

Fiscal Year 2020



Prevention Outcomes Annual Report

South Carolina
DAODAS
Department of Alcohol and Other Drug Abuse Services



Pacific Institute for Research and Evaluation

Michael D. George, PhD
Mikella D. Allen
Al Stein-Seroussi, PhD

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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 2020 (July 1, 2019 – June 30, 2020). Much of the report focuses on 1) prevention outcomes generated through pre- and post-testing of middle and high school youth who participated in prevention programs, 2) Data related to county alcohol and tobacco environmental strategies (e.g., compliance checks, bar checks, and merchant education), 3) The Youth Access to Tobacco Study (Synar), and 4) The distribution of prevention services.

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

- There were 1,574 middle school participants with matched pre- and post-tests. Most (53.7%) participants were in 6th grade. By sex, the distribution was females (45.1%) and males (53%). Most participants identified as White (46.4%) or Black/African American (36.2%).
- There were 259 high school participants with matched pre- and post- tests. Most (35.3%) participants were in the 9th grade. By sex, the distribution was females (46.1%) and males (51.2%). Most participants identified as Black (57.5%) or White (28.6%).
- For middle school, the results showed **statistically significant positive change on one of the five risk factor** measures: perceived risk. For high school, the results showed **statistically significant positive changes on three of the five risk factor** measures: perceived risk, disapproval of use and peer norms.
- For middle school **substance use**, there were **statistically significant reductions for two** out of eight substances — e-cigarettes or vapes and binge drinking. For high school **substance use**, there was a **statistically significant reductions for one** out of eight substances — marijuana.
- For **all eight substances measured**, more than **94.7% of middle school participants who were non-users at pre-test remained non-users at post-test** for each substance. For **all eight substances measured**, more than **94.8% of high school participants who were non-users at pre-test remained non-users at post-test** for each substance.
- For **all eight substances measured**, at least 20.5% of middle school participants who used at pre-test **reported reducing their use for that substance at post-test**. For **all eight substances measured**, at least 12.5% of high school participants who used at pre-test **reported reducing their use for that substance at post-test**.
- **Eleven different curriculum-based programs were implemented**, with 100% of participants being in evidence-based programs.

The color-coded tables below summarize the pre- and post-test differences in risk scores and substance use rates for middle and high school.

Summary of Statistically Significant Results, Middle School

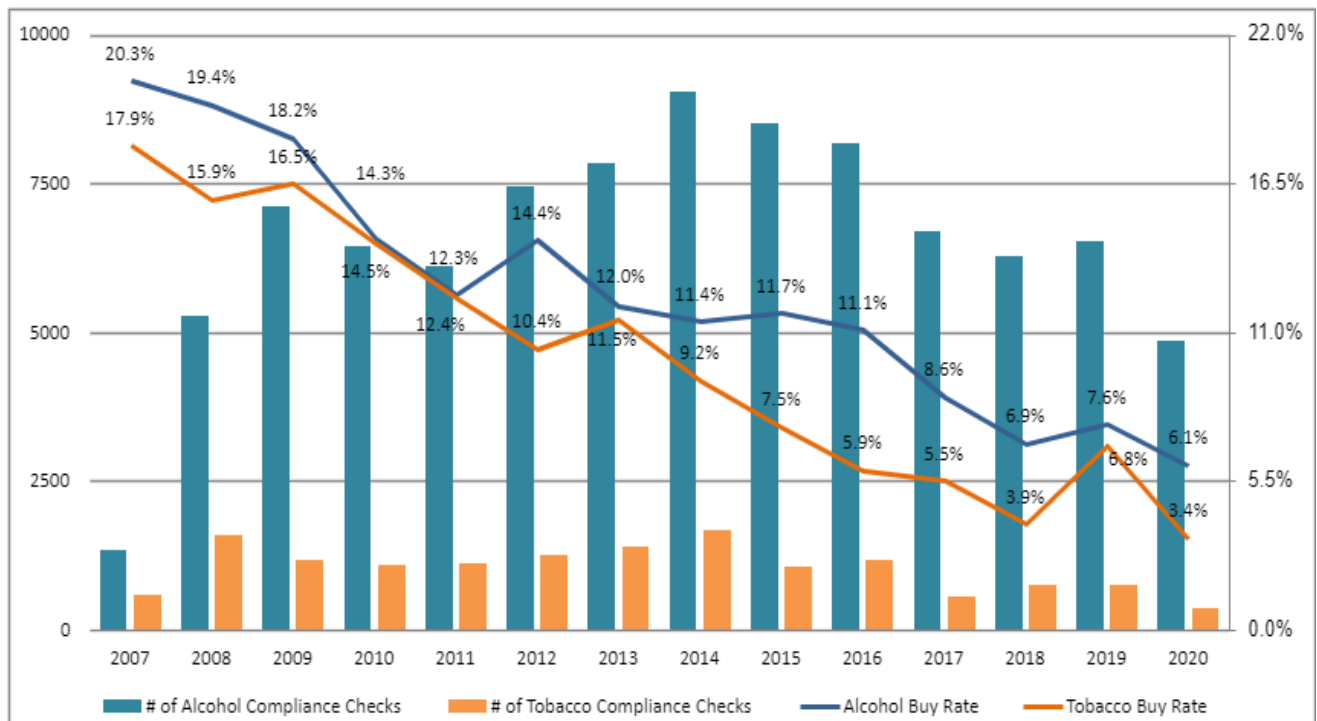
Category (number)	Perceived Risk	Decision Making	Disapproval of Use	Perceived Peer Norms	Perceived Parental Attitudes	Other Tobacco	Cigarettes	E-Cigs or Vapes	Alcohol	Marijuana	Non-Medical Prescription Drugs	Binge Drinking (past 2 wks)	
MIDDLE SCHOOL DEMOGRAPHICS													
Overall Middle School (1574)	*							*	*	*		*	
Females (705)	*	*	*					*					
Males (828)	*							*	*	*	*	*	
American Indian (27)													
Black/African American (567)						*		*	*			*	
Multi-ethnic (149)	*				*			*					
Other (83)				*									
White (727)	*			*				*		*			
Hispanic (125)	*												
Not Hispanic (1377)	*							*	*	*		*	
MIDDLE SCHOOL PROGRAMS													
Alcohol Stories (1 site; n = 156)	*		*	*				*	*		*		
Keepin' It Real (3 sites; n = 419)	*							*	*	*			
Life Skills (5 sites; n = 792)	*											*	
Operation Prevention: Rx (1 site; n=114)													
Too Good for Drugs (1 site; n=60)													
OVERALL (14 sites; n=1574)	*							*	*	*		*	
LEGEND													
Desired Marginally Significant		Desired Significant					*						
Undesired Marginally Significant		Undesired Significant					*						

Summary of Statistically Significant Results, High School

Category (number)	Perceived Risk	Decision Making	Disapproval of Use	Perceived Peer Norms	Perceived Parental Attitudes	Other Tobacco	Cigarettes	E-Cigs or Vapes	Alcohol	Marijuana	Non-Medical Prescription Drugs	Prescription Pain Pills	Heroin or Fentanyl	Cocaine	Other Illegal Drugs	Binge Drinking (past 2 wks)
HIGH SCHOOL DEMOGRAPHICS																
Overall High School (259)	*		*	*				*		*						
Females (118)			*	*					*	*						
Males (131)	*			*						*						
Black/African American (149)																
White (74)																
Not Hispanic (231)	*			*												
HIGH SCHOOL PROGRAMS																
ATOD 101 (1 site; n = 65)				*												
Class Action (1 site; n = 47)									*							
Keepin' It Real (1 site; n = 177)	*			*												
Life Skills (1 site; n = 32)								*								
Operation Prevention: Rx (1 site; n=52)	*	*	*	*					*	*						
Project TND (1 site; n = 53)																
OVERALL (6 sites; n=259)	*		*	*												
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 **4,858 alcohol compliance checks and 357 tobacco compliance checks**. For alcohol, **6.1% of attempts generated sales**; for tobacco, **3.4% of attempts resulted in sales, both of which decreased from 2019**. Even though the buy rate decreased in both alcohol and tobacco in FY'20, the number of alcohol compliance checks decreased by 25.7% and the number of tobacco checks decreased by 52.0%. Preliminary reports from AETs indicate the decrease in compliance checks was related to the COVID-19 pandemic stretching law enforcement resources to conduct compliance checks.



Annual Number of Compliance Checks and Annual Buy Rates

- **AETs** reported a total of 395 **public safety checkpoints**, up from FY '19. AETs issued 66 DUI citations during the FY '20 checkpoints. In addition, there were 161 **saturation patrols** reported that generated another 1,529 tickets. The 161 saturation patrol operations accounted for 11 DUI arrests, 120 drug possession cases, seven fugitives apprehended, 47 open container tickets, and eight felony arrests.
- **AETs** reported that 103 **parties were disbursed**, resulting in 247 tickets and arrests at gatherings involving 1,678 persons.
- The Palmetto Retailer Education Program (**PREP**) served **1,128 merchants**.

- More than **626 youth were in diversion program for youth alcohol and tobacco offenses** (247 served in the Alcohol Education Program and 379 served in the Tobacco Education Program).
- The Youth Access to Tobacco Study (Synar) showed that **4.0% of retailers sold cigarettes to underage youth**, down from 7.3% in FY 2019.

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 2020 (July 1, 2019 – June 30, 2020) from a variety of data sources. 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 '20.

Focusing on State Data Indicators

This report can be reviewed in conjunction with the [2020 South Carolina County-Level Profiles on Substance Use-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.

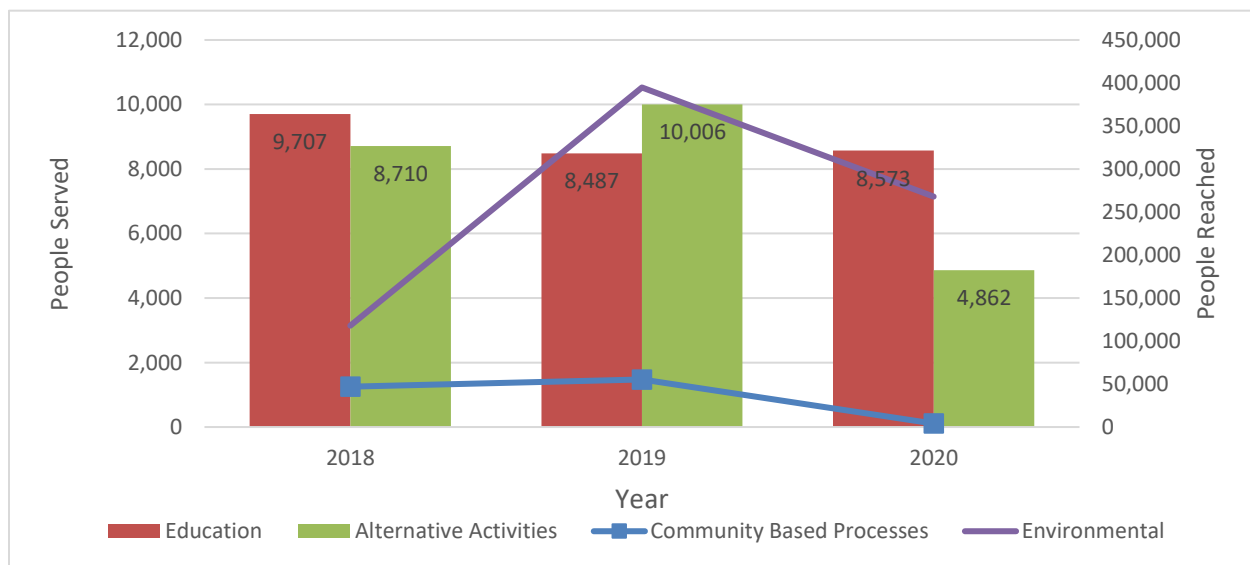
SECTION I: SERVICES ACROSS SIX CSAP STRATEGIES

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 people served in alternative activities and people reached by community-based processes and environmental strategies decreased in FY '20, which is not surprising because of the coronavirus pandemic. Notably, participation in educational programs increased slightly. In addition, not shown in the figure, over 16 million people (duplicate count) received prevention-related information (Information Dissemination) and 604 received problem identification and referral services. The COVID-19 pandemic affected in-person services starting in March 2020 through the end of the fiscal year (June 30, 2020). However, prevention personnel developed and implemented virtual prevention services within a couple of months into the pandemic.

Figure 1. Total Served by CSAP Category, FY '18, FY '19, and FY '20



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

Each year, thousands of young people 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.

In FY '19, PIRE, DAODAS, and Keystone Substance Abuse Services in York County collaborated to revise the Standard Survey and pilot test the new version. The revised Standard Survey was created to (a) simplify the survey for respondents, (b) align the pre- and post-tests more closely with the Communities that Care Survey, which is administered in many school districts every other year in South Carolina, and (c) better reflect nationally used risk factor scales. In FY '20, all providers used the revised survey. For that reason, these data, especially the risk factor data, should not be compared directly with data from previous years. We show data from FY '19 in the data tables so that readers can see the patterns from last year, but direct comparisons between FY '19 and FY '20 should not be made.

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 Surveys are comprised of a series of items that measure attitudes and behaviors related to substance use. Many of the items were drawn from the “Communities That Care” (CTC) survey which is endorsed by SAMHSA as a valid and reliable tool for gathering information about substance use and associated risk and protective factors. DAODAS administers the CTC survey in school districts throughout the state every two years to generate county-level estimates of substance use behaviors and attitudes among middle and high school students. (The DAODAS Standard Surveys – Middle School and High School versions are included in Appendix C.) The following measures are used for the middle school version:

- 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 other tobacco products
- 30-day use of cigarettes
- 30-day use of e-cigarettes or vapes
- 30-day use of alcohol
- 30-day use of marijuana
- 30-day non-medical use of prescription drugs
- Binge drinking (over the past two weeks)

The following measures were also included on the high school version:

- 30-day non-medical use of prescription pain pills
- 30-day use of heroin or fentanyl
- 30-day use of cocaine
- 30-day use of other illegal 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.

In March 2020, the coronavirus pandemic forced the physical closure of most South Carolina schools. Keystone Substance Abuse Prevention & Education asked DAODAS and PIRE to assist with developing an online survey. Consequently, four online surveys were developed to accommodate the request: pre & post-middle school online surveys and pre & post-high school online surveys. Prevention personnel used the online surveys with the delivery of online or remote curriculum-based prevention education programs. Regardless of whether paper or online surveys, providers were instructed on participant protection procedures that would

ensure confidentiality. A PowerPoint presentation titled, “DAODAS Standard Survey Overview Presentation,” was developed by PIRE to guide paper and online procedures for pre-and-post-tests and was placed on the [South Carolina Prevention/Evaluation Resources](#) webpage.²

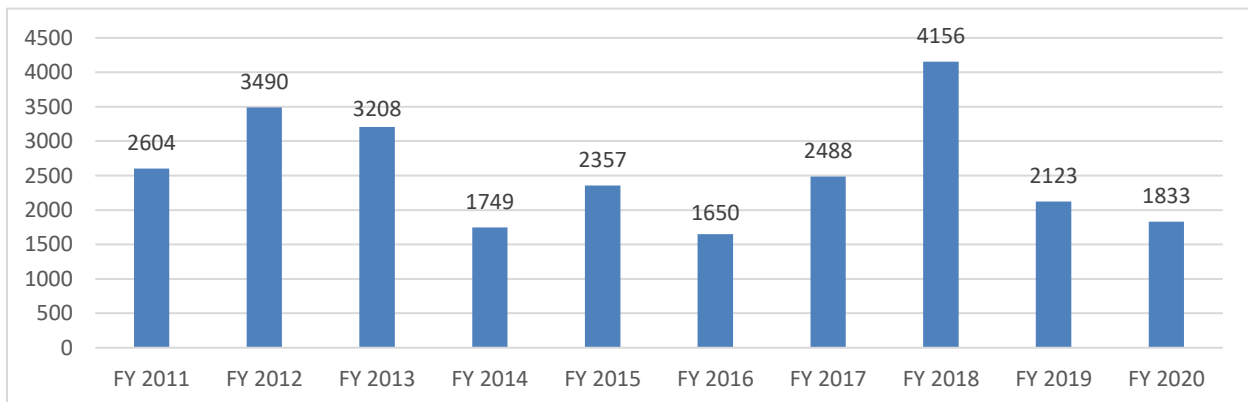
Matched Participants

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 a match—i.e., a valid pre- and post-test—then neither test was included in the database that we analyzed. The middle school pre-test database contained 2,703 surveys while the post-test database contained 1,646 cases, which resulted in 1,574 matched cases or 58.2% of pre-test cases. The high school pre-test database contained 371 surveys while the post-test database 286 contained cases, which resulted in 259 matched cases or 69.8% of pre-test cases. The total number of matched cases was 1,833 for an overall match rate of 59.6% (Figure 2). Match rates in previous years have been much higher, typically above 90%. This year’s match rate is lower because of the COVID-19 pandemic. With school closures beginning in March of 2020, it was much more difficult for teachers to complete the delivery of all the curriculum material and to obtain post-test data.

Figure 2. Matched Participants in Pre-Post Database, FY '11 through '20



² Although the online option was made available, no cases of online data were submitted.

Demographic Breakdown

The data in this section are from the middle and high school 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 Table 1, middle school matched participants were in grades 6 through 8. More males (53.0%) participated than females (45.1%) with 1.9% respondents preferring not to answer. Almost 47 percent (46.4%) of the participants were White, 36.2% were Black or African American, 9.5% of the participants associated with the multiethnic race category, 5.3% were of "other" race, 1.7% were American Indian or Alaskan Native, and 0.6% were Asian. Hispanic/Latino ethnicity was reported by 8.3% of students.

High school matched participants were in grades 9 through 12. Slightly more males than females participated; 57.5% of participants were Black or African American, 28.6% were White, 7.3% were in the multiethnic race category, 5.4% were of "other" race, 0.4% were American Indian or Alaskan Native. Hispanic/Latino ethnicity was reported by 6.2% of students.

Table 1. Demographics of Matched Participants

	Middle School (n = 1,574)	High School (n = 259)
Grade		
6 th	53.7%	-
7 th	29.5%	-
8 th	16.9%	-
9 th	-	35.3%
10 th	-	23.3%
11 th	-	32.6%
12 th	-	8.9%
Race		
American Indian	1.7%	0.4%
Asian	0.6%	-
Black	36.2%	57.5%
Multiethnic	9.5%	7.3%
Other	5.3%	5.4%
Pacific	0.3%	-
White	46.4%	28.6%
Sex		
Female	45.1%	46.1%
Male	53.0%	51.2%

Risk-Factor Measures

Table 2 shows the results for the five risk factors included on the middle and high school versions of DAODAS Standard Survey. As shown in the table, for middle school, there was a statistically significant ($p < .05$) positive change from pre- to post-test in FY '20 for one of the five measures (perceived risk), a near significant positive change in perceived peer norms and a near significant negative change in decision-making. For high school, there was a statistically significant ($p < .05$) positive change from pre- to post-test in FY '20 for three of the five measures (perceived risk, disapproval of use and perceived peer norms).

Table 2. Overall Results, Risk-Factor Measures, Middle and High School, FY '20

Risk-Factor Measure (All Scale Scores Range from 0 – 3) ^a	Middle School			High School		
	Pre- Test Average	Post- Test Average	Percent Change	Pre- Test Average	Post- Test Average	Percent Change
Perceived Risk	2.24	2.33	3.99**	2.08	2.19	5.19**
Decision-Making	1.92	1.89	-1.41*	1.82	1.87	2.46
Disapproval of Use	2.61	2.62	0.34	2.10	2.19	4.24**
Perceived Peer Norms	2.42	2.45	1.29*	1.62	1.82	12.37**
Perceived Parental Attitudes	2.81	2.80	-0.12	2.53	2.55	0.68

^a Higher scores are more favorable.

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

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

Green cell denotes significant reduction in risk; red cell is significant increase in risk.

Sex. Table A1 in the Appendix shows results separated by sex for middle school. 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). Table A5 shows results separated by sex for high school. Females reported significant positive change in one risk factor (perceived peer norms). Males reported positive changes in two risk factors (perceived risk and perceived peer norms).

Race/Ethnicity. Table A2 shows middle school results separated by race (for those race groups with 20 or more participants) and Table A3 shows the middle school 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.

Table A6 shows high school results separated by race (for those race groups with 20 or more participants) and Table A7 shows high school results by ethnicity. There were no significant changes for by race for high school participants. Participants of Hispanic, Latino, or Spanish descent or origin reported significant positive change on two risk factors (disapproval of use and perceived peer norms), while those not of Hispanic, Latino, or Spanish descent reported significant positive changes for perceived risk and perceived peer norms.

Participant Substance Use

The DAODAS Standard Survey (Middle School) asked participants to indicate the extent of their other tobacco, cigarette, e-cigarettes or vapes, alcohol, marijuana, non-medical prescription drug, and binge drinking (past two weeks) in the past 30 days. The DAODAS Standard Survey (High School) asked participants to indicate the extent of their other tobacco, cigarette, e-cigarettes or vape, alcohol, marijuana, non-medical prescription drug, prescription pain pill, heroin or fentanyl, cocaine, other illegal drugs, and binge drinking (past two weeks) in the past 30 days. The percentage of participants that used each substance at any amount was calculated at pre- and post-test. FY' 20 results for are shown in Table 3.

Program participants in middle school reported reductions in use of two out of seven substances at post-test, with both being statistically significant (e-cigarette or vape use and binge drinking). Participants reported increases in use of five substances, with two being statistically significant (alcohol and marijuana). Figure 3 depicts the same data in graphic form. Program participants in high school reported reductions in use of all substances at post-test. There was one statistically significant reduction in substance use (marijuana) and two marginally significant reductions (e-cigarettes or vapes and alcohol). (See also Figure 4.)

Table 3. Overall Results, Substance Use Rates, Middle and High School, FY '20

Substance ^a	Middle School			High School		
	% Using at Pre-Test	% Using at Post-Test	Percent Change	% Using at Pre-Test	% Using at Post-Test	Percent Change
Other Tobacco	1.14	1.61	41.23	5.04	3.49	-30.75
Cigarettes	0.89	1.34	50.56	10.89	9.69	-11.02
E-Cigarettes or Vapes	6.53	1.41	-78.41**	22.62	18.43	-18.52 *
Alcohol	4.01	5.89	46.88**	19.38	14.06	-27.45 *
Marijuana	2.16	4.16	92.59**	26.36	19.07	-27.66 **
Non-Medical Prescription Drugs	2.80	3.07	9.64	6.98	5.43	-22.21
Binge Drinking (past 2 weeks)	2.62	0.90	-65.65**	6.32	4.38	-30.70
Prescription Pain Pills	-	-	-	6.64	4.26	-35.84
Heroin or Fentanyl	-	-	-	0.39	0.00	-100.00
Cocaine	-	-	-	1.56	1.16	-25.64
Other Illegal Drugs	-	-	-	1.57	0.39	-75.16

^a Unless otherwise noted, substance use is measured as past 30-day use.

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

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

Green cell denotes significant reduction in use; red cell is significant increase in use.

Figure 3. Pre- and Post-Test Substance Use Rates, Middle School, FY '20

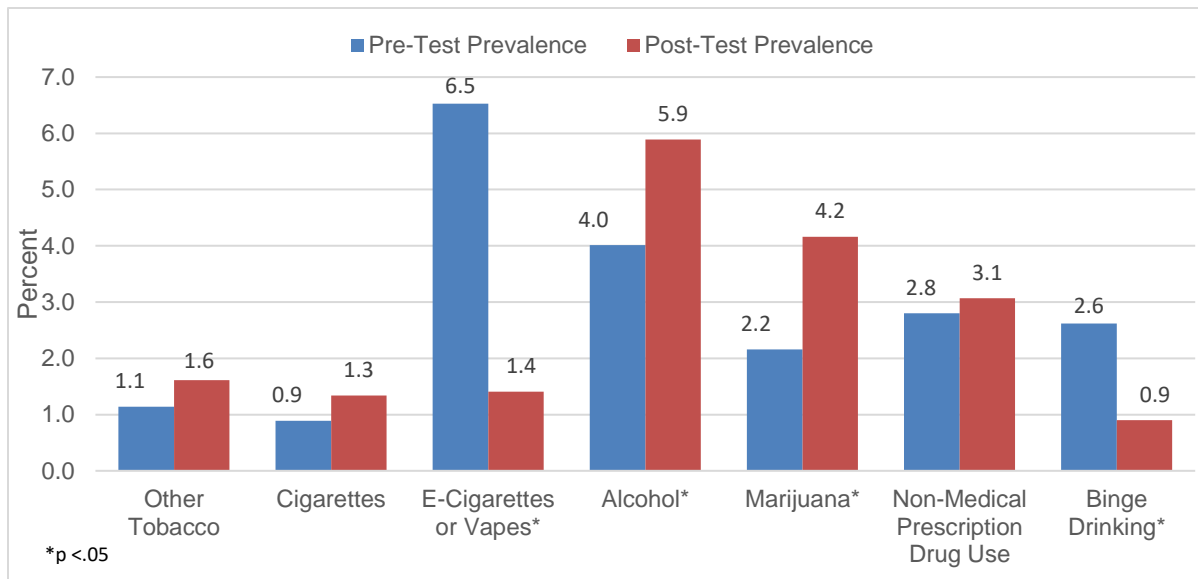
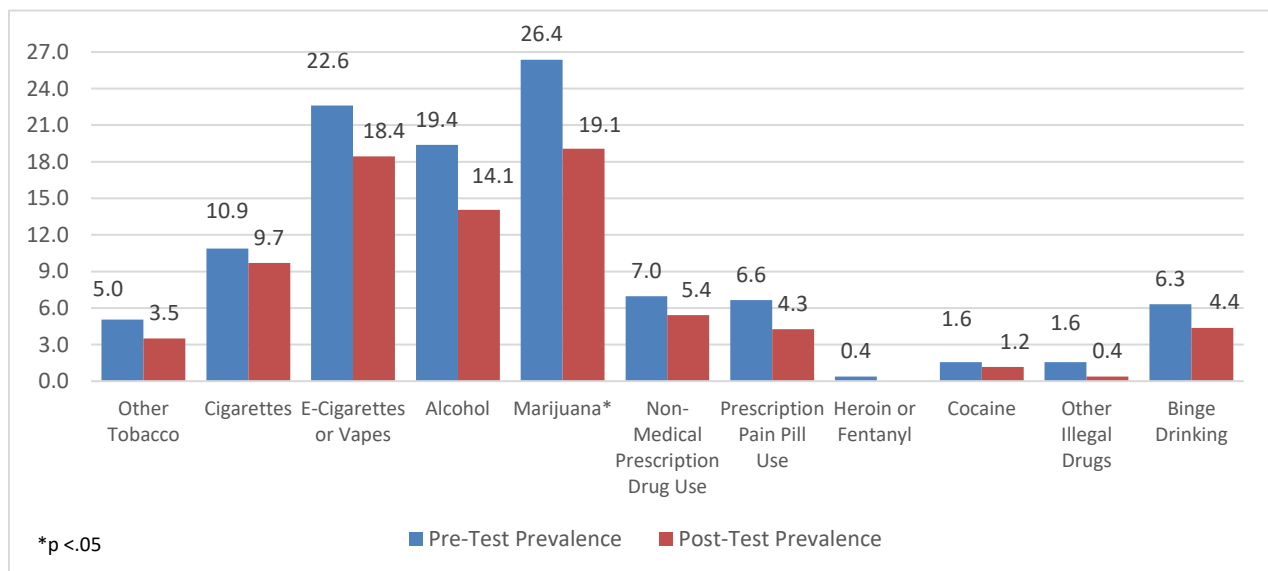


Figure 4. Pre- and Post-Test Substance Use Rates, High School, FY '20



Sex. Table A1 shows results separated by sex for middle school. Males reported significant decreases in e-cigarettes or vapes and binge drinking. There were no significant decreases in use for females. Table A5 shows results separated by sex for high school. Looking at the data broken down by sex, there were no significant decreases in use.

Race/Ethnicity. Table A2 shows middle school results separated by race (for those race groups with 20 or more participants) and Table A3 shows the middle school results by ethnicity. Participants who identified as American Indian reported no significant reductions in substance use. Black/African American participants reported significant reductions in e-cigarette or vape

and binge drinking. Additionally, there were significant increases in other tobacco and alcohol use. Participants who identified as Multi-Ethnic reported a significant reduction in e-cigarette or vape use. Participants that identified as Other reported no significant reductions in use. White participants reported no significant reductions in substance 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 e-cigarettes or vape use and binge drinking. Additionally, there was a significant increase in marijuana use.

Table A6 shows high school results separated by race (for those race groups with 20 or more participants) and Table A7 shows the high school 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 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 for middle (Figure 6) and high school (Figure 7) participants. The former analysis may be the most accurate assessment of the “preventive” effect of the programs.

Figure 5 shows that nearly all middle school participants who began programs as non-users remained non-users, ranging from 94.7% (alcohol) to 99.1% (binge drinking). That is, continued non-use of substances was nearly universal. The figure also shows that the percent of users at pretest who reported no use at post-test ranged from 20.5% (non-medical prescription use) to 92.1% (binge drinking).

Figure 5. Percent of Pre-Test Non-Users Who Remained Non-Users and Pre-Test Users Who Reported No Use at Post-Test, Middle School, FY '20

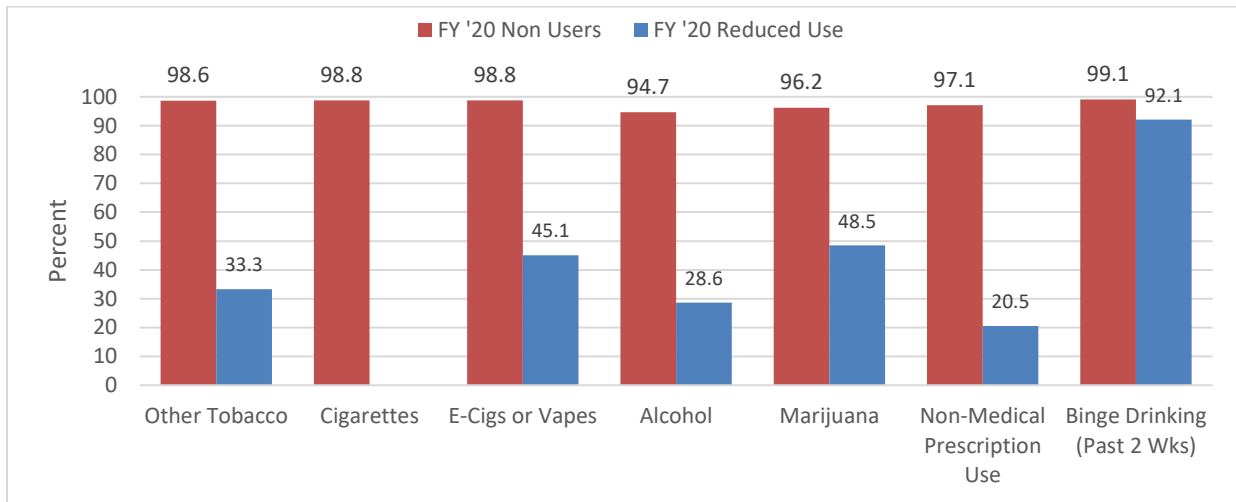
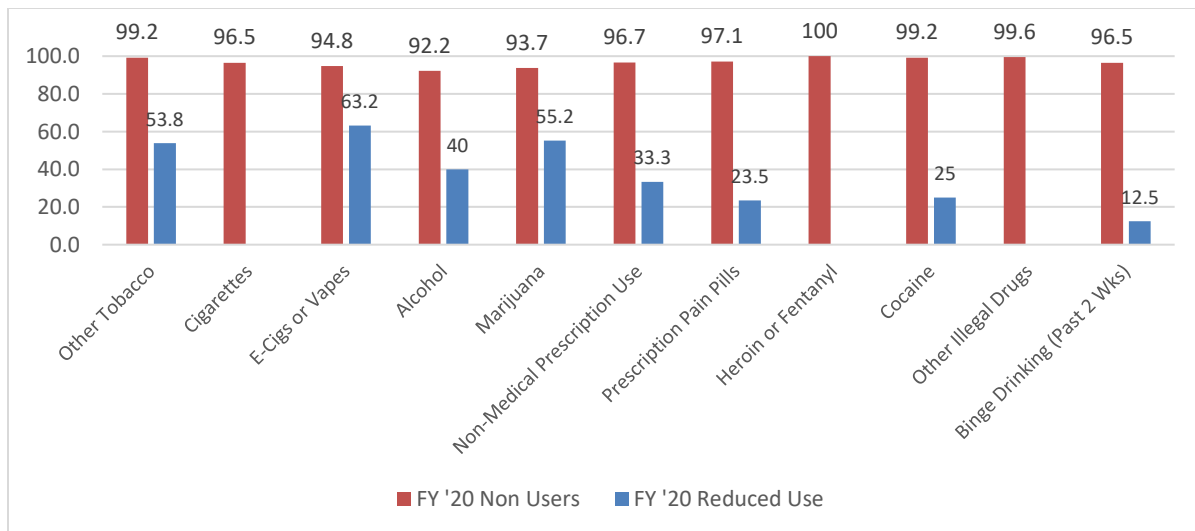


Figure 6 shows that nearly all high school participants who began programs as non-users remained non-users, ranging from 92.2% (alcohol) to 100% (heroin or Fentanyl). Again, continued non-use of substances was nearly universal. The percent of users at pretest who reported no use at post-test ranged from 12.5% (binge drinking) to 63.2% (e-cigs or vapes).

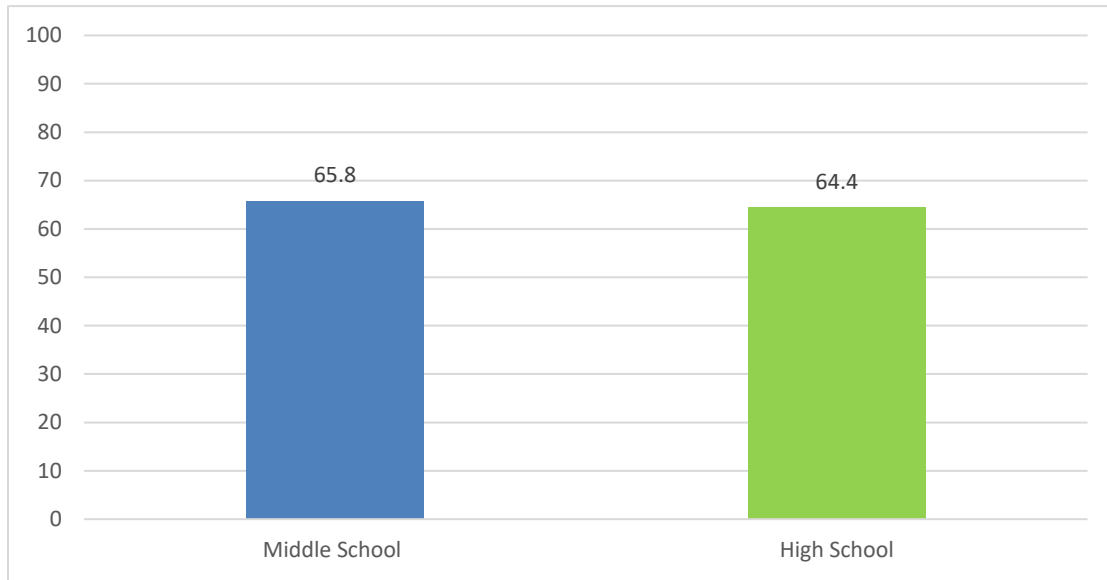
Figure 6. Percent of Pre-Test Non-Users Who Remained Non-Users and Pre-Test Users Who Reported No Use, High School, FY '20



Parent-Child Communication and Youth Exposure to Prevention Messages

The survey also asks about parent-child communication. Figure 7 shows that 65.8% of middle school participants and 64.4% of high school participants had talked to their parents about the dangers of drugs in the past year.

Figure 7. Parent Child Communication and Exposure to Prevention Messages, FY '20



Prevention Programs

Across the provider network, 11 different programs were implemented in FY '20, down from 12 in FY'19, and 13 in FY '18. In this section, we compare the outcomes for the eight 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 156 matched (middle school) youth at one site. There were statistically significant positive changes in perceived risk, favorable attitudes, perceived peer norms and a near significant positive change in decision-making. There was a statistically significant positive change in e-cigs or vapes users. There was statistically significant negative change in non-medical prescription drug use.

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 65 matched (high school) participants. There was a statistically significant positive change in favorable attitudes. There were no statistically significant changes in substance use.

Class Action is a comprehensive ATOD prevention curriculum. This program was used by one site with a total of 27 matched (high school) participants. There were no statistically significant changes in risk factors or substance use.

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 three sites with a total of 419 matched (middle school) participants. There was statistically significant positive change in perceived risk and e-cigs or vape use.

Life Skills Training is a skills based ATOD prevention curriculum and was the most widely implemented program with eight sites and 793 matched middle and 32 high school participants. For middle school, there were statistically significant positive changes in perceived risk and binge drinking use. For high school, there were no statistically significant changes in risk factors or substance use.

Operation Prevention: Rx is an evidenced-based program whose 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 114 matched (middle school) and 52 matched (high school) participants. For middle school, there were no statistically significant changes in risk factors or substances. For high school, there were statistically significant positive

changes in perceived risk, decision-making, favorable attitudes, and perceived peer norms. There were statistically significant changes in alcohol and marijuana.

Project TND, a prevention curriculum intended for high school students, was used by one site to 69 matched (high school) participants. There were no statistically significant changes in risk factors or 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 60 matched (middle school) participants, used this program. There were no statistically significant changes in risk factors or substance use.

Evidence-Based Programs

County authorities are not required to use evidence-based interventions exclusively, though most do. In FY '20, 100% of participants were served in evidence-based programs.

Summary of Section II

Tables 4 and 5 summarize 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 '20. 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).

Table 4. Summary of Statistically Significant Results, Middle School

Category (number)	Perceived Risk	Decision Making	Disapproval of Use	Perceived Peer Norms	Perceived Parental Attitudes	Other Tobacco	Cigarettes	E-Cigs or Vapes	Alcohol	Marijuana	Non-Medical Prescription Drugs	Binge Drinking (past 2 wks)	
MIDDLE SCHOOL DEMOGRAPHICS													
Overall Middle School (1574)	*							*	*	*		*	
Females (705)	*	*	*					*					
Males (828)	*							*	*	*	*	*	
American Indian (27)													
Black/African American (567)						*		*	*			*	
Multi-ethnic (149)	*				*			*					
Other (83)				*									
White (727)	*			*				*		*			
Hispanic (125)	*												
Not Hispanic (1377)	*							*	*	*		*	
MIDDLE SCHOOL PROGRAMS													
Alcohol Stories (1 site; n = 156)	*		*	*				*			*		
Keepin' It Real (3 sites; n = 419)	*							*	*				
Life Skills (5 sites; n = 792)	*											*	
Operation Prevention: Rx (1 site; n=114)													
Too Good for Drugs (1 site; n=60)													
OVERALL (14 sites; n=1574)	*							*	*	*		*	
LEGEND													
Desired Marginally Significant		Desired Significant					*						
Undesired Marginally Significant		Undesired Significant					*						

Table 5. Summary of Statistically Significant Results, High School

Category (number)	Perceived Risk	Decision Making	Disapproval of Use	Perceived Peer Norms	Perceived Parental Attitudes	Other Tobacco	Cigarettes	E-Cigs or Vapes	Alcohol	Marijuana	Non-Medical Prescription Drugs	Prescription Pain Pills	Heroin or Fentanyl	Cocaine	Other Illegal Drugs	Binge Drinking (past 2 wks)
HIGH SCHOOL DEMOGRAPHICS																
Overall High School (259)	*		*	*					*	*						
Females (118)				*					*	*						
Males (131)	*			*						*						
Black/African American (149)																
White (74)																
Not Hispanic (231)	*			*												
HIGH SCHOOL PROGRAMS																
ATOD 101 (1 site; n = 65)				*												
Class Action (1 site; n = 47)																
Keepin' It Real (1 site; n = 177)	*			*												
Life Skills (1 site; n = 32)								*								
Operation Prevention: Rx (1 site; n=52)	*	*	*	*	*				*	*						
Project TND (1 site; n = 53)																
OVERALL (6 sites; n=259)	*		*	*												
LEGEND																
Desired Marginally Significant		Desired Significant														*
Undesired Marginally Significant		Undesired Significant														*

Table 6 provides information about the significant changes in substance use across years for all programs that were implemented at least once during the past ten years (since 2011) and for which had more than 20 participants per year, on average. The programs are grouped by average number of annual participants; program with more participants have more statistical power to detect significant results. Within the groupings, programs are ordered by the number of years of implementation, recognizing that having more years of implementation provides more opportunities for more significant results. Finally, programs that are more limited in their target outcomes (e.g., focus primarily on alcohol) are noted with an asterisk (*), recognizing that programs that target fewer outcomes should be expected to have fewer opportunities for significant changes.

Highlights from the table include the following:

- Life Skills has been implemented in all 10 years and, by far, has reached the most participants. Life Skills had 11 significant decreases in substance use and no increases.
- Within the group of programs with an average of 100 – 999 participants, five programs have been implemented for at least six years. Among those implemented for the most years, All Stars participants experienced the most significant increases and no decreases.
- Within the group of programs with an average of 20 - 99 participants, two programs have been implemented for at least six years. Project TND had 11 significant increases in substance use and only two decreases.

Table 6. Changes in Substance Use by Program, 2011 - 2020

	Years Implemented	Avg N	Significant Decreases	Significant Increases
Average N Greater 1,000 or More				
Life Skills	10	1,159	11	
Average N from 100 - 999				
Keepin' It Real	10	250	2	1
All Stars	9	258	5	
Project Alert	9	200	3	
Too Good for Drugs	8	206		
Alcohol True Stories*	6	245	3	1
Project TNT*	4	102		
Operation Prevention*	3	181	2	
ATOD 101	3	133		
Responding in Peaceful and Positive Ways	1	295	1	
Tobacco Education Program*	1	119	1	
Average N From 20 - 99				
Project TND	9	90	11	2
Why Try	7	42	2	
Project Northland*	5	90	1	
Class Action*	5	41	2	
G.I.R.L. Power Series	3	39		
Prime for Life: Exploring	2	82	2	
Girls Circle	2	40		
Keep A Clear Mind	1	53		
Street Smart	1	53		2
Wise Guys	1	47		
* Indicates a program that is targeted to a smaller set of substance use outcomes.				

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'20 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, acquiring 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'20, there were 4,858 alcohol compliance checks and 357 tobacco compliance checks entered into the online AET reporting system. In FY '20, 35 counties submitted alcohol compliance checks and 13 counties submitted tobacco forms, compared to 37 counties and 18 counties, respectively, in FY '19. 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 8, the data suggested that both the alcohol and tobacco buy rates decreased from FY '19, from 7.6% to 6.1% for alcohol and from 6.8% to 3.4% for tobacco.

Figure 8. Annual Number of Compliance Checks and Annual Buy Rates

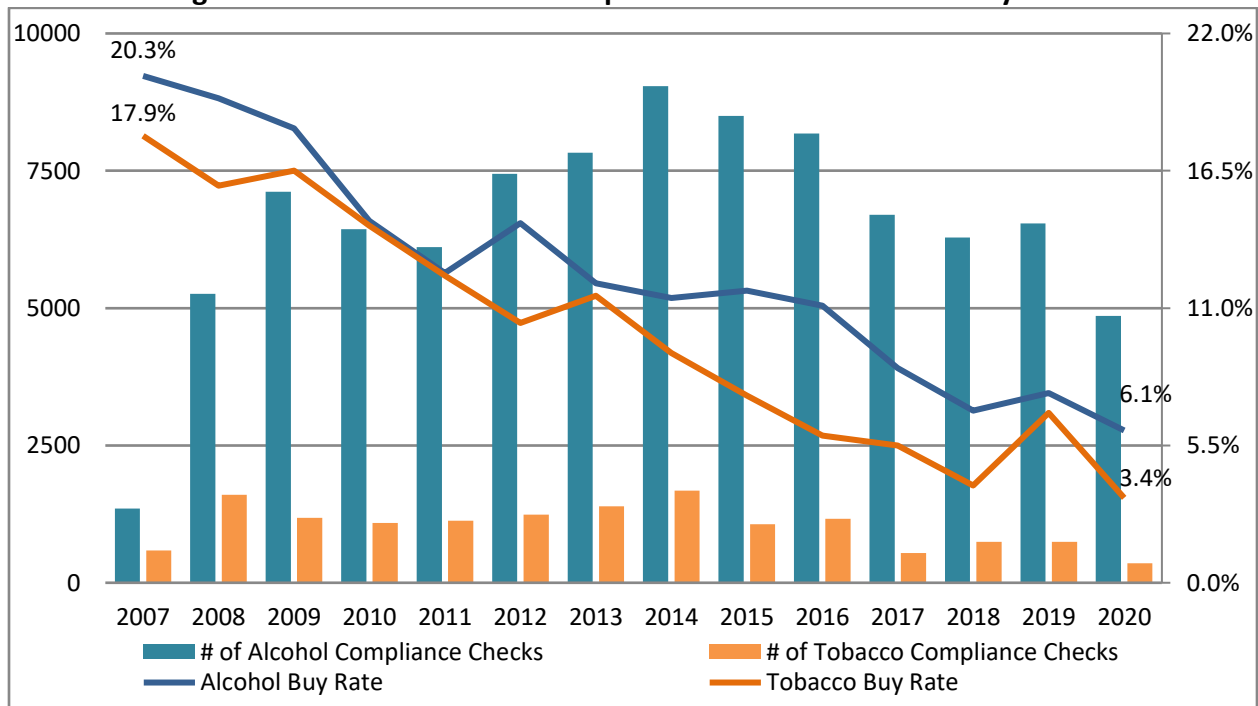


Table 7. FY '20 Alcohol and Tobacco Compliance Check Buy Rates by County

County Name	Alcohol			Tobacco		
	Total Eligible Purchase Attempts	Buy	Buy Rate	Total Eligible Purchase Attempts	Buy	Buy Rate
Abbeville	49	0	0.0%	0	0	N/A
Aiken	89	13	14.6%	0	0	N/A
Allendale	0	0	N/A	0	0	N/A
Anderson	60	7	11.7%	0	0	N/A
Bamberg	31	0	0.0%	30	0	0.0%
Barnwell	58	5	8.6%	0	0	N/A
Beaufort	0	0	N/A	0	0	N/A
Berkeley	286	7	2.4%	0	0	N/A
Calhoun	13	0	0.0%	15	0	0.0%
Charleston	163	6	3.7%	36	3	8.3%
Cherokee	30	4	13.3%	0	0	N/A
Chester	90	9	10.0%	0	0	N/A
Chesterfield	55	4	7.3%	0	0	N/A
Clarendon	7	0	0.0%	0	0	N/A
Colleton	7	0	0.0%	0	0	N/A
Darlington	68	6	8.8%	0	0	N/A
Dillon	0	0	0.0%	0	0	N/A
Dorchester	26	0	0.0%	24	0	0.0%
Edgefield	0	0	N/A	0	0	N/A
Fairfield	0	0	N/A	0	0	N/A
Florence	271	10	3.7%	25	0	0.0%
Georgetown	40	1	2.5%	0	0	N/A
Greenville	527	23	4.4%	45	0	0.0%
Greenwood	84	5	6.0%	0	0	N/A
Hampton	28	7	25.0%	0	0	N/A
Horry	332	21	6.3%	1	1	100%
Jasper	0	0	N/A	0	0	N/A
Kershaw	106	3	2.8%	0	0	N/A
Lancaster	33	5	15.2%	0	0	N/A
Laurens	113	14	12.4%	7	0	0.0%
Lee	0	0	0.0%	0	0	N/A
Lexington	737	54	7.3%	104	7	6.7%
Marion	0	0	N/A	0	0	N/A
Marlboro	47	3	6.4%	0	0	N/A
McCormick	0	0	N/A	0	0	N/A

Table 7. FY '20 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	36	0	0.0%	0	0	N/A
Oconee	4	1	25.0%	4	1	25.0%
Orangeburg	33	0	0.0%	31	0	0.0%
Pickens	83	5	6.0%	0	0	N/A
Richland	186	8	4.3%	0	0	N/A
Saluda	0	0	N/A	0	0	N/A
Spartanburg	141	9	6.4%	0	0	N/A
Sumter	46	4	8.7%	0	0	N/A
Union	19	2	10.5%	1	0	0.0%
Williamsburg	0	0	N/A	0	0	N/A
York	960	60	6.3%	0	0	N/A

Most FY '20 alcohol compliance checks were conducted at convenience stores (57.5%). The next most common type of location was liquor stores (10.1%), then restaurants (9.4%), large grocery stores (6.9%), small grocery stores (5.4%), drug stores (4.6%), bars (3.9%), other outlets (2.0%) and hotels (0.2%). In most cases, the youth attempted to buy beer (82.5%) although a substantial number attempted to buy liquor (8.9%) or alcopop drinks (5.7%). Wine or wine coolers were attempted only 2.8% of the time. Most youth volunteers were between the ages of 16 and 19 (91.4%). More purchase attempts were made by males (52.7%) than females. Most alcohol checks were conducted by White youth (88.0%), followed by Black or African American youth (10.0%).

For tobacco compliance checks, 75.4% were conducted at convenience stores, followed by large grocery stores (9.5%), small grocery stores (8.1%), drug stores (4.2%), other tobacco outlets (2.5%) and liquor stores (0.3%). In most cases, youth attempted to buy cigarettes (76.6%). The remaining attempts were made for e-cigarettes or vaping products (juice, cartridges) (16.2%), smokeless tobacco (3.4%), cigars (3.1%), cigarillos or little cigars (0.6%). 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 (47.3%) and 17 (31.7%). More purchase attempts were made by females (57.7%) than males. White youth conducted 71.1% of tobacco compliance checks, and Multiracial youth conducted 16.8% of the checks.

Figure 9 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 since FY '16.

Figure 9. Alcohol Buy Rates by Type of Product, Five-Year Trends

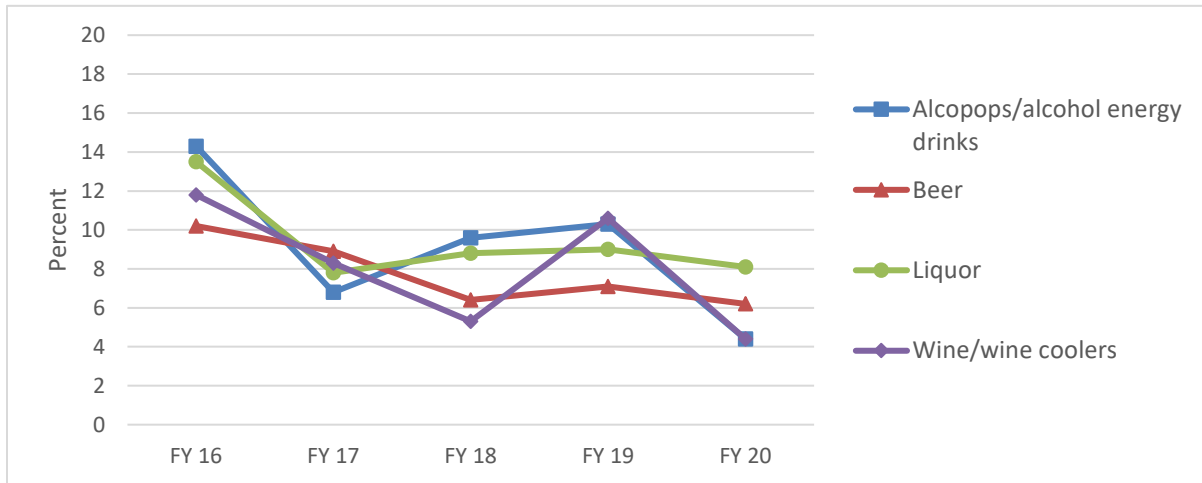


Figure 10 shows alcohol merchant practices over the past five years, including high levels and increases in best practices. Since FY '16, checking IDs increased from 90.6% to 94.2%, merchants studying IDs increased from 71.4% to 82.8%, and the use of age-verification equipment increased from 51.7% to 56.4%. Visible ID-checking signage decreased in recent years, after peaking in FY '17, though there was a slight increase this past year.

Figure 10. Alcohol Merchant Practices, Five-Year Trends

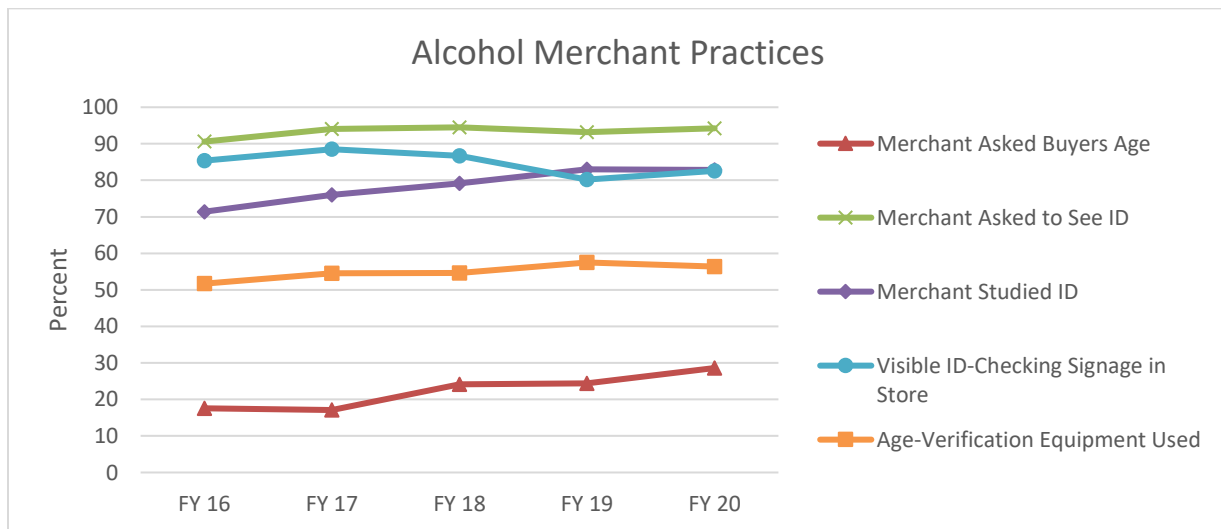


Figure 11 shows how buy rates for different products have changed over the past five years. The overall buy rate decreased by 19.7% in FY'20 compared to FY'19; however, the number of tobacco compliance checks decreased 52.0%. Buy rates increased for smokeless tobacco, electronic cigarettes, and vaping juice. Fortunately, the high rate for cigars and cigarettes decreased substantially.

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

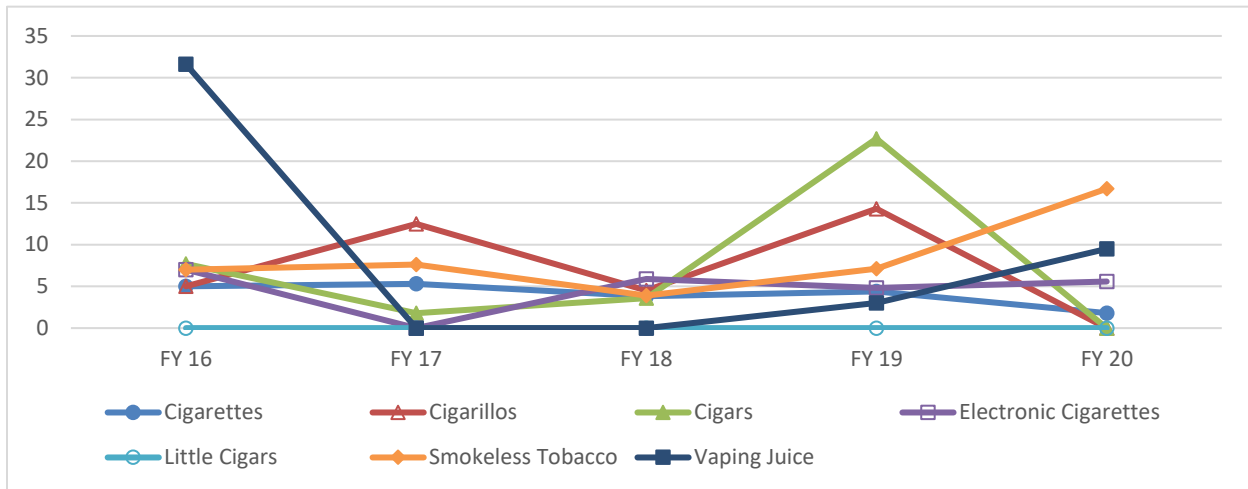


Figure 12 shows tobacco merchant practices over the past five years. For all products, merchant practices were at higher levels in FY' 20 than FY '16 except for studying the ID. Similarly, all practices except studying the ID increased from last years. The reduction in studying the ID may not be a bad trend if it is being replaced by using age-verification equipment.

Figure 12. Tobacco Merchant Practices, Five Year Trends

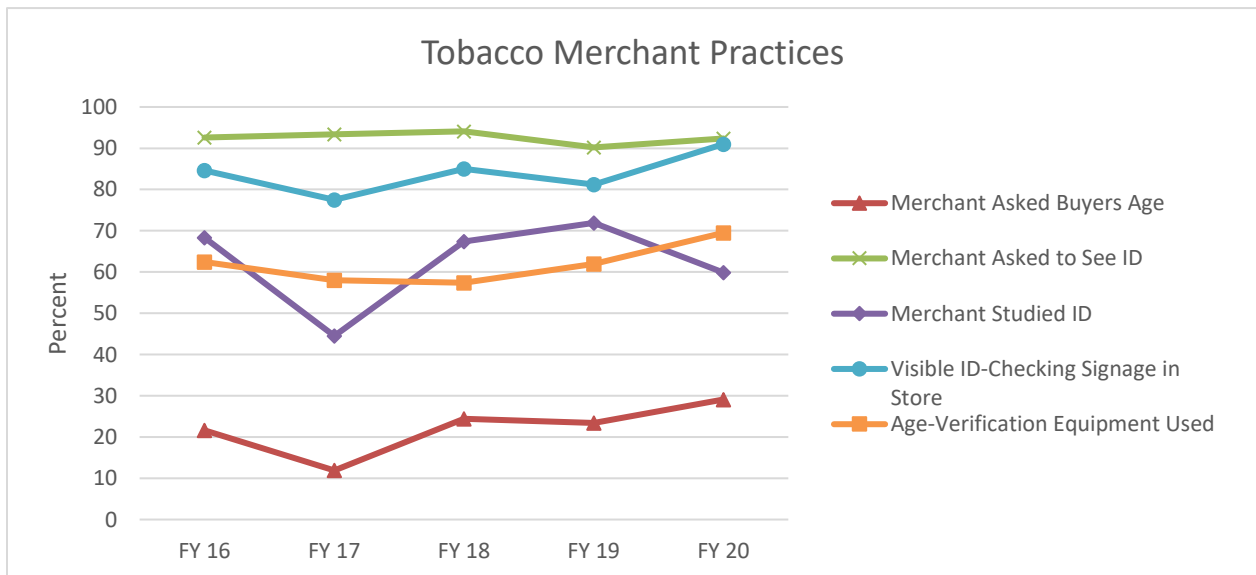


Figure 13 shows the percent of alcohol sales completed by type of business for places that had at least 50 attempts for FY '19 and FY '20. In both years, the highest rates of sales were in restaurants (14.4% and 12.7%, respectively). In FY '20 buy-rates decreased in all types of establishments except small grocery stores.

Figure 13. Percentage of Completed Alcohol Sales by Type of Business

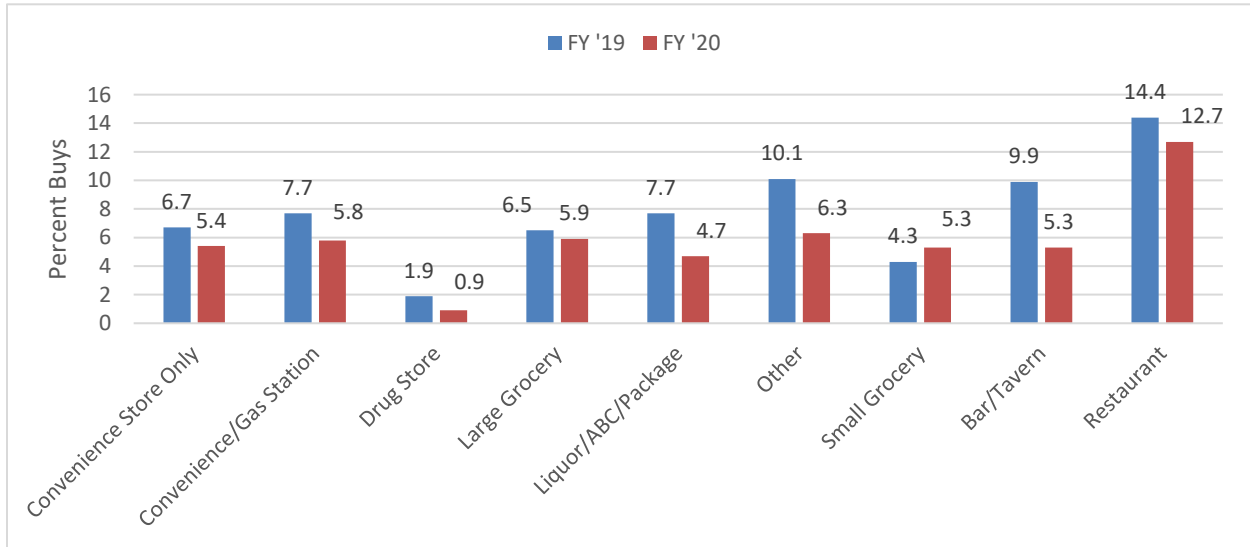


Figure 14 shows the percent of tobacco sales completed by type of business for places that had at least 50 attempts for FY '19 and FY '20. In both years, the highest rates of sales were in convenient stores only (9.1% and 9.8%, respectively). In FY '20 buy-rates decreased substantially in convenience/gas stations but increased slightly in convenient stores only.

Figure 14. Percentage of Completed Tobacco Sales, FY '19 and FY '20

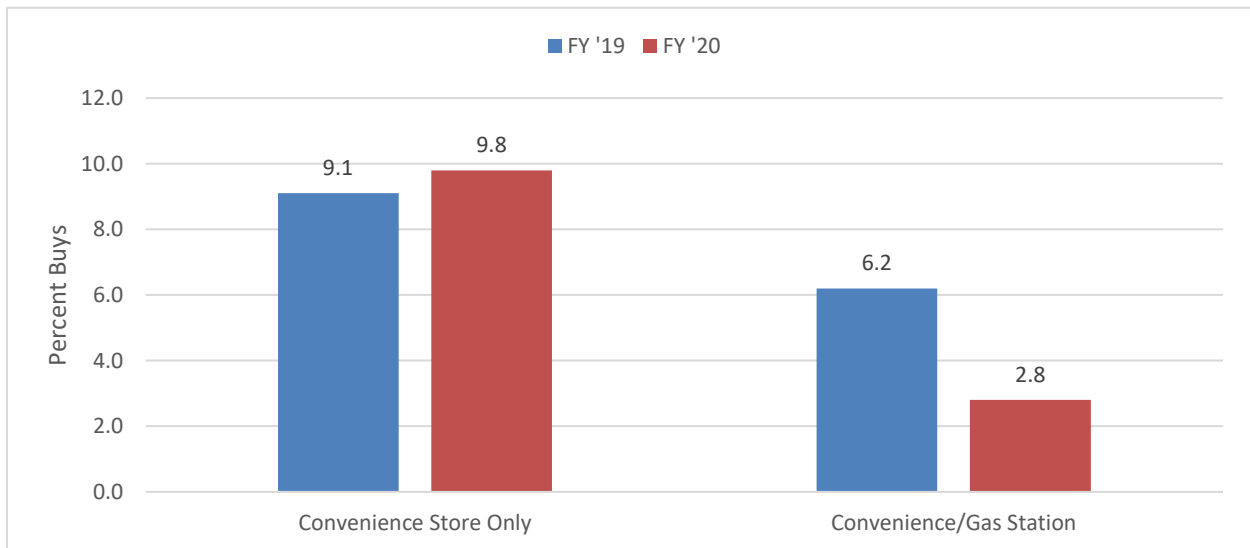


Table 8 displays the percentages of sales completed based on demographic characteristics of the clerks and buyers. For alcohol, sales were higher when the clerk was younger or Black or when the buyer was older or Black. For tobacco, there were no statistically significant differences in sales based on demographic characteristics of the clerks and buyer.

Table 8. Percentage of Retailer Sales by Demographic Characteristics

Compliance Check Characteristic	% Sales Completed—Alcohol	% Sales Completed—Tobacco
Clerk Age	***	
15 - 17	35.7	0.0
18- 20	11.6	0.0
21 - 24	6.9	1.5
25 - 44	6.1	5.1
45 – 64	4.6	1.3
65+	3.9	0.0
Clerk Sex		
Female	6.4	2.7
Male	5.7	4.6
Clerk Race	**	
Black	8.3	1.6
Hispanic	0.0	0.0
Other	0.0	0.0
White	5.6	5.1
Buyer Age	***	
15	6.2	4.8
16	4.6	3.7
17	4.1	0.0
18	6.6	0.0
19	8.4	N/A
20	8.5	0.0
Buyer Sex	***	
Female	7.4	3.9
Male	5.0	2.6
Buyer Race	**	
Black	7.4	9.8
Hispanic	0.0	N/A
Other	0.0	N/A
White	6.0	3.1
* p < .05 ** p < .01 *** p < .001		

Table 9 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 or the gender of the clerk and buyer were the same. For tobacco, there were no statistically significant differences in sales based on matches between clerk and buyer gender and race.

We also conducted analyses to see if the time of the inspection was a significant factor in whether a sale is made. 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 the second analysis, 6 pm was used as a day/night proxy. The first analysis indicated that sales of alcohol after school were more likely to occur than during school hours. No such difference was found for tobacco. The second analysis indicated that alcohol and tobacco sales were more likely to occur during nighttime hours.

Table 9. Percentage of Retailer Sales by Demographic Characteristics and Time of Day

Compliance Check Characteristic	% Sales Completed— Alcohol	% Sales Completed— Tobacco
Clerk – Buyer Sex		
Different	5.4	3.6
Same	6.7	3.2
Clerk – Buyer Race		
Different	6.1	3.8
Same	6.3	0.0
School Day	***	
7:00 am – 2:59 pm	4.3	2.9
3:00 pm – 11:59 pm	6.9	3.6
Day vs. Night	**	**
6:00 am – 5:59 pm	5.3	1.6
6:00 pm – 5:59 am	7.2	7.2
* p < .05 ** p < .01 *** p < .001		

The average clerk fine for an alcohol sale, at the time of ticketing, was \$609.07, and the most common amount was \$672.50. The average fine for a tobacco sale ticket was \$642.40, with \$470 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 297 cases in which a sale was made (alcohol and tobacco), there were 7 instances (2.4%) 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-premises 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 213 operations recorded in FY '20 in seven counties, down from 395 operations in FY '19. The officers issued 25 tickets for fake IDs, 38 verbal or written warnings, and 22 various retailer violations.

Shoulder Taps

Shoulder tap operations involve an underage volunteer standing outside of an off-premises establishment and asking adults going in to purchase alcohol for them. Those who do are ticketed. In FY'20, six counties representing five circuits conducted shoulder taps a total of nine different times, up from six in FY '19 and eight in FY '18. Altogether, 129 individuals were approached in FY '20 compared to 127 in FY '19. Eight purchased alcohol for the youth, resulting in an 6.2% violation rate. In FY '19 the rate was 8.7%, and it was 1.3% in FY '18. 65 other charges were written during these operations.

Public Safety Checkpoints/Saturation Patrols

In FY'20, AETs across South Carolina recorded 395 public safety checkpoints in 23 counties. The checkpoints expended more than 564 hours. Officers recorded contact with approximately 32,734 vehicles resulting in 3,222 citations and arrests. Highlights of those citations and arrests were 205 tickets for drug possession, 66 DUI arrests (.08 or greater BAC) among adults, one ticket for under 21 Zero Tolerance (.02 to .079 BAC), 12 fugitives apprehended, 97 tickets for open container, and 27 felony arrests. Twenty 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 2020, there were 161 saturation patrols that expended a total of 468 hours and involved 534 officers. This type of operation was recorded in 11 counties. The patrols resulted in 1,529 citations and arrests. In those violations, there were 120 tickets for drug possession, 11 DUI arrests, seven fugitives apprehended, 47 tickets for open container, and eight felony arrests.

Controlled Party Dispersals/Party Patrols

Alcohol Enforcement Teams in 10 counties recorded 103 party dispersals in FY '20. 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 '20, the predominant source for the party investigation was reported party dispersal/noise complaint. There was a total of 351 officer hours recorded at the gatherings involving 1,678 people. Officers recorded 247 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 '20, 21 counties turned in tobacco agreements, up from 17 in FY'19. 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 '20, 85 law enforcement agencies conducted enforcement activities as a part of the Alcohol Enforcement Team (AET) efforts. In FY '19, 83 law enforcement agencies participated. As stated earlier in this report, 5,215 alcohol and tobacco compliance checks accounted for the largest number of enforcement activities reported in the Environmental Prevention Strategies (EPS) Reporting system in FY '20. In FY '19, 7,274 alcohol and tobacco compliance checks were reported.

Almost 52 (51.8%) 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 42.7% of the alcohol compliance checks. In FY '19, SLED agents partnered with local law enforcement on 42.1% of the alcohol compliance checks, 38% of the alcohol checks in FY'18, 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 '20 and collectively served 1,128 retail staff, which is up from 1,081 in FY '19. Thirty-nine of the 46 counties served at least one retailer in PREP, with Beaufort (187) 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 '20, the average score was 95.7%.

Diversionsary or Court-mandated Youth Programs

County authorities often play a role in the post-arrest process for youth violators of alcohol or tobacco laws. The COVID-19 pandemic affected enforcement efforts for both underage alcohol and tobacco. 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. Two hundred and forty-seven (247) youth were served in AEP in FY '20, slightly up from FY '19 (246 youth). The bulk of the youth served came from Pickens (118 youth), Charleston (50 youth), and The Alpha Center (47 youth).

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'20, 379 youth participated in TEP, up from FY '19 when 295 youth participated. Six counties delivered TEP in FY'20, five less than the number of counties delivering the service in FY'19 when eleven counties delivered TEP.

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 176 media placements (e.g., articles, TV stories, webpages, and social media posts) during FY'20. AETs across the state conducted an additional 131 prevention activities meant to educate residents about substance abuse and misuse. Officers estimated approximately 40,685 individuals were exposed (participated or observed) the events.

Since 2010, AETs have participated in the statewide Out of Their Hands campaign during April. Focused on reducing alcohol access for individuals under 21 years old due to high school proms

traditionally held beginning the last week of March through the first week of May, April was chosen because it is also recognized nationally as “Alcohol Awareness Month”. Law enforcement across South Carolina step-up enforcement of underage drinking laws and in collaboration with prevention personnel conducted education and community awareness of the public health and public safety consequences of consuming alcoholic beverages. For instance, in FY’19 AETs conducted 47 presentations and media events conducted during “Out of Their Hands” throughout the month of April 2019. During April 2019, an estimated 700,000 South Carolinians received information about underage drinking through the “Out of Their Hands” media activities.

On March 15, 2020, South Carolina Governor Henry McMaster issued Executive Order 2020-09 due public health risk due to the COVID-19 pandemic. AET planned 2020 Out of Their Hands campaign enforcement and media activities, but the pandemic decreased participation in past year. Most schools (elementary, secondary, and higher education) closed, and school officials moved students' education to online platforms. As a result of the pandemic, the traditional enforcement operations such as alcohol compliance checks, public safety checkpoints, and related activity were reduced. The only media events related to social media posts and, unfortunately, social media were difficult to track and therefore not reported.

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.

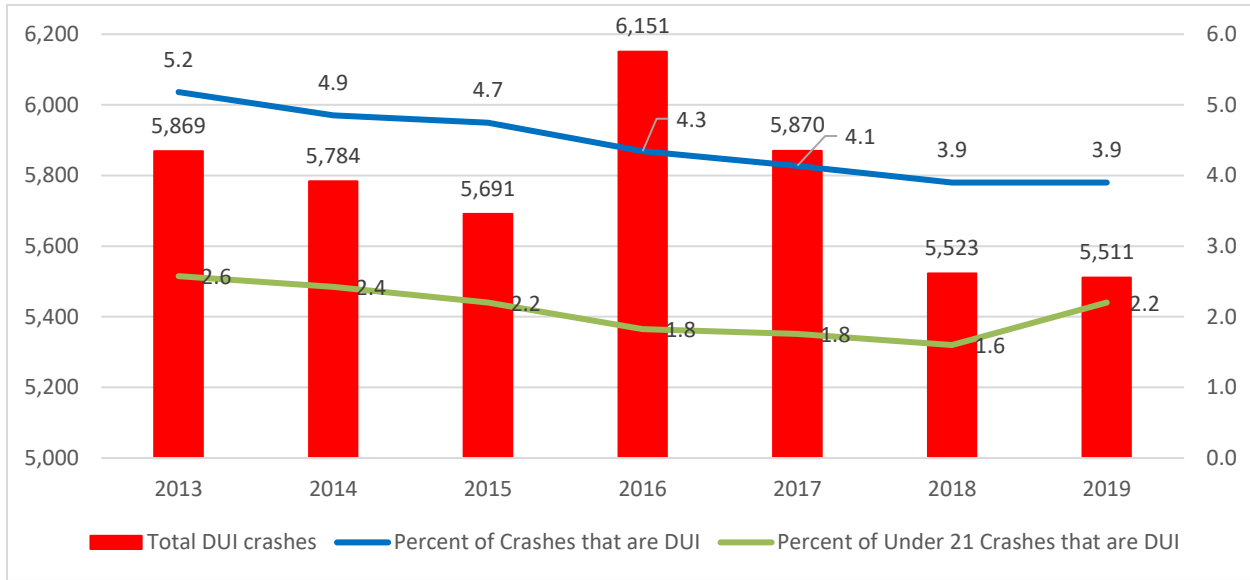
In FY ’20, there were eight training sessions conducted in five counties in South Carolina. These sessions were attended by 122 individuals, including 119 law enforcement officers. As previously noted in this report, the COVID-19 pandemic severely restricted the in-person training previously conducted in previous years, which was the training model for AETs since statewide inception in 2007.

Alcohol-Related Crashes

One of the main goals of environmental prevention strategies is to reduce alcohol-related traffic crashes. Figure 15 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, then lower in 2018 and 2019. It should be noted, however, that total crashes also increased dramatically in 2016 (not shown in the figure) and remained somewhat level through 2019, 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. While the percentage of DUI crashes to overall total crashes remained stable in 2019, the percentage of under 21 DUI crashes to overall under 21 increased. At the time of this report, 2019 crash data are preliminary.

Figure 15. Alcohol-Related Traffic Crashes, 2013 - 2019



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 4,858 alcohol compliance checks and 357 tobacco compliance checks. Sales were completed for 6.1% of alcohol attempts and 3.4% of tobacco attempts.

Most merchants asked to see the buyers' IDs (94.2% and 92.4% for alcohol and tobacco, respectively) and most merchants had visible ID checking signage in store (82.6% and 91% for alcohol and tobacco, respectively). For alcohol, sales were higher when the buyer was older and Black, the gender or the race of the clerk and buyer was the same, and the attempt was made after 6:00pm. For tobacco, sales were higher when the buyer was female, Black, and the race or gender of the clerk and buyer was different.

The counties served 1,128 merchants in the Palmetto Retailers Education Program (PREP) in FY '20, up from 1,081 in FY '19.

AETs reported a total of 395 public safety checkpoints. Among the violations, there were 66 DUIs. In addition, there were 167 saturation patrols reported. This operation generated another 1,529 tickets, among them 11 DUIs.

AETs dispersed 103 parties attended by 1,678 persons, with 247 tickets and arrests recorded at the gatherings. A total of 129 individuals were approached by the cooperating youth to purchase alcohol as part of Shoulder Tap operations, with 8 purchasing (6.2% sales).

In FY '20, there were 213 bar checks conducted, resulting in 25 fake ID violations, 38 warnings for various activity, and 22 retailer and patron violations.

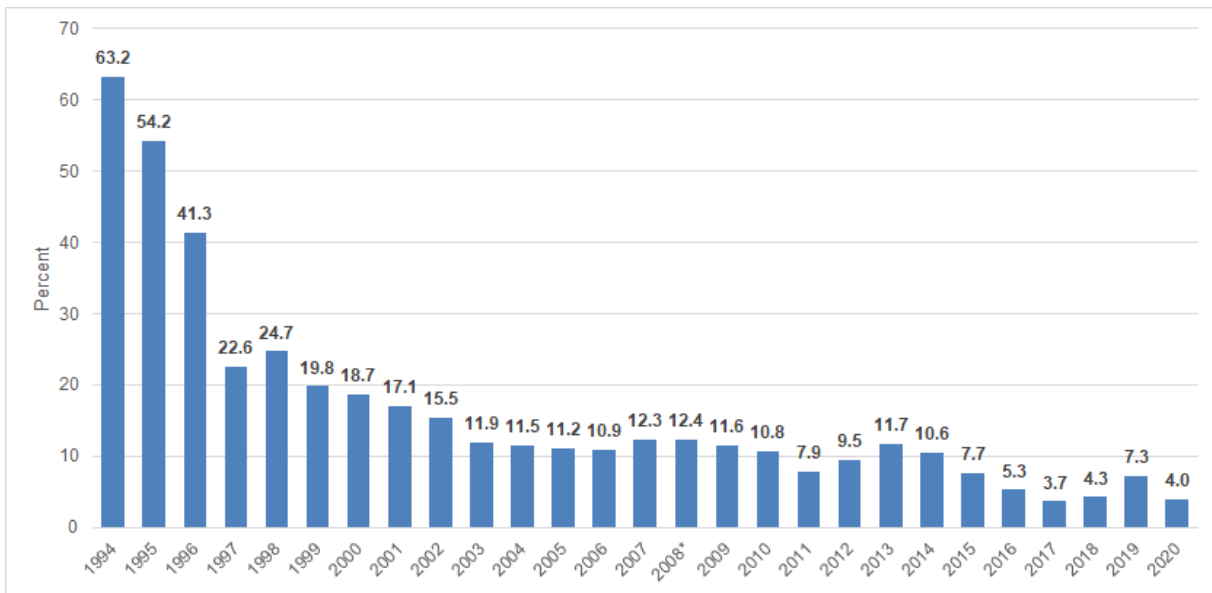
More than 626 youth were in diversion program for youth alcohol and tobacco offenses (247 served in the Alcohol Education Program and 397 served in the Tobacco Education Program).

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.³ 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, 2020, 114 youth volunteers ages 15-17, under trained adult supervision, conducted unannounced cigarette purchase attempts in 309 randomly selected retail outlets in all 46 counties. These outlets were randomly sampled from the estimated 7,095 outlets in the state. Figure 16 shows the buy rates from the Synar Study since 1994. For 2020, the estimated overall sales rate (also known as a Retailer Violation Rate or RVR) was 4.0%, lower than last year's rate of 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. Buy rates for each county are shown in Table 10.

Figure 16. YATS (Synar) Cigarette Purchase Rates (FY 1994 - 2020) ^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.

³ The Synar Regulation is named after US Congressman Mike Synar from Oklahoma, who introduced youth tobacco prevention legislation in 1992.

Table 10. YATS (Synar) Raw Buy Rates 2020

County Name	Total Eligible Attempts	No Buy	Buy	Buy Rate
Abbeville	5	5	0	N/A
Aiken	8	8	0	N/A
Allendale	5	4	1	20.0%
Anderson	16	16	0	N/A
Bamberg	5	5	0	N/A
Barnwell	5	5	0	N/A
Beaufort	1	1	0	N/A
Berkeley	8	8	0	N/A
Calhoun	5	4	1	20.0%
Charleston	30	29	1	3.3%
Cherokee	5	4	1	20.0%
Chester	5	5	0	N/A
Chesterfield	5	5	0	N/A
Clarendon	5	5	0	N/A
Colleton	5	4	1	20.0%
Darlington	-	-	-	-
Dillon	-	-	-	-
Dorchester	8	8	0	N/A
Edgefield	5	5	0	N/A
Fairfield	-	-	-	-
Florence	10	9	1	10.0%
Georgetown	-	-	-	-
Greenville	-	-	-	-
Greenwood	5	5	0	N/A
Hampton	4	3	1	25.0%
Horry	10	10	0	N/A
Jasper	5	5	0	N/A
Kershaw	-	-	-	-
Lancaster	-	-	-	-
Laurens	5	5	0	N/A
Lee	-	-	-	-
Lexington	15	15	0	N/A
Marion	-	-	-	-
Marlboro	-	-	-	-
McCormick	5	5	0	N/A
Newberry	4	4	0	N/A
Oconee	4	4	0	N/A
Orangeburg	5	4	1	20.0%

Table 10. YATS (Synar) Raw Buy Rates 2020

County Name	Total Eligible Attempts	No Buy	Buy	Buy Rate
Pickens	4	4	0	N/A
Richland	17	16	1	5.9%
Saluda	3	2	1	33.3%
Spartanburg	22	22	0	N/A
Sumter	-	-	-	-
Union	-	-	-	-
Williamsburg	5	5	0	N/A
York	13	13	0	N/A
- Indicates the county did not participate in the study.				

Table 11 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 11. YATS (Synar) Percent of Outlets Selling Cigarettes to Youth by Characteristics of Youth, 2020

Characteristic	Buy Rate (%)
Age	
15	0.0
16	5.9
17	4.2
Sex	
Female	3.8
Male	2.9
Race	
Black	4.3
Other	0.0
White	3.1
Buyer Race	
Black-Female	4.6
Other-Female	0.0
White-Female	3.8
Black-Male	3.9
Other-Male	0.0
White-Male	2.4

Table 12 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 12. YATS (Synar) Percent of Outlets Selling Cigarettes to Youth by Characteristics of Clerk, 2018

Characteristic	Buy Rate (%)
Age	
Teenager	0.0
20's	3.2
30's	6.1
40's	0.0
50's	4.9
60+	0.0
Sex	
Female	2.6
Male	6.3
Race	
Black	2.1
Hispanic	0.0
Other	4.2
White	5.0
Clerk Race	
Black-Female	2.3
Hispanic-Female	0.0
Other-Female	0.0
White-Female	3.4
Black-Male	0.0
Hispanic-Male	0.0
Other-Male	6.3
White-Male	9.7

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.

YRBS Data

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. However, data on lifetime use of various harmful substances (e.g., heroin, methamphetamines, Ecstasy, and synthetic marijuana) showed movement in the undesired direction (Figure 17). 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.

Figure 17. Past 30-Day Alcohol Use, High School Students, South Carolina and United States

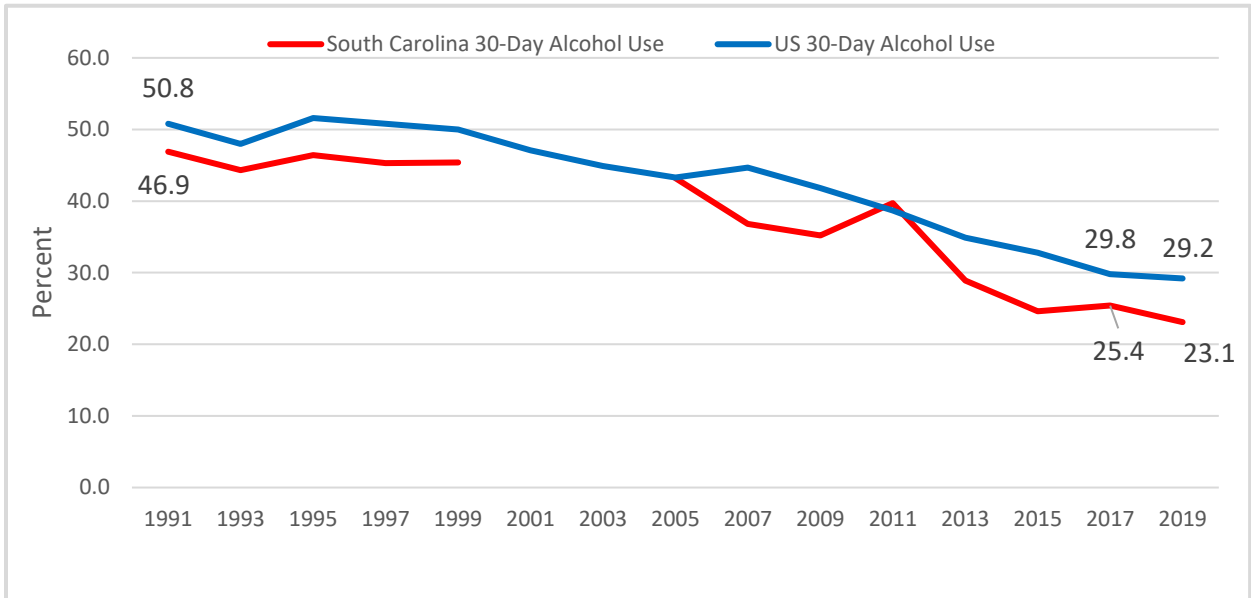


Figure 18. Past 30-Day Binge Drinking, High School Students, South Carolina and United States

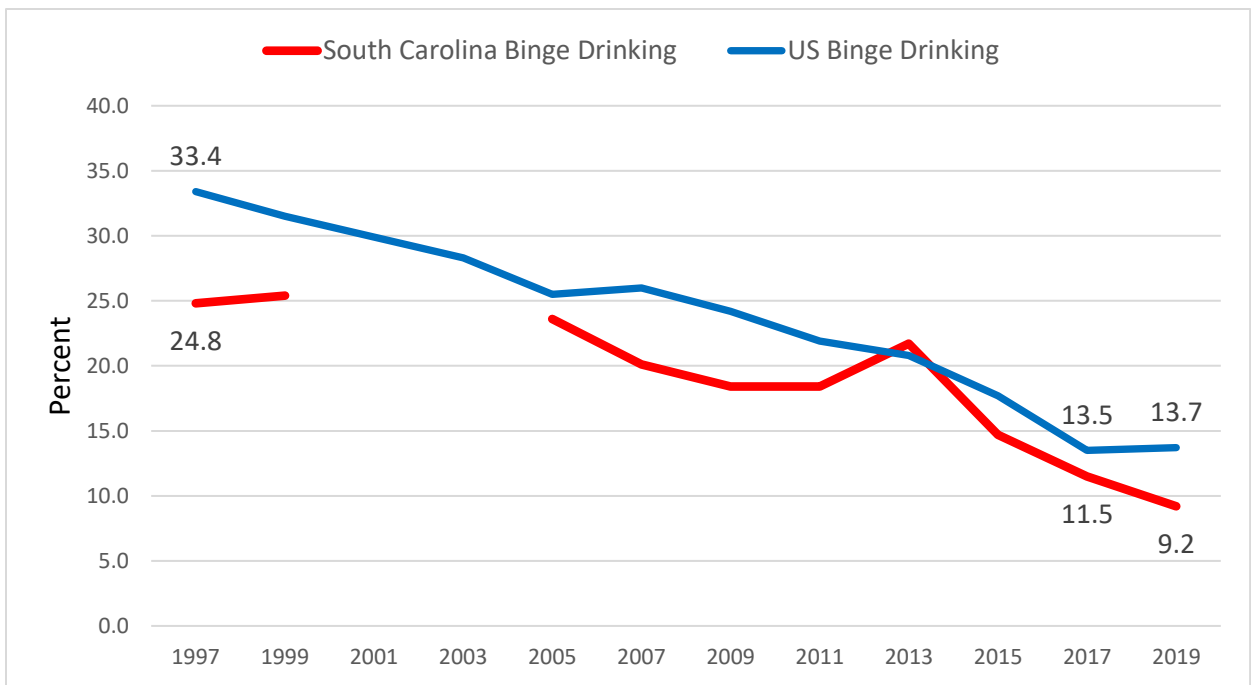


Figure 19. Past 30-Day Cigarette Use, High School Students, South Carolina and United States

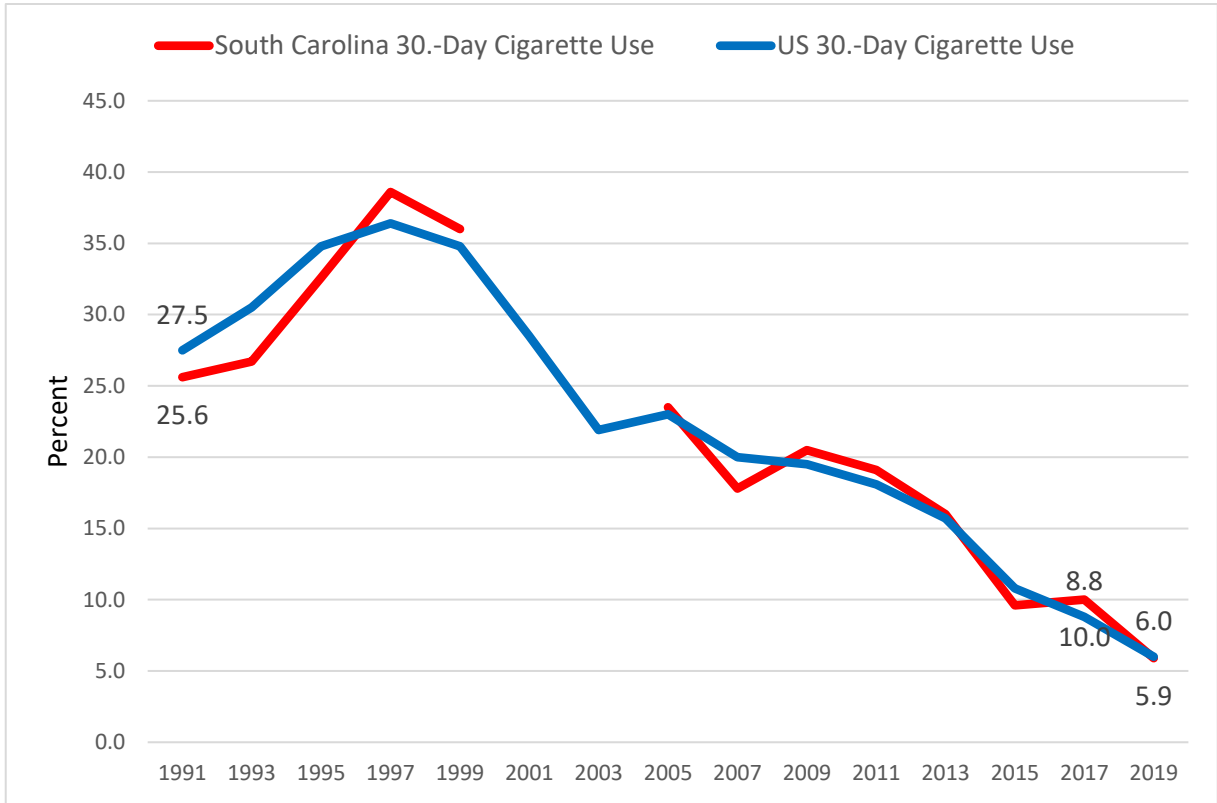


Figure 20. Past 30-Day Marijuana Use, High School Students, South Carolina and United States

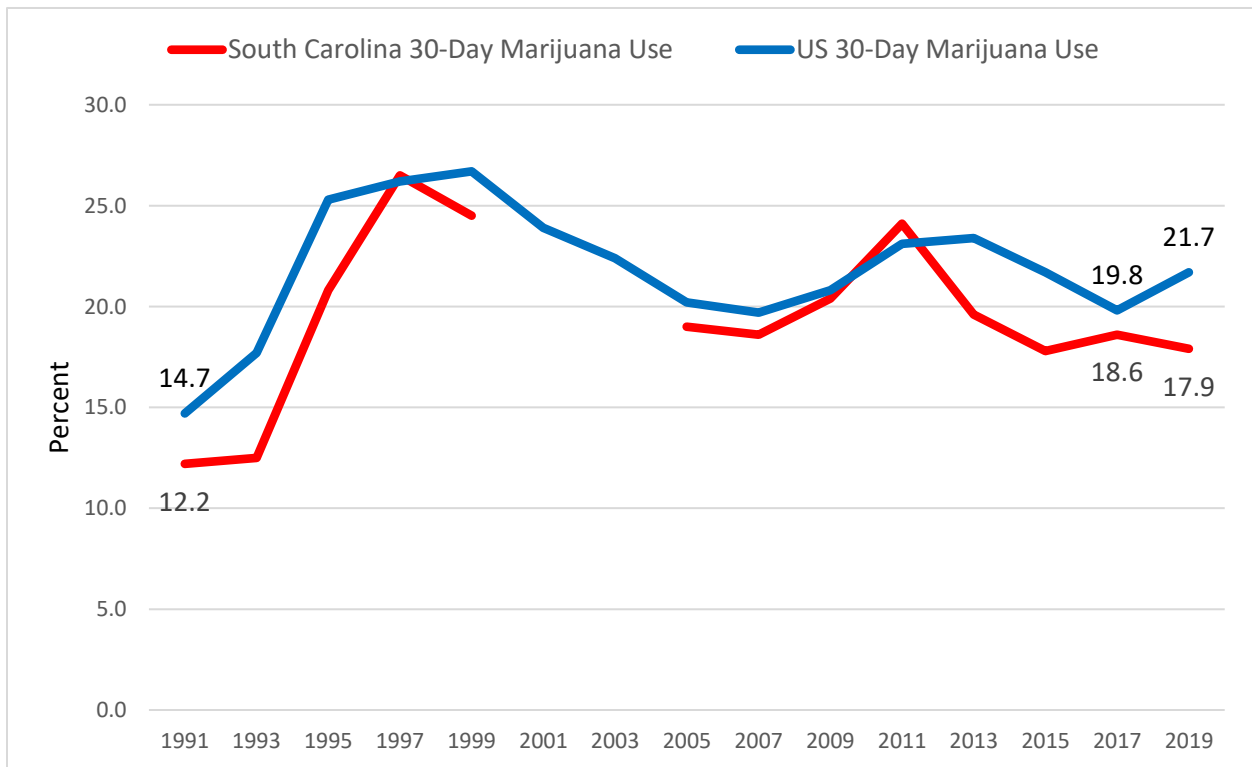


Figure 21. Ever Used Prescription Drugs (Pain Relievers) without Doctor's Prescription, High School Students, South Carolina and United States

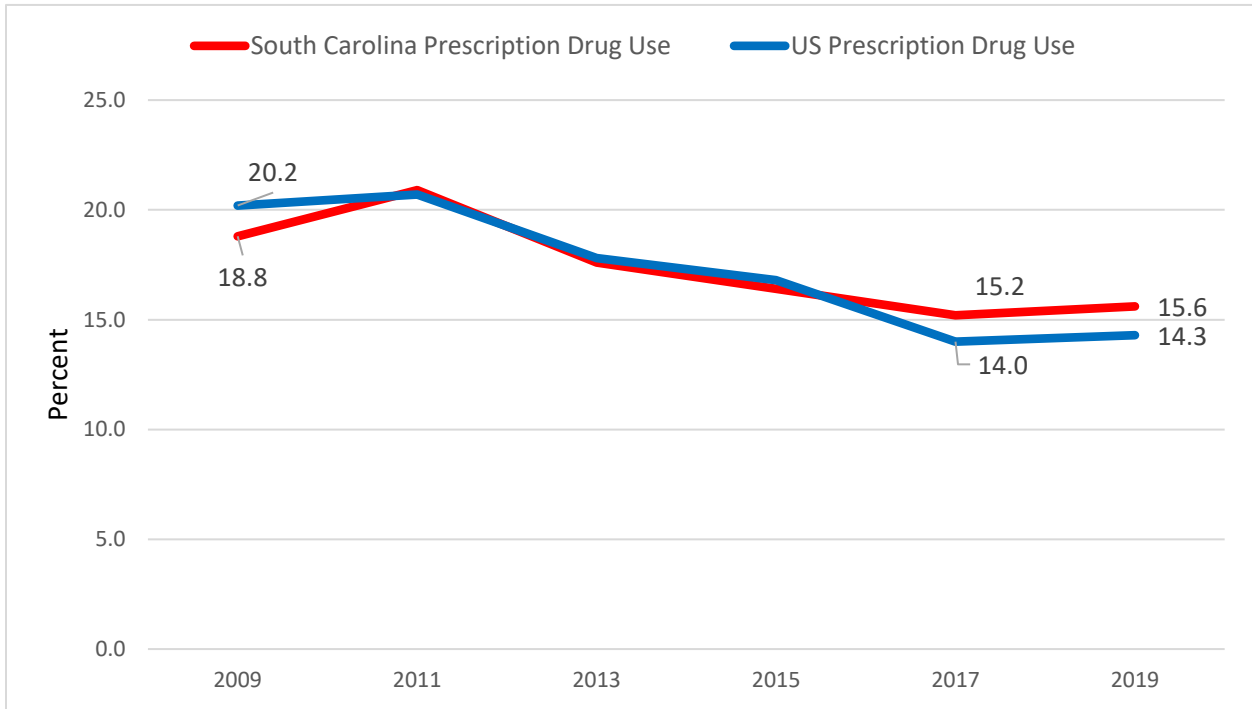
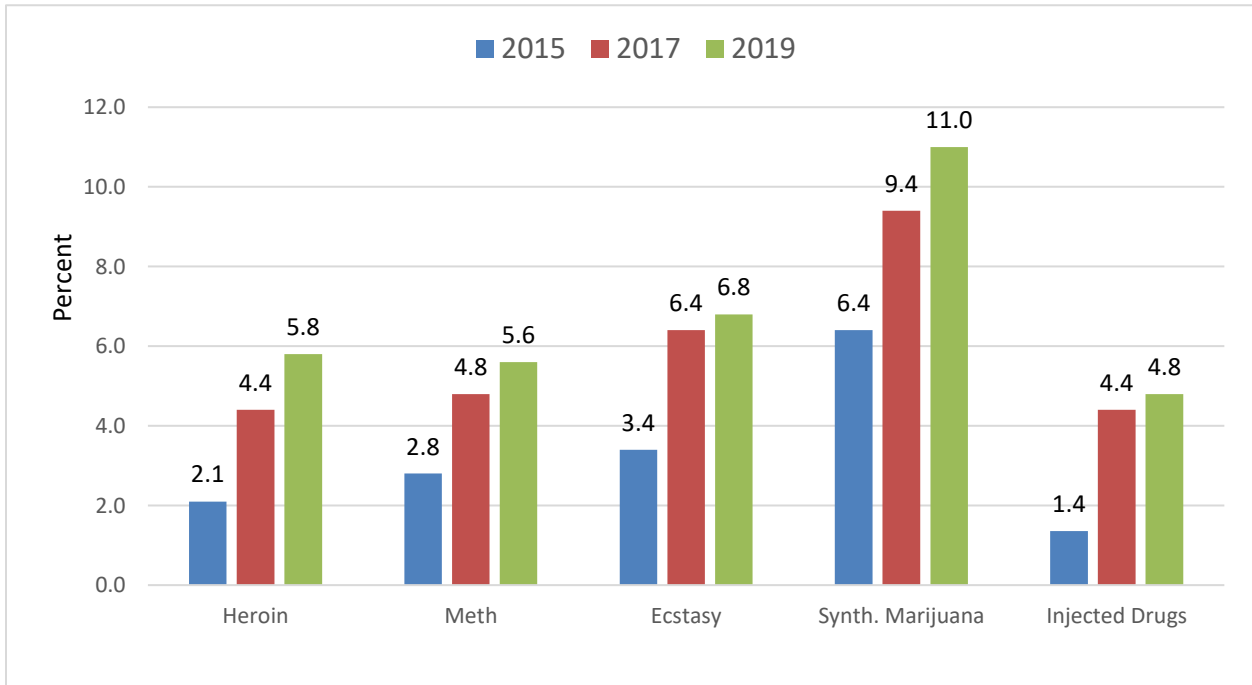


Figure 22. Ever Used Various Drugs, High School Students, 2015 - 2019, South Carolina



CSAP State Block Grant Goals

Table 13 displays statewide data in relation to the Block Grant goals set by DAODAS. As can be seen, three of the four alcohol-related targets have been met thus far. Four of the six tobacco targets have been met when looking at the most recent data available. The marijuana targets have not been met and, in one case, the most recent rate available exceeds the baseline rate. Overall, seven of the 12 targets have been met when looking at the most recent data available.

Table 13. Statewide Substance Use Data and Block Grant Goals

Priority Area	Underage Alcohol Use	Underage Alcohol Use	Underage Alcohol Use	Alcohol-Related Crashes	Youth Tobacco Use	Youth Tobacco Use	Youth Tobacco Use	Youth Tobacco Use	Youth Tobacco Use	Youth Tobacco Use	Youth Marijuana Use	Youth Rx Misuse
Indicator	30-day use	30-day use	Retail access	Alcohol-related fatalities	Retail access	30-day use of tobacco	Retail access	30-day use of cigarettes	30-day use of smokeless	30-day use of vaping	30-day use	Ever used
Data Source	YRBS	CTC	EPRS	FARS	Synar	YRBS	EPRS	CTC	CTC	CTC	YRBS	YRBS
Baseline	23% (2017)	16% (2018)	6.9% (2018)	32% (2017)	4.3% (2018)	21.6% (2017)	4.0% (2018)	4.6% (2018)	6.5% (2018)	11.5% (2018)	18.6% (2017)	15.2% (2017)
Year 1 Target	22% or less (2019)	15%	10% or less	31% or less	5% or less	20% or less	5% or less	5% or less	5% or less	10% or less	17% or less	15% or less
Year 1 Data	23.1% (2019)	10.4% (2020)	7.6% (2019)	28% (2018)	7.3% (2019)	23% (2019)	6.8% (2019)	2.4% (2020)	3.2% (2020)	10.8% (2020)	17.9% (2019)	15.6% (2019)
Year 2 Target	21% or less (2021)	14% or less (2022)	10% or less (2020)	31% or less (2019)	5% or less (2020)	20% or less (2021)	5% or less (2020)	5% or less (2022)	5% or less (2022)	10% or less (2022)	17% or less (2021)	15% or less (2021)
Year 2 Data	N/A	N/A	6.1% (2020)	28% (2019)	4.0% (2020)	N/A	3.4% (2020)	N/A	N/A	N/A	N/A	N/A
Legend:												
YRBS = Youth Risk Behavior Survey, conducted at the state-level every two years (odd years).												
CTC= Communities That Care Survey, conducted in select counties, every two years (even years).												
FARS = Fatality Analysis Reporting System, administered by the National Highway Traffic Safety Administration.												
Green cell indicates that most rates met or exceeded the target. Red cell indicates that rates are higher than the baseline rates.												

APPENDIX A: ADDITIONAL DATA TABLES

Table A1. Overall Results by Sex – Middle School

Risk Factor Scores, Range (Positive score is favorable)	Middle School - Females (n=705)			Middle School- Males (n=828)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	2.27	2.36	3.75**	2.21	2.31	4.31**
Decision-Making Skills, 0-3	2.00	1.95	-2.33**	1.85	1.84	-0.19
Disapproval of Use, 0-3	2.66	2.69	1.43**	2.58	2.57	-0.44
Perceived Peer Norms, 0-3	2.52	2.57	1.76*	2.34	2.36	1.02
Perceived Parental Attitudes, 0-3	2.83	2.85	0.77	2.79	2.76	-0.90

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Other Tobacco	0.71	0.71	0.00	1.45	2.32	60.00
Cigarettes	0.43	0.43	0.00	1.21	2.18	80.17
E-Cigarettes or Vapes	6.00	0.43	-92.83**	6.80	2.31	-66.03**
Alcohol	3.41	4.28	25.51	4.35	7.06	62.30**
Marijuana	2.13	2.85	33.80	2.06	5.48	166.02**
Non-Medical Prescription Drug Use	2.98	1.57	-47.32	2.42	4.26	76.03**
Binge Drinking (past 2 weeks)	1.28	1.01	-21.09	3.88	0.85	-78.09**

* 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 Race Group – Middle School

Risk Factor Scores, Range (Positive score is favorable)	American Indian participants (n=27)			Black/African American participants (n=567)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	2.24	2.29	1.98	2.07	2.12	2.77
Decision-Making Skills, 0-3	1.99	1.97	-0.93	2.89	1.84	-36.08
Disapproval of Use, 0-3	2.64	2.63	-0.28	2.50	2.51	0.10
Perceived Peer Norms, 0-3	2.39	2.59	8.05	2.29	2.27	-0.74
Perceived Parental Attitudes, 0-3	2.86	2.95	3.11	2.73	2.70	-0.82

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Other Tobacco	3.70	3.85	4.05	1.06	2.87	170.75**
Cigarettes	3.70	0.00	-100.00	1.06	1.95	83.96
E-Cigarettes or Vapes	14.81	0.00	-100.00	6.76	2.49	-63.17**
Alcohol	7.41	0.00	-100.00	3.89	7.12	83.03**
Marijuana	3.70	0.00	-100.00	3.89	5.36	37.79
Non-Medical Prescription Drug Use	7.41	3.85	-48.04	4.06	5.18	27.59
Binge Drinking (past 2 weeks)	0.00	0.00	-	4.43	1.26	-71.56**

* 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 Race Group – Middle School (continued)

Risk Factor Scores, Range (Positive score is favorable)	Multiethnic participants (n=149)			Other participants (n=83)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	2.25	2.36	5.10**	2.26	2.39	5.69
Decision-Making Skills, 0-3	1.81	1.78	-1.57	2.05	2.01	-2.20
Disapproval of Use, 0-3	2.59	2.59	0.07	2.66	2.74	2.73
Perceived Peer Norms, 0-3	2.43	2.45	0.77	2.46	2.63	7.11**
Perceived Parental Attitudes, 0-3	2.74	2.81	2.66**	2.83	2.82	-0.34

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Other Tobacco	0.67	0.67	0.00	1.20	1.22	1.67
Cigarettes	1.34	1.36	1.49	2.41	0.00	-100.00
E-Cigarettes or Vapes	7.38	2.04	-72.36**	1.22	1.20	-1.64
Alcohol	6.04	6.80	12.58	0.00	3.61	-
Marijuana	3.38	4.76	40.83	3.61	2.41	-33.24
Non-Medical Prescription Drug Use	2.68	5.44	102.99	2.41	1.20	-50.21
Binge Drinking (past 2 weeks)	2.72	0.68	-75.00	1.20	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 ($p < .05$).

Table A2. Overall Results by Race Group – Middle School (continued)

Risk Factor Scores, Range (Positive score is favorable)	White participants (n=727)		
	Pre Average	Post Average	% Change
Perceived Risk, 0-3	2.37	2.48	4.42**
Decision-Making Skills, 0-3	1.94	1.93	-0.62
Disapproval of Use, 0-3	2.69	2.70	0.10
Perceived Peer Norms, 0-3	2.51	2.56	2.03**
Perceived Parental Attitudes, 0-3	2.88	2.87	-0.39

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change
Other Tobacco	1.24	0.83	-33.06
Cigarettes	0.41	1.10	168.29
E-Cigarettes or Vapes	6.64	0.55	-91.72**
Alcohol	3.85	5.67	47.27
Marijuana	0.41	3.59	775.61**
Non-Medical Prescription Drug Use	1.79	1.24	-30.73
Binge Drinking (past 2 weeks)	1.52	0.83	-45.39

* 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 Ethnicity – Middle School

Risk Factor Scores, Range (Positive score is favorable)	Participants of Hispanic, Latino, or Spanish Descent or Origin (n=125)			Participants Not of Hispanic, Latino, or Spanish Descent or Origin (n=1377)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	2.30	2.40	4.64**	2.24	2.33	4.27**
Decision-Making Skills, 0-3	1.96	1.96	0.20	1.92	1.89	-1.54*
Disapproval of Use, 0-3	2.65	2.64	-0.06	2.61	2.62	0.29
Perceived Peer Norms, 0-3	2.48	2.52	1.91	2.42	2.45	1.06*
Perceived Parental Attitudes, 0-3	2.79	2.83	1.26	2.81	2.80	-0.39

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Other Tobacco	0.80	2.44	205.00	1.16	1.39	19.83
Cigarettes	2.40	2.40	0.00	0.73	1.24	69.86
E-Cigarettes or Vapes	4.84	1.60	-66.94	6.72	1.46	-78.27**
Alcohol	3.23	4.00	23.84	4.07	5.86	43.98**
Marijuana	2.42	2.40	-0.83	2.11	4.32	104.74**
Non-Medical Prescription Drug Use	1.60	1.61	0.63	2.98	3.15	5.70
Binge Drinking (past 2 weeks)	3.20	0.81	-74.69	2.56	0.88	-65.63**

* 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 Program – Middle School

Risk Factor Scores, Range (Positive score is favorable)	All Programs (n=1574)			Alcohol Stories (n=156)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	2.24	2.33	3.92**	2.38	2.53	6.34**
Decision-Making Skills, 0-3	1.92	1.89	-1.62**	1.86	1.91	2.73*
Disapproval of Use, 0-3	2.61	2.62	0.26	2.65	2.71	2.10**
Perceived Peer Norms, 0-3	2.42	2.45	0.87	2.38	2.53	6.28**
Perceived Parental Attitudes, 0-3	2.81	2.80	-0.16	2.85	2.87	0.67

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Other Tobacco	1.15	1.62	40.87	1.28	0.64	-50.00
Cigarettes	0.83	1.41	69.88	1.28	1.28	0.00
E-cigarettes or Vapes	6.37	1.42	-77.71**	8.97	2.56	-71.46**
Alcohol	3.91	5.86	49.87**	5.77	10.90	88.91*
Marijuana	2.11	4.19	98.58**	3.85	3.87	0.52
Non-Medical Prescription Drug Use	2.88	3.09	7.29	0.00	5.13	**
Binge Drinking (past 2 weeks)	2.76	0.91	-67.03**	0.64	0.64	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 A4. Overall Results by Program – Middle School (continued)

Risk Factor Scores, Range (Positive score is favorable)	Keepin' It Real (n=419)			Life Skills (n=792)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	1.88	2.04	8.25**	2.38	2.48	4.06**
Decision-Making Skills, 0-3	1.93	1.88	-2.76*	1.93	1.90	-1.27
Disapproval of Use, 0-3	2.48	2.45	-1.32	2.68	2.71	1.12*
Perceived Peer Norms, 0-3	2.29	2.32	1.51	2.52	2.53	0.18
Perceived Parental Attitudes, 0-3	2.72	2.71	-0.50	2.84	2.84	-0.14

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Other Tobacco	1.91	3.86	102.09	0.63	0.64	1.59
Cigarettes	1.20	1.67	39.17	0.76	1.14	50.00
E-Cigarettes or Vapes	10.29	1.91	-81.44**	2.93	0.89	-69.62
Alcohol	3.83	9.07	136.81**	3.16	3.31	4.75
Marijuana	2.15	5.49	155.35*	1.77	3.18	79.66
Non-Medical Prescription Drug Use	3.59	3.58	-0.28	2.40	2.04	-15.00
Binge Drinking (past 2 weeks)	4.06	0.96	-76.35	2.41	0.77	-68.05**

* 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 Program – Middle School (continued)

Risk Factor Scores, Range (Positive score is favorable)	Operation Prevention: Rx (n=114)			Too Good for Drugs (n=60)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	2.36	2.20	-6.72	2.28	2.14	-5.96
Decision-Making Skills, 0-3	1.96	1.85	-5.62*	1.98	1.99	0.63
Disapproval of Use, 0-3	2.64	2.58	-2.53	2.53	2.51	-0.88
Perceived Peer Norms, 0-3	2.30	2.41	4.43	2.41	2.33	-3.32
Perceived Parental Attitudes, 0-3	2.82	2.81	-0.09	2.80	2.79	-0.36

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Other Tobacco	0.88	0.88	0.00	0.00	1.69	-
Cigarettes	0.00	1.79	-	0.00	1.67	-
E-Cigarettes or Vapes	13.39	0.89	-93.35	5.08	1.67	-67.13
Alcohol	3.51	6.31	79.77	5.00	5.00	-
Marijuana	1.77	5.36	202.82	1.67	6.78	305.99
Non-Medical Prescription Drug Use	3.51	4.50	28.21	3.33	6.67	100.30
Binge Drinking (past 2 weeks)	0.90	2.68	197.78	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 Sex – High School

Risk Factor Scores, Range (Positive score is favorable)	High School - Females (n=118)			High School- Males (n=131)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	2.17	2.27	4.44	1.99	2.11	6.38**
Decision-Making Skills, 0-3	1.79	1.90	5.62	1.82	1.84	0.91
Disapproval of Use, 0-3	2.17	2.27	4.60*	2.03	2.10	3.29
Perceived Peer Norms, 0-3	1.71	1.93	12.70**	1.55	1.72	10.72**
Perceived Parental Attitudes, 0-3	2.60	2.60	-0.04	2.48	2.51	1.10

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Other Tobacco	0.85	0.00	-100.00	8.40	6.87	-18.21
Cigarettes	5.98	3.42	-42.81	14.50	15.27	5.31
E-Cigarettes or Vapes	10.71	7.89	-26.33	32.05	26.72	-16.63
Alcohol	14.41	6.96	-51.70**	22.90	19.85	-13.32
Marijuana	18.64	12.07	-35.25*	33.59	25.19	-25.01*
Non-Medical Prescription Drug Use	5.93	5.13	-13.49	6.87	4.58	-33.33
Prescription Pain Pills	6.84	3.42	-50.00	5.38	4.58	-14.87
Heroin or Fentanyl	0.00	0.00	-	0.76	0.00	-100.00
Cocaine	0.85	0.85	0.00	2.29	0.76	-66.81
Other Illegal Drugs	0.86	0.00	-100.00	2.29	0.76	-66.81
Binge Drinking (past 2 weeks)	4.27	0.88	-79.39	8.66	7.81	-9.82

* 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 A6. Overall Results by Race Group – High School

Risk Factor Scores, Range (Positive score is favorable)	Black/African American Participants (n=149)			White participants (n=74)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	2.06	2.17	5.44*	2.12	2.18	2.81
Decision-Making Skills, 0-3	1.83	1.92	4.87	1.85	1.82	-1.65
Disapproval of Use, 0-3	2.16	2.27	5.09**	2.03	2.04	0.63
Perceived Peer Norms, 0-3	1.66	1.89	13.43**	1.53	1.63	7.05
Perceived Parental Attitudes, 0-3	2.53	2.57	1.38	2.55	2.46	-3.29

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Other Tobacco	3.36	1.35	-59.82	8.11	8.11	0.00
Cigarettes	4.05	4.73	16.79	24.32	20.27	-16.65
E-Cigarettes or Vapes	11.64	11.64	0.00	41.67	31.51	-24.38*
Alcohol	12.75	10.20	-20.00	27.03	21.92	-18.90
Marijuana	27.52	19.05	-30.78**	21.62	17.57	-18.73
Non-Medical Prescription Drug Use	5.37	2.70	-49.72	5.41	9.46	74.86
Prescription Pain Pills	4.73	2.03	-57.08	6.76	5.41	-19.97
Heroin or Fentanyl	0.67	0.00	-100.00	0.00	0.00	-
Cocaine	0.68	0.68	0.00	2.70	1.35	-50.00
Other Illegal Drugs	0.68	0.00	-100.00	2.70	1.35	-50.00
Binge Drinking (past 2 weeks)	4.17	3.55	-14.87	8.11	8.11	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 A7. Overall Results by Ethnicity – High School

Risk Factor Scores, Range (Positive score is favorable)	Participants Not of Hispanic, Latino, or Spanish Descent or Origin (n=231)		
	Pre Average	Post Average	% Change
Perceived Risk, 0-3	2.08	2.18	4.66**
Decision-Making Skills, 0-3	1.81	1.88	3.31
Disapproval of Use, 0-3	2.11	2.18	3.05
Perceived Peer Norms, 0-3	1.63	1.81	11.07**
Perceived Parental Attitudes, 0-3	2.53	2.53	-0.04

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change
Other Tobacco	5.19	3.48	-32.95
Cigarettes	11.30	9.57	-15.31
E-Cigarettes or Vapes	21.68	17.98	-17.07
Alcohol	19.05	13.16	-30.92**
Marijuana	25.11	17.03	-32.18**
Non-Medical Prescription Drug Use	5.63	5.65	0.36
Prescription Pain Pills	5.68	3.91	-31.16
Heroin or Fentanyl	0.43	0.00	-100.00
Cocaine	1.30	1.30	0.00
Other Illegal Drugs	1.32	0.44	-66.67
Binge Drinking (past 2 weeks)	6.19	4.48	-27.63

* 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 A8. Overall Results by Program – High School

Risk Factor Scores, Range (Positive score is favorable)	All Programs (n=259)			ATOD 101 (n=65)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	2.08	2.19	5.19**	2.07	2.08	0.43
Decision-Making Skills, 0-3	1.82	1.87	2.46	1.87	1.96	4.91
Disapproval of Use, 0-3	2.10	2.19	4.24**	1.97	2.15	8.93**
Perceived Peer Norms, 0-3	1.62	1.82	12.37**	1.69	1.86	9.47
Perceived Parental Attitudes, 0-3	2.53	2.55	0.68	2.38	2.45	3.04

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Other Tobacco	5.04	3.49	-30.75	1.56	1.56	0.00
Cigarettes	10.89	9.69	-11.02	6.25	9.38	50.08
E-Cigarettes or Vapes	22.62	18.43	-18.52	12.90	20.97	62.56
Alcohol	19.38	14.06	-27.45	14.06	10.94	-22.19
Marijuana	26.36	19.07	-27.66	18.75	17.46	-6.88
Non-Medical Prescription Drug Use	6.98	5.43	-22.21	7.81	4.69	-39.95
Prescription Pain Pills	6.64	4.26	-35.84	1.59	0.00	-100.00
Heroin or Fentanyl	0.39	0.00	-100.00	0.00	0.00	-
Cocaine	1.56	1.16	-25.64	1.59	3.13	96.86
Other Illegal Drugs	1.57	0.39	-75.16	1.61	0.00	-100.00
Binge Drinking (past 2 weeks)	6.32	4.38	-30.70	1.61	6.56	307.45

* 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 A8. Overall Results by Program – High School (continued)

Risk Factor Scores, Range (Positive score is favorable)	Class Action (n=27)			Life Skills (n=32)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	2.28	2.23	-2.06	1.89	1.74	-7.88
Decision-Making Skills, 0-3	1.89	1.70	-9.80	1.57	1.67	6.47
Disapproval of Use, 0-3	2.35	2.12	-9.94	1.53	1.46	-4.43
Perceived Peer Norms, 0-3	1.72	1.73	0.72	1.10	1.18	7.01
Perceived Parental Attitudes, 0-3	2.73	2.64	-3.17	2.28	2.15	-5.40

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Other Tobacco	3.70	0.00	-100.00	9.38	6.25	-33.37
Cigarettes	3.70	0.00	-100.00	40.63	34.37	-15.41
E-Cigarettes or Vapes	16.00	0.00	-100.00	70.97	53.13	-25.14*
Alcohol	18.52	0.00	-100.00*	28.12	38.71	37.66
Marijuana	7.41	0.00	-100.00	75.00	62.50	-16.67
Non-Medical Prescription Drug Use	0.00	3.70	-	18.75	9.38	-49.97
Prescription Pain Pills	3.70	0.00	-100.00	22.58	25.00	10.72
Heroin or Fentanyl	0.00	0.00	-	0.00	0.00	-
Cocaine	0.00	0.00	-	6.25	0.00	-100.00
Other Illegal Drugs	0.00	0.00	-	6.25	3.13	-49.92
Binge Drinking (past 2 weeks)	7.41	0.00	-100.00	9.38	6.25	-33.37

* 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 A8. Overall Results by Program – High School (continued)

Risk Factor Scores, Range (Positive score is favorable)	Operation Prevention (n=52)			Project TND (n=69)		
	Pre Average	Pre Average	Pre Average	Pre Average	Post Average	% Change
Perceived Risk, 0-3	2.10	2.10	2.10	2.15	2.17	0.90
Decision-Making Skills, 0-3	1.85	1.85	1.85	1.95	1.83	-6.14
Disapproval of Use, 0-3	2.11	2.11	2.11	2.40	2.39	-0.62
Perceived Peer Norms, 0-3	1.66	1.66	1.66	1.81	1.81	0.45
Perceived Parental Attitudes, 0-3	2.57	2.57	2.57	2.76	2.70	-2.21*

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Other Tobacco	13.46	11.54	-14.26	0.00	0.00	-
Cigarettes	9.62	7.69	-20.06	1.45	1.45	0.00
E-Cigarettes or Vapes	21.57	15.38	-28.70	10.14	4.35	-57.10
Alcohol	30.77	11.76	-61.78**	10.14	11.59	14.30
Marijuana	26.92	9.62	-64.26**	17.39	11.59	-33.35
Non-Medical Prescription Drug Use	5.77	5.77	0.00	4.35	2.90	-33.33
Prescription Pain Pills	5.77	1.92	-66.72	5.80	1.45	-75.00
Heroin or Fentanyl	0.00	0.00	-	0.00	0.00	-
Cocaine	0.00	0.00	-	0.00	1.45	-
Other Illegal Drugs	0.00	0.00	-	0.00	0.00	-
Binge Drinking (past 2 weeks)	12.00	4.08	-66.00	2.90	2.90	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)

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 today 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 fewer positive outcomes.

Program Implementation Issues

Program implementation issues acknowledge possible limitations in program effectiveness due to 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

See the next pages for the 1) DAODAS Middle School Standard Survey, and 2) DAODAS High School Standard Survey. The surveys contained in this report are for content only. The correct paper versions of the Standard Surveys are found at <https://ncweb.pire.org/scdocuments/>. Please email Mikella Allen (mallen@pire.org) or Michael George (mgeorge@pire.org) for the Standard Survey link if you wish to conduct the surveys on-line.

SOUTH CAROLINA MIDDLE SCHOOL STUDENT PREVENTION 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 (e.g., JUULs)?	<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 short period of time once or twice a week?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) Use prescription drugs without a doctor's prescription? (This does NOT include things like Advil, Tylenol, aspirin or cough syrup.)	<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 (e.g., JUULs)?	<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 without a doctor's prescription? (This does NOT include things like Advil, Tylenol, aspirin or cough syrup.)	<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 or 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) Use e-cigarettes or vaping pens (e.g., JUULs)?	<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 without a doctor's prescription? (This does NOT include things like Advil, Tylenol, aspirin or cough syrup.)	<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 or 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) Use e-cigarettes or vaping pens (e.g., JUULs)?	<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 without a doctor's prescription? (This does NOT include things like Advil, Tylenol, aspirin or cough syrup.)	<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 (e.g., JUULs)?	<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? (This does NOT include things like Advil, Tylenol, aspirin or cough syrup.)	<input type="radio"/>	<input type="radio"/>

7. Think back over the last two weeks. Have 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. What grade are you in? 6th grade 7th grade 8th grade

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

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"/>

THE END

**SOUTH CAROLINA HIGH SCHOOL
STUDENT
PREVENTION SURVEY**

Private Student Code

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

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?	○	○	○	○
b) Use e-cigarettes or vaping pens daily (e.g., JUULs)?	○	○	○	○
c) Use marijuana once or twice per week?	○	○	○	○
d) Have five or more drinks of an alcoholic beverage within a short period once or twice a week?	○	○	○	○
e) Use prescription drugs without a doctor's prescription? (This does NOT include things like Advil, Tylenol, aspirin or cough syrup.)	○	○	○	○
f) Use prescription pain pills (e.g., OxyContin, Vicodin, etc.) not prescribed to them?	○	○	○	○

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)?	○	○	○	○
b) Smoke cigarettes?	○	○	○	○
c) Smoke e-cigarettes or vaping pens (e.g. JUULs)?	○	○	○	○
d) Use marijuana?	○	○	○	○
e) Use prescription drugs without a doctor's prescription? (This does NOT include things like Advil, Tylenol, aspirin or cough syrup.)	○	○	○	○
f) Use prescription pain pills (e.g., OxyContin, Vicodin, etc.) not prescribed to them?	○	○	○	○

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 or 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) Use e-cigarettes or vaping pens (e.g. JUULs)?	<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 without a doctor's prescription? (This does NOT include things like Advil, Tylenol, aspirin or cough syrup.)	<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"/>

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 or 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) Use e-cigarettes or vaping pens (e.g. JUULs)?	<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"/>

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 (e.g. JUULs)?	<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? (This does NOT include things like Advil, Tylenol, aspirin or cough syrup.)	<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"/>
i) used cocaine?	<input type="radio"/>	<input type="radio"/>
j) used other illegal drugs such as LSD (acid), amphetamines, methamphetamines, or Ecstasy (MDMA)	<input type="radio"/>	<input type="radio"/>

7. Think back over the last two weeks. Have 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. What grade are you in? 9th Grade 10th grade 11th grade 12th grade

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

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"/>