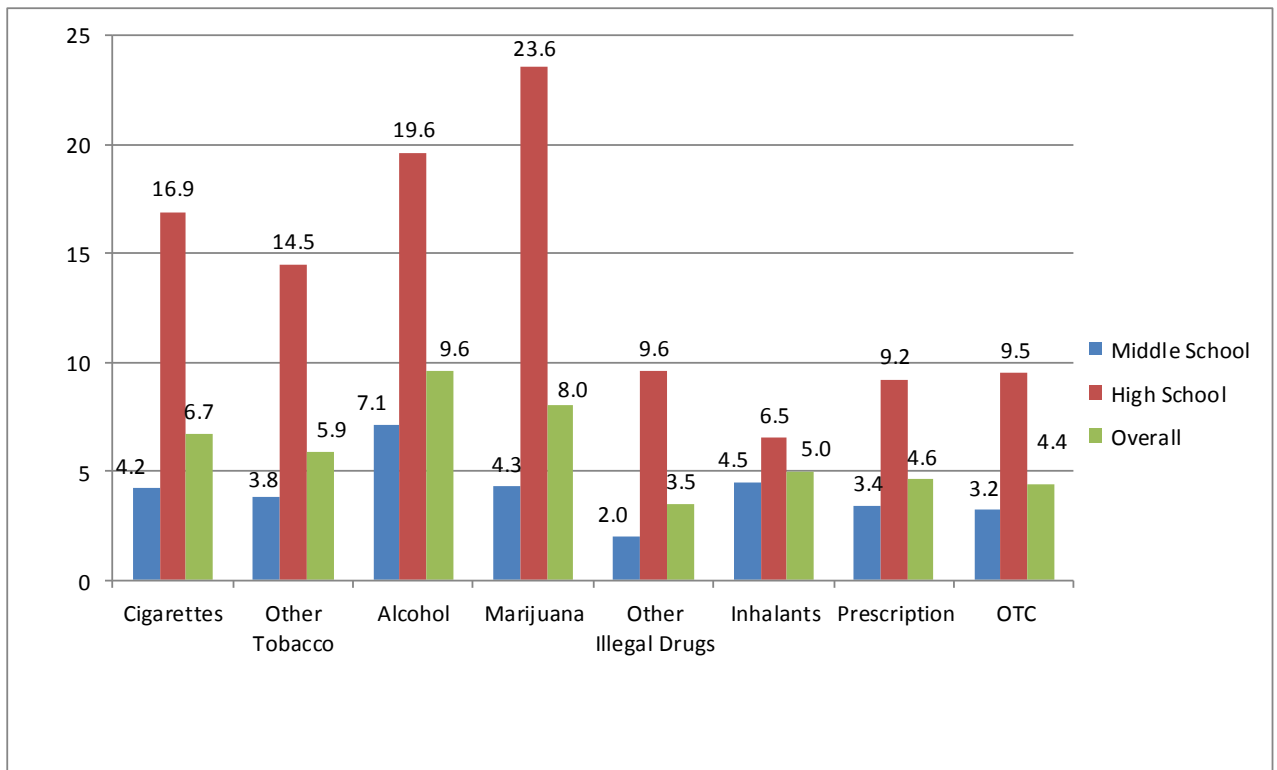


*Demographic Differences in Substance Use.* Tables A1 through A4 in Appendix A also display substance use rates results separated by age groups (middle school ages and high school ages), gender, race, and ethnicity.

*Age.* Table A1 shows data results separated by middle school (ages 10 to 13) and high school (ages 14 to 19) age ranges. The middle school participant group had changes in the desired direction for use of cigarettes, other tobacco, marijuana, inhalants, prescription drugs, and over-the-counter drugs, and changes in the undesired direction for alcohol and other illegal drug use. No changes, however, were statistically significant. Among high school students, there were decreases in use for all substances except inhalants. All observed reductions were greater than 20%, with other tobacco, alcohol, marijuana, prescription drug, and over-the-counter drug use being statistically significant. Reported decreases in substance use were quite substantial, ranging from 22% (cigarettes) to 58% (prescription drugs).

As shown in Figure 6, high school group had higher percentages of every substance. Surprisingly, marijuana use rates were higher than alcohol use rates among high school students. Overall, alcohol remained the most commonly used substance, followed by marijuana and cigarettes.

**Figure 6. Overall Results, Rates of Substance Use at Pre-Test: Overall, Middle School, and High School, FY ‘14**





*Gender.* Table A2 shows data results separated by gender. Males generally had a higher baseline level of substance use than females. Among females, rates of other tobacco products and marijuana decreased significantly, while among males there were no statistically significant decreases.

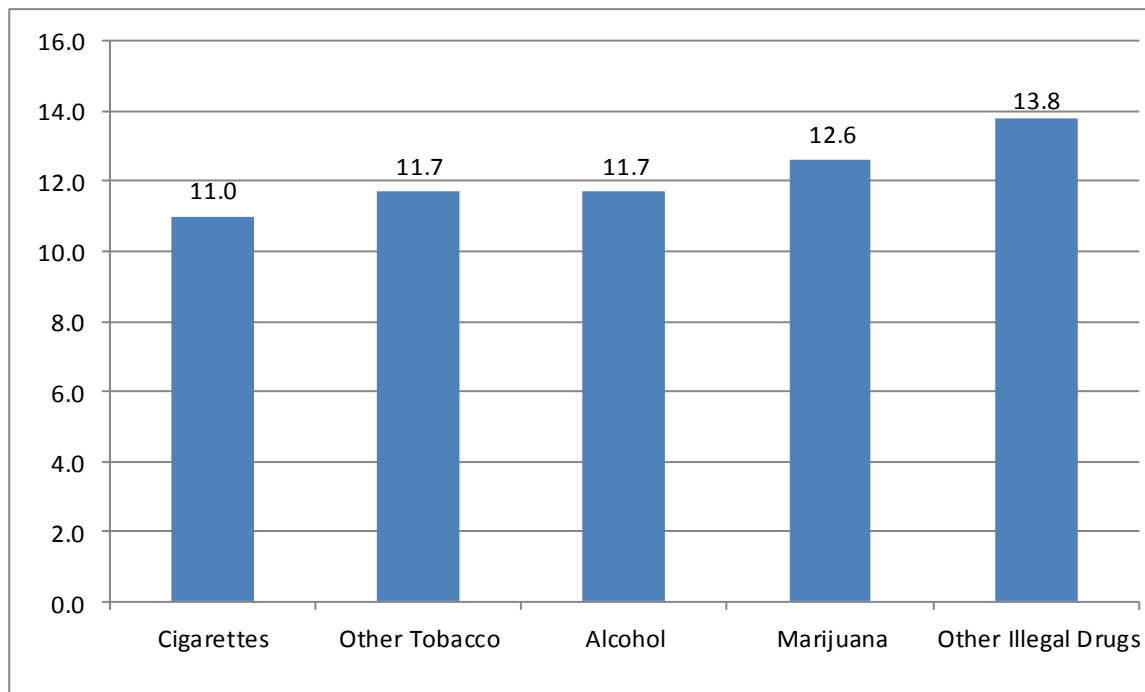
*Race/Ethnicity.* Table A3 shows data results separated by race (for those race groups with 20 or more participants), and Table A4 shows the results by ethnicity. Among the two largest race groups in the dataset, White participants and Black or African American participants, decreases in use were found for seven of the eight substances examined. African Americans reported a statistically significant decrease in marijuana use while Whites reported a marginally significant decrease in non-medical prescription drug use.

Non-Hispanic individuals showed statistically significant decreases in marijuana use, whereas there were no statistically significant changes reported for Hispanic individuals.

### **Age of First Use**

As shown in Figure 7, ages of first use ranged from 11.0 (cigarettes) to 13.8 (other illegal drugs). Compared to FY '13, the age of first use appears to be slightly higher in FY '14; FY '13 ages ranged from 10.9 (cigarettes) to 12.1 (other illegal drugs).

**Chart 7. Overall Results, Average Age of First Use, FY '14**



## **Parent-Child Communication and Youth Exposure to Prevention Messages**

Two additional items were first added to the survey in FY '08, but only on the pre-test. First, nearly identical to last year, just under two out of every three students (65.1%) report they had talked to their parents about the dangers of drugs in the past year. Additionally, similar to last year, 75.8% reported having watched, read, or heard a prevention advertisement in the past year.

## **Summary of Section II**

For the county authorities' multi-session prevention programs for youth 10 to 20 years old, a pre-post design was used with a survey containing five risk factor items and eight past-30-day-use questions for cigarettes, other tobacco products, alcohol, marijuana, other illegal drugs, inhalant drugs, non-medical use of prescription drugs, and non-medical use of over-the-counter (OTC) drugs. There were 1,749 matched participants, meaning there was a valid pre- and post-test for these individuals (92% of all pre-tests). This number is a decrease from 3,208 in FY '13. Most (92.5%) participants were between the ages of 10 and 14. Gender percentages were essentially equal. Most participants identified as Black or African American (49.0%), White (36.6%), or "Other" (5.9%) race; 7.5% of participants identified as Hispanic, Latino, or Spanish descent or origin.

The results showed statistically significant desired changes on four of the five risk factor measures: perceived risk (11.6%), decision-making (3.9%), favorable attitudes (2.6%), and peer norms (1.0%). There was one statistically significant change in substance use—a 25.8% decrease in marijuana use.

The vast majority of participants who begin programs as non-users remained non-users. For each substance, more than 94% of non-users maintained non-use. The large majority of substance users at pre-test were using less or not at all for that substance by post-test. Notably, prevention efforts in FY '14 may have had more of a reduction effect than a preventive effect relative to previous years.

Demographic analyses reveal largely desired changes for both middle and high school age youth, many of which were statistically significant. Both males and females and males reported desired changes on risk factors, but the changes were stronger for males. In addition, risk factor results were generally positive across race groups. There were differences in risk factor results by ethnicity, with non-Hispanic individuals having a greater number of statistically significant improvements than Hispanic individuals.

Changes in substance use rates were mixed across demographic groups. Most notably, there were no significant reductions in substance use among middle school students, whereas high school students reported significant reductions in use of other tobacco, alcohol, marijuana, prescription drugs, and over the counter drugs.

Ages of first use for cigarettes, other tobacco products, and alcohol were between 11.0 and 11.7, with tobacco being the most used drug at early ages. Participants averaged first use of marijuana and other illegal drugs at 12.6 and 13.8, respectively.

## SECTION III: PROGRAM OUTCOMES

### Prevention Programs

Across the provider network, 11 different programs were implemented in FY '14, down from 15 in FY '13 and 20 in FY '10. In this section, we compare the outcomes for the nine programs with 20 or more matched participants. The full tables with results by program are found in Appendix A in Table A5. A summary of the statistically significant effects by program are found in Table 4 and described below.

**Table 4. Summary of Statistically Significant Results, By Program**

	Alcohol	Cigarettes	Other Tobacco	Marijuana	Inhalants	Other Illegal Drugs	Non-medical Use of Prescriptions	Non-medical Use of OTCs	Perceived Risk	Decision Making	Favorable Attitudes	Perceived Peer Norms	Perceived Parental Attitudes	
All Stars (3 sites; n = 226)													*	
Girls Circle (1 site; n = 51)											*			
Keepin' It Real (1; n = 99)									*					
Life Skills (8 sites; n = 853)									*	*	*			
Project Alert (2 sites; n = 174)									*	*				
Project TND (1 site; n = 49)	*	*		*		*		*	*			*		
Project TNT (1 site; n = 33)														
Too Good for Drugs (2 sites; n = 167)														
Why Try (2 sites; n = 54)									*					
OVERALL (19 sites; n = 1749)				*					*	*	*	*		
Desired Marginally Significant		Desired Significant					*							
Undesired Marginally Significant		Undesired Significant					*							

**All Stars** is a comprehensive evidence-based ATOD prevention curriculum. This program was used by three sites with a total of 226 matched participants. There was one undesired change among the risk factors (perceived parental attitudes), but no changes among the substance use behaviors.

**Girls Circle (formerly G.I.R.L. Power Series)** is a single-county prevention program. G.I.R.L. (Gifted, Intelligent, Responsible Ladies) Circle is a seven-session program assisting young girls with development of positive social skills, emphasizing respect for

self and others, handling peer pressure, manners, and being comfortable in your own skin. This program had 51 matched participants. There was a desired change in favorable attitudes toward substance use but no changes among the substance use behaviors.

**Keepin' It Real**, an evidence-based, video-enhanced intervention for youth 10 to 17 that uses a culturally-grounded resiliency model that incorporates traditional ethnic values and practices that protect against drug use, was used by one site with a total of 99 matched participants. The results show an undesired change in decision making, but no changes among the substance use behaviors.

**Life Skills Training**, a skill-based, evidence-based ATOD prevention curriculum, was the most commonly implemented program with eight sites and 853 matched participants. There were desired changes on three of the five risk factors (perceived risk, decision making, and favorable attitudes) but no changes among the substance use behaviors.

**Project Alert**, a comprehensive evidence-based ATOD prevention curriculum for middle school students, was delivered at two sites to 174 matched participants. The results showed a desired change for perceived risk and decision-making, but no changes for the other risk factors or substance use behaviors.

**Project TND**, a prevention curriculum intended for high school students, was used by one site with 49 total matched participants. The results showed desirable changes for two factor measures (perceived risk and perceived peer norms). There were also significant decreases in the use of alcohol, cigarettes, marijuana, other illegal drugs, and non-medical use of OTC drugs.

**Project Toward No Tobacco Use (TNT)**, a comprehensive, evidence-based tobacco prevention program for middle school youth was used by one site, with 33 matched participants. The results showed no changes in any of the risk factors or substance use behaviors.

**Too Good for Drugs** is an evidence-based program with specific lessons for each middle and high school grade. Two sites, with a total of 167 matched participants, used this program. The results showed a marginally significant desirable change in favorable attitudes, but no statistically significant changes in any other risk factors or substance use behaviors.

**Why Try** is a comprehensive evidence-based ATOD prevention curriculum, which was implemented at two sites with 54 participants. There was a significant increase in perceived risk, and a marginally significant decrease in alcohol use.

### **Evidence-Based vs. Non-Evidence-Based Programs**

County authorities are not required to use evidence-based interventions exclusively, though most do. In FY '14, 94.6% (all but 100 of matched pre-posttests) of participants were served in evidence-based programs. Due to the large difference in numbers of

participants served in evidence-based versus non-evidence based programs, we do not compare the pre-post results by these groups. In past years, we have generally seen superior outcomes from the evidence-based programs.

### **Summary of Section III**

There were 19 county authority program implementations of 11 different programs in FY '14. The large majority (94.6%) of participants with matched pre- and post-tests were served in evidence-based programs. Comparing outcomes across programs, the best results were seen for Project TND, which showed desirable changes in two risk factors and a decrease in the use of five substances. Project TND was also among the list of programs that demonstrated the best results in FY '13.

## SECTION IV: METHODOLOGY AND ANALYSIS ISSUES

In this section, we describe the evaluation design that generated the outcomes from pre- and post-testing of youth curricula participants described in sections II and III. In addition, we discuss the analyses used and cautions in interpreting the results.

### Evaluation Design Issues

Evaluation design issues acknowledge possible limitations in the ability to detect positive findings due to the particular evaluation methodology. Several evaluation design issues are relevant, including floor and ceiling effects, lack of comparison groups, and the short duration between pre- and post-surveys. Unpublished data collected by the developers of Life Skills show that when measured simply with a pre-post survey, there were no apparent effects of the Life Skills intervention. However, when the program was measured after booster sessions and at later points in time and with a comparison group, effects of the intervention emerged. Thus, it is possible that seeds of some of these interventions have been planted, but that we are not yet able to measure the intended long-term benefits.

Non-Specific Measurement Targets. The DAODAS Standard Survey asks a core set of items across all programs, regardless of the programs' designed targets. For the most part, this is not a problem, as many substance abuse prevention programs target a wide array of substances and risk factors. Nevertheless, not all programs target all substances or risk factors, and some programs target very specific substances or risk factors—TNT (Project Toward No Tobacco Use), for example. Thus, we would not necessarily expect to see changes in all substances or risk factors across all programs.

Floor and Ceiling Effects. Floor and ceiling effects refer to circumstances that make it difficult to measure change over time because participants' scores are already as low (or high) as they can be prior to the intervention. Participants generally reported low risk and low rates of substance use. Thus, the potential to show improvement at post-survey was limited. Despite these ceiling and floor effects, positive changes were reported for many of the interventions.

Lack of Comparisons. DAODAS staff and PIRE decided that it would not be appropriate to require collection of data from comparison sites. There were two primary reasons for this. First, the purpose was not to prove that interventions are effective, but to enhance communities' capacity to implement and monitor effective interventions. The PIRE evaluation team views evaluation data as an essential tool to improve future performance more so than a judgment of past efforts. Second, requiring providers to collect comparison data would have been a large administrative burden. Clearly, however, the lack of comparison groups limits our ability to interpret these findings. Given that there is a consistent trend across the country for teens to develop less favorable attitudes and behaviors regarding illegal substance use over time, it is likely that the absence of

pre/post changes for participants is indication of favorable effects relative to youth who did not participate in similar prevention interventions.

Attendance Bias. It should be noted that our matched participant databases consist of participants who attended the pre- and post-test sessions for the program. Thus, these groups may not include some higher-risk youth because they may have been more likely to be absent from the program during the pre- or post-test session due to truancy, suspension, or change of schools. The implication of the differences between the participants in our databases and the full set of participants is that our findings should not be generalized to the whole sets of participants. However, because the bias in our results is largely due to absenteeism, our findings are relevant for those youth who were present for a larger portion of the interventions. Thus, our results should provide a relatively accurate picture of changes experienced by program participants who had a significant opportunity to benefit from the intervention.

Short Duration Between Pre- and Post-Surveys. It is possible that the effects of the prevention interventions will not be realized until a later point in time. The large majority of participants in these databases are in their early teens or younger. The interventions are aimed at preventing or delaying the onset of substance use as the youth get older. Thus, by the time youth reach late high school age, these participants may report lower risk and lower rates of substance use, relative to non-participants. We do not have the data to determine whether there will be long-term positive results for these program participants.

Maturation Effects. Because adolescents in today's society generally become more tolerant of substance use and more likely to engage in some substance use behaviors as they grow older, it may be difficult to achieve positive changes among program participants over the time span between the pre- and post-surveys, especially if the time gap between pre- and post-tests is long. Therefore, even seeing no change on some risk factors and/or substance use behaviors may be viewed as a positive impact of program participation. This is particularly true for these data, where most respondents reported very low levels of risk and very low levels of substance use at the beginning of the programs. Outcomes for programs with longer time gaps between pre- and post-tests are difficult to compare to those with shorter time gaps because the maturation effect is more pronounced for the former and may appear to have less positive outcomes.

### **Program Implementation Issues**

Program implementation issues acknowledge possible limitations in program effectiveness due to particular aspects of the way an intervention is implemented. At least three program implementation issues are relevant for these projects: ineffective interventions, inadequate match between interventions and communities, and fidelity.

Ineffective Interventions. The first reaction one might have upon reviewing some of these programs' data is that some interventions are not effective in preventing or reducing substance use or affecting risk factors. This is less likely to actually be the case when



evidence-based interventions were used because they have been shown through research to be effective. Thus, we should not conclude that these interventions are, in general, ineffective. Nevertheless, there may be aspects of the way they are implemented that render them less effective. There is a possibility that unfavorable results for a non-evidence-based intervention indicate a lack of program effectiveness, but there are other potential explanations, as well.

Inadequate Match between Interventions and Communities. It is possible that some interventions do not match the needs of, and/or are not appropriate for, some local target populations. In other words, the research-based interventions may be very effective with the populations in the settings where they were designed and tested, but may not be as appropriate to serve the needs of some of the target populations in South Carolina. There continue to be factors involved in program selection other than proven effectiveness with a particular type of target population, such as implementation time allowed, cost, and convenience (using whatever program that staff currently have training in or can be trained in quickly or inexpensively). In addition, sites are not always aware of the exact needs of their communities. Community characteristics can change across time, and intervention developers are not always aware of limitations to the generalizability of the effectiveness of their interventions. It would be wise for all programs to continuously ask themselves whether their interventions are the right match for their target population and setting, and this may have been an important factor in the different levels of success across locations.

Fidelity. Fidelity is the extent to which interventions are delivered as they are intended. Even with well-controlled research studies, the degree of fidelity can vary widely. Life Skills researchers have found limited effects of the program when analyzing data from the full sample of students, but more widespread effects when analyzing data from a high-fidelity sample. Clearly, fidelity is an important factor in determining the effectiveness of interventions, and low fidelity can lead an otherwise effective intervention to appear ineffective. Thus, it is possible that for some implementations where we did not see more positive outcomes it may be because the interventions were not delivered with a high degree of fidelity.

## **Data Analysis Methods**

Testing Pre- and Post-Survey Differences in Risk-Factor Scores: We used SAS statistical software for all analyses. We conducted paired-samples t-tests to compare the means of the pre-survey and post-survey scores for each risk-factor measure assessed on the surveys. This test computed the difference (change) between the pre- and post-survey means for each factor and then tested whether the mean difference was “significantly different” from zero. A statistically significant difference means that the observed difference was too large to occur as a result of chance alone. The treatment (intervention) and/or other factors played a role in helping changes take place in the behaviors and attitudes of the participants. T-tests (as well as all tests of significance) were performed at a significance level of  $p < .05$  (two-tailed), though differences of between .05 and .10

were noted for participants and labeled as “approaching” or “near” significant. Appropriate nonparametric tests were used with small group sizes.

Testing Pre- and Post-Survey Differences in Substance Use: Based on students’ responses to the substance-specific “Past 30-Day Use” items on the pre- and post-tests, students were coded as being users (if they used a substance on at least one day of the past 30 days) or non-users. We used the nonparametric McNemar test to detect if the changes in percentages of substance users were statistically significant. Similar to other nonparametric tests, the McNemar uses the chi-square distribution and is used mainly to detect changes in response to a treatment (e.g., a program intervention) in *before and after* designs.

### **Summary of Section IV**

The methods used to generate outcomes for the youth curricula are common and generally accepted. There are aspects of the design, however, that should be taken into account when considering the results. There were numerous instances of ceiling effects where pre-test responses were so close to the ideal that it was difficult to improve on the post-test and limited potential positive changes. Also, there were no comparison groups, so we cannot say with confidence whether the outcomes would have been more or less favorable as compared to a group having no intervention. Negative results for any site or program may not necessarily indicate an ineffective program. Poor fidelity or poor matching of a program with the target population may be more likely to lead to poor outcomes.

## **SECTION V: ALCOHOL AND TOBACCO ENVIRONMENTAL PREVENTION STRATEGIES**

County authorities have been implementing or assisting with the implementation of environmental strategies for many years. These efforts were boosted in FY '07 with the creation of the Synar Tobacco Enforcement Partnerships (STEP) and Alcohol Strategy Incentive Program (ASIP). In FY'08, the ASIP program ended due to the creation of the state Alcohol Enforcement Teams (AET) program, which now reports on most of the same strategies that had been tracked through ASIP. STEP continued into FY'13 and is most identified with its year-end monetary incentives to local providers based on the amount of tobacco-related environmental strategies implemented. Under STEP, counties could receive points for educating merchants through PREP (Palmetto Retailer Education Program), implementing tobacco compliance checks, getting a multi-jurisdictional law enforcement agreement around tobacco enforcement signed, and sending in names of new tobacco outlets. In this section, we document the amount of overall environmental strategy activity generated with a primary emphasis on the outcomes generated from the most common strategy, compliance checks.

The South Carolina Alcohol Enforcement Team (AET) model has grown from just three sites in the early 2000s to our current situation of having an active AET covering every judicial circuit in the state. The AET model, which includes community coalition maintenance and development, merchant education, and law enforcement partnership, specifies a multi- or single jurisdictional alcohol law enforcement approach (depending on the needs and participation of law enforcement within the target area) in a community to:

- reduce youth access to alcohol utilizing various strategies (social and retail access);
- measure, track and improve merchant compliance with alcohol laws;
- provide research-based merchant education;
- build community support for enforcement of underage drinking laws through media advocacy and community coalition maintenance and development; and
- develop local law enforcement support for underage drinking prevention and enforcement efforts.

### **Alcohol and Tobacco Compliance Checks**

Compliance checks are an environmental strategy to reduce youth access to alcohol or tobacco. Ideally, compliance checks include the following actions:

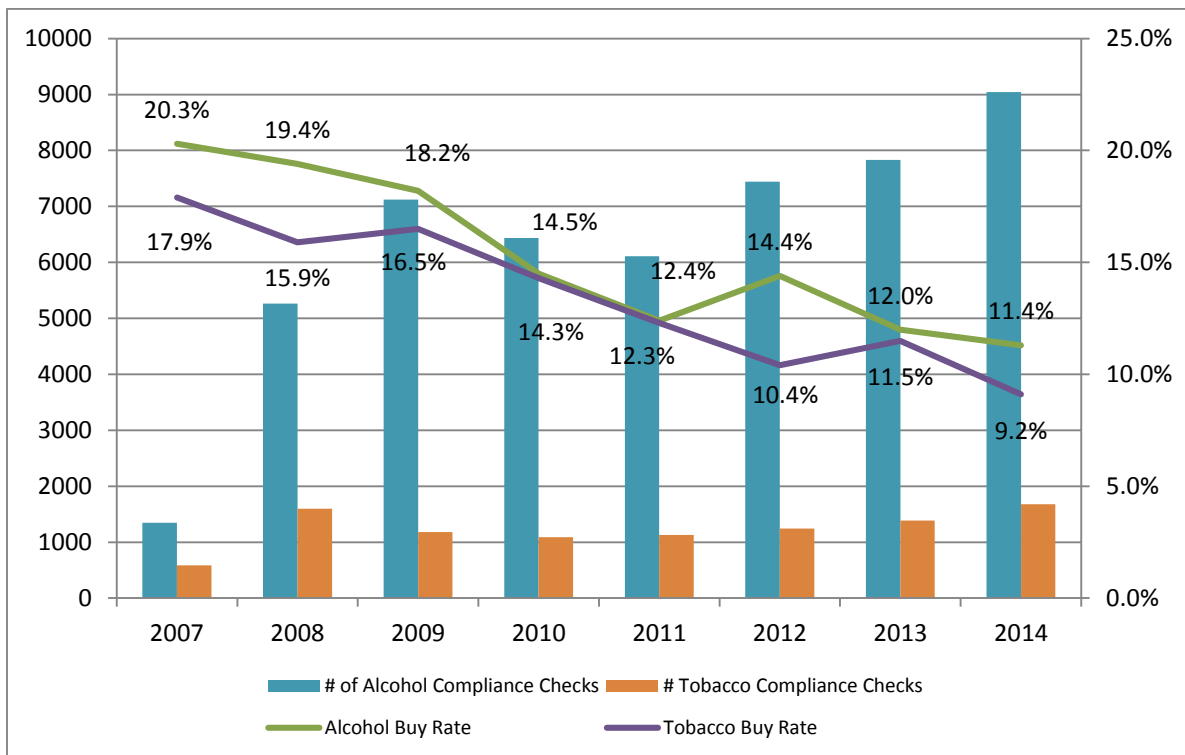
- Publicity to alcohol and tobacco sales staff that enforcement operations will be increasing,
- Awareness-raising with the community to increase its acceptance of increased compliance operations,

- Law enforcement operations involving the use of underage buyers attempting to purchase alcohol or tobacco with charges being brought against the clerk and establishment license holder if a sale is made, and
- Regularly offered merchant education to help merchants improve their underage sales policies and practices.

Across the county authority system, prevention staff was required to use the DAODAS Compliance Check Form when cooperating with local law enforcement to implement alcohol or tobacco compliance checks. The form requests details of the compliance checks, such as time of check, type of store, information on purchaser and clerk, and whether the clerk asked for ID.

In FY'14, there were 9,043 alcohol and 1,697 tobacco compliance check forms returned, both of which were historic highs. In FY '14, 39 counties returned alcohol compliance check forms, while 28 counties returned tobacco forms. There may have been additional compliance checks for which a form did not get returned to DAODAS, so the data received may not reflect every compliance check during the year. It should, however, contain the vast majority. As shown in Figure 8, the data suggested that buy rates were also at historical lows of 11.4% for alcohol and 9.2% for tobacco. Tables 5 and 6 show the buy rates for each county.

**Figure 8. Annual Number of Compliance Checks and Annual Buy Rates**



Most FY '14 alcohol compliance checks were conducted at convenience stores (64.3%). The next most common type of location was large grocery stores (9.5%), then liquor stores (8.4%), drug stores (5.8%), restaurants (3.8%), bars (3.5%), small grocery stores (2.4%), and “other” (2.3%). In most cases, the youth attempted to buy beer (74.9%) although a substantial number attempted to buy alcopops or alcohol energy drinks (14.4%) or liquor (8.6%). Wine or wine coolers were attempted only 2.2% of the time. Most youth volunteers was between the ages of 17 and 19 (79.5%). More purchase attempts were made by males (65.3%) than females. The large majority of alcohol checks were conducted by White youth (80.1%), followed by Black or African American youth (17.5%). Compared to FY '13, a slightly higher percentage of buyers was African-American, and a slightly lower percentage was White.

For tobacco compliance checks, 70.1% were conducted at convenience stores, followed by drug stores (11.4%), large grocery stores (9.5%), and “other” (5.2%). In most cases, youth attempted to buy cigarettes (82.9%). The remaining 17.2% of attempts were made for smokeless tobacco, cigars, or blunts. To place this in context, in FY '08, only 5% of attempts were for these other tobacco products. The most common age for the youth volunteers was 16 (41.0%). More purchase attempts were made by males (63.6%) than females. About three-fourths (74.1%) of tobacco compliance checks were conducted by White youth, with the majority of the remainder being done by Black or African American youth (15.6%).

**Table 5. FY '14 Alcohol Compliance Check Buy Rates by County**

County Name	Total Eligible Purchase Attempts	Buy	Buy Rate
Abbeville	10	0	0.0%
Aiken	161	25	15.5%
Allendale	0	0	N/A
Anderson	161	28	17.4%
Bamberg	48	3	6.3%
Barnwell	111	5	4.5%
Beaufort	14	4	28.6%
Berkeley	438	18	4.1%
Calhoun	16	0	0.0%
Charleston	550	84	15.3%
Cherokee	43	5	11.6%
Chester	11	3	27.3%
Chesterfield	59	17	28.8%
Clarendon	10	2	20.0%
Colleton	61	14	23.0%
Darlington	376	31	8.2%
Dillon	65	5	7.7%
Dorchester	112	5	4.5%

County Name	Total Eligible Purchase Attempts	Buy	Buy Rate
Edgefield	0	0	N/A
Fairfield	48	2	4.2%
Florence	458	29	6.3%
Georgetown	123	17	13.8%
Greenville	2171	201	9.3%
Greenwood	125	14	11.2%
Hampton	3	1	33.3%
Horry	312	44	14.1%
Jasper	1	1	100.0%
Kershaw	265	29	10.9%
Lancaster	148	22	14.9%
Laurens	0	0	N/A
Lee	0	0	N/A
Lexington	743	71	9.6%
Marion	11	2	18.2%
Marlboro	62	9	14.5%
McCormick	0	0	N/A
Newberry	74	19	25.7%
Oconee	77	11	14.3%
Orangeburg	53	16	30.2%
Pickens	460	43	9.4%
Richland	469	90	19.2%
Saluda	0	0	N/A
Spartanburg	167	31	18.6%
Sumter	126	16	12.7%
Union	30	10	33.3%
Williamsburg	0	0	N/A
York	828	97	11.7%

**Table 6. FY '14 Tobacco Compliance Check Buy Rates by County**

County Name	Total Eligible Purchase Attempts	Buy	Buy Rate
Abbeville	0	0	N/A
Aiken	29	4	13.8%
Allendale	0	0	N/A
Anderson	14	0	0.0%
Bamberg	24	1	4.2%
Barnwell	37	1	2.7%
Beaufort	10	6	60.0%
Berkeley	66	0	0.0%
Calhoun	14	1	7.1%
Charleston	5	0	0.0%
Cherokee	0	0	N/A
Chester	11	0	0.0%
Chesterfield	3	1	33.3%
Clarendon	8	0	0.0%
Colleton	4	3	75.0%
Darlington	17	0	0.0%
Dillon	0	0	N/A
Dorchester	46	2	4.4%
Edgefield	0	0	N/A
Fairfield	29	0	0.0%
Florence	314	23	7.3%
Georgetown	0	0	N/A
Greenville	137	14	10.2%
Greenwood	0	0	N/A
Hampton	0	0	N/A
Horry	49	3	6.1%
Jasper	0	0	N/A
Kershaw	184	25	13.6%
Lancaster	18	0	0.0%
Laurens	0	0	N/A
Lee	0	0	N/A
Lexington	122	10	8.2%
Marion	0	0	N/A
Marlboro	4	2	50.0%
McCormick	0	0	N/A
Newberry	0	0	N/A
Oconee	0	0	N/A
Orangeburg	34	11	32.4%
Pickens	10	1	10.0%

**Table 6. FY '14 Tobacco Compliance Check Buy Rates by County**

County Name	Total Eligible Purchase Attempts	Buy	Buy Rate
Richland	252	32	12.7%
Saluda	0	0	N/A
Spartanburg	164	8	4.9%
Sumter	1	0	0.0%
Union	0	0	N/A
Williamsburg	0	0	N/A
York	52	4	7.7%

For alcohol, the highest sale rate was for liquor (14.8% of attempts), followed by alcopops/alcohol energy drinks (11.9%) and wine/wine coolers (11.9%), and beer (10.9%). Thus, although the highest number of purchase attempts was for beer, the buyers were least successful in their attempts to buy beer.

In Table 7 below, some of the higher and lower sale proportions are shown for some types of alcohol products. Sam Adams (40.0%) and Burnetts (27.8%) had the highest sale proportions; Arbor Mist (4.3%) and Jack Daniels (4.5%) had the lowest.

**Table 7. Notable High and Low Percentages of Completed Sales by Alcohol Product (minimum 20 attempts)**

Notable Low Sales		Notable High Sales	
Product	Sale %	Product	Sale %
Arbor Mist	4.3%	Miller Light	19.3
Jack Daniels	4.5%	Seagrams	20.0%
Coors	4.7%	Sparks	21.4%
Michelob	6.9%	Natural Light	22.2%
Redds Apple Ale	7.0%	Miller	22.2%
Yuengling	8.8%	Icehouse	22.6%
Barefoot	9.4%	Bud Light Lime	22.9%
Pabst Blue Ribbon	9.6%	Burnetts (Vodka)	27.8%
Strawberita	9.7%	Sam Adams	40.0%



Table 8 details the frequency of certain merchant conditions and practices at the time of the compliance check. In more than three-fourths of the cases, merchants asked to see ID for alcohol and tobacco (88.9% and 83.8%, respectively). Merchants studied the IDs somewhat less frequently (72.0% for alcohol and 62.2% for tobacco). More than 80% of outlets had posted signage stating that they check IDs, but the percentage of stores that had age-verification equipment was only about half. For alcohol and tobacco, analyses suggested that each feature was statistically significantly associated with a sale being less likely to occur with the exception of signage in regard to tobacco sales.

**Table 8. Compliance Check Merchant Practices**

<b>Compliance Check Feature</b>	<b>Alcohol (%)</b>	<b>Tobacco (%)</b>
Sales Completed	11.4	9.2
Merchant Asked Buyers Age	19.7	22.6
Merchant Asked to See ID	88.9	83.8
Merchant Studied ID	72.0	62.2
Visible ID-Checking Signage in Store	81.0	85.9
Age-Verification Equipment Used	48.4	59.3

Table 9 shows that small grocery stores and drug stores had the lowest sales rates for alcohol and tobacco than other types of businesses, while bars and restaurants had the highest. The type of business was a statistically significant factor on the alcohol sale rate ( $p < .001$ ). Type of business was only marginally, statistically significant for tobacco sales ( $p = .053$ ).

**Table 9. Percentage of Completed Sales by Type of Business**

<b>Type of Business</b>	<b>Number Alcohol Purchase Attempts</b>	<b>Percent Alcohol Sales Completed</b>	<b>Number Tobacco Purchase Attempts</b>	<b>Percent Tobacco Sales Completed</b>
Bar/Tavern	314	19.4%	1	0%
Convenience Store Only	446	15.7%	77	14.3%
Convenience Store/Gas Station	5310	10.7%	1072	9.8%
Drug Store	517	4.8%	188	2.7%
Large Grocery	848	10.9%	155	9.0%
Liquor/ABC/Package Store	758	13.7%	12	0%
Restaurant	344	18.0%	1	0%
Small Grocery	210	5.7%	47	8.5%

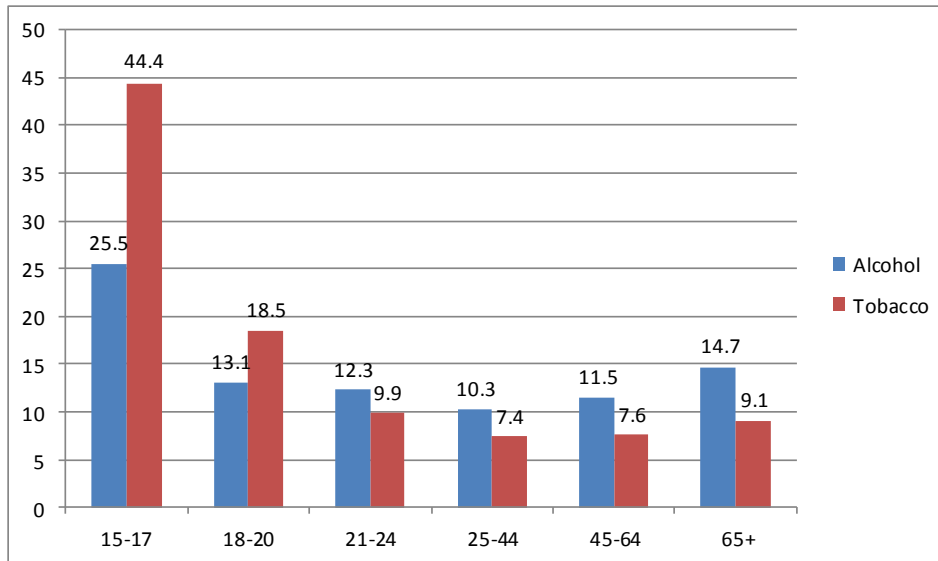
Table 10 displays the percentages of sales completed based on multiple demographic characteristics of the clerks and buyers. Clerk race was the only statistically significant predictor of alcohol sales ( $p=.002$ ) and buyer race was the only statistically significant predictor of tobacco sales ( $p=.002$ ). The former was due to Hispanic clerks being more likely to sell alcohol and buyers of Hispanic or “other” race being less likely to successfully complete a tobacco sale. There was no difference in sale rates for either product based on clerk or buyer gender.

**Table 10. Percentage of Retailer Sales by Demographic Characteristics**

<b>Compliance Check Characteristic</b>	<b>% Sales Completed—Alcohol</b>	<b>% Sales Completed—Tobacco</b>
Clerk Female	11.1	8.8
Clerk Male	12.0	9.6
Clerk Black	12.1	9.9
Clerk Hispanic	16.7	16.7
Clerk Other	9.3	6.8
Clerk White	11.5	9.0
Buyer Female	11.3	7.5
Buyer Male	11.3	9.9
Buyer Black	12.2	6.6
Buyer Hispanic	11.4	4.7
Buyer Other	2.6	1.0
Buyer White	11.2	10.6
Gender Diff.	11.1	9.9
Gender Same	11.7	7.8
Race Diff.	11.0	8.9
Race Same	11.7	9.2

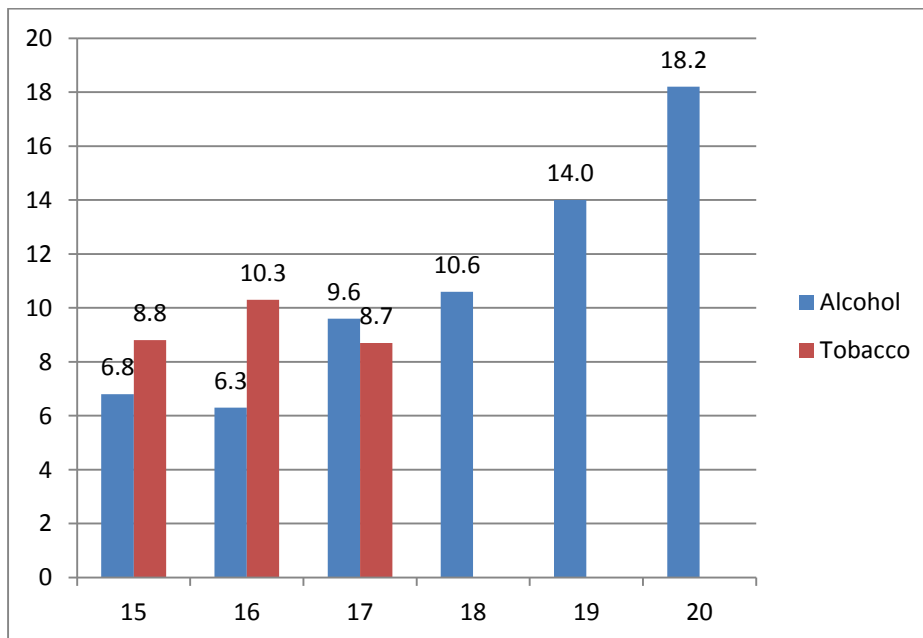
Youth buyers were asked to estimate the age of the clerk who handled their attempted purchase. Estimated clerk age had a statistically significant effect on the sales rate for alcohol ( $p = .002$ ) and tobacco ( $p < .001$ ), with clerks estimated to be 15-17 having much higher sales rates for alcohol and tobacco (Figure 9).

**Figure 9. Percentage of Stores Selling by Estimated Clerk Age**



The age of the purchaser had a statistically significant effect on sale rates only for alcohol ( $p < .001$ ) but not tobacco ( $p = .553$ ). Figure 10 shows that sales were more common for older than younger buyers.

**Figure 10. Percentage of Stores Selling by Buyer Age**



Analyses were conducted to see if the time of the inspection was a significant factor in whether a sale is made. This was limited to weekday checks. First, an analysis was done based on whether the inspection was done before or after 3 pm, approximating whether youth would normally be in or out of school. In addition, 6 pm was used as a day/night proxy. Neither analyses indicated that time of day is a significant factor.

The average clerk fine for an alcohol sale, at the time of ticketing, was \$610.89, and the most common amount was \$677.50. The average fine for a tobacco sale ticket was \$440.30, with \$470.00 being the most common amount.

The compliance check form includes a section where officers ask offenders if they have ever taken a merchant education class. Of the 450 cases in which a sale was made, there were 54 instances (12.0%) in which the offender indicated they had taken a class.

### **Bar Checks**

The other primary enforcement activity aimed at retailers is the use of bar checks. The intent of bar checks can vary between (1) doing a sweep of patrons in a bar/restaurant to look for those who are underage or have fake IDs, (2) looking for retailer violations such as selling to underage customers or some other violation of an alcohol license, or (3) building rapport with retailers or reminding them to be mindful of relevant laws during a “walk through” or “casual contact.” One “bar check” or visit to an establishment could serve multiple purposes.

There were a total of 545 bar checks reported in FY '14. Twenty counties reported bar checks with the 9<sup>th</sup> (21.0%) and 15<sup>th</sup> (12.7%) AET Circuits doing the most. Most bar checks included “casual contacts” (277), followed by fake ID sweeps (183), and inspecting the retailers for violations (132).

A total of 125 tickets were written for fake IDs. Another 433 alcohol-related violations were written against customers during these bar checks. Officers issued 14 verbal or written warnings.

### **Shoulder Taps**

Shoulder tap operations involve an underage volunteer standing outside of an off-premise establishment and asking adults going in to purchase alcohol for them. Those who do are ticketed. In FY'14, four counties representing four circuits conducted shoulder taps a total of 17 different times, down from 25 in FY '13 and 31 in FY '12. Altogether, 165 individuals were approached in FY '14. Five purchased alcohol for the youth, resulting in a 3.0% violation rate. In FY '13 the rate was 3.8%, and it was 7% in FY'12. Three other alcohol-related charges were written during these operations.

### **Public Safety Checkpoints/Saturation Patrols**

A total of 1,382 public safety checkpoints, often called sobriety checkpoints, were

implemented in FY'14, the highest total ever for the AETs and an increase from the 1,011 in FY '13. There were 36 different counties with checkpoints in FY'14, an increase from 34 different counties with checkpoints in FY '13. Checkpoints done by the 6<sup>th</sup> and 11<sup>th</sup> judicial circuits comprised 53.2% of the total checkpoints across the state.

A total of 114,409 cars went through those checkpoints across the state. AET reports for these checkpoints show that there were 500 DUIs among adults and 49 among those underage, 144 felony arrests, 110 fugitives apprehended, 26 Fake IDs, 20 stolen vehicles recovered, 881 drug possession charges, three underage tobacco possession charges, and 844 open container violations. These ticket totals for underage drinking, DUI, drug possessions, and open container are somewhat higher than FY '13, but they are generally comparable.

In FY '14, 748 saturation patrols were reported. These patrols resulted in 7,268 total tickets, mostly for "other" offenses (3386) and speeding (2010). There were 185 underage drinking tickets (compared to 14 in FY '13), 188 DUIs (19 underage), 402 open container violations, 18 fake ID violations, and 270 drug offenses.

Colleton County represented nearly half of the reported saturation patrols (346). Twenty-six counties reported at least one patrol.

### **Controlled Party Dispersals/Party Patrols**

Controlled party dispersals are a way of addressing underage drinking parties that involve better containment, adequate person-power, more faithful enforcement of underage drinking laws, and safe returns home for underage drinkers. This is in contrast to a manner of breaking up a party that may involve youth scattering and getting into cars intoxicated. Some law enforcement agencies or AETs devote resources to locating parties through patrols or acting on previously gathered information. This enforcement best practice is being utilized much more often due to the presence of AETs. Seventeen counties turned in AET party dispersal reporting forms in FY '14, slightly down from 20 in FY '13. The number of parties dispersed was 146.

The 146 parties had an estimated total 17,584 attendees (up from the 12,662 attendees at the 153 parties dispersed in FY '13). A total of 1168 tickets were written during these operations, including 843 for underage drinking violations (763 of those for 17 to 20 years old), 53 for transfer of alcohol to an underage person, 31 for unlicensed keg possession, 53 for fake IDs, and 67 for drug possession. The most common alcoholic beverage confiscated was beer.

In addition to the safe dispersal of parties, many AETs were involved in preventing parties, often by receiving information and contacting the youth planning to host the party or that young person's parents. AETs reported 142 parties prevented in FY'13 compared to 149 in FY'13.

## **Multi-Jurisdictional Law Enforcement Agreements**

Counties were able to earn STEP points for providing a copy of a multi-jurisdictional tobacco law enforcement agreement, a document signed by multiple law enforcement agencies that promised a cooperative effort to address underage alcohol and/or tobacco enforcement. These agreements are believed to be important to sustaining consistent enforcement. In FY '14, 23 counties turned in tobacco agreements, the same as in FY '13. There are many multi-jurisdictional alcohol enforcement agreements in place (often as part of the same document that serves as the tobacco agreement), but DAODAS does not formally collect or count them.

## **Merchant Education**

Efforts to enforce laws regarding underage purchases of alcohol or tobacco are strengthened by efforts to help educate and train those who sell alcohol or tobacco products with appropriate information and proper techniques. There are a number of these merchant education curricula used nationally and in South Carolina, though the county authorities are now exclusively using the PREP curriculum. County authorities were each required to implement merchant education programming in FY '14 and collectively served 1,678 retail staff, which is up from 1,147 in FY '13. Thirty-seven of the 46 counties served at least one retailer in PREP, and Greenville (291) served the most.

There is a standardized PREP post-test used across the system that allows standardization of outcomes. Primarily, the test is graded for a pass or fail. Among those who passed in FY '14, the average score was 95.4%.

## **Diversions or Court-mandated Youth Programs**

County authorities often play a role in the post-arrest process for youth violators of alcohol or tobacco laws. Related to alcohol, county providers often offer programming as part of their solicitor's Alcohol Education Program (AEP), a program many first-time offenders will be offered in lieu of a conviction.

There were 564 youth served in AEP in calendar year 2014, compared to 763 in FY '13, and 1,082 in FY '12.<sup>3</sup> The bulk of the youth served in 2014 came from Pickens (183), Spartanburg (79), and Charleston (78).

For tobacco, county agencies offer the Tobacco Education Program (TEP) for youth as a program they can complete when charged with underage tobacco possession in lieu of paying a fine. In FY '14, 468 youth participated in TEP, which is up from FY '13. Fourteen counties delivered TEP in FY '14, with Chester (73) and Charleston (255) serving the most youth.

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<sup>3</sup> For this report, we used calendar year data because of a mid-year clinical records transition.

## **Alcohol Enforcement Team Awareness Activities**

AET awareness activities included holding town hall meetings, doing educational sessions for youth or adults, conducting local media campaigns, and “casual contacts,” which are typically law enforcement officers making community contacts with youth or merchants to keep a high visibility presence and warn them of upcoming enforcement efforts. AETs reported 339 media placements (articles, TV stories, etc.) during FY ’14. There were 142 presentations and media events occurring during “Out of Their Hands” conducted the entire month of April 2014. This includes all forms of media including television, radio, and social media as well as presentations conducted at schools, colleges, and universities. The number of media placements in FY ’14 is down from 366 in FY ’13.

## **Alcohol Enforcement Team Training**

Since the beginning of the expansion of AET statewide in FY ’08 (July 2007), there has been a commitment to following the AET Model established by a small number of counties. This model is based on national “best practices.” A key component of the AET model utilized in South Carolina involves developing local law enforcement support for underage drinking prevention and enforcement efforts. In order to develop local law enforcement support, an initial training date was held in October 2007. This training was conducted by the national Underage Drinking Enforcement Training Center (UDETC) funded by the U.S. Department of Justice, Office of Juvenile Justice and Delinquency Prevention (OJJDP). UDETC is managed by Pacific Institute for Research and Evaluation (PIRE) and is located in Calverton, Maryland.

It was decided after that initial OJJDP/UDETC training to establish additional training on various underage drinking enforcement topics. With the assistance of UDETC, a training cadre was formed from South Carolina (DAODAS and PIRE) staff members as well as local personnel. These instructors have conducted training on Alcohol Enforcement Team training topics such as Fake IDs, Public Safety Checkpoints, Source Investigation, Special Alcohol Events Management, Current Alcohol Trends and Fads, Alcohol Screener Devices, and other topics to increase capacity of law enforcement officers, prevention specialists, and other community partners to enforce underage drinking laws and educate citizens in the value of enforcing those laws.

In FY ’14, there were 22 training sessions conducted in 16 counties in South Carolina. These sessions were attended by 577 individuals, including 422 law enforcement officers. Among those attending were 81 youth who participated as role-players in mock party dispersal training. This training module was combined with primary training topics such as the Two-Day AET Training, AET Activities Training, and Fake ID Training.

## Summary of Section V

The most common environmental strategies implemented were alcohol compliance checks, tobacco compliance checks, and merchant education, though Alcohol Enforcement Teams also generated considerable activity on operations such as public safety check points, controlled party dispersals, and saturation patrols.

County authority prevention staff and AET Coordinators returned forms on 9,043 alcohol compliance checks and 1,679 tobacco compliance checks. These are increases over FY '13 totals. Sales were completed for 11.4% of alcohol attempts and 9.2% of tobacco attempts, historic lows for both types of products.

Most merchants asked to see the buyers' IDs (88.9% and 83.8% for alcohol and tobacco, respectively) and most merchants studied the IDs (72.0% and 62.2% for alcohol and tobacco, respectively). Findings by race suggested that Hispanic clerks were more likely to sell alcohol and buyers of Hispanic or "other" races were less likely to have completed sales for tobacco. Not surprisingly, clerks estimated to be young (ages 15-17) were more likely to sell alcohol and tobacco.

The counties served 1,678 merchants in the Palmetto Retailers Education Program (PREP) in FY '14, up from 1,147 in FY '13.

AETs reported a total of 1,382 public safety checkpoints, an all-time high. Among the violations, there were 500 DUIs. In addition, there were 748 saturation patrols reported. This operation generated another 7,268 tickets, among them 188 DUIs.

AETs dispersed 146 parties attended by 17,584 persons. Together, 1,168 tickets (843 for underage drinking) were written during those dispersals. Another 142 parties were reported as having been prevented due to proactive use of advanced information. A total of 165 individuals were approached by the cooperating youth to purchase alcohol as part of Shoulder Tap operations, with five purchasing (3.0% sales).

In FY '14, there were 545 bar checks conducted, resulting in 125 fake ID violations and 433 other alcohol-related charges to patrons.

More than one thousand youth were in diversion program for youth alcohol offenses (564 served in the Alcohol Education Program) and tobacco offenses (468 served in the Tobacco Education Program).

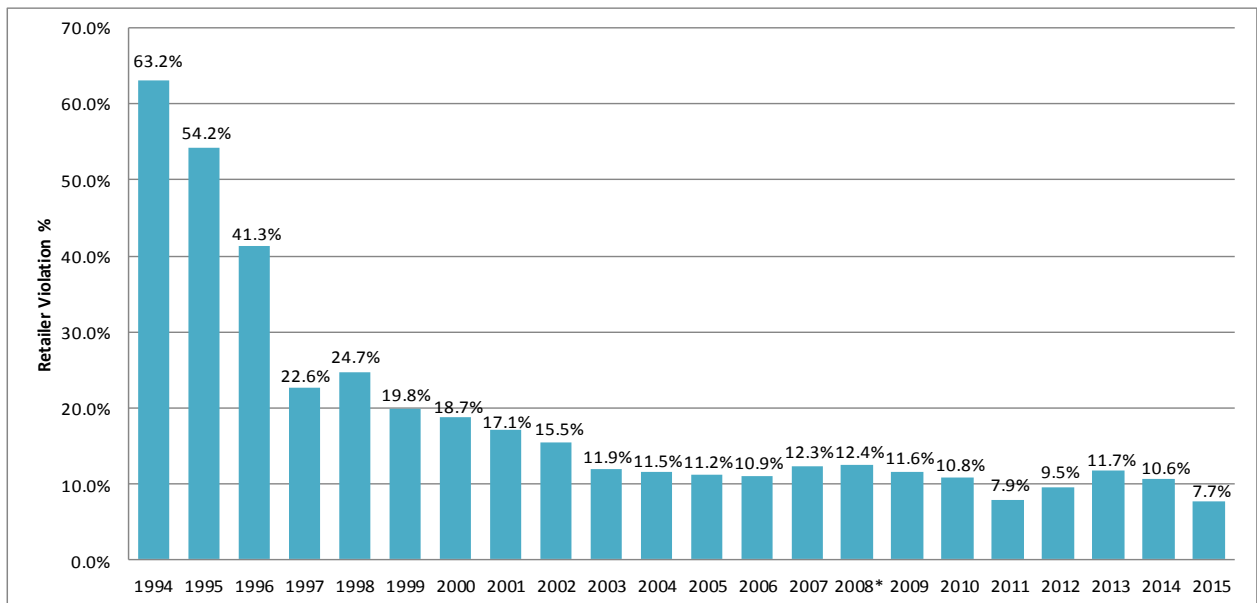


## SECTION VI: YOUTH ACCESS TO TOBACCO STUDY (SYNAR)

Each year, as part of a federal requirement, South Carolina conducts a study to determine the extent to which youth younger than 18 can successfully buy cigarettes from retail outlets. Between Jan. 1 and Feb. 28, 2015 (during the Federal Fiscal Year 2014-15, or FFY '15), 140 youth volunteers ages 15-17, under trained adult supervision, conducted 429 random, unannounced cigarette purchase attempts in all 46 counties. These outlets were randomly sampled from the estimated 8,000 outlets in the state.

Figure 11 shows the overall Synar results for FFY '15. For FFY '15, the estimated overall sales rate (also known as a Retailer Violation Rate or RVR) was 7.7%. This rate is far better than the federal standard of 20.0% and substantially lower than the RVR of 63.2% in FFY 1994, which was the first year of the study. The 95% confidence interval for this year's violation rate is from 4.5% to 11.0%, meaning that statistical projections tell us that if we had taken multiple samples from every store in the state, it would be 95% likely the calculated violation rate would fall in that range. The FFY '14 rate was 10.6%. Buy rates for each county are shown in Table 11.

**Figure 11. YATS (Synar) Cigarette Purchase Rates (FFY 1994-2015)**



\*Starting with the FFY 2008 study, the state did not allow 14-year-old inspectors, who consistently had lower purchase rates than 15- to 17-year-olds.

**Table 11. YATS (Synar) Raw Buy Rates FFY '15**

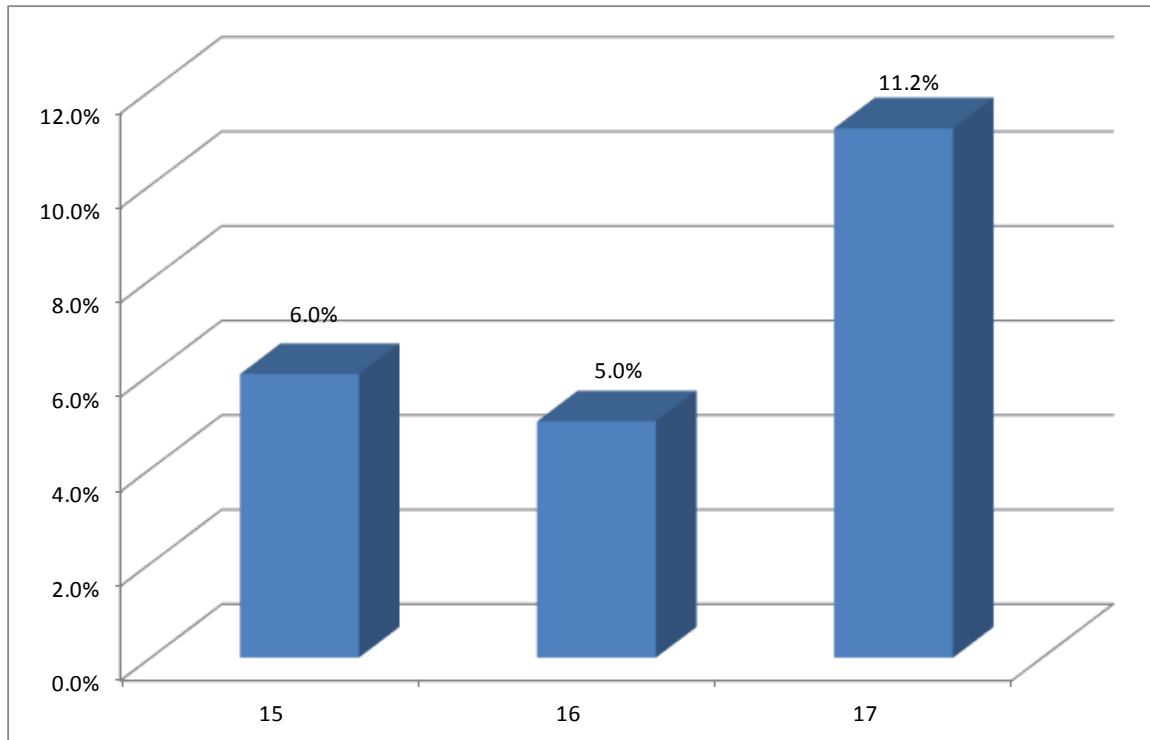
<b>County Name</b>	<b>Total Eligible Attempts</b>	<b>No Buy</b>	<b>Buy</b>	<b>Buy Rate</b>
Abbeville	1	1	0	0.0%
Aiken	8	6	2	25.0%
Allendale	1	1	0	0.0%
Anderson	7	6	1	14.3%
Bamberg	2	2	0	0.0%
Barnwell	2	2	0	0.0%
Beaufort	7	7	0	0.0%
Berkeley	12	9	3	25.0%
Calhoun	1	1	0	0.0%
Charleston	24	23	1	4.2%
Cherokee	4	3	1	25.0%
Chester	2	2	0	0.0%
Chesterfield	3	3	0	0.0%
Clarendon	4	4	0	0.0%
Colleton	2	2	0	0.0%
Darlington	7	7	0	0.0%
Dillon	2	1	1	50.0%
Dorchester	5	4	1	20.0%
Edgefield	2	2	0	0.0%
Fairfield	1	1	0	0.0%
Florence	7	6	1	14.3%
Georgetown	3	3	0	0.0%
Greenville	14	12	2	14.3%
Greenwood	3	3	0	0.0%
Hampton	2	2	0	0.0%
Horry	34	32	2	5.9%
Jasper	4	4	0	0.0%
Kershaw	5	5	0	0.0%
Lancaster	5	5	0	0.0%
Laurens	3	0	3	100.0%
Lee	2	2	0	0.0%
Lexington	12	12	0	0.0%
Marion	1	1	0	0.0%
Marlboro	4	3	1	25.0%
McCormick	1	1	0	0.0%
Newberry	3	3	0	0.0%
Oconee	4	4	0	0.0%
Orangeburg	8	8	0	0.0%
Pickens	7	7	0	0.0%

**Table 11. YATS (Synar) Raw Buy Rates FFY '15**

County Name	Total Eligible Attempts	No Buy	Buy	Buy Rate
Richland	16	16	0	0.0%
Saluda	2	2	0	0.0%
Spartanburg	12	12	0	0.0%
Sumter	8	8	0	0.0%
Union	2	1	1	50.0%
Williamsburg	3	3	0	0.0%
York	9	8	1	11.1%

Figure 12 shows the percent of outlets selling to youth, by age of youth. Youth who were 17 years old appear more likely to have successfully purchased cigarettes than those who were 15 or 16.

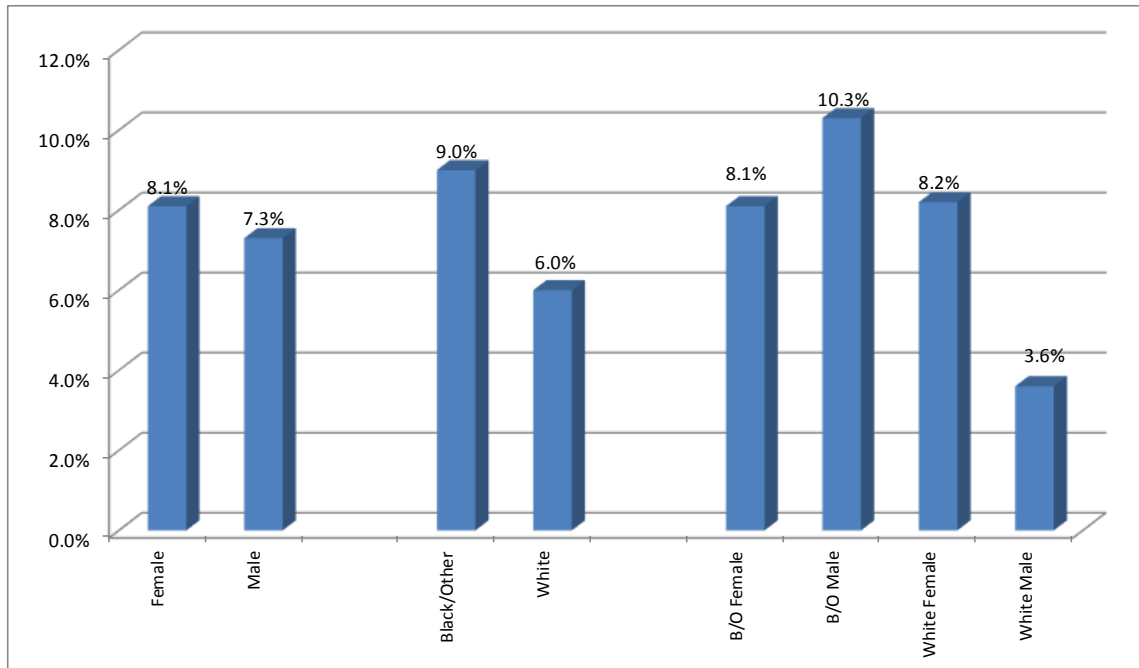
**Figure 12. Percent of Outlets Selling Cigarettes to Youth by Age, FFY '2015**



Note: The differences by age are not statistically significant.

Figure 13 presents the Synar buy rate by gender and race. There is no statistically significant difference by gender or race of purchaser. White youth were sold to less frequently than other youth (6.0% vs. 9.0%), with Black/Other males having the highest purchase rates (10.3%). Perceived race and gender of the clerk were unrelated to whether a sale occurred, similar to last year, but age was related to successful purchase such that those clerks perceived to be in their 20's were more likely to sell to youth than were clerks of older ages.

**Chart 13. Percent of Outlets Selling Cigarettes to Youth by Youth Gender & Race, FFY 2015**



Past analyses have shown an important link between regular local tobacco compliance checks and our success with Synar rates. For example, with the FFY'10 Synar data, we compared county Synar data to the levels of tobacco compliance check enforcement in that same county for the previous year. We found that counties with enforcement had better buy rates than those that did not (10% vs. 15%), though the difference was not significant. However, the difference was significant ( $p < .001$ ) when comparing those counties with more than 40 compliance checks to those with less than 40 (5% vs. 15% violation rates).

For the present report, we analyzed FFY '15 Synar data and FY '14 tobacco compliance check data. In this case, the difference in rates between counties with any enforcement (7.9% sales) and those with no enforcement (7.0%) was not significant ( $p = .781$ ). The difference between those counties with more than 40 compliance checks and those with fewer (7.4% and 7.9%) also was not statistically significant ( $p = .888$ ). Number of tobacco outlets in a county had no relationship to the buy rate.

In reviewing the FFY '15 Synar data in relation to FY '14 compliance check numbers, we also analyzed totals of tobacco and alcohol compliance checks (80 or more total versus less than 80 total) under the premise that total enforcement, regardless of the substance targeted, may impact retailer's attentiveness to preventing under sales of either substance. This also showed no impact of higher levels of enforcement.

To note, survey data suggest that reducing youth retail access to tobacco requires continued attention. According to the 2013 Youth Risk Behavior Survey, 25.4% of high school students who smoked during the past 30 days reported getting their cigarettes from a store or vending machine.

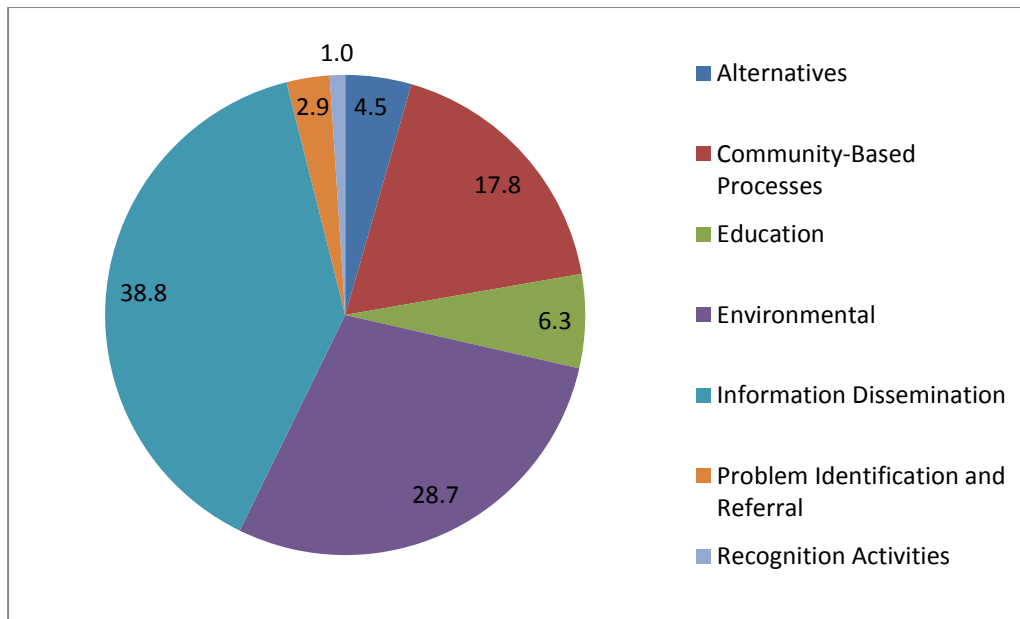
## SECTION VII: OTHER PREVENTION INTERVENTIONS

In the previous chapters, we have described the cumulative outcomes, to the extent possible, of youth curricula, environmental approaches, and the Youth Access to Tobacco Study. Prevention professionals deliver an even wider range of services than this list, however. Below are some of the other common prevention programs offered:

- Parenting Programs
- Working with Coalitions
- Information Dissemination
- Alternative Activities
- HIV/AIDS Programming

These types of programs are important components of a well-rounded county prevention effort. However, they do not lend themselves well to measurable outcomes and there are no consistent statewide tools to capture outcome data on them.

**Figure 14. Distribution of Service Events by CSAP Category, FY '14**



The KIT Prevention online reporting system had prevention staff code each service activity in one of seven CSAP prevention categories. Figure 14 shows the distribution of the 966 service events by category. In addition to Block Grant-funded activities, other prevention efforts are included in the KIT data set, including data from the SC SPF SIG (the CAST project, which ended in September of 2014) and other local efforts funded by various sources. By far, the largest categories of prevention services were information dissemination (39%), environmental strategies (29%), and community-based processes (18%). The number of service events may not be a perfect measure of overall effort devoted to a particular category, but should provide a general sense of how local efforts are focused.

## APPENDIX A: ADDITIONAL DATA TABLES

**Table A1. Overall Results by Age**

Risk Factor Scores, Range (Positive score is favorable)	Middle School (n=1398)			High School (n=341)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	1.97	2.16	9.65**	1.64	1.98	20.73**
Decision-Making Skills, 0-3	1.83	1.92	4.92**	1.65	1.74	5.45**
Favorable Attitudes, 0-2	1.62	1.65	1.65**	1.21	1.28	5.79*
Perceived Peer Norms, 0-10	8.69	8.71	0.23	7.20	7.53	4.58**
Perceived Parental Attitudes, 0-3	2.89	2.88	-0.35	2.62	2.64	0.76

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Cigarettes	4.20	4.04	-3.81	16.88	13.14	-22.16
Other Tobacco	3.81	3.44	-9.71	14.51	8.97	-38.18**
Alcohol	7.08	7.57	6.92	19.62	10.31	-47.45**
Marijuana	4.26	3.77	-11.50	23.62	14.73	-37.64**
Other Illegal Drugs	2.04	2.50	22.55	9.64	6.69	-30.60
Inhalants	4.52	4.27	-5.53	6.54	6.75	3.21
Non-Medical Prescription Drug Use	3.36	3.32	-1.19	9.18	3.90	-57.52**
Non-Medical Over-The-Counter Drug Use	3.19	3.18	-0.31	9.51	5.74	-39.64**

\*\* Pre- and post-test averages are statistically significantly different (p<.05).

\* Pre- and post-test averages are approaching being statistically significantly different (p<.10).

**Table A2. Overall Results by Gender**

Risk Factor Scores, Range (Positive score is favorable)	Females (n=893)			Males (n=841)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	1.93	2.17	12.44**	1.87	2.08	11.23**
Decision-Making Skills, 0-3	1.83	1.92	4.92**	1.76	1.85	5.11**
Favorable Attitudes, 0-2	1.59	1.62	1.87	1.48	1.54	4.05**
Perceived Peer Norms, 0-10	8.49	8.53	0.47	8.30	8.43	1.57**
Perceived Parental Attitudes, 0-3	2.86	2.87	0.35	2.80	2.80	0.00

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Cigarettes	6.22	5.05	-18.81	7.23	6.59	-8.85
Other Tobacco	3.30	1.54	-53.33**	8.72	7.75	-11.12
Alcohol	9.07	7.74	-14.66	10.26	8.45	-17.64
Marijuana	6.96	4.45	-36.06**	9.24	7.53	-18.51
Other Illegal Drugs	2.08	2.17	4.33	5.10	4.47	-12.35
Inhalants	4.58	4.01	-12.45	5.29	5.45	3.02
Non-Medical Prescription Drug Use	3.86	2.57	-33.42	5.22	4.27	-18.20
Non-Medical Over-The-Counter Drug Use	3.23	3.10	-4.02	5.49	4.18	-23.86

\*\* Pre- and post-test averages are statistically significantly different (p<.05).

\* Pre- and post-test averages are approaching being statistically significantly different (p<.10).



**Table A3. Overall Results by Race Group**

Risk Factor Scores, Range (Positive score is favorable)	Black/African American participants (n=848)			White participants (n=633)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	1.83	2.12	15.85**	1.99	2.11	6.03**
Decision-Making Skills, 0-3	1.78	1.92	7.87	1.81	1.84	1.66
Favorable Attitudes, 0-2	1.49	1.54	3.36	1.60	1.61	0.63
Perceived Peer Norms, 0-10	8.25	8.38	1.58	8.59	8.59	0.00
Perceived Parental Attitudes, 0-3	2.83	2.85	0.71	2.83	2.83	0.00

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Cigarettes	5.39	4.16	-22.82	7.83	7.18	-8.30
Other Tobacco	4.01	3.27	-18.45	8.28	6.61	-20.17
Alcohol	8.89	7.55	-15.07	9.86	8.92	-9.53
Marijuana	8.56	5.41	-36.80**	7.18	5.59	-22.14
Other Illegal Drugs	3.53	3.47	-1.70	3.25	2.21	-32.00
Inhalants	5.01	4.96	-1.0	4.46	5.13	15.02
Non-Medical Prescription Drug Use	4.90	3.90	-20.41	4.55	2.62	-42.42*
Non-Medical Over-The-Counter Drug Use	4.24	4.29	1.18	4.30	3.13	-27.21

\*\* Pre- and post-test averages are statistically significantly different (p<.05).

\* Pre- and post-test averages are approaching being statistically significantly different (p<.10).

**Table A3. Overall Results by Race Group (continued)**

Risk Factor Scores, Range (Positive score is favorable)	Multi-ethnic participants (n=115)			American Indian/Native American participants (n=24)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	2.10	2.23	6.19*	1.74	2.10	20.69**
Decision-Making Skills, 0-3	1.82	1.78	-2.20	1.91	2.13	11.52*
Favorable Attitudes, 0-2	1.62	1.58	-2.47	1.63	1.65	1.23
Perceived Peer Norms, 0-10	8.41	8.51	1.19	8.63	8.94	3.59
Perceived Parental Attitudes, 0-3	2.90	2.86	-1.38	2.73	2.60	-4.76

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Cigarettes	6.86	5.71	-16.76	10.00	10.53	5.30
Other Tobacco	7.69	4.72	-38.62	4.76	5.26	10.50
Alcohol	11.43	8.49	-25.72	9.52	9.52	0.00
Marijuana	8.74	8.57	-1.95	5.26	15.00	185.17
Other Illegal Drugs	3.77	5.77	53.05	0.00	0.00	-
Inhalants	5.15	0.00	-100.00	10.00	6.67	-33.30
Non-Medical Prescription Drug Use	2.94	1.90	-35.37	9.52	10.00	5.04
Non-Medical Over-The-Counter Drug Use	8.16	0.95	-88.36**	0.00	0.00	-

\*\* Pre- and post-test averages are statistically significantly different (p<.05).

\* Pre- and post-test averages are approaching being statistically significantly different (p<.10).

**Table A3. Overall Results by Race Group (continued)**

Risk Factor Scores, Range (Positive score is favorable)	"Other" race participants (n=102)		
	Pre Average	Post Average	% Change
Perceived Risk, 0-3	1.81	2.09	15.47**
Decision-Making Skills, 0-3	1.74	1.94	11.49**
Favorable Attitudes, 0-2	1.45	1.56	7.59
Perceived Peer Norms, 0-10	8.28	8.44	1.93
Perceived Parental Attitudes, 0-3	2.84	2.78	-2.11

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change
Cigarettes	9.28	8.42	-9.27
Other Tobacco	4.17	2.06	-50.60
Alcohol	12.12	6.32	-47.85
Marijuana	9.38	7.22	-23.03
Other Illegal Drugs	5.21	7.53	44.53
Inhalants	6.45	6.38	-1.09
Non-Medical Prescription Drug Use	3.30	6.59	99.70
Non-Medical Over-The-Counter Drug Use	3.37	6.59	95.55**

\*\* Pre- and post-test averages are statistically significantly different (p<.05).

\* Pre- and post-test averages are approaching being statistically significantly different (p<.10).

**Table A4. Overall Results by Ethnicity**

Risk Factor Scores, Range (Positive score is favorable)	Participants of Hispanic, Latino, or Spanish Descent or Origin (n=126)			Participants Not of Hispanic, Latino, or Spanish Descent or Origin (n=1560)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	1.89	2.06	8.99**	1.91	2.13	11.52**
Decision-Making Skills, 0-3	1.87	1.93	3.21	1.79	1.88	5.03**
Favorable Attitudes, 0-2	1.54	1.58	2.60	1.54	1.58	2.60**
Perceived Peer Norms, 0-10	8.49	8.51	0.24	8.39	8.48	1.07**
Perceived Parental Attitudes, 0-3	2.85	2.79	-2.11	2.84	2.84	0.00

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Cigarettes	7.02	5.08	-27.64	6.47	5.89	-8.96
Other Tobacco	3.45	0.08	-97.68	6.05	4.76	-21.32
Alcohol	7.02	5.83	-16.95	9.73	8.47	-12.95
Marijuana	7.83	8.40	7.28	8.05	5.65	-29.81**
Other Illegal Drugs	5.17	4.31	-16.63	3.37	3.22	-4.45
Inhalants	3.64	5.13	40.93	5.18	4.53	-12.55
Non-Medical Prescription Drug Use	4.59	4.42	3.70	4.63	3.26	-29.59
Non-Medical Over-The-Counter Drug Use	2.78	7.27	161.51	4.43	3.36	-24.15

\*\* Pre- and post-test averages are statistically significantly different (p<.05).

\* Pre- and post-test averages are approaching being statistically significantly different (p<.10).

**Table A5. Overall Results by Program**

Risk Factor Scores, Range (Positive score is favorable)	All Programs (n=1749)			All Stars (n=226)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	1.90	2.12	11.58**	1.99	2.06	3.52
Decision-Making Skills, 0-3	1.79	1.89	5.59**	1.82	1.87	2.75
Favorable Attitudes, 0-2	1.54	1.58	2.60**	1.63	1.57	-3.68
Perceived Peer Norms, 0-10	8.40	8.48	0.95**	8.61	8.67	0.70
Perceived Parental Attitudes, 0-3	2.83	2.84	0.35	2.89	2.83	-2.08*

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Cigarettes	6.67	5.81	-12.89	5.58	2.66	-52.33
Other Tobacco	5.91	4.54	-23.18	1.50	2.04	36.00
Alcohol	9.60	8.13	-15.31	6.70	5.05	-24.63
Marijuana	8.03	5.96	-25.78**	3.72	1.61	-56.72
Other Illegal Drugs	3.52	3.37	-4.26	0.51	3.21	529.41
Inhalants	4.97	4.79	-3.62	4.62	6.84	48.05
Non-Medical Prescription Drug Use	4.55	3.48	-23.52	2.16	3.72	72.22
Non-Medical Over-The-Counter Drug Use	4.37	3.72	-14.87	4.26	5.26	23.47

\*\* Pre- and post-test averages are statistically significantly different (p<.05).

\* Pre- and post-test averages are approaching being statistically significantly different (p<.10).

**Table A5. Overall Results by Program (continued)**

Risk Factor Scores, Range (Positive score is favorable)	Girls Circle (n=51)			Keepin' It Real (n=99)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	1.90	2.10	10.53	1.98	2.13	7.58
Decision-Making Skills, 0-3	1.88	1.82	-3.19	1.94	1.09	-43.81**
Favorable Attitudes, 0-2	1.51	1.69	11.92**	1.77	1.80	1.69
Perceived Peer Norms, 0-10	8.27	8.17	-1.21	9.02	9.05	0.33
Perceived Parental Attitudes, 0-3	2.80	2.85	1.79	2.96	2.96	0.00

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Cigarettes	4.65	9.80	110.75	0.00	10.1	-
Other Tobacco	2.27	0.00	-100.00	1.09	2.13	95.41
Alcohol	11.36	12.50	10.04	1.11	4.26	283.78
Marijuana	0.00	6.38	-	3.45	0.00	-100.00
Other Illegal Drugs	0.00	4.08	-	1.05	1.08	2.86
Inhalants	2.27	0.00	-100.00	1.16	2.06	77.59
Non-Medical Prescription Drug Use	2.38	4.35	82.77	1.09	3.13	187.16
Non-Medical Over-The-Counter Drug Use	4.76	2.04	-57.14	1.12	2.15	91.96

\*\* Pre- and post-test averages are statistically significantly different (p<.05).

\* Pre- and post-test averages are approaching being statistically significantly different (p<.10).

**Table A5. Overall Results by Program (continued)**

Risk Factor Scores, Range (Positive score is favorable)	Life Skills (n=853)			Project ALERT (n=174)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	1.90	2.20	15.79**	1.93	2.10	8.81**
Decision-Making Skills, 0-3	1.77	1.87	5.65**	1.84	2.09	13.59**
Favorable Attitudes, 0-2	1.51	1.55	2.65**	1.63	1.675	2.76
Perceived Peer Norms, 0-10	8.28	8.32	0.48	8.81	8.91	1.14
Perceived Parental Attitudes, 0-3	2.83	2.83	0.00	2.85	2.91	2.11

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Cigarettes	6.01	6.52	8.49	7.59	6.29	-17.13
Other Tobacco	6.67	6.05	-9.30	4.46	2.53	-43.27
Alcohol	10.10	10.36	2.57	7.64	7.59	-0.65
Marijuana	7.72	7.79	0.91	5.03	3.66	-27.24
Other Illegal Drugs	3.03	3.25	7.26	5.26	1.89	-64.07
Inhalants	5.36	4.86	-9.33	7.00	7.45	6.43
Non-Medical Prescription Drug Use	4.45	3.96	-11.01	4.76	5.06	6.30
Non-Medical Over-The-Counter Drug Use	3.27	3.71	13.46	4.86	2.53	-47.94

\*\* Pre- and post-test averages are statistically significantly different (p<.05).

\* Pre- and post-test averages are approaching being statistically significantly different (p<.10).

**Table A5. Overall Results by Program (continued)**

Risk Factor Scores, Range (Positive score is favorable)	Project TND (n=49)			Project TNT (n=33)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	1.19	1.68	41.18**	2.33	2.31	-0.86
Decision-Making Skills, 0-3	1.54	1.69	9.74	2.03	1.98	-2.46
Favorable Attitudes, 0-2	0.66	0.69	4.55	1.80	1.89	5.00
Perceived Peer Norms, 0-10	5.87	6.67	13.63**	8.77	8.78	0.11
Perceived Parental Attitudes, 0-3	2.27	2.32	2.20	2.95	2.92	-1.02

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Cigarettes	31.25	8.70	-72.16**	0.00	3.33	-
Other Tobacco	22.45	0.00	-100.00	0.00	3.33	-
Alcohol	39.58	8.70	-78.02**	0.00	3.13	-
Marijuana	46.94	8.51	-81.87**	0.00	0.00	-
Other Illegal Drugs	20.93	4.55	-78.26**	0.00	7.41	-
Inhalants	12.77	0.00	-100.00	0.00	3.45	-
Non-Medical Prescription Drug Use	19.15	0.00	-100.00	0.00	0.00	-
Non-Medical Over-The-Counter Drug Use	18.60	2.33	-87.47**	4.76	0.00	-100.00

\*\* Pre- and post-test averages are statistically significantly different (p<.05).

\* Pre- and post-test averages are approaching being statistically significantly different (p<.10).



**Table A5. Overall Results by Program (continued)**

Risk Factor Scores, Range (Positive score is favorable)	Too Good For Drugs (n=167)			Why Try (n=60)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	1.98	2.00	1.01	1.48	1.88	27.03**
Decision-Making Skills, 0-3	1.91	1.94	1.57	1.49	1.49	0.00
Favorable Attitudes, 0-2	1.72	1.79	4.07*	1.01	1.10	8.91
Perceived Peer Norms, 0-10	9.07	9.09	0.22	7.27	7.47	2.75
Perceived Parental Attitudes, 0-3	2.90	2.88	-0.69	2.65	2.72	2.64

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Cigarettes	3.16	2.44	-22.78	18.00	16.67	-7.39
Other Tobacco	3.75	3.77	0.53	25.00	13.21	-47.16
Alcohol	5.03	3.11	-38.17	24.00	12.73	-46.96*
Marijuana	4.52	3.41	-24.56	30.00	23.21	-22.63
Other Illegal Drugs	3.13	1.89	-39.62	15.69	12.73	-18.87
Inhalants	2.52	1.92	-23.81	5.00	12.76	155.20
Non-Medical Prescription Drug Use	3.16	1.30	-58.86	15.56	3.70	-76.22
Non-Medical Over-The-Counter Drug Use	4.64	3.21	-30.82	14.63	9.43	-35.54

\*\* Pre- and post-test averages are statistically significantly different (p<.05).

\* Pre- and post-test averages are approaching being statistically significantly different (p<.10).

## **APPENDIX B: DAODAS STANDARD SURVEY**

# STUDENT PREVENTION PRE-SURVEY

Private Student Code

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Your responses are very important to us, and we would like your opinion on these issues. All your responses will be strictly confidential.

RIGHT NOW, please put the private code you were given here AND put it on the other pages of the survey.



Please choose the responses you think are most accurate and fill in those bubbles as much as you can.

1. How much do you think people risk harming themselves physically and in other ways when they . . .	No Risk	Slight Risk	Moderate Risk	Great Risk
a) Smoke one or more packs of cigarettes per day?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Smoke marijuana once or twice a week?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Try one or two drinks of an alcoholic beverage (beer, wine, liquor)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Have five or more drinks of an alcoholic beverage once or twice a week?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. Please respond to the following questions and statement about decision-making.	Never	Sometimes, But Not Often	Often	All the Time
a) How often do you stop to think about your options before you make a decision?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) How often do you stop to think about how your decisions may affect others' feelings?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) How often do you stop and think about all of the things that may happen as a result of your decisions?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) I make good decisions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. How do you think your close friends would feel about you smoking one or more packs of cigarettes a day?	Neither Approve Nor Disapprove	Somewhat Disapprove	Strongly Disapprove
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Private Student Code:

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4. How do you feel about someone your age . . .	Neither Approve Nor Disapprove	Somewhat Disapprove	Strongly Disapprove
a) Smoking one or more packs of cigarettes a day?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Trying marijuana once or twice?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Using marijuana once a month or more?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Having one or two drinks of an alcoholic beverage nearly every day?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. How many of your closest friends do you think have . . .	All of Them	Most of Them	Some of Them	None of Them
a) Used marijuana during the past 30 days?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Been drunk during the past 30 days?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Had some kind of alcoholic beverage during the past 30 days?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Used a drug like cocaine or heroin during the past 30 days?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. What would your best friends think if you . . .	They Would Be Angry With Me	They Would Be a Little Upset	They Wouldn't Care One Way or Another	They Would Accept Me	They Would Be Glad
a) Tried using marijuana?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Got drunk once in a while?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7. How do you think your closest friends feel about the following statements:	They Strongly Agree	They Agree	They Disagree	They Strongly Disagree
a) "People who use drugs are stupid."	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) "It is cool to get drunk."	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Private Student Code:

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8. How wrong do your parents feel it would be for YOU to . . .	Very Wrong	Wrong	A Little Bit Wrong	Not Wrong at All
a) Drink beer, wine, or hard liquor (for example, vodka, whiskey, or gin) regularly?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Smoke cigarettes?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Smoke marijuana?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**For the questions below, list how many days out of the past 30 days that you used the drug listed. You should write a number between 0 (if you did not use in the past 30 days) and 30 (used every day).**

9. During the past 30 days, on how many days did you smoke part or all of a cigarette?	<table border="1" style="display: inline-table;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table> days		
10. During the past 30 days, on how many days did you use other tobacco products (such as dip, snuff, chew, or cigars)?	<table border="1" style="display: inline-table;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table> days		
11. During the past 30 days, on how many days did you drink one or more drinks of an alcoholic beverage?	<table border="1" style="display: inline-table;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table> days		
12. During the past 30 days, on how many days did you use marijuana?	<table border="1" style="display: inline-table;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table> days		
13. During the past 30 days, on how many days did you use any other illegal drug?	<table border="1" style="display: inline-table;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table> days		
14. During the past 30 days, on how many days did you sniff glue, breathe the contents of an aerosol spray can, or inhale other gases or sprays in order to get high?	<table border="1" style="display: inline-table;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table> days		
15. During the past 30 days, on how many days did you take a prescription medication (such as Ritalin, Adderall, Xanax) <u>without</u> a doctor's prescription?	<table border="1" style="display: inline-table;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table> days		
16. During the past 30 days, on how many days did you use an over-the-counter medicine (one you can buy without a doctor's prescription) to get high rather than for the reason it was made?	<table border="1" style="display: inline-table;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table> days		



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For the questions below, list what age you were when you first used the drug listed or, if you have never used that drug, fill in "never used."

	Never Used	
17. How old were you the <u>first time</u> you smoked part or all of a cigarette?	<input type="radio"/>	Or Age <input type="text"/> <input type="text"/>
18. How old were you the <u>first time</u> you used any other tobacco product?	<input type="radio"/>	Or Age <input type="text"/> <input type="text"/>
19. How old were you the <u>first time</u> you had a drink of an alcohol beverage? Please <u>do not</u> include any time when you only had a sip or two from an alcoholic drink and <u>do not</u> include having alcohol as part of a religious service.	<input type="radio"/>	Or Age <input type="text"/> <input type="text"/>
20. How old were you the <u>first time</u> you used marijuana?	<input type="radio"/>	Or Age <input type="text"/> <input type="text"/>
21. How old were you the <u>first time</u> you used any other illegal drug?	<input type="radio"/>	Or Age <input type="text"/> <input type="text"/>

22. During the past 12 months . . .	Yes	No
a) Have you talked with at least one of your parents about the dangers of tobacco, alcohol, or drug use? By parents, we mean either your biological parents, adoptive parents, stepparents, or adult guardians--whether or not they live with you.	<input type="radio"/>	<input type="radio"/>
b) Do you recall hearing, reading, or watching an advertisement about the prevention of substance use?	<input type="radio"/>	<input type="radio"/>

Please answer the following questions about yourself. (Remember, this survey is confidential!)

23. How old are you?  10  11  12  13  14  15  16  17  18
24. Are you male or female?  Male  Female
25. Are you Hispanic or Latino?  Yes  No
26. Which of these groups describes you?
- |                       |                               |  |  |                       |                       |                       |
|-----------------------|-------------------------------|--|--|-----------------------|-----------------------|-----------------------|
| White                 | Black/<br>African<br>American | American<br>Indian or<br>Alaska Native | Native Hawaiian<br>Other Pacific<br>Islander | Asian                 | Multiethnic           | Other                 |
| <input type="radio"/> | <input type="radio"/>         | <input type="radio"/>                  | <input type="radio"/>                        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |