

2012 Prevention Outcomes Annual Report

South Carolina
DAODAS
Department of Alcohol and Other Drug Abuse Services



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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 2011-2012. 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 3,490 participants with matched pre- and post-tests, an increase from the 2,604 in FY '11. Most (92%) participants were between the ages of 10 and 14. The race demographics were roughly 50% Black or African American, 36% White, and 6% "Other" race.
- The results showed statistically significant positive changes on four of the five risk factor measures: perceived risk, decision-making, favorable attitudes, and perceived peer norms.
- For substance use, for the first time since FY '05, there were no statistically significant reductions in the number of users for any of the eight substances measured. Only alcohol and inhalants had reductions in the number of users.
- For most substances, more than 95% of participants that 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 substances by post-test.
- Average ages of first use for cigarettes, other tobacco products, and alcohol were between 10.8 and 11.2. First use of marijuana averaged 12.2.
- There were 32 county program implementations analyzed representing 15 different curricula.
- 95% of the participants were served in an evidence-based program. As with past years, evidence-based programs generally demonstrate more desirable outcomes.

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

- County authority prevention staff returned forms on 7,422 alcohol compliance checks and 1,242 tobacco compliance checks. For alcohol, 14.5% of attempts generated sales compared to 10.4% for tobacco. This is the lowest sale rate we have ever tracked for tobacco but an increase over FY '11 for the alcohol rate (12.4%; non-significant difference). Having posted signage about checking IDs or having age verification equipment were both statistically significantly associated with being less likely to sell alcohol.

- 1,675 merchants were served in the Palmetto Retailer Education Program.
- Primarily through Alcohol Enforcement Teams, counties reported 928 public safety checkpoints, resulting in more than 1,800 tickets, and 154 dispersed parties during which 840 underage drinking violations were written. Another 137 parties were prevented from AETs working off of advance information. About 7% of the 237 adults approached by a cooperating youth asking for alcohol from a store purchased alcohol and were ticketed by an AET (“shoulder tap” operations).
- Far more youth were served in a diversion program for youth alcohol offenses (1,082 served in the Alcohol Education Program) than tobacco (361 served in the Tobacco Education Program). That is the highest annual total so far for TEP.
- The FFY 2013 Youth Access to Tobacco Study (Synar) showed that 11.7% of retailers sell cigarettes to underage youth, the highest rate since FFY 2008.
- 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.

In summary, South Carolina’s prevention data is very positive and demonstrates that where we can measure outcomes well across counties, we can see clear evidence of positive change. However, it should be noted that the curriculum programs had some of the least desired outcomes compared to past years, even if they are generally positive overall. The levels of environmental strategies implemented remain strong, though there were undesired increases in the alcohol compliance check buy rate and the Synar rate.

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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. A majority of their funds are distributed to the county alcohol and drug authority system, 33 agencies serving the state's 46 counties. 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).

Beginning in FY '05, county authorities were required to use the DAODAS Standard Survey 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 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 for FY '12. The deadline for pre- or post-tests to be included in the final database for FY '12 was June 1. This report, written by the Columbia, SC office of the Pacific Institute for Research and Evaluation, focuses on the findings based on the year-end cumulative database for FY '12, though we also present results where appropriate from past years for comparison purposes.

Contents of This Report

This report will not focus exclusively on outcomes generated through pre- and post-testing of middle and high school youth, but those results will receive the most analysis and discussion because it is the most standardized data collection method implemented across county authority sites. Other sections of the report will deal with those outcomes that can be assessed across sites for environmental strategies and the Youth Access to Tobacco Study (Synar).

Section II will focus on the overall results generated by the DAODAS Standard Survey. Section II will also present and discuss the pre- and post-test findings by demographic groups: age, gender, race, and ethnicity.

Section III will present and discuss analyses for the pre- and post-test results by program. In addition, we will present a comparison of the results for evidence-based programs versus non-evidence-based programs.

Section IV will be a discussion of 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 will discuss findings from county alcohol and tobacco environmental strategies with a focus on compliance checks and Alcohol Enforcement Team efforts.

Section VI will cover results from the FFY '13 Youth Access to Tobacco Study (Synar).

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

Many of the most 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 '12.

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 will present 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 the 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. The survey stayed unchanged for the first three years, but adaptations were made in FY '08 to ensure compatibility with the National Outcome Measures (NOMs). Some measures stayed consistent across the two versions, but most required changes. The survey has been largely unchanged since FY '09.

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 in. 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.¹ 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,

¹ 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.

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.

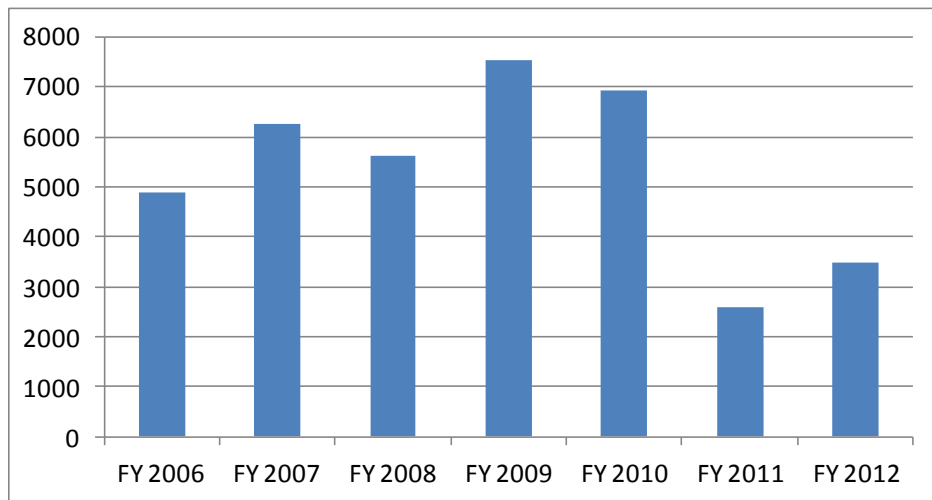
Matched Participants

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.

Chart 1. Matched Participants in Pre-Post Database, FY '06-'12



The final database had 3,490 matched participants, which is the second lowest in the history of the standard survey process but more than the 2,604 in FY '11 (Chart 1). The ending of the Safe and Drug-Free Schools funding at the end of FY '10 accounts for much of the drop from the FY '06 to FY '10 period.

The year-end scanned pre-test database contained 3,974, meaning 88% of those pre-tests ended up with a matched post-test. This was our second year of using our current system of locally administered participant ID numbers and data collection with data scanning at the state level by PIRE. In prior years, local prevention staff entered participant responses into an online system. Considerable effort was made by state staff to address participant ID coding in order to save as many matches as possible.

The 3,974 total youth that received a pre-test do not necessarily reflect all school age youth to receive curriculum program services. DAODAS' prevention reporting system showed 8,385 total participants in recurring services for FY '12, 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 demographic figures presented in this section are based on the participants' responses to the demographic items on their pre-test. The same items appeared on their post-tests but were not used.

Table 1. Age Distribution of Program Participants

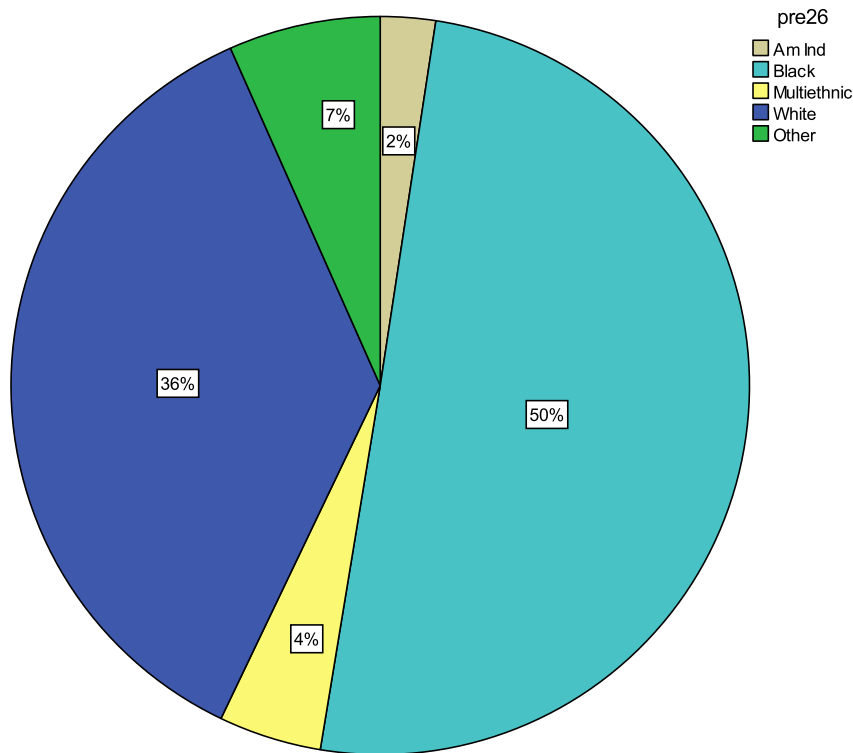
Age	% of Participants	
	FY '12	FY '11
10	14.8	22.9
11	15.1	19.9
12	22.7	18.9
13	23.0	21.1
14	16.7	8.6
15	3.5	3.3
16	2.2	2.8
17	1.4	1.8
18	.5	.7
19	0	0

Age. A majority (92%) of participants were between the ages of 10 and 14, with an average age of 12.4, a slight shift to the older ages from FY '11 and '10 when the average age was 12.1. Compared to FY '11, the participant population more heavily included 12 to 14 year olds and fewer 10 and 11 year olds. Still, 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 an older age students had small numbers of participants served.

Gender. Males made up half of the matched participant population (50% with 0.9% of the participants unidentified for gender). The programs that did not have a relatively evenly split gender breakdown were Girl Power, Teacher Cadets, and Wise Guys.

Race/Ethnicity. Of the matched participants, 50% were Black or African American, 36% were White, 6% were of “other” race, 2% were American Indian or Alaskan Native, and 4% were in the multiethnic race category (Chart 2). There were small numbers of participants (0.3% or below) that were Asian, Native Hawaiian, or Other Pacific Islander. Just under 7% of matched participants were of Hispanic, Latino, or Spanish origin or descent. These percentages closely match FY ’11 except that the percentage of Hispanic, Latino, or Spanish origin students rose from 5%. Some programs had atypical demographic breakdowns, such as Girl Power (30% Hispanic/Latino; 25% multiethnic), Teacher Cadets (31% Hispanic/Latino; 67% White), Project Toward No Drug Abuse (56% White), Too Good For Drugs (57% White).

Chart 2. Matched Participants by Race



Risk-Factor Measures

Table 2 (below) shows the results for the five risk factors included on the DAODAS Standard Survey. As shown in the table, there was statistically significant ($p < .05$) positive change from pre- to post-test for four of the five measures—perceived risk, decision-making, favorable attitudes, and perceived peer norms. There was also a negative statistically significant change for perceived parental attitudes, though it should

be noted that measure had the highest relative pre-test score and may have been limited by a “ceiling effect” because the high pre-test score left little room for improvement. For some measures, the percentage changes for FY ’12 were slightly less desirable than in FY ’11. The greatest percentage changes were in the positive direction from 1.8% to 2.9% improvement for decision-making and from 1.1% to 1.9% improvement for favorable attitudes.

**Table 2. Overall Results, Risk-Factor Measures:
County Authorities, FY ‘12 and ‘11**

Risk-Factor Measure	Possible Range of Scores	Pre-Test Average	Post-Test Average	FY '12 % Change	FY '11 % Change
Perceived Risk	0-3	1.91	2.06	7.8**	8.1**
Decision-Making	0-3	1.83	1.89	2.9**	1.8**
Favorable Attitudes	0-2	1.53	1.56	1.9**	1.1
Perceived Peer Norms	0-10	8.25	8.31	0.8**	1.2**
Perceived Parental Attitudes	0-3	2.82	2.80	-0.7**	-0.4

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

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

Age. Table A1 shows county authority data 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 risk-factor scores. Middle school students showed statistically significant improvement for perceived risk and decision-making skills. High school students had significant improvement for perceived risk, decision-making skills, favorable attitudes, and perceived peer norms. The high school group had larger percentage improvements for most risk factor measures, though that is often the case for the group with lower pre-test scores, likely because they have more room for improvement.

Gender. Table A2 shows data results separated by gender. Results show statistically significant positive change for perceived risk, decision-making skills, and perceived peer norms for females and significant improvement on perceived risk, decision-making skills, and favorable attitudes for males. Females had a significant undesired decline in perceived parental attitudes, though their pre-test score was so high there was almost no room for change except down. It is worth noting that females had better pre-test risk-factor scores than males on all measures.

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. The Black or African American participant group had significant positive change on perceived risk, decision-making skills, favorable attitudes, and perceived peer norms, while the White participant group had significant improvement on perceived risk only and a negative

significant decline on perceived parental attitudes (again with a quite high pre-test score). The Black or African American participant group had larger percentage improvements for most risk factor measures compared to the White participant group, though that is often the case for the group with lower pre-test scores, likely because they have more room for improvement.

Participants of Hispanic, Latino, or Spanish descent or origin had statistically significant positive change for perceived risk only, though their pre-to-post change scores were similar to those not of that ethnicity. The lack of statistical significance is more attributable to the lower number of participants (only 240) than less positive change.

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 '12 results, along with the corresponding changes in use from FY '11, are shown in Table 3.

Table 3. Overall Results, Substance Use Rates, FY '11-'12

Risk-Factor Measure	% Using at Pre-Test	% Using at Post-Test	FY '12 % Change	FY '11 % Change
30-Day Cigarette Use	7.0	7.3	4.6	-16.3**
30-Day Other Tobacco Use	4.1	5.0	20.9	-18.2**
30-Day Alcohol Use	11.1	10.9	-1.9	-7.8
30-Day Marijuana Use	5.5	6.2	12.8	-13.9
30-Day Other Illegal Drug Use	2.7	3.2	17.6	-15.6
30-Day Inhalants Use	5.2	4.6	-10.8	-18.2**
30-Day Non-Medical Prescription Drug Use	3.2	3.8	18.6	-26.8
30-Day Non-Medical OTC Drug Use	3.6	3.9	7.5	-25.4**

Negative changes are desired for these items

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

For most substances, the number of users increased from pre- to post-test, though none of the changes, positive or negative, were significant. Some of the larger percentage increases are partially a function of small pre-test percentages. For example, non-cigarette tobacco use had the largest percentage increase (20.9%) but only 4.1% of students were using other tobacco products at pre-test.

Reviewing FY '11 pre-test data, the percentages of students using substances in FY '12 are generally lower. Lower pre-test use rates can increase a “floor” effect where it is difficult to improve on already low rates. However, FY '10 pre-test percentages of users

were well below FY '12 rates, and there were still generally double-digit percentage decreases in users.

Regardless, relative to past years, these data have to be viewed as disappointing. In FY '11, the number of users decreased for all substances, and the changes were significant for four of those substances. In past years, the number of users typically decreased for all substances and to the level of significance for six to eight substances annually. In additional analyses, we analyzed changes in substance use rates among just those students that reported the use of any substance. Among these substance users, there were decreases in the number of users ranging from 32% to 55%. However, the addition of new users over the course of a program is what drove most of the overall percentages of users higher.

Chart 3. Substance Use, Pre-Test Rates and Percentage Change in Users from Pre-to Post-Test, FY '12

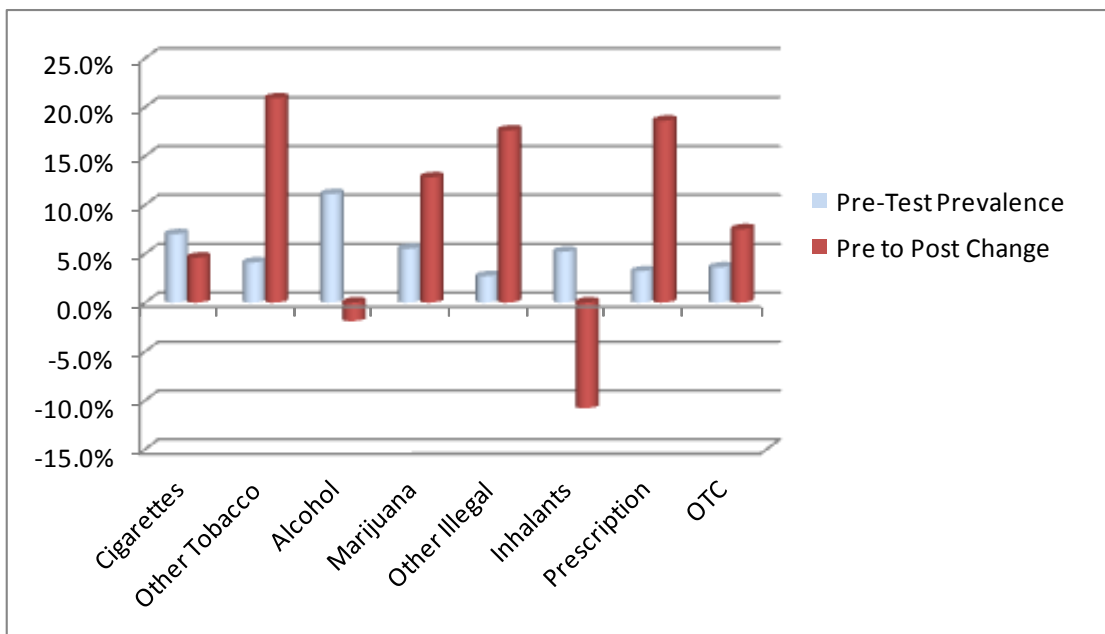


Chart 3 depicts the pre-test prevalence for each of the eight substances along with the percentage decreases in the number of users.

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.

Charts 4 and 5 show that the vast majority of participants who begin programs as non-users remain non-users. More than 95% of cigarette, other tobacco, marijuana, other

illegal drug, inhalant, non-medical prescription drug, and non-medical over-the-counter drug non-users maintained non-use. Alcohol had the most undesirable results, with about 7% of participants initiating alcohol use during the course of programs. Compared to FY '11, these results were less desirable, but this was to be expected given less desirable FY '12 results in the overall decline in the number of substance users seen in Table 3.

Chart 4. Percent of Pre-Test Non-Users Who Remained Non-Users, FY '12 and '11

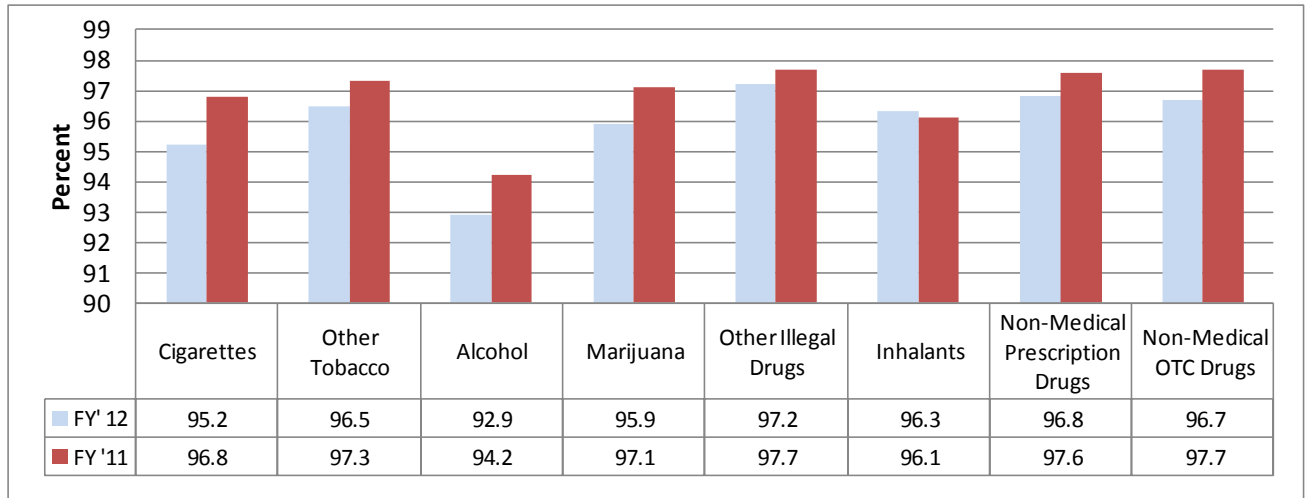
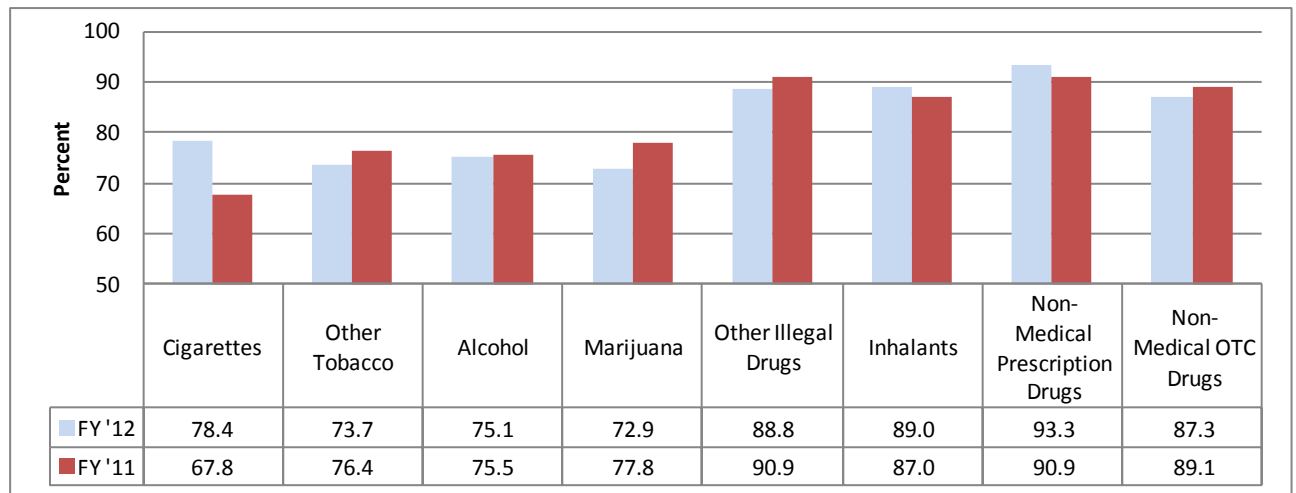


Chart 5. Percent of Pre-Test Users Who Reduced Their Level of Use, FY '12 and '11



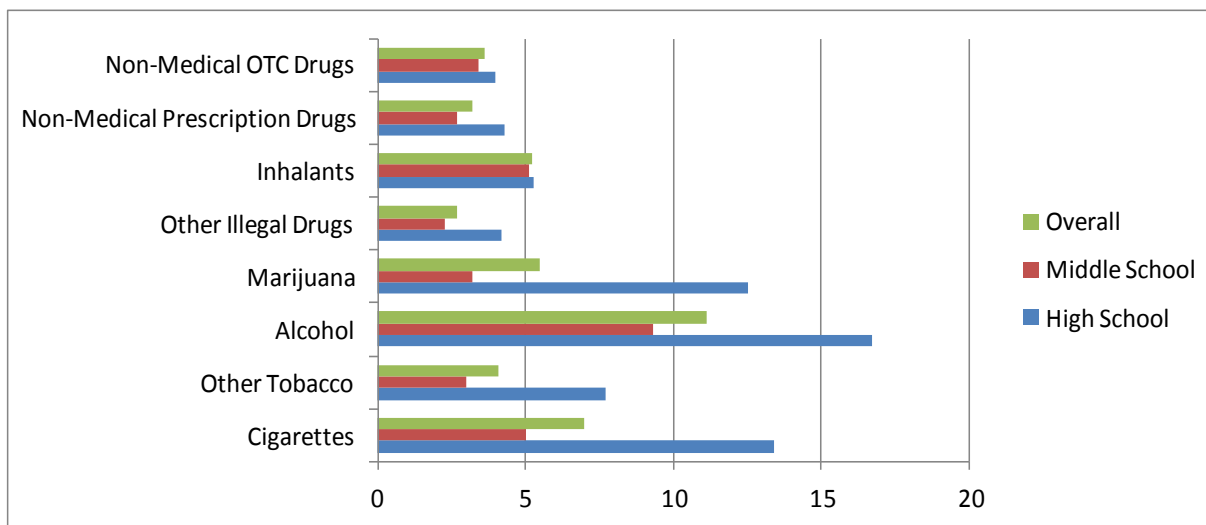
Marijuana users at pre-test were least likely among users of any of the substances to reduce their level of use over the course of a program, though the 73% that did still

represents a strong majority. A considerably higher percentage of pre-test cigarette users reduced their level of use in FY '12 compared to FY '11.

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 two significant changes in the number of substance users, for other tobacco products and marijuana, but they were both in the undesired direction. The only substances with decreased numbers of users were alcohol and inhalants, and those decreases were small and not significant. This is in contrast to FY '11 data when there were decreases in the number of all substance users for middle school students. For the high school participant group, there was a desired significant decrease in the number of cigarette users.

Chart 6. Overall Results, Rates of Substance Use at Pre-Test: Overall, Middle School, and High School, FY '12



It should be noted in Chart 6 that the high school group had higher percentages of every substance, even inhalants, which has been higher for middle school students in past years. That is a somewhat typical pattern based on national data as inhalants are one of the few substances that has decreased use as age increases. We can also see that use rates for non-medical use of over-the-counter drugs is very close between middle school and high school. Alcohol was the most commonly used drug by far for both groups, followed by cigarettes and marijuana for high school students and inhalants and cigarettes for middle school students.

Gender. Table A2 shows data results separated by gender. There was no consistent pattern distinguishing substance use rates between genders. Females only showed

declines on alcohol and inhalants, while males showed declines on cigarettes and inhalants. No changes were statistically significant to the $p=.05$ standard.

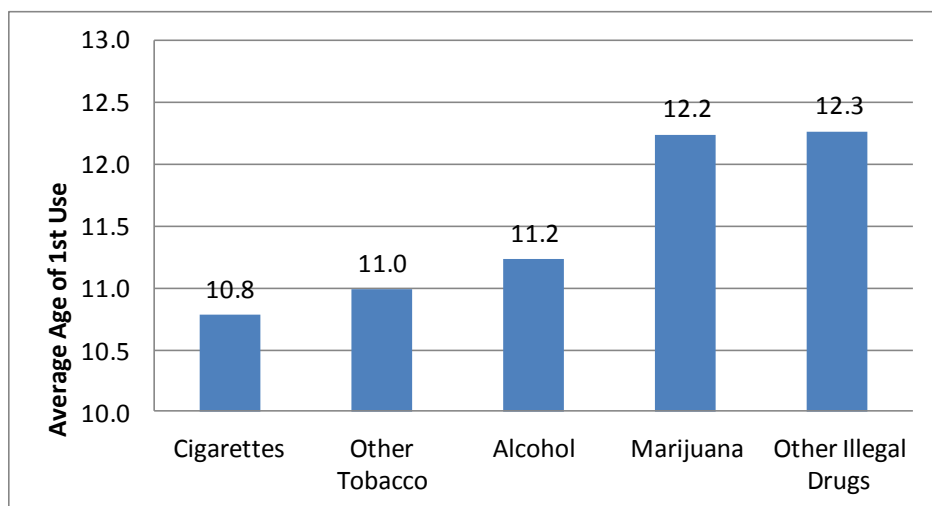
Race/Ethnicity. Table A3 shows data results separated by race (for those race groups with 40 or more participants), and Table A4 shows the results by ethnicity. There was no consistent pattern distinguishing substance use rates between the two largest race groups in the dataset, White participants and Black or African American participants. The largest change was a 54% increase in the number of Black or African American other illegal drug users. Among multiethnic participants, there was a large, statistically significant increase in non-medical users of over-the-counter drugs.

There was no consistent pattern distinguishing substance use rates between those of Hispanic, Latino, or Spanish ethnicity and those not of that ethnicity.

Age of First Use

Starting in FY '08, the DAODAS Standard Survey asked participants at what age they first began using certain substances. As shown in Chart 7, ages of first use for cigarettes, other tobacco products, and alcohol were between 10.8 and 11.2 with tobacco being the most used drug at early ages. Participants averaged first use of marijuana and other illegal drugs at 12.2 and 12.3, respectively. These figures are equal to or higher than FY '11, especially for marijuana and other illegal drugs which were 11.9 and 11.7, respectively.

Chart 7. Overall Results, Average Age of First Use, FY '12



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, just under two out of every three students (63%) report they had talked to their parents about the dangers of drugs in the past year. Additionally, 74% 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 3,490 matched participants, meaning there was a valid pre- and post-test. This number is an increase from 2,604 in FY '11, which had been the lowest total since the standard survey's inception. A majority (92%) of participants were between the ages of 10 and 14. Gender percentages were essentially equal, and the race breakdowns was roughly 50% Black or African American, 36% White, and 6% "Other" race. Only 7% of participants were of Hispanic, Latino, or Spanish descent or origin.

The results showed statistically significant positive changes ($p < .05$) on four of the five risk factor measures: perceived risk (7.8%), decision-making (2.9%), favorable attitudes (1.9%), and perceived peer norms (0.8%). There was an undesired significant change for perceived parental attitudes (-0.7%). Unlike past years, there were no desired statistically significant declines in the number of users for any substance, and there were only two substances for which the number of users decreased, alcohol and inhalants. None of the increases in numbers of users were statistically significant.

The vast majority of participants who begin programs as non-users remained non-users. More than 95% of cigarette, other tobacco, marijuana, other illegal drug, inhalant, non-medical prescription drug, and non-medical over-the-counter drug non-users maintained non-use. The large majority of substance users at pre-test were using less or not all for that substance by post-test.

Demographic analyses reveal that programs had positive impacts on risk factor measures for both middle school and high school age youth. Females had generally higher pre-test risk factor scores and smaller percentages of pre-test substance users compared to males. Risk factor results were generally positive across all race groups and ethnicities. Changes in substance use rates were mixed across most demographic groups.

Ages of first use for cigarettes, other tobacco products, and alcohol were between 10.8 and 11.2 with tobacco being the most used drug at early ages. Participants averaged first use of marijuana and other illegal drugs at 12.2 and 12.3, respectively.

SECTION III: PROGRAM OUTCOMES

Across the provider network, 15 different programs were implemented, down from 17 in FY '11 and 20 in FY '10. In this section, we compare the outcomes for the programs with 40 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 Program Effects

Program	# of Sites	Measures with Significant Change
All Interventions	32	Perceived Risk Decision-Making Favorable Attitudes Perceived Peer Norms <i>Perceived Parental Attitudes</i>
All Stars	6	Perceived Risk <i>Perceived Parental Attitudes</i> Inhalants Non-Medical Prescription Drug Use Non-Medical Over-The-Counter Drug Use
G.I.R.L. Power Series	1	<i>Perceived Parental Attitudes</i>
Keepin' It Real	1	Perceived Risk Decision-Making Favorable Attitudes Perceived Peer Norms Perceived Parental Attitudes Alcohol
Life Skills Training	11	<i>Perceived Parental Attitudes</i>
Project Alert	4	Perceived Risk Non-Medical Prescription Drug Use
Project Northland	2	Perceived Risk Decision-Making Perceived Peer Norms
Project TND	2	Perceived Risk Decision-Making Favorable Attitudes Perceived Peer Norms <i>Marijuana</i> <i>Other Illegal Drugs</i>
Project Toward No Tobacco Use (TNT)	1	<i>Perceived Parental Attitudes</i>
Street Smart	1	Decision-Making <i>Marijuana</i> <i>Non-Medical Over-The-Counter Drug Use</i>
Too Good For Drugs	1	Perceived Risk Non-Medical Over-The-Counter Drug Use
Wise Guys	1	Perceived Peer Norms

Italics indicate undesired change.

Bold items indicate statistically significant change (p<.05); Non-bold items indicate near significance (p<.10).

All Stars, a comprehensive evidence-based ATOD prevention curriculum, had one positive risk factor change (perceived risk) along with a negative risk factor change (perceived parental attitudes). Results show a significant reduction in the number of inhalant users and a near significant reduction in non-medical prescription and over-the-counter drug users. This program was used by six sites with a total of 455 matched participants.

G.I.R.L. Power Series is a single-county prevention program. G.I.R.L. (Gifted, Intelligent, Responsible Ladies) Power 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. The program showed a near significant negative risk factor change in perceived parental attitudes.

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 647 matched participants. The results show a statistically significant improvement in perceived risk, decision-making, favorable attitudes, perceived peer norms, and perceived parental attitudes. There was also a significant reduction in the number of alcohol users.

Life Skills Training is a skill-based, evidence-based ATOD prevention curriculum. There was a significant negative risk factor change in perceived parental attitudes. It was the most commonly implemented program with 11 sites and 1,120 matched participants.

Project Alert, a comprehensive evidence-based ATOD prevention curriculum for middle school students, was delivered in four counties for 342 matched participants. Overall, the results showed positive near significant effects for perceived risk, as well as a near significant reduction in the number of non-medical prescription drug users.

Project Northland, an evidence-based ATOD prevention curriculum with a strong focus on alcohol and influencing the environment, was used by two sites with a total of 99 matched participants. The results show a statistically significant improvement in perceived risk, perceived peer norms, and decision-making.

Project TND, a prevention curriculum intended for high school students, was used by two sites with 197 total matched participants. The results showed positive significant effects for perceived risk, decision-making, favorable attitudes, and perceived peer norms. Unfortunately, there was a significant increase in marijuana and other illegal drug users.

Project Toward No Tobacco Use (TNT), a comprehensive, evidence-based tobacco prevention program for middle school youth, was used by one site and had a near significant negative change for perceived parental attitudes.

Street Smart was created by The Boys & Girls Clubs of America and addresses youth risk factors for gang involvement, helps develop effective conflict resolution and

leadership skills, creates positive peer helpers, and recognizes and addresses the virtues of diversity. It was used by one site and had significant positive change for decision-making. The results showed significant increases in marijuana and non-medical over-the-counter drug users.

Too Good for Drugs is an evidence-based program with specific lessons for each middle and high school grade. One site used Too Good for Drugs, and the results showed a statistically significant positive change for perceived risk and a near significant decrease in non-medical over-the-counter drug use.

Wise Guys, a locally designed, six- to seven-session program for boys/young men 10-18 years old, was used by one site and 47 matched participants. The results showed a statistically significant positive change for perceived peer norms.

Evidence-Based vs. Non-Evidence-Based Programs

County authorities are not required to use evidence-based interventions exclusively, though most do. In FY '12, 95% (all but 183 of matched pre-post tests) of participants were served in evidence-based programs. Despite the large difference in size between the groups, we can compare some of their outcomes. These results are displayed in Table A6 in Appendix A.

First, it should be noted that the students served by non-evidence-based programs had generally higher percentages of pre-test substance users compared to those served in evidence-based programs. The results from the non-evidence-based programs showed the change scores from pre- to post-test were generally less desirable; evidence-based programs had generally higher percentage improvements on risk factor measures and generally more desired changes in the percentages of substance users. In past years, we've generally seen superior outcomes from the evidence-based programs.

Summary of Section III

There were 32 county authority program implementations of 15 different programs in FY '12. Comparing outcomes across programs, the best results were seen from Keepin' It Real with all five positive risk factor changes and a significant decrease in alcohol users.

Other outcomes of note:

- Project TND showed significant positive change on four risk factors but had significant increases in users for marijuana and other illegal drugs
- All Stars showed significant or near significant change on one risk factor and three substance use indicators, but also had an undesired significant change for perceived parental attitudes.

- Project Northland, traditionally one of the programs with the best outcomes from in past reports, had three significant risk factor improvements.

The large majority (95%) of participants with matched pre- and post-tests were served in evidence-based programs. The evidence-based programs showed better outcomes overall.

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. But when 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.

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, but it is the case that each evidence-based program tends to have a base of research support for the long-term impact of the program.

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.

The only fidelity measure used for the county authorities was the reporting of the number of sessions that each group of students received of that program. There was some variation of number of sessions delivered, even for the same program across sites. However, in some instances, this was found to be a difference in the length of each session (some schools have different class period lengths), but the overall delivery time was comparable. Still, some providers did offer the program in numbers of sessions fewer than what the developer recommended, suggesting less overall delivery time. This could have adversely affected outcomes.

Data Analysis Methods

Testing Pre- and Post-Survey Differences in Risk-Factor Scores: We used SPSS 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'12 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 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:

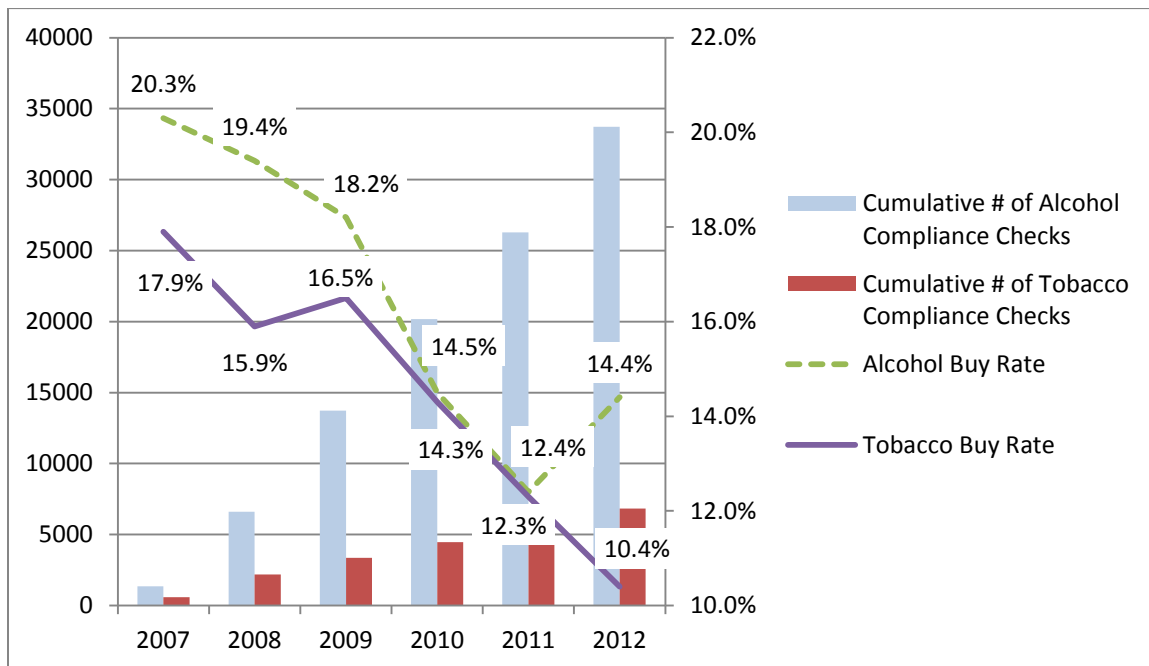
- Publicity to alcohol and tobacco sales staff that enforcement operations will be increasing,
- Awareness-raising with the community to increase its acceptance of increased compliance operations,

- 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 were 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'12, there were 7,422 alcohol and 1,242 tobacco compliance check forms returned. Compared to FY'11, this is an increase for alcohol (6,108) and tobacco (1,127). The FY '10 totals were 6,438 and 1,088, '09 totals were 7,121 and 1,182, and FY' 08 totals were 5,261 and 1,599 respectively. In FY '12, 43 counties returned alcohol compliance check forms, while 31 counties returned tobacco forms. The 43 counties doing alcohol compliance checks are the second highest total ever (44 counties returned forms in '09) and well above the 38 counties that did checks in FY '11. More counties also did tobacco compliance checks in FY '12 as only 27 counties did them in FY '11. 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.

Chart 8. Percentage of Stores Selling and Cumulative Number of Compliance Checks by Year, FY '07-'12



The tobacco merchants sold cigarettes 129 times or 10.4%. The tobacco buy rate is the lowest we have measured since FY '07. It decreased from 12.3% in FY '11 and has continued a relatively steady decline from our first measure of 17.9%. While the decline from FY '11 is not statistically significant, the overall decrease in the sale rate since FY '07 is significant ($p < .001$).

Alcohol was sold 1,076 times or 14.5%. The buy rate increased since FY '11, but not significantly, when it was 12.4%. However, the overall trend is still positive as there was a 20.4% buy rate in FY '07 that has shown decreases most years until this most recent year. The current buy rate is significantly lower than FY '07 ($p < .001$).

Tables 5 and 6 show the buy rate for each county.

In the analysis of FY '08 alcohol compliance data, we were able to demonstrate a statistically significant difference in the compliance rates between counties that had traditional local enforcement (18.7% sales) and those that had local enforcement for the first time in FY '08 (22.3%). This supported the idea that consistent enforcement decreases compliance rates over time, which would be consistent with the general declines in the state rate. However, we are not able to repeat this analysis in subsequent years as there are no counties left to be “new” enforcement counties.

Most FY '11 alcohol compliance checks were conducted at convenience stores (65%). The next most common type of location was large grocery stores (9%), then liquor stores (8%), restaurants (6%), bars (4%), drug stores (3%), “other” (3%), and small grocery stores (2%). In most cases, the youth attempted to buy beer (72%) although a substantial 17% attempted to buy alcopops or alcohol energy drinks and 7% attempted to buy liquor. The most common age for the youth volunteers was 19 (35%) or 18 (24%). Almost 19% of buyers were 17, and 12% were 20. More buyers were male (57%) than female. The large majority of alcohol checks were conducted by White youth (85%), followed by Black or African American youth (12%). These figures were all very close to the FY' 11 figures except that only 66% of checks were beer purchase attempts that year and the gender balance was closer to an even split.

For tobacco compliance checks, 73% were conducted at convenience stores, followed by drug stores (11%), and large grocery stores (9%). Buyers typically attempted to buy cigarettes (71%) with smokeless tobacco, cigars, or blunts being the other products targeted. In FY '08, only 5% of attempts were for other tobacco products, meaning these products have been increasingly targeted over the past five years. Most buyers were 16 (54%), followed by 17 years old (34%), and 15 year olds (10%). The split by gender was essentially even. More than 80% of tobacco compliance checks were conducted by White youth, with the rest being done by Black or African American youth.

The FY'12 sale rate for non-cigarette tobacco products was 14%, statistically significantly higher than the cigarette sale rate of 9% ($p = .006$). For the past two years, the other tobacco product sale rate was 21%, so it is encouraging that FY '12 finally

Table 5. FY '12 Alcohol Compliance Check Buy Rates by County

County Name	Total Eligible Purchase Attempts	Buy	Buy Rate
ABBEVILLE	6	4	66.7%
AIKEN	67	20	29.9%
ALLENDALE	6	0	0%
ANDERSON	232	56	24.1%
BAMBERG	37	2	5.4%
BARNWELL	52	8	15.4%
BEAUFORT	0	0	N/A
BERKELEY	662	34	5.1%
CALHOUN	17	1	5.9%
CHARLESTON	333	62	18.6%
CHEROKEE	17	4	23.5%
CHESTER	30	3	10.0%
CHESTERFIELD	130	34	26.2%
CLARENDON	24	5	20.8%
COLLETON	88	19	21.6%
DARLINGTON	109	14	12.8%
DILLON	56	16	28.6%
DORCHESTER	78	8	10.3%
EDGEFIELD	10	2	20.0%
FAIRFIELD	30	5	16.7%
FLORENCE	311	34	10.9%
GEORGETOWN	28	6	21.4%
GREENVILLE	1975	204	10.3%
GREENWOOD	165	14	8.5%
HAMPTON	16	7	43.8%
HORRY	291	55	18.9%
JASPER	25	6	24.0%
KERSHAW	65	7	10.8%
LANCASTER	163	35	21.5%
LAURENS	13	7	53.8%
LEE	25	3	12.0%
LEXINGTON	395	54	13.7%
MARION	0	0	N/A
MARLBORO	0	0	N/A
MCCORMICK	11	3	27.3%
NEWBERRY	78	11	14.1%
OCONEE	57	13	22.8%
ORANGEBURG	48	13	27.1%
PICKENS	394	52	13.2%
RICHLAND	257	53	20.6%
SALUDA	12	2	16.7%
SPARTANBURG	222	37	16.7%
SUMTER	51	23	45.1%
UNION	24	0	0%
WILLIAMSBURG	50	11	22.0%
YORK	760	126	16.6%

Table 6. FY '12 Tobacco Compliance Check Buy Rates by County

County Name	Total Eligible Purchase Attempts	Buy	Buy Rate
ABBEVILLE	0	0	N/A
AIKEN	17	3	17.6%
ALLENDALE	0	0	N/A
ANDERSON	0	0	N/A
BAMBERG	28	4	14.3%
BARNWELL	13	0	0%
BEAUFORT	10	0	0%
BERKELEY	87	3	3.4%
CALHOUN	16	0	0%
CHARLESTON	0	0	N/A
CHEROKEE	7	4	57.1%
CHESTER	0	0	N/A
CHESTERFIELD	3	1	33.3%
CLARENDON	8	1	12.5%
COLLETON	34	2	5.9%
DARLINGTON	11	2	18.2%
DILLON	0	0	N/A
DORCHESTER	7	0	0%
EDGEFIELD	0	0	N/A
FAIRFIELD	22	0	0.0%
FLORENCE	248	6	2.4%
GEORGETOWN	0	0	N/A
GREENVILLE	194	19	9.8%
GREENWOOD	11	0	0%
HAMPTON	5	1	20.0%
HORRY	32	10	31.3%
JASPER	12	7	58.3%
KERSHAW	20	6	30.0%
LANCASTER	51	5	9.8%
LAURENS	8	0	0%
LEE	10	0	0%
LEXINGTON	89	8	9.0%
MARION	0	0	N/A
MARLBORO	0	0	N/A
MCCORMICK	0	0	N/A
NEWBERRY	0	0	N/A
OCONEE	9	0	0%
ORANGEBURG	26	6	23.1%
PICKENS	48	9	18.8%
RICHLAND	52	12	23.1%
SALUDA	13	3	23.1%
SPARTANBURG	147	16	10.9%
SUMTER	0	0	N/A
UNION	0	0	N/A
WILLIAMSBURG	0	0	N/A
YORK	3	0	0%

indicated a drop in the sales of those products to underage youth. However, the gap between cigarettes and other tobacco products persists in this area.

For alcohol, the sale rate for alcopops/alcohol energy drinks was just below the sale rate for beer (13% vs. 15%). The sale rate for liquor was 15%, and the sale rate for wine or wine coolers was 20%, though among a smaller sample of checks (185). The type of product purchased was a statistically significant factor on the alcohol sale rate in most past years due to a high sale percentage for liquor, but that difference was not as pronounced in FY '12.

In Table 7 below, some of the higher and lower sale rates are shown for some types of alcohol products. For tobacco products, L&M (26%) and Camel Light (32%) were the two brands with the highest sales rates.

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

Low Sale Rates		High Sale Rates	
Product	Sale Rate	Product	Sale Rate
Coors Light	7%	Miller Lite	20%
Miller	8%	Corona	23%
Mike's Hard Lemonade	9%	Tilt	27%
		Busch Light	36%
		Blue Moon	41%

Table 8 details the frequency of certain merchant conditions and practices at the time of the compliance check. Merchants were much more likely to ask to see an ID than merely ask the buyers' age. However, they only studied the ID 64% and 75% of the time. Even when the ID was studied, the sale was completed about 6-8% of the time. More than 81% of outlets had posted signage stating that they check IDs, but the percentage of stores that had age-verification equipment was closer to half.

Table 8. Compliance Check Merchant Practices

Compliance Check Feature	Alcohol (%)	Tobacco (%)
Sales Completed	14.5	10.4
Merchant Asked Buyers Age	22.8	21.0
Merchant Asked to See ID	86.7	75.0
Merchant Studied ID	74.9	64.2
Completed Sale When Merchant Studied ID	7.9	5.5
Visible ID-Checking Signage in Store	81.8	81.1
Age-Verification Equipment Used	43.3	51.8

The presence of signage promoting ID-checking had a statistically significant impact for completed sales for alcohol ($p < .001$) and tobacco ($p = .002$). Only 12% of stores with signage sold alcohol compared to 28% of stores without signage (11% vs. 19% for

tobacco). The use of age verification equipment was also statistically significant for alcohol and tobacco ($p < .001$) as only 4% of stores with equipment sold alcohol compared to 22% of stores without equipment (2% vs. 20% for tobacco).

Table 9 shows that drug stores had lower sales rates than other types of businesses for alcohol, while bars and restaurants had the highest. Convenience stores had the highest tobacco sales rates. The type of business was a statistically significant factor on the alcohol sale rate ($p < .001$), primarily due to the high bar, restaurant, and liquor store sale rate. Type of business was also significant for tobacco sales ($p = .017$).

Table 9. Percentage of Completed Sales by Type of Business

Type of Business	N (Alcohol Purchase Attempts)	% Sales Completed— Alcohol	N (Tobacco Purchase Attempts)	% Sales Completed— Tobacco
Convenience Store/Gas Station	4,855	13.8	902	11.6
Bar	306	29.1	0	--
Restaurant	462	25.1	0	--
Liquor Store	558	13.4	3	0
Small Grocery	117	18.8	25	8.0
Large Grocery	640	11.7	109	3.7
Drug Store	245	5.7	138	5.8

Because the sale rate for on-premise alcohol establishments (bars/restaurants) is repeatedly substantially higher than the sale rate for off-premise establishments (stores), the overall state sale rate could be influenced by the percentage of alcohol compliance checks conducted in on-premise establishments. In FY '11, 10.8% of checks were at on-premise establishment compared to 10.4% in FY '12. In addition, the off-premise buy rate increased from 10.8% to 13.1% from FY '11 to FY '12. Therefore, the increase in the buy rate for FY '12 is not due to solely to a higher emphasis on conducting on-premise checks.

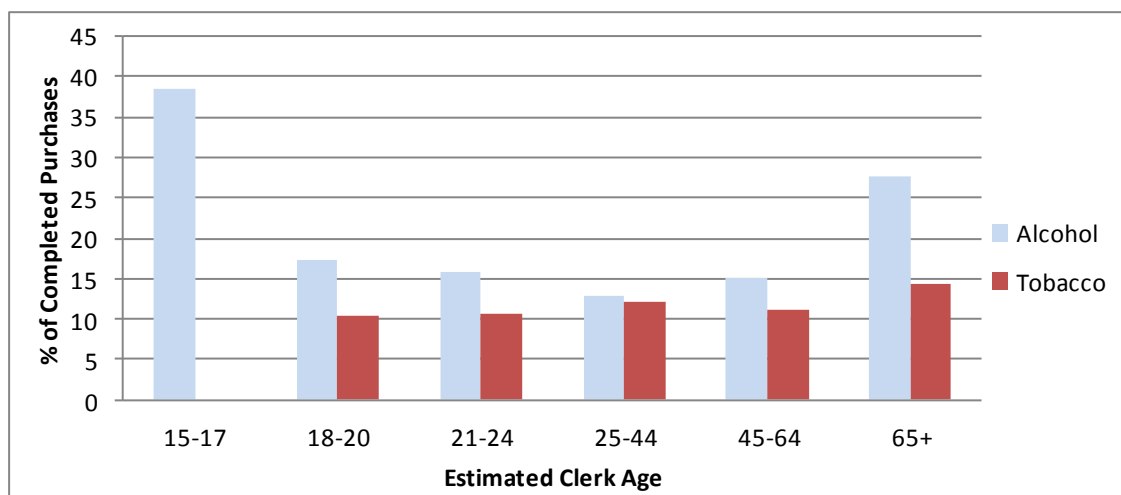
Table 10 displays the percentages of sales completed based on multiple demographic characteristics of the clerks and buyers. The clerk's gender was a significant factor for tobacco sales ($p = .03$) as male clerks were more likely to sell, but this was not a significant factor for alcohol. Black or African American and "other" race clerks had the lowest sales rate for alcohol. The impact of clerk race on sales was statistically significant for alcohol ($p = .05$), but not for tobacco.

Table 10. Percentage of Retailer Sales by Demographic Characteristics

Compliance Check Characteristic	% Sales Completed— Alcohol	% Sales Completed— Tobacco
Clerk: Male	14.5	12.9
Clerk: Female	14.5	8.9
Clerk: Black or African American	13.8	8.7
Clerk: White	14.9	10.1
Clerk: Hispanic	19.0	14.3
Clerk: Other	12.9	12.6
Buyer: Male	15.0	9.8
Buyer: Female	13.7	10.9
Buyer: Black or African American	12.5	9.7
Buyer: White	14.6	9.7
Buyer: Hispanic	9.6	--
Buyer: Other	32.4	--
Clerk and Buyer: Same Gender	14.0	10.5
Clerk and Buyer: Different Gender	14.8	9.8
Clerk and Buyer: Same Race	14.9	10.5
Clerk and Buyer: Different Race	13.8	10.0

Youth buyers were asked to estimate the age of the clerk who handled their attempted purchase. Clerk age had a statistically significant effect on the sales rate for alcohol ($p < .001$) but not for tobacco. For the previous two years, clerk age was significant for both substances. As seen in Chart 9, clerks estimated to be 15-17 had a much higher sale rate for alcohol, followed by those over age 65.

Chart 9. Percentage of Stores Selling by Estimated Clerk Age



In FY '12, similar to FY '11, buyer race was a statistically significant factor on buy rates for alcohol ($p < .001$) but not for tobacco. White and "other" race youth were most likely

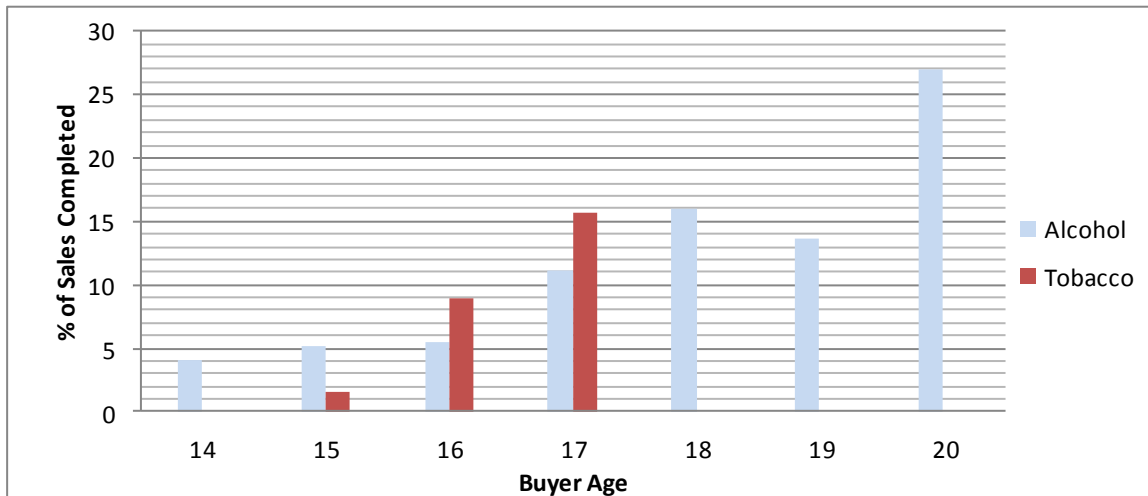
to be sold alcohol; the sale rate for “other” race youth was disturbingly high at 32%, though this was based on only 68 purchase attempts. It should be noted that these data fluctuate from year to year as in FY ’11, it was Black or African American and Hispanic youth that were able to purchase most often. There was no difference in sale rates for either product based on buyer gender.

The age of the purchaser had a statistically significant effect on sale rates for both substances ($p < .001$). Chart 10 below shows that the pattern for both substances shows a general trend of the likelihood of a sale increasing as age increases.

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 (85% of inspections). 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 \$621, and the most common amount was \$677.50. The average fine for a tobacco sale ticket was \$413 with \$470.00 being the most common amount.

Chart 10. Percentage of Stores Selling by Buyer Age



The compliance check form includes a section where officers should ask offenders if they have ever taken a merchant education class. Seventy-three of 765 (10%) indicated they had.

Bar Checks

The other primary enforcement activity aimed at retailers are 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 265 bar checks reported in FY '12. Twenty-one counties reported bar checks with the 9th AET Circuit doing the most (46%). Most bar checks included a fake ID sweep (174), followed by inspecting the retailers for violations (67), and “causal contacts” (63).

A total of 193 tickets were written for fake IDs. Another 244 alcohol-related violations were written against customers during these bar checks. Officers wrote 157 tickets to alcohol retailers and another 76 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'12, 11 counties representing seven circuits conducted shoulder taps a total of 31 different times, down considerably from 64 in FY '11 and 55 in FY '10. Altogether, 237 individuals were approached in FY '12 with 16 purchasing alcohol for the youth for a 7% violation rate. In FY '11 the rate was 5%, and it was 6% in FY'10. Eleven other charges were written during these operations.

Public Safety Checkpoints/Saturation Patrols

A total of 928 public safety checkpoints, often called sobriety checkpoints, were implemented in FY'12, the highest total ever for the AETs and a major increase from the 257 in FY '11. There were 32 different counties with checkpoints in FY'12, an increase from 24 different counties with checkpoints in FY '11. Checkpoints done by the 3rd and 6th judicial circuits comprised 73% of the total checkpoints across the state, even higher than the 64% they accounted for in FY '11.

Just more than 105,000 cars went through those checkpoints across the state. AET reports show that these checkpoints resulted in 1,809 tickets, including 200 underage drinking violations. There were also 378 DUIs (31 underage), 122 felony arrests, 116 fugitives apprehended, 6 Fake IDs, 9 stolen vehicles recovered, 681 drug possession charges, 5 underage tobacco possession charges, and 786 open container violations. These ticket totals for underage drinking, DUI, drug possessions, and open container are considerably higher than FY '11, which makes sense given the large increase in checkpoints. However, the 1,809 total tickets is actually less than the 2,625 reported in FY '11. One explanation for this is that AETs were given a Saturation Patrol Reporting Form in FY '12 for the first time, and some saturation patrols that may have previously been reported on checkpoint forms are not any longer. Saturation patrols are more likely to result in other traffic related tickets like speeding.

In FY '12, 298 saturation patrols were reported, though we know the actual number is larger as some counties turned in forms representing an entire month's worth of patrols without specifying the actual number of patrols in that month. These patrols resulted in 10,020 total tickets, mostly for "other" offenses (5,189) and speeding (2,652). The saturation patrols generated 103 underage drinking tickets, 236 DUIs (15 underage), 402 open container violations, 10 fake ID violations, and 345 drug offenses.

Kershaw County represented more than one quarter of the reported saturation patrols (83). Nineteen 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 manpower, 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 manpower 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. Eighteen counties turned in AET party dispersal reporting forms in FY '12, down from 20 in FY '11, 23 in FY '10 and 21 in FY '09. Pickens County alone accounted for 53% of the total 154 parties dispersed across the state. The number of parties dispersed in down from FY '11 when 224 parties were dispersed.

The 154 parties had an estimated total 3,566 attendees. A total of 978 tickets were written during these operations, including 840 for underage drinking violations (766 of those for 17 to 20 years old), 44 for transfer of alcohol to an underage person, nine for unlicensed keg possession, 29 for fake IDs, and 26 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 137 parties prevented in FY '12, very similar to the 131 prevented in FY '11 and 140 in FY '10.

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 '12, 22 counties turned in tobacco agreements compared to 23 in FY '11, 22 in FY '10, 19 in FY '09, and 16 in FY '08. 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 '12 and collectively served 1,675 retail staff, higher than the 1,430 in FY '11 and the highest total since FY '09. Forty of the 46 counties served at least one retailer in PREP, and Greenville (389) 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 '12, the average score was 91%.

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 1,082 youth served in AET in FY '12, a decrease from FY '11 when there were 1,420 youth served and similar to the 1,086 youth served in FY '10. The bulk of the youth served in FY '12 came from Pickens (275), Charleston (182), Spartanburg (172), and Greenwood (128).

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 '12, 361 youth participated in TEP; the highest annual total since TEP was created. Eighteen counties delivered TEP in FY '12, with Charleston (101) serving the most youth.

TEP is evaluated with a post-test-only design comprised of true/false questions and four items that assess attitudes and intentions. About 46% of participants got all 11 true/false questions correct (well above the 30% for FY '10), and a total of 84% got nine, 10, or 11 correct (higher than the 68% in FY '10), which is considered passing. 22% of participants indicated they see themselves quitting tobacco products in the near future.

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 323 media placements (articles, TV stories, etc.) during FY '12, up from 253 in FY '11 but slightly less than 338 in FY'10. These media placements peaked in April for the enforcement/education blitz called “Out of Their Hands.” There were no outcomes gathered from these types of activities, which would be expected as they are essentially information dissemination efforts.

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 checkpoints, controlled party dispersals, and saturation patrols.

County authority prevention staff and AET Coordinators returned forms on 7,422 alcohol compliance checks and 1,242 tobacco compliance checks. These are increases over FY '11 totals. For alcohol, 14.5% of attempts generated sales, compared to 10.4% for tobacco. This is the lowest sale rate that we have ever tracked for tobacco checks, which suggests a successful impact from consistent enforcement. For the alcohol sale rate, the rate rose from FY '11's 12.4% (change not significant), the first time we have recorded an increase but still lower than the 20.3% when data were first tracked in FY '07. The FY '07 to FY '12 decreases for both substances are statistically significant ($p < .001$).

Most merchants asked to see the buyers' IDs, although about 6-8% of those who studied the ID still sold. Having posted signage about checking IDs or having age verification equipment were both statistically significantly associated with being less likely to sell alcohol or tobacco.

The counties served 1,675 merchants in the Palmetto Retailers Education Program (PREP) in FY '12, the highest total since FY '09.

AETs reported a total of 928 public safety checkpoints, an all-time high by far. More than 1,800 tickets were written during the FY '12 checkpoints. In addition, there were 298 saturation patrols reported that generated another 10,020 tickets. Together, these operations accounted for 303 underage drinking cases and 614 DUIs.

AETs dispersed 154 parties, through one county accounted for 53% of those operations. Together, 978 tickets (840 for underage drinking) were written during those dispersals. Another 137 parties were reported as having been prevented due to proactive use of advanced information. Shoulder tap operations were conducted less often in FY '12. In

total, 237 individuals were approached by the cooperating youth to purchase alcohol, with 16 purchasing (7% sales).

For the first time in FY '12, we formally collected data on bar checks. There were 265 establishments checked. These resulted in 193 fake ID violations and 244 other alcohol-related charges to patrons. There were another 157 tickets written to the retailers.

Far more youth were served in a diversion program for youth alcohol offenses (1,082 served in the Alcohol Education Program) than tobacco (361 served in the Tobacco Education Program), though this number served in TEP is the highest ever.

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. 29, 2012 (considered the FFY 2013 study), 176 youth volunteers ages 15-17, under trained adult supervision, conducted 405 random, unannounced cigarette purchase attempts in all 46 counties. These outlets were randomly sampled from the estimated (there is no official account of tobacco sales outlets in South Carolina) 8,000 outlets in the state.

The FFY '13 results indicated an estimated overall sales rate (also known as a Retailer Violation Rate or RVR) of 11.7%. 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. This year's rate marks the second consecutive undesired increase in the RVR and is the highest rate since FFY 2008. The 95% confidence interval for the violation rate is from 8.7% to 14.8%, meaning that statistical projections tell us that if we had inspected every store in the state, it would be 95% likely the actual violation rate would fall in that range.

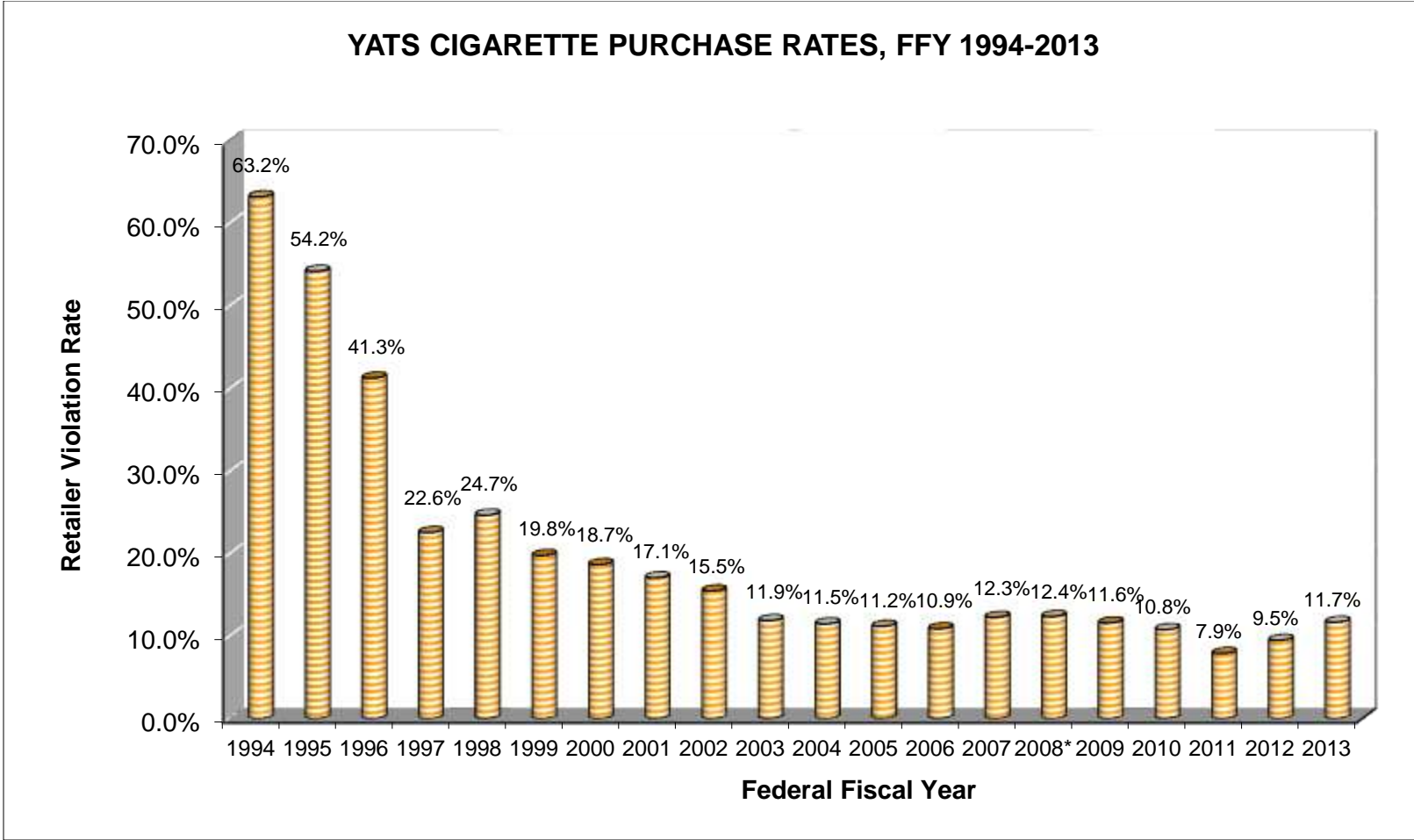
The age of the youth volunteer was statistically significant ($p=.001$) as there was a steady increase in the buy rate from 4.8% among 15 year olds to 19.1% among 17 year olds. The sale rate to males was more than five percentage points lower than for females, the opposite of FFY '11, but the difference was not statistically significant. White youth were sold to less frequently than other youth (9% vs. 15%), and this difference approached but did not meet statistical significance ($p=.007$). This is consistent with the FFY '11 study but opposite of the FFY '12 study. Race of the clerk was not a significant factor in whether a sale took place, but the gender of the clerk approached statistical significance ($p=.06$) as male clerks were more likely to sell than female clerks (16% vs. 9%). In some years, the youngest clerks have been most likely to sell, but there was relatively little variation in sale rates by estimated age of the clerk in FFY '13 and FFY '12.

Past analyses have shown an important link between regular local tobacco compliance checks and our success with Synar rates. 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). A similar analysis of FFY '11 Synar data with FY '09 tobacco compliance check data showed somewhat similar results. In this case, the data contrasted between those counties with any enforcement (6% sales) compared to those with no enforcement (15%). This difference approached significance ($p=.006$). However, the difference between

those counties with more than 40 compliance checks and those with less was minor (7% vs. 8%). Number of tobacco outlets in a county had no relationship to the buy rate.

In reviewing the FFY '13 Synar data in relation to FY '11 compliance check numbers, higher enforcement numbers, "any" or greater than 40 tobacco checks, were not related to decreased Synar rates. In fact, for the first time we 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.

The state's success in reducing both its Synar and tobacco compliance check rate is encouraging, but other data suggest that reducing youth retail access to tobacco requires continued attention. According to the 2011 Youth Tobacco Survey, 19% of high school students report getting their cigarettes from a store or vending machine, compared to 11% of youth buying their alcohol themselves, according to the 2011 Youth Risk Behavior Survey. According to the 2009 Youth Tobacco Survey, 62% of underage high school students who had tried to purchase cigarettes from a store in the past 30 days were not refused a sale. This would suggest that the number of stores selling to minors may have decreased but that students still know where they can access cigarettes.



*Starting with the FFY 2008 study, the state did not allow 14-year-old inspectors, which consistently were sold to less often than the 15- to 17-year-old inspectors. It can be assumed that, beginning with FFY 2008, RVR rates would have been lower without this change.

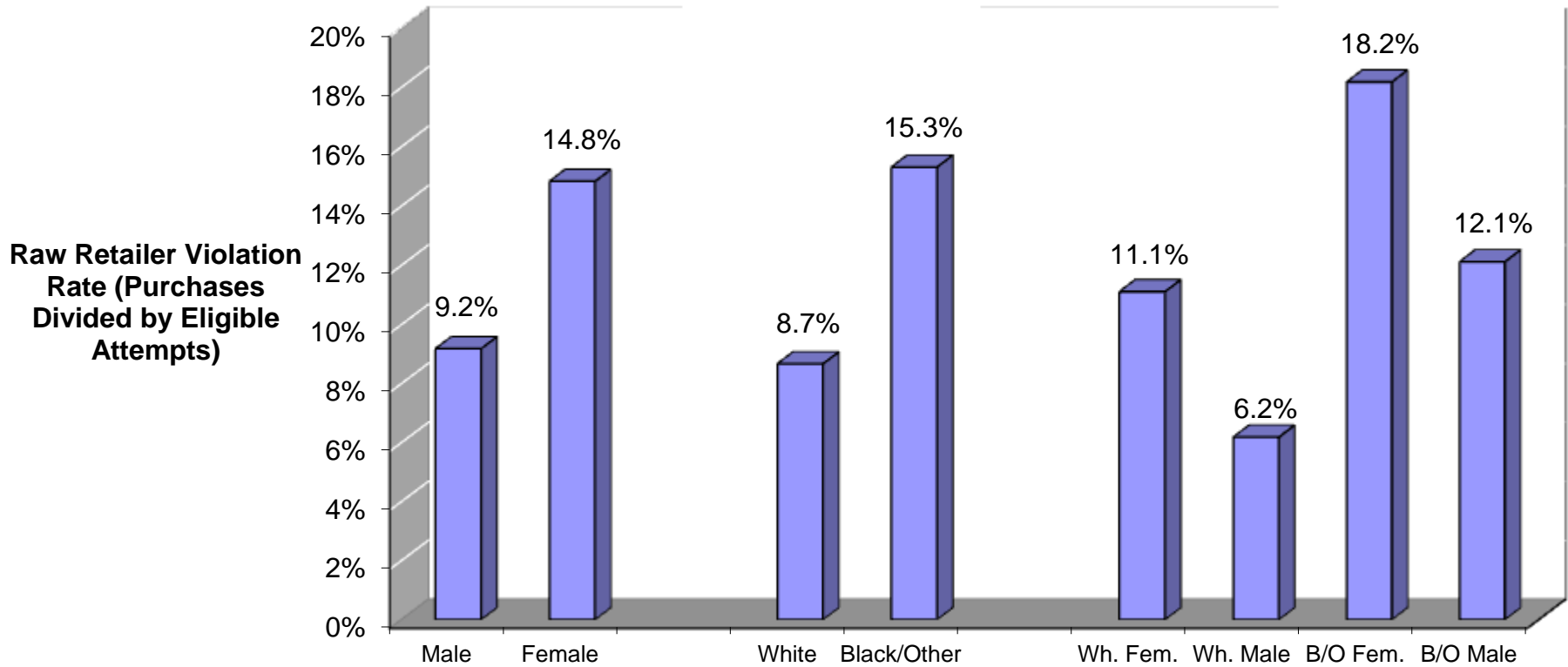
FFY 2013 Youth Access to Tobacco Raw Buy Rates

County Name	Total Eligible Purchase Attempts	No Buy	Buy	Buy Rate
ABBEVILLE	2	2	0	0.0%
AIKEN	15	8	7	46.7%
ALLENDALE	1	1	0	0.0%
ANDERSON	20	18	2	10.0%
BAMBERG	3	3	0	0.0%
BARNWELL	1	1	0	0.0%
BEAUFORT	10	9	1	10.0%
BERKELEY	11	10	1	9.1%
CALHOUN	2	1	1	50.0%
CHARLESTON	31	25	6	19.4%
CHEROKEE	7	7	0	0.0%
CHESTER	4	2	2	50.0%
CHESTERFIELD	5	5	0	0.0%
CLARENDON	5	4	1	20.0%
COLLETON	7	7	0	0.0%
DARLINGTON	6	5	1	16.7%
DILLON	2	2	0	0.0%
DORCHESTER	8	8	0	0.0%
EDGEFIELD	2	1	1	50.0%
FAIRFIELD	3	1	2	66.7%
FLORENCE	14	13	1	7.1%
GEORGETOWN	5	5	0	0.0%
GREENVILLE	29	24	5	17.2%
GREENWOOD	8	7	1	12.5%
HAMPTON	5	4	1	20.0%
HORRY	24	19	5	20.8%
JASPER	7	6	1	14.3%
KERSHAW	9	9	0	0.0%
LANCASTER	7	7	0	0.0%
LAURENS	6	5	1	16.7%
LEE	2	1	1	50.0%
LEXINGTON	22	21	1	4.5%
MARION	3	3	0	0.0%
MARLBORO	7	7	0	0.0%
MCCORMICK	0	0	0	N/A
NEWBERRY	5	5	0	0.0%
OCONEE	6	6	0	0.0%
ORANGEBURG	10	8	2	20.0%
PICKENS	9	9	0	0.0%
RICHLAND	28	26	2	7.1%
SALUDA	2	2	0	0.0%
SPARTANBURG	22	22	0	0.0%
SUMTER	9	6	3	33.3%
UNION	3	3	0	0.0%
WILLIAMSBURG	6	6	0	0.0%
YORK	19	19	0	0.0%

Percent of Outlets Selling Cigarettes to Youth By Youth Age, FFY 2013



Percent of Outlets Selling Cigarettes to Youth By Youth Gender & Race, FFY 2013



SECTION VII: OTHER PREVENTION INTERVENTIONS

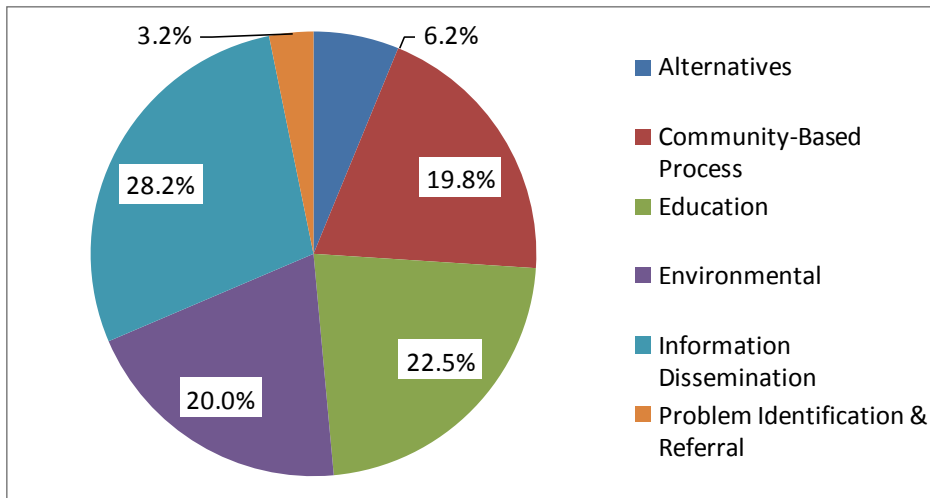
In the previous chapters, we have described the cumulative outcomes, to the extent possible, of youth curricula, environmental approaches, and the Youth Access to Tobacco Study. Prevention professionals deliver an even wider range of services than this list, however. Below are some of the other common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

State Distribution of Service Events

Chart 11. Distribution of Service Events by CSAP Category, FY '12



The KIT Prevention online reporting system had prevention staff code each service activity in one of six CSAP prevention categories. Chart 11 shows the distribution of the 17,060 service events by category. It should be noted that not just Block Grant funded efforts are entered into KIT Prevention, and therefore comprise the data represented in the chart. All Community Action for a Safer Tomorrow (CAST) services and activities are entered along with some other local efforts funded by various sources.

The largest categories, representing more than 90% of service events, are community-based processes, education, information dissemination, and environmental. 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. Compared to FY '11, there was a decrease in the percentage of community-based process and environmental and an increased percentage of information dissemination and education.

APPENDIX A: ADDITIONAL DATA TABLES

Table A1. Overall Results by Age

Risk Factor Scores, Range (Positive score is favorable)	Middle School (n=2,616)			High School (n=842)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	2.0	2.0	4.7**	1.8	2.1	18.9**
Decision-Making Skills, 0-3	1.9	1.9	1.4**	1.7	1.9	7.3**
Favorable Attitudes, 0-2	1.6	1.6	-0.6	1.3	1.4	11.1**
Perceived Peer Norms, 0-10	8.5	8.5	0.3	7.4	7.6	2.7**
Perceived Parental Attitudes, 0-3	2.8	2.8	-0.5	2.7	2.7	-1.2*

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Cigarettes	5.0	6.1	24.0*	13.4	10.6	-20.9**
Other Tobacco	3.0	4.1	36.9**	7.7	7.9	2.5
Alcohol	9.3	9.0	-3.4	16.7	16.5	-1.4
Marijuana	3.2	4.4	35.4**	12.5	11.9	-4.6
Other Illegal Drugs	2.3	2.4	7.1	4.2	5.6	33.9
Inhalants	5.1	4.9	-3.9	5.3	3.7	-29.1*
Non-Medical Prescription Drug Use	2.7	3.3	20.6	4.3	5.2	21.0
Non-Medical Over-The-Counter Drug Use	3.4	3.7	8.3	4.0	4.3	9.9

* Pre- and post-test averages are approaching being statistically significantly different (significant at the p<.10 level, but not p<.05 level)

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

Table A2. Overall Results by Gender

Risk Factor Scores, Range (Positive score is favorable)	Females (n=1,714)			Males (n=1,745)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	2.0	2.1	8.4**	1.9	2.0	7.3**
Decision-Making Skills, 0-3	1.9	1.9	2.9**	1.8	1.8	2.5**
Favorable Attitudes, 0-2	1.6	1.6	1.4*	1.4	1.5	2.2**
Perceived Peer Norms, 0-10	8.4	8.5	0.8**	8.1	8.2	0.8*
Perceived Parental Attitudes, 0-3	2.9	2.8	-1.0**	2.8	2.8	-0.4

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Cigarettes	6.2	6.8	10.7	7.8	7.6	-2.1
Other Tobacco	2.7	2.8	3.3	5.6	7.2	28.3*
Alcohol	12.3	11.0	-10.5	9.9	10.7	7.6
Marijuana	4.0	4.3	8.6	6.9	8.0	16.7
Other Illegal Drugs	1.9	2.4	29.8	3.5	3.9	11.6
Inhalants	5.1	4.6	-9.1	5.3	4.7	-11.2
Non-Medical Prescription Drug Use	3.3	3.9	20.9	3.1	3.6	17.6
Non-Medical Over-The-Counter Drug Use	3.4	3.5	2.7	3.6	4.3	18.0

* Pre- and post-test averages are approaching being statistically significantly different (significant at the $p < .10$ level, but not $p < .05$ level)
 ** Pre- and post-test averages are statistically significantly different (significant at $p < .05$ level)

Table A3. Overall Results by Race Group

Risk Factor Scores, Range (Positive score is favorable)	Black/African American participants (n=1,729)			White participants (n=1,249)			"Other" race participants (n=212)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	1.9	2.1	11.4**	2.0	2.0	3.9**	1.8	2.0	10.2**
Decision-Making Skills, 0-3	1.8	1.9	4.9**	1.9	1.8	-0.9	1.7	1.8	4.5*
Favorable Attitudes, 0-2	1.5	1.5	3.6**	1.6	1.6	-1.0	1.4	1.5	4.7
Perceived Peer Norms, 0-10	8.2	8.3	1.4**	8.4	8.4	-0.4	7.9	8.1	2.6*
Perceived Parental Attitudes, 0-3	2.8	2.8	-0.6	2.8	2.8	-1.1**	2.8	2.8	-0.6

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Cigarettes	5.4	5.4	-0.4	8.6	9.5	10.2	7.2	7.7	7.2
Other Tobacco	2.5	3.4	36.0	6.0	6.7	11.5	5.7	8.3	43.7
Alcohol	11.5	10.3	-10.1	10.3	11.5	11.0	10.1	11.6	15.3
Marijuana	5.4	6.0	12.1	4.9	6.4	32.0	8.6	8.7	1.0
Other Illegal Drugs	2.2	3.4	53.6*	3.2	2.8	-12.6	2.9	3.4	18.1
Inhalants	4.9	4.6	-7.7	5.0	5.0	0.6	7.2	5.4	-25.5
Non-Medical Prescription Drug Use	2.5	3.3	28.0	3.6	3.6	0.8	3.4	6.8	103
Non-Medical Over-The-Counter Drug Use	4.2	4.3	1.9	2.8	3.3	18.0	2.9	1.5	-49.7

* Pre- and post-test averages are approaching being statistically significantly different (significant at the p<.10 level, but not p<.05 level)

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

Table A3. Overall Results by Race Group (continued)

Risk Factor Scores, Range (Positive score is favorable)	Multi-ethnic participants (n=155)			American Indian/Native American participants (n=83)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	2.0	2.1	7.6**	1.9	2.0	1.8
Decision-Making Skills, 0-3	1.7	1.8	9.9**	1.8	1.8	0.7
Favorable Attitudes, 0-2	1.5	1.6	4.2	1.6	1.6	0.5
Perceived Peer Norms, 0-10	8.0	8.2	3.0**	8.3	8.3	0.3
Perceived Parental Attitudes, 0-3	2.8	2.8	0.3	2.8	2.8	-0.4

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Cigarettes	9.8	10.3	5.3	7.2	5.0	-30.8
Other Tobacco	7.2	5.2	-28.2	1.2	3.9	221
Alcohol	15.0	11.1	-26.1	9.6	10.1	5.1
Marijuana	7.2	4.6	-36.3	6.1	2.5	-58.5
Other Illegal Drugs	2.6	5.8	122	4.9	0	-100
Inhalants	4.6	3.3	-27.7	7.2	3.8	-47.4
Non-Medical Prescription Drug Use	5.3	5.2	-0.6	4.9	5.1	3.7
Non-Medical Over-The-Counter Drug Use	2.0	6.5	225**	4.8	2.5	-48.1

* Pre- and post-test averages are approaching being statistically significantly different (significant at the $p < .10$ level, but not $p < .05$ level)

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

Table A4. Overall Results by Ethnicity

Risk Factor Scores, Range (Positive score is favorable)	Participants of Hispanic, Latino, or Spanish Descent or Origin (n=240)			Participants Not of Hispanic, Latino, or Spanish Descent or Origin (n=3,106)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	1.9	2.1	8.1**	1.9	2.1	7.7**
Decision-Making Skills, 0-3	1.8	1.8	3.0	1.8	1.9	2.8**
Favorable Attitudes, 0-2	1.5	1.5	0.9	1.5	1.6	1.8**
Perceived Peer Norms, 0-10	8.0	8.1	1.5	8.3	8.3	0.8**
Perceived Parental Attitudes, 0-3	2.8	2.8	0.6	2.8	2.8	-0.8**

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Cigarettes	9.8	7.2	-25.8	6.9	7.0	2.2
Other Tobacco	4.2	4.2	0	4.3	5.1	20.0
Alcohol	12.3	11.4	-7.3	11.1	10.8	-2.6
Marijuana	7.2	5.5	-23.5	5.3	6.3	18.3*
Other Illegal Drugs	2.1	3.0	39.3	2.8	3.2	14.9
Inhalants	6.0	3.0	-49.7	5.1	4.9	-4.9
Non-Medical Prescription Drug Use	3.8	6.0	57.7	3.1	3.7	20.0
Non-Medical Over-The-Counter Drug Use	1.7	3.4	102	3.6	3.9	7.8

* Pre- and post-test averages are approaching being statistically significantly different (significant at the p<.10 level, but not p<.05 level)

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

Table A5. Overall Results by Program

Risk Factor Scores, Range (Positive score is favorable)	All Programs (n=3,519)			All Stars (n=455)			Girl Power (n=47)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	1.9	2.1	7.8**	1.9	2.0	3.8*	2.2	2.2	-1.2
Decision-Making Skills, 0-3	1.8	1.9	2.9**	1.8	1.8	0.2	1.8	1.7	-2.0
Favorable Attitudes, 0-2	1.5	1.6	1.9**	1.6	1.5	-1.0	1.6	1.7	4.4
Perceived Peer Norms, 0-10	8.2	8.3	0.8**	8.2	8.1	-0.5	8.4	8.4	-0.8
Perceived Parental Attitudes, 0-3	2.8	2.8	-0.7**	2.8	2.7	-3.1**	3.0	2.9	-1.7*

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Cigarettes	7.0	7.3	4.6	8.3	8.3	0.6	2.1	6.4	199
Other Tobacco	4.1	5.0	20.9	4.7	5.6	18.7	4.3	2.1	-50.0
Alcohol	11.1	10.9	-1.9	12.7	14.8	17.0	10.6	8.5	-20.0
Marijuana	5.5	6.2	12.8	5.8	5.2	-10.8	6.4	10.6	66.8
Other Illegal Drugs	2.7	3.2	17.6	2.9	2.3	-22.7	2.1	8.5	299
Inhalants	5.2	4.6	-10.8	7.2	3.2	-56.1**	4.3	4.4	2.1
Non-Medical Prescription Drug Use	3.2	3.8	18.6	3.6	1.8	-50.1*	2.1	2.2	4.2
Non-Medical Over-The-Counter Drug Use	3.6	3.9	7.5	5.6	2.9	-48.0*	0	0	N/A

* Pre- and post-test averages are approaching being statistically significantly different (significant at the $p < .10$ level, but not $p < .05$ level)

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

Table A5. Overall Results by Program (continued)

Risk Factor Scores, Range (Positive score is favorable)	Keepin' It REAL (n=650)			Life Skills (n=1,120)			Project Alert (n=342)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	2.0	2.4	20.9**	1.9	1.9	1.9	1.8	1.9	5.0*
Decision-Making Skills, 0-3	1.8	1.9	6.8**	1.9	1.9	0.7	1.8	1.8	1.7
Favorable Attitudes, 0-2	1.5	1.6	7.9**	1.5	1.5	-0.4	1.5	1.5	-1.0
Perceived Peer Norms, 0-10	8.2	8.5	3.5**	8.4	8.3	-0.7	8.4	8.4	-0.4
Perceived Parental Attitudes, 0-3	2.8	2.9	1.6**	2.8	2.8	-1.3**	2.8	2.8	-1.1

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Cigarettes	6.4	5.8	-9.3	5.0	6.3	25.4	6.5	8.1	24.1
Other Tobacco	2.5	3.6	44.8	4.0	4.8	20.1	3.9	4.8	24.4
Alcohol	11.5	7.7	-33.4**	8.4	9.5	13.0	11.2	12.5	11.5
Marijuana	4.4	5.4	25.1	5.1	5.8	14.0	4.8	4.2	-11.8
Other Illegal Drugs	2.6	2.5	-5.7	2.5	3.1	25.9	2.4	2.4	0.4
Inhalants	5.6	4.0	-27.7	5.3	5.2	-1.9	4.4	6.3	41.9
Non-Medical Prescription Drug Use	2.0	2.6	30.7	3.9	4.0	4.9	2.1	5.1	147*
Non-Medical Over-The-Counter Drug Use	3.4	3.6	4.4	3.1	4.1	29.4	4.4	3.0	-32.1

* Pre- and post-test averages are approaching being statistically significantly different (significant at the p<.10 level, but not p<.05 level)

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

Table A5. Overall Results by Program (continued)

Risk Factor Scores, Range (Positive score is favorable)	Project Northland (n=99)			Project TND (n=197)			Project TNT (n=156)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	1.9	2.1	9.9**	1.8	2.0	8.0**	2.0	2.1	4.7
Decision-Making Skills, 0-3	1.7	1.9	7.9**	1.7	1.8	8.0**	2.0	2.0	1.8
Favorable Attitudes, 0-2	1.5	1.6	5.3	1.4	1.5	12.4**	1.7	1.7	-2.0
Perceived Peer Norms, 0-10	8.0	8.3	3.7**	7.7	8.0	3.4**	8.7	8.8	0.9
Perceived Parental Attitudes, 0-3	2.9	2.9	0.2	2.7	2.7	1.8	2.9	2.8	-3.5*

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Cigarettes	10.1	5.2	-49.0	11.7	13.6	16.2	4.6	7.1	56.9
Other Tobacco	4.0	2.0	-49.5	6.9	7.8	13.2	2.0	3.9	100
Alcohol	16.2	10.2	-36.9	16.5	17.6	6.6	7.2	6.0	-17.1
Marijuana	4.0	3.1	-24.3	8.5	14.0	65.1**	2.6	2.0	-25.9
Other Illegal Drugs	3.0	2.0	-32.7	0.5	5.7	966**	1.3	4.5	242
Inhalants	3.1	3.1	1.0	3.7	6.2	66.0	4.6	3.3	-28.1
Non-Medical Prescription Drug Use	6.1	2.0	-66.3	3.8	7.8	108	0.7	3.9	500
Non-Medical Over-The-Counter Drug Use	2.0	2.0	0	3.8	3.9	4.5	1.3	2.6	100

* Pre- and post-test averages are approaching being statistically significantly different (significant at the $p < .10$ level, but not $p < .05$ level)

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

Table A5. Overall Results by Program (continued)

Risk Factor Scores, Range (Positive score is favorable)	Street Smart (n=53)			Too Good For Drugs (n=212)			Wise Guys (n=47)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	1.6	1.8	9.6	2.0	2.1	8.2**	1.8	1.9	3.4
Decision-Making Skills, 0-3	1.5	1.6	11.0**	1.9	2.0	1.2	1.8	1.8	-0.3
Favorable Attitudes, 0-2	1.3	1.3	0.4	1.7	1.7	-0.4	1.5	1.5	-4.5
Perceived Peer Norms, 0-10	7.7	7.6	-1.1	8.7	8.7	1.0	7.8	8.1	3.8**
Perceived Parental Attitudes, 0-3	2.8	2.7	-3.8	2.9	2.9	0.5	2.9	2.8	-1.0

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Cigarettes	21.6	19.2	-10.8	7.8	5.2	-33.2	0	4.4	N/A
Other Tobacco	13.7	19.6	42.8	5.8	5.2	-10.6	4.3	6.5	53.1
Alcohol	13.7	17.3	26.1	7.3	7.2	-1.9	17.0	10.6	-37.5
Marijuana	13.7	26.0	89.4**	4.4	5.7	30.1	8.7	6.4	-26.7
Other Illegal Drugs	9.8	15.7	60.1	2.9	1.4	-51.2	2.1	4.4	108
Inhalants	2.0	9.8	390	4.4	3.3	-23.8	4.3	6.4	49.8
Non-Medical Prescription Drug Use	12.0	15.7	30.8	1.0	2.8	189	0	0	N/A
Non-Medical Over-The-Counter Drug Use	6.0	15.4	156**	1.5	4.7	225*	2.2	6.4	194

* Pre- and post-test averages are approaching being statistically significantly different (significant at the $p < .10$ level, but not $p < .05$ level)

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

Table A6. Overall Results for Evidence-Based Vs. Non-Evidence-Based Programs

Risk Factor Scores, Range (Positive score is favorable)	Non-Evidence-Based Programs (n=183)			Evidence-Based Programs (n=3,305)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	1.9	1.9	0.6	1.9	2.1	8.2**
Decision-Making Skills, 0-3	1.7	1.8	2.2	1.8	1.9	2.9**
Favorable Attitudes, 0-2	1.5	1.5	-1.1	1.5	1.6	2.0**
Perceived Peer Norms, 0-10	7.7	7.7	0	8.3	8.3	0.8**
Perceived Parental Attitudes, 0-3	2.8	2.7	-2.8**	2.8	2.8	-0.6**

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Cigarettes	8.8	10.1	14.4	6.9	7.1	3.9
Other Tobacco	6.1	7.8	28.0	4.0	4.8	20.2
Alcohol	17.1	18.2	6.4	10.7	10.5	-2.6
Marijuana	11.2	14.6	30.8	5.2	5.7	10.9
Other Illegal Drugs	6.6	8.9	34.8	2.5	2.9	15.2
Inhalants	4.4	5.7	27.3	5.2	4.6	-12.5
Non-Medical Prescription Drug Use	6.1	6.8	11.6	3.0	3.6	20.0
Non-Medical Over-The-Counter Drug Use	2.2	6.7	200**	3.7	3.7	0.8

* Pre- and post-test averages are approaching being statistically significantly different (significant at the $p < .10$ level, but not $p < .05$ level)

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

APPENDIX B: EVALUATION INSTRUMENTS