

2010 Prevention Outcomes Annual Report

South Carolina
DAODAS
Department of Alcohol and Other Drug Abuse Services



Pacific Institute for Research and Evaluation
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EXECUTIVE SUMMARY

This report summarizes prevention outcomes generated by the South Carolina county authority substance abuse prevention system in Fiscal Year 2009-2010. 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 6,920 participants with matched pre- and post-tests. Most (89%) participants were between the ages of 10 and 14. The race demographics were roughly 43% Black or African American, 42% White, and 7% “Other” race.
- The results showed statistically significant positive changes on four of the five risk factor measures: perceived risk, favorable attitudes, decision-making, and perceived peer norms. Perceived parental attitudes did not show significant improvement, though that may be due to a “ceiling effect” as the pre-test score was 2.8 out of 3.0, leaving little room for improvement.
- For substance use, there were statistically significant reductions in the number of users of six of eight substances measured, ranging from a high of 30% (inhalants) to a low of 15% (cigarettes). The reduction in the number of other illegal drugs (not marijuana) approached significance.
- Between 96% and 99% of participants that were non-users at pre-test remained non-users at post-test for each substance. Around 70-90% of substance users at pre-test were using less or not at all by post-test.
- Average ages of 1st use for cigarettes, other tobacco products, and alcohol were between 10.7 and 11.2. First use of marijuana averaged 12.3.
- There were 51 county program implementations analyzed representing 20 different curricula. Of the programs with multiple implementations, Keepin’ It Real, Life Skills, and Project Northland had some of the most consistently positive results.
- 94% of the participants were served in an evidence-based program. Evidence-based programs had dramatically more positive results for risk factor measures than programs that were not evidence-based but a less clear advantage for reducing the number of substance users.

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

- County authority prevention staff returned forms on 6,438 alcohol compliance checks and 1,088 tobacco compliance checks. For alcohol, 14.5% of attempts generated sales compared to 14.3% for tobacco. These are the lowest sale rates we have ever tracked and represent statistically significant decreases from FY '07. The sale rate for tobacco products other than cigarettes was higher than cigarettes, and the sale rate for liquor was higher than other alcohol products. Having posted signage about checking IDs or having age verification equipment were both statistically significantly associated with being less likely to sell alcohol.
- 1,671 merchants were served in the Palmetto Retailer Education Program.
- Primarily through Alcohol Enforcement Teams, counties reported 491 public safety checkpoints, resulting in almost 6,300 tickets, and 150 dispersed parties during which 705 underage drinking violations were written. Another 140 parties were prevented from AETs working off of advance information. About 6% of the 573 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 (1,087 served in the Alcohol Education Program) than tobacco (129 served in the Tobacco Education Program).
- The FFY 2011 Youth Access to Tobacco Study (Synar) showed a retailer violation rate of 7.9%, which is the lowest ever rate for selling tobacco products to youth in the study.
- Analyses show that counties with tobacco compliance check enforcement have lower Synar buy rates.
- Many **other prevention activities** are not well suited to generating valid outcomes. A lack of outcomes is not necessarily an indication that an approach is unimportant or ineffective.

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SECTION I: EVALUATION REPORT OVERVIEW

State Prevention Evaluation Efforts

The South Carolina Department of Alcohol and Other Drug Abuse Services (DAODAS) is one of the primary funders for substance abuse prevention services in the state. 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). In addition, DAODAS also received Safe and Drug-Free Schools and Communities (SDFS) funds through the U.S. Department of Education that were distributed to community providers in a competitive process. A handful of these SDFS grant recipients were not part of the county authority system, but their outcomes are included in this report where appropriate.

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.

Local prevention staff administered the surveys and entered student responses into the KIT Prevention online reporting system. PIRE staff were sent a cumulative outcome database quarterly. The deadline for pre- or post-tests to be included in the final database for FY '10 was June 15. 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 '10, 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 and Block Grant funded programs versus SDFS funded 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 '11 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 '10.

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 revised 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 was unchanged in FY '09 and '10.

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 were expected to enter the student responses into the KIT Prevention online reporting system. Providers were instructed on participant protection procedures that would ensure likely 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.

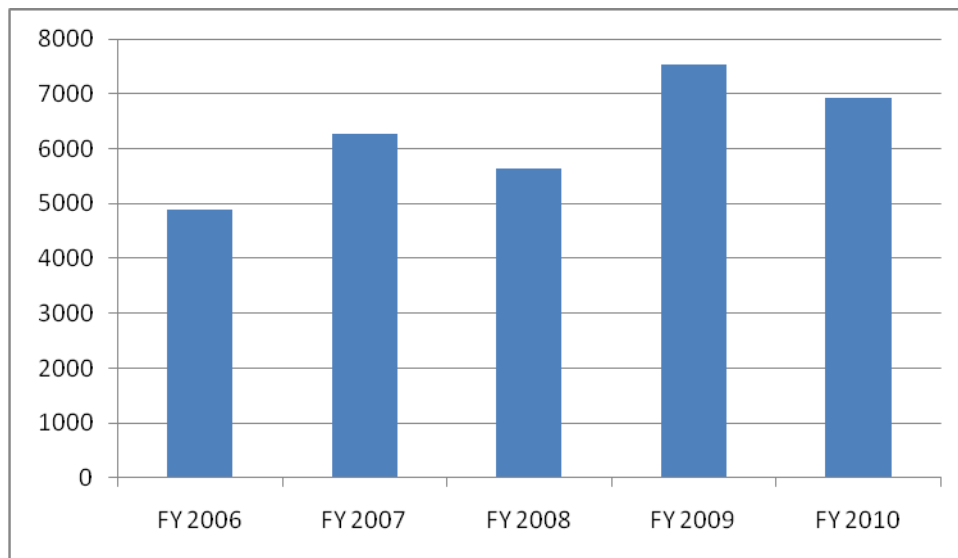
Matched Participants

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 entered 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-'10



The final database had 6,920 matched participants, which is less than the 7,526 participants in FY '09 but more than any other year (Chart 1). An unmatched database provided by KIT Prevention staff showed a total of 7,546 pre-tests entered, meaning a match rate of 92%. The 7,546 total that received a pre-test do not necessarily reflect all

school age youth to receive curriculum program services. DAODAS' prevention reporting system had 9,854 total registered recurring participants for FY '10, and 95% (9,403) of these individuals 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.

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.

Age. A majority (89%) of participants were between the ages of 10 and 14, with an average age of 12.1, slightly younger than the 12.4 average in FY '09 and '08. This means that middle school students make up a sizable portion of the total population. Table 1 shows the complete breakdown. Compared to FY '09, the participant population clustered more to 11 and 12 year olds with fewer 10, 13, and 14 year olds. The programs delivered to a majority older audience were Class Action, Leadership and Resiliency, Palmetto Youth Leadership, Project Toward No Drug Abuse (TND), Street Smart, and Teen Institute.

Table 1. Age Distribution of County Authority Program Participants

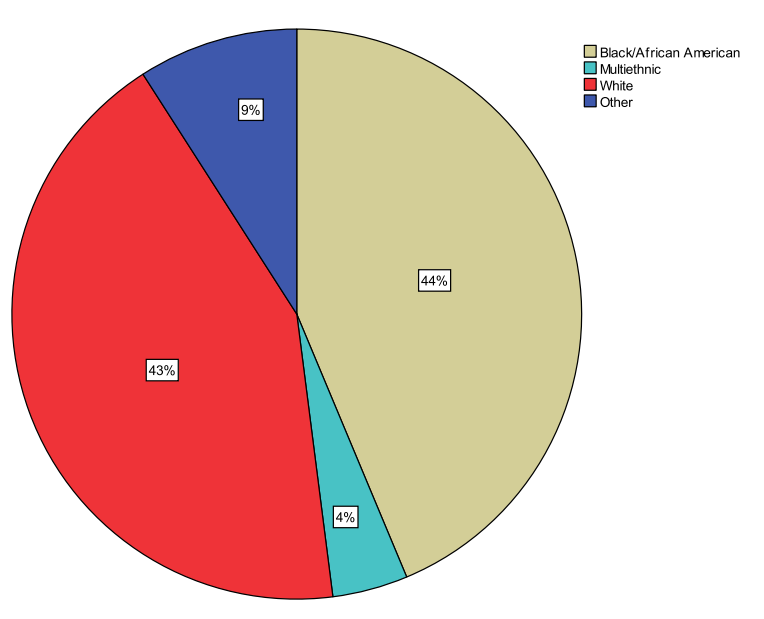
Age	% of Participants	
	FY '10	FY'09
10	15.5	17.5
11	26.8	17.9
12	20.2	15.1
13	15.0	21.3
14	11.1	17.2
15	6.1	6.1
16	2.7	2.7
17	1.1	0.8
18	0.4	0.3
19	0	0.1

Gender. Females made up half of the matched participant population (50% with 1.2% of the participants unidentified for gender). The only programs with an atypical gender breakdown were Second Step (84% male), along with Wise Guys and G.I.R.L. Power, for obvious reasons.

Race/Ethnicity. 43% of the matched participants were Black or African American, 42% were White, 7% were of "Other" race, 1% were American Indian or Alaskan Native, and 4% were in the Multiethnic race category (Chart 2). There were small numbers of

participants (0.7% or below) that were Asian, Native Hawaiian, or Other Pacific Islander. Only 6% of matched participants were of Hispanic, Latino, or Spanish origin or descent. These percentages are very similar to FY '09 and '08. Some programs had atypical demographic breakdowns, such as After School Recreation (90% White), Class Action (75% Black or African American), G.I.R.L. Power (26% Hispanic/Latino), Responding in Peaceful and Positive Ways (78% Black or African American), Teen Institute (97% Black or African American), Too Good For Drugs (72% White), and Wise Guys/Sports and the Law (31% Hispanic/Latino).

Chart 2. Matched Participants by Race



Risk-Factor Measures

Table 2 shows the results for the five risk factors included on the DAODAS Standard Survey. As shown in the table, there was 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. It should be noted that perceived parental attitudes 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 all measures, the percentage changes from FY '10 were smaller than in FY '09.

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.

**Table 2. Overall Results, Risk-Factor Measures:
County Authorities, FY '10 and '09**

Risk-Factor Measure	Possible Range of Scores	Pre-Test Average	Post-Test Average	FY '10 % Change	FY '09 % Change
Perceived Risk	0-3	1.99	2.19	10.2**	12.2**
Decision-Making	0-3	1.85	1.93	4.6**	5.2**
Favorable Attitudes	0-2	1.57	1.64	4.5**	6.1**
Perceived Peer Norms	0-10	8.42	8.57	1.8**	2.8**
Perceived Parental Attitudes	0-3	2.84	2.84	0.2	0.6**

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

Age. Table A1 shows county authorities' 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. Both groups had statistically significant changes on the same four risk-factor measures (all but perceived parental attitudes). 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 on four of the five risk factors (all but perceived parental attitudes) for males and females. It is worth noting that females had better pre-test risk-factor scores than males on all measures, which may be a primary reason that males had more desirable change scores on all five measures—females had less room for improvement.

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. Both the White participant group and the Black or African American participant group had significant positive change on all measures except perceived parental attitudes. The Asian participant group had the highest pre-test scores overall, followed by the White participant group. The Black or African American and multi-ethnic participant groups generally had the largest percentage improvements.

Participants of Hispanic, Latino, or Spanish descent or origin had statistically significant positive change for perceived risk, favorable attitudes, decision-making, and perceived peer norms. They had generally lower pre-test risk factor scores than participants not of that ethnicity.

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' 10 results, along with the corresponding changes in use from FY '09, are shown in Table 3.

Table 3. Overall Results, Substance Use Rates, FY '09-'10

Risk-Factor Measure	% Using at Pre-Test	% Using at Post-Test	FY '10 % Change	FY '09 % Change
30-Day Cigarette Use	5.5	4.6	-15.4**	-22.7**
30-Day Other Tobacco Use	3.8	3.1	-19.6**	-13.8**
30-Day Alcohol Use	9.4	6.8	-27.5**	-27.2**
30-Day Marijuana Use	3.6	2.9	-19.2**	-30.6**
30-Day Other Illegal Drug Use	1.5	1.2	-20.3*	-28.2**
30-Day Inhalants Use	3.8	2.7	-29.5**	-42.3**
30-Day Non-Medical Prescription Drug Use	2.4	1.7	-28.3**	-21.2**
30-Day Non-Medical OTC Drug Use	1.6	1.5	-7.9	-39.6**

Negative changes are desired for these items

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

There were desired statistically significant declines in the number of users for all substances from pre- to post-test, except for non-medical use of over-the-counter drugs. The percentage declines in the number of users were generally lower in FY '10 as compared to FY '09, but the percentages of users at pre-test were consistently higher in FY '09, allowing for more opportunity to show declines.

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

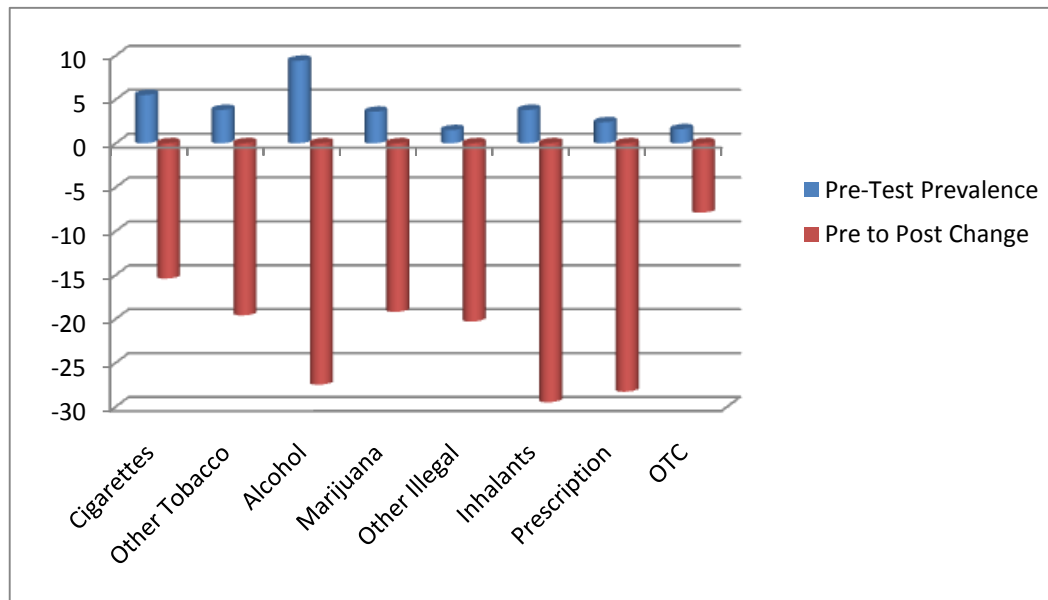


Chart 3 depicts the pre-test prevalence for each of the eight substances along with the percentage decreases in the number of users.

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 98% of other tobacco, marijuana, other illegal drug, non-medical prescription drug, and non-medical over-the-counter drug non-users maintained non-use. Alcohol had the most undesirable results, with almost 4% of participants initiating alcohol use during the course of programs.

Users of cigarettes 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. Three substances saw more than 80% of users reducing their use. A much higher percentage of other tobacco product users reduced their level of use in FY '10 compared to FY '09 (79.5% vs. 69.5%).

Chart 4. Percent of Pre-Test Non-Users Who Remained Non-Users, FY '10 and '09

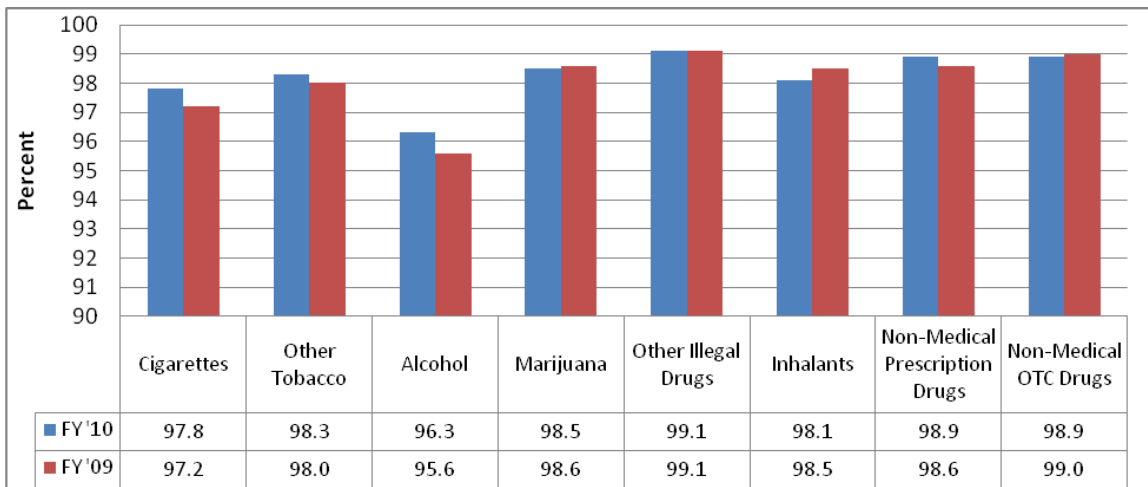
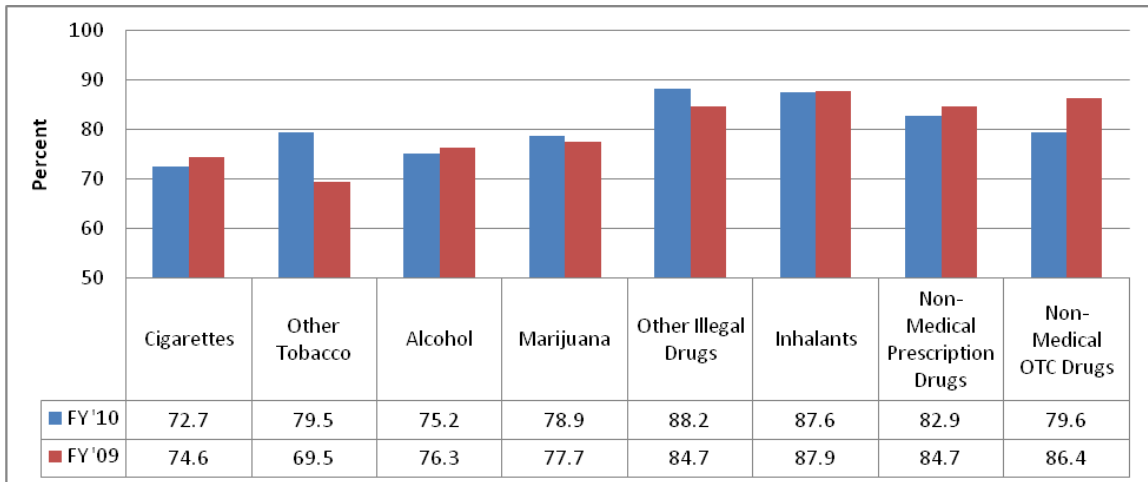


Chart 5. Percent of Pre-Test Users Who Reduced Their Level of Use, FY '10 and '09



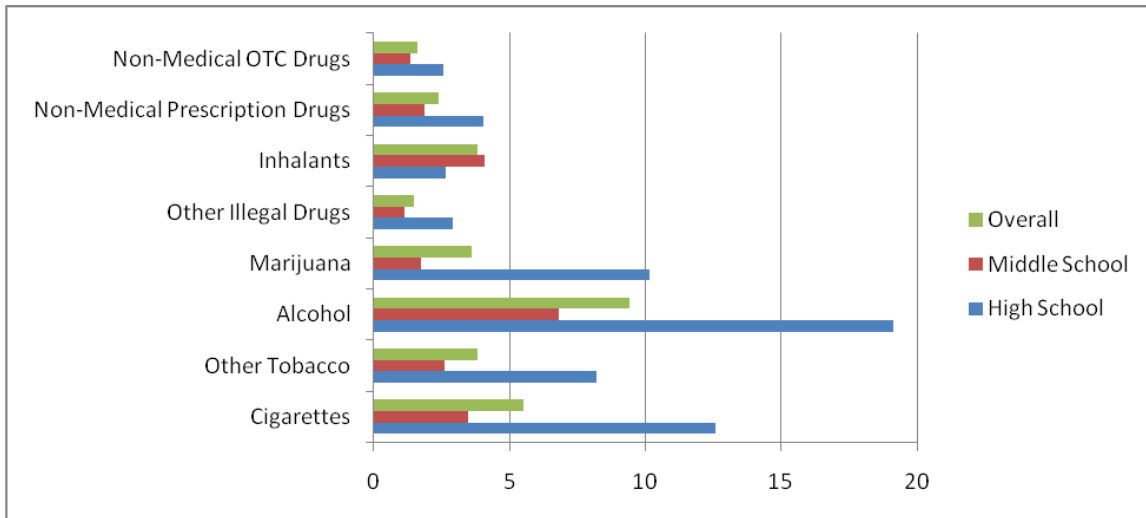
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Demographic Differences in Substance Use. Tables A1 through A4 in Appendix A also display substance use rates results separated by age groups, (middle school ages and high school ages), gender, race, and ethnicity.

Age. Table A1 shows data results separated by middle school (ages 10 to 13) and high school (ages 14 to 19) age ranges. For both age groups, there were decreases in the use of every substance. The middle school participant group had significant decreases in the number of users for six of the eight substances. The high school participant group had significant reductions in the number of users for cigarettes, alcohol, and marijuana. The percentage change in the number of users was greater for the middle school group for six of eight substances.

These numbers are very similar to FY '09 but stand in contrast to the FY '08 data in several ways. For middle school students in FY '08, there were only significant ($p < .05$) decreases in the number of users for two substances, compared to the six in FY '10. However, the FY '08 high school group had significant decreases for all substances. The high school group had larger percentage reductions for all substances in FY '08, but only two substances in FY '10. There is no clear reason why state programming was more effective for middle schools students in reducing the number of substance users in FY '10 and '09 than for high school students when the opposite was the case in FY '08.

Chart 6. Overall Results, Rates of Substance Use at Pre-Test: Overall, Middle School, and High School, FY '10



It should be noted in Chart 6 that the high school group had higher percentages of every substance except inhalants. It was the second-most used substance among middle school students, but tied for last among the eight substances for high school students. This is a somewhat typical pattern based on national data as inhalants are one of the few substances that has decreased use as age increases. This year was the first time that inhalants was the second most used substance for middle school students, surpassing cigarettes. This is primarily due to the pre-test percentage of cigarette users dropping from 4.8% to 3.5%. Alcohol was the most commonly used drug for both groups, followed by cigarettes for high school students.

Gender. Table A2 shows data results separated by gender. Males were more likely to be users at pre-test for all substances. Males had statistically significant declines in users for all substances except non-medical use of prescription drugs (though it was approaching significance), other illegal drugs and non-medical use of over-the-counter drugs. Females had significant declines in users for alcohol, inhalants and non-medical use of prescription drugs. This stands in contrast to FY '09 when females had significant declines in the number of users for seven of the eight substances; however, pre-test use was considerably less in FY '10, leaving less opportunity for decreases.

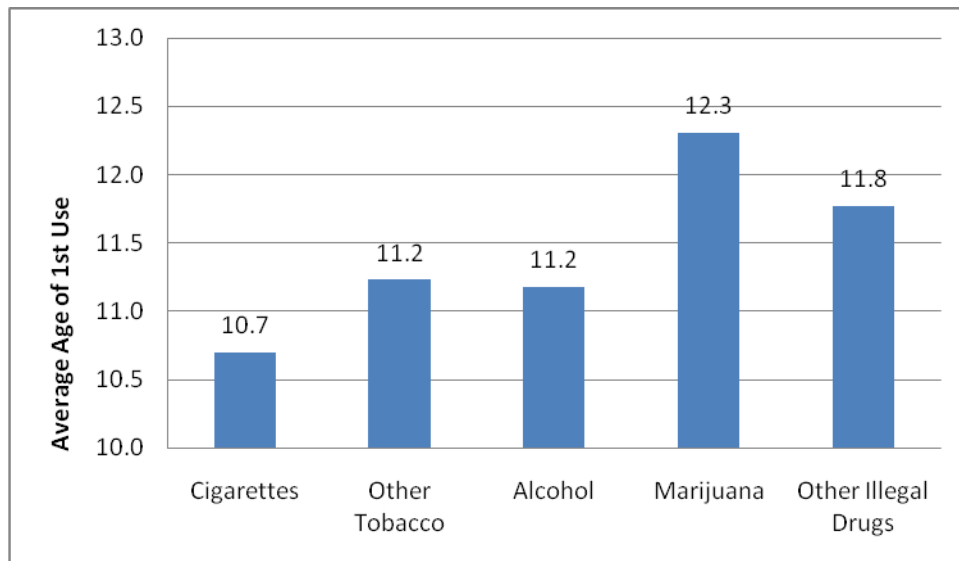
Race/Ethnicity. Table A3 shows data results separated by race (for those race groups with 40 or more participants), and Table A4 shows the results by ethnicity. Both White and Black or African American participant groups had declines in the number of users from pre- to post-test for all substances, except non-medical over-the-counter drug use for the Black or African American participant group, with the reductions being statistically significant in most cases.

Participants of Hispanic, Latino, or Spanish ethnicity had significant reductions in the number of alcohol users. Participants of Hispanic, Latino, or Spanish descent or origin had higher pre-test use rates for all substances as compared to 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 10.7 and 11.2 with tobacco being the most used drug at early ages; participants averaged first use of marijuana and other illegal drugs at 12.3 and 11.8, respectively.

Chart 7. Overall Results, Average Age of First Use, FY '10



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 three students (64%) report they had talked to their parents about the dangers of drugs in the past year—a minor decrease from FY '09 (65%). Additionally, 77%, a slight decrease from 79% in FY '09, 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 drugs. There were 6,920 matched participants, meaning there was a valid pre- and post-test. This number is a decrease from 7,526 from the year before. A majority (89%) of participants were between the ages of 10 and 14. Gender percentages were essentially equal, and the race breakdowns was roughly 43% Black or African American, 42% White, and 7% “Other” race. Only 6% 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 (10.2%), decision-making (4.6%), favorable attitudes (4.5%), and perceived peer norms (1.8%). There was essentially no change for perceived parental attitudes, but that measure had a very high pre-test score (2.84 out of 3.00). These percentage changes were all less than FY '09. For substance use, there were statistically significant reductions in the number of users of every substance measured, except for non-medical use of over-the-counter drugs and other illegal drug use, though the other illegal drug use decrease was approaching significance. The decreases in the number of users for the other seven substances ranged from a high of 30% (inhalants) to a low of 15% (cigarettes).

Between 96% and 99% of participants that were non-users at pre-test remained non-users at post-test for each substance. Around 70-90% of substance users at pre-test were using less or not at all for that substance by post-test.

Demographic analyses reveal that programs were effective for both middle school and high school age youth. The middle school group had generally larger declines in substance use percentages compared to the high school group.

Females had higher pre-test risk factor scores and smaller percentages of pre-test substance users. Males generally had greater positive change on risk factor measures, which may be related to their lower pre-test scores (more room for improvement than females had).

Results were generally positive across all race groups. Participants of Hispanic, Latino, or Spanish origin or descent had significant positive change on four of the five risk factor measures as well as significant reductions in the number of alcohol users. They also began the programs with generally higher pre-test percentages of users as compared to those not of that ethnicity.

Ages of first use for cigarettes, other tobacco products, and alcohol were between 10.7 and 11.2; participants averaged first use of marijuana and other illegal drugs at 12.3 and 11.8, respectively.

Just under two-thirds of students reported talking to their parents about the dangers of drugs in the past year, and about three out of four reported having watched, read, or heard a prevention advertisement in the past year.

SECTION III: PROGRAM OUTCOMES

Across the provider network, 20 different programs were implemented, down from 27 in FY '09. 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	51	Perceived Risk Favorable Attitudes Decision-Making Perceived Peer Norms 30-Day Cigarette Use 30-Day Other Tobacco Use 30-Day Alcohol Use 30-Day Marijuana Use 30-Day Other Illegal Drugs Use 30-Day Inhalants Use 30-Day Non-Medical Presc. Drug Use
After-School Recreation	1	Perceived Risk <i>Perceived Peer Norms</i> 30-Day Alcohol Use
All Stars	9	Perceived Risk Favorable Attitudes Perceived Peer Norms
Class Action	3	Perceived Risk Favorable Attitudes 30-Day Alcohol Use
G.I.R.L. Power Series	1	Decision-Making
Keepin' It Real	2	Perceived Risk Decision-Making Perceived Peer Norms 30-Day Alcohol Use 30-Day Marijuana Use
Life Skills Training	6	Perceived Risk Favorable Attitudes Decision-Making Perceived Peer Norms 30-Day Cigarettes Use 30-Day Alcohol Use 30-Day Marijuana Use
Project Alert	8	Perceived Risk Favorable Attitudes <i>Perceived Peer Norms</i> 30-Day Alcohol Use

Project Northland	5	Perceived Risk Favorable Attitudes Decision-Making Perceived Peer Norms Perceived Parental Attitudes 30-Day Cigarette Use 30-Day Other Tobacco Use 30-Day Alcohol Use 30-Day Marijuana Use 30-Day Other Illegal Drugs Use 30-Day Inhalants Use 30-Day Non-Medical Presc. Drug Use
Project Toward No Drug Abuse (TND)	4	Perceived Risk Decision-Making 30-Day Non-Medical Presc. Drug Use
Project Toward No Tobacco Use (TNT)	2	Perceived Risk 30-Day Marijuana Use 30-Day Non-Medical Presc. Drug Use
Responding in Peaceful and Positive Ways (RIPP)	1	Perceived Risk Favorable Attitudes <i>Perceived Parental Attitudes</i> 30-Day Cigarette Use 30-Day Alcohol Use 30-Day Inhalants Use
Teen Institute	1	Perceived Risk Decision-Making Perceived Peer Norms <i>Perceived Parental Attitudes</i>
Too Good For Drugs	1	Perceived Risk Favorable Attitudes Perceived Peer Norms 30-Day Cigarette Use
Wise Guys/Sports and the Law	1	Perceived Risk

Italics indicate undesired change.

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

After-School Recreation, which provides at-risk youth ages 11-14 with evidence-based prevention programs in an after-school setting with instructional, recreational, cultural and athletic programs that encourage drug- and violence- free lifestyles, was implemented by one site. Results were mixed as there was a statistically near-significant improvement on perceived risk and a near significant reduction in the number of alcohol users. However, there was a negative significant change for perceived peer norms.

All Stars, a comprehensive evidence-based ATOD prevention curriculum, had three positive risk factor changes (perceived risk, favorable attitudes, and perceived peer norms). It was the most commonly implemented program with nine sites and 1,155 matched participants.

Class Action, an evidence-based program that is a high school extension of Project Northland uses interactive, peer-led sessions to discuss and debate the consequences of

substance abuse. Three sites implemented this program, and there were two significant positive changes, perceived risk and favorable attitudes, along with a near significant decrease in the number of alcohol users.

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 significant improvement in decision-making.

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 two sites. The results show a statistically significant improvement in perceived risk, decision-making, and perceived peer norms. There was also a significant reduction in the number of users for alcohol, and there was a near-significant reduction in the number of marijuana users.

Life Skills Training, a skill-based, evidence-based ATOD prevention curriculum, was used by six sites. It demonstrated significant positive change for perceived risk, favorable attitudes, decision-making skills, and perceived peer norms. There were also significant reductions in the number or users for cigarettes, alcohol, and marijuana.

Project Alert, a comprehensive evidence-based ATOD prevention curriculum for middle school students, was delivered in eight counties for 1,017 students. Overall, the results showed positive significant effects for perceived risk and favorable attitudes, as well as a significant reduction in the number of alcohol users. In addition, there was a near significant improvement in perceived peer norms.

Project Northland, an evidence-based ATOD prevention curriculum with a strong focus on alcohol and influencing the environment, was used by five sites with a large total of 1,183 matched participants, making it the most represented program in our database. Every risk factor and substance use measure had positive significant change except non-medical use of over-the-counter drugs.

Project Towards No Drug Abuse (TND), an evidence-based general ATOD prevention curriculum for high school youth, was used by four county authority sites with a significant positive change in perceived risk and a significant decline in the number of non-medical prescription drug users. In addition, there was a near significant improvement in decision-making.

Project Towards No Tobacco Use (TNT), a comprehensive, evidence-based tobacco prevention program for middle school youth, had significant positive change for perceived risk, along with significant reductions in the number of marijuana and non-medical use of prescription drugs.

Responding in Peaceful and Positive Ways, a school-based violence prevention program designed to provide students in middle and junior high schools with conflict resolution strategies and skills, was used by one site and had significant improvements in perceived risk and favorable attitudes along with significant declines in the number of alcohol and inhalant users. There was also a near significant decrease in the number of cigarette users. However, there was a negative near significant change in perceived parental attitudes.

Teen Institute is the name often given to year-long work with a youth leadership group. One site pre- and post-tested their Teen Institute youth group in FY '10 and showed significant positive change in decision making along with near significant changes in perceived risk and perceived peer norms. However, there was a near significant negative change in perceived parental attitudes.

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 statistically significant improvement for perceived risk and near significant improvement for favorable attitudes and perceived peer norms. In addition, there was a near significant decline in the number of cigarette users.

Wise Guys/Sports and the Law is a locally designed, 6-7 session program for boys/young men 10-18 years old. It explores the need for rules and consequences, leadership, sportsmanship and team effort. The curriculum correlates these concepts to everyday life situations from those encountered within sports & the law. The program showed a significant improvement in perceived risk.

Evidence-Based vs. Non-Evidence-Based Programs

County authorities are not required to use evidence-based interventions exclusively, though most do. In FY '10, 94% of participants were served in evidence-based programs, just below the 95% in FY '09, which is the highest percentage since this has been tracked. Despite the large difference in size between the group served by evidence-based programs versus non-evidence-based programs, we can compare their outcomes. These results are displayed in Table A6 in Appendix A.

For risk factor measures, evidence-based programs saw statistically significant positive change on four of the five risk factors, while non-evidence-based programs had significant positive change for only perceived risk. Evidence-based programs had a higher percentage of positive change for all five risk factors. On substance use measures, the differences were less clear. Evidence-based programs had significant declines in the number of users for six substances compared to one near significant change (alcohol) for non-evidence-based programs. However, this lack of significance may be largely attributable to the difference in the number of participants in the two groups. In some instances, non-evidence-based programs had larger percentage declines in the number of users, but evidence-based programs had the larger declines for others.

Safe and Drug-Free Schools

Close to half of the matched participants in the state database were served by a program funded by Safe and Drug-Free Schools dollars in FY '10, the final year for this funding stream. Table A7 in Appendix A shows results for these participants compared to the rest of the participants (considered to be Block Grant funded as that is the other primary prevention funding source). Safe and Drug-Free Schools programs had overall greater increases in risk factor measures. Safe and Drug-Free Schools programs also had greater percentage declines in the number of substance users for all eight substances.

Summary of Section III

There were 51 county authority program implementations of 20 different programs in FY '10. Of the programs with multiple implementations, Keepin' It Real, Life Skills, and Project Northland had some of the most consistently positive results.

The large majority (94%) of participants with matched pre- and post-tests were served in evidence-based programs. Evidence-based programs had dramatically more positive results for risk factors but a less clear advantage for reducing the number of substance users.

About half of the matched participants in the state database were served by a program funded by Safe and Drug-Free Schools dollars. SDFS programs had greater improvements on risk factor measures and greater declines in the number of substance users.

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 for both projects, 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 benefit.

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 subrecipients 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-test 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 a “good fit” 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 recording of participant attendance. However, a large number of sites had attendance results that indicate considerable amounts of missing data, as many participants were listed with zero sessions attended, which would not be possible if they had a matched pre- and post-test. Therefore, analyses of attendance (or “dosage”) on outcomes are not possible. However it may be safe to assume that a lack of fidelity probably had an adverse impact on the findings for at least some of the interventions at some of the sites.

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 was 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'10 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:

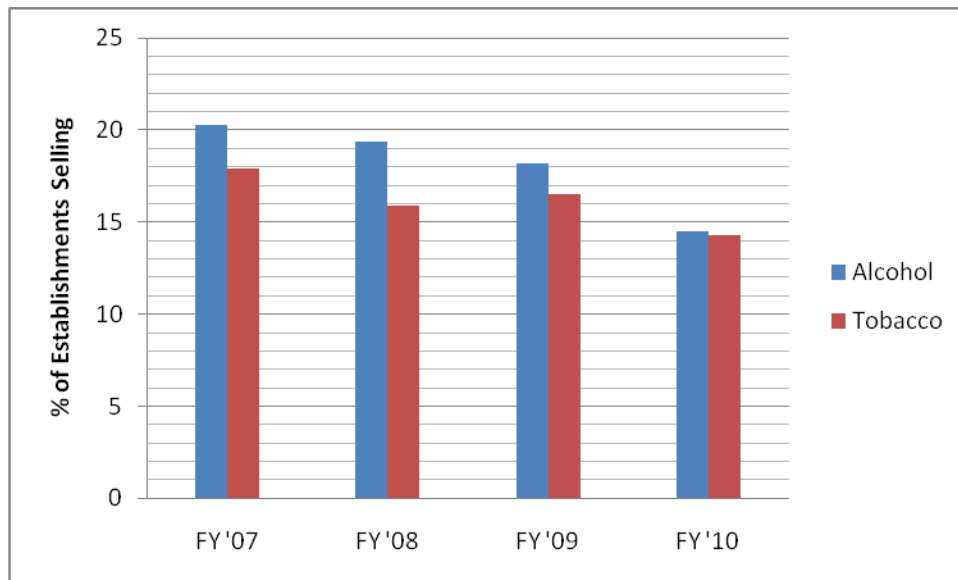
- Publicity to alcohol and tobacco sales staff that enforcement operations will be increasing,
- Awareness-raising with the community to increase its acceptance of increased compliance operations,

- 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 '10, there were 6,438 alcohol and 1,088 tobacco compliance check forms returned. Compared to FY '09, this is a decrease for alcohol (7,121) and tobacco (1,182). The FY '08 totals were 5,261 and 1,599, respectively. In FY '10, 36 counties returned alcohol compliance check forms, while 28 counties returned tobacco forms. These figures are both decreases from FY '09 when 44 counties did alcohol compliance checks and 33 returned tobacco compliance check data. There may have been additional compliance checks for which a form did not get returned to and entered by DAODAS in the given time frame, so the data received may not reflect every compliance check during the year. It should contain the vast majority, however.

Chart 8. Percentage of Stores Selling by Year, FY '07-'10



The tobacco merchants sold cigarettes 156 times or 14.3%. Alcohol was sold 933 times or 14.5%. These buy rates are substantial improvements from FY '09 when the tobacco buy rate was 16.5% and the alcohol buy rate was 18.2%. The FY '08 tobacco and alcohol rates were 15.9% and 19.4%, respectively, and the FY '07 rates were 17.9% and 20.3%, respectively. Thus, as seen in Chart 8, the alcohol compliance rate has dropped annually, and the tobacco compliance rate has decreased, though not as consistently. The

alcohol purchase rate decrease from FY '07 to FY '10 is statistically significant ($p < .001$), and the tobacco rate decrease approaches significance ($p = .05$). Tables 5 and 6 show the buy rate by 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 continued decline in the state rate. However, we were not able to repeat this analysis in subsequent years as there are virtually no counties left to be "new" enforcement counties.

Most FY '10 alcohol compliance checks were done at convenience stores (70%). The next most common type of location was large grocery stores (10%), then liquor stores (7%), restaurants (4%), and bars (4%). In most cases, the youth attempted to buy beer (66%), although a substantial 20% attempted to buy alcopops or alcohol energy drinks and 8% attempted to buy liquor. The most common age for the youth volunteers was 18 (34%) or 19 (31% each). Almost 16% of buyers were 17, and 12% were 20. Most buyers were male (52%) and White (89%). Almost all of these figures are very close to FY '09 numbers except that 65% of buyers were male in FY '09.

For tobacco compliance checks, 76% were done at convenience stores, followed by drug stores (11%) and large grocery stores (9%). In FY '09, only 1% of checks were done at drug stores. Buyers typically attempt to buy cigarettes (78%, down from 85% in FY '09) 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 increasing targeted over the past three years. Most buyers were 16 (44%), followed by 17 years old (29%), and 15 year olds (22%). This is a substantial shift from FY '09 when the buyers' age breakdown was 38% 17 year olds, 38% 15 year olds, and 22% 16 year olds. Buyers were male 67% of the time, and most buyers were White (82%). Another 14% of buyers were Black or African American. The FY '10 sale rate for other tobacco products was 21%, statistically significantly higher than the cigarette sale rate of 13% ($p = .003$).

For alcohol, the sale rate for alcopops/alcohol energy drinks was just below the sale rate for beer (13.3% vs. 14.6%). The sale rate for liquor was 19%. The type of product purchased was a statistically significant factor on the alcohol sale rate ($p = .016$), due to the high liquor sale rate. In Table 7 below, some of the higher and lower sale rates are shown for some types of alcohol products. In some instances, those completing alcohol compliance check forms included in the product description what quantity was attempted to be purchased. We analyzed the data in this way for the first time in FY '09 and found that when only one can or bottle was purchased, the sale rate was 33%, much higher than other quantity sale rates such as 18% for 12 packs or 15% for 6 packs. However, this pattern did not hold in FY '10 as 6 packs had a sale rate of 14% (the lowest), followed by singles and 12 packs with similar sale rates of 24.2% and 24.5%.

Table 5. FY '10 Alcohol Compliance Check Buy Rates by County

CountyName	Total Eligible Purchase Attempts	Buy	Buy Rate
ABBEVILLE	9	3	33.3%
AIKEN	38	10	26.3%
ALLENDALE	0	0	N/A
ANDERSON	315	36	11.4%
BAMBERG	27	1	3.7%
BARNWELL	7	0	0.0%
BEAUFORT	0	0	N/A
BERKELEY	504	54	10.7%
CALHOUN	15	1	6.7%
CHARLESTON	475	124	26.1%
CHEROKEE	56	16	28.6%
CHESTER	73	12	16.4%
CHESTERFIELD	0	0	N/A
CLARENDON	22	1	4.5%
COLLETON	0	0	N/A
DARLINGTON	38	12	31.6%
DILLON	20	4	20.0%
DORCHESTER	142	14	9.9%
FAIRFIELD	50	7	14.0%
FLORENCE	341	54	15.8%
GEORGETOWN	52	10	19.2%
GREENVILLE	672	96	14.3%
GREENWOOD	224	38	17.0%
HAMPTON	0	0	N/A
HORRY	101	21	20.8%
JASPER	0	0	N/A
KERSHAW	230	25	10.9%
LANCASTER	73	7	9.6%
LAURENS	59	20	33.9%
LEE	64	14	21.9%
LEXINGTON	191	23	12.0%
MARION	0	0	N/A
MARLBORO	0	0	N/A
NEWBERRY	81	11	13.6%
OCONEE	208	17	8.2%
ORANGEBURG	50	8	16.0%
PICKENS	445	47	10.6%
RICHLAND	314	54	17.2%
SALUDA	10	4	40.0%
SPARTANBURG	206	39	18.9%
SUMTER	86	12	14.0%
UNION	42	9	21.4%
WILLIAMSBURG	12	1	8.3%
YORK	1186	128	10.8%

Table 6. FY '10 Tobacco Compliance Check Buy Rates by County

CountyName	Total Eligible Purchase Attempts	Buy	Buy Rate
ABBEVILLE	0	0	N/A
AIKEN	13	2	15.4%
ALLENDALE	0	0	N/A
ANDERSON	32	1	3.1%
BAMBERG	15	0	0.0%
BARNWELL	0	0	N/A
BEAUFORT	0	0	N/A
BERKELEY	61	7	11.5%
CALHOUN	8	2	25.0%
CHARLESTON	9	6	66.7%
CHEROKEE	0	0	N/A
CHESTER	0	0	N/A
CHESTERFIELD	0	0	N/A
CLARENDON	10	2	20.0%
COLLETON	9	1	11.1%
DARLINGTON	1	0	0.0%
DILLON	0	0	N/A
DORCHESTER	44	5	11.4%
FAIRFIELD	33	1	3.0%
FLORENCE	131	12	9.2%
GEORGETOWN	0	0	N/A
GREENVILLE	204	45	22.1%
GREENWOOD	0	0	N/A
HAMPTON	0	0	N/A
HORRY	0	0	N/A
JASPER	11	0	0.0%
KERSHAW	10	1	10.0%
LANCASTER	35	0	0.0%
LAURENS	1	0	0.0%
LEE	0	0	N/A
LEXINGTON	97	12	12.4%
MARION	0	0	N/A
MARLBORO	0	0	N/A
NEWBERRY	19	1	5.3%
OCONEE	18	6	33.3%
ORANGEBURG	8	0	0.0%
PICKENS	27	0	0.0%
RICHLAND	83	12	14.5%
SALUDA	3	1	33.3%
SPARTANBURG	98	14	14.3%
SUMTER	10	2	20.0%
UNION	0	0	N/A
WILLIAMSBURG	1	0	0.0%
YORK	97	23	23.7%

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
Sparks	8%	Smirnoff Ice	20%
Coors (regular)	8%	Coors Light	20%
Miller (regular)	7%	Miller Light	22%
		Icehouse	26%
		Corona	31%
		Michelob Ultra	33%

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 63% to 76% of the time. Even when the ID was studied, the sale was completed about 8% to 9% of the time. More than 75% of stores had posted signage stating that they check IDs, but the percentage of stores that had age-verification equipment was around 42%, though that was slightly higher than in FY '09.

Table 8. Compliance Check Merchant Practices

Compliance Check Feature	Alcohol (%)	Tobacco (%)
Sales Completed	14.5	14.3
Merchant Asked Buyers Age	25.0	20.3
Merchant Asked to See ID	84.5	76.7
Merchant Studied ID	75.9	62.5
Completed Sale When Merchant Studied ID	8.1	9.0
Visible ID-Checking Signage in Store	77.5	87.0
Age-Verification Equipment Used	42.2	41.7

The presence of signage promoting ID-checking had a statistically significant impact for completed sales for alcohol ($p < .001$) but not tobacco. Only 13% of stores with signage sold alcohol compared to 21% of stores without signage (15% vs. 19% for tobacco). The use of age verification equipment was also statistically significant for alcohol and tobacco ($p < .001$) as only 5% of stores with equipment sold alcohol compared to 22% of stores without equipment (5% vs. 21% for tobacco).

Table 9 shows that drug stores had lower sales rates than other types of businesses for alcohol by far, while bars and restaurants had the highest. Large grocery stores and drug 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 and restaurant sale rate. Type of business was not significant for tobacco sales.

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	4,479	13.6	829	13.5
Bar	277	26.0	0	--
Restaurant	282	22.7	0	--
Liquor Store	456	18.2	2	0
Small Grocery	44	18.2	12	8.3
Large Grocery	636	10.8	101	17.8
Drug Store	143	4.9	115	15.7

Table 10 displays the percentages of sales completed based on multiple demographic characteristics of the clerks and buyers. There were no significant differences in sale rates by clerk gender. White and “other” race clerks had the lowest sales rate for alcohol, but there was no clear pattern for tobacco. The impact of clerk race on sales was statistically significant for alcohol ($p < .001$), but not for tobacco.

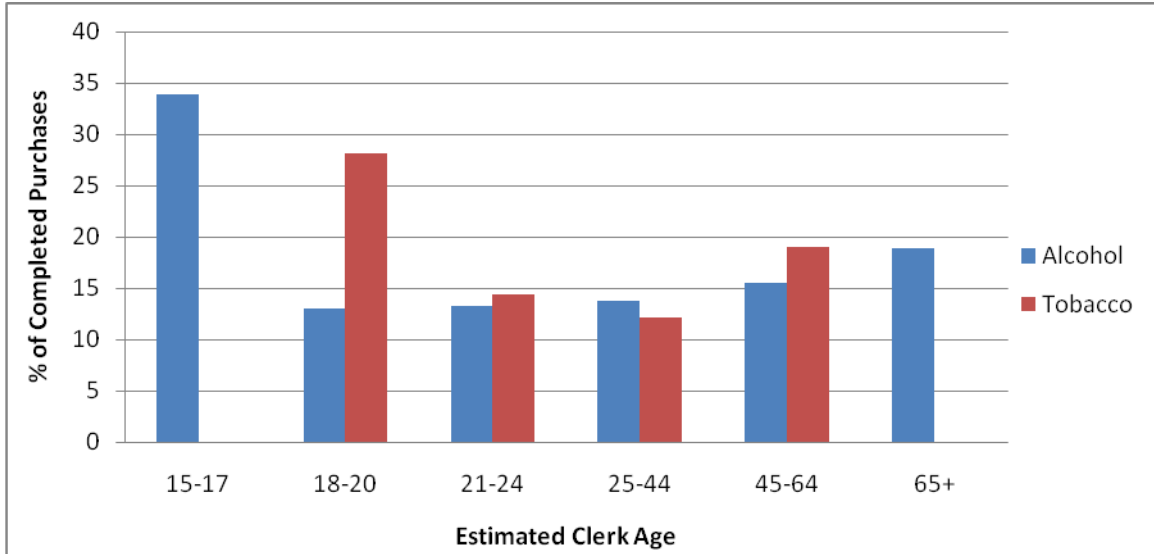
Table 10. Percentage of Retailer Sales by Demographic Characteristics

Compliance Check Characteristic	% Sales Completed— Alcohol	% Sales Completed— Tobacco
Clerk: Male	15.7	15.6
Clerk: Female	13.9	14.1
Clerk: Black or African American	17.7	14.7
Clerk: White	13.6	15.5
Clerk: Hispanic	19.0	4.8
Clerk: Other	13.5	12.8
Buyer: Male	15.6	13.8
Buyer: Female	15.0	13.5
Buyer: Black or African American	14.5	11.7
Buyer: White	14.7	15.2
Buyer: Hispanic	16.3	9.8
Buyer: Other	10.0	--
Clerk and Buyer: Same Gender	14.5	16.4
Clerk and Buyer: Different Gender	15.1	13.4
Clerk and Buyer: Same Race	13.7	15.5
Clerk and Buyer: Different Race	16.1	13.8

Youth buyers were asked to estimate the age of the clerk who handled their attempted purchase. For alcohol, clerk age had a statistically significant effect on the sales rate ($p < .001$). As seen in Chart 9, clerks estimated to be 15-17 had a much higher sale rate.

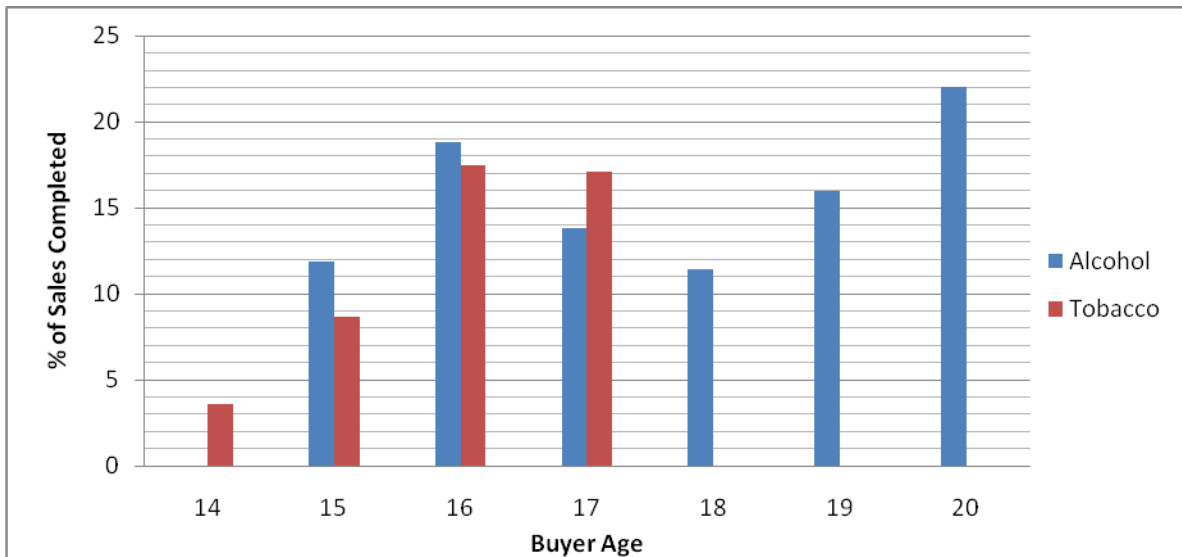
Estimated clerk age was also significant for tobacco sales ($p=.002$), with 18-20 year olds selling most often. There were too few 15-17 year old and 65 and older clerks to draw any conclusions in this year's data. However, in past years, 15-17 year olds had higher than normal sale rates for tobacco.

Chart 9. Percentage of Stores Selling by Estimated Clerk Age



In FY '10, buyer race was not a statistically significant factor on buy rates for alcohol or tobacco, though Black or African American youth had higher buy rates for both tobacco and alcohol in FY '09. Unlike in FY '09, when males were significantly more likely to be able to purchase alcohol (19.5% vs. 16.1% for females, $p<.001$), there was no difference in sale rates for either product based on gender.

Chart 10. Percentage of Stores Selling by Buyer Age



The age of the purchaser had a statistically significant effect on sale rates for both substances ($p < .001$). Chart 10 shows that 16 and 17 year olds had higher sale rates than 15 and 14 year olds. The pattern was less clear for alcohol and 16 and 20 year olds had the highest sale rates and 18 year olds had a lower sale rate.

The average clerk fine for an alcohol sale, at the time of ticketing, was \$595.37, and the median amount was \$672.50. The average fine for a tobacco sale ticket was \$373.46 with \$470.00 being the most common amount.

The compliance check form includes a section where officers should ask offenders if they have ever taken a merchant education class. Fifty-three of 483 (11%) indicated they had, compared to 5% in FY '09. Of the 21 instances where a class was named by the clerk, 18 times the program noted was PREP.

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 '10, 22 counties turned in tobacco agreements compared to 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.

Public Safety Checkpoints

A total of 491 public safety checkpoints, often called sobriety checkpoints, were implemented in FY '10, a slight decrease from the 529 checkpoints in FY '09, with almost 60,000 cars going through those checkpoints. AET reports show that these checkpoints resulted in 6,295 tickets, including 167 underage drinking violations. There were also 244 DUIs, 76 felony arrests, 161 fugitives apprehended, 34 Fake IDs, 17 stolen vehicles recovered, 382 drug possession charges, 147 underage tobacco possession charges, and 349 open container violations. There were 32 different counties with checkpoints in FY '10, essentially the same as FY '09 and '08, though 62% of the checkpoints were done by the 3rd and 6th judicial circuits. The most common alcoholic beverage confiscated was beer, by far.

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. Twenty-three counties turned in AET party dispersal reporting forms in FY '10, up from 21 in FY '09, though three counties (Greenville, Pickens, and York) accounted for 55% of the 150 parties dispersed. Those 150 parties had an estimated total of 3,846 attendees. A total of 952 tickets were written during these operations, including 705 for underage drinking violations (43 of those for age 16 or younger), 68 for transfer of alcohol to an underage person (double the FY'09 total), one for unlicensed keg possession, 16 for fake IDs (up from three), and 52 for drug possession.

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 140 parties prevented in FY '10, down from 231 in FY '09.

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 '10 and collectively served 1,671 retail staff, slightly less than the 1,899 in FY '09.

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. The FY '10 pass rate was 98%, the same as FY '09, with the average score being 94, the same as FY '09.

Diversory 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 1,086 youth served in AEP in FY '10.

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 '10, 129 youth participated in TEP, of which 83 were court-ordered.

This is a substantial drop from FY '09 when there were 305 total participants (158 court-ordered).

TEP is evaluated with a post-test-only design comprised of true/false questions and four items that assess attitudes and intentions. One-third of participants got all ten true/false questions correct, and 62% got nine or 10 correct, which is considered passing. 38% of participants indicated they see themselves quitting tobacco products in the near future.

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' 10, 10 counties representing six circuits conducted shoulder taps a total of 55 different times, up from 25 in FY '09. Altogether, 573 individuals were approached with 33 purchasing alcohol for the youth for a 6% violation rate, down from 10% in FY '09.

Other Alcohol Enforcement Team Activities

In addition to compliance checks, public safety checkpoints, merchant education, shoulder taps, and controlled party dispersals, AETs also implement a number of other strategies, though with less frequency, and engage in a wide range of awareness-raising activities. Less common operations include:

- Fake ID Checks/Bar Checks: This is when officers do a sweep of an establishment looking for customers with fake IDs or when they remain undercover in an on-premise establishment and observe possible violations, such as use of fake ID or serving an underage person.
- Saturation Patrols: This is very concentrated traffic enforcement looking for driving under the influence and other traffic violations.

AET awareness activities included holding town hall meetings, doing educational sessions for youth or adults, conducting a local media campaign, 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 338 media placements (articles, TV stories, etc.) during FY '10. 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 shoulder taps. County authority prevention staff and AET Coordinators returned forms on 6,438 alcohol compliance checks and 1,088 tobacco checks. This is a decrease from FY '09 for both. For alcohol, 14.5% of attempts generated sales, compared to 14.3% for tobacco. These are the lowest sale rates that we have ever tracked, which suggests a successful impact from consistent enforcement. The alcohol sale rate has shown a particularly encouraging consistent decline from 20.3% in FY '07. The FY '07 to FY '10 decreases are significant for both alcohol ($p < .001$) and tobacco ($p = .05$).

The sale rate for tobacco products other than cigarettes was significantly higher ($p = .003$) than for cigarettes. The type of alcohol purchased also had a significant effect ($p = .016$) on the sale rate, primarily due to the sale rate for liquor being 19%.

Most merchants asked to see the buyers' IDs, though about 8% to 9% 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 ($p < .001$), and the electronic equipment was also significant for tobacco ($p < .001$).

A total of 491 public safety checkpoints were reported, which is down from last year's 529. Almost 6,300 tickets were written during the FY '10 checkpoints. The counties served 1,671 merchants in the Palmetto Retailers Education Program (PREP) in FY '10, down from 1,899. The pass rate for the course was 98%. AETs dispersed 150 parties, through three counties accounted for 55% of those operations. Almost 1,000 tickets (705 for underage drinking) were written during those dispersals. Another 140 parties were reported as having been prevented due to proactive use of advanced information. During shoulder tap operations, 573 individuals were approached by the cooperating youth to purchase alcohol, with 33 purchasing (6% sales). Other AET operations included fake ID/bar checks and saturation patrols. Counties were able to get a total of 22 multi-jurisdictional tobacco enforcement agreements signed, up three from the year before. AETs reported 338 media placements (articles, TV stories, etc.).

Far more youth were served in a diversion program for youth alcohol offenses (1,087 served in the Alcohol Education Program) than tobacco (129 served in the Tobacco Education Program).

SECTION VI: YOUTH ACCESS TO TOBACCO STUDY (SYNAR)

Each year, as part of a federal requirement, South Carolina conducts a study to determine the extent to which youth younger than 18 can successfully buy cigarettes from retail outlets. In the 2010 study (FFY 2011), South Carolina continued using a simple random sampling methodology rather than a census design (visiting every store). This strategy began in the 2007 study. Between Jan. 1 and Feb. 28, 2010, 213 youth volunteers ages 15-17, under trained adult supervision, conducted 459 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) 7,800 outlets in the state.

The FFY '11 results indicated an estimated overall sales rate (also known as a Retailer Violation Rate or RVR) of 7.9%. This rate is far below 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 is also the lowest in the history of the state's Synar study and the first time the state has met the 10% mark, which has been the Governor's goal for several years. The 95% confidence interval for the violation rate is from 5.5% to 10.3%, 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.

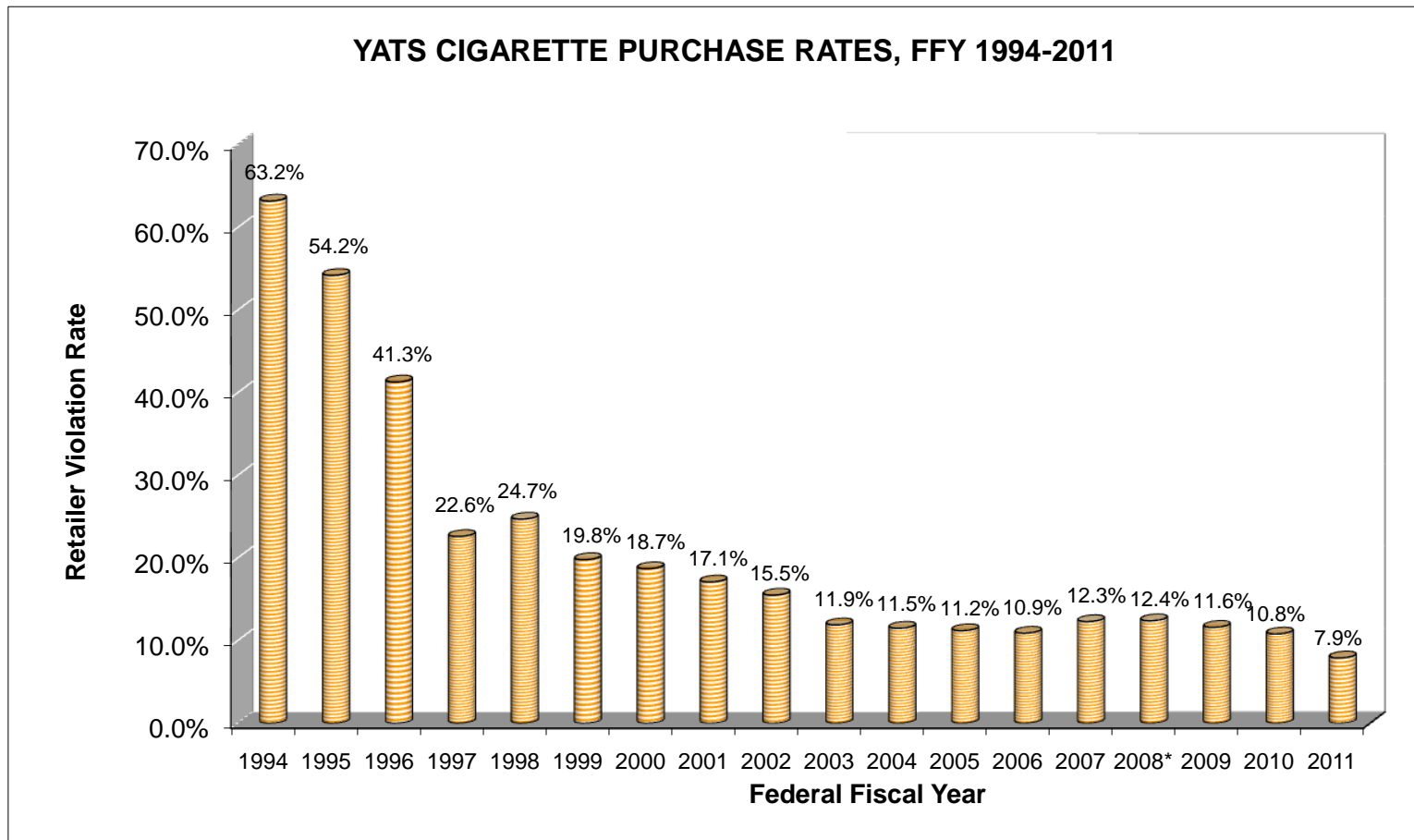
The age of the youth volunteer was not statistically significant overall though the sales rate increased with each year of age, from 6% to 11%. Comparing just the sale rate for 15 year olds to the sale rate for 17 year olds, the difference approaches statistical significance ($p=.07$). Sales rates were virtually identical for males and females. Black or African American youth were sold to more than the other race categories (9% vs. 6% for "other" and 7% for White), though race was not a significant factor overall. Race of the clerk was not a significant factor in whether a sale took place, nor was the gender of the clerk, although males sold more often (10% vs. 7%). In past years, the youngest clerks were most likely to sell, but clerks estimated to be in their 20s only sold 6% of the time in FY '10. More than 15% of teenage clerks sold, but they accounted for just 13 inspections. Clerks estimated to be older than 60 had the highest sale rate (17% of 30 attempts). Age of the clerk was not statistically significant.

With the FFY 2010 Synar data, we compared county Synar data to the levels of tobacco compliance check enforcement in that 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 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 2011 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 was significant ($p=.006$). 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 had no relationship to the buy rate.

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 2007 Youth Tobacco Survey, 19% of high school students report getting their cigarettes from a store, compared to 7% of youth getting their alcohol from a store, according to the 2009 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.

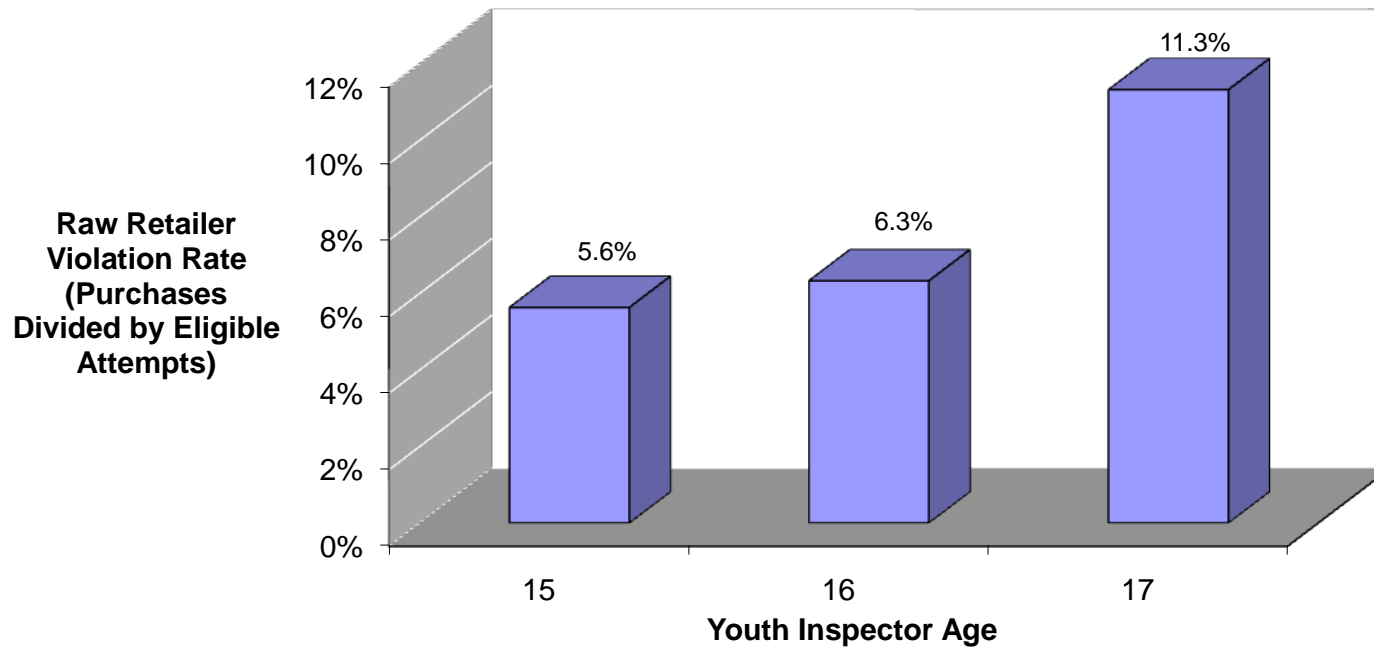


*The FFY 2008 study was the first that did not allow 14-year-old inspectors, which consistently were sold to less often than the 15- to 17-year-old inspectors. Barring this change in methods, the RVR would reasonably have been lower in 2008 than in 2007.

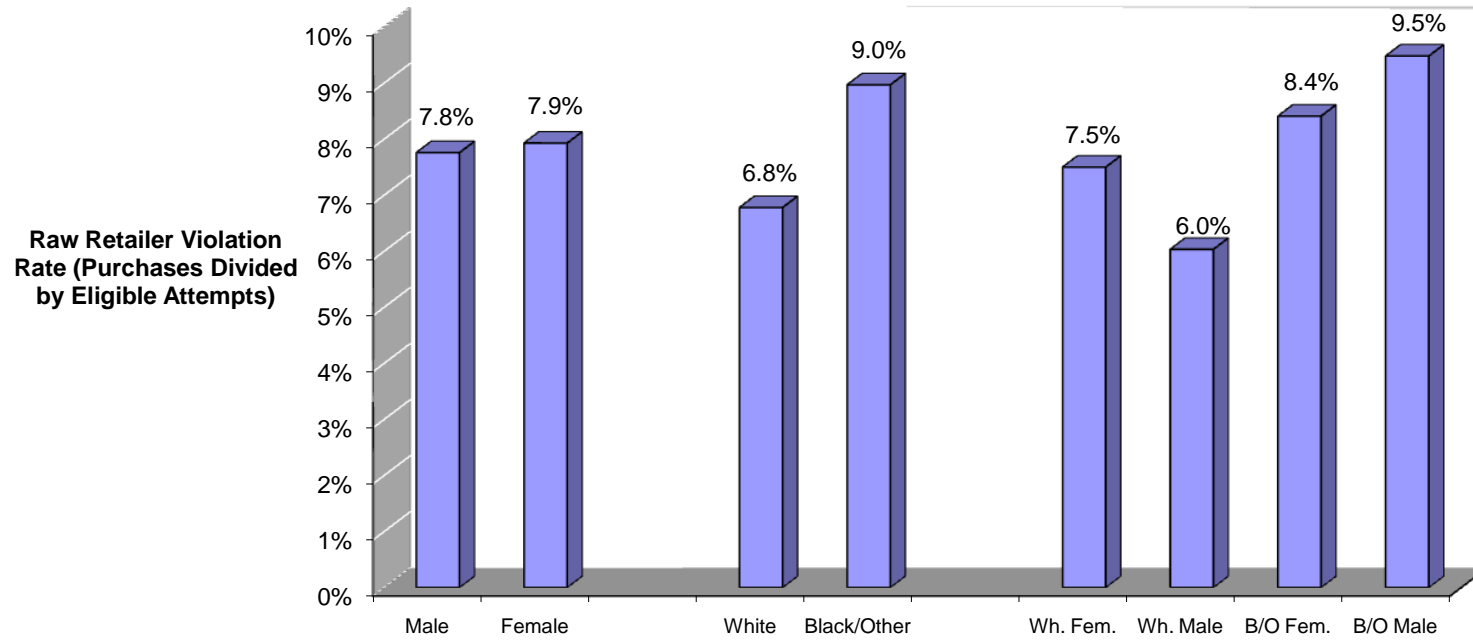
FFY 2011 Youth Access to Tobacco Raw Buy Rates

County Name	Total Eligible Purchase Attempts	No Buy	Buy	Buy Rate
ABBEVILLE	3	3	0	0.0%
AIKEN	14	13	1	7.1%
ALLENDALE	3	3	0	0.0%
ANDERSON	19	17	2	10.5%
BAMBERG	4	4	0	0.0%
BARNWELL	3	2	1	33.3%
BEAUFORT	11	9	2	18.2%
BERKELEY	10	10	0	0.0%
CALHOUN	1	1	0	0.0%
CHARLESTON	29	29	0	0.0%
CHEROKEE	8	8	0	0.0%
CHESTER	7	7	0	0.0%
CHESTERFIELD	4	4	0	0.0%
CLARENDON	7	6	1	14.3%
COLLETON	5	5	0	0.0%
DARLINGTON	10	9	1	10.0%
DILLON	1	1	0	0.0%
DORCHESTER	8	7	1	12.5%
EDGEFIELD	3	2	1	33.3%
FAIRFIELD	3	3	0	0.0%
FLORENCE	16	14	2	12.5%
GEORGETOWN	7	6	1	14.3%
GREENVILLE	33	30	3	9.1%
GREENWOOD	7	7	0	0.0%
HAMPTON	5	4	1	20.0%
HORRY	27	26	1	3.7%
JASPER	9	9	0	0.0%
KERSHAW	8	6	2	25.0%
LANCASTER	9	8	1	11.1%
LAURENS	10	9	1	10.0%
LEE	4	4	0	0.0%
LEXINGTON	25	25	0	0.0%
MARION	6	5	1	16.7%
MARLBORO	6	6	0	0.0%
MCCORMICK	1	0	1	100.0%
NEWBERRY	3	3	0	0.0%
OCONEE	8	8	0	0.0%
ORANGEBURG	13	10	3	23.1%
PICKENS	10	9	1	10.0%
RICHLAND	28	27	1	3.6%
SALUDA	2	2	0	0.0%
SPARTANBURG	28	25	3	10.7%
SUMTER	10	9	1	10.0%
UNION	3	3	0	0.0%
WILLIAMSBURG	6	5	1	16.7%
YORK	19	18	1	5.3%

Percent of Outlets Selling Cigarettes to Youth By Youth Age, FFY 2011



Percent of Outlets Selling Cigarettes to Youth By Youth Gender & Race, FFY 2011



SECTION VII: OTHER PREVENTION INTERVENTIONS

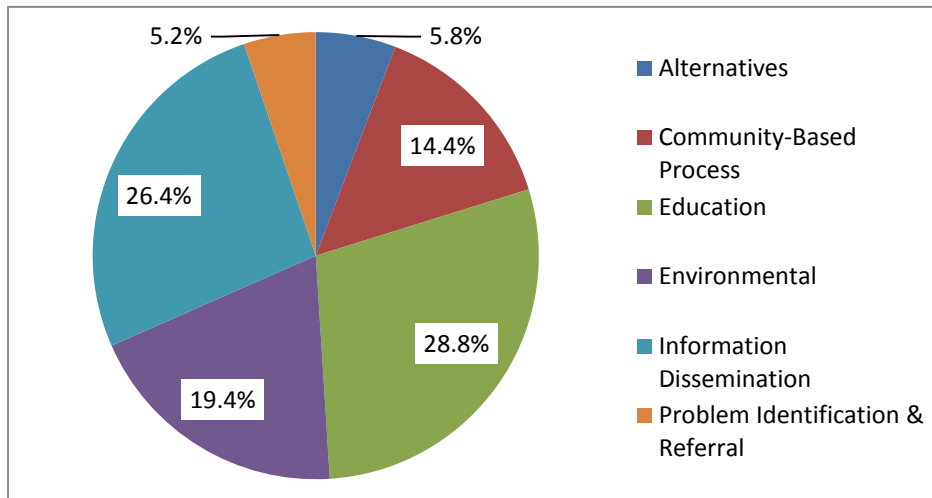
In the previous chapters, we have described the cumulative outcomes, to the extent possible, of youth curricula, environmental approaches, and the Youth Access to Tobacco Study. Prevention professionals deliver an even wider range of services than this list, however. Below are some of the other common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

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

These types of programs are offered 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 '10



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 19,600 service events by category. The largest categories, representing almost three-quarters of service events, are education (small group sessions with consistent participants such as curriculum programs), 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.

APPENDIX A: ADDITIONAL DATA TABLES

Table A1. Overall Results by Age

Risk Factor Scores, Range (Positive score is favorable)	Middle School (n=5,359)			High School (n=1,459)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	2.0	2.2	10.0**	1.9	2.1	11.7**
Decision-Making Skills, 0-3	1.9	2.0	4.1**	1.8	1.9	6.8**
Favorable Attitudes, 0-2	1.6	1.7	3.9**	1.3	1.4	7.6**
Perceived Peer Norms, 0-10	8.7	8.8	1.4**	7.4	7.7	3.9**
Perceived Parental Attitudes, 0-3	2.9	2.9	0.3	2.7	2.7	0

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Cigarettes	3.5	2.8	-18.8**	12.6	10.7	-15.0**
Other Tobacco	2.6	1.9	-27.1**	8.2	7.1	-13.9
Alcohol	6.8	4.6	-32.1**	19.1	14.5	-24.4**
Marijuana	1.7	1.4	-21.3*	10.2	8.1	-20.2**
Other Illegal Drugs	1.1	0.9	-19.3	2.9	2.3	-21.0
Inhalants	4.1	2.8	-31.4**	2.6	2.1	-20.9
Non-Medical Prescription Drug Use	1.9	1.3	-31.4**	4.0	3.1	-24.1
Non-Medical Over-The-Counter Drug Use	1.4	1.3	-8.0	2.6	2.4	-8.2

* 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=3,435)			Males (n=3,391)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	2.1	2.2	9.1**	1.9	2.1	11.6**
Decision-Making Skills, 0-3	1.9	2.0	4.3**	1.8	1.9	5.0**
Favorable Attitudes, 0-2	1.6	1.7	3.9**	1.5	1.6	5.5**
Perceived Peer Norms, 0-10	8.6	8.8	1.8**	8.2	8.4	2.0**
Perceived Parental Attitudes, 0-3	2.9	2.9	0.1	2.8	2.8	0.5

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Cigarettes	4.1	3.7	-10.4	6.8	5.4	-20.2**
Other Tobacco	1.8	1.4	-21.7	5.9	4.7	-20.6**
Alcohol	8.8	5.9	-33.0**	10.1	7.7	-24.1**
Marijuana	2.3	2.1	-8.0	4.9	3.5	-27.5**
Other Illegal Drugs	1.2	0.9	-26.7	1.8	1.5	-14.9
Inhalants	3.6	2.7	-25.7**	3.9	2.6	-32.3**
Non-Medical Prescription Drug Use	1.9	1.2	-35.3**	2.8	2.2	-23.0*
Non-Medical Over-The-Counter Drug Use	1.2	1.2	2.5	2.1	1.8	-14.8

* 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 A3. Overall Results by Race Group

Risk Factor Scores, Range (Positive score is favorable)	Black/African American participants (n=2,975)			White participants (n=2,924)			“Other” race participants (n=462)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	1.9	2.1	12.2**	2.1	2.2	8.9**	2.0	2.2	8.2**
Decision-Making Skills, 0-3	1.9	2.0	5.2**	1.8	1.9	4.4**	1.9	2.0	3.9**
Favorable Attitudes, 0-2	1.5	1.6	7.8**	1.7	1.7	1.4**	1.5	1.6	5.9**
Perceived Peer Norms, 0-10	8.2	8.4	2.8**	8.6	8.7	1.0**	8.3	8.6	2.8**
Perceived Parental Attitudes, 0-3	2.8	2.8	0.3	2.9	2.9	0	2.8	2.8	-0.2

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	4.9	3.8	-21.8**	6.0	5.3	-11.6	6.1	5.0	-18.2**
Other Tobacco	2.4	1.7	-26.7**	5.6	4.4	-21.0**	3.1	3.3	6.5
Alcohol	10.0	7.3	-27.1**	8.4	6.3	-24.4**	11.8	7.2	-39.0
Marijuana	4.1	3.0	-26.4**	3.1	2.6	-14.6	3.7	3.5	-5.9
Other Illegal Drugs	1.5	1.5	-2.0	1.6	0.9	-40.0**	2.2	1.7	-20.2
Inhalants	4.3	2.9	-33.1**	3.1	2.2	-30.3**	3.5	3.9	11.7
Non-Medical Prescription Drug Use	1.7	1.5	-9.5	2.9	1.9	-36.0**	3.1	1.5	-50.3
Non-Medical Over-The-Counter Drug Use	1.3	1.5	18.6	2.0	1.5	-23.0	2.0	2.2	8.5

* 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=292)			American Indian/Native American participants (n=89)			Asian participants (n=51)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	2.0	2.2	12.1**	2.0	2.1	4.4	2.1	2.3	11.3**
Decision-Making Skills, 0-3	1.8	1.9	6.0**	1.9	1.9	1.2	2.0	2.1	1.9
Favorable Attitudes, 0-2	1.6	1.7	7.1**	1.5	1.6	2.8	1.7	1.8	4.5
Perceived Peer Norms, 0-10	8.5	8.6	1.6*	8.3	8.5	2.7	9.2	9.2	0.4
Perceived Parental Attitudes, 0-3	2.9	2.9	1.3	2.7	2.8	3.4**	2.9	3.0	2.5

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	6.5	5.2	-20.9	5.7	2.3	-59.5	2.0	2.0	0
Other Tobacco	2.7	2.8	0.4	3.5	2.3	-34.1	2.0	0	-100
Alcohol	12.7	6.9	-45.7**	8.0	3.5	-56.6	3.9	2.0	-50.0
Marijuana	3.1	2.8	-10.7	3.5	0	-100	2.0	0	-100
Other Illegal Drugs	1.4	1.4	0	1.2	0	-100	0	0	N/A
Inhalants	5.8	3.1	-46.9	4.6	2.3	-50.0	3.9	2.0	-50.0
Non-Medical Prescription Drug Use	2.1	1.7	-16.1	6.8	1.2	-83.0	0	0	N/A
Non-Medical Over-The-Counter Drug Use	0.7	0.7	0	5.7	0	-100	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 A4. Overall Results by Ethnicity

Risk Factor Scores, Range (Positive score is favorable)	Participants of Hispanic, Latino, or Spanish Descent or Origin (n=427)			Participants Not of Hispanic, Latino, or Spanish Descent or Origin (n=6,246)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	2.0	2.1	8.8**	2.0	2.2	10.4**
Decision-Making Skills, 0-3	1.8	1.9	5.5**	1.9	1.9	4.6**
Favorable Attitudes, 0-2	1.5	1.6	5.7**	1.6	1.6	4.8**
Perceived Peer Norms, 0-10	8.1	8.4	2.8**	8.4	8.6	1.9**
Perceived Parental Attitudes, 0-3	2.8	2.8	0	2.8	2.8	0.3

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Cigarettes	6.8	6.1	-10.4	5.4	4.4	-18.8**
Other Tobacco	4.9	3.5	-28.3	3.7	2.9	-21.9**
Alcohol	12.3	9.0	-26.8**	9.3	6.6	-29.3**
Marijuana	5.0	5.4	9.9	3.5	2.6	-27.0**
Other Illegal Drugs	3.3	3.3	-0.3	1.4	1.1	-22.6
Inhalants	4.7	4.0	-15.3	3.8	2.6	-31.7**
Non-Medical Prescription Drug Use	3.8	2.6	-31.3	2.2	1.6	-28.8**
Non-Medical Over-The-Counter Drug Use	2.4	2.6	9.3	1.6	1.4	-13.3

* 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=6,920)			After School Recreation (n=57)			All Stars (n=1,155)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	2.2	2.2	11.1**	2.2	2.5	14.9*	2.0	2.1	6.3**
Decision-Making Skills, 0-3	1.9	1.9	4.2**	2.0	2.0	-1.7	1.8	1.8	1.5
Favorable Attitudes, 0-2	1.6	1.7	5.0**	1.8	1.8	-2.3	1.5	1.6	2.7**
Perceived Peer Norms, 0-10	8.7	8.7	1.9**	9.0	8.4	-6.2**	8.1	8.2	1.8**
Perceived Parental Attitudes, 0-3	2.8	2.9	0.4	2.9	2.9	-0.4	2.8	2.7	-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	5.5	4.6	-15.4**	7.2	0	-100	5.3	5.3	0.4
Other Tobacco	3.8	3.1	-19.6**	7.2	0	-100	3.9	3.3	-13.5
Alcohol	9.4	6.8	-27.5**	8.9	0	-100*	8.5	8.1	-5.3
Marijuana	3.6	2.9	-19.2**	5.3	0	-100	3.0	3.7	23.6
Other Illegal Drugs	1.5	1.2	-20.3*	5.3	0	-100	1.1	1.3	24.8
Inhalants	3.8	2.7	-29.5**	5.3	3.5	-33.3	3.0	2.9	-3.0
Non-Medical Prescription Drug Use	2.4	1.7	-28.3**	7.0	0	-100	1.8	1.9	9.7
Non-Medical Over-The-Counter Drug Use	1.6	1.5	-7.9	5.3	0	-100	1.5	1.6	4.7

* 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 A5. Overall Results by Program (continued)

Risk Factor Scores, Range (Positive score is favorable)	Class Action (n=103)			G.I.R.L. Power Series (n=73)			Keepin' It Real (n=585)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	1.9	2.1	12.6**	2.1	2.1	-0.7	1.9	2.1	13.7**
Decision-Making Skills, 0-3	1.7	1.8	5.1	1.8	1.9	6.6**	1.9	2.0	5.0**
Favorable Attitudes, 0-2	1.2	1.3	12.1**	1.6	1.6	3.8	1.6	1.6	1.6
Perceived Peer Norms, 0-10	6.9	7.1	3.1	8.4	8.3	-1.4	8.5	8.6	1.6**
Perceived Parental Attitudes, 0-3	2.8	2.7	-3.3	2.9	2.9	1.1	2.9	2.8	-0.7

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	5.9	7.8	32.1	1.4	4.1	200	5.8	5.7	-2.6
Other Tobacco	3.9	4.9	23.7	0	1.4	N/A	3.1	2.8	-10.7
Alcohol	21.6	15.5	-28.0*	8.2	6.9	-15.6	10.8	6.4	-41.1**
Marijuana	7.8	8.7	11.5	1.4	2.7	100	3.1	1.5	-50.0*
Other Illegal Drugs	1.0	2.9	197	2.8	2.7	-1.4	1.2	0.9	-28.3
Inhalants	2.0	1.9	-1.0	2.7	2.7	0	4.6	3.3	-29.4
Non-Medical Prescription Drug Use	3.9	1.0	-75.3	2.8	4.1	47.8	1.0	1.4	33.0
Non-Medical Over-The-Counter Drug Use	1.0	0	-100	1.4	2.7	94.3	1.5	0.7	-55.2

* 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)	Life Skills Training (n=553)			Project Alert (n=1,017)			Project Northland (n=1,183)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	2.0	2.3	10.8**	2.0	2.2	10.7**	2.1	2.4	16.7**
Decision-Making Skills, 0-3	1.9	2.1	6.7**	1.9	1.9	2.0	1.8	2.1	13.9**
Favorable Attitudes, 0-2	1.7	1.8	6.3**	1.6	1.6	2.9**	1.5	1.7	13.5**
Perceived Peer Norms, 0-10	8.7	8.9	1.8**	8.6	8.7	1.0*	8.3	8.8	5.7**
Perceived Parental Attitudes, 0-3	2.8	2.9	1.2	2.8	2.8	0.3	2.8	2.9	2.6**

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	7.1	4.2	-41.3**	5.3	5.5	3.6	6.6	3.7	-43.4**
Other Tobacco	4.0	2.4	-41.1	5.6	4.9	-12.9	3.9	2.5	-35.5**
Alcohol	8.0	3.8	-52.3**	8.5	6.7	-21.5**	12.0	5.7	-52.4**
Marijuana	3.7	1.6	-55.1**	3.9	3.0	-23.6	3.4	1.5	-55.6**
Other Illegal Drugs	1.6	1.5	-11.0	2.4	2.1	-12.9	1.3	0.3	-73.4**
Inhalants	3.5	2.9	-16.1	5.5	4.4	-20.4	4.3	1.7	-60.4**
Non-Medical Prescription Drug Use	1.7	2.9	76.4	3.7	2.4	-35.2	2.1	0.9	-54.9**
Non-Medical Over-The-Counter Drug Use	1.7	1.5	-11.5	3.1	2.6	-16.8	0.8	0.8	-1.3

* 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 TND (n=318)			Project TNT (n=340)			Responding in Peaceful and Positive Ways (n=318)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	1.9	2.0	7.5**	1.9	2.1	9.1**	1.9	2.1	8.7**
Decision-Making Skills, 0-3	1.8	1.9	3.7*	1.8	1.9	2.4	1.8	1.8	0.6
Favorable Attitudes, 0-2	1.4	1.4	3.9	1.5	1.5	-0.9	1.6	1.7	5.6**
Perceived Peer Norms, 0-10	7.8	7.8	-0.1	8.0	8.0	0.6	8.8	8.9	0.9
Perceived Parental Attitudes, 0-3	2.8	2.7	-0.9	2.8	2.8	-0.5	2.9	2.9	-1.4*

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	11.0	13.1	19.8	6.4	6.3	-1.1	3.1	0.9	-70.1*
Other Tobacco	6.5	6.7	4.0	6.6	5.1	-23.0	1.3	0.3	-75.4
Alcohol	15.9	17.6	10.8	13.6	11.1	-17.8	6.9	3.1	-54.6**
Marijuana	11.0	9.0	-18.9	5.7	8.1	41.5**	2.2	0.9	-57.3
Other Illegal Drugs	3.6	3.8	7.6	2.7	2.4	-11.1	0.3	0	-100
Inhalants	3.9	3.5	-9.5	3.6	2.1	-41.7	3.5	0.6	-81.8**
Non-Medical Prescription Drug Use	5.8	2.9	-50.7**	3.9	1.8	-53.8**	1.3	0	-100
Non-Medical Over-The-Counter Drug Use	2.6	3.2	24.4	3.0	3.9	30.0	1.6	1.3	-19.7

* 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 A5. Overall Results by Program (continued)

Risk Factor Scores, Range (Positive score is favorable)	Teen Institute (n=57)			Too Good For Drugs (n=898)			Wise Guys/Sports and the Law (n=127)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	1.9	2.2	12.8*	2.0	2.2	7.5**	1.9	2.1	8.5**
Decision-Making Skills, 0-3	1.9	2.1	9.1**	1.9	1.9	1.0	1.8	1.8	3.4
Favorable Attitudes, 0-2	1.5	1.6	3.6	1.8	1.8	1.3*	1.5	1.5	1.2
Perceived Peer Norms, 0-10	8.2	8.5	3.5*	9.2	9.2	0.7*	8.2	8.2	0.3
Perceived Parental Attitudes, 0-3	2.9	2.8	-4.0*	2.9	2.9	0.1	2.9	2.9	-0.1

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	1.8	1.8	0	0.9	0.3	-62.9*	1.6	0.8	-49.7
Other Tobacco	0	0	N/A	0.6	0.5	-19.6	1.6	0.8	-49.7
Alcohol	14.0	7.0	-50.0	2.6	3.1	21.4	8.7	5.6	-35.9
Marijuana	5.3	5.3	0	0.7	0.3	-50.7	0	2.4	N/A
Other Illegal Drugs	0	0	N/A	0.6	0.2	-60.7	0	0.8	N/A
Inhalants	3.5	1.8	-50.1	2.2	1.9	-15.2	0.8	2.4	199
Non-Medical Prescription Drug Use	0	0	N/A	1.0	0.9	-11.9	2.4	0.8	-66.8
Non-Medical Over-The-Counter Drug Use	0	1.8	N/A	0.3	0.6	64.7	0	1.6	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 A6. Overall Results for Evidence-Based Vs. Non-Evidence-Based Programs

Risk Factor Scores, Range (Positive score is favorable)	Non-Evidence-Based Programs (n=410)			Evidence-Based Programs (n=6,510)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	2.0	2.1	6.0**	2.0	2.2	10.4**
Decision-Making Skills, 0-3	1.8	1.9	2.8	1.9	1.9	4.7**
Favorable Attitudes, 0-2	1.5	1.5	1.0	1.6	1.6	4.7**
Perceived Peer Norms, 0-10	8.1	8.1	-0.2	8.4	8.6	2.0**
Perceived Parental Attitudes, 0-3	2.9	2.8	-0.7	2.8	2.8	0.3

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Cigarettes	4.9	3.7	-24.9	5.5	4.7	-14.9**
Other Tobacco	2.7	2.5	-8.9	3.9	3.1	-20.3**
Alcohol	11.6	7.9	-31.4*	9.3	6.8	-27.2**
Marijuana	3.0	3.5	17.3	3.6	2.8	-21.2**
Other Illegal Drugs	2.2	1.5	-33.5	1.5	1.2	-18.8
Inhalants	3.7	2.9	-20.3	3.8	2.7	-30.2**
Non-Medical Prescription Drug Use	3.9	2.2	-43.9	2.3	1.7	-26.4**
Non-Medical Over-The-Counter Drug Use	2.0	1.5	-25.8	1.6	1.5	-6.2

* 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 A7. Overall Results for Safe and Drug-Free School Programs vs. Block Grant-Funded Programs

Risk Factor Scores, Range (Positive score is favorable)	Drug-Free Schools Programs (n=3,543)			Block Grant Programs (n=3,377)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	2.0	2.2	10.6**	2.0	2.1	9.7**
Decision-Making Skills, 0-3	1.8	2.0	5.9**	1.9	1.9	3.2**
Favorable Attitudes, 0-2	1.6	1.7	6.1**	1.5	1.6	2.8**
Perceived Peer Norms, 0-10	8.5	8.7	2.6**	8.3	8.4	1.0**
Perceived Parental Attitudes, 0-3	2.8	2.9	0.6*	2.8	2.8	-0.2

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Cigarettes	5.5	3.7	-32.7**	5.4	5.6	2.8
Other Tobacco	3.5	2.3	-34.9**	4.2	3.9	-6.3
Alcohol	8.9	5.8	-34.7**	9.9	7.9	-20.9**
Marijuana	3.6	2.1	-40.7**	3.5	3.6	4.0
Other Illegal Drugs	1.5	0.9	-42.9**	1.5	1.6	3.3
Inhalants	3.3	1.9	-41.7**	4.3	3.5	-19.7*
Non-Medical Prescription Drug Use	2.6	1.5	-42.4**	2.2	1.9	-10.2
Non-Medical Over-The-Counter Drug Use	1.4	1.0	-27.1	1.9	2.0	7.4

* 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