SOUTH CAROLINA
G-CAP STUDY THREE AND
FY '05 STATE PREVENTION EVALUATION
OUTCOME REPORT

2005

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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 2004-2005 and by the Governor's Cooperative Agreement for Prevention (G-CAP), a federally funded State Incentive Grant. 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 **prevention curricula** are:

- There were 2,869 participants with matched pre- and post-tests for the county authorities, and 4,299 for G-CAP. County authority participants were relatively evenly spread from ages 10 to 15, while G-CAP participants were primarily 11 to 13. The race demographics were almost identical with about 54% Black or African American participants, about 38% White participants, and about 5% "Other" race participants.

- The county authorities' 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 ($p<.05$). For substance use, there were statistically significant reductions in the number of users of alcohol (19.8%) and marijuana (29.7%) and a near significant decline in cigarette users ($p<.10$).

- G-CAP results revealed statistically significant changes for perceived risk, favorable attitudes, and perceived peer norms ($p<.05$). There was a statistically significant reduction in the number of alcohol users from pre- to post-test and small, non-significant declines in the number of cigarette and marijuana users.

- Both projects had relatively similar results for maintaining pre-test non-users as non-users at post-test (>92%) and reducing the amount of use for pre-test users by post-test (around 60% to 75%). County authority programs had slightly better results in these two analyses.

- There were 53 county authority youth curricula implementations and 16 for G-CAP. Of the programs with multiple implementations, Project Toward No Tobacco Use (TNT), All Stars, and Project Northland had some of the most consistently positive results. Disregarding the G-CAP results, Life Skills Training and Project Alert had multiple positive outcomes similar to the successful programs mentioned above.

- Evidence-based programs had greater positive change results for participants than programs that were not evidence-based, though the differences were not significant and 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:

- **Compliance Checks**. In G-CAP, 22.8% of alcohol purchase attempts were successful compared to 12.7% of tobacco attempts ($p<.05$). Convenience stores had the highest sales rates, and drug stores had the least. The race of the clerk (Hispanic and "Other" race clerks sell more often) and the race of the buyer (Black or African American youth can purchase more often) were statistically significant for completed sales. The average clerk fine for an alcohol sale was $308.35, and the average tobacco fine was $58.30. In a study of G-CAP alcohol compliance checks involving four G-CAP sites and four comparison sites over a 16-month period, retailer violation rates went up in both sets of communities, though the G-CAP sites had smaller increases. These results suggest that G-CAP compliance checks may have slowed a reduction in the percentage of merchants who are adequately studying young-looking buyers' IDs. Lack of decreases in retailer violation rates may be due to the fact that even the G-CAP sites had relatively low levels of enforcement.

- The 2005 Youth Access to Tobacco Study showed another decrease in retailer violation rates for providing tobacco products to youth under 18. The 2005 rate was 11.2%, down from 63.2% in 1994.

- Prevention staff generally exceeded their expectations for the percentages of **merchant education** participants agreeing with targeted beliefs.

- Evaluation and data management for **parenting programs** is a weak area. When accurate data were presented, results were mixed for the county authorities and more consistently positive for G-CAP.

- 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

G-CAP and State Prevention Evaluation Efforts

In 2000, the U.S. Center for Substance Abuse Prevention (CSAP) entered into a cooperative agreement with the Governor of South Carolina for a State Incentive Grant (SIG). The management of the SIG was delegated to the SC Department of Alcohol and Other Drug Abuse Services (DAODAS) and renamed the South Carolina Governor's Cooperative Agreement for Prevention (G-CAP). G-CAP seeks to influence changes in the way youth substance abuse prevention is planned, coordinated, and evaluated at the state and community levels. Specifically the four goals of G-CAP are:

- **Goal 1**: Coordinate, leverage and/or redirect, as appropriate, those substance abuse prevention resources within South Carolina that are directed at communities, families, school and workplaces to reduce youth marijuana, alcohol, tobacco and other drugs use.

- **Goal 2**: Develop a revitalized, comprehensive statewide strategy aimed at reducing substance use among youth in South Carolina by implementing effective evidence-based substance abuse community-based prevention efforts.

- **Goal 3**: Reduce marijuana, alcohol, tobacco and other drug use among 12- to 17-year-old youth within the population served by G-CAP partners.

- **Goal 4**: Increase the awareness and involvement of youth and adults in prevention.

Nineteen community coalitions were selected to receive the community-level funds beginning Oct. 2001. One coalition ended its G-CAP relationship in Sept. 2003 when it did not reapply for funding. The G-CAP evaluation, conducted by the Pacific Institute for Research and Evaluation (PIRE), seeks to evaluate the changes created by G-CAP at the state level, community level, and the intervention level, as all G-CAP sub-recipients have been conducting one or more evidence-based prevention programs and environmental strategies. This report will share findings regarding G-CAP intervention's impact on program participants and community indicators.

In addition to impacting youth and communities, G-CAP has also influenced multiple aspects of the state's prevention system. One such influence has been the sharp increase in attention paid to evaluation of local interventions regardless of funding stream. Based on the satisfaction of the progress of the G-CAP evaluation and the appreciation for being able to review and share solid outcome results, DAODAS decided to apply the G-CAP methods for recurring program evaluation to a majority of the recurring programs implemented with Substance Abuse Prevention and Treatment Block Grant (SAPTBG) and Safe and Drug-Free Schools and Communities Act (SDFSCA) funds. PIRE agreed to extend their evaluation services to these efforts as part of the G-CAP expansion.

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 to be 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. This report includes only those findings based on the year-end cumulative database for FY '05. The deadline for pre- or post-tests to be included in the final database was June 15, 2005.

In this report, findings will be distinguished by either "G-CAP sites" or "county authorities," which will refer to those the county alcohol and other drug authorities that implement prevention programming under SAPTBG or SDFSCA funding. However, one non-county authority receiving SDFSCA funding will have its outcome data included in the "county authority" database.

The Pre-Post Test Outcome Evaluation Instruments

Copies of the G-CAP Student Questionnaire and the DAODAS Standard Survey are included in Appendix B.

The G-CAP Student Questionnaire is comprised of outcome measures taken from SAMHSA core measures and the National Household Survey. (Note: These core measures and other measures used are essentially ways to measure certain risk factors found as part of the risk- and protective-factor framework for South Carolina. In subsequent sections, these measures are referred to as risk factors.) The core measures used were **perceived peer norms regarding ATOD use, perceived availability of ATOD and handguns,** and **30-day use of alcohol, marijuana, and cigarettes**. The National Household Survey measures were **perceived risk/harm of ATOD use, favorable attitudes toward ATOD use, and perceived parental attitudes regarding ATOD use**. Sites were allowed to add additional core measures if there were additional foci of their programs they wished to assess. Only a handful of sites added measures, and those results are not included in this report.

The DAODAS Standard Survey is comprised of SAMHSA core measures only. 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 instructions for administering the surveys were very similar for both projects. Both were instructed to administer the pre-test within two weeks prior to the start of the program content and administer the post-test with two weeks following the end of the

content. Both projects required local staff to enter the student responses into the KIT Prevention online reporting system. Both groups were instructed on participant protection procedures, but G-CAP sites were asked to primarily use anonymity procedures while county authorities were asked to primarily use less rigorous confidentiality procedures. Both methods, however, should have been adequate to protect participants and encourage honest responses.

It is important to note that the evaluation design for both projects 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 multiple programs and sites will assist the state and CSAP in further understanding which programs, implemented under which conditions, appear to be most and least effective.

Data sources for the report sections that do not deal with pre- and post-testing are described in those sections.

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 will receive the most analysis and discussion because it is the most standardized, valid method implemented across G-CAP and 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 and the G-CAP Student Questionnaire. The DAODAS Standard Survey data is for FY '05 only. The G-CAP Student Questionnaire data is cumulative from the beginning of G-CAP programming in early 2002. The two sets of data have not been combined and analyzed together because most of the measures were not identical. Section II will also

[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.

present and discuss the pre- and post-test findings by demographic groups like gender, race, and ethnicity.

Section III will present and discuss analyses for the pre- and post-test results based on 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 various environmental strategies used through G-CAP and the county authority system. This includes alcohol and tobacco compliance checks, the 2005 Youth Access To Tobacco Study (Synar), merchant education, public safety checkpoints, and social norms campaigns.

Section VI will address the common findings for G-CAP sites and county authorities for parenting interventions.

Section VII will address the common findings for G-CAP sites and county authorities 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.

SECTION II: OVERALL PRE- AND POST-TEST FINDINGS

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

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 did not put their name on their surveys for either project; 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 thrown out of the system,
- 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 PIRE analyzed.

For county authorities, the final database had 2,869 matched participants. An unmatched database provided by KIT Prevention staff showed a total of 3,556 pre-tests, meaning a favorable match rate of 80.7%. 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 have not entered unmatched pre-tests or post-tests because they knew those tests would not be included in the final analyses.

For G-CAP, the final database had 4,229 matched participants. The unmatched database had 6,551 pre-tests for a match rate of 64.6%. The same possibilities described above that could have raised the match rate are applicable for G-CAP, as well.

Demographics

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 here.

Age. **For county authorities**, participants' ages were spread rather evenly from 10 to 15 years old. This means that middle school students make up a sizable portion of the total population. Table 1 shows the complete breakdown. All Stars was delivered to a wide range of ages as 15-year olds followed closely after 12-year olds as the most frequent age of participants. The other programs dealing with primarily high-school aged participants were ATOD Presentation, Project Success, Project TNT (mostly 13- and 14-year olds), and Second Step.

Table 1. Age Distribution of County Authority Program Participants

Age	% of Participants
10	18.3
11	17.2
12	17.5
13	15.8
14	11.9
15	9.2
16	6.2
17	2.4
18	1.4
19	0.1
20	0

For G-CAP sites, services were mostly directed at participants of 11, 12, and 13 years of age. Though the directed age range of G-CAP was 12 to 17 years, very few 16- or 17-year olds were served through recurring programs. Table 2 shows the full age breakdown for G-CAP programs.

Table 2. Age Distribution of G-CAP Program Participants

Age	% of Participants
10	1.0
11	22.6
12	29.8
13	29.9
14	12.7
15	2.9
16	0.8
17	0.2
18-20	0

Gender. **For county authorities**, females made up a majority of the matched participant population (55.6%). Two programs with atypical gender breakdowns were Girls Grapevine (100% female) and Second Step (80% male). The gender split for **G-CAP** was more even as only 51.4% of participants were female. No programs had atypical gender breakdowns.

Race/Ethnicity. For **county authorities**, 54.7% of the matched participants were Black or African American, 38.3% were White, 5.2% were of "Other" race, and 1.2% 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 5.1% of matched participants were of Hispanic, Latino, or Spanish origin or descent. Some programs had atypical demographic breakdowns, such as Life Skills Training (60.0% White), Project Success (88.8% Black or African American), Project TNT (68.1% White), and Second Step (68.0% White).

For **G-CAP sites**, the racial balance was almost identical. For G-CAP, 53.9% of participants were Black or African American, 38.6% were White, 4.6% were of "Other" race, and 2.4% 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. Just 4.5% of matched participants were of Hispanic, Latino, or Spanish origin or descent. Some programs had very different demographic breakdowns, such as Project Northland (55.4% White), Life Skills Training (92.9% Black or African American and 0% White), Project Alert (78.9% Black or African American), and Woodrock Youth Development Program (89.4% Black or African American).

Risk-Factor Measures

Table 3 shows the results for the five risk factors included on the DAODAS Standard Survey. As shown in the table, there was positive change from pre- to post-test for all five measures. In addition, the change for each was statistically significant ($p<.05$). The measure with the smallest percent change, perceived parental attitudes, also had the highest pre-test score and may have been limited by a "ceiling effect" because the high

pre-test score left relatively little room for improvement. The Ns for perceived peer norms and perceived parental attitudes are smaller because multiple county authorities identified one of those measures as not relating to the content of their program. In this case, the results for those measures were not included so that the outcomes included were only those intended to take place.

Table 3. Overall Results, Risk-Factor Measures: County Authorities

Risk-Factor Measure	N	Possible Range of Scores	Pre-Test Average	Post-Test Average	% Change
Perceived Risk	2,827	0-3	2.19	2.47	12.7**
Favorable Attitudes	2,863	0-3	2.51	2.63	4.6**
Decision-Making	2,865	0-3	1.84	1.90	3.1**
Perceived Peer Norms	2,679	0-10	8.06	8.37	3.8**
Perceived Parental Attitudes	1,991	0-3	2.76	2.80	1.6**

* 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)

For G-CAP sites, Table 4 shows the results for the five risk factors included on the G-CAP Student Questionnaire. As shown in the table, there were statistically significant positive changes for three of the measures: perceived risk, favorable attitudes, and perceived peer norms. There was also an undesired statistically significant change for perceived availability, though the evaluation team and the local sites agree that this measure does not relate to the content of any of the programs used in G-CAP and was a poor choice for the student questionnaire. (Note: the data for perceived availability is not included in the subsequent discussions of data findings or data tables due to its lack of relevance to program content). 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. The Ns for favorable attitudes and perceived parental attitudes are smaller because errors in the original version of the G-CAP Student Questionnaire caused much of the early data for these measures to be thrown out.

Table 4. Overall Results, Risk-Factor Measures: G-CAP

Risk-Factor Measure	N	Possible Range of Scores	Pre-Test Average	Post-Test Average	% Change
Perceived Risk	4,227	0-3	2.11	2.27	7.3**
Favorable Attitudes	2,688	0-2	1.48	1.56	5.0**
Perceived Peer Norms	4,222	0-10	8.10	8.28	2.2**
Perceived Parental Attitudes	2,684	0-2	1.84	1.84	0.3
Perceived Availability	4,219	0-3	2.23	2.20	-1.6**

* 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)

Only one risk-factor measure was identical across **both projects**: perceived peer norms. The combined results show a statistically significant improvement (Table 5).

Table 5. Perceived Peer Norms Results: County Authorities and G-CAP

Risk-Factor Measure	N	Possible Range of Scores	Pre-Test Average	Post-Test Average	% Change
Perceived Peer Norms	7,076	0-10	8.06	8.29	2.9**

Demographic Differences in Risk-Factor Measures. Tables A1 through A8 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 for both projects.

Age. Table A1 in Appendix A 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 five risk-factor measures, but the older participants had significantly better outcomes on all measures ($p<.05$).

For G-CAP sites, Table A2 in Appendix A shows that, as expected, the younger students had higher pre-test risk-factor scores. Both groups had statistically significant improvements for perceived risk, favorable attitudes, and perceived peer norms, but the high school participants had significantly better improvements on all three of those measures as compared to middle school participants.

Gender. Table A3 in Appendix A shows **county authorities'** data results separated by gender. Results for all five risk-factor measures show statistically significant positive change for both genders. There were no statistically significant differences in the outcomes based on gender. It is worth noting that females had consistently better pre-test risk-factor scores than males.

For G-CAP sites, Table A4 in Appendix A shows that there were improvements from pre- to post-test for both genders, but males had better change scores for perceived risk, favorable attitudes, and perceived peer norms. This difference was statistically significant for favorable attitudes. Males had consistently lower pre-test risk-factor scores than females

Race/Ethnicity. Table A5 in Appendix A shows **county authorities'** data results separated by race (for those race groups with 40 or more participants), and Table A7 shows the results by ethnicity. White participants had positive, statistically significant change on each of the five risk-factor measures, as opposed to four for Black or African American participants (though decision-making was approaching significance), and two for "Other" race participants (perceived risk and perceived peer norms with favorable attitudes approaching significance). For perceived risk and perceived parental attitudes, there was a statistically significant difference in results by race. For perceived risk, this was due to the fact that Native Hawaiian, Other Pacific Islander, and Asian participants

all had negative changes on this measure while the other participants showed positive change. For perceived parental attitudes, American Indian or Alaskan Native, Native Hawaiian, and "Other" race participants had declines from pre-test to post-test while the other participants improved.

Participants of Hispanic, Latino, or Spanish descent or origin had statistically significant positive change for perceived risk, favorable attitudes, and perceived peer norms. However, their change scores were less positive on the risk-factor measures than other participants, except on perceived peer norms. The risk-factor measure outcome differences between participants of Hispanic, Latino, or Spanish descent or origin and the other participants were not significant, however.

For G-CAP sites, Table A6 in Appendix A shows that the statistically significant improvements on perceived risk, favorable attitudes, and perceived peer norms generally carried across racial groups, though Black or African American participants generally had the highest percent changes. No race group showed any change for perceived parental attitudes, though all had very high pre-test scores. There were no statistically significant differences in outcomes based on race. White participants generally had higher pre-test risk factor scores than the other two race groups.

Participants of Hispanic, Latino, or Spanish descent or origin (Table A8) had consistently lower pre-test risk-factor scores than the other participants but had consistently better change scores (though not significantly better).

Substance Use

The DAODAS Standard Survey and G-CAP Student Questionnaire 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 for substance use in the two projects are shown in Table 6.

Table 6. Overall Substance Use Rates, Combined, County Authorities, and G-CAP Sites

Measure	County Authorities (n=2,849)			G-CAP (n=4,227)			Combined (n=7,089)		
	Pre-Test Avg.	Post-Test Avg.	% Change	Pre-Test Avg.	Post-Test Avg.	% Change	Pre-Test Avg.	Post-Test Avg.	% Change
30-Day Alcohol Use^	18.9	15.2	-19.8**	16.8	14.1	-15.9**	17.6	14.5	-17.6**
30-Day Marijuana Use^	10.6	7.4	-29.7**	7.0	7.0	-1.0	8.5	7.2	-15.5**
30-Day Cigarette Use^	12.7	11.8	-7.1*	10.4	9.9	-4.5	11.3	10.7	-5.7*

* 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)

^ Negative changes are desired for these items

There were statistically significant declines in the percentage of participants using alcohol for both the county authorities and G-CAP sites (p<.05). County authorities data also show a statistically significant decline in the number of marijuana users and a near-significant decline in the number of cigarette users. G-CAP results also showed declines, though not significant ones. Combined, the changes were significant for alcohol and marijuana and near significant for cigarettes.

Demographic Differences in Risk-Factor Measures. Tables A1 through A8 in Appendix A display risk-factor measure and substance use rates results separated by age groups, (middle school ages and high school ages), gender, race, and ethnicity for both projects.

Age. Table A1 in Appendix A shows **county authorities'** 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 (significant for alcohol and marijuana), though the reduction was significantly greater for older students regarding marijuana use. Older participants had higher percentages of users for each substance at pre-test.

For G-CAP sites, Table A2 in Appendix A shows, as might be expected, that the percentage of older students using each substance was two to three times more than the percentage of younger users. High school students had consistency larger reductions in the percentage of users. The difference was statistically significant for alcohol and marijuana (p<.05).

Gender. Table A3 in Appendix A shows **county authorities'** data results separated by gender. Females had larger percent reductions in the number of users for all three substances though the difference was not statistically significant. Males were more likely to be users at pre-test for all three substances.

For G-CAP sites, Table A4 in Appendix A shows the results by gender. Both genders had statistically significant positive declines in the number of alcohol users. However,

females also had declines for marijuana and cigarettes, while males had increases. No differences were statistically significant. Males had higher pre-test percentages of 30-day use.

Race/Ethnicity. Table A5 in Appendix A shows **county authorities'** data results separated by race (for those race groups with 40 or more participants), and Table A7 shows the results by ethnicity. Black or African American participants had better reductions in the number of substance users than White participants, though "Other" race participants had the largest declines for alcohol and marijuana. Only Black or African American participants had a reduction in the number of cigarette users. None of the race differences were statistically significant.

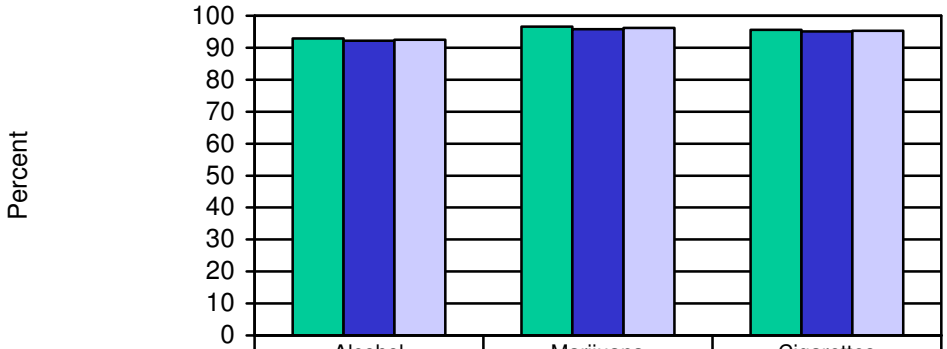
Both ethnicity groups had statistically significant reductions in the number of marijuana users, but only participants not of Hispanic, Latino, or Spanish ethnicity had a significant reduction in the number of cigarette alcohol users. Differences were not statistically significant. Participants of Hispanic, Latino, or Spanish descent or origin had higher pre-test use rates for all three substances as compared to those not of that ethnicity.

For G-CAP sites, Table A6 in Appendix A shows that "Other" race participants had the largest declines in percentage of users of alcohol and marijuana, followed by Black or African American participants. Only Black or African American participants had a reduction in the number of cigarette users. Race was a statistically significant factor on marijuana use ($p<.05$). White participants had higher percentages of substance users at pre-test compared to Black or African American participants, though "Other" race participants had even higher pre-test percentages of alcohol and marijuana users.

Participants of Hispanic, Latino, or Spanish ethnicity had a reduction in the percentage of users for alcohol only, but those not of that ethnicity had reductions on all three substances (Table A8). Differences were not statistically significant. 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.

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.

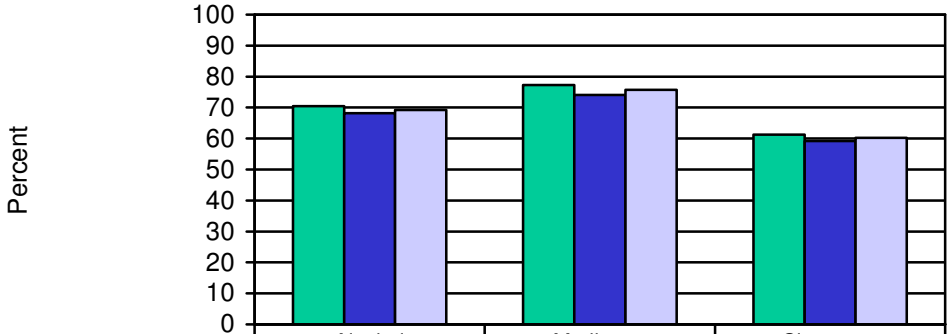
Chart 1. Percent of Pre-Test Non-Users Who Remained Non-Users: Combined, County Authorities, and G-CAP Sites



	Alcohol	Marijuana	Cigarettes
County Authorities	92.9	96.6	95.6
G-CAP	92.2	95.8	95.1
Combined	92.5	96.2	95.3

Charts 1 and 2 indicate similar effects for both projects on all three substances. More than 92% of pre-test alcohol non-users, 96% of pre-test marijuana non-users, and 95% of cigarette pre-test non-users remained non-users by post-test. Around 75% of marijuana users at pre-test, around 70% of alcohol users, and about 60% of cigarette users were using less by post-test. County authority programs had slightly better "preventive" and "reduction" effects.

Chart 2. Percent of Pre-Test Users Who Reduced Their Level of Use: Combined, County Authorities, and G-CAP Sites



	Alcohol	Marijuana	Cigarettes
County Authorities	70.5	77.3	61.3
G-CAP	68.2	74.1	59.2
Combined	69.2	75.7	60.2

Summary of Section II

For both the county authorities' prevention programs in FY '05 and the G-CAP project, a pre-post design was used with a survey containing some risk-factor items and three 30-day use questions for alcohol, marijuana, and cigarettes. There were 2,869 matched participants for the county authorities, and 4,229 for G-CAP. County authority participants were relatively evenly spread from ages 10 to 15, while G-CAP participants were primarily 11 to 13. Females were a slight majority for both projects, and the race breakdowns were almost identical with about 54% Black or African American, about 38% White, and about 5% "Other" race.

The county authorities' 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 ($p<.05$). For substance use, there were statistically significant reductions in the number of users of alcohol (19.8%) and marijuana (29.7%) and a near significant decline in cigarette users ($p<.10$).

G-CAP results reveal statistically significant changes for perceived risk, favorable attitudes, and perceived peer norms ($p<.05$). There was also an undesired significant change on perceived availability, though the evaluation team and the local sites agree that this measure does not relate to the content of any of the programs used in G-CAP and was a poor choice for the student questionnaire. There was a statistically significant reduction in the number of alcohol users from pre- to post-test and small, non-significant declines in the number of cigarette and marijuana users.

Demographic analyses reveal that age was the most important factor in results. Older participants had lower pre-test risk-factor scores and more pre-test substance users.

However, these older participants had statistically significantly better outcomes than the younger participants on all risk-factor items that were significant overall and on alcohol and marijuana users for both projects.

Females generally had higher pre-test risk-factor scores and a smaller percentage of pre-test substance users. However, gender was generally not a factor in outcomes. Participants of Hispanic, Latino, or Spanish origin or descent generally had lower pre-test risk-factor scores and higher percentages of substance users compared to participants not of that ethnicity. For both projects, Black or African American participants had better reductions in the number of substance users than White participants, though "Other" race participants had the largest declines for alcohol and marijuana. Only Black or African American participants had reductions in the number of cigarette users.

Both projects had relatively similar results for maintaining pre-test non-users as non-users at post-test (>92%) and reducing the amount of use for pre-test users by post-test (around 60% to 75%). County authority programs had slightly better results in these two analyses.

SECTION III: PROGRAM OUTCOMES

Across the county authority sites, 27 different programs were implemented; five were implemented through G-CAP. In this section, we compare the outcomes for the G-CAP programs and those county authority programs with 40 or more matched participants. The full tables with results by program are found in Appendix A in tables A9 and A10. A summary of the statistically significant effects by program are found below in Table 7 and described below.

Table 7. Summary of Significant Program Effects

Program	County Authorities*		G-CAP*	
	# of Sites	Significant Measures	# of Sites	Significant Measures
All Interventions	**53**	**Perceived Risk** **Favorable Attitudes** **Decision-Making** **Perceived Peer Norms** **Perceived Parental Attitudes** **30-Day Alcohol Use** **30-Day Marijuana Use** 30-Day Cigarette Use	**16**	**Perceived Risk** **Favorable Attitudes** **Perceived Peer Norms** **30-Day Alcohol Use**
All Stars	**8**	**Perceived Risk** **Favorable Attitudes** **Decision-Making** Perceived Peer Norms **30-Day Marijuana Use**	**10**	**Perceived Risk** **Favorable Attitudes** **Perceived Peer Norms** 30-Day Alcohol Use
ATOD Presentation	**1**	**Perceived Risk** **Favorable Attitudes** Decision-Making **Perceived Peer Norms** **Perceived Parental Attitudes** **30-Day Marijuana Use**		
Girls Grapevine	**1**	None		
Keep a Clear Mind	**3**	**Perceived Risk** **Favorable Attitudes** **Perceived Peer Norms**		
Life Skills Training	**6**	**Perceived Risk** **Favorable Attitudes** **Perceived Peer Norms** Perceived Parental Attitudes	**1**	*Perceived Risk* ***Perceived Peer Norms*** ***30-Day Alcohol Use*** ***30-Day Marijuana Use*** *30-Day Cigarette Use*
Project Alert	**6**	**Perceived Risk** **Favorable Attitudes** **Decision-Making** **Perceived Peer Norms** **30-Day Alcohol Use** **30-Day Marijuana Use**	**1**	None

Project Northland			**2**	**Perceived Risk** **Favorable Attitudes** **Perceived Peer Norms** **30-Day Alcohol Use** 30-Day Marijuana Use
Project Success	**1**	**Favorable Attitudes** Decision-Making ***Perceived Peer Norms*** **Perceived Parental Attitudes**		
Project Toward No Drug Abuse	**3**	*Perceived Risk*		
Project Toward No Tobacco Use	**3**	**Perceived Risk** **Favorable Attitudes** **Decision-Making** **Perceived Peer Norms** **Perceived Parental Attitudes** **30-Day Alcohol Use** **30-Day Marijuana Use** **30-Day Cigarette Use**		
RISE	**1**	**Perceived Risk**		
Second Step	**1**	None		
Woodrock Youth Development Program			**2**	***Perceived Risk*** ***Perceived Peer Norms***

*There were eight measures for county authorities and only seven for G-CAP when disregarding perceived availability.

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 multiple positive risk-factor changes in both projects, including perceived risk and favorable attitudes in both. It was the most commonly implemented program in G-CAP, accounting for about half of the participants in that database.

ATOD Presentation is a single-county general prevention education program that generated many positive changes, including all five risk factors. There was a more than 50% improvement in perceived risk scores.

Girls Grapevine is a single-county program developed to help sixth grade girls address their transition into middle school. There were no significant changes on the DAODAS Standard Survey, though the participants' pre-test results were quite favorable and difficult to improve upon.

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 three significant risk-factor changes: perceived risk, favorable attitudes, and perceived peer norms.

Life Skills Training, a skill-based evidence-based ATOD prevention curriculum, had multiple positive significant changes for the six county authority sites, but had multiple negative significant changes in one G-CAP site. However, there is a serious methodological issue that must be considered when viewing the G-CAP results. Because the coalition administered the post-test at the end of the school year to all participants, regardless of when the intervention was delivered, some participants had significant lengths of time between the actual end of the curriculum and the post-test. The recommendation from the evaluation team was that the pre-test be given within two weeks prior to the beginning of the curriculum content and the post-test be given with two weeks following the end of the curriculum content. There are two reasons that this procedure is significant. First, the longer the time period between the pre- and post-test, the more the "maturation" effect influences results, meaning that youth generally use more and have greater risk levels as they get older. With some participants having nearly 10 months between pre- and post-test, these results may be showing the influence of this maturation effect more than any program influence. Second, large periods of time between assessment points allow for more external factors to influence results. Even during an eight-week program, there are external effects (not counting the program itself) that can influence results (i.e., a new drug gaining popularity, notable media event glamorizing use, sudden easy availability of a substance). When the time period is extended between assessments, there are even more opportunities for external events to "drown out" the program effects.

Project Alert, an evidence-based ATOD prevention curriculum, had six positive significant effects (perceived risk, favorable attitudes, decision-making, perceived peer norms, 30-day alcohol use, and 30-day marijuana use) in the six county authority intervention sites but no significant effects in the one G-CAP site.

Project Northland, an evidence-based ATOD prevention curriculum with a strong focus on alcohol and influencing the environment, was only used by G-CAP sites. The overall results show significant effects on perceived risk, favorable attitudes, perceived peer norms, 30-day alcohol use, and 30-day marijuana use. One of the two sites had extremely positive results, while the other had more flat results.

Project Success, a selective and indicated evidence-based program for high-school-aged youth, was used in one county authority site only. There were three positive significant changes (favorable attitudes, decision-making, and perceived parental attitudes), but perceived peer norms had a significant negative change.

Project Toward No Drug Abuse, an evidence-based general ATOD prevention curriculum for high school youth, was used by three county authority sites and had an overall negative significant change for perceived risk. Two of the three sites had very few participants, so these overall results primarily reflect one site's results.

Project Toward No Tobacco Use, a comprehensive, evidence-based tobacco prevention program for middle school youth, had consistently large, positive significant changes for all five risk-factor measures and all three substances. No G-CAP sites used Project TNT.

RISE, Responsibility Increases Student Excellence, targets the areas of substance abuse, anti-violence, character education, and life skills. It had a statistically significant positive change for perceived risk.

Second Step, a universal evidence-based social skills program for middle school youth, was used by only one site and had no significant changes, though there was a sizable increase in perceived risk.

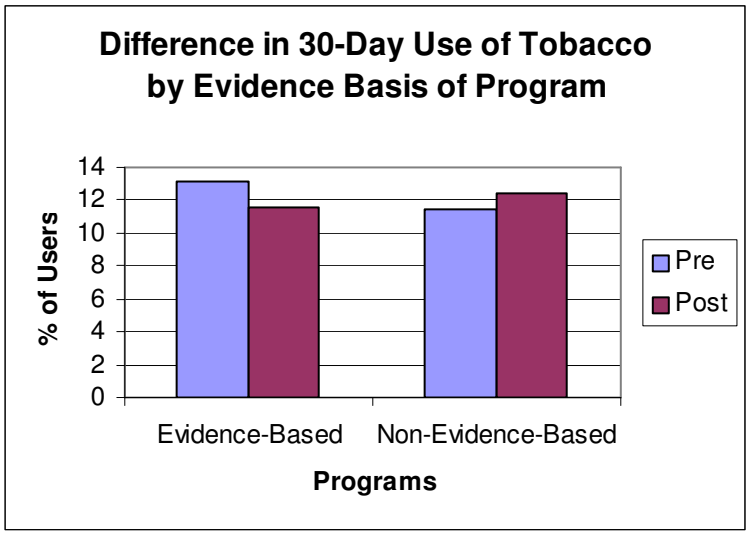
Woodrock Youth Development Program, a comprehensive selective evidence-based program with multiple components including homework assistance, social skills curriculum, and group cultural activities, was used by two G-CAP sites. Their results show two significant negative changes, perceived risk and perceived peer norms, but this is not completely unexpected given an evaluation design challenge that most other sites did not face. The WYDP is a much longer program than the traditional youth prevention curricula, which may run eight to 12 weeks. Longer programs have longer time frames between pre- and post-testing, which allows the "maturation effect" to have a great deal of influence. The maturation effect refers to the fact that as youth get older, they are more likely to use substances and have higher levels of personal risk. This effect is minimal when there is a short time period between pre- and post-test but substantial when the length is longer. WYDP participants had between eight and 22 months between pre and post-tests.

Evidence-Based vs. Non-Evidence-Based Programs

The county authorities were not required to use evidence-based interventions, which allows for a comparison of outcomes between evidence-based programs and non-evidence-based interventions. These results are displayed in Table A11 in Appendix A.

For every measure except perceived parental attitudes, evidence-based interventions had better change scores than non-evidence-based interventions. The difference was not statistically significant for any measure. The most divergent results were for cigarette use as evidence-based interventions had a statistically significant decrease in the number of users but non-evidence-based interventions had an increase in users. It should be noted that non-evidence-based interventions had generally higher pre-test risk-factor scores and lower pre-test substance use rates. This may account for some of the overall trend because non-evidence-based interventions had less room for improvement.

Chart 3. Tobacco Use Results for Evidence-Based vs. Non-Evidence-Based Programs



Summary of Section III

There were 53 county authority program implementations and 16 for G-CAP. Of the programs with multiple implementations, Project Toward No Tobacco Use (TNT), All Stars, and Project Northland had some of the most consistently positive results. There were serious evaluation methodology concerns with the G-CAP implementations of the Woodrock Youth Development Program and Life Skills Training that may have contributed to their poorer outcomes. Disregarding the G-CAP results, Life Skills Training and Project Alert had multiple positive outcomes similar to the successful programs mentioned above. Keep A Clear Mind also had three significant positive effects across three implementations.

Evidence-based programs had greater positive change results for participants than programs that were not evidence-based, though the differences were not significant and the non-evidence-based programs generally had more desirable pre-test scores that may have lessened their likelihood of larger positive changes. The outcome advantage of evidence-based programs was most notable regarding decreasing the number of tobacco 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 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. For both projects, the evaluation team and administrative staff 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 (this is particularly true for G-CAP, which used all evidence-based interventions that have already received rigorous evaluations) 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.

Fidelity was monitored through the G-CAP project through use of monthly fidelity checklists sent in to the state. These forms required coalitions to compare their original intervention plans with actual implementation results and record any adaptations. These forms were not analyzed in connection with these outcome results, so no conclusions regarding fidelity can be drawn. 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. Thus, 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 detected changes in response to a treatment (e.g. a program intervention) in *before and after* designs.

Testing Pre- and Post-Survey Differences in Risk-Factor Measures for Subgroups: To test if participant sex, participant race/ethnicity, and participant age accounted for significant differences in changes in the risk-factor and substance use results, we used the GLM Repeated Measures procedure to conduct both multivariate and univariate analyses. We tested models that included gender, race/ethnicity, and age as the independent (predictor) variables. The repeated risk-factor measure scores and percentages of past-month substance users of a particular program represented the multiple dependent variables.

Summary of Section IV

The methods used to generate outcomes for the county authority and G-CAP 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: ENVIRONMENTAL STRATEGIES

Environmental strategies attempt to reshape a community's availability, accessibility, and social norms regarding alcohol and tobacco for youth. The introductory section to these evaluation reports provides more details on environmental strategies. This section will discuss several strategies in detail, according to the amount of data available.

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.

G-CAP Compliance Checks: Overview. Across several G-CAP sites, there were 373 compliance checks where the proper form was completed. Of these, 126 were for tobacco, 232 were for alcohol, and 11 were for both. These latter 11 will not be included in the tobacco- and alcohol-specific breakdowns below to maximize clarity. About 61% of the checks were done in convenience store/gas station outlets followed by large groceries (13%), small groceries (10%), convenience stores only (9%), and drug stores (3%).

Table 8. Key G-CAP Compliance Check Findings

Compliance Check Feature	%
Alcohol Sales Completed	22.8
Tobacco Sales Completed	12.7
Merchant Asked Buyers Age	23.7
Merchant Asked to See ID	85.2
Merchant Studied ID	65.3
Completed Sales When Merchant Saw ID	13.3
Visible ID-Checking Signage in Store	63.5
Age-Verification Equipment Used	30.1

There were a greater percentage of successful alcohol purchases (22.8%) than tobacco purchases (12.7%), which is statistically significant ($p<.05$). Merchants were much more likely to ask to see an ID than merely ask the buyers' age. However, they only studied the ID 65.3% of the time. Even when the ID was studied, the sale was completed 13.3% of the time. Almost two-thirds of stores had posted signage stating that they check IDs, but only 30% had age-verification equipment.

Sales rates varied by community. The highest tobacco sales rate was 20%, and the lowest was 0%. The highest alcohol sales rate was 30%, and the lowest was 13%.

Table 9. Percentage of Completed Sales by Type of Business

Type of Business	% Sales Completed
Convenience Store/Gas Station	21.1
Convenience Store/No Gas	24.2
Small Groceries	19.4
Large Groceries	12.5
Drug Stores	8.3

Convenience stores had the highest sales rates, and drug stores had the lowest, but store type was not statistically significant for completed sales. It was significant for the presence of age-verification equipment ($p<.01$). Large grocery stores were most likely (43.6%) to have this equipment, but no drug stores did.

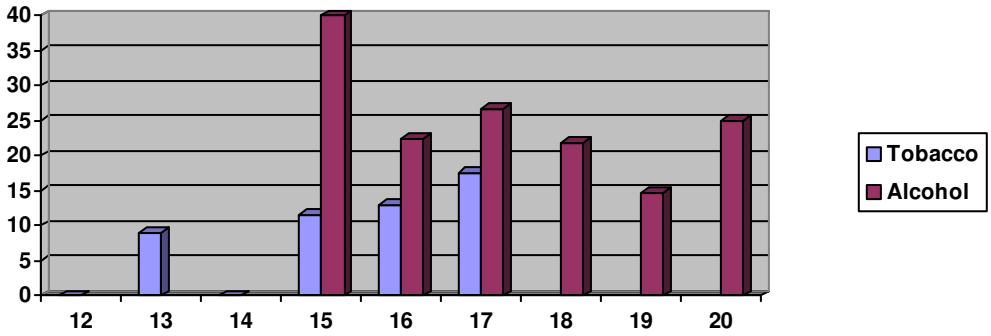
The table below displays the percentages of sales completed based on multiple demographic characteristics of the clerks and buyers. Though male clerks sold more often than female clerks, the difference was not significant. There was a significant effect ($p<.05$) for clerk race as Black or African American clerks sold least often and Hispanic and Other race clerks sold almost one-third of the time. Buyer gender was not a significant factor, but buyer race was ($p<.05$). Black or African American buyers purchased 22.6% of the time compared to just 13.6% of the time for White buyers. There were no significant differences based on whether the clerk and buyer were the same gender or race.

Table 10. Percentage of Retailer Sales by Demographic Characteristics

Compliance Check Characteristic	% Sales Completed
Clerk: Male	23.7
Clerk: Female	19.2
Clerk: Black or African American	16.8
Clerk: White	19.1
Clerk: Hispanic	66.7 (2 of 3)
Clerk: Other	31.3
Buyer: Male	19.1
Buyer: Female	19.7
Buyer: Black or African American	22.6
Buyer: White	13.6
Clerk and Buyer: Same Gender	22.2
Clerk and Buyer: Different Gender	18.0
Clerk and Buyer: Same Race	17.2
Clerk and Buyer: Different Race	21.3

For tobacco, there was the expected pattern of increasing sales rates as the buyers were closer to age 18. However, the expected pattern did not occur for alcohol. Seventeen year olds actually had higher sales rates than 18 and 19 year olds (there were only five checks by 15 year olds though their rate appears very high in the chart below).

Chart 4. Percentage of Successful Purchases by Volunteer Buyer Age



The clerk asking the buyer's age was significantly ($p<.05$) associated with completed sales (23.0% when not asked; 8.3% when asked). There was also a significant effect for when the clerk asked to see an ID (74.5% when not asked; 10.1% when asked).

The presence of ID-checking signage was not significant for completed sales or asking to see an ID but was significant ($p<.05$) for asking the buyers age (no signage: 11.1%; signage: 30.2%) and studying the ID (no signage: 47.1%; signage: 75.7%).

The only significant effect of the time of day for the compliance check is that clerks were significantly ($p<.001$) more likely to ask the buyer's age before 6 pm than after (33.1% vs. 14.9%).

The type of alcohol purchased was not a significant factor for completed sales but was a significant effect for whether the buyer's age was asked. Just more than 30% of the time, clerks asked the buyer's age when beer was purchased, but only 11.4% of the time when wine coolers were purchased. They also studied the ID significantly less often (beer: 78.4%; wine coolers: 59.1%).

The average clerk fine for an alcohol sale was $308.35. The average tobacco fine was $58.30.

G-CAP Alcohol Compliance Checks: An Evaluation. PIRE conducted an outcome evaluation of alcohol compliance checks because there were a number of sites that chose this strategy. PIRE conducted alcohol purchase surveys (non-law enforcement purchases using over-21 buyers who appear younger) to determine the impact of this practice on sales to underage youth. Two rounds of alcohol purchases were conducted in those communities, in addition to matched comparison sites for four of the G-CAP sites, selected because of their similar population size and race demographics. The first round was conducted between 1/2/03 and 2/11/03, and the second round was conducted between 4/26/04 and 5/20/04. An average of 10 sites were checked in each community. PIRE purchasers were over the age of 21 but verified to look younger by 21 as confirmed by an earlier process where strangers guessed their age. PIRE purchasers recorded several facets of the alcohol purchase, including whether their ID was requested, whether it was studied, whether their age was asked, whether age verification equipment was used, and whether there was visible signage stating that the clerk should be checking IDs of anyone who appears even close to 21. Merchants were not aware of the study. Key findings are presented below.

Table 11. Number of Sites in G-CAP Compliance Checks Study by Type of Community

G-CAP, w/ comparison sites	4
G-CAP, but not in study	1
Comparison	4

Table 12. Number of Retailers that Studied the ID by Type of Community

Type of Community	Pre-checks			Post-checks			% Change
	Yes	Total	%	Yes	Yes	%	
G-CAP w/ Comparison	32	40	80.0	25	37	67.6	-12.4
Comparison	27	40	67.5	15	37	40.5	-27.0
Total	59	80	73.8	40	74	54.1	-19.7

Table 13. Comparison of ID-Studying and Age Equipment Usage by G-CAP/Comparison Pairs

G-CAP Sites							Comparison Sites							% Difference (G-CAP change vs. Comparison change)	
	% Studied ID			% Used Age Equipment				% Studied ID			% Used Age Equipment				
	Pre	Post	Change	Pre	Post	Change		Pre	Post	Change	Pre	Post	Change	% Studied ID	% Used Age Equipment
Blackville	87.5	88.9	**+12.4**	12.5	66.7	**+54.2**	Estill	44.4	44.4	**0**	0	22.2	**+22.2**	**+12.4**	**+32.0**
Clinton	91.7	90.0	**-1.7**	33.3	50.0	**+16.7**	Hartsville	54.5	30.0	**-24.5**	54.5	30.0	**-24.5**	**+22.8**	**+41.2**
Charleston	60.0	40.0	**-20.0**	20.0	0	**-20.0**	Eau Claire	90.0	33.3	**-56.7**	0	22.2	**+22.2**	**+36.7**	**-42.2**
Lake City	80.0	50.0	**-30.0**	40.0	44.4	**+4.4**	Marion	80.0	55.6	**-24.4**	20.0	60.0	**+40.0**	**-5.6**	**-35.6**
Edisto	70.0	72.7	**+2.7**	10.0	9.1	**-0.9**									

In two of the five G-CAP communities, there was essentially no change in the percentage of merchants who studied the buyers' IDs. Only one of the other three communities had a positive trend in ID-studying (12.4% increase in Blackville). However, as compared to their matched comparison communities, three of the four G-CAP communities had more positive trends because no comparison communities had positive changes in ID-studying and three of them declined by more than 20%. Combined, G-CAP sites' ID-studying percentage decreased by 12.4%, as compared to a 27.0% decrease for the comparison sites, which is a statistically significant difference ($p<.05$).

The chart below compares the impact of the checks with the number of compliance checks conducted between the time of PIRE's pre-checks and post-checks, roughly 16 months. Because most of the sites conducted a similar number of checks (16-22), there is no opportunity to see if the frequency of checks impacts the results. It may be worth noting, however, that Lake City has the fewest checks (10) and the greatest decline in ID-studying (-30.0%).

Table 14. Comparison of Compliance Check Impact with Number of Checks Conducted

G-CAP Site	G-CAP Site % Change for Studying ID	Number of Compliance Checks Conducted
Blackville	+12.4%	16
Edisto	+2.7%	22
Clinton	-1.7%	18
Charleston	-20.0%	20
Lake City	-30.0%	10

Conclusions. Though there may not be enough data to make generalizations, these results suggest that G-CAP compliance checks may have slowed a reduction in the percentage of merchants who are adequately studying young-looking buyers' IDs as compared to communities without this additional enforcement.

It appears that G-CAP efforts had no impact on increased use of signage specifying that a clerk check IDs for all those who appear close to underage.

It cannot be determined from this study if the frequency of checks impacts results. However, it is worth noting that even the site with the most checks (22) during the 16-month period only averages out to just over one store checked per month. It may be that lack of enforcement is the main explanation for the lack of stronger impact from pre-checks to post-checks.

Update on G-CAP Compliance Checks. Since the completion of PIRE's evaluation of alcohol compliance checks, many more alcohol and tobacco compliance checks have been completed. In a review of the G-CAP Coalition Closeout reports, the coalitions' final submissions, all of the coalitions that provided data reported improvements in their alcohol and tobacco violation rates. Many reported rates that were roughly two-thirds better than they were at the initiation of compliance checking.

County Authority Compliance Checks and Planning. Many county authorities opted to spend FY '05 preparing for tobacco compliance checks by building law enforcement relationships and obtaining the necessary trainings. There were, however, some counties that had plans to begin compliance check operations for tobacco and alcohol this year.

The outcome objective reports for alcohol compliance checks indicate a number of unsuccessful efforts. Multiple counties reported that they were unsuccessful obtaining law enforcement support. Some appeared to have initiated operations but did not do the promised data collection that would allow them to gauge their success in reducing access from the beginning of the year to the end. Many counties had objectives regarding law enforcement attitudes they were hoping to influence. Some reports indicated success in this area, and some did not pre- and post-test as their plans were written.

There seemed to be more success in tobacco compliance check efforts. There were still some sites that were not able to obtain law enforcement cooperation, but there were more sites that reported lower retailer violation rates, as shown from their Synar study, that could be linked to the law enforcement operations.

Summary of Alcohol and Tobacco Compliance Checks

G-CAP sub-recipients returned forms on 232 alcohol compliance checks and 126 tobacco checks. 22.8% of alcohol purchase attempts were successful compared to 12.7% of tobacco attempts ($p<.05$). Convenience stores had the highest sales rates, and drug stores had the least. The race of the clerk (Hispanic and "Other" race clerks sell more often) and the race of the buyer (Black or African American youth can purchase more often) were statistically significant for completed sales. The average clerk fine for an alcohol sale was $308.35, and the average tobacco fine was $58.30.

In a study of G-CAP alcohol compliance checks involving four G-CAP sites and four comparison sites over a 16-month period, retailer violation rates went up in both sets of communities, though the G-CAP sites had smaller increases. Though there may not be

enough data to make generalizations, these results suggest that G-CAP compliance checks may have slowed a reduction in the percentage of merchants who are adequately studying young-looking buyers' IDs as compared to communities without this additional enforcement. Lack of decreases in retailer violation rates may be due to the fact that even the G-CAP sites had relatively low levels of enforcement. Even the site with the most checks averaged just over one store checked per month.

Overall for G-CAP and county authorities, local prevention staff report positive results at the end of the project or fiscal year for tobacco compliance checks. Especially for alcohol, many reported a number of barriers that prevented operations from taking place. Insufficient data collection was also a common problem.

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 under 18 can successfully buy cigarettes from retail outlets. In 2005, the Synar study revealed a retailer violation rate of 11.2%, which continues a trend of decreasing violation rates for nine of the past 10 years that began at 63.2% in 1994. The 2004 rate was 11.5%. Counties varied in their violation rate from 0% to 33.3%.

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. County authorities were each required to implement merchant education programming in FY '05 and were instructed to use a curriculum off of an approved list maintained by DAODAS.

Partially due to multiple curricula being used, there is no consistent evaluation used statewide to evaluate merchant education. Even among those counties using a common curriculum, staff varied in whether or how they used the curriculum's evaluation instrument. Some counties used a pre-post design, while some used a post-only. Due to this lack of standardization, it is difficult to draw any conclusions about the effectiveness of merchant education statewide and impossible to merge data to make definitive statements.

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 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 75%. Generally, prevention staff exceeded these outcomes with agreement rates typically from 70% to 100%. This would indicate that merchant education programs are generally producing merchants who report the desired attitudes.

For G-CAP, only two coalitions reported merchant education outcomes. Both had more than 80% agreement with statements identical or similar to those listed above on their merchant education post-tests.

Summary of Merchant Education

Prevention staff generally exceeded their expectations for the percentage of merchant education participants agreeing with targeted beliefs. This would indicate that merchant education programs are generally producing merchants who report the desired attitudes, though the merchants may have had these desired attitudes prior the training.

SOCIAL NORMS CAMPAIGNS

Two G-CAP sites developed social norms campaigns, which are intended to correct youth and/or adult perceptions of substance use. Both sites addressed alcohol use among middle school and high school youth. After surveying youth for accurate use rates, the sites developed marketing materials that feature a set of accurate statistics that are intended to incorrect overestimations of local use. Only one site provided outcome objectives and data for this approach, and those objectives were not achieved. Staff attributed continued overestimation of use by youth, parents, and educators to some highly publicized incidents involving minors drinking on school grounds.

PUBLIC SAFETY CHECKPOINTS

Also called sobriety checkpoints, this intervention involves roadside law enforcement operations where all of or a selection of drivers passing through a certain area are stopped and checked for proof of license and insurance. This stop allows officers to possibly detect additional violations, including those involving drinking and driving. Assessing the effectiveness of public safety checkpoints is difficult because increases in enforcement will often lead to increased violations, which seem to run counter to the intended long-term desired effects. One coalition, however, did report fewer violations issued during checkpoints after two years of operations as compared to the initial violation rates. Two others reported no youth arrests in the final year of operations, which could be interpreted as success if enforcement was vigorous.

ADDRESSING POLICIES

In different ways, several G-CAP coalitions addressed public or school policies regarding alcohol, tobacco, and other drug use. Some coalitions did not include outcome objectives and data for this approach, but one site documented that they doubled the number of churches with ATOD policies.

SECTION VI: PARENTING PROGRAMS

Roughly half of the county authorities had a management plan for a 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 incarcerated adults or working with young mothers.

There is no standard evaluation tool in the state for parenting programs. Reviewing county's outcome objectives and results revealed that the most common target area of change was parent-child bonding/cohesion, but this was not a majority because there was great variation in targeted outcomes. Many of the outcome objectives written were actually process objectives. There were also a number of parent programs that were never implemented as intended. There was also a very high rate of incomplete or unmatched results. Many counties reported that data was not available at the time of the report, and many listed results that did not correspond to their own outcome objectives. When correct data was presented, it was sometimes positive and sometimes negative.

Only three G-CAP coalitions reported parenting program outcomes in their Coalition Closeout Reports. One had numerous positive shifts in responses, including items asking whether children were involved in discussions about what their punishments should be for misbehaving. The other coalitions had very large increases in intentions to use effective parenting strategies and to set clear family norms.

Summary of Section VI

Evaluation and data management for parenting programs is a weak area. There is not a standardized instrument, and counties appeared unsure in many cases how to develop and measure appropriate outcomes. When accurate data were presented, results were mixed for the county authorities and more consistently positive for G-CAP.

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.

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 a certain number of community groups become active or see a certain number of activities implemented by their coalition(s). One plan had an outcome objective of a certain ordinance being passed, but it did not. 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.

About half of the G-CAP coalitions had process or outcome objectives related to coalition development or growth of the coalition. Of those that had outcome objectives related to the coalition, several involved increased attendance and membership at meetings. All but one coalition was successful in increasing adult membership, and that coalition did succeed in increasing youth membership.

Youth Leadership Groups. Many county agencies work with one or more youth leadership groups. Working with these groups is typically distinct from education services because the youth are not being targeted for having their risks reduced but are developed as leaders so they can better influence their peers or their environment. These activities often occur under the South Carolina Teen Institute framework. These services do not typically have outcomes associated with them because change in the participants is not the primary focus. Those that did have outcomes were varied and cannot be summarized easily. Some agencies still chose to evaluate the participants as if they were program participants on measures such as perceived risk and substance use. The other most common approach was having an outcome related to the amount of activities conducted by the youth groups such as completing their Teen Institute plan or reaching a certain number of peers.

A few G-CAP coalitions had outcome objectives related to helping youth groups organize a number of activities or changing their perceived risk. Reports indicate success on both approaches.

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 occurred because pre- and post-tests typically are not feasible when contact is brief. As encouraged by DAODAS, most agencies said that outcomes could not accurately be assessed for their information dissemination plans. For the few that did provide outcomes, some did so by brief pre- and post-testing before and after a presentation or by giving a post-survey only that asked participants if they had increased awareness or agreed with certain beliefs provided on the survey. In these instances, agencies generally reported meeting their outcome objectives. Like coalition work, information dissemination is considered an important part of prevention but not one that can easily provide outcomes.

Alternative Activities. Alternatives are typically positive activities for youth that encourage positive youth development and/or occupy young peoples' time so that they are involved in constructive activities. Counties had a wide range of outcome objectives for alternatives, including many who said that they could not accurately assess their intended outcomes. Many developed a way to measure attitude changes or life skills regarding ATOD use; results were mixed, as some had the changes they desired and some did not.

Summary of Section VII

Many of the prevention activities described in this section (coalition work, youth leadership development programs, information dissemination, and alternative activities) 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: County Authorities

Measure	Middle School (n=1,965)			High School (n=890)		
	Pre-Test Avg.	Post-Test Avg.	% Change	Pre-Test Avg.	Post-Test Avg.	% Change
Perceived Risk	2.22	2.47	11.4**	2.13	2.45	15.1**
Favorable Attitudes	2.66	2.75	3.3**	2.20	2.38	8.0**
Decision-Making	1.91	1.94	1.8**	1.71	1.81	6.3**
Perceived Peer Norms	8.47	8.71	2.8**	6.95	7.40	6.4**
Perceived Parental Attitudes	2.82	2.86	1.6**	2.58	2.70	4.6**
30-Day Alcohol Use^	14.3	11.1	-22.7**	28.9	24.2	-16.3**
30-Day Marijuana Use^	6.2	4.2	-33.5**	20.1	14.7	-27.1**
30-Day Cigarette Use^	7.3	7.0	-4.9	24.4	22.4	-8.5*

^ 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 A2. Overall Results by Age: G-CAP Sites

Measure	Middle School (n=3,415)			High School (n=682)		
	Pre-Test Avg.	Post-Test Avg.	% Change	Pre-Test Avg.	Post-Test Avg.	% Change
Perceived Risk	2.12	2.26	6.6**	2.08	2.31	11.2**
Favorable Attitudes^^	1.54	1.59	3.7**	1.25	1.40	12.2**
Perceived Peer Norms	8.26	8.40	1.6**	7.27	7.69	5.8**
Perceived Parental Attitudes^^	1.85	1.86	0.3	1.76	1.78	1.0
30-Day Alcohol Use^	14.8	12.6	-15.1**	27.7	21.3	-23.2**
30-Day Marijuana Use^	5.0	5.3	5.6	16.9	14.0	-17.5*
30-Day Cigarette Use^	8.6	8.4	-1.4	19.9	17.2	-13.6

^ Negative change scores are desired for these items

^^ Ns may have been smaller for these items due to an error on the original pre-post test that disqualified some responses

* 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 Gender: County Authorities

Measure	Males (n=1,284)			Females (n=1,567)		
	Pre-Test Avg.	Post-Test Avg.	% Change	Pre-Test Avg.	Post-Test Avg.	% Change
Perceived Risk	2.12	2.41	13.8**	2.25	2.51	11.4**
Favorable Attitudes	2.41	2.55	5.7**	2.60	2.70	3.8**
Decision-Making	1.72	1.77	2.9**	1.95	2.01	3.4**
Perceived Peer Norms	7.66	7.95	3.8**	8.29	8.59	3.6**
Perceived Parental Attitudes	2.70	2.76	2.2**	2.78	2.85	2.7**
30-Day Alcohol Use^	23.3	18.9	-18.9**	15.1	11.9	-21.2**
30-Day Marijuana Use^	14.8	11.3	-23.6**	6.9	4.2	-39.2**
30-Day Cigarette Use^	16.7	16.0	-3.9	9.1	8.1	-11.3*

^ 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 Gender: G-CAP Sites

Measure	Males (n=2,029)			Females (n=2,145)		
	Pre-Test Avg.	Post-Test Avg.	% Change	Pre-Test Avg.	Post-Test Avg.	% Change
Perceived Risk	2.07	2.23	7.7**	2.15	2.31	7.1**
Favorable Attitudes^^	1.38	1.51	8.9**	1.58	1.61	1.8*
Perceived Peer Norms	7.80	8.03	2.9**	8.38	8.51	1.6**
Perceived Parental Attitudes^^	1.81	1.81	0.3	1.86	1.87	0.4
30-Day Alcohol Use^	19.3	16.3	-15.8**	14.1	12.0	-15.3**
30-Day Marijuana Use^	11.0	14.5	32.2	5.2	4.9	-5.4
30-Day Cigarette Use^	17.2	17.6	2.3	8.2	7.3	-10.6

^ Negative change scores are desired for these items

^^ Ns may have been smaller for these items due to an error on the original pre-post test that disqualified some responses

* 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 Race Group: County Authorities

Measure	White Participants (n=1,094)			Black or African American Participants (n=1,560)			"Other" Race Participants (n=147)		
	Pre-Test Avg.	Post-Test Avg.	% Change	Pre-Test Avg.	Post-Test Avg.	% Change	Pre-Test Avg.	Post-Test Avg.	% Change
Perceived Risk	2.21	2.53	14.3**	2.18	2.43	11.7**	2.18	2.41	10.4**
Favorable Attitudes	2.49	2.62	5.3**	2.53	2.64	4.2**	2.45	2.54	3.5*
Decision-Making	1.81	1.90	4.6**	1.87	1.90	1.9*	1.77	1.86	5.0
Perceived Peer Norms	7.97	8.24	3.4**	8.01	8.34	4.1**	7.86	8.31	5.6**
Perceived Parental Attitudes	2.71	2.82	4.0**	2.76	2.81	1.9**	2.76	2.73	-1.0
30-Day Alcohol Use^	18.1	15.2	-16.0**	19.3	15.0	-22.1**	22.6	15.2	-32.9**
30-Day Marijuana Use^	10.5	8.0	-23.8**	10.4	6.9	-33.7**	13.6	8.3	-38.8*
30-Day Cigarette Use^	14.4	14.7	2.5	11.3	9.5	-15.7**	12.9	13.8	6.7

^ 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 by Race Group: G-CAP Sites

Measure	White Participants (n=1,242)			Black or African American Participants (n=1,735)			"Other" Race Participants (n=148)		
	Pre-Test Avg.	Post-Test Avg.	% Change	Pre-Test Avg.	Post-Test Avg.	% Change	Pre-Test Avg.	Post-Test Avg.	% Change
Perceived Risk	2.27	2.38	4.8**	2.05	2.22	8.3**	2.08	2.25	7.8**
Favorable Attitudes	1.54	1.59	3.2**	1.45	1.55	7.0**	1.45	1.51	3.8
Perceived Peer Norms	8.15	8.27	1.5**	8.15	8.37	2.7**	7.84	8.17	4.2**
Perceived Parental Attitudes	1.87	1.88	0.5	1.81	1.83	1.0	1.84	1.82	-0.9
30-Day Alcohol Use^	17.8	14.3	-19.6**	15.0	11.6	-22.5**	21.0	16.1	-23.2
30-Day Marijuana Use^	7.5	7.2	-3.9	4.8	4.3	-9.7	10.1	6.9	-31.6
30-Day Cigarette Use^	13.7	13.7	0.3	6.9	5.7	-17.9*	12.8	13.1	2.0

^ Negative change scores are desired for these items.

^^ Ns may have been smaller for these items due to an error on the original pre-post test that disqualified some responses

* 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 by Ethnicity: County Authorities

Measure	Participants of Hispanic, Latino, or Spanish Descent or Origin (n=145)			Participants Not of Hispanic, Latino, or Spanish Descent or Origin (n=2,685)		
	Pre-Test Avg.	Post-Test Avg.	% Change	Pre-Test Avg.	Post-Test Avg.	% Change
Perceived Risk	2.19	2.42	10.4**	2.19	2.47	12.8**
Favorable Attitudes	2.42	2.52	4.1**	2.52	2.64	4.7**
Decision-Making	1.85	1.89	2.5	1.84	1.90	3.3**
Perceived Peer Norms	7.82	8.30	6.1**	8.01	8.31	3.7**
Perceived Parental Attitudes	2.69	2.72	1.0	2.74	2.82	2.7**
30-Day Alcohol Use^	24.1	18.8	-22.3	18.6	14.9	-20.3**
30-Day Marijuana Use^	17.4	9.7	-44.0**	10.2	7.3	-28.4**
30-Day Cigarette Use^	15.2	16.8	10.6	12.5	11.4	-8.9**

^ 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 A8. Overall Results by Ethnicity: G-CAP Sites

Measure	Participants of Hispanic, Latino, or Spanish Descent or Origin (n=183)			Participants Not of Hispanic, Latino, or Spanish Descent or Origin (n=3,915)		
	Pre-Test Avg.	Post-Test Avg.	% Change	Pre-Test Avg.	Post-Test Avg.	% Change
Perceived Risk	2.00	2.22	10.9**	2.12	2.28	7.3**
Favorable Attitudes	1.39	1.50	7.9*	1.49	1.67	5.1**
Perceived Peer Norms	7.64	8.14	6.6**	8.13	8.30	2.2**
Perceived Parental Attitudes	1.80	1.81	0.6	1.84	1.84	0.3
30-Day Alcohol Use^	19.3	16.3	-15.8	16.6	13.7	-17.5**
30-Day Marijuana Use^	11.0	14.5	32.2	6.7	6.2	-7.1
30-Day Cigarette Use^	17.2	17.6	2.3	9.9	9.3	-6.3

^ Negative change scores are desired for these items

^^ Ns may have been smaller for these items due to an error on the original pre-post test that disqualified some responses

* 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 A9. Overall Results by Program: County Authorities

Measure	All Programs (n=2,865)			All Stars (n=254)			ATOD Presentation (n=87)		
	Pre-Test Avg.	Pre-Test Avg.	Pre-Test Avg.	Pre-Test Avg.	Post-Test Avg.	% Change	Pre-Test Avg.	Post-Test Avg.	% Change
Perceived Risk	2.19	2.47	12.7**	2.05	2.51	22.1**	1.91	2.94	54.3**
Favorable Attitudes	2.51	2.63	4.6**	2.41	2.52	4.2**	2.10	2.30	9.4**
Decision-Making	1.84	1.90	3.1**	1.85	1.99	7.5**	1.50	1.63	8.9*
Perceived Peer Norms	8.06	8.37	3.8**	7.97	8.16	2.4*	6.64	7.30	9.9**
Perceived Parental Attitudes	2.76	2.80	1.6**	2.76	2.80	1.5	2.35	2.61	10.8**
30-Day Alcohol Use^	18.9	15.2	-19.8**	25.1	19.7	21.6	32.6	29.1	-10.7
30-Day Marijuana Use^	10.6	7.4	-29.7**	16.9	8.7	-48.8**	29.9	22.1	-26.1**
30-Day Cigarette Use^	12.7	11.8	-7.1*	16.5	18.9	14.3	38.8	35.6	-8.2

^ 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 A9. Overall Results by Program: County Authorities (continued)

Measure	Girls Grapevine (n=153)			Keep A Clear Mind (n=346)			Life Skills Training (n=360)		
	Pre-Test Avg.	Pre-Test Avg.	Pre-Test Avg.	Pre-Test Avg.	Post-Test Avg.	% Change	Pre-Test Avg.	Post-Test Avg.	% Change
Perceived Risk	2.62	2.67	1.9	2.36	2.58	9.2**	2.21	2.60	17.7**
Favorable Attitudes	2.74	2.72	-1.9	2.66	2.75	3.2**	2.80	2.85	1.6**
Decision-Making	2.14	2.13	-0.7	1.92	1.93	0.8	2.02	2.06	2.4
Perceived Peer Norms	9.06	8.94	-1.3	8.75	8.99	2.7**	8.81	9.07	3.0**
Perceived Parental Attitudes	2.88	2.88	-0.1	2.79	2.82	1.0	2.89	2.92	1.1*
30-Day Alcohol Use^	7.2	9.9	36.3	14.5	14.8	2.3	9.8	7.2	-25.7
30-Day Marijuana Use^	1.3	3.3	152.3	5.5	4.7	-15.3	3.1	1.7	-46.0
30-Day Cigarette Use^	2.0	5.3	163.0	9.3	6.4	-30.8	6.2	5.0	-17.4

^ 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 A9. Overall Results by Program: County Authorities (continued)

Measure	Project Alert (n=489)			Project SUCCESS (n=125)			Project Toward No Drug Abuse (TND) (n=174)		
	Pre-Test Avg.	Post-Test Avg.	% Change	Pre-Test Avg.	Post-Test Avg.	% Change	Pre-Test Avg.	Post-Test Avg.	% Change
Perceived Risk	2.11	2.36	11.8**	2.11	2.15	2.2	2.19	2.07	-5.1*
Favorable Attitudes	2.45	2.62	6.7**	2.13	2.26	6.4*	2.36	2.33	-1.4
Decision-Making	1.72	1.78	3.9**	1.85	1.72	-7.2**	1.69	1.71	1.2
Perceived Peer Norms	7.62	8.03	5.4**	6.90	7.23	4.7**	7.43	7.38	-0.7
Perceived Parental Attitudes	2.76	2.79	1.0	2.64	2.77	5.1**	2.63	2.64	0.7
30-Day Alcohol Use^	22.8	13.8	-39.4**	28.5	22.6	-20.7	26.5	27.2	2.6
30-Day Marijuana Use^	12.8	8.8	-30.9**	16.1	14.4	-10.7	14.0	15.3	9.6
30-Day Cigarette Use^	14.5	12.9	-10.9	18.6	15.2	-18.1	19.2	20.4	6.0

^ 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 A9. Overall Results by Program: County Authorities (continued)

Measure	Project TNT (n=319)			RISE (n=234)			Second Step (n=50)		
	Pre-Test Avg.	Post-Test Avg.	% Change	Pre-Test Avg.	Post-Test Avg.	% Change	Pre-Test Avg.	Post-Test Avg.	% Change
Perceived Risk	2.24	2.72	21.4**	2.17	2.27	4.5**	1.44	1.71	18.8
Favorable Attitudes	2.40	2.77	15.2**	2.80	2.81	0.6	2.12	2.06	-3.0
Decision-Making	1.72	1.89	9.6**	2.08	2.05	-1.5	1.21	1.30	7.0
Perceived Peer Norms	7.22	8.06	11.5**	8.76	8.92	1.8	7.64	7.48	-2.1
Perceived Parental Attitudes	2.58	2.88	11.7**	2.89	2.90	0.2	2.52	2.37	-5.9
30-Day Alcohol Use^	21.7	16.0	-26.3**	7.8	8.8	12.0	24.0	14.0	-41.7
30-Day Marijuana Use^	10.7	5.0	-52.8**	5.2	3.0	-42.0	26.0	20.0	-23.1
30-Day Cigarette Use^	11.6	8.2	-29.7**	2.6	4.3	66.5	34.0	32.0	-5.9

^ 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 A10. Overall Results by Program: G-CAP

Measure	Overall (n=4,227)			All Stars (n=2,052)			Life Skills Training❖ (n=196)		
	Pre-Test Avg.	Post-Test Avg.	% Change	Pre-Test Avg.	Post-Test Avg.	% Change	Pre-Test Avg.	Post-Test Avg.	% Change
Perceived Risk	2.11	2.27	7.3**	2.08	2.23	6.9**	2.05	1.95	-4.9*
Favorable Attitudes^^	1.48	1.56	5.0**	1.55	1.58	2.0**	1.38	1.38	-0.4
Perceived Peer Norms	8.10	8.28	2.2**	8.33	8.46	1.6**	7.90	7.53	-4.8**
Perceived Parental Attitudes^^	1.84	1.84	0.3	1.85	1.84	-0.2	1.71	1.56	-8.5
30-Day Alcohol Use^	16.8	14.1	-15.9**	12.1	10.8	-10.8*	23.8	34.7	46.2**
30-Day Marijuana Use^	7.0	7.0	-1.0	4.5	4.2	-8.1	16.0	27.9	74.1**
30-Day Cigarette Use^	10.4	9.9	-4.5	7.3	6.9	-5.8	16.6	24.2	46.2*

^ Negative change scores are desired for these items.

^^ Ns may have been smaller for these items due to an error on the original pre-post test that disqualified some responses

❖Refer to p. 22 for a discussion of the methodological issues regarding the evaluation of this program

* 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 A10. Overall Results by Program: G-CAP (continued)

Measure	Project Alert (n=244)			Project Northland (n=1,633)			Woodrock Youth Development Program❖ (n=103)		
	Pre-Test Avg.	Post-Test Avg.	% Change	Pre-Test Avg.	Post-Test Avg.	% Change	Pre-Test Avg.	Post-Test Avg.	% Change
Perceived Risk	2.05	2.08	1.6	2.16	2.41	11.3**	2.28	2.00	-11.7**
Favorable Attitudes^^	1.41	1.33	-5.8	1.41	1.56	10.6**	1.49	1.40	-5.8
Perceived Peer Norms	7.83	7.99	2.1	7.83	8.20	4.7**	8.63	7.89	-8.7**
Perceived Parental Attitudes^^	1.87	1.87	0	1.82	1.84	1.2	1.81	1.87	3.2
30-Day Alcohol Use^	19.8	19.3	-2.9	22.0	15.4	-30.0**	6.8	7.8	15.3
30-Day Marijuana Use^	2.1	3.7	80.5	10.2	8.8	-13.3*	2.9	2.0	-32.6
30-Day Cigarette Use^	10.3	8.2	-20.6	14.1	12.7	-9.6	3.9	7.8	102

^ Negative change scores are desired for these items.

^^ Ns may have been smaller for these items due to an error on the original pre-post test that disqualified some responses

❖ Refer to p. 23 for a discussion of the methodological issues regarding the evaluation this program

* 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 A11. Overall Results for Evidence-Based Vs. Non-Evidence-Based Programs: County Authorities

Measure	Evidence-Based (n=2,161)			Non-Evidence-Based (n=705)		
	Pre-Test Avg.	Post-Test Avg.	% Change	Pre-Test Avg.	Post-Test Avg.	% Change
Perceived Risk	2.17	2.46	13.1**	2.23	2.49	11.5**
Favorable Attitudes	2.50	2.64	5.3**	2.55	2.61	2.5**
Decision-Making	1.81	1.88	3.9**	1.94	1.96	0.9
Perceived Peer Norms	8.01	8.37	4.5**	8.20	8.36	2.0**
Perceived Parental Attitudes	2.78	2.81	1.2**	2.68	2.76	3.2**
30-Day Alcohol Use^	19.9	15.3	-23.0**	15.9	14.7	-7.5
30-Day Marijuana Use^	10.8	7.3	-32.0**	9.9	7.7	-21.7**
30-Day Cigarette Use^	13.1	11.6	-11.7**	11.4	12.4	9.2

^ 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)