

Fiscal Year 2019



Prevention Outcomes Annual Report

South Carolina
DAODAS
Department of Alcohol and Other Drug Abuse Services



Pacific Institute for Research and Evaluation

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EXECUTIVE SUMMARY

This report summarizes prevention outcomes generated by the South Carolina county authority substance abuse prevention system in Fiscal Year 2019 (July 1, 2018 – June 30, 2019). Much of the report focuses on prevention outcomes generated through pre- and post-testing of middle and high school youth who participated in prevention programs. The report also includes data related to county alcohol and tobacco environmental strategies (e.g., compliance checks, bar checks, and merchant education), the Youth Access to Tobacco Study (Synar), and the distribution of prevention services.

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

- There were 2,123 participants with matched pre- and post-tests. Most (99.3%) participants were between the ages of 10 and 17. There was an equal distribution of females (50%) and males (50%). Most participants identified as White (43.1%) or Black/African American (38.9%).
- The results showed **statistically significant positive changes on three of the five risk factor** measures: perceived risk, decision-making, and peer norms.
- For **substance use**, there was a **statistically significant reduction for one** out of eight substances — alcohol.
- For **all eight substances measured**, more than **96.6% of participants who were non-users at pre-test remained non-users at post-test** for each substance.
- For **all eight substances measured**, the **majority** (at least 58.3%) of those who used at pre-test **reported reducing their use** for that substance **at post-test**.
- **Average age of first use** for **cigarettes, other tobacco products, and alcohol** ranged from **11.4 to 11.9** years. The average age of first use of **other illegal drugs** and **marijuana** was 11.4 and 12.4 years, respectively.
- **Twelve different curriculum-based programs were implemented**, with 100% of participants being in evidence-based programs.

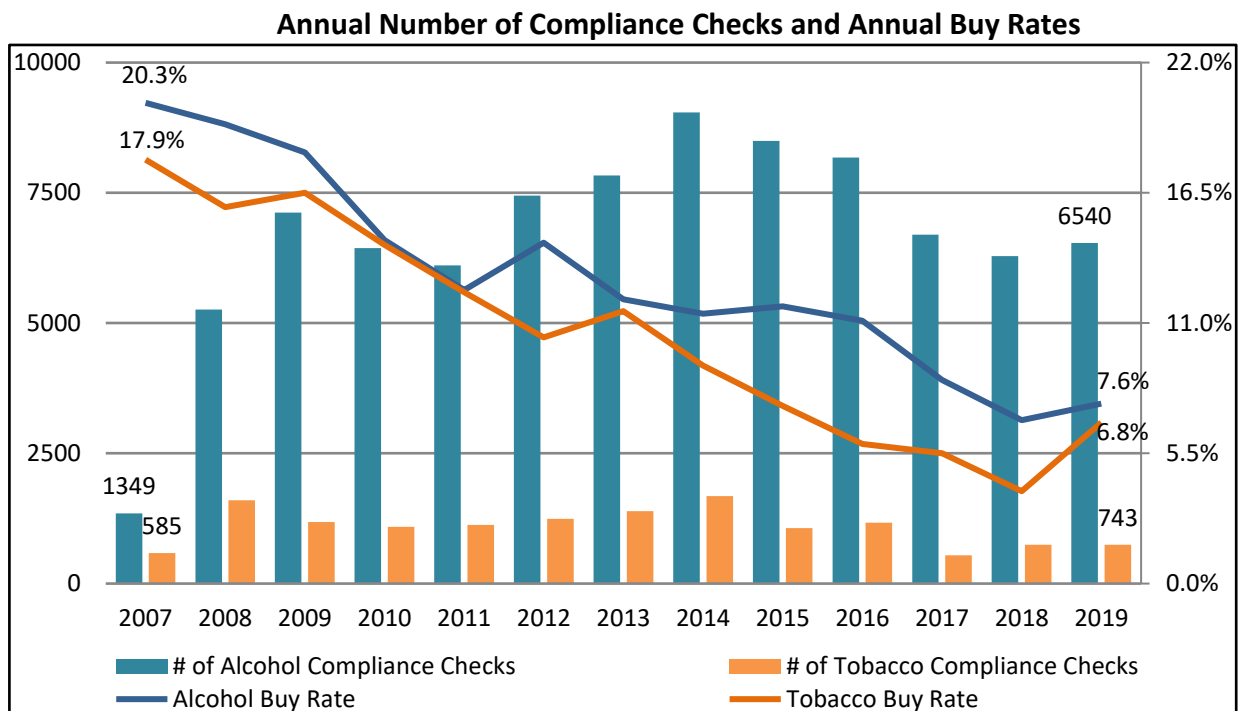
The color-coded table below summarizes the pre- and post-test differences in risk scores and substance use rates. As can be seen, there were widespread desired changes in risk factor scores in FY '19.

Summary of Statistically Significant Results, By Demographics and Program

| Category (number) | Perceived Risk | Decision Making | Disapproval of Use | Perceived Peer Norms | Perceived Parental Attitudes | Cigarettes | Other Tobacco | Alcohol | Marijuana | Other Illegal Drugs | Inhalants | Non-medical Use of Prescriptions | Non-medical Use of OTCs | |
|---|----------------|-----------------------|--------------------|----------------------|------------------------------|------------|---------------|---------|-----------|---------------------|-----------|----------------------------------|-------------------------|--|
| DEMOGRAPHICS | | | | | | | | | | | | | | |
| Overall Middle School (1642) | * | | | * | | | | | | | | | | |
| Overall High School (454) | * | * | * | * | | | * | * | * | | | | | |
| Females (982) | * | * | | * | | | | | | | | | | |
| Males (992) | * | | | * | | | | | | | | | | |
| American Indian (47) | * | | | | | | | | | | | | | |
| Black/African American (820) | * | * | | * | | | | * | * | | * | | | |
| Multi-ethnic (174) | * | | | * | | | | | | | | * | | |
| Other (135) | * | | | | | | | | | | | | | |
| White (908) | * | | | * | | | | | | | | | | |
| Hispanic (187) | | | | * | | | | | | | | | | |
| Not Hispanic (1837) | * | * | * | * | | | | | * | | | | | |
| PROGRAMS | | | | | | | | | | | | | | |
| Alcohol Stories (1 site; n = 329) | * | | | * | | | | | | | | | | |
| All Stars (1 site; n = 93) | | | * | | * | | | | | | | | | |
| ATOD 101 (1 site; n = 37) | | | | | * | | | | | | | | | |
| Class Action (2 sites; n = 47) | | | | | | | | | | | | | | |
| Keepin' It Real (2 sites; n = 177) | | | | | | | | | | | | | | |
| Life Skills (8 sites; n = 872) | * | * | * | * | * | | | | | | | | | |
| Operation Prevention: Rx (2 sites; n=128) | * | * | * | * | | | | | | | | | | |
| Project Alert (2 sites; n = 135) | | | | | * | | | | | | | | | |
| Project Northland (1 site; n=47) | | | | | | | | | | | | | | |
| Project TND (1 site; n = 53) | * | | * | * | | | | | | | | | | |
| Too Good for Drugs (1 site; n=184) | * | * | * | * | * | | | | | | | | | |
| Why Try (1 site; n = 21) | | | | | | | | | | | | | | |
| OVERALL (23 sites; n=2123) | * | * | * | * | | | | * | | | | | | |
| LEGEND | | | | | | | | | | | | | | |
| Desired Marginally Significant | * | Desired Significant | | | | | * | | | | | | | |
| Undesired Marginally Significant | * | Undesired Significant | | | | | * | | | | | | | |

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

- County authority prevention staff returned forms on **6,540 alcohol compliance checks and 743 tobacco compliance checks**. For alcohol, **7.6% of attempts generated sales**; for tobacco, **6.8% of attempts resulted in sales, both of which increased from 2018**. Although still among historic lows, the increases suggest that prevention specialists may need to intensify their efforts to prevent further increases.



- **AETs reported a total of 352 public safety checkpoints**, down from FY '18. AETs issued 62 DUIs citations during the FY '19 checkpoints. In addition, there were 147 **saturation patrols** reported that generated another 1,102 tickets. This operation accounted for 20 DUIs.
- **AETs reported that 143 parties were disbursed**, resulting in 234 tickets and arrests at gatherings involving 3,003 persons.
- The Palmetto Retailer Education Program (**PREP**) served **1,081 merchants**.
- More than **541 youth were in diversion program for youth alcohol and tobacco offenses** (246 served in the Alcohol Education Program and 295 served in the Tobacco Education Program).
- The Youth Access to Tobacco Study (Synar) showed that **7.3% of retailers sold cigarettes to underage youth**, up from 4.3% in FY 2018.

EVALUATION REPORT OVERVIEW

State Prevention Evaluation Efforts

The South Carolina Department of Alcohol and Other Drug Abuse Services (DAODAS) is one of the primary funders for substance abuse prevention services in the state. Most DAODAS prevention funds are distributed to the county alcohol and drug authority system, 32 agencies serving the state's 46 counties. The South Carolina Act 301 of 1973 created the single and multi-county service provider system that exist today. Every county authority offers prevention services, primarily using funds that pass through DAODAS and originate from the U.S. Center for Substance Abuse Prevention (CSAP) within the Substance Abuse and Mental Health Services Administration (SAMHSA). The primary sources of prevention funds from CSAP are the Substance Abuse Prevention and Treatment Block Grant (SAPTBG) and discretionary grants such as the Strategic Prevention Framework Partnerships for Success (PFS) grant.

Contents of This Report

This report provides prevention data for Fiscal Year 2019 (July 1, 2018 – June 30, 2019) from a variety of data sources. Much of the report focuses on prevention outcomes generated through pre- and post-testing of middle and high school youth who participated in prevention programs. The report also includes data related to county alcohol and tobacco environmental strategies (e.g., compliance checks, bar checks, and merchant education), the Youth Access to Tobacco Study (also known as the Synar study), and the distribution of prevention services. Each section of the report is described below.

Section I provides information on the distribution of prevention services across the six prevention service categories supported with CSAP funds.

Section II focuses on the changes in substance use and associated risk factors reported by participants in DAODAS-funded prevention education programs, using pre-test and post-test data from the DAODAS Standard Survey. Within Section II, we present data overall, by demographic group (i.e., age, sex, race, and ethnicity), and by prevention program.

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

Section IV covers results from the FY '18 Youth Access to Tobacco Study (Synar).

Section V provides statewide youth substance use trends, allowing DAODAS and its stakeholders to monitor changes in use over time.

Many of the more detailed data tables are included in Appendix A of this report to make the report more readable, while more succinct tables or summaries are presented in the narrative

sections. In Appendix B, we discuss some of the methodological issues associated with analyzing and interpreting the pre- and post-test results. Appendix C includes a copy of the DAODAS Standard Survey in effect for FY '19.

Focusing on State Data Indicators

This report can be reviewed in conjunction with the *2015 South Carolina Profile on Alcohol, Tobacco, and Other Substance Related Indicators*. The Profile is an overview of data indicators related to youth and adult drug use, consequences, and risk factors, and is an important measuring stick for the overall direction of the state in addressing its ATOD issues. Of note, the Profile provides updates on progress for the state's ATOD priorities determined by the Governor's Council on Substance Abuse Prevention and Treatment and covers a variety of topics including the following:

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

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

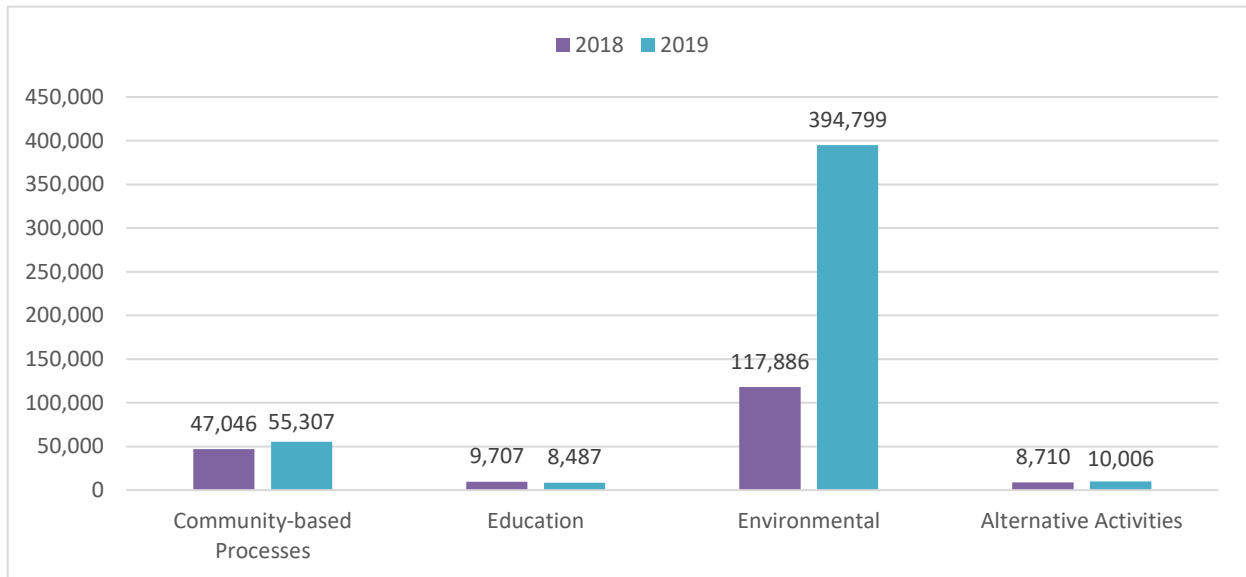
SECTION I: SERVICES ACROSS SIX CSAP STRATEGIES

Prevention providers across South Carolina deliver and coordinate a wide variety of prevention programs, policies, and practices across six overarching prevention strategies supported by CSAP. The six CSAP strategies are the following:

- Information dissemination
- Community-based processes
- Education
- Environmental
- Alternative activities
- Problem identification and referral services

Figure 1 presents data from the DAODAS reporting system, known as IMPACT, on the total persons served by four of the six CSAP strategies. In many cases, these values are estimates provided by prevention providers; nevertheless, the data provide a sense of the scope of reach of prevention efforts in South Carolina. The figure shows that, for most categories, more people were reached in FY '19 than FY '18. In addition, not shown in the figure, over 10.7 million people received prevention-related information (Information Dissemination) and 377 received problem identification and referral services.

Figure 1. Total Served by CSAP Category, FY '18 and FY '19



SECTION II: CHANGES IN SUBSTANCE USE AND RISK FACTORS AMONG PROGRAM PARTICIPANTS

Each year, thousands of youth participate in substance abuse prevention programs funded by DAODAS through the county agencies and their providers. The goals of these programs are to prevent and reduce substance use among South Carolina's youth and to reduce risk factors associated with substance use. The primary way these programs are measured is to collect pre- and post-test data from the youth participants. In this section, we present data on pre- and post-test changes reported by youth. We present the data overall and then by sex, race, ethnicity, and program.

It is important to note that the evaluation design is non-experimental. That is, pre- and post-surveys are required to be administered only to program participants and not to control groups, so we cannot tell what would have happened in the absence of the program. Despite this limitation, reported changes in the desired direction are expected to provide some level of comfort that the program seems to be leading to the outcomes anticipated for a program.¹ Changes in the undesired direction are expected to raise questions about the fidelity of program implementation and/or the fit of the program to the community. That said, neither desired nor undesired changes should be taken as a conclusive indication of a program's effectiveness (or lack thereof). Through this monitoring process, the hope is that program implementation receives the attention that is necessary to be of greatest benefit to the community. In addition, the analysis of pre-post data across multiple programs and sites will assist the state in further understanding which programs, implemented under which conditions, appear to be most and least effective.

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

¹ Because adolescents generally become more tolerant of substance use and more likely to engage in some substance use behaviors as they grow older, it may be difficult to achieve positive changes among program participants over the time span between the pre- and post-surveys, even for a period as short as a few months. Therefore, even seeing no change on some risk factors and/or substance use behaviors may be viewed as a positive impact of program participation. This is particularly true for these data, where most respondents reported very low levels of risk and very low levels of substance use at the beginning of the programs.

The Pre-Post Test Outcome Evaluation Instrument

The DAODAS Standard Survey is comprised of SAMHSA's National Outcome Measures (NOMs) and other measures from SAMHSA's Core Measure Initiative. (The DAODAS Standard Survey is included in Appendix C.) The following measures are used:

- Perceived risk/harm of ATOD use
- Disapproval of use (formerly referred to as favorable attitudes)
- Decision-making
- Perceived peer norms regarding ATOD use
- Perceived parental attitudes regarding ATOD use
- 30-day use of cigarettes
- 30-day use of other tobacco products
- 30-day use of alcohol
- 30-day use of marijuana
- 30-day use of other illegal drugs
- 30-day use of inhalant drugs
- 30-day non-medical use of prescription drugs
- 30-day non-medical use of over-the-counter drugs

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

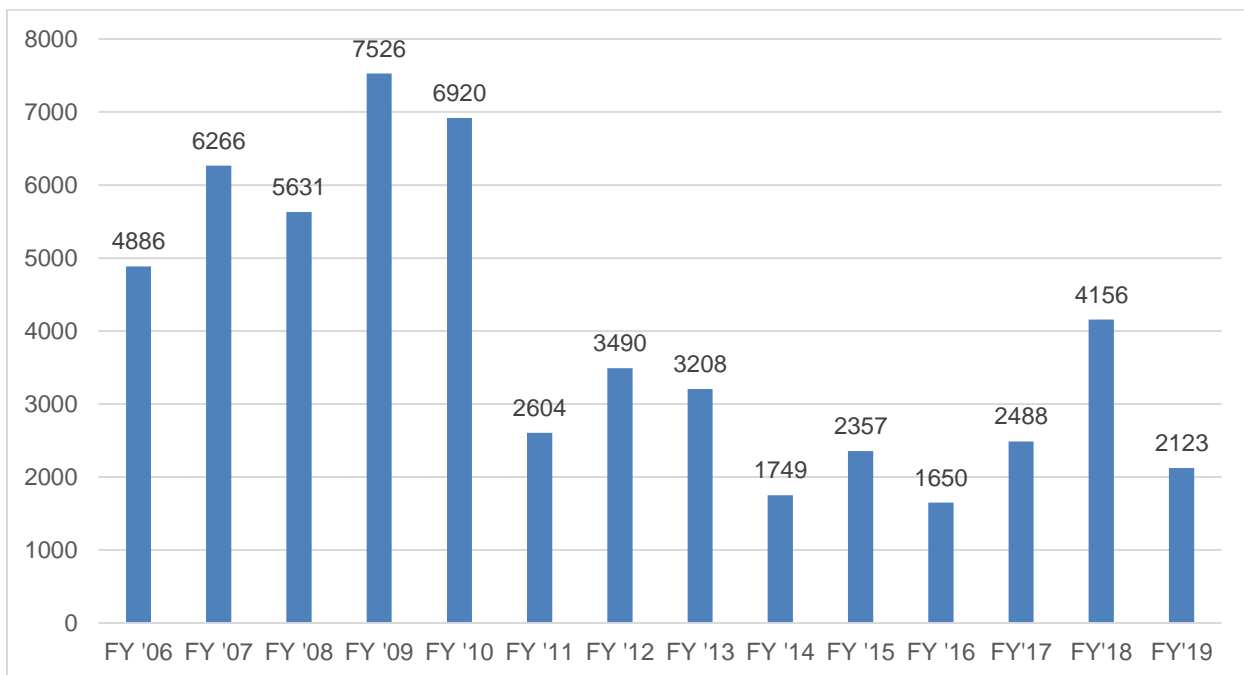
Matched Participants

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 for the following reasons:

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

If a participant did not have matched, valid pre- and post-tests, then neither test was included in the database that we analyzed. The pre-test database contained 2,551 surveys while the post-test database contained 2,392 cases, which resulted in 2,123 matched cases or 93.8% of pre-test cases (Figure 2) and a 51% decrease from FY '18 (which was particularly high compared to the number of matched cases since 2010). The elimination of Safe and Drug-Free Schools funding at the end of FY '10 accounts for the reduced number of pre-post surveys since then.

Figure 2. Matched Participants in Pre-Post Database, FY '06 through '19



Demographic Breakdown

The data in this section are from the participants' responses to the demographic items on their pre-test. The same items appeared on their post-tests but are not reported here. As shown in Figure 3, all matched participants were between the ages of 10 and 18. The average age of participants was 12.4. A near even number of females and males participated (Figure 4); 43.1% of participants were White, 38.9% were Black or African American, 8.3% were in the multiethnic race category, 6.4% were of "other" race, 2.2% were American Indian or Alaskan Native, and 0.9% were Asian (Figure 5). Hispanic/Latino ethnicity was reported by 9.1% of students.

Figure 3. Matched Participants by Age

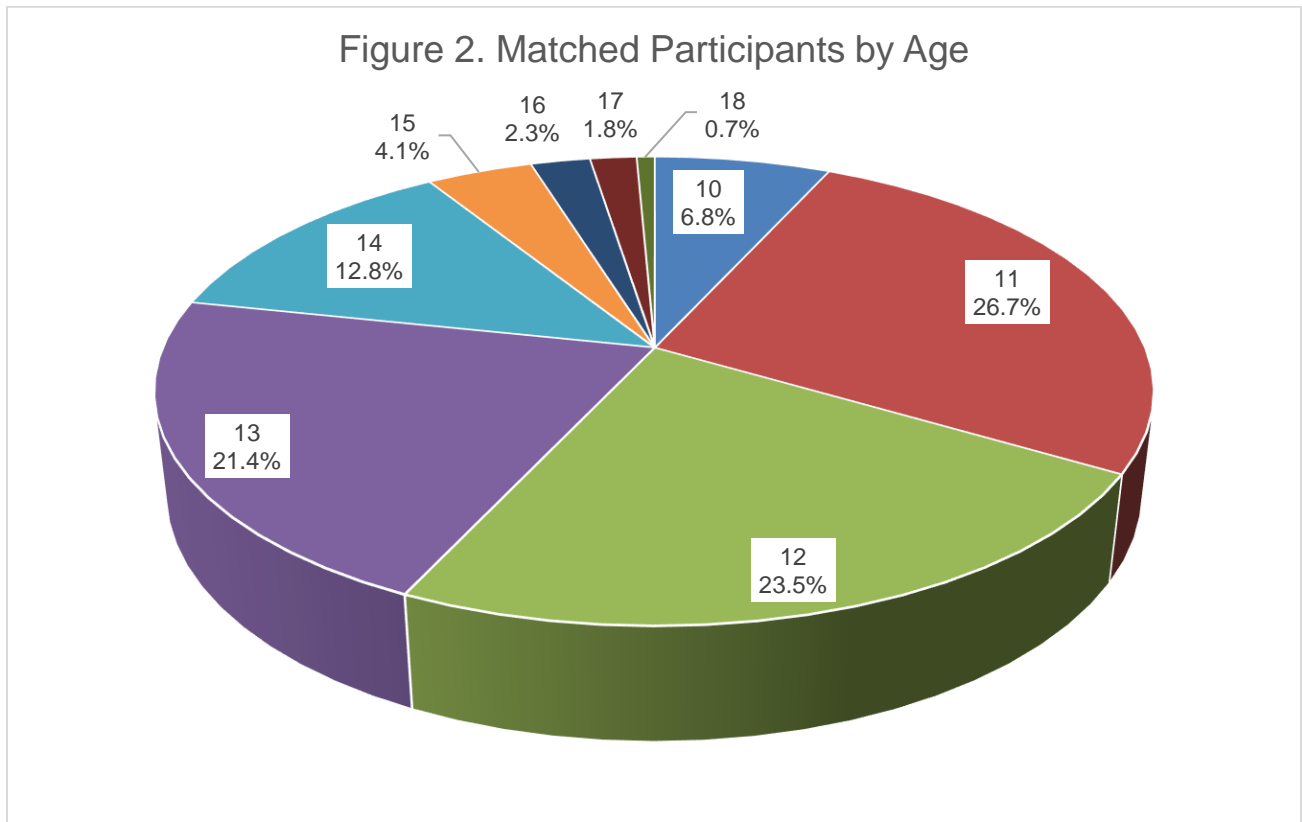


Figure 4. Matched Participants by Sex

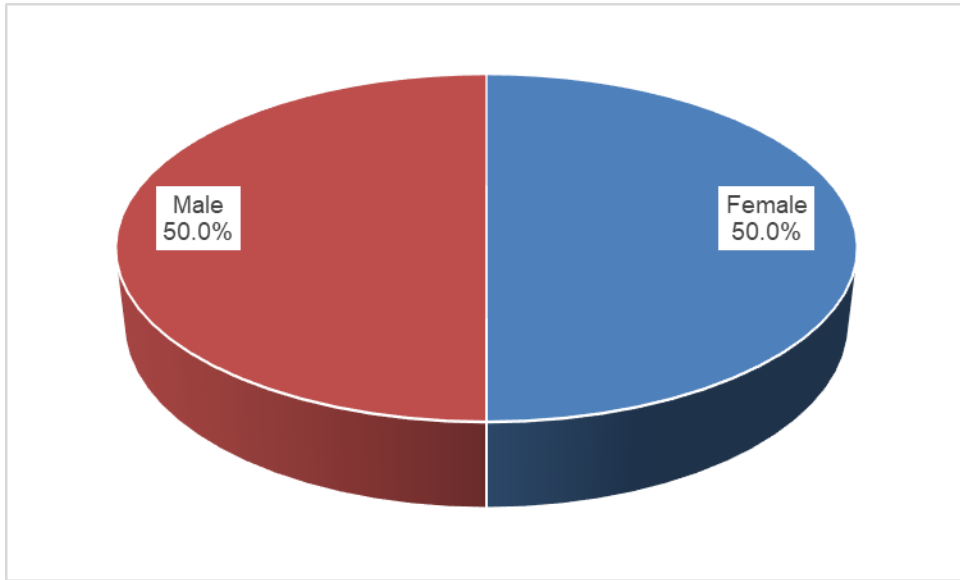
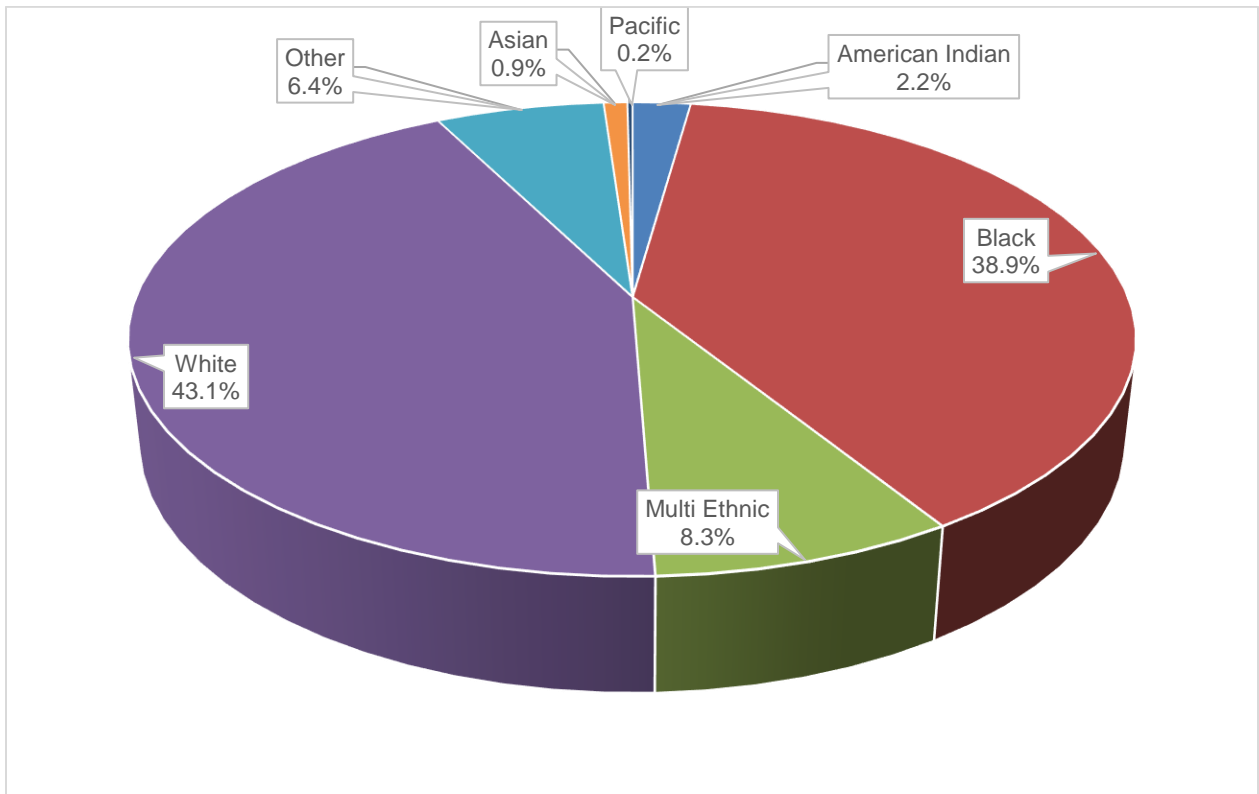


Figure 5. Matched Participants by Race/Ethnicity



Risk-Factor Measures

Table 1 shows the results for the five risk factors included on the DAODAS Standard Survey. As shown in the table, there was a statistically significant ($p < .05$) positive change from pre- to post-test in FY '19 for three of the five measures (perceived risk, decision making, and peer norms) and a near significant positive change in disapproval of use. In FY '18, there were significant changes in the desired direction in the same four risk factors and a statistically significant negative change for parental norms.

Table 1. Overall Results, Risk-Factor Measures, FY '19 and '18

| Risk-Factor Measure | Possible Range of Scores | Pre-Test Average | Post-Test Average | FY '19 % Change | FY '18 % Change |
|------------------------------|--------------------------|------------------|-------------------|-----------------|-----------------|
| Perceived Risk | 0-3 | 1.93 | 2.09 | 8.13** | 7.70** |
| Decision-Making | 0-3 | 1.82 | 1.86 | 2.25** | 2.31** |
| Favorable Attitudes | 0-2 | 1.58 | 1.62 | 2.20* | 1.68** |
| Perceived Peer Norms | 0-10 | 8.36 | 8.53 | 2.04** | 0.77** |
| Perceived Parental Attitudes | 0-3 | 2.83 | 2.83 | 0.17 | -0.86** |

Positive scores are more favorable.

Note: FY '19 change calculations are based on unrounded pre- and post-test figures and, therefore, may not match the percentages that would be obtained using the rounded figures presented in the second and third columns.

* Pre- and post-test averages are marginally significantly different ($p < .10$).

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

Tables A1 through A4 in Appendix A display risk factor measures and substance use rates separated by age group (middle school ages and high school ages), sex, race, and ethnicity.

Age. Table A1 shows results separated by age range: middle school age (ages 10 to 13) and high school age (ages 14 to 18). As expected, younger participants had higher pre-test scores. Middle school students reported significant changes in the desired direction on two risk factors (perceived risk and peer norms). High school students had significant changes in the desired direction on four risk factors (perceived risk, decision-making skills, favorable attitudes and peer norms).

Sex. Table A2 shows data results separated by sex. Females reported significant positive changes on three risk factors (perceived risk, decision-making and peer norms). Males reported positive changes on two risk factors (perceived risk and perceived peer norms).

Race/Ethnicity. Table A3 shows data results separated by race (for those race groups with 20 or more participants) and Table A4 shows the results by ethnicity. Participants who identified as American Indian reported significant positive change on one risk factor (perceived risk).

Black/African American participants reported significant positive changes on three risk factors (perceived risk, decision-making and perceived peer norms). White participants reported significant desired change on two risk factors (perceived risk and perceived peer norms). Participants who identified as Multi-Ethnic reported significant positive change on two risk factors (perceived risk and perceived peer norms). Participants that identified as Other reported significant positive change on one risk factor (perceived risk). Participants of Hispanic, Latino, or Spanish descent or origin reported significant positive change on one risk factor (perceived peer norms), while those not of Hispanic, Latino, or Spanish descent reported significant positive changes for perceived risk, decision-making skills and perceived peer norms.

Participant Substance Use

The DAODAS Standard Survey asked participants to indicate the extent of their cigarette, other tobacco, alcohol, marijuana, other illegal drug, inhalant, non-medical prescription drug, and non-medical over-the-counter drug use in the past 30 days. The percentage of participants that used each substance at any amount was calculated at pre- and post-test. FY' 19 results, along with the corresponding changes in use for FY '18, are shown in Table 2.

For FY '19, program participants reported reductions in use of six out of eight substances at post-test. There was one marginally significant change in substance use—reduction in alcohol use. Last year (FY '18) there was a statistically significant reduction for three substance use variables and four marginally significant reductions. Figure 6 depicts these same data in graphic form, showing pre-test and post-test use rates for FY '19.

Table 2. Overall Results, Substance Use Rates, FY '19 and FY '18

| Risk-Factor Measure: 30 Day Use | % Using at Pre- Test | % Using at Post- Test | FY '19 % Change | FY '18 % Change |
|------------------------------------|----------------------------|-----------------------------|--------------------|--------------------|
| Cigarettes | 3.23 | 3.53 | 9.29 | -20.78** |
| Other Tobacco | 4.75 | 4.00 | -15.79 | -20.62* |
| Alcohol | 9.06 | 7.79 | -14.02* | -20.78** |
| Marijuana | 4.47 | 3.44 | -23.04 | -13.26** |
| Other Illegal Drugs | 1.71 | 1.37 | -19.88 | -22.90* |
| Inhalants | 3.47 | 2.93 | -15.56 | -10.19 |
| Non-Medical Prescription Drugs | 2.42 | 2.28 | -5.79 | -19.03* |
| Non-Medical OTC Drugs | 1.85 | 1.93 | 4.32 | -24.51* |

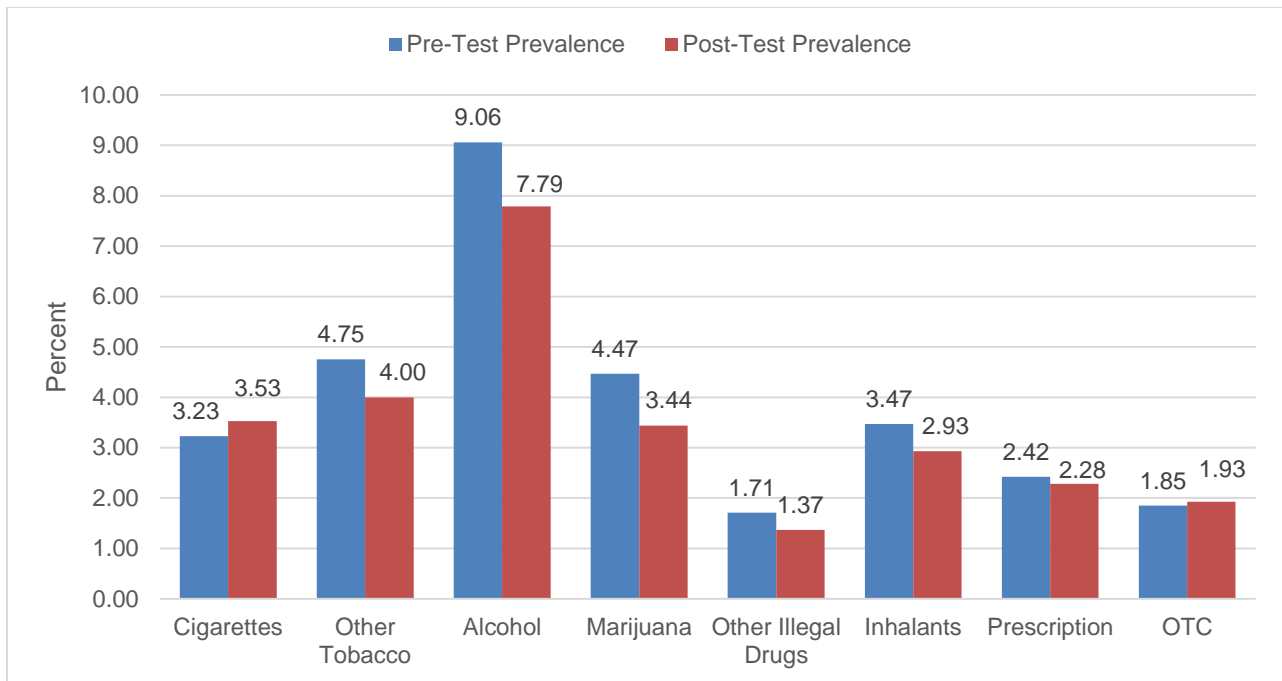
Negative changes are desired for these items.

Note: FY '19 % Change calculations are based on unrounded pre- and post-test figures and, therefore, may not match the percentages that would be obtained using the rounded figures presented in the second and third columns.

* Pre- and post-test averages are marginally significantly different ($p < .10$).

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

Figure 6. Pre- and Post-Test Substance Use Rates, FY '19



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

Age. Table A1 shows data results separated by middle school (ages 10 to 13) and high school (ages 14 to 19) age ranges. The middle school participant group had no significant decreases in use. Among high school students, there were significant decreases in use for other tobacco, alcohol and marijuana.

Sex. Table A2 shows data results separated by sex. Among males and females, there were no significant decreases in use.

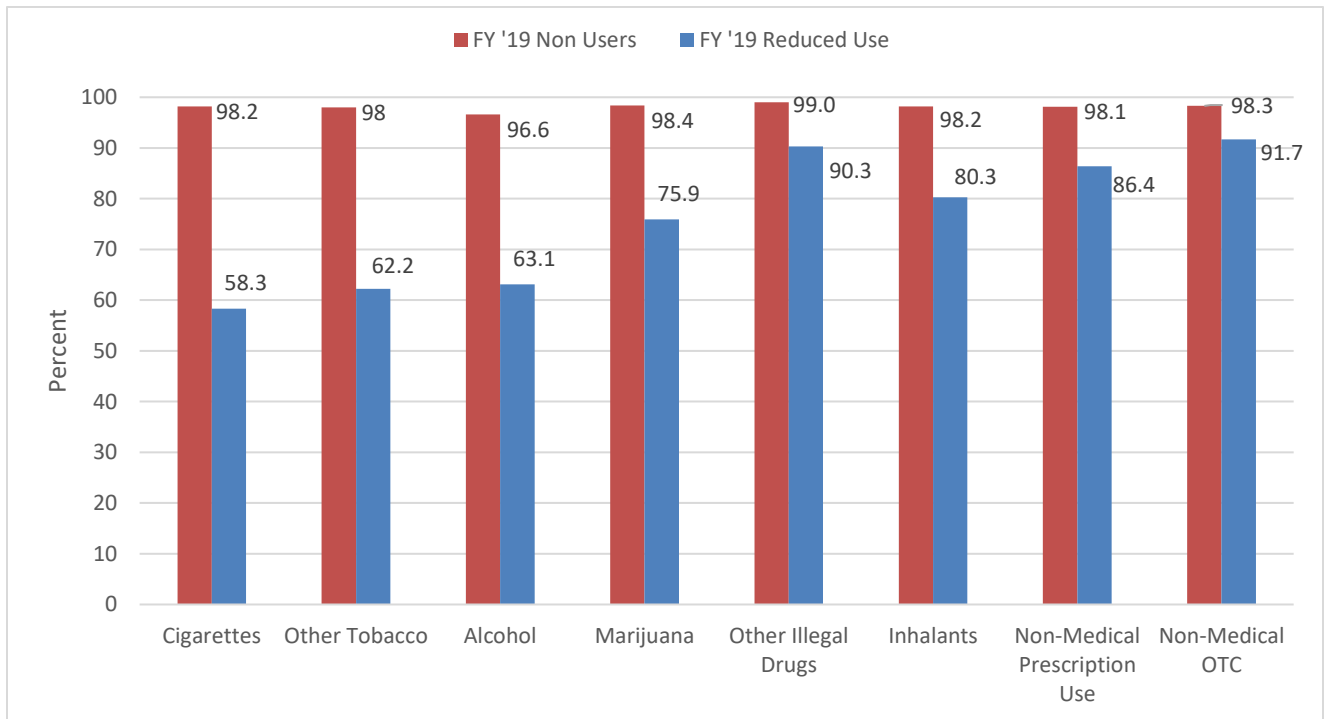
Race/Ethnicity. Table A3 shows data results separated by race (for those race groups with 20 or more participants) and Table A4 shows the results by ethnicity. Participants who identified as American Indian reported no significant reductions in substance use. Black/African American participants reported significant reductions in alcohol and marijuana use and marginally significant reductions in inhalant use. White participants reported no significant reductions in substance use. Participants who identified as Multi-Ethnic reported significant increases in non-medical prescription drug use. Participants that identified as Other reported no significant reductions in use. Participants of Hispanic, Latino, or Spanish descent or origin reported no significant reductions in use, while those not of Hispanic, Latino, or Spanish descent reported significant reductions in marijuana use.

Substance Use Prevention and Reduction

We analyzed responses regarding past-30-day use 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 reported no use at post-test (Figure 7). The former may be the most accurate assessment of the “preventive” effect of the programs.

Figure 7 shows that nearly all participants who began programs as non-users remained non-users, ranging from 98% (alcohol) to 99% (other illegal drugs). That is, continued non-use of substances was nearly universal. The figure also shows that the percent of users at pretest who reduced their substance use ranged from 58.3% (cigarettes) to 91.7% (non-medical OTC use).

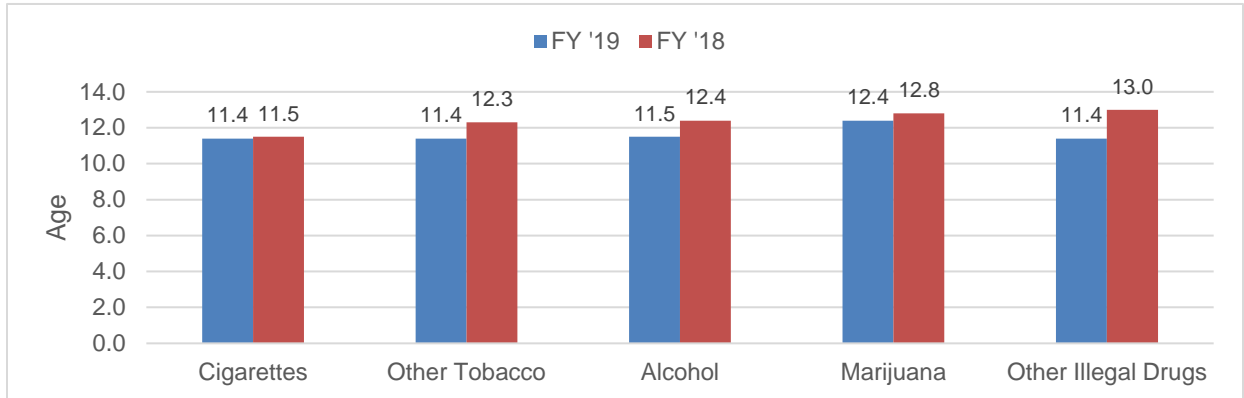
Figure 7. Percent of Pre-Test Non-Users Who Remained Non-Users and Users Who Reduced Their Use, FY '19



Age of First Use

As shown in Figure 8, among those who had used substances, ages of first use at pre-test ranged from 11.4 (cigarettes) to 12.4 (marijuana). Ages of first use in FY '19 appear to be younger than those for FY '18.

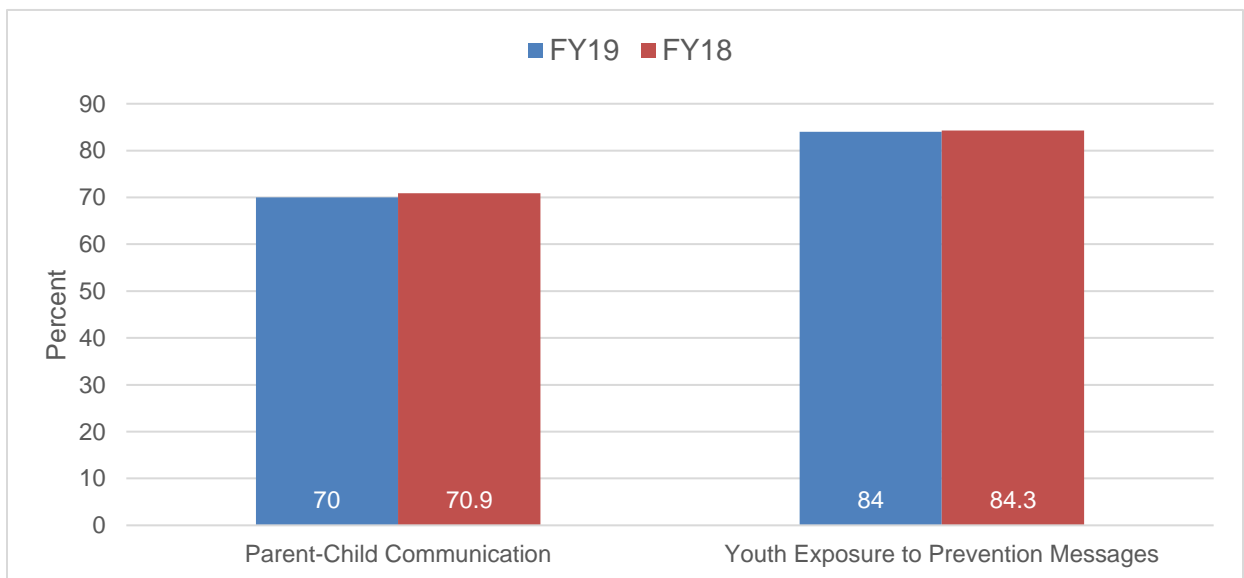
Figure 8. Overall Results, Average Age of First Use, FY '19 and FY '18



Parent-Child Communication and Youth Exposure to Prevention Messages

The survey asks about two additional topics on the pre-test—parent-child communication and exposure to prevention messages. As shown in Figure 9, 70% reported that they had talked to their parents about the dangers of drugs in the past year and 84% reported having watched, read, or heard a prevention advertisement in the past year, similar to FY '18 rates.

Figure 9. Parent Child Communication and Exposure to Prevention Messages, FY '17 and FY'18



Prevention Programs

Across the provider network, 12 different programs were implemented in FY '19, down from 13 in FY'18, and up from 10 in FY '17. In this section, we compare the outcomes for the 11 programs with 20 or more matched participants. The full tables with results by program are found in Appendix A in Table A5.

Alcohol-Drug True Stories (hosted by Matt Damon) is a movie with testimonials by real people about their experiences with alcohol and drugs. Used together with its accompanying discussion guide, this is considered an evidenced-based practice. The program was implemented with 329 matched youth at one site. There was a statistically significant positive change in perceived risk and perceived peer norms.

All Stars is a comprehensive ATOD prevention curriculum. This program was used by one site with a total of 93 matched participants. There was a statistically significant negative change perceived parental attitudes and a near significant decrease in favorable attitudes.

ATOD (Alcohol, Tobacco and Other Drugs) 101 is a course that can be customized for any setting. In ATOD 101, students receive information on the risks and laws associated with alcohol, tobacco, marijuana and other drugs. This program was used by one site with a total of 37 matched participants. There was a near significant change in perceived parental attitudes.

Class Action is a comprehensive ATOD prevention curriculum. This program was used by two sites with a total of 47 matched participants. There were no statistically significant changes in risk factors or substances.

Keepin' It Real is a video-enhanced intervention for youth 10 to 17 that uses a culturally grounded resiliency model that incorporates traditional ethnic values and practices to protect against drug use. It was used by two sites with a total of 177 matched participants. There were no statistically significant changes in risk factors or substances.

Life Skills Training, a skills-based, ATOD prevention curriculum, was the most commonly implemented program with eight sites and 872 matched participants. There were statistically significant positive changes in all risk factors. There were no statistically significant changes in substance use.

Operation Prevention: Rx, is an evidenced-based program. Operation Prevention's mission is to educate students about the true impacts of opioids and kick-start lifesaving conversations in the home and classroom. It was used by two sites with a total of 128 matched participants. There were statistically significant desired changes on four of the five risk factors (perceived risk, decision making, favorable attitudes and perceived peer norms). There were no statistically significant changes in substance use.

Project Alert, a comprehensive ATOD prevention curriculum for middle school students, was delivered at two sites with a total of 135 matched participants. There were no statistically significant increases in risk factors or substances.

Project Northland, an ATOD prevention curriculum with a strong focus on alcohol and influencing the environment, was used by one site with a total of 47 matched participants. There were no statistically significant increases in risk factors or substances.

Project TND, a prevention curriculum intended for high school students, was used by one site to 53 matched participants. There were statistically significant desired changes on two of the five risk factors (perceived risk and perceived peer norms). There were no statistically significant changes in substance use.

Too Good for Drugs is a program with specific lessons for each middle and high school grade. One site, with a total of 184 matched participants, used this program. There were statistically significant negative changes in three risk factors (decision-making, perceived peer norms, perceived parental attitudes) and near significant negative changes in the remaining risk factors. There were no statistically significant changes in substance use.

Why Try is a comprehensive ATOD prevention curriculum, implemented at one site with 21 matched participants. There were no significant changes in risk factors or substances.

Evidence-Based Programs

County authorities are not required to use evidence-based interventions exclusively, though most do. In FY '19, 100% of participants were served in evidence-based programs.

Summary of Section II

Table 3 summarizes the pre- and post-test differences in risk scores and substance use rates that were found among participants in the county authorities' multi-session prevention programs for youth. Green cells signify changes that were at least marginally statistically significant in the desired direction; desired changes that were statistically significant include an asterisk (*). Red cells signify changes that were at least marginally statistically significant in the undesired direction; undesired changes that were statistically significant include an asterisk (*).

As can be seen, there were widespread desired changes in risk factor scores in FY '19. Overall, high school students reported significant changes in four risk factors, and female students, Black/African American students, and Non-Hispanic students reported significant changes on three risk factors. Changes in perceived risk and perceived norms were most common while changes in parental attitudes were the least common. These desired changes in risk factor scores were experienced primarily by participants in two prevention programs (Life Skills and Operation Prevention: Rx). There were no widespread, statistically significant reductions in substance use in FY '19.

Table 3. Summary of Statistically Significant Results, By Demographics and Program

| Category (number) | Perceived Risk | Decision Making | Disapproval of Use | Perceived Peer Norms | Perceived Parental Attitudes | Cigarettes | Other Tobacco | Alcohol | Marijuana | Other Illegal Drugs | Inhalants | Non-medical Use of Prescriptions | Non-medical Use of OTCs | |
|---|----------------|-----------------------|--------------------|----------------------|------------------------------|------------|---------------|---------|-----------|---------------------|-----------|----------------------------------|-------------------------|--|
| DEMOGRAPHICS | | | | | | | | | | | | | | |
| Overall Middle School (1642) | * | | | * | | | | | | | | | | |
| Overall High School (454) | * | * | * | * | | | * | * | * | | | | | |
| Females (982) | * | * | | * | | | | | | | | | | |
| Males (992) | * | | | * | | | | | | | | | | |
| American Indian (47) | * | | | | | | | | | | | | | |
| Black/African American (820) | * | * | | * | | | | * | * | | | | | |
| Multi-ethnic (174) | * | | | * | | | | | | | | * | | |
| Other (135) | * | | | | | | | | | | | | | |
| White (908) | * | | | * | | | | | | | | | | |
| Hispanic (187) | | | | * | | | | | | | | | | |
| Not Hispanic (1837) | * | * | * | * | | | | | * | | | | | |
| PROGRAMS | | | | | | | | | | | | | | |
| Alcohol Stories (1 site; n = 329) | * | | | * | | | | | | | | | | |
| All Stars (1 site; n = 93) | | | | | * | | | | | | | | | |
| ATOD 101 (1 site; n = 37) | | | | | * | | | | | | | | | |
| Class Action (2 sites; n = 47) | | | | | | | | | | | | | | |
| Keepin' It Real (2 sites; n = 177) | | | | | | | | | | | | | | |
| Life Skills (8 sites; n = 872) | * | * | * | * | * | | | | | | | | | |
| Operation Prevention: Rx (2 sites; n=128) | * | * | * | * | | | | | | | | | | |
| Project Alert (2 sites; n = 135) | | | | | * | | | | | | | | | |
| Project Northland (1 site; n=47) | | | | | | | | | | | | | | |
| Project TND (1 site; n = 53) | * | | * | * | | | | | | | | | | |
| Too Good for Drugs (1 site; n=184) | * | * | * | * | * | | | | | | | | | |
| Why Try (1 site; n = 21) | | | | | | | | | | | | | | |
| OVERALL (23 sites; n=2123) | * | * | * | * | | | | * | | | | | | |
| LEGEND | | | | | | | | | | | | | | |
| Desired Marginally Significant | * | Desired Significant | | | | | * | | | | | | | |
| Undesired Marginally Significant | * | Undesired Significant | | | | | * | | | | | | | |

SECTION III: ALCOHOL AND TOBACCO ENVIRONMENTAL PREVENTION STRATEGIES

County authorities have been implementing or assisting with the implementation of environmental strategies for many years. These efforts were boosted in FY '07 with the creation of the Synar Tobacco Enforcement Partnerships (STEP) and Alcohol Strategy Incentive Program (ASIP). In FY'08, the ASIP program ended due to the creation of the state Alcohol Enforcement Teams (AET) program, which now reports on most of the same strategies that had been tracked through ASIP. STEP continued into FY'18 and is most identified with its year-end monetary three incentives to local providers based on the amount of tobacco-related environmental strategies implemented. Under STEP, counties could receive points for educating merchants through PREP (Palmetto Retailer Education Program), implementing tobacco compliance checks, getting a multi-jurisdictional law enforcement agreement around tobacco enforcement signed, and sending in names of new tobacco outlets. In this section, we document the amount of overall environmental strategy activity generated with a primary emphasis on the outcomes generated from the most common strategy, compliance checks.

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

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

Alcohol and Tobacco Compliance Checks

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

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

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

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

In FY'19, there were 6,540 alcohol compliance checks and 743 tobacco compliance checks entered into the online AET reporting system. In FY '19, 37 counties submitted alcohol compliance checks, while 18 counties submitted tobacco forms. Compared to FY' 18, 33 counties submitted alcohol compliance check forms and 14 counties submitted tobacco compliance forms. There may have been additional compliance checks for which a form was not entered into the online system, so the data received may not reflect every compliance check during the year, though it should contain most of the enforcement activity. As shown in Figure 10, the data suggested that both the alcohol and tobacco buy rates increased from FY '18, from 6.9% to 7.6% for alcohol and from 3.9% to 6.8% for tobacco. Although still among historic lows, the increases suggest that prevention specialists may need to intensify their efforts to prevent further increases.

Figure 10. Annual Number of Compliance Checks and Annual Buy Rates

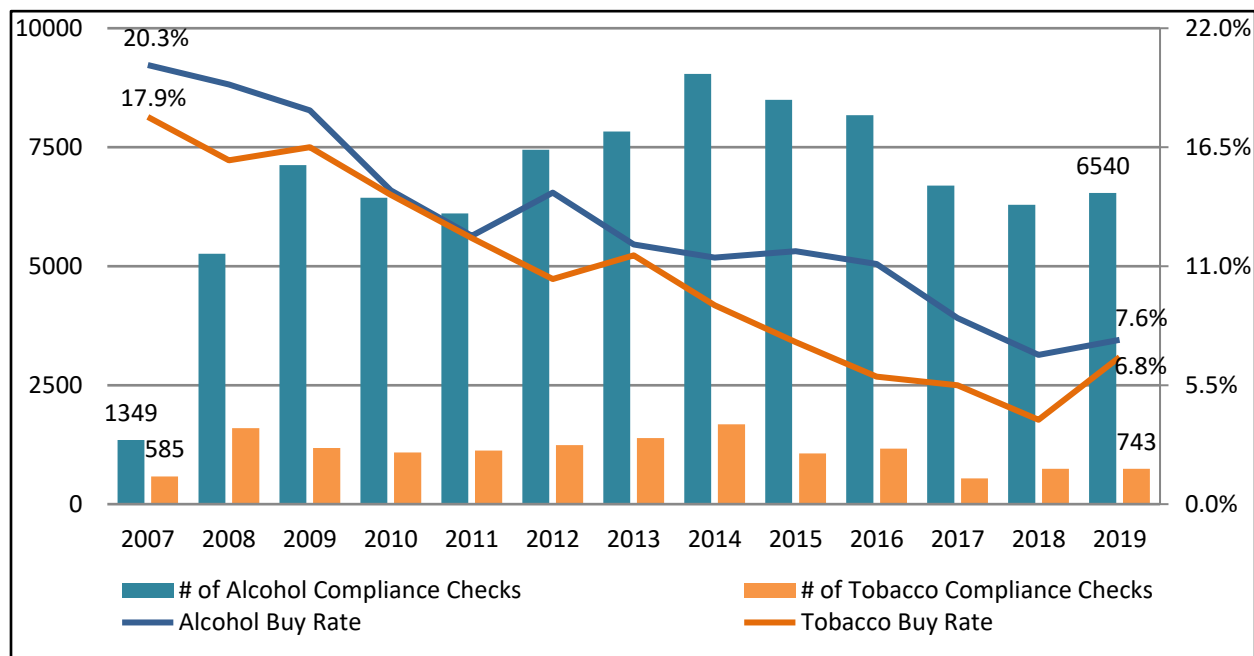


Table 4. FY '19 Alcohol and Tobacco Compliance Check Buy Rates by County

| County Name | Alcohol | | | Tobacco | | |
|--------------|----------------------------------|-----|----------|----------------------------------|-----|----------|
| | Total Eligible Purchase Attempts | Buy | Buy Rate | Total Eligible Purchase Attempts | Buy | Buy Rate |
| Abbeville | 19 | 3 | 15.8% | 0 | 0 | N/A |
| Aiken | 147 | 29 | 19.7% | 0 | 0 | N/A |
| Allendale | 0 | 0 | N/A | 0 | 0 | N/A |
| Anderson | 55 | 4 | 7.3% | 0 | 0 | N/A |
| Bamberg | 19 | 0 | 0.0% | 20 | 1 | 5.0% |
| Barnwell | 86 | 11 | 12.8% | 14 | 0 | 0.0% |
| Beaufort | 8 | 0 | 0.0% | 10 | 0 | 0.0% |
| Berkeley | 372 | 26 | 7.0% | 47 | 4 | 8.5% |
| Calhoun | 14 | 0 | 0.0% | 14 | 1 | 7.1% |
| Charleston | 176 | 17 | 9.7% | 0 | 0 | N/A |
| Cherokee | 61 | 16 | 26.2% | 0 | 0 | N/A |
| Chester | 22 | 2 | 9.1% | 10 | 0 | 0.0% |
| Chesterfield | 99 | 3 | 3.0% | 0 | 0 | N/A |
| Clarendon | 0 | 0 | N/A | 0 | 0 | N/A |
| Colleton | 34 | 1 | 2.9% | 0 | 0 | N/A |
| Darlington | 70 | 5 | 7.1% | 0 | 0 | N/A |
| Dillon | 15 | 0 | 0.0% | 0 | 0 | N/A |
| Dorchester | 24 | 1 | 4.2% | 22 | 3 | 13.6% |
| Edgefield | 1 | 1 | 100% | 0 | 0 | N/A |
| Fairfield | 0 | 0 | N/A | 0 | 0 | N/A |
| Florence | 270 | 16 | 5.9% | 35 | 2 | 5.7% |
| Georgetown | 103 | 6 | 5.8% | 0 | 0 | N/A |
| Greenville | 1323 | 63 | 4.8% | 188 | 5 | 2.7% |
| Greenwood | 79 | 2 | 2.5% | 0 | 0 | N/A |
| Hampton | 25 | 0 | 0.0% | 7 | 2 | 28.6% |
| Horry | 571 | 68 | 11.9% | 44 | 12 | 27.3% |
| Jasper | 0 | 0 | N/A | 0 | 0 | N/A |
| Kershaw | 67 | 16 | 23.9% | 1 | 0 | 0.0% |
| Lancaster | 0 | 0 | N/A | 0 | 0 | N/A |
| Laurens | 71 | 2 | 2.8% | 0 | 0 | N/A |
| Lee | 1 | 0 | 0.0% | 0 | 0 | N/A |
| Lexington | 512 | 44 | 8.6% | 109 | 9 | 10.0% |
| Marion | 0 | 0 | N/A | 0 | 0 | N/A |
| Marlboro | 111 | 8 | 7.2% | 0 | 0 | N/A |
| McCormick | 28 | 3 | 10.7% | 6 | 1 | 16.7% |

Table 4. FY '19 Alcohol and Tobacco Compliance Check Buy Rates by County

| County Name | Alcohol | | | Tobacco | | |
|--------------|----------------------------------|-----|----------|----------------------------------|-----|----------|
| | Total Eligible Purchase Attempts | Buy | Buy Rate | Total Eligible Purchase Attempts | Buy | Buy Rate |
| Newberry | 33 | 2 | 6.1% | 0 | 0 | N/A |
| Oconee | 31 | 1 | 3.2% | 0 | 0 | N/A |
| Orangeburg | 31 | 2 | 6.5% | 37 | 1 | 2.7% |
| Pickens | 162 | 5 | 3.1% | 5 | 0 | 0.0% |
| Richland | 208 | 20 | 9.6% | 0 | 0 | N/A |
| Saluda | 0 | 0 | N/A | 0 | 0 | N/A |
| Spartanburg | 313 | 16 | 5.1% | 90 | 9 | 10.0% |
| Sumter | 0 | 0 | N/A | 0 | 0 | N/A |
| Union | 60 | 7 | 11.7% | 0 | 0 | N/A |
| Williamsburg | 0 | 0 | N/A | 0 | 0 | N/A |
| York | 1319 | 94 | 7.1% | 75 | 0 | 0.0% |

Most FY '19 alcohol compliance checks were conducted at convenience stores (57.9%). The next most common type of location was liquor stores (11%), then small grocery (7.7%), large grocery stores (7%), restaurants (6.9%), drug stores (5.5%), bars (2.3%), "other" (1.5%) and hotels (0.1%). In most cases, the youth attempted to buy beer (81.5%) although a substantial number attempted to buy liquor (10.2%) or alcopops or alcohol energy drinks (5.7%). Wine or wine coolers were attempted only 2.2% of the time. Most youth volunteers were between the ages of 17 and 19 (85%). More purchase attempts were made by males (57%) than females. Most alcohol checks were conducted by White youth (86.4%), followed by Black or African American youth (11.2%).

For tobacco compliance checks, 73.4% were conducted at convenience stores, followed by small grocery stores (9.1%), large grocery stores (7.6%), "other" (6.1%), drug stores (3.1%) and liquor stores (0.5%). In most cases, youth attempted to buy cigarettes (52.8%). The remaining attempts were made for smokeless tobacco (19.9%), cigarillos (7.8%), "other" (7.6%), vaping juice (2.8%), electronic cigarettes (2.5%), and little cigars (1.5%). To place this in context, in FY '08, only 5% of attempts were for these non-cigarette tobacco products. The most common age for the youth volunteers was 16 (42.4%) and 17 (34.8%). More purchase attempts were made by males (67.2%) than females. White youth conducted 78.2% of tobacco compliance checks, and Black/African American youth conducted 21.8% of the checks.

Figure 11 shows how buy rates for different products have changed over the past five years. Buy rates for all types of alcohol—beer, wine/wine coolers, liquor, and alcopops have decreased over that time, although the buy rates for all products increased since last year.

Figure 11. Alcohol Buy Rates by Type of Product, Five-Year Trends

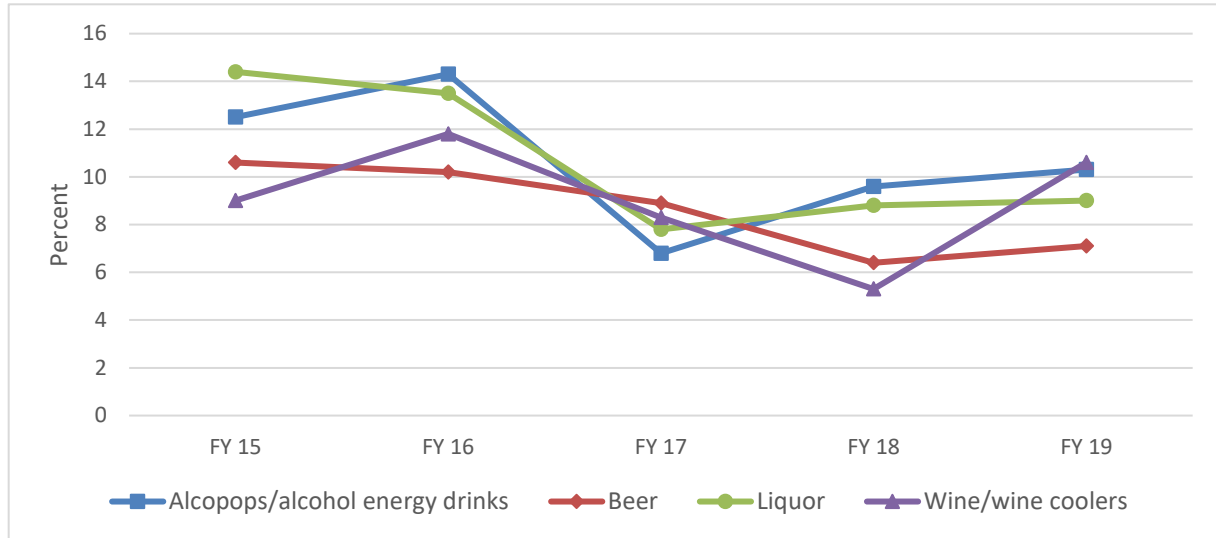


Figure 12 shows alcohol merchant practices over the past five years, including high levels and increases in best practices. Since FY '15, checking IDs increased from 91.6% to 93.2%, merchants studying IDs increased from 70.1% to 83%, and the use of age-verification equipment increased from 51.8% to 57.5%. Notably, visible ID-checking signage decrease during the past five years, from 82.3% to 80.2%, after peaking in FY '17 at 88.5%.

Figure 12. Alcohol Merchant Practices, Five-Year Trends

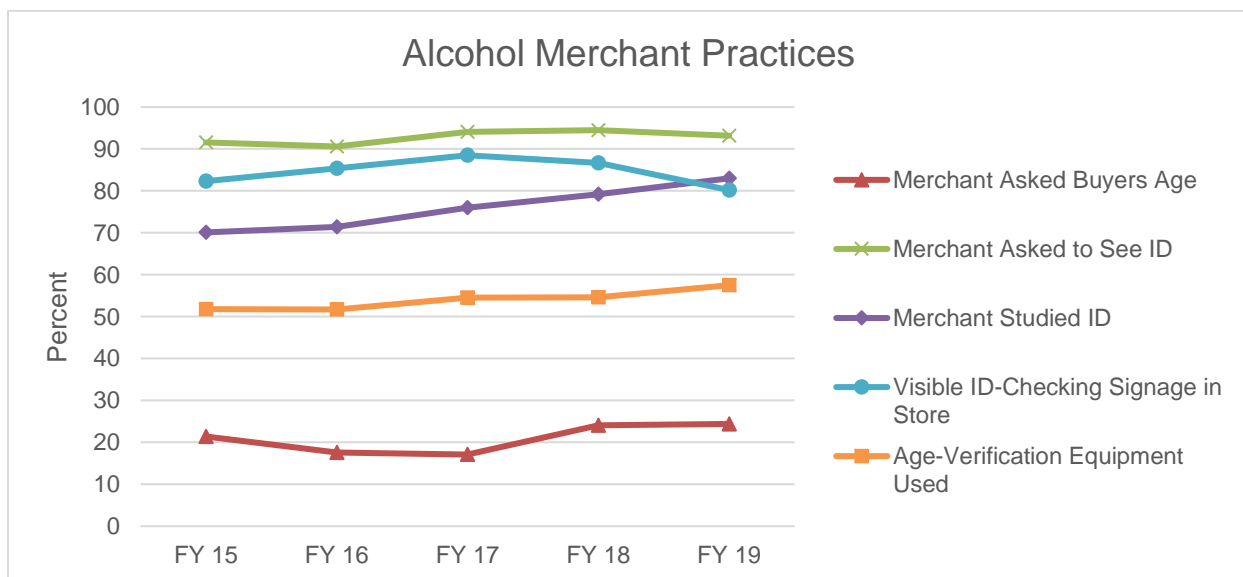


Figure 13 shows how buy rates for different products have changed over the past five years. Buy rates for most types of tobacco products increased during the past year, especially for cigars and cigarillos. Fortunately, the exceptionally high buy rate for vaping juice seen in 2016 has decreased substantially.

Figure 13. Tobacco Buy Rates by Type of Product, Five-Year Trends

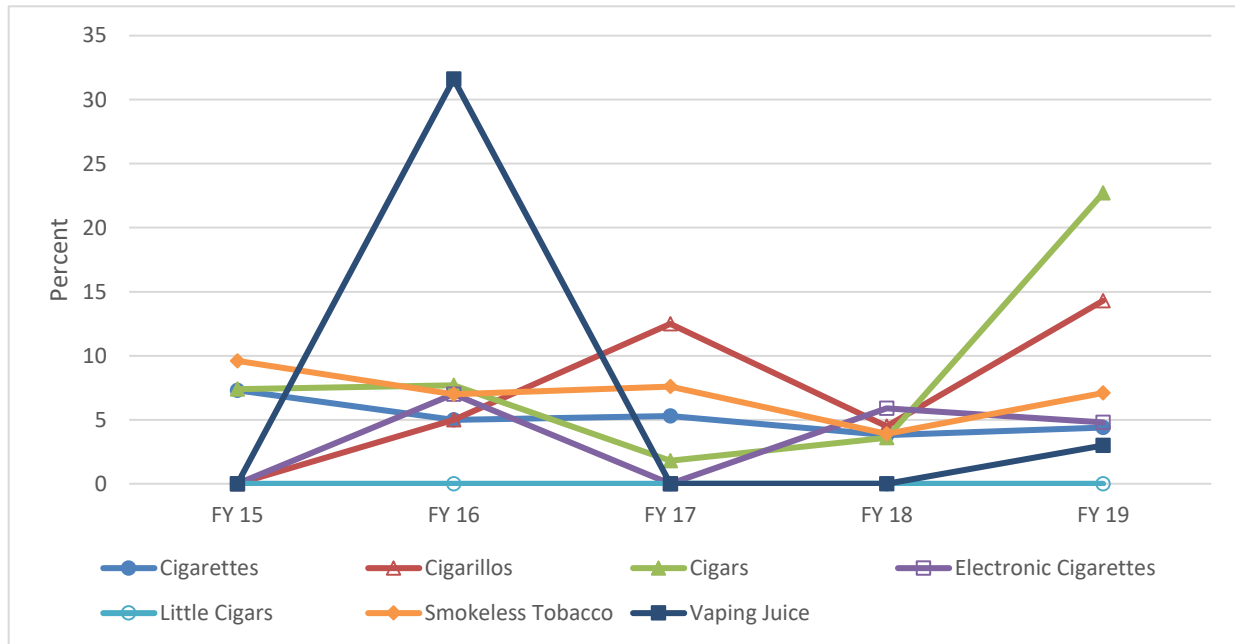


Figure 14 shows tobacco merchant practices over the past five years. Since FY '15, checking IDs increased from 88.8% to 90.2%, although it did decrease this past year from 94.1% in FY '18. Signage about checking IDs increased for several years but decreased slightly in FY '19 and the use of age-verification equipment increased slightly from 61.5% to 62%.

Figure 14. Tobacco Merchant Practices, Five Year Trends

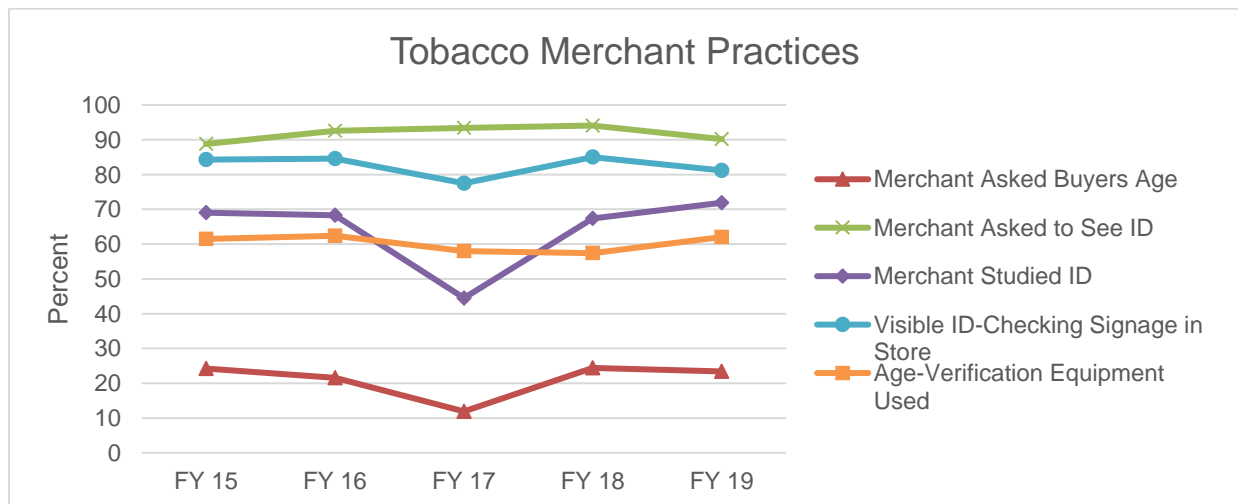


Figure 15 shows the percent of sales completed by type of business for places that had at least 50 attempts. For alcohol, the highest rates of sale were restaurants (14.4%), “other” (10.1%), and bars/taverns (9.9%). For tobacco, the highest rates were small grocery stores (12%), convenience stores (9.1%), and convenience store/gas stations (6.2%), all of which had relatively low rates of completed sales.

Figure 15. Percentage of Completed Sales by Type of Business

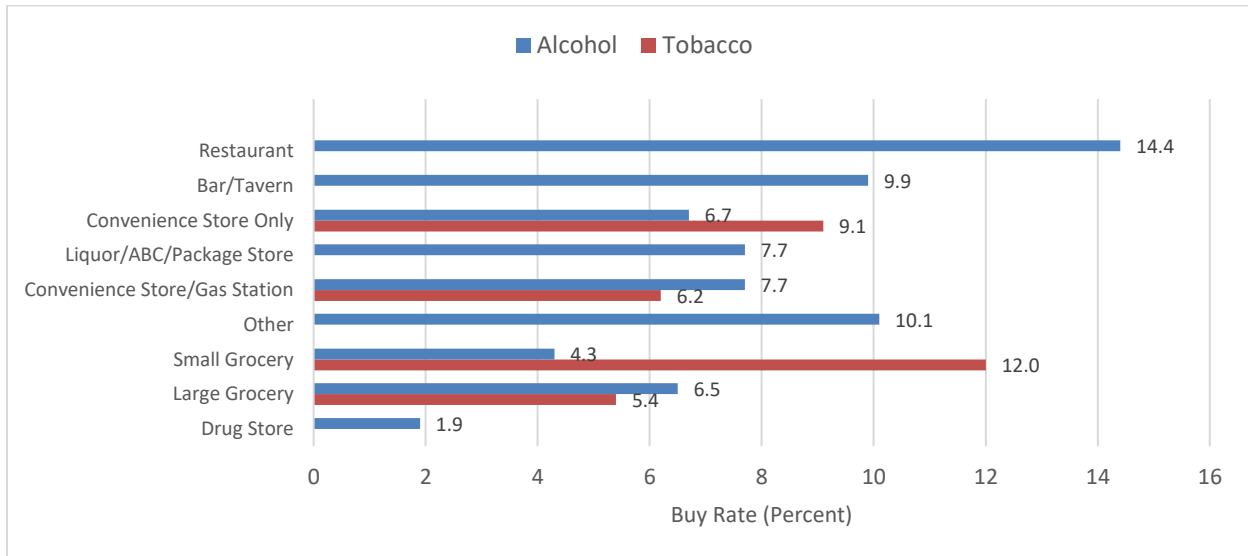


Figure 16 compares the completed sales rate of alcohol products in FY '18 and FY '19. As can be seen, the completed sales rates were lower in FY '18 in all establishments except restaurants.

Figure 16. Percentage of Completed Alcohol Sales, FY '18 and FY '19

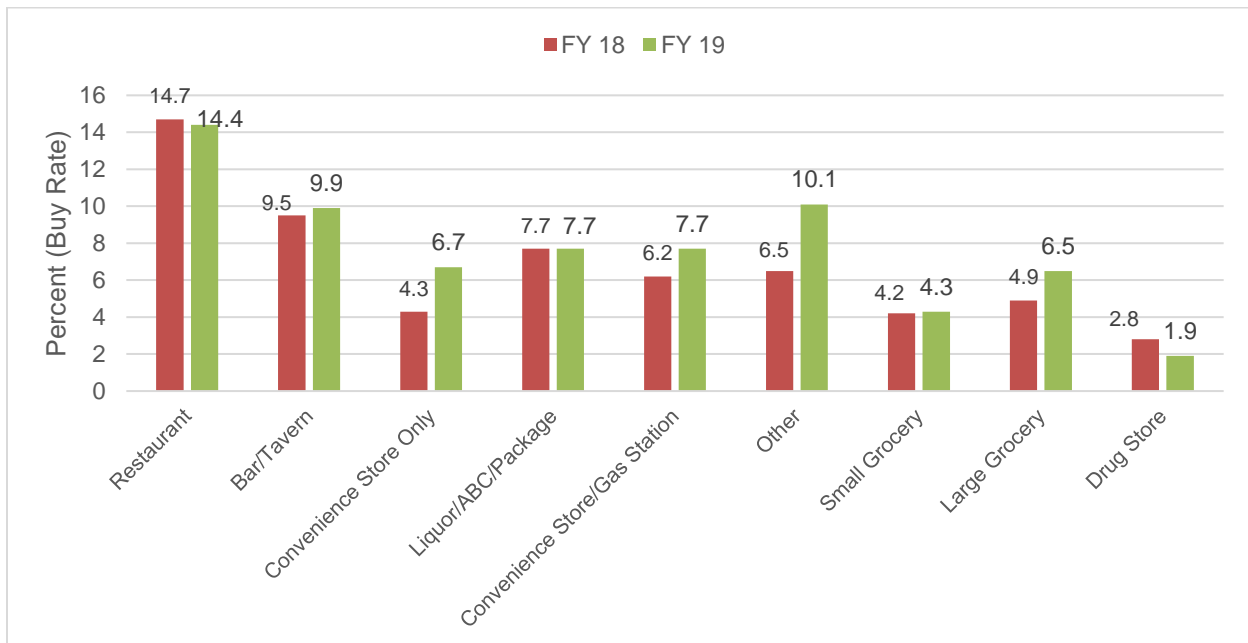


Table 5 displays the percentages of sales completed based on multiple demographic characteristics of the clerks and buyers. For alcohol, sales were higher when the clerk was Hispanic, and the buyer was older. For tobacco, sales were higher when the buyer was female, and the buyer was Black.

Table 5. Percentage of Retailer Sales by Demographic Characteristics

| Compliance Check Characteristic | % Sales Completed— Alcohol | % Sales Completed— Tobacco |
|--|---|---|
| Clerk Age | | |
| 15 - 17 | 10.0% | 0.0% |
| 18- 20 | 9.2% | 7.1% |
| 21 - 24 | 8.7% | 5.2% |
| 25 - 44 | 7.9% | 8.3% |
| 45 – 64 | 6.0% | 2.9% |
| 65+ | 8.1% | 9.1% |
| Clerk Sex | | |
| Female | 7.3% | 5.6% |
| Male | 7.8% | 8.9% |
| Clerk Race | ** | |
| Black | 8.7% | 9.6% |
| Hispanic | 10.6% | 0.0% |
| Other | 5.6% | 6.2% |
| White | 7.6% | 5.4% |
| Buyer Age | *** | |
| 15 | 2.2% | 5.0% |
| 16 | 4.4% | 5.8% |
| 17 | 6.5% | 8.7% |
| 18 | 8.2% | 0.0% |
| 19 | 8.3% | 0.0% |
| 20 | 14.2% | N/A |
| Buyer Sex | | ** |
| Female | 7.7% | 10.4% |
| Male | 7.4% | 5.1% |
| Buyer Race | | ** |
| Black | 8.2% | 11.9% |
| Hispanic | 12.8% | N/A |
| Other | 4.8% | N/A |
| White | 7.4% | 5.1% |
| * p < .05 ** p < .01 *** p < .001 | | |

Table 6 displays the percentages of sales completed when the sex and race of the clerk and buyer were the same and different. For alcohol, sales were higher when the race of the clerk and buyer were different. For tobacco, sales were higher when the race of the clerk and buyer were the same.

Table 6. Percentage of Retailer Sales by Demographic Characteristics and Time of Day

| Compliance Check Characteristic | % Sales Completed— Alcohol | % Sales Completed— Tobacco |
|---|---------------------------------------|---------------------------------------|
| Clerk – Buyer Sex | | |
| Different | 7.1% | 6.8% |
| Same | 7.9% | 6.8% |
| Clerk – Buyer Race | ** | * |
| Different | 7.9% | 6.0% |
| Same | 5.5% | 13.5% |
| School Day | | |
| 7:00 am – 2:59 pm | 6.7% | 6.8% |
| 3:00 pm – 11:59 pm | 8.0% | 6.7% |
| Day vs. Night | ** | |
| 6:00 am – 5:59 pm | 6.9% | 7.4% |
| 6:00 pm – 5:59 am | 9.0% | 5.1% |
| * p < .05 ** p < .01 *** p < .001 | | |

We conducted analyses to see if the time of the inspection was a significant factor in whether a sale is made. This was limited to weekday checks. First, an analysis was done based on whether the inspection was conducted before or after 3 pm, approximating whether youth would normally be in or out of school. In addition, 6 pm was used as a day/night proxy. The first analysis indicated that a compliance check before or after 3 pm on weekdays was not a significant factor for tobacco or alcohol sales. The second analysis indicated that while a day/night weekday sale was significant ($p < .01$) for alcohol—that is, it was more likely to occur at night—it was not significant for a sale for tobacco.

The average clerk fine for an alcohol sale, at the time of ticketing, was \$596.26, and the most common amount was \$672.50. The average fine for a tobacco sale ticket was \$437.01, with \$672.50 being the most common amount.

The compliance check form includes a section where officers ask offenders if they have ever taken a merchant education class. Of the 544 cases in which a sale was made (alcohol and tobacco), there were 17 instances (3.1%) in which the offender indicated they had taken a class.

Bar Checks

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

Bar Checks are conducted at on-premise alcohol establishments. The operation is not a compliance check in the sense that an undercover youth is sent into an establishment to attempt to purchase alcohol. In contrast, the operation occurs when law enforcement officers “walk through” an establishment checking for fake IDs, observing for retailer violations, and conducting casual contacts with alcohol outlet personnel and patrons. There were 395 operations recorded in FY ‘19 in ten counties, up from 207 operations in FY ‘18. The officers issued 101 tickets for fake IDs, ten verbal or written warnings, and 30 various retailer violations.

Shoulder Taps

Shoulder tap operations involve an underage volunteer standing outside of an off-premise establishment and asking adults going in to purchase alcohol for them. Those who do are ticketed. In FY’19, four counties representing four circuits conducted shoulder taps a total of six different times, down from eight in FY ‘18 and 9 in FY ‘17. Altogether, 127 individuals were approached in FY ‘19 compared to 77 in FY ‘18, even though the number of operations was down. Eleven purchased alcohol for the youth, resulting in an 8.7% violation rate. In FY ‘18 the rate was 1.3%, and it was 2.1% in FY ‘17. Nine other charges were written during these operations.

Public Safety Checkpoints/Saturation Patrols

AETs across South Carolina recorded 352 public safety checkpoints in 23 counties. The checkpoints expended more than 592 hours. Officers recorded contact with approximately 23,972 vehicles resulting in 2,233 citations and arrests. Highlights of those citations and arrests were 182 tickets for drug possession, 62 DUI arrests (.08 or greater BAC) among adults, four tickets for under 21 Zero Tolerance (.02 to .079 BAC), 18 fugitives apprehended, 123 tickets for open container, and 16 felony arrests. Eleven underage individuals were ticketed for alcohol possession/consumption at the checkpoints.

Saturation patrols, also called directed patrol, are sometimes described as “roving checkpoints.” Public safety checkpoints are stationery while saturation patrols are conducted by officers patrolling in vehicles. Both enforcement operations concentrate on areas where vehicle crashes and traffic violations occur. These focus areas are determined by data analysis

and officers' knowledge about the areas. In FY 2019, there were 147 saturation patrols that expended a total of 308 hours and involved 358 officers. This type of operation was recorded in 11 counties. The patrols resulted in 1,102 citations and arrests. In those violations, there were 57 tickets for drug possession, 20 DUI arrests, three fugitives apprehended, 14 tickets for open container, and four felony arrests. Two underage individuals were ticketed for alcohol possession/consumption.

Controlled Party Dispersals/Party Patrols

Alcohol Enforcement Teams in 10 counties recorded 143 party dispersals in FY '19. A party dispersal is conducted when officers receive a complaint from a source and investigate that complaint. In some cases, officers observe a social gathering involving individuals under the legal alcohol drinking age of 21 years old while on duty and investigate the gathering. In FY '19, the predominant source for the party investigation was call for service (7.7%). There was a total of 574 officer hours recorded at the gatherings involving 3,003 people. Officers recorded 234 tickets and arrests at the gatherings.

Multi-Jurisdictional Law Enforcement Agreements and Efforts

Counties earned STEP points for providing a copy of a multi-jurisdictional tobacco law enforcement agreement, a document signed by multiple law enforcement agencies that promised a cooperative effort to address underage alcohol and/or tobacco enforcement. These agreements are believed to be important to sustaining consistent enforcement. In FY '19, 17 counties turned in tobacco agreements, the same as in FY '18. There are many multi-jurisdictional alcohol enforcement agreements in place (often as part of the same document that serves as the tobacco agreement), but DAODAS does not formally collect or count them.

In FY '19, 83 law enforcement agencies conducted enforcement activities as a part of the Alcohol Enforcement Team (AET) efforts. In FY '18, 69 law enforcement agencies participated. As stated earlier in this report, 7,274 alcohol and tobacco compliance checks accounted for the largest number of enforcement activities reported in the Environmental Prevention Strategies (EPS) Reporting system in FY '19. In FY '18, 7,033 alcohol and tobacco compliance checks were reported.

Almost 49 percent of the compliance checks were submitted as multi-jurisdictional (involving more than one law enforcement agency). The South Carolina State Law Enforcement Division (SLED) Alcohol Enforcement partnered with local law enforcement agencies on 42.1% of the alcohol compliance checks. In FY '18, SLED agents partnered with local law enforcement on 38% of the alcohol compliance checks and on 27% of the alcohol checks in FY '17.

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. Several merchant education curricula are in use nationally and in South Carolina, though the county authorities are now exclusively using the PREP (Palmetto Retailer Education Program) curriculum. County authorities were each required to implement merchant education programming in FY '19 and collectively served 1,081 retail staff, which is down from 1,411 in FY '18. Thirty-seven of the 46 counties served at least one retailer in PREP, with Beaufort (205) serving the most.

There is a standardized PREP post-test used across the system that allows standardization of outcomes. Primarily, the test is graded for a pass or fail. Among those who passed in FY '19, the average score was 95.7%.

Diversions or Court-mandated Youth Programs

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

There were 246 youth served in AEP in FY '19, down from FY '18. The bulk of the youth served came from Pickens (110), Charleston (52), and Richland (22).

For tobacco, county agencies offer the Tobacco Education Program (TEP) for youth as a program they can complete when charged with underage tobacco possession in lieu of paying a fine. In FY '19, 295 youth participated in TEP, up slightly from FY '18 when 287 youth participated. Eleven counties delivered TEP in FY '19, one more county than in FY '18, with Chesterfield (77) serving the majority.

Alcohol Enforcement Team Awareness Activities

AET awareness activities included holding town hall meetings, doing educational sessions for youth or adults, conducting local media campaigns, and "casual contacts," which are typically law enforcement officers making community contacts with youth or merchants to keep a high visibility presence and warn them of upcoming enforcement efforts. AETs reported 893 media placements (e.g., articles and TV stories) during FY '19. There were 47 presentations and media events conducted during "Out of Their Hands" throughout the month of April 2019, down from 88 in FY '18. During April 2019, an estimated 700,000 South Carolinians received information about underage drinking through the "Out of Their Hands" media activities. This includes all forms of media such as television, radio, and social media as well as presentations conducted at schools, colleges, and universities. It is noted that an increase in the number of AETs using social media starting in FY '18, such as Facebook and Twitter, and continued during "Out of

Their Hands” in April 2019. While the AETs noted the social media presence, complete data analytics were not transmitted to the reporting system, so the social media reach is difficult to measure. On the two Facebook pages maintained at the state level, “Parents Who Host, Lose the Most” (PWHLTM), and “SC Out of Their Hands” (OOTH), OOTH FB had a daily average of 235 LIKES, 29,111 post reach with 50,011 post impressions (views). Likewise, PWHLTM FB had a daily average of 464 LIKES, 4,111 post reach with 13,583 post impressions (views).

Alcohol Enforcement Team Training

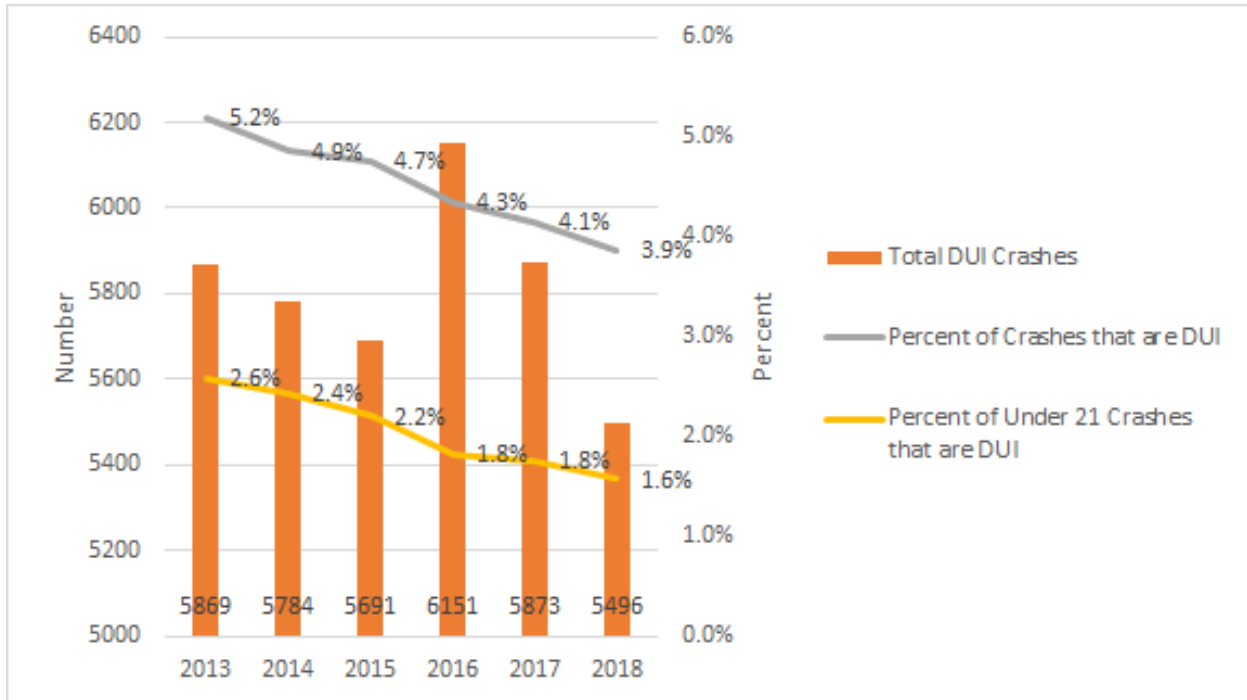
A key component of the AET model utilized in South Carolina involves developing and maintaining local law enforcement support for underage drinking prevention and enforcement efforts. Some of this support takes the form of continued training opportunities for law enforcement officers in such topics as Fake IDs, Public Safety Checkpoints, Source Investigation, Special Alcohol Events Management, Current Alcohol Trends and Fads, Alcohol Screener Devices, and others to increase capacity of law enforcement officers, prevention specialists, and other community partners to enforce underage drinking laws and educate citizens in the value of enforcing those laws.

In FY '19, there were 23 training sessions conducted in 7 counties in South Carolina. These sessions were attended by 348 individuals, including 293 law enforcement officers. Among those participants attending were 20 youth and adults who participated as role-players in mock controlled party dispersal training. This training module was combined with the primary training topic of AET 101 Training.

Alcohol-Related Crashes

One of the main goals of environmental prevention strategies is to reduce alcohol-related traffic crashes. Figure 17 below shows that the total number of DUI crashes had decreased steadily from 2013 through 2015 then increased dramatically in 2016, reducing back to 2013 levels in 2017 and lower in 2018. It should be noted, however, that total crashes also increased dramatically in 2016 (not shown in the figure), suggesting that factors other than alcohol contributed to a higher number of crashes. In fact, the percent of crashes that were alcohol-related steadily decreased from 2015 to 2018 (total DUI crashes and crashes for people under the age of 21), suggesting that efforts to reduce DUI crashes have been fruitful.

Figure 17. Alcohol-Related Traffic Crashes, 2013 - 2018



Summary of Section III

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

County authority prevention staff and AET Coordinators submitted electronic forms on 6,540 alcohol compliance checks and 743 tobacco compliance checks. Sales were completed for 7.6% of alcohol attempts and 6.8% of tobacco attempts.

Most merchants asked to see the buyers’ IDs (93.2% and 90.2% for alcohol and tobacco, respectively) and most merchants studied the IDs (83% and 71.9% for alcohol and tobacco, respectively). For alcohol, sales were higher when the clerk was Hispanic, the buyer was older, the sex of the clerk and buyer was different, and the attempt was made after 6:00pm. For tobacco, sales were higher when the buyer was female, the buyer was Black, and the race of the clerk and buyer was the same.

The counties served 1,081 merchants in the Palmetto Retailers Education Program (PREP) in FY ’19, down from 1,411 in FY ’18.

AETs reported a total of 352 public safety checkpoints. Among the violations, there were 62 DUIs. In addition, there were 147 saturation patrols reported. This operation generated another 1,102 tickets, among them 20 DUIs.

AETs dispersed 143 parties attended by 3,003 persons, with 234 tickets and arrests recorded at the gatherings. A total of 127 individuals were approached by the cooperating youth to purchase alcohol as part of Shoulder Tap operations, with 11 purchasing (8.7% sales).

In FY '19, there were 395 bar checks conducted, resulting in 101 fake ID violations, 10 warnings for various activity, and 30 retailer and patron violations.

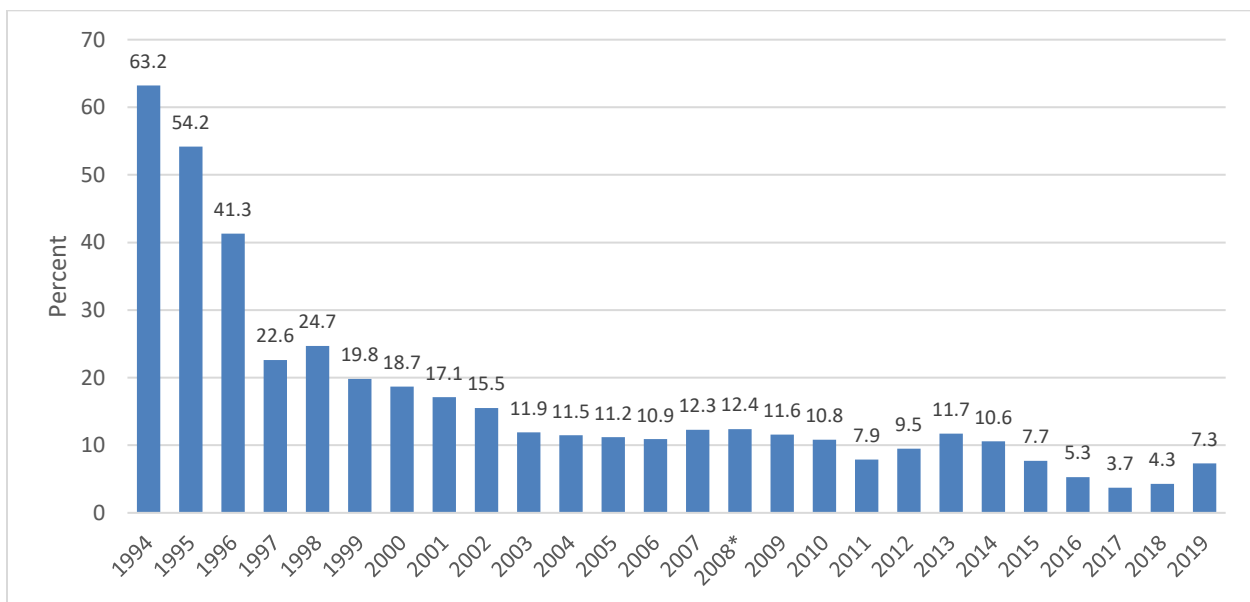
More than 541 youth were in diversion program for youth alcohol and tobacco offenses (246 served in the Alcohol Education Program and 295 served in the Tobacco Education Program).

SECTION IV: YOUTH ACCESS TO TOBACCO STUDY (SYNAR)

As per the Federal Synar Regulation, South Carolina conducts annual, unannounced inspections of a valid probability sample of tobacco outlets that are accessible to minors.² This study, known in South Carolina as the Youth Access to Tobacco Study (YATS) or simply the Synar Study, is designed to determine the extent to which people younger than 18 can successfully buy cigarettes from retail outlets. Although similar in nature and scope to the counties' tobacco compliance checks discussed in the previous section, the Synar Study is a distinct operation that occurs during a specific time period each year and uses a scientifically developed and SAMHSA-approved sampling frame.

Between Jan. 1 and Feb. 28, 2019, 133 youth volunteers ages 15-17, under trained adult supervision, conducted unannounced cigarette purchase attempts in 403 randomly selected retail outlets in all 46 counties. These outlets were randomly sampled from the estimated 7,095 outlets in the state. Figure 18 shows the buy rates from the Synar Study since 1994. For 2019, the estimated overall sales rate (also known as a Retailer Violation Rate or RVR) was 7.3%. This rate is far better than the federal standard of 20.0% and substantially lower than the RVR of 63.2% in 1994, the first year of the study. It was, however, an increase from the buy rate of 4.3% in 2018. Buy rates for each county are shown in Table 7.

Figure 18. YATS (Synar) Cigarette Purchase Rates (FY 1994 - 2019)^a



^a Data are labeled based on when they were collected. Typically, these data are collected in January and February, but reported to SAMHSA the following December, meaning they are collected in one fiscal year and reported to SAMHSA the next fiscal year. For example, the 2016 data match the FY 2017 submission to SAMHSA by DAODAS.

* Beginning in 2008, the state did not allow 14-year-old inspectors, who consistently had lower purchase rates than 15- to 17-year-olds.

² The Synar Regulation is named after US Congressman Mike Synar from Oklahoma, who introduced youth tobacco prevention legislation in 1992.

Table 7. YATS (Synar) Raw Buy Rates 2019

| County Name | Total Eligible Attempts | No Buy | Buy | Buy Rate |
|--------------------|--------------------------------|---------------|------------|-----------------|
| Abbeville | 1 | 1 | 0 | 0.0% |
| Aiken | 8 | 7 | 1 | 12.5% |
| Allendale | 1 | 1 | 0 | 0.0% |
| Anderson | 9 | 7 | 2 | 22.2% |
| Bamberg | 5 | 5 | 0 | 0.0% |
| Barnwell | 5 | 5 | 0 | 0.0% |
| Beaufort | 15 | 13 | 2 | 13.3% |
| Berkeley | 11 | 11 | 0 | 0.0% |
| Calhoun | 1 | 1 | 0 | 0.0% |
| Charleston | 28 | 26 | 2 | 7.14% |
| Cherokee | 7 | 7 | 0 | 0.0% |
| Chester | 3 | 3 | 0 | 0.0% |
| Chesterfield | 3 | 3 | 0 | 0.0% |
| Clarendon | 3 | 3 | 0 | 0.0% |
| Colleton | 7 | 5 | 2 | 28.57% |
| Darlington | 4 | 3 | 1 | 25.0% |
| Dillon | 7 | 5 | 2 | 28.57% |
| Dorchester | 11 | 11 | 0 | 0.0% |
| Edgefield | 0 | 0 | 0 | 0.0% |
| Fairfield | 2 | 2 | 0 | 0.0% |
| Florence | 10 | 10 | 0 | 0.0% |
| Georgetown | 4 | 4 | 0 | 0.0% |
| Greenville | 22 | 21 | 1 | 4.55% |
| Greenwood | 5 | 5 | 0 | 0.0% |
| Hampton | 4 | 3 | 1 | 25.0% |
| Horry | 12 | 12 | 0 | 0.0% |
| Jasper | 2 | 2 | 0 | 0.0% |
| Kershaw | 6 | 6 | 0 | 0.0% |
| Lancaster | 3 | 3 | 0 | 0.0% |
| Laurens | 6 | 6 | 0 | 0.0% |
| Lee | 1 | 1 | 0 | 0.0% |
| Lexington | 19 | 18 | 1 | 5.26% |
| Marion | 2 | 2 | 0 | 0.0% |
| Marlboro | 1 | 0 | 1 | 100% |
| McCormick | 3 | 3 | 0 | 0.0% |
| Newberry | 1 | 1 | 0 | 0.0% |
| Oconee | 5 | 5 | 0 | 0.0% |
| Orangeburg | 8 | 8 | 0 | 0.0% |

Table 7. YATS (Synar) Raw Buy Rates 2019

| County Name | Total Eligible Attempts | No Buy | Buy | Buy Rate |
|--------------|-------------------------|--------|-----|----------|
| Pickens | 6 | 5 | 1 | 16.67% |
| Richland | 20 | 17 | 3 | 15.0% |
| Saluda | 2 | 2 | 0 | 0.0% |
| Spartanburg | 17 | 15 | 2 | 11.76% |
| Sumter | 4 | 4 | 0 | 0.0% |
| Union | 6 | 5 | 1 | 16.67% |
| Williamsburg | 4 | 4 | 0 | 0.0% |
| York | 10 | 10 | 0 | 0.0% |

Table 8 shows Synar buy rates, broken down by the demographic characteristics of the youth purchaser. No purchaser demographics were significantly related to the likelihood of a successful buy.

Table 8. YATS (Synar) Percent of Outlets Selling Cigarettes to Youth by Characteristics of Youth, 2019

| Characteristic | Buy Rate (%) |
|-------------------|--------------|
| Age | |
| 15 | 5.6 |
| 16 | 7.3 |
| 17 | 8.8 |
| Sex | |
| Female | 8.7 |
| Male | 5.8 |
| Race | |
| Black | 8.0 |
| Other | 9.4 |
| White | 6.2 |
| Buyer Race | |
| Black-Female | 11.2 |
| Other-Female | 7.1 |
| White-Female | 6.5 |
| Black-Male | 4.4 |
| Other-Male | 11.1 |
| White-Male | 5.8 |

Table 9 shows Synar buy rates, broken down by the demographic characteristics of the clerk. No clerk demographics were significantly related to the likelihood of a successful buy.

Table 9. YATS (Synar) Percent of Outlets Selling Cigarettes to Youth by Characteristics of Clerk, 2018

| Characteristic | Buy Rate (%) |
|-----------------------|---------------------|
| Age | |
| Teenager | 22.2 |
| 20's | 13.5 |
| 30's | 4.4 |
| 40's | 6.6 |
| 50's | 2.2 |
| 60+ | 0.0 |
| Sex | |
| Female | 6.1 |
| Male | 9.8 |
| Race | |
| Black | 10.0 |
| Hispanic | 11.1 |
| Other | 4.2 |
| White | 6.0 |
| Clerk Race | |
| Black-Female | 6.9 |
| Hispanic-Female | 0.0 |
| Other-Female | 0.0 |
| White-Female | 5.7 |
| Black-Male | 22.2 |
| Hispanic-Male | 16.7 |
| Other-Male | 5.9 |
| White-Male | 6.8 |

SECTION V: STATEWIDE YOUTH SUBSTANCE USE TRENDS

One reason for DAODAS and the State of South Carolina to devote resources to prevention efforts is to prevent and reduce youth substance use across the state. Just as it is beneficial for DAODAS to track its prevention efforts and outcomes annually through this report, it is beneficial to monitor statewide substance use trends across years as well. By monitoring statewide trends, DAODAS can gauge the changes in use over time and determine if its efforts should be modified to better address the trends.

The figures below show long-term trends (where data were available) in youth substance use, using data from the Youth Risk Behavior Survey (YRBS). Where possible, we compare South Carolina data with those of the United States. As can be seen, South Carolina, along with the nation as-a-whole, has experienced considerable reductions in youth alcohol and cigarette use over the years, with the state alcohol use rates typically slightly lower than those for the nation. Although the overall reductions in South Carolina cannot be attributed directly to the DAODAS-funded efforts, the comprehensive approach taken by the state (i.e., extensive environmental efforts supplemented by curriculum-based programs) has been shown to lead to positive outcomes.

It should be noted that in 2019, several 30-day substance use measures showed a downward trend, including alcohol, cigarettes, and marijuana.³ However, data on lifetime use of various harmful substances (e.g., heroin, methamphetamines, Ecstasy, and synthetic marijuana) showed movement in the undesired direction (Figure 24). Prevention stakeholders should continue to monitor all trends and ensure that evidence-based prevention strategies continue to be implemented as broadly as possible in their communities.

³ 2019 data for the US have not yet been released.

Figure 19. Past 30-Day Alcohol Use, High School Students, South Carolina and United States

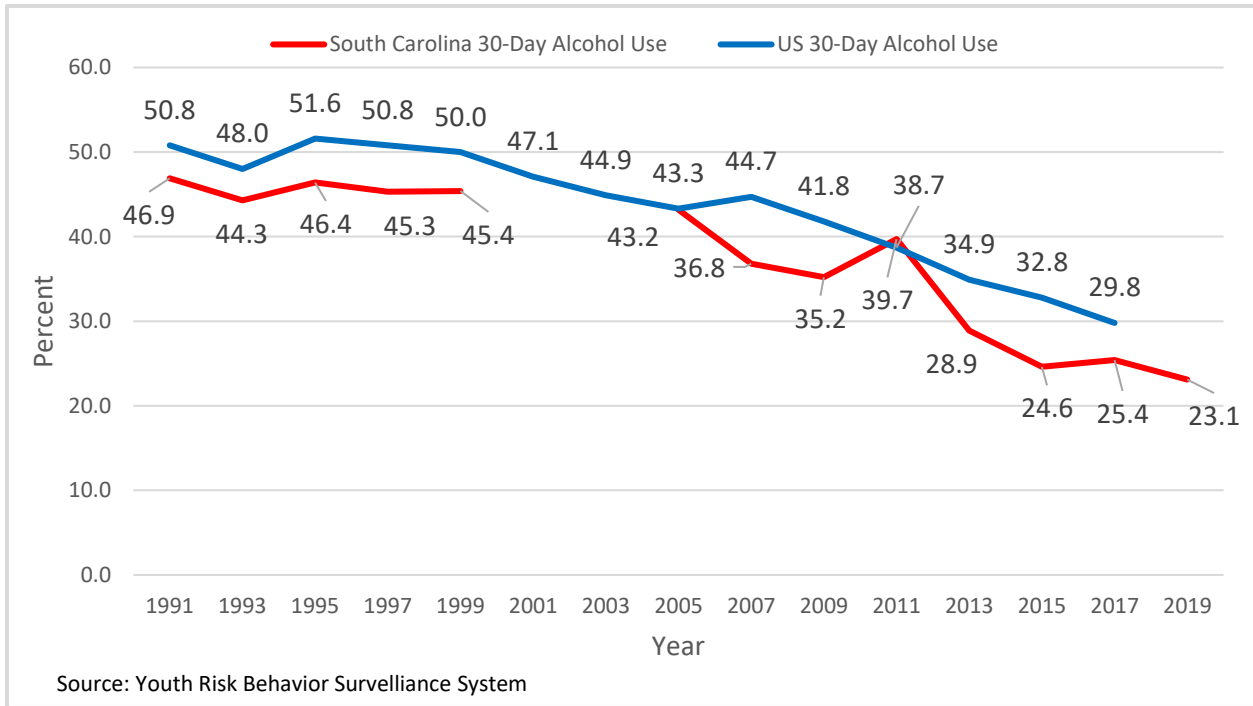


Figure 20. Past 30-Day Binge Drinking, High School Students, South Carolina and United States

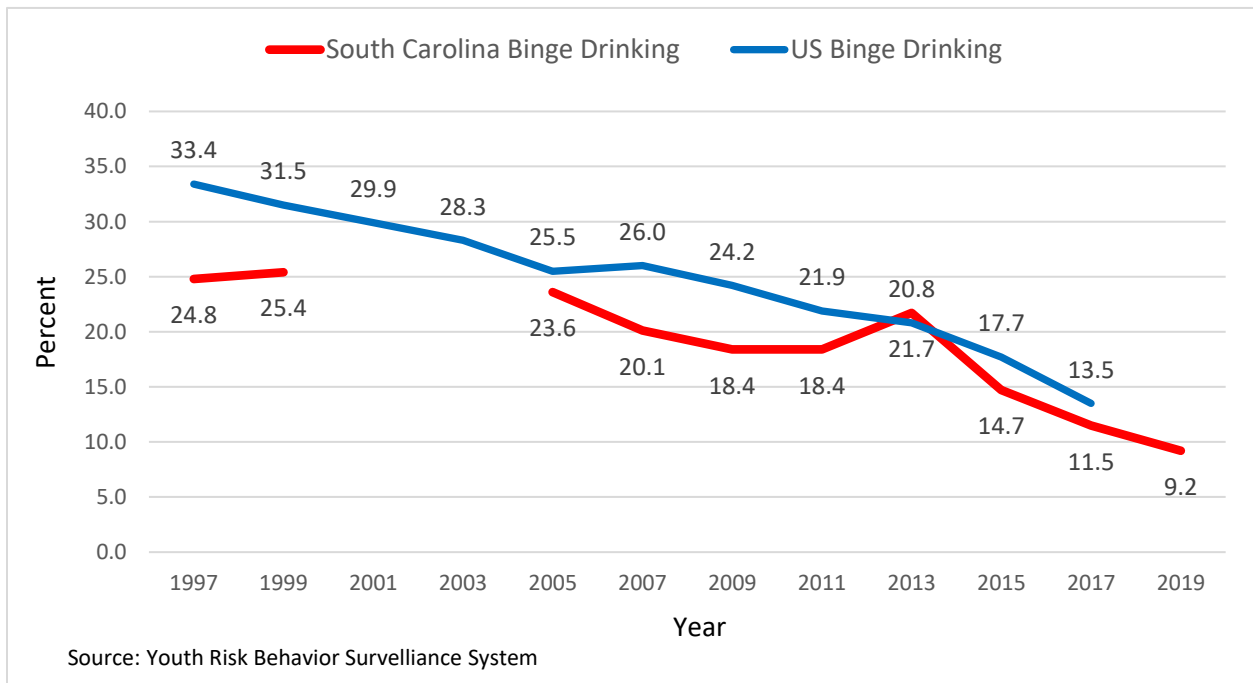


Figure 21. Past 30-Day Cigarette Use, High School Students, South Carolina and United States

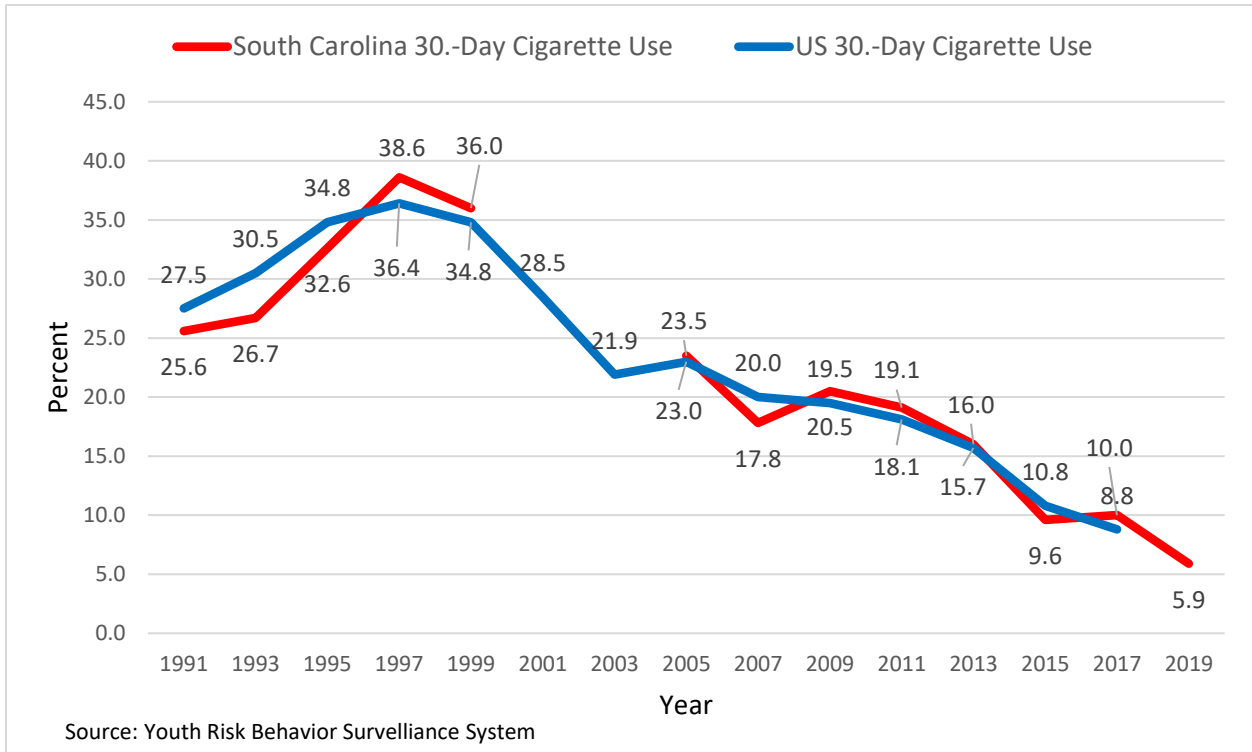


Figure 22. Past 30-Day Marijuana Use, High School Students, South Carolina and United States

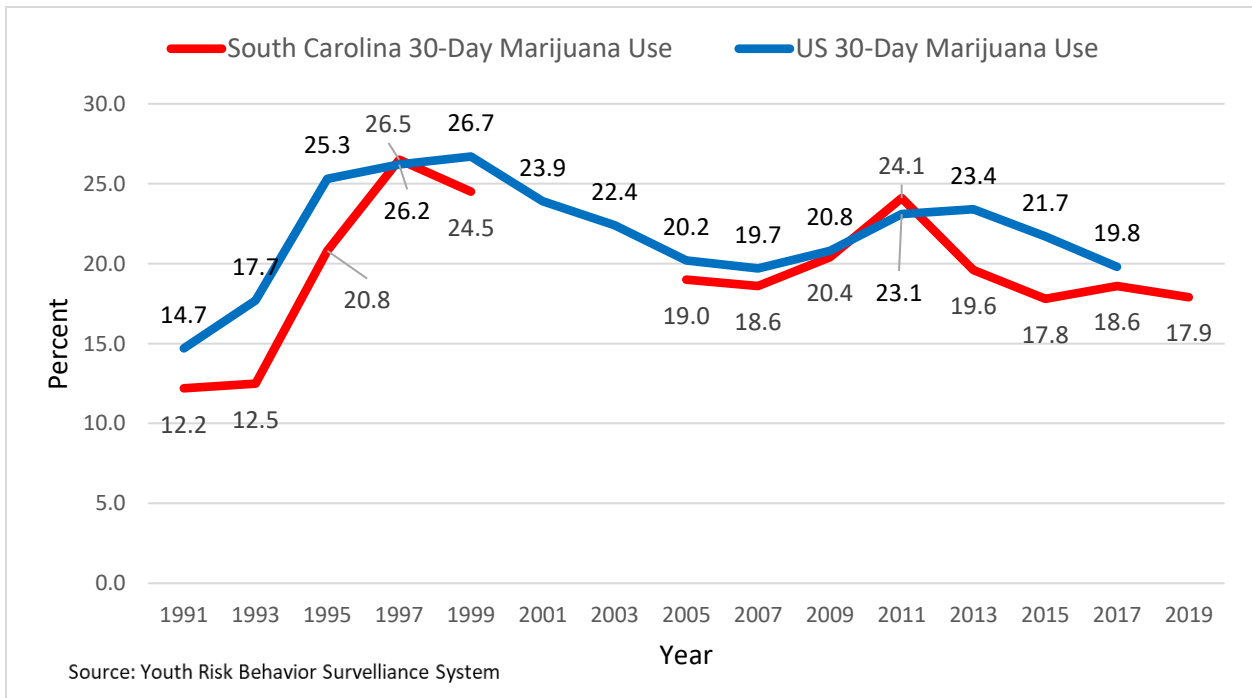


Figure 23. Ever Used Prescription Drugs (Pain Relievers) without Doctor's Prescription, High School Students, South Carolina and United States

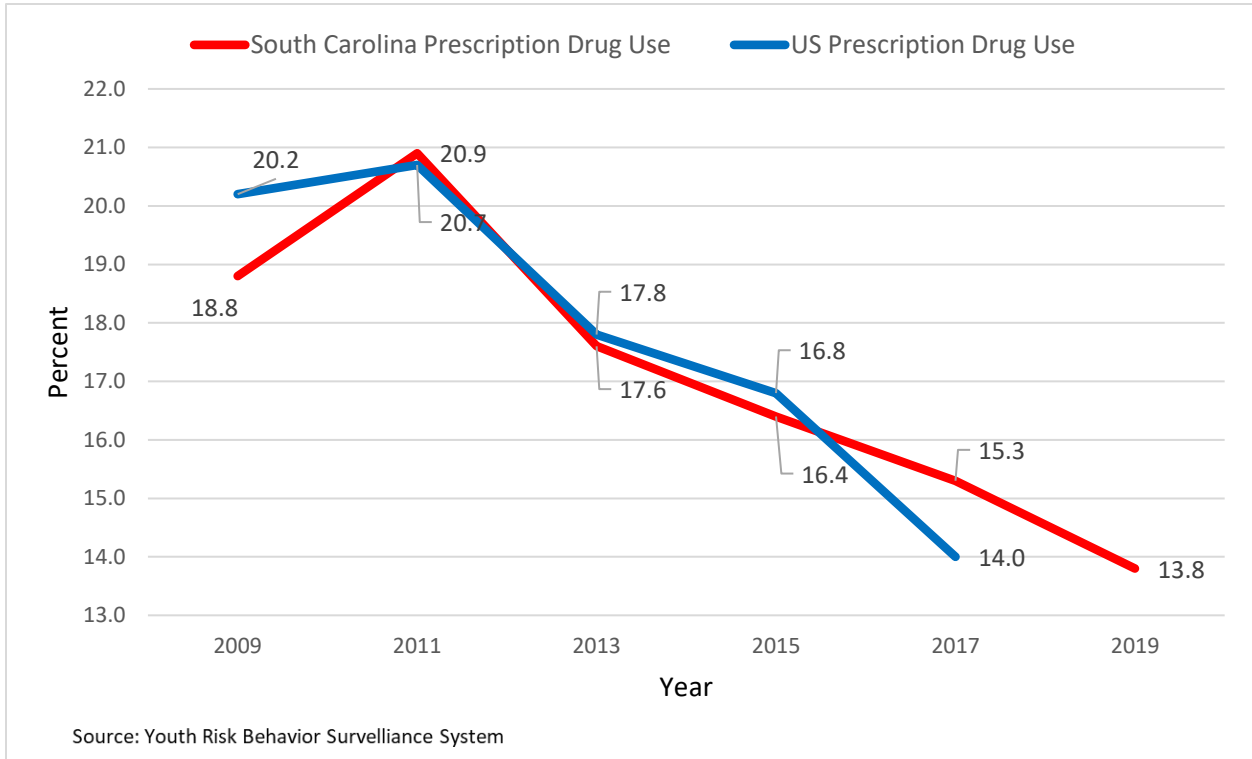
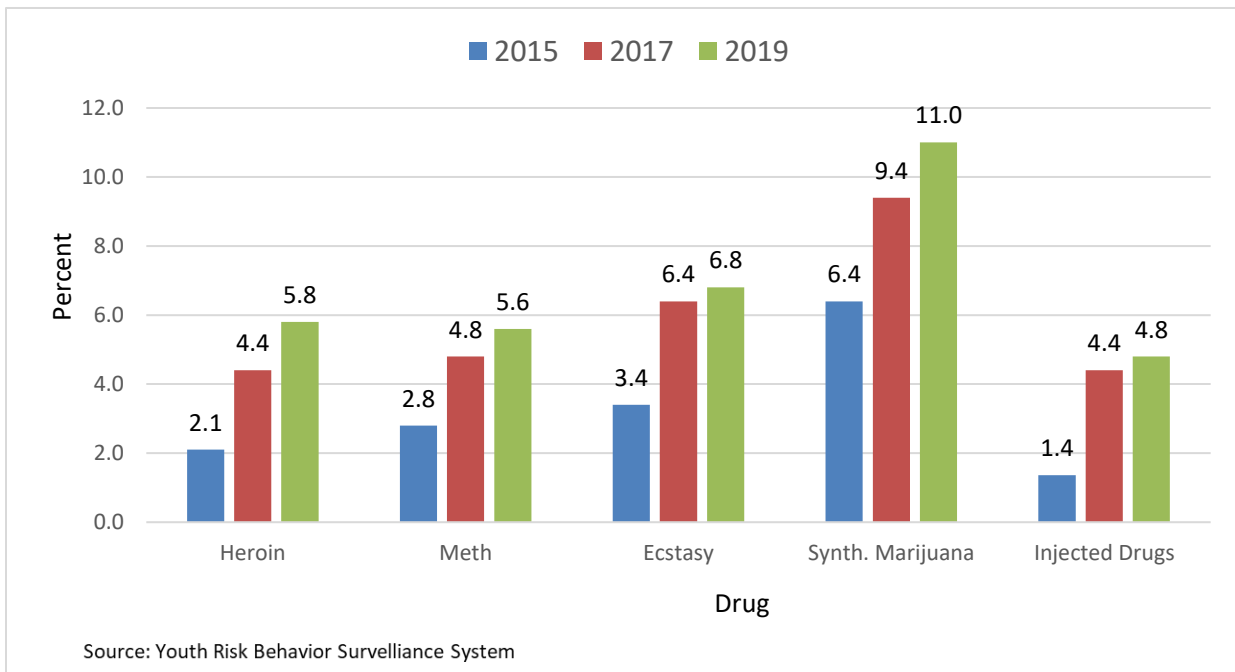


Figure 24. Ever Used Various Drugs, High School Students, 2015 and 2017, South Carolina



APPENDIX A: ADDITIONAL DATA TABLES

Table A1. Overall Results by Age

| Risk Factor Scores, Range (Positive score is favorable) | Middle School (n=1642) | | | High School (n=454) | | |
|--|------------------------|--------------|----------|---------------------|--------------|----------|
| | Pre Average | Post Average | % Change | Pre Average | Post Average | % Change |
| Perceived Risk, 0-3 | 1.97 | 2.10 | 7.05** | 1.78 | 2.00 | 12.54** |
| Decision-Making Skills, 0-3 | 1.83 | 1.86 | 1.49 | 1.75 | 1.84 | 5.20** |
| Disapproval of Use, 0-2 | 1.65 | 1.67 | 1.18 | 1.35 | 1.43 | 5.98** |
| Perceived Peer Norms, 0-10 | 8.65 | 8.75 | 1.13** | 7.28 | 7.69 | 5.60** |
| Perceived Parental Attitudes, 0-3 | 2.86 | 2.86 | -0.02 | 2.73 | 2.75 | 0.84 |

| Substance Use, % Users in Past 30 Days (Negative change is favorable) | Pre Average | Post Average | % Change | Pre Average | Post Average | % Change |
|---|-------------|--------------|----------|-------------|--------------|----------|
| Cigarettes | 2.32 | 2.69 | 15.95 | 6.43 | 6.23 | -3.11 |
| Other Tobacco | 2.69 | 2.96 | 10.04 | 11.95 | 8.25 | -30.96** |
| Alcohol | 5.50 | 5.22 | -5.09 | 21.51 | 17.71 | -17.67** |
| Marijuana | 2.51 | 2.51 | 0.00 | 11.56 | 7.25 | -37.28** |
| Other Illegal Drugs | 1.16 | 1.35 | 16.38 | 3.33 | 1.25 | -62.46 |
| Inhalants | 3.61 | 3.47 | -3.88 | 2.44 | 1.00 | -59.02 |
| Non-Medical Prescription Drug Use | 2.02 | 2.00 | -0.99 | 3.77 | 3.49 | -7.43 |
| Non-Medical Over-The-Counter Drug Use | 1.72 | 1.87 | 8.72 | 1.99 | 2.24 | 12.56 |

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

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

Table A2. Overall Results by Sex

| Risk Factor Scores, Range (Positive score is favorable) | Females (n=982) | | | Males (n=992) | | |
|--|-----------------|--------------|----------|---------------|--------------|----------|
| | Pre Average | Post Average | % Change | Pre Average | Post Average | % Change |
| Perceived Risk, 0-3 | 1.97 | 2.14 | 8.38** | 1.88 | 2.03 | 7.95** |
| Decision-Making Skills, 0-3 | 1.85 | 1.90 | 3.13** | 1.79 | 1.81 | 1.25 |
| Disapproval of Use, 0-2 | 1.65 | 1.68 | 2.05 | 1.52 | 1.55 | 2.29 |
| Perceived Peer Norms, 0-10 | 8.43 | 8.64 | 2.39** | 8.29 | 8.43 | 1.76** |
| Perceived Parental Attitudes, 0-3 | 2.86 | 2.87 | 0.32 | 2.81 | 2.81 | 0.11 |

| Substance Use, % Users in Past 30 Days (Negative change is favorable) | Pre Average | Post Average | % Change | Pre Average | Post Average | % Change |
|---|-------------|--------------|----------|-------------|--------------|----------|
| Cigarettes | 2.19 | 2.56 | 16.89 | 4.21 | 4.45 | 5.70 |
| Other Tobacco | 3.63 | 2.87 | -20.94 | 5.65 | 4.88 | -13.63 |
| Alcohol | 8.67 | 7.27 | -16.15 | 9.29 | 8.12 | -12.59 |
| Marijuana | 3.82 | 3.49 | -8.64 | 4.99 | 3.15 | -36.87 |
| Other Illegal Drugs | 1.24 | 0.92 | -25.81 | 2.21 | 1.83 | -17.19 |
| Inhalants | 2.96 | 2.36 | -20.27 | 4.03 | 3.44 | -14.64 |
| Non-Medical Prescription Drug Use | 2.29 | 2.46 | 7.42 | 2.49 | 1.93 | -22.49 |
| Non-Medical Over-The-Counter Drug Use | 1.53 | 1.03 | -32.68 | 2.02 | 2.64 | 30.69 |

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

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

Table A3. Overall Results by Race Group

| Risk Factor Scores, Range (Positive score is favorable) | American Indian participants (n=47) | | | Asian participants (n=18) | | |
|--|-------------------------------------|--------------|----------|---------------------------|--------------|----------|
| | Pre Average | Post Average | % Change | Pre Average | Post Average | % Change |
| Perceived Risk, 0-3 | 1.84 | 2.07 | 12.51** | | | |
| Decision-Making Skills, 0-3 | 1.80 | 1.78 | -1.54 | | | |
| Disapproval of Use, 0-2 | 1.52 | 1.55 | 2.03 | | | |
| Perceived Peer Norms, 0-10 | 8.29 | 8.12 | -1.99 | | | |
| Perceived Parental Attitudes, 0-3 | 2.63 | 2.68 | 1.90 | | | |

| Substance Use, % Users in Past 30 Days (Negative change is favorable) | Pre Average | Post Average | % Change | Pre Average | Post Average | % Change |
|---|-------------|--------------|----------|-------------|--------------|----------|
| Cigarettes | 12.77 | 13.04 | 2.11 | | | |
| Other Tobacco | 4.26 | 6.52 | 53.05 | | | |
| Alcohol | 12.77 | 13.04 | 2.11 | | | |
| Marijuana | 4.26 | 6.52 | 53.05 | | | |
| Other Illegal Drugs | 8.51 | 11.11 | 30.55 | | | |
| Inhalants | 6.38 | 15.22 | 138.56 | | | |
| Non-Medical Prescription Drug Use | 8.51 | 2.17 | -74.50 | | | |
| Non-Medical Over-The-Counter Drug Use | 4.26 | 4.35 | 2.11 | | | |

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

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

Table A3. Overall Results by Race Group (continued)

| Risk Factor Scores, Range (Positive score is favorable) | Black/African American participants (n=820) | | | White participants (n=908) | | |
|--|--|-----------------|-------------|----------------------------|-----------------|-------------|
| | Pre Average | Post Average | % Change | Pre Average | Post Average | % Change |
| Perceived Risk, 0-3 | 1.87 | 2.04 | 9.31** | 1.97 | 2.11 | 7.28** |
| Decision-Making Skills, 0-3 | 1.81 | 1.87 | 3.83** | 1.82 | 1.84 | 1.54 |
| Disapproval of Use, 0-2 | 1.54 | 1.58 | 2.74 | 1.64 | 1.66 | 1.08 |
| Perceived Peer Norms, 0-10 | 8.28 | 8.52 | 2.84** | 8.44 | 8.54 | 1.23** |
| Perceived Parental Attitudes, 0-3 | 2.82 | 2.84 | 0.74 | 2.85 | 2.84 | -0.52 |

| Substance Use, % Users in Past 30 Days (Negative change is favorable) | Pre Average | Post Average | % Change | Pre Average | Post Average | % Change |
|---|----------------|-----------------|-------------|----------------|-----------------|-------------|
| Cigarettes | 1.84 | 2.25 | 22.28 | 3.97 | 4.31 | 8.56 |
| Other Tobacco | 3.56 | 2.51 | -29.49 | 5.64 | 5.37 | -4.79 |
| Alcohol | 7.13 | 4.77 | -33.10** | 10.36 | 10.26 | -0.97 |
| Marijuana | 6.65 | 4.11 | -38.20** | 2.43 | 2.45 | 0.82 |
| Other Illegal Drugs | 2.83 | 1.59 | -43.82 | 0.33 | 0.70 | 112.12 |
| Inhalants | 3.69 | 2.11 | -42.82* | 2.87 | 2.68 | -6.62 |
| Non-Medical Prescription Drug Use | 2.59 | 2.12 | -18.15 | 1.99 | 2.33 | 17.09 |
| Non-Medical Over-The-Counter Drug Use | 1.72 | 1.19 | -30.81 | 1.32 | 2.11 | 59.85 |

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

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

Table A3. Overall Results by Race Group (continued)

| Risk Factor Scores, Range (Positive score is favorable) | Multi-ethnic participants (n=174) | | | Other (n=135) | | |
|--|-----------------------------------|--------------|----------|---------------|--------------|----------|
| | Pre Average | Post Average | % Change | Pre Average | Post Average | % Change |
| Perceived Risk, 0-3 | 1.92 | 2.05 | 6.78** | 2.00 | 2.17 | 8.74** |
| Decision-Making Skills, 0-3 | 1.85 | 1.87 | 1.24 | 1.86 | 1.85 | -0.46 |
| Disapproval of Use, 0-2 | 1.51 | 1.57 | 3.58 | 1.54 | 1.61 | 4.42 |
| Perceived Peer Norms, 0-10 | 8.20 | 8.49 | 3.51** | 8.40 | 8.63 | 2.80* |
| Perceived Parental Attitudes, 0-3 | 2.76 | 2.82 | 1.94 | 2.86 | 2.87 | 0.41 |

| Substance Use, % Users in Past 30 Days (Negative change is favorable) | Pre Average | Post Average | % Change | Pre Average | Post Average | % Change |
|---|-------------|--------------|----------|-------------|--------------|----------|
| Cigarettes | 1.72 | 2.44 | 41.86 | 4.51 | 4.17 | -7.54 |
| Other Tobacco | 4.60 | 2.44 | -46.96 | 5.26 | 5.83 | 10.84 |
| Alcohol | 10.92 | 8.54 | -21.79 | 7.52 | 6.67 | -11.30 |
| Marijuana | 2.87 | 4.27 | 48.78 | 6.77 | 4.17 | -38.40 |
| Other Illegal Drugs | 1.15 | 1.83 | 59.13 | 1.50 | 0.83 | -44.67 |
| Inhalants | 4.02 | 3.05 | -24.13 | 3.01 | 4.17 | 38.54 |
| Non-Medical Prescription Drug Use | 0.57 | 3.05 | 435.09* | 3.76 | 1.67 | -55.59 |
| Non-Medical Over-The-Counter Drug Use | 3.47 | 3.05 | -12.10 | 2.26 | 1.68 | -25.66 |

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

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

Table A4. Overall Results by Ethnicity

| Risk Factor Scores, Range (Positive score is favorable) | Participants of Hispanic, Latino, or Spanish Descent or Origin (n=187) | | | Participants Not of Hispanic, Latino, or Spanish Descent or Origin (n=1837) | | |
|--|--|--------------|----------|---|--------------|----------|
| | Pre Average | Post Average | % Change | Pre Average | Post Average | % Change |
| Perceived Risk, 0-3 | 2.03 | 2.13 | 5.07 | 1.93 | 2.09 | 8.10** |
| Decision-Making Skills, 0-3 | 1.89 | 1.91 | 1.10 | 1.81 | 1.86 | 2.39** |
| Disapproval of Use, 0-2 | 1.63 | 1.66 | 1.78 | 1.58 | 1.62 | 2.31* |
| Perceived Peer Norms, 0-10 | 8.34 | 8.70 | 4.25** | 8.37 | 8.53 | 1.94** |
| Perceived Parental Attitudes, 0-3 | 2.84 | 2.87 | 0.90 | 2.83 | 2.84 | 0.16 |

| Substance Use, % Users in Past 30 Days (Negative change is favorable) | Pre Average | Post Average | % Change | Pre Average | Post Average | % Change |
|---|-------------|--------------|----------|-------------|--------------|----------|
| Cigarettes | 2.70 | 2.33 | -13.70 | 3.32 | 3.71 | 11.75 |
| Other Tobacco | 5.41 | 3.49 | -35.49 | 4.71 | 4.11 | -12.74 |
| Alcohol | 11.89 | 6.98 | -41.30 | 8.88 | 8.05 | -9.35 |
| Marijuana | 4.32 | 5.23 | 21.06 | 4.45 | 3.31 | -25.62* |
| Other Illegal Drugs | 1.62 | 0.58 | -64.20 | 1.61 | 1.43 | -11.18 |
| Inhalants | 3.78 | 4.65 | 23.02 | 3.37 | 2.68 | -20.47 |
| Non-Medical Prescription Drug Use | 2.16 | 0.58 | -73.15 | 2.47 | 2.40 | -2.83 |
| Non-Medical Over-The-Counter Drug Use | 3.78 | 4.68 | 23.81 | 1.61 | 1.66 | 3.11 |

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

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

Table A5. Overall Results by Program

| Risk Factor Scores, Range (Positive score is favorable) | All Programs (n=2123) | | | Alcohol Stories (n=329) | | |
|--|-----------------------|--------------|----------|-------------------------|--------------|----------|
| | Pre Average | Post Average | % Change | Pre Average | Post Average | % Change |
| Perceived Risk, 0-3 | 1.93 | 2.09 | 8.13** | 2.01 | 2.25 | 11.63** |
| Decision-Making Skills, 0-3 | 1.82 | 1.86 | 2.25** | 1.85 | 1.88 | 1.94 |
| Disapproval of Use, 0-2 | 1.58 | 1.62 | 2.20* | 1.66 | 1.64 | -0.81 |
| Perceived Peer Norms, 0-10 | 8.36 | 8.53 | 2.04** | 8.60 | 8.85 | 2.87** |
| Perceived Parental Attitudes, 0-3 | 2.83 | 2.83 | 0.17 | 2.85 | 2.85 | 0.11 |

| Substance Use, % Users in Past 30 Days (Negative change is favorable) | Pre Average | Post Average | % Change | Pre Average | Post Average | % Change |
|---|-------------|--------------|----------|-------------|--------------|----------|
| Cigarettes | 3.23 | 3.53 | 9.29 | 3.05 | 3.96 | 29.84 |
| Other Tobacco | 4.75 | 4.00 | -15.79 | 5.83 | 6.71 | 15.09 |
| Alcohol | 9.06 | 7.79 | -14.02* | 5.79 | 7.01 | 21.07 |
| Marijuana | 4.47 | 3.44 | -23.04 | 5.18 | 4.88 | -5.79 |
| Other Illegal Drugs | 1.71 | 1.37 | -19.88 | 0.92 | 2.44 | 165.22 |
| Inhalants | 3.47 | 2.93 | -15.56 | 3.07 | 2.74 | -10.75 |
| Non-Medical Prescription Drug Use | 2.42 | 2.28 | -5.79 | 1.83 | 3.35 | 83.06 |
| Non-Medical Over-The-Counter Drug Use | 1.85 | 1.93 | 4.32 | 2.44 | 2.74 | 12.30 |

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

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

Table A5. Overall Results by Program (continued)

| Risk Factor Scores, Range (Positive score is favorable) | All Stars (n=93) | | | ATOD 101 (n=37) | | |
|--|------------------|--------------|----------|-----------------|--------------|----------|
| | Pre Average | Post Average | % Change | Pre Average | Post Average | % Change |
| Perceived Risk, 0-3 | 2.13 | 2.10 | -1.41 | 1.81 | 2.02 | 11.51 |
| Decision-Making Skills, 0-3 | 1.69 | 1.67 | -1.20 | 1.72 | 1.88 | 8.82 |
| Disapproval of Use, 0-2 | 1.70 | 1.58 | -7.21* | 1.27 | 1.17 | -8.15 |
| Perceived Peer Norms, 0-10 | 8.67 | 8.51 | -1.78 | 6.74 | 6.41 | -4.89 |
| Perceived Parental Attitudes, 0-3 | 2.94 | 2.79 | -5.04** | 2.76 | 2.61 | -5.21* |

| Substance Use, % Users in Past 30 Days (Negative change is favorable) | Pre Average | Post Average | % Change | Pre Average | Post Average | % Change |
|---|-------------|--------------|----------|-------------|--------------|----------|
| Cigarettes | 0.00 | 2.20 | - | 5.56 | 16.00 | 187.77 |
| Other Tobacco | 0.00 | 1.10 | - | 10.81 | 12.00 | 11.01 |
| Alcohol | 3.23 | 3.37 | 4.33 | 36.11 | 36.00 | -0.30 |
| Marijuana | 1.08 | 1.10 | 1.85 | 11.11 | 8.00 | -27.99 |
| Other Illegal Drugs | 0.00 | 0.00 | - | 0.00 | 0.00 | - |
| Inhalants | 1.08 | 2.20 | 103.70 | 0.00 | 0.00 | - |
| Non-Medical Prescription Drug Use | 2.15 | 3.30 | 53.49 | 0.00 | 0.00 | - |
| Non-Medical Over-The-Counter Drug Use | 2.17 | 2.20 | 1.38 | 0.00 | 0.00 | - |

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

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

Table A5. Overall Results by Program (continued)

| Risk Factor Scores, Range (Positive score is favorable) | Class Action (n=47) | | | Keepin' It Real (n=177) | | |
|--|---------------------|--------------|----------|-------------------------|--------------|----------|
| | Pre Average | Post Average | % Change | Pre Average | Post Average | % Change |
| Perceived Risk, 0-3 | 1.91 | 1.92 | 0.49 | 1.95 | 1.96 | 0.73 |
| Decision-Making Skills, 0-3 | 1.68 | 1.83 | 9.29 | 1.84 | 1.86 | 0.93 |
| Disapproval of Use, 0-2 | 1.32 | 1.38 | 4.90 | 1.61 | 1.64 | 2.26 |
| Perceived Peer Norms, 0-10 | 7.24 | 7.54 | 4.19 | 8.55 | 8.61 | 0.76 |
| Perceived Parental Attitudes, 0-3 | 2.77 | 2.71 | -2.21 | 2.84 | 2.84 | -0.23 |

| Substance Use, % Users in Past 30 Days (Negative change is favorable) | Pre Average | Post Average | % Change | Pre Average | Post Average | % Change |
|---|-------------|--------------|----------|-------------|--------------|----------|
| Cigarettes | 6.38 | 8.11 | 27.12 | 5.17 | 5.73 | 10.83 |
| Other Tobacco | 10.64 | 11.11 | 4.42 | 2.87 | 3.82 | 33.10 |
| Alcohol | 19.15 | 18.92 | -1.20 | 8.05 | 7.01 | -12.92 |
| Marijuana | 6.52 | 5.41 | -17.02 | 1.73 | 4.49 | 159.54 |
| Other Illegal Drugs | 2.13 | 0.00 | -100.00 | 1.15 | 0.64 | -44.35 |
| Inhalants | 0.00 | 0.00 | - | 5.17 | 1.91 | -63.06 |
| Non-Medical Prescription Drug Use | 2.17 | 2.70 | 24.42 | 2.87 | 0.64 | -77.70 |
| Non-Medical Over-The-Counter Drug Use | 0.00 | 0.00 | - | 2.30 | 3.18 | 38.26 |

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

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

Table A5. Overall Results by Program (continued)

| Risk Factor Scores, Range (Positive score is favorable) | Life Skills (n=872) | | | Operation Prevention: Rx (n=128) | | |
|--|---------------------|--------------|----------|----------------------------------|--------------|----------|
| | Pre Average | Post Average | % Change | Pre Average | Post Average | % Change |
| Perceived Risk, 0-3 | 1.96 | 2.16 | 10.11* | 1.79 | 2.06 | 15.10** |
| Decision-Making Skills, 0-3 | 1.86 | 1.91 | 3.16** | 1.76 | 1.85 | 5.26** |
| Disapproval of Use, 0-2 | 1.62 | 1.69 | 4.32** | 1.54 | 1.62 | 5.15** |
| Perceived Peer Norms, 0-10 | 8.54 | 8.73 | 2.24** | 7.37 | 7.76 | 5.22** |
| Perceived Parental Attitudes, 0-3 | 2.82 | 2.87 | 1.61** | 2.78 | 2.71 | -2.44 |

| Substance Use, % Users in Past 30 Days (Negative change is favorable) | Pre Average | Post Average | % Change | Pre Average | Post Average | % Change |
|---|-------------|--------------|----------|-------------|--------------|----------|
| Cigarettes | 2.42 | 1.91 | -21.07 | 8.59 | 8.59 | 0.00 |
| Other Tobacco | 3.35 | 1.91 | -42.99 | 11.72 | 11.72 | 0.00 |
| Alcohol | 7.27 | 5.14 | -29.30 | 27.34 | 26.56 | -2.85 |
| Marijuana | 4.73 | 2.63 | -44.40 | 2.34 | 2.34 | 0.00 |
| Other Illegal Drugs | 2.31 | 1.67 | -27.71 | 0.78 | 0.78 | 0.00 |
| Inhalants | 3.46 | 4.06 | 17.34 | 0.00 | 0.00 | - |
| Non-Medical Prescription Drug Use | 2.31 | 2.15 | -6.93 | 1.56 | 2.34 | 50.00 |
| Non-Medical Over-The-Counter Drug Use | 1.73 | 1.68 | -2.89 | 0.78 | 0.78 | 0.00 |

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

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

Table A5. Overall Results by Program (continued)

| Risk Factor Scores, Range (Positive score is favorable) | Project Alert (n=135) | | | Project Northland (n=47) | | |
|--|-----------------------|--------------|----------|--------------------------|--------------|----------|
| | Pre Average | Post Average | % Change | Pre Average | Post Average | % Change |
| Perceived Risk, 0-3 | 1.96 | 2.01 | 2.55 | 1.97 | 2.10 | 6.64 |
| Decision-Making Skills, 0-3 | 1.81 | 1.85 | 2.43 | 1.56 | 1.56 | 0.01 |
| Disapproval of Use, 0-2 | 1.59 | 1.67 | 4.68 | 1.68 | 1.62 | -3.46 |
| Perceived Peer Norms, 0-10 | 8.61 | 8.71 | 1.18 | 8.42 | 8.70 | 3.34 |
| Perceived Parental Attitudes, 0-3 | 2.85 | 2.92 | 2.32** | 2.84 | 2.90 | 2.20 |

| Substance Use, % Users in Past 30 Days (Negative change is favorable) | Pre Average | Post Average | % Change | Pre Average | Post Average | % Change |
|---|-------------|--------------|----------|-------------|--------------|----------|
| Cigarettes | 1.48 | 3.97 | 168.24 | 4.26 | 2.33 | -45.31 |
| Other Tobacco | 3.70 | 1.59 | -57.03 | 6.38 | 4.65 | -27.12 |
| Alcohol | 6.67 | 5.56 | -16.64 | 8.51 | 6.98 | -17.98 |
| Marijuana | 1.49 | 2.38 | 59.73 | 0.00 | 0.00 | - |
| Other Illegal Drugs | 0.00 | 0.79 | - | 2.13 | 0.00 | -100.00 |
| Inhalants | 5.93 | 2.38 | -59.87 | 14.89 | 9.30 | -37.54 |
| Non-Medical Prescription Drug Use | 4.44 | 3.17 | -28.60 | 6.38 | 2.33 | -63.48 |
| Non-Medical Over-The-Counter Drug Use | 1.48 | 0.00 | -100.00 | 6.38 | 4.65 | -27.12 |

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

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

Table A5. Overall Results by Program (continued)

| Risk Factor Scores, Range (Positive score is favorable) | Project TND (n=53) | | | Too Good For Drugs (n=184) | | |
|--|--------------------|--------------|----------|----------------------------|--------------|----------|
| | Pre Average | Post Average | % Change | Pre Average | Post Average | % Change |
| Perceived Risk, 0-3 | 1.70 | 1.96 | 14.86* | 1.74 | 1.63 | -6.12* |
| Decision-Making Skills, 0-3 | 1.80 | 1.85 | 2.50 | 1.81 | 1.71 | -5.57** |
| Disapproval of Use, 0-2 | 1.27 | 1.38 | 9.13* | 1.43 | 1.33 | -6.75* |
| Perceived Peer Norms, 0-10 | 7.13 | 7.93 | 11.17* | 8.21 | 7.92 | -3.52** |
| Perceived Parental Attitudes, 0-3 | 2.82 | 2.84 | 0.68 | 2.83 | 2.73 | -3.54** |

| Substance Use, % Users in Past 30 Days (Negative change is favorable) | Pre Average | Post Average | % Change | Pre Average | Post Average | % Change |
|---|-------------|--------------|----------|-------------|--------------|----------|
| Cigarettes | 1.89 | 0.00 | -100.00 | 3.93 | 4.23 | 7.63 |
| Other Tobacco | 9.43 | 4.08 | -56.73 | 5.62 | 3.57 | -36.48 |
| Alcohol | 15.09 | 10.20 | -32.41 | 6.74 | 5.00 | -25.82 |
| Marijuana | 20.75 | 14.29 | -31.13 | 3.93 | 2.84 | -27.74 |
| Other Illegal Drugs | 5.66 | 0.00 | -100.00 | 1.69 | 1.42 | -15.98 |
| Inhalants | 3.77 | 0.00 | -100.00 | 2.81 | 2.13 | -24.20 |
| Non-Medical Prescription Drug Use | 7.55 | 2.04 | -72.98 | 0.56 | 1.43 | 155.36 |
| Non-Medical Over-The-Counter Drug Use | 0.00 | 2.04 | - | 1.70 | 2.86 | 68.24 |

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

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

Table A5. Overall Results by Program (continued)

| Risk Factor Scores, Range (Positive score is favorable) | Why Try (n=21) | | |
|--|----------------|--------------|----------|
| | Pre Average | Post Average | % Change |
| Perceived Risk, 0-3 | 1.23 | 1.79 | 46.12 |
| Decision-Making Skills, 0-3 | 1.40 | 1.49 | 6.42 |
| Disapproval of Use, 0-2 | 1.20 | 1.22 | 1.85 |
| Perceived Peer Norms, 0-10 | 8.15 | 8.19 | 0.54 |
| Perceived Parental Attitudes, 0-3 | 2.71 | 2.76 | 1.66 |

| Substance Use, % Users in Past 30 Days (Negative change is favorable) | Pre Average | Post Average | % Change |
|---|-------------|--------------|----------|
| Cigarettes | 0.00 | 0.00 | - |
| Other Tobacco | 0.00 | 5.56 | - |
| Alcohol | 9.52 | 11.11 | 16.70 |
| Marijuana | 9.52 | 5.88 | -38.24 |
| Other Illegal Drugs | 9.52 | 0.00 | -100.00 |
| Inhalants | 4.76 | 0.00 | -100.00 |
| Non-Medical Prescription Drug Use | 4.76 | 0.00 | -100.00 |
| Non-Medical Over-The-Counter Drug Use | 4.76 | 0.00 | -100.00 |

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

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

APPENDIX B: 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 Section II. In addition, we discuss the analyses used and cautions in interpreting the results.

Evaluation Design Issues

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

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

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

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

time, it is likely that the absence of pre/post changes for participants is indication of favorable effects relative to youth who did not participate in similar prevention interventions.

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

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

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

Program Implementation Issues

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

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

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

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

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

Data Analysis Methods

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

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

APPENDIX C: DAODAS STANDARD SURVEY

SOUTH CAROLINA STUDENT PREVENTION PRE SURVEY

Private Student Code

| | | | | | | |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 2 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 3 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 4 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 5 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 6 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 7 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 8 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 9 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 0 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

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

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

| 1. How much do you think people risk harming themselves physically and in other ways when they . . . | No Risk | Slight Risk | Moderate Risk | Great Risk |
|--|-----------------------|-----------------------|-----------------------|-----------------------|
| a) Smoke one or more packs of cigarettes per day? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b) Use e-cigarettes or vaping pens daily? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c) Use marijuana once or twice per week? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d) Have five or more drinks of an alcoholic beverage in a row once or twice a week? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e) Use prescription drugs not prescribed to them? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| f) Use prescription pain pills (e.g., OxyContin, Vicodin, etc.) not prescribed to them? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

| 2. How wrong do you think it is for someone your age to... | Not at all wrong | A little bit wrong | Wrong | Very Wrong |
|--|-----------------------|-----------------------|-----------------------|-----------------------|
| a) Drink beer, wine or hard liquor (e.g., vodka, whiskey or gin)? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b) Smoke cigarettes? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c) Smoke e-cigarettes or vaping pens? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d) Use marijuana? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e) Use prescription drugs not prescribed to them? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| f) Use prescription pain pills (e.g., OxyContin, Vicodin, etc.) not prescribed to them? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| g) Use heroin or fentanyl? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| h) Use cocaine? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| i) Use other illegal drugs such as LSD (acid) amphetamines, and Ecstasy (MDMA)? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |



Private Student Code:

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|--|--|--|--|--|--|
| | | | | | |
|--|--|--|--|--|--|

| 3. How wrong do you think your <u>parents</u> feel it would be for YOU to... | Not at all wrong | A little bit wrong | Wrong | Very Wrong |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| a) Have one of two drinks of an alcoholic beverage nearly every day? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b) Smoke cigarettes? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c) Using e-cigarettes or vaping pens? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d) Use marijuana? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e) Use prescription drugs not prescribed to you? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| f) Use prescription pain pills (e.g., OxyContin, Vicodin, etc.) not prescribed to you? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| g) Use heroin or fentanyl? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

| 4. How wrong do your <u>friends</u> feel it would be for YOU to... | Not at all wrong | A little bit wrong | Wrong | Very Wrong |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| a) Have one of two drinks of an alcoholic beverage nearly every day? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b) Smoke cigarettes? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c) Using e-cigarettes or vaping pens? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d) Use marijuana? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e) Use prescription drugs not prescribed to you? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| f) Use prescription pain pills (e.g., OxyContin, Vicodin, etc.) not prescribed to you? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| g) Use heroin or fentanyl? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

| 5. Please respond to the following questions and statements about decision-making. | Never | Sometimes, but not often | Often | All the time |
|---|-----------------------|--------------------------|-----------------------|-----------------------|
| a) How often do you stop to think about your options before you make a decision? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b) How often do you stop to think about how your decisions may affect others' feelings? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c) How often do you stop and think about all of the things that may happen as a result of your decisions? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d) I make good decisions. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |



Private Student Code:

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| 6. During the past 30 days, have you... | Yes | No |
|---|-----------------------|-----------------------|
| a) used chewing tobacco, snuff or dip? | <input type="radio"/> | <input type="radio"/> |
| b) smoked cigarettes? | <input type="radio"/> | <input type="radio"/> |
| c) smoked e-cigarettes or vapes? | <input type="radio"/> | <input type="radio"/> |
| d) had alcoholic beverages (beer, wine, or hard liquor) - more than just a few sips? | <input type="radio"/> | <input type="radio"/> |
| e) used marijuana (weed, pot), edibles, or hashish (hash, hash oil)? | <input type="radio"/> | <input type="radio"/> |
| f) used prescription drugs without a doctor's prescription? | <input type="radio"/> | <input type="radio"/> |
| g) used prescription pain pills (e.g., OxyContin, Vicodin, etc.) without a doctor's prescription? | <input type="radio"/> | <input type="radio"/> |
| h) used heroin or fentanyl? | <input type="radio"/> | <input type="radio"/> |

7. Think back over the last two weeks. How many times had you had 5 or more alcoholic drinks in a row within a short period of time?

Yes

No

8. Have you talked to at least one of your parents about the dangers of alcohol, tobacco, or other drugs? By parents, we mean either your biological parents, adoptive parents, step parents, or adult guardians - whether or not they live with you.

Yes

No

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

9. How old are you? 10 11 12 13 14 15 16 17 18
 19

10. What is your gender? Male Other
 Female
 Prefer not to answer



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11. Are you Hispanic or Latino? Yes No

12. Which of the following describes you? (please choose one)

- | | | | | | | |
|-----------------------|-------------------------------|--|--|-----------------------|-----------------------|-----------------------|
| White | Black/ African American | American Indian or Alaska Native | Native Hawaiian Other Pacific Islander | Asian | Multiethnic | Other |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

