

2007 Prevention Outcomes Annual Report



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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 2006-2007. A majority 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 6,266 participants with matched pre- and post-tests. A majority (81%) of participants were between the ages of 10 and 13. The race demographics were roughly 49% Black or African American, 42% White, and 6% “Other” race.
- The results showed statistically significant positive changes on all five risk factor measures: perceived risk, favorable attitudes, decision-making, perceived peer norms, and perceived parental attitudes ($p < .05$). These results are generally similar to FY '06.
- For substance use, there were statistically significant reductions in the number of users of alcohol (32.1%) and marijuana (34.2%) and cigarettes (23.7%). These results are generally similar to FY '06.
- Between 94% and 97% of participants that were non-users at pre-test remained non-users at post-test for each substance. Around 78% of marijuana users at pre-test, around 74% of alcohol users, and about 70% of cigarette users were using less by post-test.
- Of the programs with multiple implementations, Keep a Clear Mind, Life Skills Training, Project Alert, and Project Northland had some of the most consistently positive results.
- 92% of the matched program participants were served in an evidence-based program. On most measures, evidence-based programs had greater positive change results for participants than programs that were not evidence-based. The difference was most distinct for impact of past 30-day use as there were statistically significant reductions for alcohol, tobacco, and marijuana for evidence-based programs but no significant changes for non-evidence-based programs. The non-evidence-based programs generally had more desirable pre-test scores that may have lessened their likelihood of larger positive changes.

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

- County authority prevention staff returned forms on 1,349 alcohol compliance checks and 585 tobacco checks. Just more than 20% percent of alcohol purchase attempts were successful compared to 17.9% of tobacco attempts. Having posted signage about checking IDs or having age verification equipment were both statistically significantly associated with being less likely to sell ($p < .05$ and $< .001$, respectively). The average clerk fine for an alcohol sale was \$337.03, compared to \$206.06 for tobacco.
- 958 merchants were served in the Palmetto Retailer Education Program in FY '07.
- The FFY 2008 Youth Access to Tobacco Study (Synar) showed the highest retailer violation rates, 12.4%, for providing tobacco products to youth under 18 since 2001. The rate remains far lower than the 63.2% in 1994. If not for a required change to no longer use 14-year-old purchasers, the rate would have been lower.
- A total of 10,203 participants were registered for any type of recurring programs during the year. This would include adult program participants.
- Many **other prevention activities** are not well suited to generating valid outcomes and some interventions were implemented too infrequently to generate conclusions, though there were limited examples of both successes and shortcomings. 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 receives Safe and Drug-Free Schools and Communities (SDFSC) funds through the U.S. Department of Education that are distributed to community providers in a competitive process. A handful of these SDFSC grant recipients are not part of the county authority system, but their outcomes are included in this report where appropriate.

Beginning in FY '05, county alcohol and drug abuse 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 DAODAS Standard Survey after DAODAS prevention staff selected the SAMHSA core measures they wanted included. Local prevention staff administered the survey 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 was June 15, 2007. 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 '07, though we also present results, where appropriate, from FY '06 and FY '05 or from the three years' data combined.

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, valid 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, the Youth Access to Tobacco Study (YATS), and other interventions.

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

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

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

Section V will discuss findings from county alcohol and tobacco environmental strategies with a focus on compliance checks.

Section VI will cover results from the FFY '08 Youth Access To Tobacco Study (Synar).

Section VII will address the findings for other prevention interventions not included in the previous sections.

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 '07.

SECTION II: OVERALL PRE- AND POST-TEST FINDINGS

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

The Pre-Post Test Outcome Evaluation Instrument

The DAODAS Standard Survey is comprised of SAMHSA core measures. 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 alcohol, marijuana, and cigarettes.** County authorities were allowed to add additional core measures if there were additional foci of their programs they wished to assess, but none chose to do so. The DAODAS Standard Survey is included in Appendix B. The survey has stayed consistent since FY '05, but there will be adaptations made for FY '08 due to changes in federally mandated reporting requirements, known as the National Outcome Measures (NOMs).

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, 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

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.

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.

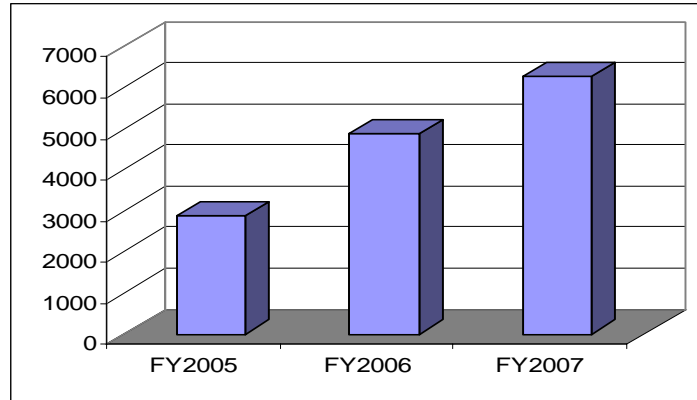
If a participant did not have matched, valid pre- and post-tests, then neither test was included in the database that we analyzed.

The final database had 6,266 matched participants, a large increase over the 4,886 matched participants from FY '06, which had in turn increased greatly from the 2,869 matched participants in FY '05. An unmatched database provided by KIT Prevention staff showed a total of 6,359 post-tests, meaning a favorable match rate of 98.5%. It is very likely that the actual match rate is lower than this figure because some local staff may not have entered pre-tests until after they had already collected the post-tests. If they checked for matches before entering all of the pre-tests, they might not have entered unmatched pre-tests or post-tests because they knew those tests would not be included in the final analyses. This is further supported by the fact that DAODAS' prevention reporting system had 10,203 registered participants for FY '07. This would include all ages in all types of recurring services, but 91.6% of these individuals were youth. However, elementary school programs and some other allowed exceptions did not use the DAODAS Standard Survey.

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.

Chart 1. Matched Participants in Pre-Post Database, FY '05-'07



Age. A majority (81%) of participants were between the ages of 10 and 13, with an average age of 12.2 (FY '05 average was 12.4). This means that middle school students make up a sizable portion of the total population. Table 1 shows the complete breakdown. Compared to FY '06, there were more 10 and 11 year olds and fewer participants between the ages of 12 and 15. The only program delivered to a majority older audience was Project TNT, which is intended for a middle school population.

Table 1. Age Distribution of County Authority Program Participants

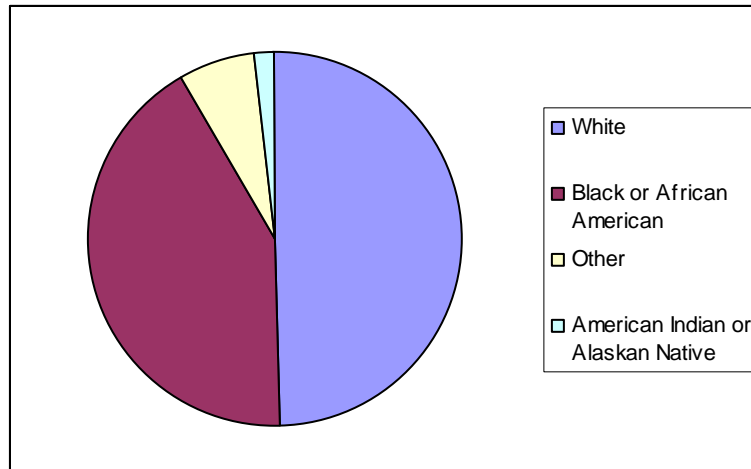
| Age | % of Participants | |
|-----|-------------------|--------|
| | FY '07 | FY '06 |
| 10 | 19.1 | 13.7 |
| 11 | 24.4 | 17.0 |
| 12 | 21.6 | 24.9 |
| 13 | 15.8 | 20.8 |
| 14 | 9.1 | 12.5 |
| 15 | 4.7 | 6.0 |
| 16 | 3.3 | 3.4 |
| 17 | 1.5 | 1.3 |
| 18 | 0.3 | 0.3 |
| 19 | 0.1 | 0.1 |

Gender. Males made up a slim majority of the matched participant population (50.8%). The only programs with an atypical gender breakdown were G.I.R.L. Power and Girls Grapevine, for obvious reasons.

Race/Ethnicity. Just less than 50% of the matched participants were Black or African American, 42.4% were White, 5.8% were of “Other” race, and 1.8% were American Indian or Alaskan Native. There were small numbers of participants (less than 0.5%) that were Asian, Native Hawaiian, or Other Pacific Islander. Only 5.3% of matched participants were of Hispanic, Latino, or Spanish origin or descent. In FY '06, just over 55% of the matched participants were Black or African American and only 35.0% were White. Some programs had atypical demographic breakdowns, such as ELW Tutoring

(86.4% Black or African American), Life Skills Training (69.4% White), Responding in Peaceful and Positive Ways (91.9% Black or African American), and RISE (93.6% Black or African American).

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 all five measures. The measure with the smallest percent change, perceived parental attitudes, also had the highest relative pre-test score and may have been limited by a “ceiling effect” because the high pre-test score left relatively little room for improvement. These results are generally similar to FY '06.

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 '07 and '06**

| Risk-Factor Measure | N | Possible Range of Scores | Pre-Test Average | Post-Test Average | FY '07 % Change | FY '06% Change |
|------------------------------|-------|--------------------------|------------------|-------------------|-----------------|----------------|
| Perceived Risk | 6,620 | 0-3 | 2.13 | 2.37 | 11.3** | 11.2** |
| Favorable Attitudes | 6,253 | 0-3 | 2.61 | 2.68 | 2.5** | 3.5** |
| Decision-Making | 6,256 | 0-3 | 1.84 | 1.90 | 3.1** | 3.2** |
| Perceived Peer Norms | 6,256 | 0-10 | 8.31 | 8.57 | 3.1** | 4.5** |
| Perceived Parental Attitudes | 6,237 | 0-3 | 2.79 | 2.82 | 1.1** | 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 all risk-factor measures. The older participants had greater positive change on all risk factor measures, which is likely related to the fact that younger students had higher pre-test scores and, therefore, less room to improve.

Gender. Table A2 shows data results separated by gender. Results for all five risk-factor measures show statistically significant positive change for males and females. It is worth noting that females had consistently better pre-test risk-factor scores than males, which may be a primary reason that males had more desirable change scores on four of the five measures.

Race/Ethnicity. Table A3 shows data results separated by race (for those race groups with 40 or more participants), and Table A4 shows the results by ethnicity. Black or African American participants and “Other” race participants had positive, statistically significant change on each of the five risk-factor measures, as opposed to four for White participants and American Indian and Alaska Native participants. White participants had generally higher pre-test risk factor scores than other groups, but had consistently lower change scores, which is likely related.

Participants of Hispanic, Latino, or Spanish descent or origin had statistically significant positive change for perceived risk, decision-making, and perceived peer norms. They had consistently lower pre-test risk factor scores than participants not of that ethnicity. Pre- to post-test results indicate no consistent trends that distinguish the groups by ethnicity.

Substance Use Measures

The DAODAS Standard Survey asked participants to indicate the extent of their alcohol, marijuana, and cigarette 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. The overall results are shown in Table 3, along with the corresponding changes in substance use for FY ‘06.

Table 3. Overall Results, Substance Use Rates: County Authorities, FY ‘07 and ‘06

| Risk-Factor Measure | N | Pre-Test Average | Post-Test Average | FY ‘07 % Change | FY ‘06% Change |
|-----------------------|-------|------------------|-------------------|-----------------|----------------|
| 30-Day Alcohol Use^ | 6,196 | 15.6% | 10.6% | -32.1** | -31.1** |
| 30-Day Marijuana Use^ | 6,188 | 7.9% | 5.2% | -34.2** | -31.6** |
| 30-Day Cigarette Use^ | 6,184 | 9.3% | 7.1% | -23.7** | -23.5** |

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

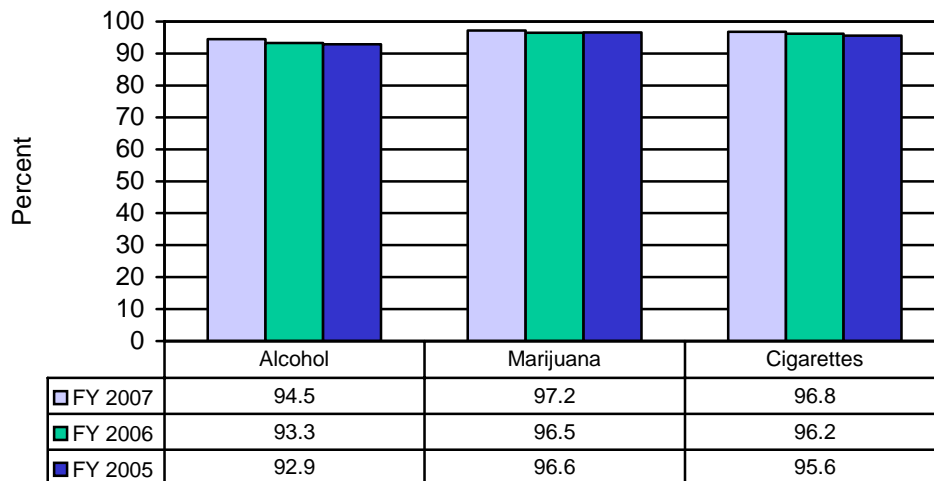
** Pre- and post-test averages are statistically significantly different (significant at p<.05 level)

^ Negative changes are desired for these items

There were desired statistically significant declines in the number of users for alcohol, marijuana, and cigarettes from pre- to post-test. All declines were very similar to FY '06. Alcohol was the most widely used substance at pre- and post-test, while marijuana was the least used.

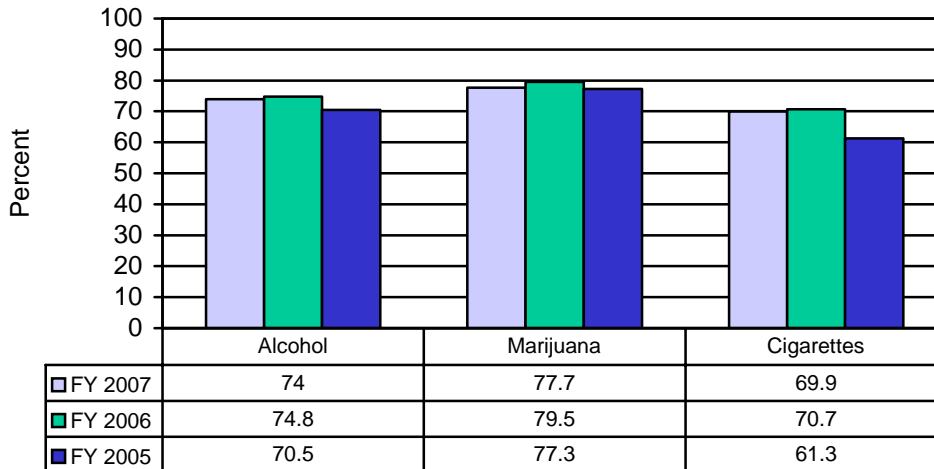
Maintenance/Reductions. Responses regarding 30-day use were analyzed to determine (1) the percentage of participants who were not using a substance at pre-test that were still not using at post-test and (2) the percentage of participants who were using a substance at pre-test that were using less (or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

**Chart 3. Percent of Pre-Test Non-Users Who Remained Non-Users:
FY 2007, 2006, 2005**



Charts 1 and 2 indicate similar effects for both years on all three substances. More than 94% of pre-test alcohol non-users, 97% of pre-test marijuana non-users, and 96% of cigarette pre-test non-users remained non-users by post-test in FY '06. These numbers are all improvements over the FY '06 and 05 results. About 77% of marijuana users at pre-test, 74% of alcohol users, and 70% of cigarette users were using less by post-test for FY '07. These results were all less desirable than the FY '06 numbers but more favorable than the FY '05 numbers.

**Chart 4. Percent of Pre-Test Users Who Reduced Their Level of Use:
FY 2007, 2006, and 2005**



Demographic Differences in Substance Use. Tables A1 through A4 in Appendix A also display risk-factor measure and 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. Reductions in the number of users of each substance occurred in each age range and were statistically significant for all three substances in both groups. Older participants had higher percentages of users for each substance at pre-test but still had smaller reductions than middle school students.

Gender. Table A2 shows data results separated by gender. Declines in the number of users were statistically significant for both genders for all three substances. Males were more likely to be users at pre-test for all three substances.

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. Declines in the percentages of users across all three substances were entirely in the desired direction for all race groups. The declines were all statistically significant for the three largest race groups (Black or African American, White, and “Other”). American Indian or Alaska Native participants had the highest pre-test percentages of users while White participants were least likely to be users at pre-test.

Participants of Hispanic, Latino, or Spanish ethnicity had a significant reduction in the number of alcohol and marijuana users. Participants of Hispanic, Latino, or Spanish descent or origin had higher pre-test use rates for all three substances as compared to those not of that ethnicity.

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 three 30-day use questions for alcohol, marijuana, and cigarettes. There were 6,266 matched participants. A majority of participants were between the ages of 10 and 13. Gender percentages were essentially equal, and the race breakdowns were roughly 50% Black or African American, 42% White, and 6% "Other" race. Only 5.3% of participants were of Hispanic, Latino, or Spanish descent or origin.

The results showed statistically significant positive changes ($p < .05$) on all five risk factor measures: perceived risk (11.3%), favorable attitudes (2.5%), decision-making (3.1%), perceived peer norms (3.1%), and perceived parental attitudes (1.1%). For substance use, there were statistically significant reductions in the number of users of alcohol (32.1%), marijuana (34.2%), and cigarette (23.7%) users. All results were very similar to FY '06.

Between 94% and 97% of participants that were non-users at pre-test remained non-users at post-test for each substance. Around 77% of marijuana users at pre-test, around 74% of alcohol users, and about 70% of cigarette users were using less by post-test.

Demographic analyses reveal that age was an important factor in results. Older participants had lower pre-test risk-factor scores and more pre-test substance users. However, these older participants had better outcomes than the younger participants on all risk-factor items, which may be related to their lower pre-test scores (more room for improvement than younger participants had). This did not hold true for substance use as middle school students had the larger reductions despite having lower percentages of pre-test use.

Females had higher pre-test risk-factor scores and a smaller percentage 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 race groups with minimal differences in results by race for risk factor measures. Participants of Hispanic, Latino, or Spanish origin or descent had significant positive change on all risk factor measures as well as significant reductions in the number of alcohol and marijuana users.

SECTION III: PROGRAM OUTCOMES

Across the county authority sites, 30 different programs were implemented. 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 below in Table 4 and described below.

Table 4. Summary of Statistically Significant Program Effects

| Program | # of Sites | Measures with Significant Change |
|-----------------------------|-------------------|--|
| All Interventions | 67 | Perceived Risk Favorable Attitudes Decision-Making Perceived Peer Norms Perceived Parental Attitudes 30-Day Alcohol Use 30-Day Marijuana Use 30-Day Cigarette Use |
| All Stars | 13 | Perceived Risk Decision-Making Perceived Peer Norms 30-Day Alcohol Use |
| E.L. Wright Tutoring | 1 | Perceived Risk |
| Girls Grapevine | 1 | none |
| G.I.R.L. Power | 1 | none |
| Keep a Clear Mind | 3 | Perceived Risk Favorable Attitudes Decision-Making Perceived Peer Norms Perceived Parental Attitudes |
| Keepin' It Real | 2 | Perceived Risk Decision-Making Perceived Peer Norms 30-day Alcohol Use 30-day Marijuana Use 30-day Cigarette Use |
| Life Skills Training | 7 | Perceived Risk Favorable Attitudes Perceived Peer Norms Perceived Parental Attitudes 30-Day Alcohol Use 30-Day Marijuana Use |

| | | |
|--|----------|--|
| Project Alert | 9 | Perceived Risk Favorable Attitudes Decision-Making Perceived Peer Norms Perceived Parental Attitudes 30-Day Alcohol Use 30-Day Marijuana Use 30-Day Cigarette Use |
| Project Northland | 4 | Perceived Risk Favorable Attitudes Decision-Making Perceived Peer Norms Perceived Parental Attitudes 30-Day Alcohol Use 30-Day Marijuana Use 30-Day Cigarette Use |
| Project Northland, Life Skills Training, Project Towards No Tobacco Use | 1 | none |
| Project Toward No Drug Abuse (TND) | 6 | Perceived Risk <i>Decision-Making</i> <i>Perceived Parental Attitudes</i> 30-Day Alcohol Use 30-Day Marijuana Use 30-Day Cigarette Use |
| Project Toward No Tobacco Use (TNT) | 3 | Perceived Risk <i>Favorable Attitudes</i> <i>Perceived Peer Norms</i> 30-Day Marijuana Use |
| Responding in Peaceful and Positive Ways | 1 | Perceived Risk <i>Decision-Making</i> Perceived Peer Norms 30-Day Alcohol Use |
| RISE | 1 | Perceived Risk Favorable Attitudes Decision-Making Perceived Peer Norms Perceived Parental Attitudes 30-Day Alcohol Use |
| Second Step | 2 | Perceived Peer Norms |

Italics indicate undesired change.

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

All Stars, a comprehensive evidence-based ATOD prevention curriculum, had two positive risk-factor changes (perceived risk and perceived peer norms) and a significant reduction in the percentages of users for alcohol. There was also an undesired significant change in decision-making. It was the most commonly implemented program with 12 sites and 1,358 matched participants.

E.L. Wright Tutoring is a middle school tutoring program from one area. It had a statistically significant improvement in perceived risk.

Girls Grapevine is a single-county program developed to help sixth grade girls address their transition into middle school. There were no statistically significant improvements, perhaps due in part to very high pre-test scores.

G.I.R.L. Power 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. There were no statistically significant changes from pre- to post-test.

Keep A Clear Mind is an evidence-based program for late elementary school students that primarily involves a series of homework booklets for students. There were significant improvements for all five risk factors for the three implementation sites.

Keepin' It Real, an evidence-based, video-enhanced intervention for youth 10 to 17 that uses a culturally-grounded resiliency model which 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 and decision-making along with a near-significant improvement in perceived peer norms. It showed a significant reduction in the number of marijuana users and a near-significant reduction in the number of alcohol and cigarette users.

Life Skills Training, a skill-based, evidence-based ATOD prevention curriculum, was used by seven sites for a total of 1,126 matched students. It demonstrated significant positive change for perceived risk and perceived peer norms with a near-significant improvement for favorable attitudes and perceived parental attitudes. There were also significant reductions in the number of alcohol and marijuana users.

Project Alert, a comprehensive evidence-based ATOD prevention curriculum, had positive significant effects for all risk factor and 30-day use measures across the nine county authority intervention sites totaling 515 matched participants.

Project Northland, an evidence-based ATOD prevention curriculum with a strong focus on alcohol and influencing the environment, was used by four sites but with a large total of 1,389 matched participants, making it the most represented program in our database. The overall results show significant effects on every risk factor and 30-day use measure.

Project Northland, Life Skills Training, and Project Towards No Tobacco Use (TNT) were all implemented for a group of students in one county. There were no significant changes.

Project Towards No Drug Abuse (TND), an evidence-based general ATOD prevention curriculum for high school youth, was used by six county authority sites and had overall significant reductions in the number of alcohol, marijuana, and cigarette users. There was a near-significant improvement in perceived risk but near-significant undesired changes in decision-making and perceived parental attitudes.

Project Towards No Tobacco Use (TNT), a comprehensive, evidence-based tobacco prevention program for middle school youth, had significant positive change for perceived risk and 30-day marijuana use. There were near-significant undesired changes in favorable attitudes and perceived peer norms.

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 30-day alcohol use. There was a near-significant improvement in perceived peer norms but a near-significant undesired change in decision-making.

RISE, Responsibility Increases Student Excellence, targets the areas of substance abuse, anti-violence, character education, and life skills. It is used in one county only and had statistically significant positive changes for all five risk factor measures in addition to a near-significant improvement for 30-day alcohol use.

Second Step, a universal evidence-based social skills program for middle school youth, was used by one site and had a positive significant change for perceived peer norms.

Evidence-Based vs. Non-Evidence-Based Programs

County authorities are not required to use evidence-based interventions exclusively (though 92% of the matched participants were served in evidence-based programs), which allows for a comparison of outcomes between evidence-based programs and non-evidence-based interventions. These results are displayed in Table A6 in Appendix A.

Every measure had statistically significant change for evidence-based programs, while non-evidence-based programs had significant change for four risk factors (perceived risk, favorable attitudes, decision-making, and perceived peer norms) and no 30-day use measures. Evidence-based programs had a higher percentage of positive change for three risk factors (perceived risk, favorable attitudes, and perceived peer norms) and each substance use measure. These substance use results contrast to the FY '06 results where non-evidence-based programs had greater reductions in substance use for marijuana and cigarettes. It should be noted that non-evidence-based interventions had consistently but slightly higher pre-test risk-factor scores and lower pre-test substance use rates in FY '07 and '06.

Additional Information

In a review of year-end reports, a majority of county programs seemed to have reached or exceeded their targeted number of participants. Many counties delivered a program to more than 100 participants during the year. Counties not reaching these process

objectives typically cited staff turnover or change in key contact personnel in their schools.

Summary of Section III

There were 67 county authority program implementations in FY '07. Of the programs with multiple implementations, Keep a Clear Mind, Life Skills Training, Project Alert, and Project Northland had some of the most consistently positive results.

The large majority (92%) of participants with matched pre- and post-tests were served in evidence-based programs. Evidence-based programs had a higher percentage of positive change for three risk factors (perceived risk, favorable attitudes, and perceived peer norms) and each substance use measure.

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 subrecipient 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 subrecipient 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. Until the attendance data is better entered, there cannot be analyses of attendance’s impact on outcomes. 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, and, in many cases, this may be avoided in the future through close monitoring of these issues.

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 at least once during the last 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). Both STEP and ASIP center around year-end monetary incentives to local providers based on the amount of environmental strategies implemented. Under STEP, counties could receive points for tobacco compliance checks, serving youth who had been charged with tobacco possession with an approved program, and getting a multi-jurisdictional law enforcement agreement around tobacco enforcement signed. Under ASIP, counties earned points for alcohol compliance checks, serving youth who had been charged with an alcohol offense in a diversionary program, getting a multi-jurisdictional law enforcement agreement around underage alcohol enforcement signed, public safety checkpoints, other law enforcement operations, and underage-drinking-focused community activities. In this section, we document the amount of environmental strategy activity generated with a primary emphasis on the outcomes generated from the most common strategy, compliance checks.

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 compliance checks. This form was to be used for both alcohol and tobacco compliance checks. The form records 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 or age.

In FY '07, there were 1,349 alcohol and 585 tobacco compliance check forms returned. This is a major increase from the FY '06 totals of 613 and 83, respectively. There were 23 counties that returned alcohol compliance check forms, and the same number returned forms for tobacco, though the two sets of counties were not identical.

The tobacco merchants sold cigarettes 105 times or 17.9%. Alcohol was sold 274 times or 20.3%. The FY '06 tobacco and alcohol sales rates were 16.9% and 22.0%, respectively.

Not all counties used the compliance check form at the time of the operation. They entered what information they did have after the fact, so some of the data presented below reflect all the known data for a given component but may not accurately document all the compliance checks.

Most of the alcohol compliance checks were done at convenience stores (72.2%). The next most common type of location was grocery stores (10.2%), then bars and restaurants (9.6%), followed by liquor stores (6.2%). In almost all cases, the youth attempted to buy beer (88.9%), though almost 6% attempted to buy liquor (primarily at liquor stores). The most common age for the youth volunteers was 19 (30.9%). There were almost equal percentages of 17-, 18- and 20-year-old buyers (16.4-22.2%). About 13% of buyers were under age 17. Most buyers were males (61.5%) and White (81.6%).

For tobacco compliance checks, similar percentages of checks were conducted in convenience stores and grocery stores, with drug stores being the other common location (8.7%). Buyers almost always attempt to buy cigarettes (94.3%) with smokeless tobacco being the other product targeted. About 80% of buyers were 16 or 17, followed by 15 year olds (12.9%). Most buyers were male (62.7%) and White (73.2%). Another 26.7% of buyers were Black or African American.

Table 5. Compliance Check Merchant Practices

| Compliance Check Feature | % (Alcohol) | % (Tobacco) |
|--|--------------------|--------------------|
| Sales Completed | 20.3 | 17.9 |
| Merchant Asked Buyers Age | 24.9 | 24.5 |
| Merchant Asked to See ID | 86.8 | 86.5 |
| Merchant Studied ID | 69.0 | 62.2 |
| Completed Sales When Merchant Studied ID | 9.8 | 9.3 |
| Visible ID-Checking Signage in Store | 71.5 | 86.7 |
| Age-Verification Equipment Used | 30.2 | 39.7 |

Table 5 above 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 62-69% of the time. Even when the ID was studied, the sale was completed about 10% of the time. More than 70% of stores had posted signage stating that they check IDs, but less than 40% had age-verification equipment.

Most locations had signage indicating they check IDs. The presence of signage promoting ID-checking had a statistically significant impact for completed sales for both alcohol ($p < .001$) and tobacco ($p < .05$). Only 16.3% of stores with signage sold alcohol

compared to 34.0% of stores without signage (14.1% vs. 24.2% for tobacco). About one-third of outlets had age verification equipment. This was also statistically significant for alcohol and tobacco ($p < .001$) as only 5.7% of stores with equipment sold alcohol compared to 27.7% of stores without equipment (4.8% vs. 22.2% for tobacco). The sale rate for beer (19.2%) was lower than liquor (25.0%).

Table 6. 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 | 963 | 17.5 | 422 | 19.7 |
| Bar | 64 | 34.7 | -- | -- |
| Restaurant | 53 | 24.5 | -- | -- |
| Liquor Store | 83 | 25.3 | -- | -- |
| Small Grocery | 19 | 36.8 | 8 | 0 |
| Large Grocery | 117 | 27.4 | 67 | 14.9 |
| Drug Store | 17 | 0 | 50 | 14.0 |

Table 6 above shows that convenience stores and drug stores had a lower sales rate than other types of businesses for alcohol, but convenience stores had a higher sales rate for tobacco compared to drug stores or large grocery stores. Bars and small grocery stores had the highest sales rates for alcohol.

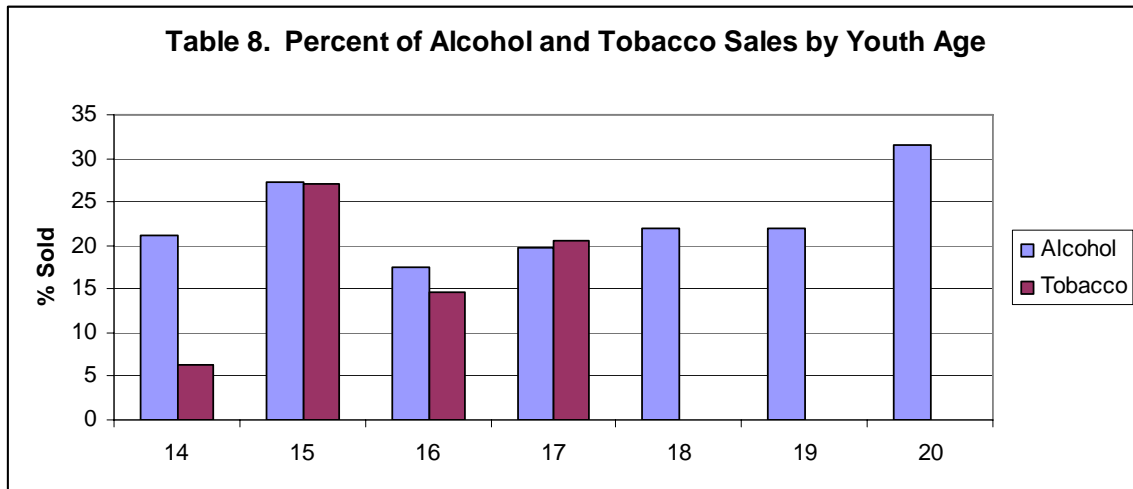
Table 7 below displays the percentages of sales completed based on multiple demographic characteristics of the clerks and buyers. Male clerks sold more often than female clerks, though the difference was not significant. White clerks had the highest sales rate for alcohol, while “Other” race clerks had the highest sales rates for tobacco. The impact of race on sales was statistically significant for tobacco ($p < .05$) but not for alcohol. Neither buyer gender nor buyer race was a significant factor. There were no significant differences based on whether the clerk and buyer were the same gender or race.

Table 8 shows that there is an increasing likelihood that a youth can purchase alcohol as between the ages of 16 and 20. There was a high percentage of sales to 15 year olds, though there were only 11 alcohol compliance checks with youth that age. Tobacco sales were most likely when the buyer was 15 or 17; there is no known reason for the lower sales rate among 16 year olds.

The average clerk fine for an alcohol sale was \$337.03, and the average tobacco sale fine was \$206.06.

Table 7. Percentage of Retailer Sales by Demographic Characteristics

| Compliance Check Characteristic | % Sales Completed (Alcohol) | % Sales Completed (Tobacco) |
|--|------------------------------------|------------------------------------|
| Clerk: Male | 25.2 | 23.3 |
| Clerk: Female | 22.2 | 17.9 |
| Clerk: Black or African American | 23.3 | 15.7 |
| Clerk: White | 25.6 | 21.0 |
| Clerk: Hispanic | 16.7 | 3.6 |
| Clerk: Other | 17.3 | 29.5 |
| Buyer: Male | 22.8 | 17.0 |
| Buyer: Female | 22.4 | 18.0 |
| Buyer: Black or African American | 22.5 | 21.2 |
| Buyer: White | 22.4 | 16.7 |
| Clerk and Buyer: Same Gender | 25.1 | 20.5 |
| Clerk and Buyer: Different Gender | 21.7 | 18.8 |
| Clerk and Buyer: Same Race | 24.6 | 20.0 |
| Clerk and Buyer: Different Race | 22.0 | 17.8 |



In a review of year-end objective reports, just more than one-third of county agencies had management plans to implement alcohol compliance checks. As expected, there were far fewer plans that dealt only with building relationships in order to do future operations. There were almost equal numbers of reports that exceeded the number of checks expected and fell below. Similarly, there were mixed results in terms of whether the buy rate they generated was above or below expectations.

The issues regarding tobacco compliance checks were largely the same as the issues for alcohol compliance checks. A majority of counties reported completing fewer tobacco compliance checks than anticipated for a number of reasons including a law enforcement focus on alcohol and reallocated law enforcement agency resources. Few counties were

able to link tobacco enforcement to a desired change in buy rates but more so than the prior year.

Multi-Jurisdictional Law Enforcement Agreements

Through both ASIP and STEP, counties were able to earn points for providing a copy of multi-jurisdictional 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 '07, nine counties turned in alcohol and tobacco agreements.

Public Safety Checkpoints

Public safety checkpoints, often called sobriety checkpoints, were implemented in eight counties, according to ASIP forms returned. A total of 153 were implemented, though 125 of those came from one county.

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 '07 and collectively served 958 retail staff between June 1, 2006 and May 30, 2007.

There was work done during FY '07 to standardize PREP evaluation and move toward a pass/fail test. This led to a number of different versions and approaches being used this year, and the state did not request these data to be turned in. Therefore, there was no cross-site evaluation. In a general review of county authorities' year-end reports on their merchant education outcome objectives, it was found that most counties wrote outcome objectives regarding a percentage of merchant education participants they hoped would agree or strongly agree (or an increase in the number who would agree) with a variety of statements, such as:

- It is my responsibility to make sure minors do not have access to tobacco or alcohol products at my store.
- It is good for business to have responsible sales practices for alcohol and tobacco products.
- It is important not to sell alcohol or tobacco products to minors.

Typically, the expected agreement rates varied from 50% to 90%, a slightly larger range than in FY'07. Generally, prevention staff met or exceeded these outcomes with agreement rates typically from 60% to 100%. This would indicate that merchant education programs are generally producing merchants who report the desired attitudes. Counties varied in whether they reached the number of merchants they had targeted.

Diversions or Court-mandated Youth Programs

County authorities often play a role in the post-arrest process for youth violators of alcohol or tobacco laws. Related to alcohol, county providers often offer programming as part of their solicitor's Alcohol Education Program (AEP), a program many first-time offenders will be offered in lieu of a conviction. For tobacco, many county authorities offer Alternatives to Suspension, Not On Tobacco, or another DHEC-approved program that a magistrate can send a youth to instead of having them pay a fine when they are guilty. Five counties reported serving a total of 149 youth arrested for an alcohol violation; 110 of those came from one county. Eleven counties offered a tobacco program for offenders, and they served a total of 127 youth.

In year-end reports and in other forums, many counties described that there were lower than expected counts for tobacco offender programs due to low enforcement. There were no consistent evaluation methods used to estimate any degree of effectiveness across sites.

Summary of Section V

The most common environmental strategies implemented were alcohol compliance checks, tobacco compliance checks, and merchant education. County authority prevention staff returned forms on 1,349 alcohol compliance checks and 585 tobacco checks. Just more than 20% of alcohol purchase attempts were successful compared to 17.9% of tobacco attempts. These compliance checks most frequently were done at convenience stores and attempting to purchase either beer or cigarettes.

Most merchants asked to see the buyers' IDs, though almost 10% 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 ($p < .001$). White clerks sold alcohol at a higher rate than other races, but "Other" race clerks had the highest sales rates for tobacco. The average clerk fine for an alcohol sale was \$337.03, compared to \$206.06 for tobacco.

Other environmental strategies were implemented, though with less frequency and less formal data collection. Counties were able to get a total of nine multi-jurisdictional alcohol enforcement agreements signed and another nine for tobacco. In most cases, these were joint documents. A total of 153 public safety checkpoints were reported, with the vast majority coming from one county. The counties served 958 merchants in the

Palmetto Retailers Education Program (PREP) in FY '07. A total of five counties served 149 youth who were arrested for an underage alcohol violation, and 11 counties served 127 youth arrested for underage tobacco violations.

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 2007 study (FFY 2008), South Carolina moved to a simple random sampling methodology rather than a census design (visiting every store). During a 2-month period between Jan. 1 and Feb. 28, 2007, 276 youth volunteers ages 15-17, under trained adult supervision, conducted 501 random, unannounced cigarette purchase attempts in all 46 counties.

The FFY '08 results indicated an estimated overall sales rate (also known as a Retailer Violation Rate or RVR) of 12.4%*. 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, perhaps as low as 10-11%.

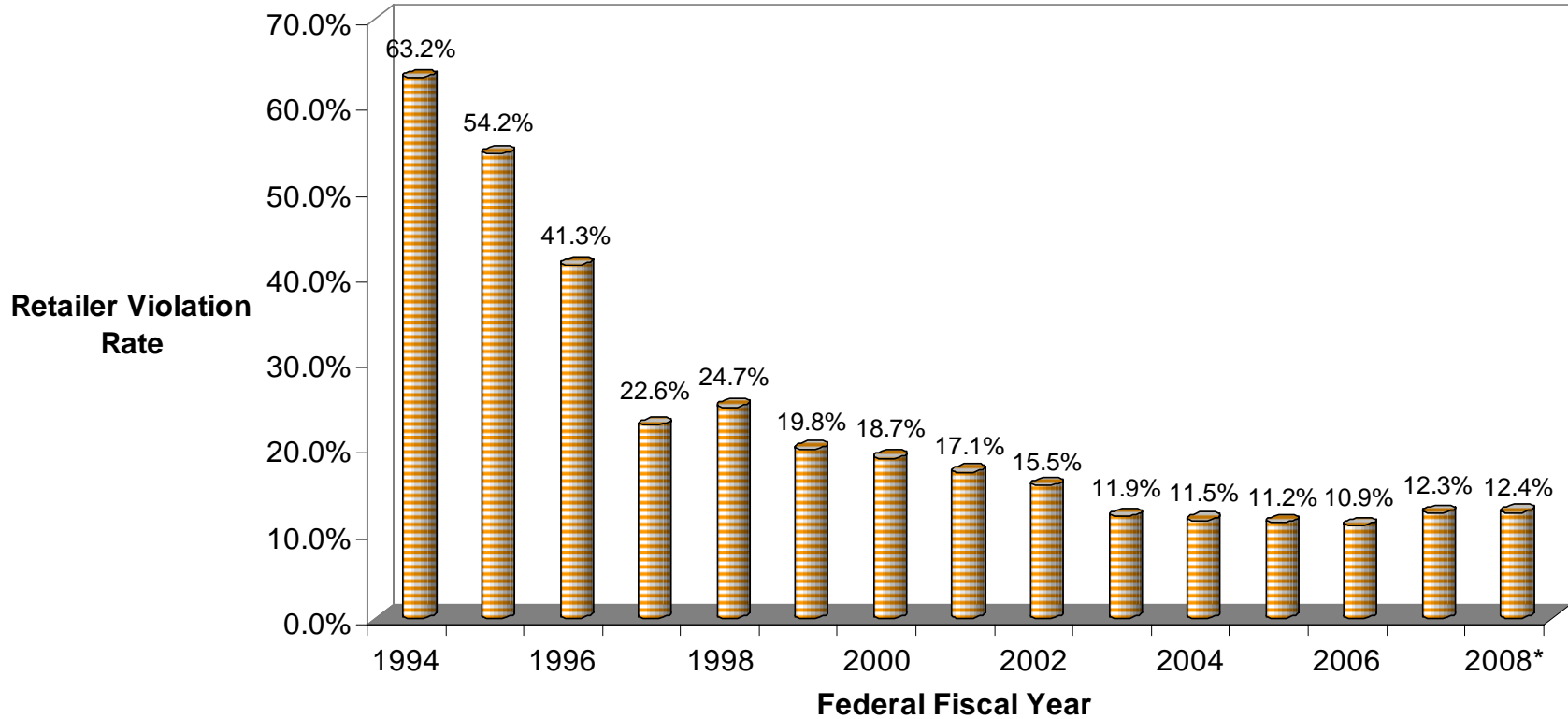
The 12.4% rate is far below the federal standard of 20.0% and substantially lower than the RVR of 63.2% in FFY 1994, which was the first year of the study. However, this is our highest rate since 2002.

The RVR for over-the-counter transactions was 12.4%, and the RVR for vending machines was 23.5%, though there were only 17 machines (all the ones in the state we are aware of) in the study.

Regions ranged in retailer violation rates from 9.1% to 16.0%. Region 2 had the highest sales rate, though they had the lowest rate last year.

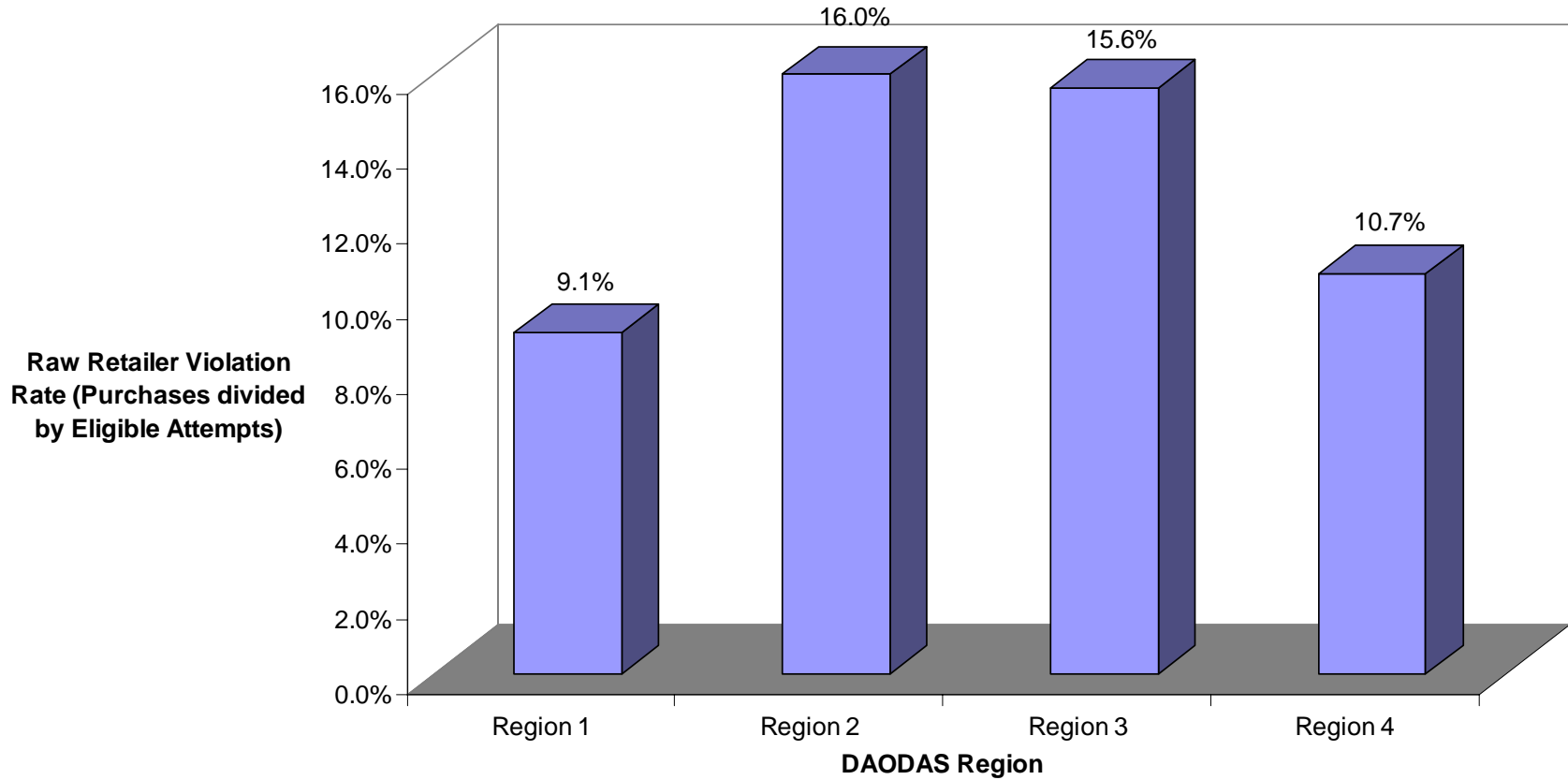
The age of the youth volunteer was a significant factor as the sales rate increased with each year of age, from 7.4% to 17.6%. Sales rates varied by gender (14.2% for males; 11.3% for females), but the difference was not statistically significant. White youth purchased less often than buyers of other race groups (12.1% vs. 13.4%). However, White males had a much higher sales rate than White females (15.6% vs. 8.4%).

YATS CIGARETTE PURCHASE RATES, FFY 1994-2008



*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.

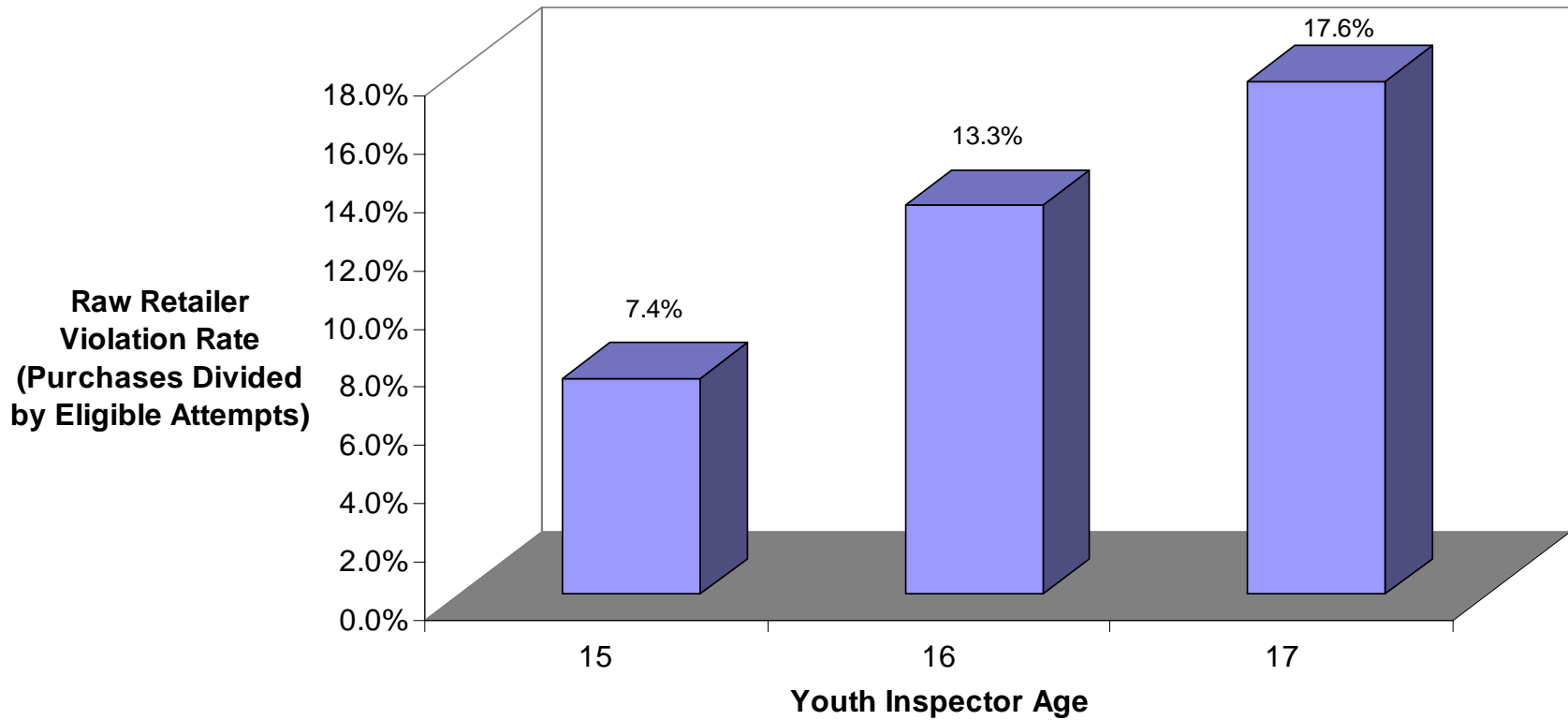
Percentage of Outlets Selling Cigarettes by DAODAS Region, FFY 2008



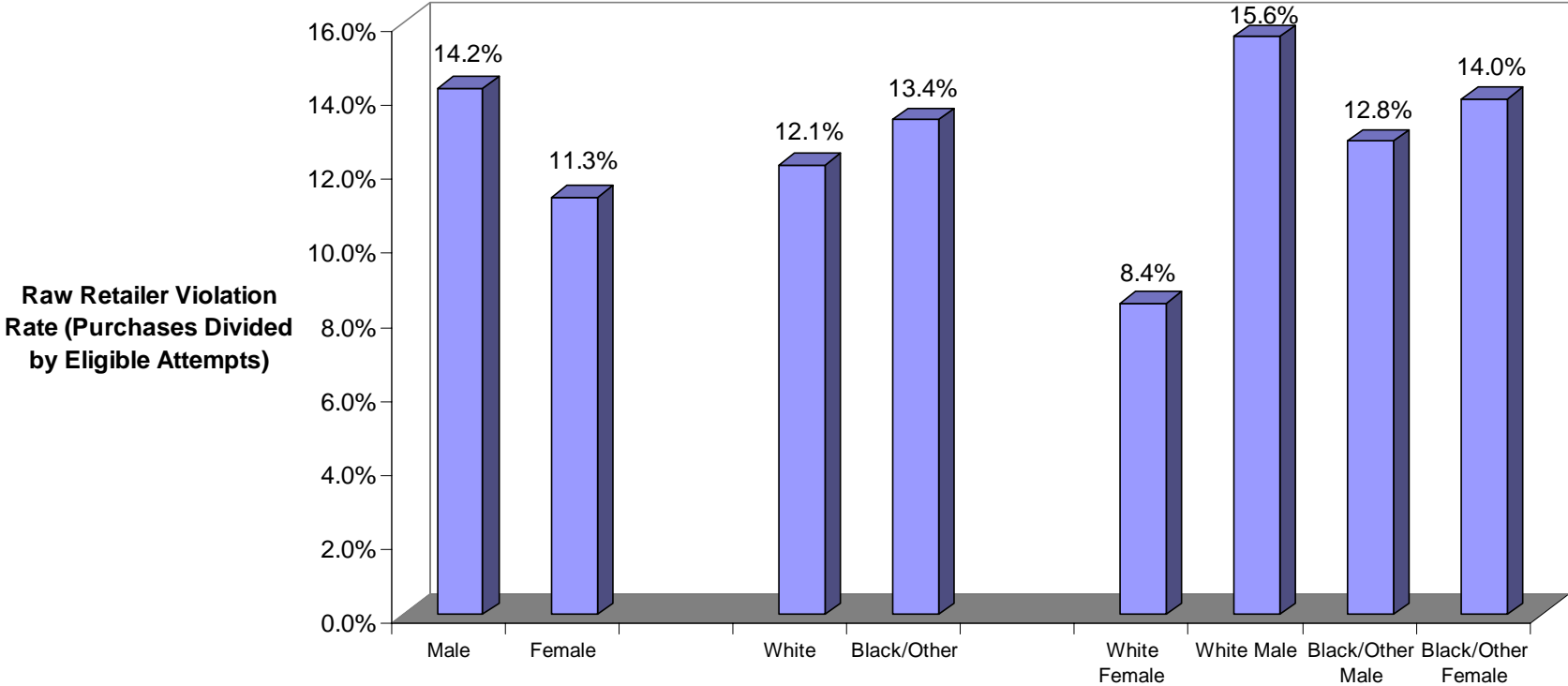
FFY 2008 Youth Access to Tobacco Study Raw Buy Data by County

| County Name | Total Eligible Purchase Attempts | No Buy | Buy | Buy Rate |
|--------------------|---|---------------|------------|-----------------|
| ABBEVILLE | 2 | 2 | 0 | 0.0% |
| AIKEN | 16 | 12 | 4 | 25.0% |
| ALLENDALE | 3 | 3 | 0 | 0.0% |
| ANDERSON | 17 | 17 | 0 | 0.0% |
| BAMBERG | 2 | 2 | 0 | 0.0% |
| BARNWELL | 4 | 4 | 0 | 0.0% |
| BEAUFORT | 13 | 12 | 1 | 7.7% |
| BERKELEY | 12 | 11 | 1 | 8.3% |
| CALHOUN | 2 | 2 | 0 | 0.0% |
| CHARLESTON | 33 | 28 | 5 | 15.2% |
| CHEROKEE | 13 | 13 | 0 | 0.0% |
| CHESTER | 6 | 5 | 1 | 16.7% |
| CHESTERFIELD | 8 | 3 | 5 | 62.5% |
| CLARENDON | 5 | 4 | 1 | 20.0% |
| COLLETON | 7 | 6 | 1 | 14.3% |
| DARLINGTON | 11 | 10 | 1 | 9.1% |
| DILLON | 4 | 3 | 1 | 25.0% |
| DORCHESTER | 8 | 7 | 1 | 12.5% |
| EDGEFIELD | 3 | 2 | 1 | 33.3% |
| FAIRFIELD | 4 | 4 | 0 | 0.0% |
| FLORENCE | 23 | 21 | 2 | 8.7% |
| GEORGETOWN | 18 | 15 | 3 | 16.7% |
| GREENVILLE | 31 | 26 | 5 | 16.1% |
| GREENWOOD | 9 | 7 | 2 | 22.2% |
| HAMPTON | 6 | 6 | 0 | 0.0% |
| HORRY | 36 | 29 | 7 | 19.4% |
| JASPER | 7 | 7 | 0 | 0.0% |
| KERSHAW | 9 | 8 | 1 | 11.1% |
| LANCASTER | 9 | 7 | 2 | 22.2% |
| LAURENS | 7 | 7 | 0 | 0.0% |
| LEE | 3 | 2 | 1 | 33.3% |
| LEXINGTON | 27 | 27 | 0 | 0.0% |
| MCCORMICK | 2 | 2 | 0 | 0.0% |
| MARION | 7 | 5 | 2 | 28.6% |
| MARLBORO | 8 | 8 | 0 | 0.0% |
| NEWBERRY | 5 | 5 | 0 | 0.0% |
| OCONEE | 7 | 6 | 1 | 14.3% |
| ORANGEBURG | 9 | 9 | 0 | 0.0% |
| PICKENS | 9 | 8 | 1 | 11.1% |
| RICHLAND | 32 | 26 | 6 | 18.8% |
| SALUDA | 1 | 1 | 0 | 0.0% |
| SPARTANBURG | 23 | 21 | 2 | 8.7% |
| SUMTER | 11 | 10 | 1 | 9.1% |
| UNION | 3 | 3 | 0 | 0.0% |
| WILLIAMSBURG | 5 | 3 | 2 | 40.0% |
| YORK | 21 | 18 | 3 | 14.3% |

Percent of Outlets Selling Cigarettes to Youth By Youth Age, FFY 2008



Percent of Outlets Selling Cigarettes to Youth By Youth Gender & Race, FFY 2008



SECTION VII: OTHER PREVENTION INTERVENTIONS

In the previous chapters, we have described the cumulative outcomes, to the extent possible, of youth curricula, parenting programs, merchant education, compliance checks, and the Youth Access to Tobacco Study. Prevention professionals frequently deliver even a wider range of services than this list, however. In this section, we address some of the other types of prevention interventions that are sometimes delivered by the county agencies.

Parenting Programs

Only seven county authorities had a year-end report for a prevention parenting program. Parenting programs typically focus on enhancing adults' skills in areas such as communication, rule-setting, appropriate discipline, and positive interaction. Some agencies had different types of adult programs such as working with divorcing parents, young mothers, or developing relationship-building skills.

There is no standard evaluation tool in the state for parenting programs. Reviewing counties' outcome objectives and results revealed great variation in targeted outcomes, ranging from decreased exposure on children's behalf to parents arguing to improved communication skills between parents and children. Actual outcomes either met or exceeded projected outcomes for five of the seven programs for which outcomes were presented. From reviewing process objective data, projected numbers of participants were either met or exceeded for three of the seven programs. The remaining 4 programs did not meet their projected numbers of parents, though two had numbers approaching their projected levels.

Working with Coalitions

A large number of prevention professionals in the county system work with one or more coalitions to strengthen collaborative efforts and best utilize scarce resources, though many did not dedicate a management plan to those efforts. Of those who did, relatively few had measurable outcome objectives, which is understandable for this type of work. Those who wrote outcome objectives wanted to see either an increase in coalition or board membership, improved knowledge of baseline data among coalition members, or to see a certain number of activities or initiatives implemented by their coalition(s). Although there were both positive and negative reports of success regarding growing coalition attendance and implementing awareness or prevention activities, the majority of reported outcomes were positive. There were too few reports to summarize the impact of working with coalitions; this is the type of activity that is generally agreed to be very important but does not produce easily assessable outcomes.

Youth Leadership Groups

In FY '07, there were only two clearly identified youth leadership programs found among the county year-end reports, the same as FY '06, but fewer than previous years.

Information Dissemination

Information dissemination is a considerable portion of the activities of a prevention specialist. Information dissemination includes all informational presentations, health fairs, and one-time activities focused on providing information and raising awareness. By nature, one-time activities are difficult to prove as causing change because pre- and post-tests typically are not feasible when contact is brief. In terms of numbers reached, number of informational activities, or amount of information distributed, most counties reported exceeding their targets, some by very large numbers. It is unclear whether they set targets far lower than what was reasonable or if they were able to reach for more than expected. As encouraged by DAODAS, most agencies said that outcomes could not accurately be assessed for their information dissemination plans. For those that did provide outcomes, a small number of sites did so by brief pre- and post-testing before and after a presentation. In these instances, agencies consistently reported meeting their outcome objectives. Like coalition work, information dissemination is considered an important part of prevention but not one that can easily produce documented outcomes.

Alternative Activities

Alternatives typically are activities for youth that encourage positive youth development and/or occupy young peoples' time so that they are involved in constructive activities. Counties implemented a range of programming under this heading, including large drug-free community events, ropes course team-building activities, after-school programs and events, and drug-free outings for specific youth groups. Five counties attempted to evaluate their alternatives activities in terms of impact on behavior or attitudes. Most considered the attendance counts as their primary measure of success, which is appropriate. Although there was some variation in actual numbers reached, it was notable that many counties far exceeded their expected attendance numbers in FY '07.

HIV/AIDS Programming

The purpose of HIV/AIDS programming is to provide education to the general public in order to reduce HIV infections and high risk behaviors that lead to infection, as these relate to ATOD use. Primary methods include community-based educational programs, presentations, and information dissemination, as well as direct training for prevention professionals. Another goal of these programs is to directly provide awareness, outreach, and testing to high-risk populations.

A total of seven HIV/AIDS programs submitted goals in FY '07. Objectives were measured by number of participants reached, number of residents tested, number of events, number of presentations, or amount of training. The majority of programs did submit outcome objectives. Programs generally met or exceeded their outcome objectives.

Faith-based Programming

Another area of programming takes place within faith-based communities. In some instances, county agencies partner with faith-based organizations to provide resources and implement programs for youth. Other faith-based programs involve community support, promotional workshops, sermon series, support groups, and traditional curricula such as All Stars that are implemented in conjunction with faith-based curricula. Programs may focus on prevention, skill building, and peer leadership, while others may utilize both a faith-based community support program for individuals in recovery and a prevention component for youth.

In FY'07, there were a total of three faith-based programs with various implementations submitted within each program.

Although outcome objectives were not measured for many of the individual goals submitted, those that were measured improvement via measures found on the DAODAS standard survey (favorable attitudes about drug use, decision-making), number of events/meetings, or number of participants reached. A review of year-end process objective data shows the programs and individual goals submitted for each consistently exceeded projected outcomes.

Summary of Section VII

Many of the prevention activities described in this section (coalition work, youth leadership development programs, information dissemination, alternative activities, faith-based programming) are not well suited to generating valid outcomes. Therefore, there is little information from which to formulate conclusions, though there are instances of both successes and shortcomings in the reports county prevention professionals provided.

APPENDIX A: ADDITIONAL DATA TABLES

Table A1. Overall Results by Age

| Measure | Middle School (n=4,958) | | | High School (n=1,157) | | |
|-----------------------------------|-------------------------|----------------|----------|-----------------------|----------------|----------|
| | Pre-Test Avg. | Post-Test Avg. | % Change | Pre-Test Avg. | Post-Test Avg. | % Change |
| Perceived Risk | 2.17 | 2.39 | 9.9** | 1.97 | 2.31 | 17.3** |
| Favorable Attitudes | 2.70 | 2.74 | 1.6** | 2.23 | 2.39 | 7.2** |
| Decision-Making | 1.88 | 1.91 | 1.7** | 1.67 | 1.83 | 9.6** |
| Perceived Peer Norms | 8.61 | 8.84 | 2.7** | 7.00 | 7.36 | 5.1** |
| Perceived Parental Attitudes | 2.85 | 2.87 | 0.7** | 2.54 | 2.61 | 2.8** |
| 30-Day Alcohol Use [^] | 12.6 | 8.2 | -34.6** | 29.7 | 21.6 | -27.3** |
| 30-Day Marijuana Use [^] | 5.2 | 3.3 | -35.4** | 19.9 | 13.3 | -33.2** |
| 30-Day Cigarette Use [^] | 5.8 | 4.4 | -24.6** | 24.5 | 19.1 | -22.0** |

[^] Negative change scores are desired for these items

* 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

| Measure | Males (n=3,137) | | | Females (n=3,041) | | |
|-----------------------------------|-----------------|----------------|----------|-------------------|----------------|----------|
| | Pre-Test Avg. | Post-Test Avg. | % Change | Pre-Test Avg. | Post-Test Avg. | % Change |
| Perceived Risk | 2.08 | 2.34 | 12.5** | 2.18 | 2.40 | 10.1** |
| Favorable Attitudes | 2.55 | 2.62 | 2.7** | 2.68 | 2.74 | 2.2** |
| Decision-Making | 1.77 | 1.85 | 4.5** | 1.91 | 1.94 | 1.6** |
| Perceived Peer Norms | 8.06 | 8.38 | 4.0** | 8.57 | 8.76 | 2.2** |
| Perceived Parental Attitudes | 2.76 | 2.78 | 0.7** | 2.83 | 2.86 | 1.1** |
| 30-Day Alcohol Use [^] | 18.8 | 13.3 | -29.3** | 12.5 | 8.0 | -36.0** |
| 30-Day Marijuana Use [^] | 10.9 | 6.9 | -36.7** | 4.8 | 3.4 | -29.2** |
| 30-Day Cigarette Use [^] | 12.1 | 9.3 | -23.1** | 6.5 | 4.9 | -24.6** |

[^] Negative change scores are desired for these items

* 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

| Measure | White Participants (n=2,637) | | | Black or African American Participants (n=3,071) | | |
|-----------------------------------|------------------------------|----------------|----------|--|----------------|----------|
| | Pre-Test Avg. | Post-Test Avg. | % Change | Pre-Test Avg. | Post-Test Avg. | % Change |
| Perceived Risk | 2.21 | 2.39 | 8.1** | 2.06 | 2.34 | 13.6** |
| Favorable Attitudes | 2.66 | 2.72 | 2.3** | 2.58 | 2.64 | 2.3** |
| Decision-Making | 1.86 | 1.89 | 1.6** | 1.82 | 1.89 | 3.8** |
| Perceived Peer Norms | 8.57 | 8.74 | 2.0** | 8.12 | 8.42 | 3.7** |
| Perceived Parental Attitudes | 2.82 | 2.83 | 0.4 | 2.78 | 2.81 | 1.1** |
| 30-Day Alcohol Use [^] | 13.5 | 9.9 | -26.7** | 17.1 | 11.2 | -34.5** |
| 30-Day Marijuana Use [^] | 5.6 | 3.7 | -33.9** | 9.2 | 6.3 | -31.5** |
| 30-Day Cigarette Use [^] | 9.1 | 7.6 | -16.5** | 9.1 | 6.6 | -27.5** |

[^] Negative change scores are desired for these items.

* 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)

| Measure | American Indian or Alaska Native (n=113) | | | "Other" Race Participants (n=361) | | |
|-----------------------------------|---|-------------------|-------------|--------------------------------------|-------------------|-------------|
| | Pre-Test Avg. | Post-Test Avg. | % Change | Pre-Test Avg. | Post-Test Avg. | % Change |
| Perceived Risk | 2.10 | 2.45 | 16.7** | 2.13 | 2.47 | 16.0** |
| Favorable Attitudes | 2.57 | 2.70 | 5.1** | 2.57 | 2.72 | 5.8** |
| Decision-Making | 1.77 | 1.95 | 10.2** | 1.88 | 1.96 | 4.3** |
| Perceived Peer Norms | 7.91 | 8.54 | 8.0** | 8.15 | 8.60 | 5.5** |
| Perceived Parental Attitudes | 2.74 | 2.81 | 2.6 | 2.72 | 2.82 | 3.7** |
| 30-Day Alcohol Use [^] | 18.8 | 10.7 | -43.1* | 17.9 | 12.0 | -33.0** |
| 30-Day Marijuana Use [^] | 12.5 | 6.3 | -49.6* | 10.7 | 5.6 | -47.7** |
| 30-Day Cigarette Use [^] | 13.3 | 10.7 | -19.5 | 10.7 | 6.2 | -42.1** |

[^] Negative change scores are desired for these items.

* 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

| Measure | Participants of Hispanic, Latino, or Spanish Descent or Origin (n=314) | | | Participants Not of Hispanic, Latino, or Spanish Descent or Origin (n=5,589) | | |
|-----------------------------------|--|----------------|----------|--|----------------|----------|
| | Pre-Test Avg. | Post-Test Avg. | % Change | Pre-Test Avg. | Post-Test Avg. | % Change |
| Perceived Risk | 2.05 | 2.35 | 14.6** | 2.12 | 2.37 | 11.8** |
| Favorable Attitudes | 2.59 | 2.63 | 1.5 | 2.61 | 2.68 | 2.7** |
| Decision-Making | 1.82 | 1.92 | 5.5** | 1.84 | 1.89 | 2.7** |
| Perceived Peer Norms | 8.00 | 8.36 | 4.5** | 8.30 | 8.57 | 3.3** |
| Perceived Parental Attitudes | 2.70 | 2.74 | 1.5 | 2.79 | 2.82 | 1.1** |
| 30-Day Alcohol Use [^] | 20.9 | 12.1 | -42.1** | 15.6 | 10.5 | -32.7** |
| 30-Day Marijuana Use [^] | 12.5 | 5.8 | -53.6** | 7.8 | 5.2 | -33.3** |
| 30-Day Cigarette Use [^] | 10.3 | 9.0 | -12.6 | 9.4 | 7.0 | -25.5** |

[^] Negative change scores are desired for these items

* 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

| Measure | All Programs (n=6,266) | | | All Stars (n=1,356) | | | E.L. Wright Tutoring (n=44) | | |
|-----------------------------------|---------------------------|-------------------|-------------|------------------------|-------------------|-------------|--------------------------------|-------------------|-------------|
| | Pre-Test Avg. | Post-Test Avg. | % Change | Pre-Test Avg. | Post-Test Avg. | % Change | Pre-Test Avg. | Post-Test Avg. | % Change |
| Perceived Risk | 2.13 | 2.37 | 11.3** | 2.03 | 2.18 | 7.4** | 1.83 | 2.33 | 27.3** |
| Favorable Attitudes | 2.61 | 2.68 | 2.5** | 2.61 | 2.60 | -0.4 | 2.61 | 2.74 | 5.0 |
| Decision-Making | 1.84 | 1.90 | 3.1** | 1.81 | 1.75 | -3.3** | 1.98 | 1.91 | -3.5 |
| Perceived Peer Norms | 8.31 | 8.57 | 3.1** | 8.19 | 8.39 | 2.4** | 8.44 | 8.42 | -0.2 |
| Perceived Parental Attitudes | 2.79 | 2.82 | 1.1** | 2.80 | 2.81 | 0.4 | 2.86 | 2.86 | 0 |
| 30-Day Alcohol Use [^] | 15.6 | 10.6 | -32.1** | 14.7 | 12.1 | -17.7** | 18.6 | 20.9 | 12.4 |
| 30-Day Marijuana Use [^] | 7.9 | 5.2 | -34.2** | 8.3 | 7.3 | -12.0 | 7.0 | 2.4 | -65.7 |
| 30-Day Cigarette Use [^] | 9.3 | 7.1 | -23.7** | 10.6 | 9.5 | -10.4 | 4.6 | 2.3 | -50.0 |

[^] Negative change scores are desired for these items

* 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)

| Measure | Girl's Grapevine (n=176) | | | Girl Power (n=55) | | | Keep a Clear Mind (n=250) | | |
|-----------------------------------|-----------------------------|-------------------|-------------|----------------------|-------------------|-------------|------------------------------|-------------------|-------------|
| | Pre-Test Avg. | Post-Test Avg. | % Change | Pre-Test Avg. | Post-Test Avg. | % Change | Pre-Test Avg. | Post-Test Avg. | % Change |
| Perceived Risk | 2.75 | 2.76 | 0.5 | 1.90 | 2.28 | 20.0** | 2.67 | 2.82 | 5.6** |
| Favorable Attitudes | 2.81 | 2.85 | 1.4 | 2.71 | 2.66 | -1.8 | 2.67 | 2.74 | 2.6** |
| Decision-Making | 2.09 | 2.05 | -1.9 | 1.95 | 1.83 | -6.2 | 2.23 | 2.50 | 12.1** |
| Perceived Peer Norms | 9.03 | 9.11 | 0.9 | 8.29 | 8.57 | 3.4 | 9.07 | 9.35 | 3.1** |
| Perceived Parental Attitudes | 2.89 | 2.92 | 1.2 | 2.87 | 2.81 | -2.1 | 2.74 | 2.81 | 2.6** |
| 30-Day Alcohol Use [^] | 9.3 | 8.7 | -6.3 | 14.6 | 14.6 | 0 | 2.4 | 2.9 | 20.8 |
| 30-Day Marijuana Use [^] | 2.9 | 3.5 | 20.9 | 3.6 | 7.3 | 103 | 1.6 | 2.5 | 56.3 |
| 30-Day Cigarette Use [^] | 4.2 | 5.4 | 27.9 | 1.8 | 3.7 | 106 | 2.0 | 2.4 | 20.0 |

[^] Negative change scores are desired for these items

* 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)

| Measure | Keepin' It Real (n=209) | | | Life Skills Training (n=1,119) | | | Project Alert (n=515) | | |
|-----------------------------------|----------------------------|-------------------|-------------|-----------------------------------|-------------------|-------------|--------------------------|-------------------|-------------|
| | Pre-Test Avg. | Post-Test Avg. | % Change | Pre-Test Avg. | Post-Test Avg. | % Change | Pre-Test Avg. | Post-Test Avg. | % Change |
| Perceived Risk | 1.83 | 2.31 | 26.2** | 2.20 | 2.38 | 8.2** | 2.06 | 2.37 | 15.0** |
| Favorable Attitudes | 2.71 | 2.73 | 0.7 | 2.83 | 2.85 | 0.7* | 2.45 | 2.65 | 8.2** |
| Decision-Making | 1.90 | 1.99 | 4.7** | 1.96 | 1.98 | 1.0 | 1.72 | 1.88 | 9.3** |
| Perceived Peer Norms | 8.38 | 8.50 | 1.4* | 9.01 | 9.18 | 1.9** | 7.79 | 8.25 | 5.9** |
| Perceived Parental Attitudes | 2.87 | 2.84 | -1.0 | 2.90 | 2.92 | 0.7* | 2.68 | 2.80 | 4.5** |
| 30-Day Alcohol Use [^] | 14.7 | 10.6 | -27.9* | 8.5 | 5.8 | -31.8** | 20.7 | 12.3 | -40.6** |
| 30-Day Marijuana Use [^] | 11.1 | 6.7 | -39.6** | 2.9 | 1.3 | -55.2** | 13.9 | 8.0 | -42.4** |
| 30-Day Cigarette Use [^] | 11.2 | 7.7 | -31.3* | 2.8 | 2.2 | -21.4 | 16.0 | 10.9 | -31.9** |

[^] Negative change scores are desired for these items

* 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)

| Measure | Project Northland (n=1,387) | | | Project Northland, Life Skills Training, Project Towards No Tobacco Use (n=80) | | | Project Toward No Drug Abuse (TND) (n=271) | | |
|--------------------------------------|--------------------------------|-------------------|-------------|---|-------------------|-------------|--|-------------------|-------------|
| | Pre-Test Avg. | Post-Test Avg. | % Change | Pre-Test Avg. | Post-Test Avg. | % Change | Pre-Test Avg. | Post-Test Avg. | % Change |
| Perceived Risk | 2.14 | 2.56 | 19.6** | 2.28 | 2.23 | -2.2 | 2.06 | 2.13 | 3.5* |
| Favorable Attitudes | 2.51 | 2.68 | 7.0** | 2.59 | 2.54 | -1.9 | 2.49 | 2.50 | 0.3 |
| Decision- Making | 1.75 | 1.94 | 11.0** | 1.84 | 1.92 | 4.3 | 1.71 | 1.63 | -4.7* |
| Perceived Peer Norms | 8.02 | 8.52 | 6.2** | 7.81 | 7.83 | 0.3 | 7.96 | 7.95 | -0.1 |
| Perceived Parental Attitudes | 2.74 | 2.80 | 2.1** | 2.83 | 2.81 | -0.7 | 2.75 | 2.69 | -2.1* |
| 30-Day Alcohol Use [^] | 18.6 | 9.2 | -50.5** | 19.5 | 15.2 | -22.1 | 24.4 | 18.2 | -25.4** |
| 30-Day Marijuana Use [^] | 8.4 | 4.2 | -50.0** | 6.3 | 6.3 | 0 | 13.1 | 8.5 | -35.1** |
| 30-Day Cigarette Use [^] | 10.3 | 6.3 | -38.8** | 6.3 | 6.3 | 0 | 16.4 | 10.3 | -37.2** |

[^] Negative change scores are desired for these items

* 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)

| Measure | Project Toward No Tobacco Use (TNT) (n=97) | | | Responding in Peaceful and Positive Ways (RiPP) (n=309) | | | RISE (n=47) | | |
|-----------------------------------|--|----------------|----------|---|----------------|----------|---------------|----------------|----------|
| | Pre-Test Avg. | Post-Test Avg. | % Change | Pre-Test Avg. | Post-Test Avg. | % Change | Pre-Test Avg. | Post-Test Avg. | % Change |
| Perceived Risk | 1.90 | 2.23 | 17.5** | 2.03 | 2.21 | 8.9** | 2.27 | 2.85 | 25.4** |
| Favorable Attitudes | 2.27 | 2.13 | -6.2* | 2.67 | 2.69 | 0.7 | 2.86 | 2.98 | 4.1** |
| Decision-Making | 1.72 | 1.80 | 4.6 | 1.84 | 1.70 | -7.6** | 2.26 | 2.81 | 24.3** |
| Perceived Peer Norms | 7.50 | 7.24 | -3.5* | 8.60 | 8.76 | 1.9* | 8.91 | 9.83 | 10.3** |
| Perceived Parental Attitudes | 2.64 | 2.63 | -0.5 | 2.83 | 2.86 | 1.1 | 2.97 | 3.00 | 1.0** |
| 30-Day Alcohol Use [^] | 42.1 | 38.5 | -8.5 | 18.3 | 12.4 | -32.2** | 11.1 | 0 | -100* |
| 30-Day Marijuana Use [^] | 22.9 | 9.4 | -59.1** | 8.8 | 6.5 | -26.1 | 6.5 | 0 | -100 |
| 30-Day Cigarette Use [^] | 26.3 | 21.1 | -19.8 | 8.2 | 8.7 | 6.1 | 2.2 | 0 | -100 |

[^] Negative change scores are desired for these items

* 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)

| Measure | Second Step (n=88) | | |
|--------------------------------------|-----------------------|-------------------|-------------|
| | Pre-Test Avg. | Post-Test Avg. | % Change |
| Perceived Risk | 1.99 | 2.01 | 1.0 |
| Favorable Attitudes | 2.54 | 2.58 | 1.6 |
| Decision- Making | 1.69 | 1.66 | -1.8 |
| Perceived Peer Norms | 7.81 | 8.23 | 5.4** |
| Perceived Parental Attitudes | 2.73 | 2.77 | 1.5 |
| 30-Day Alcohol Use [^] | 24.1 | 16.1 | -33.2 |
| 30-Day Marijuana Use [^] | 12.5 | 7.0 | -44.0 |
| 30-Day Cigarette Use [^] | 12.6 | 9.1 | -27.8 |

[^] Negative change scores are desired for these items

* 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

| Measure | Evidence-Based (n=5,777) | | | Non-Evidence-Based (n=479) | | |
|-----------------------------------|--------------------------|----------------|----------|----------------------------|----------------|----------|
| | Pre-Test Avg. | Post-Test Avg. | % Change | Pre-Test Avg. | Post-Test Avg. | % Change |
| Perceived Risk | 2.12 | 2.36 | 11.5** | 2.32 | 2.51 | 8.2** |
| Favorable Attitudes | 2.61 | 2.67 | 2.6** | 2.67 | 2.73 | 2.2** |
| Decision-Making | 1.83 | 1.89 | 3.3** | 1.97 | 2.04 | 3.6** |
| Perceived Peer Norms | 8.30 | 8.57 | 3.3** | 8.41 | 8.54 | 1.5** |
| Perceived Parental Attitudes | 2.79 | 2.82 | 1.1** | 2.82 | 2.85 | 1.1 |
| 30-Day Alcohol Use [^] | 15.8 | 10.5 | -33.5** | 13.8 | 11.7 | -15.2 |
| 30-Day Marijuana Use [^] | 8.1 | 5.1 | -37.0** | 5.3 | 5.7 | 7.5 |
| 30-Day Cigarette Use [^] | 9.6 | 7.2 | -25.0** | 6.2 | 6.2 | 0.0 |

[^] Negative change scores are desired for these items

* 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