BHDD SOUTH CAROLINA DEPARTMENT of BEHAVIORAL HEALTH AND DEVELOPMENTAL DISABILITIES

OFFICE of SUBSTANCE USE SERVICES

Prevention Outcomes Annual Report

Fiscal Year 2024

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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 2024 (FY24: July 1, 2023 – June 30, 2024). 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 2,217 middle school participants with matched pre- and post-tests. Most (54.3%) participants were in 6th grade. By sex, the distribution was females (49.1%) and males (48.4%). Most participants identified as White (47.5%) or Black/African American (28.9%), although 11.9% identified as multi-racial (two or more races).

- There were 257 high school participants with matched pre- and post- tests. Most (75.5%) participants were in the 9th grade. By sex, the distribution was females (34.9%) and males (64.0%). Most participants identified as Black (53.9%) or White (32.4%) with 6.3% identifying as multi-racial (two or more races).

- For middle school, the results showed statistically significant positive changes in all five risk factor measures: perceived risk, decision-making skills, disapproval of use, perceived peer norms, and perceived parental attitudes. For high school, the results showed statistically significant positive changes on four of the five risk factor measures: perceived risk, disapproval of use, perceived peer norms, and perceived parental attitudes.

- For middle school substance use, there were statistically significant reductions in e-cigarettes or vapes but increases in marijuana, other tobacco use, and CBD use. For high school substance use, there were statistically significant reductions in alcohol.

- For all eight substances measured in middle school, at least 98.4% of participants who reported that they did not use substances at pretest also reported not using at posttest. For all eleven substances measured in high school, at least 92.2% of high school participants who reported that they did not use substances at pretest also reported not using substances at posttest.

- Ten 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[a]

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	CBD use
OVERALL												
Overall Middle School (2,217)	**	**	**	**	**	**		**		**		*
DEMOGRAPHIC GROUPS												
Females (1,046)	**		**	**	**	*						*
Males (1,011)	**	**	**	**	**							
American Indian (26)		**										
Asian (49)	**		**									
Black/African American (587)	**	**	**	**	**							
Multi-racial (250)	**			*				**				-**
Other (168)	**	**	**					**		**		
White (1,013)	**		**	**								
Hispanic (261)	**		**	**				**				
Not Hispanic (1,826)	**	**	**	**	**							
PROGRAMS												
Alcohol-Drug Stories (2 sites; n = 429)	**			**				**				
Keepin' It Real (2 sites; n = 57)								*				
Life Skills (9 sites; n =1,425)	**		**	**	**	*		**				
Project Alert (2 site; n = 106)		**	**					**		**		
Project Northland (1 site; n=40)			**	*								
Tobacco Education Program (1 site; n = 166)	**	**	**	**	**			**				
LEGEND												
Desired Marginally Significant (p<.10)	*											
Desired Significant (p<.05)	**											
Undesired Marginally Significant (p<.10)	*											
Undesired Significant (p<.05)	**											

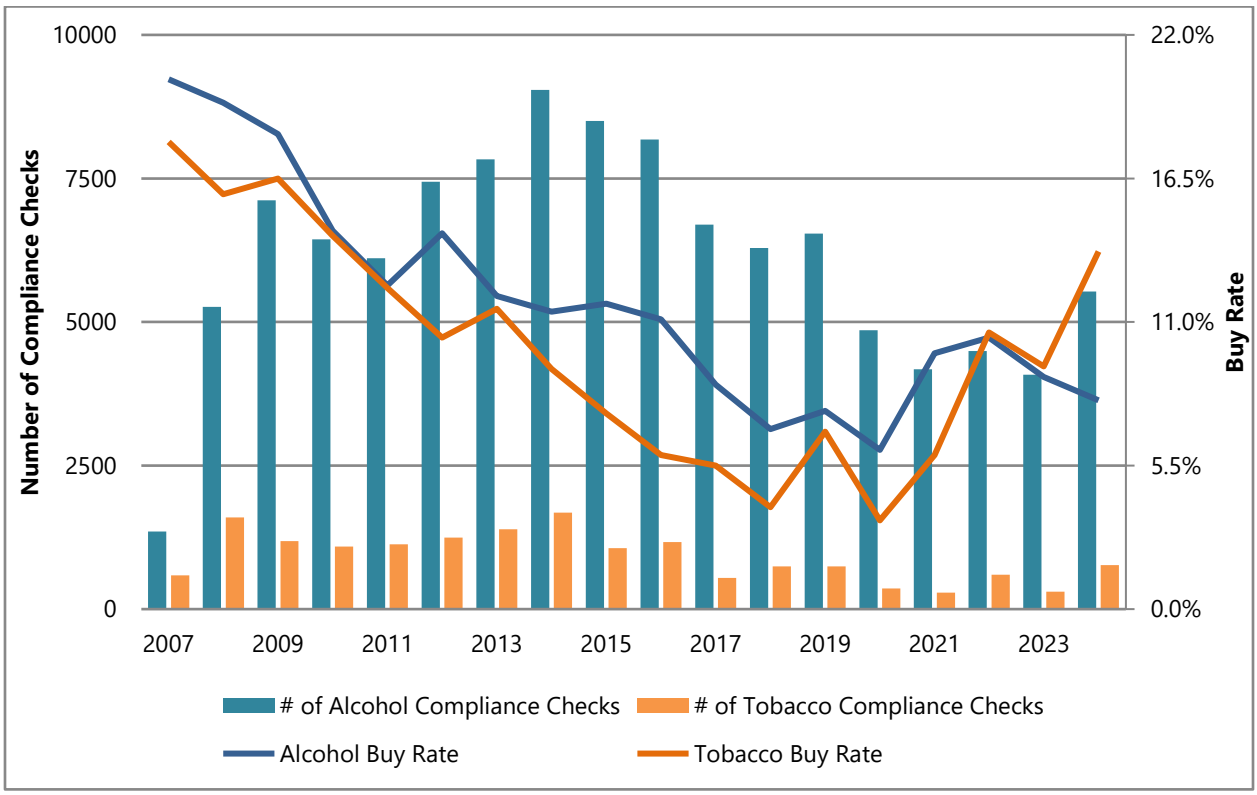
Summary of Statistically Significant Results, High School[a]

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	CBD use
OVERALL																
Overall High School (257)	**		**	**	**				**						*	
DEMOGRAPHIC GROUPS																
Females (79)	**		**		**											
Males (140)	*		*													
Black/African American (116)	**		**		**											
Multi-racial (15)		*	**	*	**											
Other (9)																
White (74)																
Hispanic/Latino/ Spanish (17)		**														
Not Hispanic (202)	**		**	*	**											
PROGRAMS																
Life Skills (4 sites; n =219)	**		**	**	**											
Keeping It Real (1 site, n=43)				*												
LEGEND																
Desired Marginally Significant (p<.10)	*															
Desired Significant (p<.05)	**															
Undesired Marginally Significant (p<.10)	*															
Undesired Significant (p<.05)	**															

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

- The county authority prevention staff returned forms on 5,530 alcohol compliance checks and 767 tobacco compliance checks. For alcohol, 8.0% of attempts generated sales; for tobacco, 13.7% of attempts resulted in sales. While the alcohol buy rate decreased in FY 2024 from FY 2023, the tobacco buy rate increased during that same period.

Annual Number of Compliance Checks and Annual Buy Rates



- AETs reported 798 public safety checkpoints in 28 counties, an increase from FY23. These checkpoints resulted in 3,269 citations and arrests, including 122 DUIs (adult and youth).
- In addition, there were 104 saturation patrols reported that generated another 1,227 tickets. The saturation patrol operations accounted for 43 DUI arrests, 99 drug possession cases, 6 fugitives apprehended, 26 open container tickets, 8 felony arrests, and 1,045 various misdemeanor and felony offenses.
- AETs reported that 107 parties were disbursed, resulting in 216 tickets and arrests at gatherings involving 3,920 people.
- The Palmetto Retailer Education Program (PREP) served 967 merchants.

- More than 822 youth were in diversion program for youth alcohol and tobacco offenses (76 served in the Alcohol Education Program and 746 served in the Tobacco Education Program).
- The Youth Access to Tobacco Study (Synar) showed that 8.9% of retailers sold cigarettes to underage youth, down from 10.7% in FY 2023.

EVALUATION REPORT OVERVIEW

State Prevention Evaluation Efforts

The South Carolina Department of Behavioral Health and Developmental Disabilities, Office of Substance Use Services (OSUS, formerly called DAODAS) provides funding for substance abuse prevention services throughout the state. OSUS allocates most of these funds to 31 agencies, within the county alcohol and drug authority system, established by South Carolina Act 301 of 1973. The 31 agencies provide services in all 46 counties. Major sources of funding include the Substance Use Prevention, Treatment, and Recovery Services Block Grant (SUPTRS BG) and grants like the Strategic Prevention Framework Partnerships for Success (PFS), primarily from the U.S. Center for Substance Abuse Prevention (CSAP) within the Substance Abuse and Mental Health Services Administration (SAMHSA).

Contents of This Report

This report provides prevention data for **Fiscal Year 2024 (July 1, 2023 – June 30, 2024)** 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 OSUS-funded prevention education programs, using pre-test and post-test data from the OSUS 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 FFY25 (conducted in SFY24) Youth Access to Tobacco Study (Synar).

Section V provides statewide youth substance use trends, allowing OSUS 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.

Focusing on State Data Indicators

This report can be reviewed in conjunction with the 2024 South Carolina County Profiles of Alcohol and Other Drug Use. 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. The Profile updates progress on the state's ATOD priorities set by OSUS and covers topics such as:

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

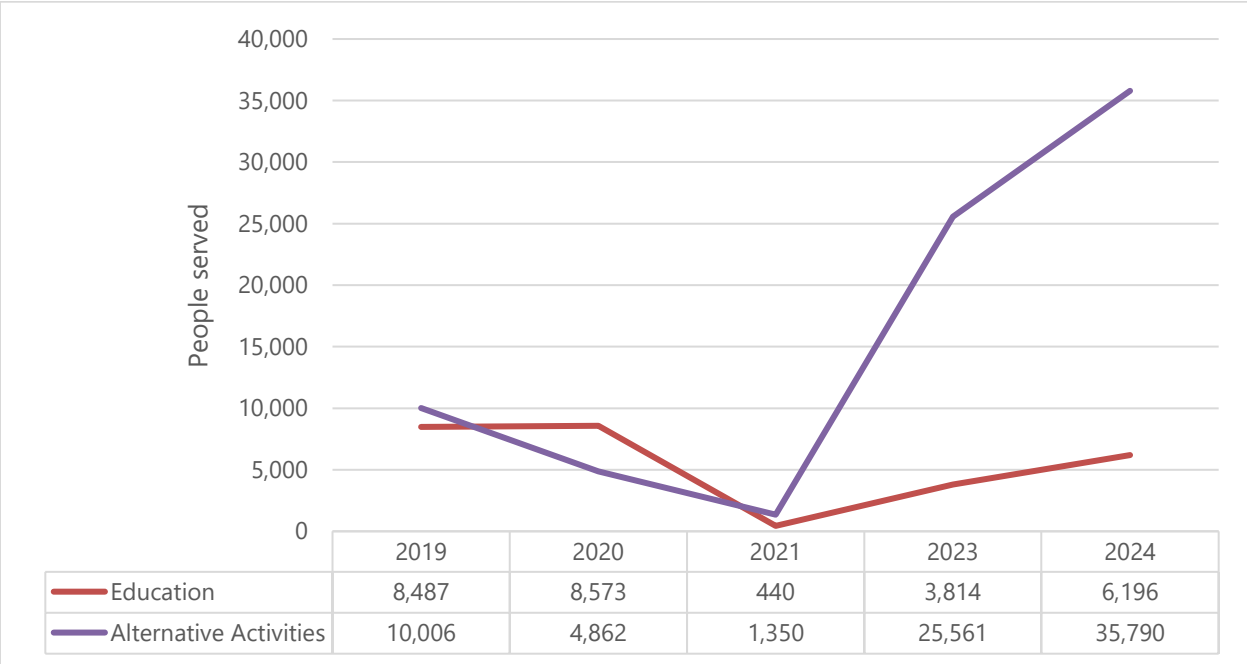
Prevention providers across South Carolina deliver and coordinate a wide variety of prevention programs, policies, and practices across six overarching prevention strategies supported by CSAP. The six CSAP strategies are the following:

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

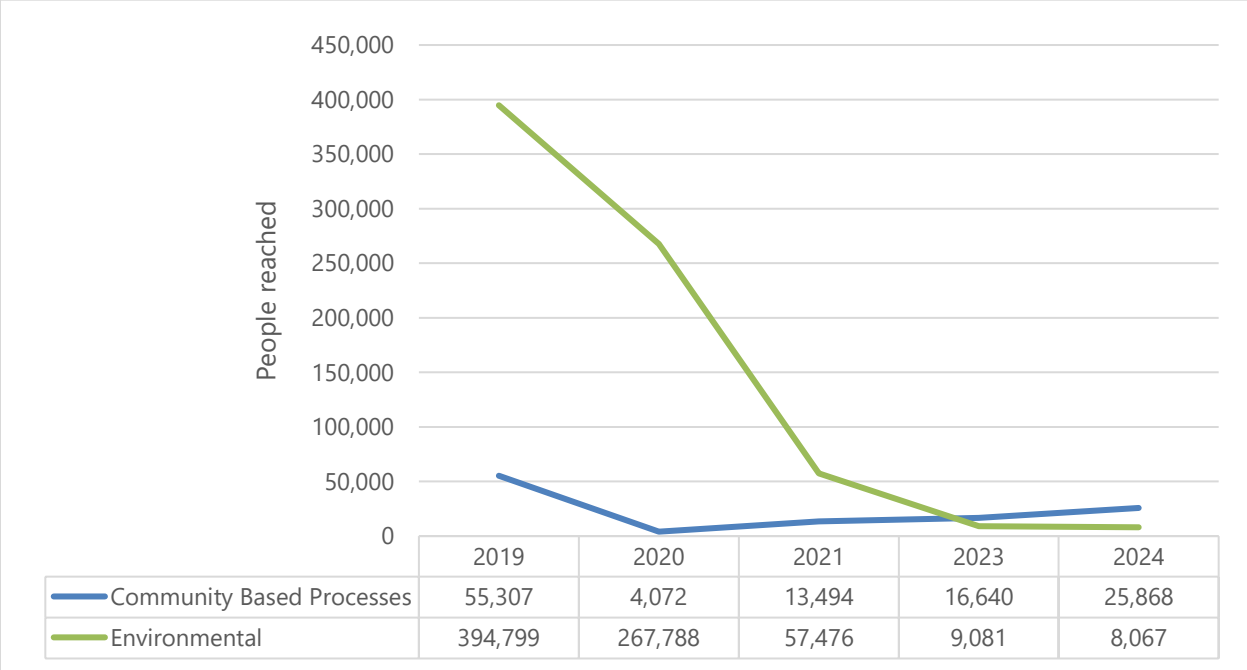
Figure 1 presents data from the OSUS reporting system, known as Grant Management System (GMS), on the total number of people served by four of the six CSAP strategies. In many cases, the values are estimates provided by prevention providers; nevertheless, the data provides a sense of the scope of reach of prevention efforts in South Carolina. Although prevention providers conducted strategies and programs in FY22, CSAP counts were not available due to a change from IMPACT to the GMS system.

The figure shows that people served alternative activities, educational services, and people reached by community-based processes increased in FY24 from FY23. The number of people reportedly served by alternative activities increased 40% in the last year, whereas the number of people reportedly reached by environmental strategies decreased by 98% since 2019. It is possible that these dramatic changes are an artifact of the new reporting system or ways in which providers define the data elements; we recommend that OSUS explore these possibilities with its providers. In addition, not shown in the figure, over 297,626 people received prevention-related information (Information Dissemination) and 3,873 received problem identification and referral services. Social media, media campaigns, and PSAs during Out of Their Hands (March 2024 to June 2024) added almost 31.4 million views/impressions.

Figure 1. Number of People Served and Reached by Four Types of Prevention Strategies, FY 2019 – FY 2024



	2019	2020	2021	2023	2024
Education	8,487	8,573	440	3,814	6,196
Alternative Activities	10,006	4,862	1,350	25,561	35,790



	2019	2020	2021	2023	2024
Community Based Processes	55,307	4,072	13,494	16,640	25,868
Environmental	394,799	267,788	57,476	9,081	8,067

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

Each year, thousands of young individuals engage in substance abuse prevention programs funded by OSUS through county agencies and their providers. The objectives of these initiatives are to prevent and reduce substance use among South Carolina's youth and mitigate risk factors associated with substance use. These programs' effectiveness is primarily assessed by collecting pre- and post-test data from the youth participants. This section presents data on the changes reported by youth through pre- and post-tests, categorized overall and further broken down by sex, race, ethnicity, and program.

It is important to emphasize that the evaluation design is non-experimental. Pre- and post-surveys are administered exclusively to program participants, without comparison groups, limiting our ability to determine hypothetical outcomes absent from the program. Nonetheless, observed changes in the desired direction can provide some indication that the program may be achieving its intended outcomes. Conversely, changes in the undesired direction may prompt concerns regarding program implementation fidelity and/or its suitability for the community. It should be noted that neither desired nor undesired changes should be considered definitive evidence of a program's effectiveness.

Through this monitoring process, the goal is to ensure that program implementation receives the necessary attention to maximize community benefit. Additionally, analyzing pre-post data across various programs and sites will aid the state in identifying which programs, under specific conditions, yield the most effective results.

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

The Pre-Post Test Outcome Evaluation Instrument

The OSUS Standard Surveys (Middle School Version and High School Version) 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 Survey (CTC) which is endorsed by SAMHSA as a valid and reliable tool for gathering information about substance use and associated risk and protective factors. OSUS 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 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 chewing tobacco, snuff, or dip
- 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
- 30-day use of cannabidiols (CBD)
- In the past two weeks, consumed five or more alcoholic beverages in a short period of time (binge drinking).

In addition to the measures listed above, 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 before the start of the program content and the post-test within two weeks after the content ends. Local staff then gave the surveys to OSUS or Pacific Institute for Research and Evaluation (PIRE) staff to have the responses scanned.

To accommodate the need to deliver prevention services using online platforms, and to meet a growing demand for online surveys regardless of service delivery mode, PIRE developed four online surveys: pretest and posttest middle school online surveys and pretest and posttest high school online surveys. Prevention personnel used online surveys with the delivery of online or remote curriculum-based prevention education programs. Regardless of whether it was paper or online surveys, providers were instructed on participant protection procedures that would ensure confidentiality. PIRE developed a PowerPoint presentation titled, *Standard Survey Overview Presentation*, to guide paper and online procedures for pre-and-post-tests and was placed on the South Carolina Prevention/Evaluation Resources website.

Matched Participants

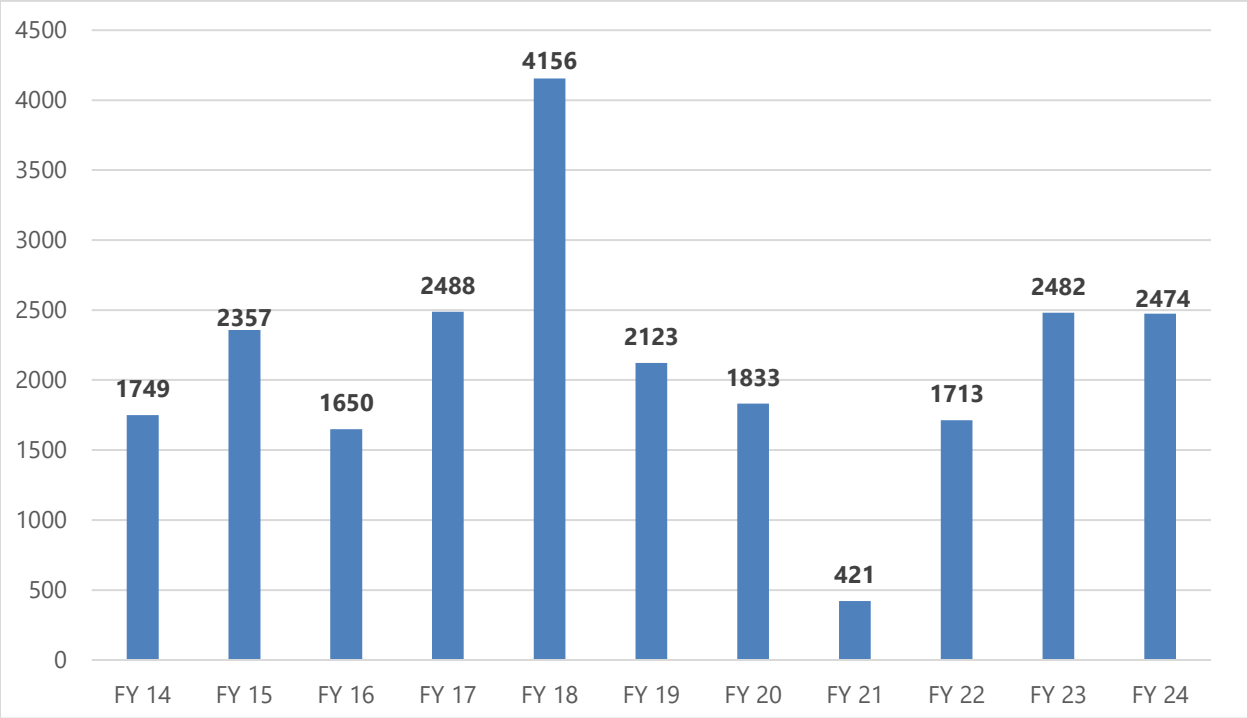
For multiple reasons, not every pre-test completed by a participant could be matched to a valid post-test for that participant and vice versa. This could happen for the following reasons:

- 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 analysis,
- The participant refused to take the pre- or the post-test, or
- Surveys were misplaced or not given to OSUS/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 2,852 surveys while the post-test database contained 2,633 cases, which resulted in 2,217 matched cases or 77.7% of the pre-test cases. The high school pre-test database contained 331 surveys while the post-test database contained 298 cases, which resulted in 257 matched cases or 77.6% of the pre-test cases. The total number of matched cases was 2,474 (Figure 2) for an overall match rate of 77.7%. The number of matched cases reached levels like those seen before the pandemic.

Figure 2. Participants Matched in Pre-Post Database, FY'14 through FY24



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, with most (54.3%) being in grade 6. More females (49.1%) participated than males (48.4%) with 2.6% respondents preferring not to answer. Almost 48 percent (47.5%) of the participants were White, 28.9% were Black or African American, 7.8% of the participants associated with "Other" race category, 11.9% were of multi-racial race, 2.3% were Asian, 1.2% were American Indian or Alaskan Native, and 0.1% were Pacific Islander. Hispanic/Latino ethnicity was reported by 12.1% of students.

High school matched participants were in grades 9, 10, 11, and 12, with most (75.5%) being in grade 9. More males (64.0%) than females (34.9%) participated with 1.2% respondents preferring not to answer. Almost 54% (53.9%) of participants were Black or African American, 32.4% were White, 4.7% of the participants associated with "other" race category, 6.3% were in the multi-racial race category, 2.0% responded as American Indian, and 0.8% were Asian. Hispanic/Latino ethnicity was reported by 8.1% of students.

Table 1. Demographics of Matched Participants

	Middle School (n = 2,217)	High School (n = 257)
GRADE		
6th	54.3%	-
7th	19.7%	-
8th	26.0%	-
9th	-	75.5%
10th	-	11.7%
11th	-	4.7%
12th	-	8.2%
RACE		
American Indian	1.2%	2.0%
Asian	2.3%	0.8%
Black	28.9%	53.9%
Multi-racial	11.9%	6.3%
Other	7.8%	4.7%
Pacific Islander	0.1%	-
White	47.5%	32.4%
ETHNICITY		
Hispanic/Latino	12.1%	8.1%
SEX		
Female	49.1%	34.9%
Male	48.4%	64.0%

Risk-Factor Measures

Table 2 shows the results for the five risk factors included in the middle and high school versions of OSUS Standard Survey. As shown in the table, for middle school, there were statistically significant ($p < .05$) positive changes from pre- to post-test in FY24 for five of the five measures (perceived risk, decision-making skills, disapproval of use, perceived parental attitudes, and perceived peer norms). For high school, there was a statistically significant ($p < .05$) positive change from pre- to post-test in FY24 for four out of the five measures (perceived risk, perceived parental attitudes, disapproval of use, and perceived peer norms).

Table 2. Overall Results, Risk-Factor Measures, Middle and High School, FY24

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	2.19	2.40	**9.80****	2.10	2.29	**8.71****
Decision-Making	1.89	1.92	**1.53****	1.85	1.87	1.33
Disapproval of Use	2.57	2.65	**3.24****	2.24	2.37	**5.73****
Perceived Peer Norms	2.43	2.52	**3.36****	1.98	2.10	**6.20****
Perceived Parental Attitudes	2.77	2.80	**1.31****	2.54	2.64	**3.93****

[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 ($p<.05$).
A green cell denotes reduction in risk; a blue cell denotes an increase in risk.

Sex. Table A1 in the Appendix shows results by sex for middle school. Females reported significant positive changes on four risk factors (perceived risk, disapproval of use, perceived peer norms, and perceived parental attitudes). Males reported significant positive changes on five risk factors (perceived risk, decision-making skills, disapproval of use, perceived peer norms, and perceived parental attitudes). Table A5 shows results separated by sex for high school. Females reported significant positive changes in three risk factors (perceived risk, disapproval of use, and perceived parental attitudes). Males reported marginally significant positive changes in two risk factors (perceived risk and disapproval of 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 one significant risk factor change (decision-making skills). Participants who identified as Asian reported significant positive change in perceived risk and in disapproval of use. Participants who identified as Black/African American reported significant positive changes on all five risk factors. Multi-racial participants reported a significant positive change in perceived risk and a marginally significant change in perceived peer norms. Participants who identified as Other reported a significant positive change in perceived risk and a marginally significant change in perceived norms. White participants reported significant positive changes in perceived risk, disapproval of use, and perceived peer norms. Participants of Hispanic, Latino, or Spanish descent or origin reported significant positive

changes in perceived risk, disapproval of use, and perceived peer norms. Participants not of Hispanic, Latino, or Spanish descent or origin reported significant positive changes on all factors.

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. Black or African American participants reported significant positive changes in three risk factors (perceived risk, disapproval of use, and perceived parental attitudes). Multi-racial participants reported significant positive changes in three risk factors (disapproval of use, perceived peer norms, and perceived parental attitudes), as well as a marginally significant positive change in decision making. White participants reported no significant or marginally significant positive changes in any risk factors. Participants of Hispanic, Latino, or Spanish descent reported a significant positive change in decision making. Participants not of Hispanic, Latino, or Spanish descent or origin reported significant positive changes in three risk factors (perceived risk, disapproval of use and perceived parental attitudes) and a marginally significant positive change in perceived peer norms.

Participant Substance Use

Changes in reported substance use between pre- and post-tests are shown in Table 3. For middle school youth, we found statistically significant reductions in use of one substance at post-test (e-cigarettes or vapes) and statistically significant increases in use of two substances (other tobacco and marijuana). Additionally, there was a marginally significant increase in CBD use. For high school youth, we found statistically significant reductions in one substance at post-test (alcohol). See Figure 3 and 4 for graphic displays of the substance use data.

Table 3. Overall Results, Substance Use Rates, Middle and High School, FY24

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	0.67	1.12	**67.16****	2.34	1.17	-50.00
Cigarettes	1.79	0.67	-62.57	3.91	4.72	20.94
E-Cigarettes or Vapes	8.54	0.67	**-92.15****	16.34	18.43	12.78
Alcohol	7.83	6.92	-11.62	14.40	14.23	**-1.16****
Marijuana	3.36	5.36	**59.52****	14.90	16.47	10.53
Non-Medical Prescription Drug Use	2.46	2.91	18.29	4.28	3.13	-26.99
Prescription Pain Pills				3.89	3.92	0.78
Heroin or Fentanyl				0.78	0.78	0.39
Cocaine				0.78	1.97	151.97
Other Illegal Drugs				1.57	1.57	0.00
CBD use	1.57	1.91	**15.29***	3.97	3.57	-10.00

[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 ($p<.05$).
A green cell denotes a significant reduction in use; a blue cell is significant increase in use.

Figure 3. Pre- and Post-Test Substance Use Rates, Middle School, FY24

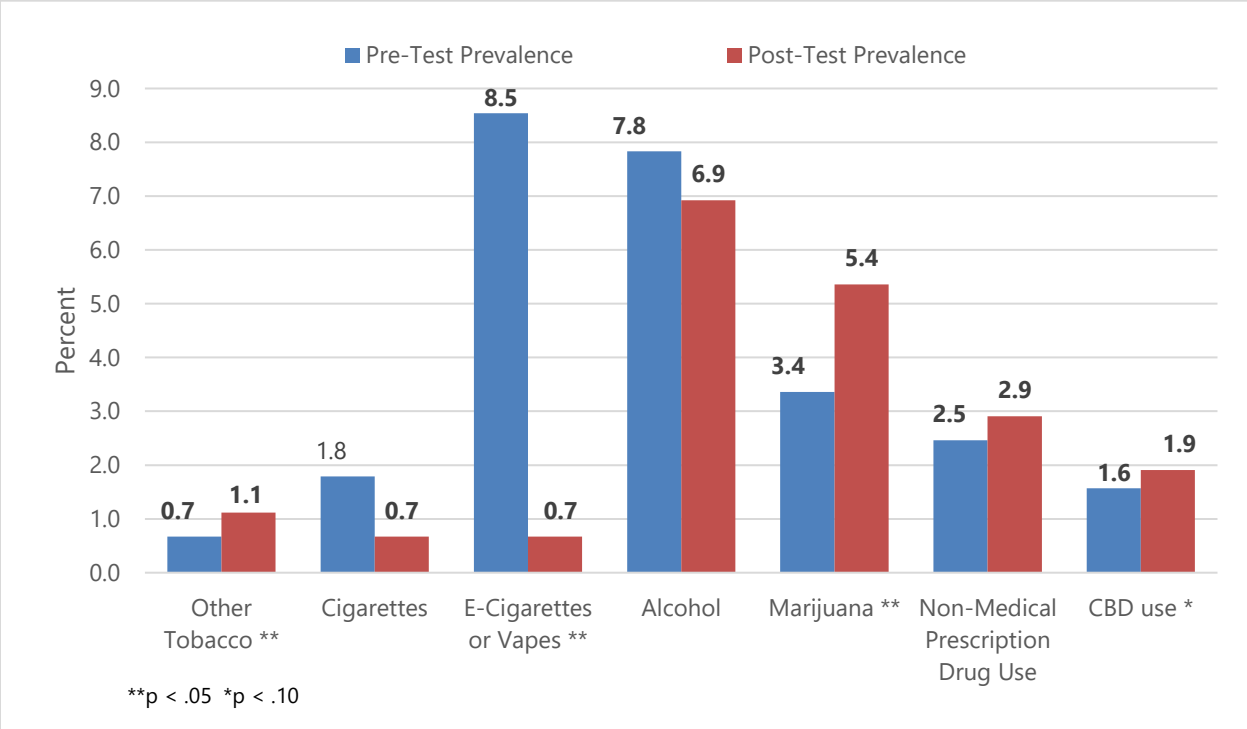
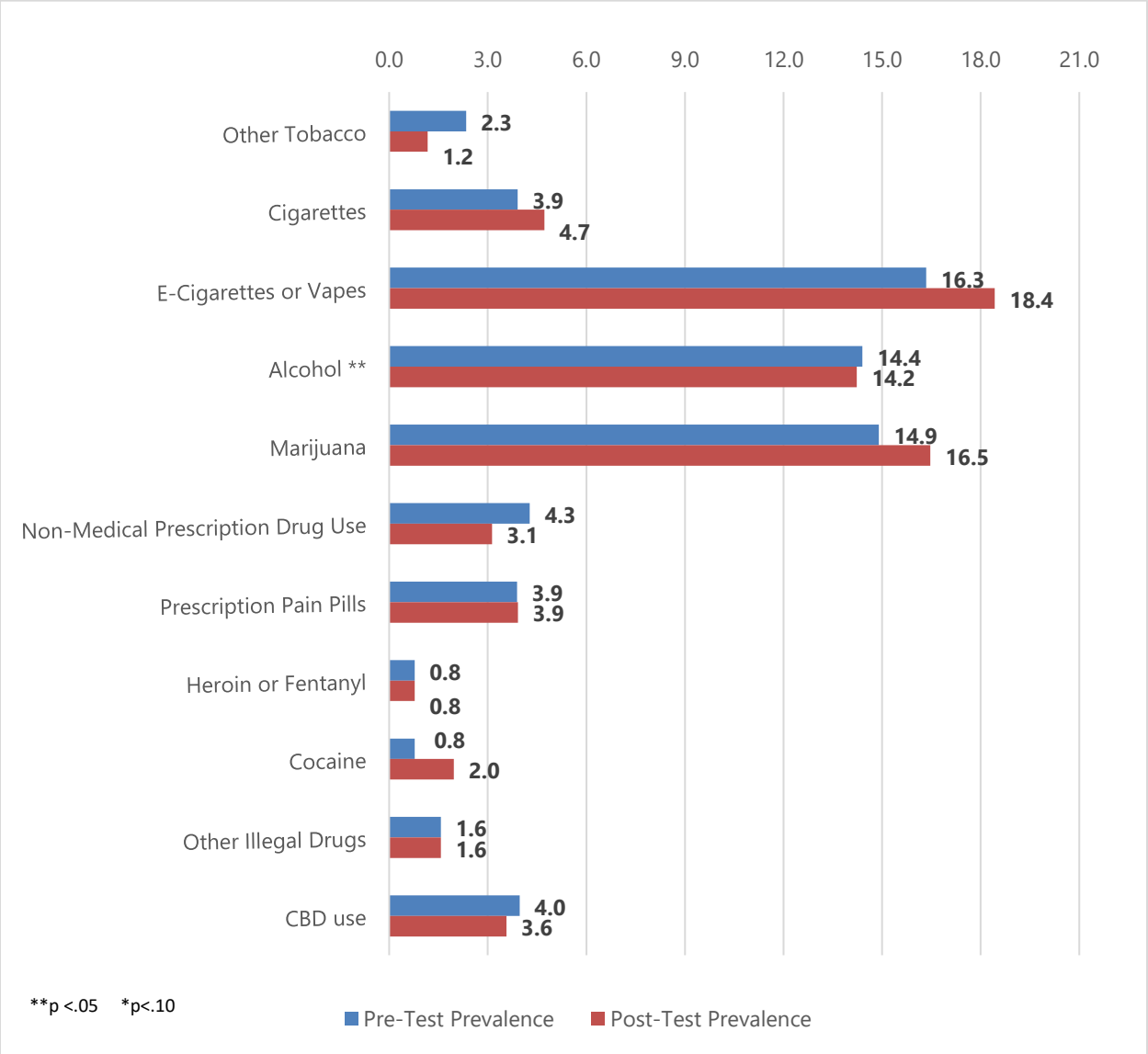


Figure 4. Pre- and Post-Test Substance Use Rates, High School, FY24



Sex. Table A1 shows results separated by sex for middle school. Females reported a marginally statistically significant decrease in CBD use and a statistically significant increase in other tobacco use. Males reported no significant changes in any substance use. Table A5 shows results separated by sex for high school. Females and males reported no significant changes 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. Multi-racial students reported a statistically significant decrease in e-cigarette or vape use and CBD use. Other race participants reported statistically significant decrease in e-cigarette or vape use and an increase in marijuana use. American Indian, Asian, Black/African American and White participants reported no significant changes in use. Participants not of Hispanic, Latino, or Spanish descent reported no significant changes in any substance use. Participants of Hispanic, Latino, or Spanish descent reported a statistically significant reduction in e-cigarettes or vape 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. No race or ethnic grouping reported any significant changes in any substance 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. 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 reported not using a substance at pretest also reported not using at posttest. Similarly, Figure 6 shows that nearly all high school participants who reported not using a substance at pretest also reported not using at posttest. All participants that reported use at pretest also reported use at posttest (not shown in a graph).

Figure 5. Percent Who Reported No Use at Pretest Who Also Reported No Use at Posttest, Middle School, FY24

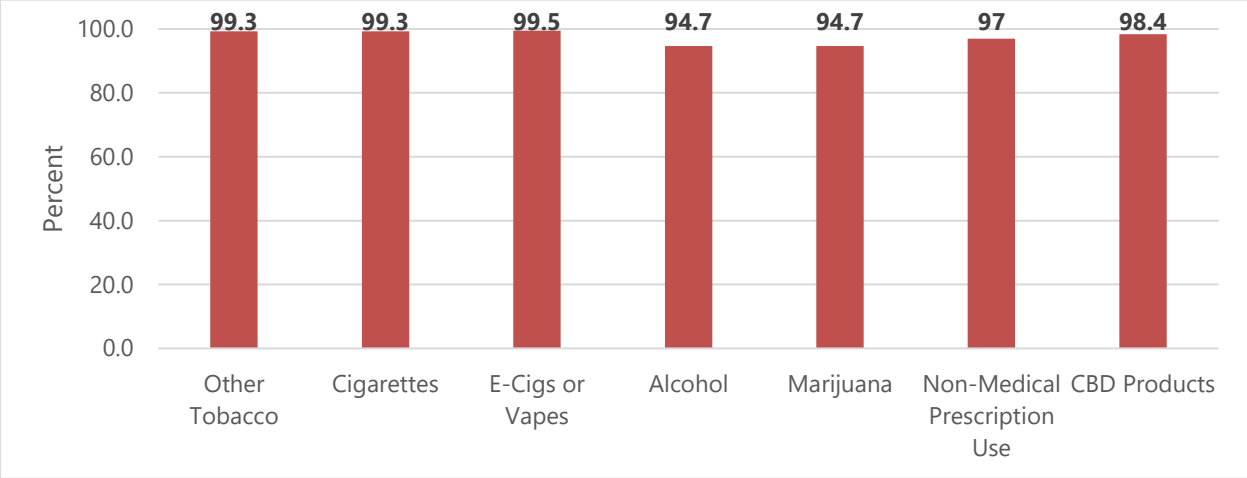
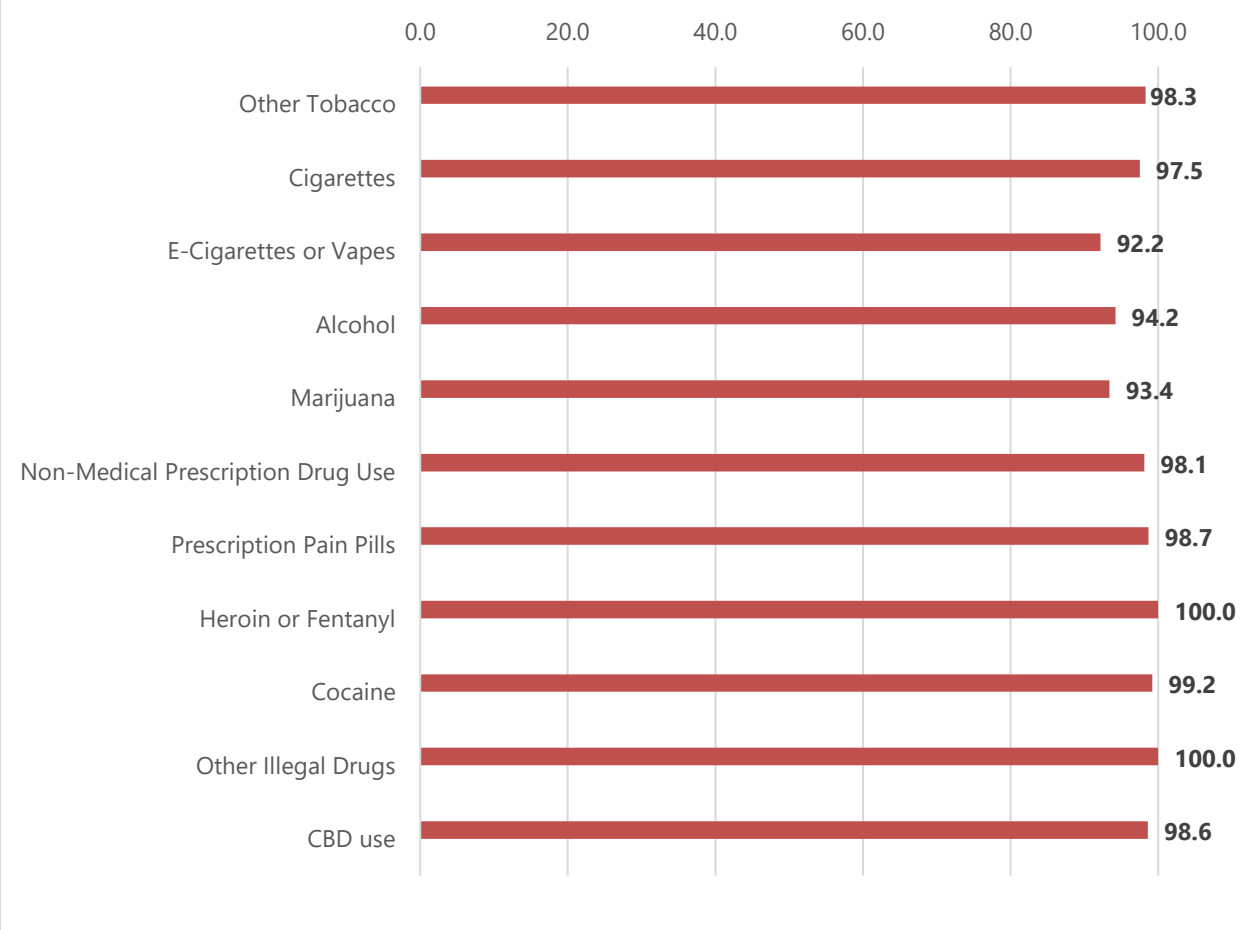


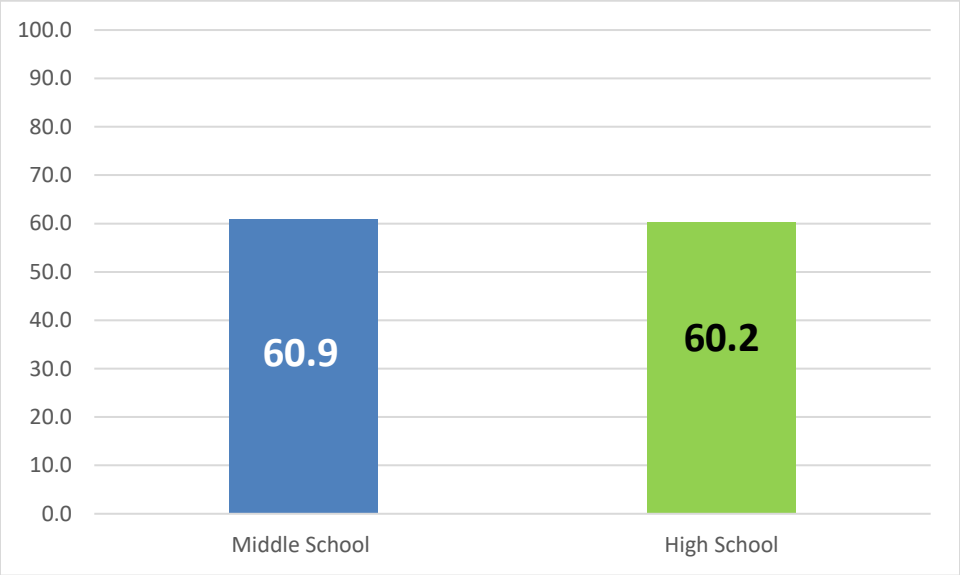
Figure 6. Percent Who Reported No Use at Pretest Who Also Reported No Use at Posttest, High School, FY24



Parent-Child Communication and Youth Exposure to Prevention Messages

The survey also asks about parent-child communication. Figure 7 shows that 60.9% of middle school participants and 60.2% 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, FY24



Prevention Programs

Across the provider network, nine different programs were implemented in FY24. In FY23 and FY'22, ten different programs were implemented. In this section, we describe the outcomes for the six programs with 20 or more matched participants. The full tables with results by program are found in Appendix A in Table A4 for middle school and A8 for high school.

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 429 matched middle school youth at two sites. There were statistically significant positive changes in perceived risk and perceived peer norms risk factors. For substance use, there was a statistically significant decrease in the rate of e-cigarettes or vapes 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 57 matched middle school participants and 43 matched high school participants. For middle schools, there were no significant changes in risk factors. There was a marginally significant decrease in the rate of e-cigarette or vape use. For

high school participants, there was a marginally significant positive change in perceived peer norms with no significant reductions in substance use.

Life Skills Training is a skill based ATOD prevention curriculum and was the most widely implemented program with a total of thirteen sites with 1,425 matched middle school and 202 high school participants. For middle schools, there were statistically significant positive changes in perceived risk, disapproval of use, perceived peer norms, and perceived parental attitudes. For substance use, there were statistically significant increase in other tobacco and significant decreases in e-cigarette or vape use. For high school, there were statistically significant positive changes in perceived risk, disapproval of use, perceived peer norms and perceived parental attitudes. For substance use, there were no significant changes in the use of substances.

Project Alert, a comprehensive ATOD prevention curriculum for middle school students, was delivered to two sites with 106 matched participants. There were statistically significant desired changes in decision-making skills and disapproval of use with a statistically significant reduction in the use of e-cigarettes or vapes and an increase in marijuana use.

Project Northland, an ATOD prevention curriculum with a strong focus on alcohol and influencing the environment, was used by one site with 40 total matched participants with statistically significant desired change in disapproval of use and a marginally significant desired change in perceived peer norms. There were no significant changes in substance use.

Tobacco Education Program (TEP) teaches youth about the dangers of tobacco and nicotine use and offers strategies for prevention. It can be used as a referral program for those who violate laws or policies, or as a multi-session educational course. TEP was used by one site with 166 matched middle school participants. There were statistically significant desired changes in all five risk factors' perceived risk, decision-making skills, disapproval of use, perceived peer norms, and perceived parental attitudes. The program deployment resulted in a statistically significant reduction of e-cigarette or vape use.

Evidence-Based Programs

County authorities are not required to use evidence-based interventions exclusively, though most do. In FY24, 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 with an asterisk (*) signify changes that were at least marginally statistically significant ($p<.10$) in the desired direction; desired changes that were statistically significant ($p<.05$) include two asterisks (**). Blue cells with an asterisk (*) signify changes that were at least marginally statistically significant ($p<.10$) in the undesired direction; undesired changes that were statistically significant ($p<.05$) include two asterisks (**).

Table 4 shows overall positive changes among middle school students in perceived risk, decision-making skills, disapproval of use, peer norms, and parental attitudes across various groups and programs. The changes in risk factors among middle school students was widespread and experienced by male and female students and students of varying racial and ethnic backgrounds. The changes in risk factors were most consistent for students participating in LifeSkills and TEP. Despite the widespread positive changes in risk factors, middle school students reported higher rates of use of other tobacco, marijuana, and CBD. In contrast, the use of e-cigarettes or vapes decreased overall and was relatively widespread—it was experienced by several racial and ethnic groups and was reported by students participating in most programs.

Table 5 shows overall positive changes among high school students in perceived risk, disapproval of use, peer norms, and parental attitudes across various groups and programs. The changes in risk factors among high school students was widespread and experienced by male and female students and students of varying racial and ethnic backgrounds. The changes in risk factors were most consistent for students participating in LifeSkills. High school students reported lower rates of alcohol and other illegal drugs. These reductions were experienced by high schools overall, but statistically significant differences were not found when analyzing subgroups.

Table 4. Summary of Statistically Significant Results, Middle School[a]

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	CBD use
OVERALL												
Overall Middle School (2,217)	**	**	**	**	**	**		**		**		*
DEMOGRAPHIC GROUPS												
Females (1,046)	**		**	**	**	*						*
Males (1,011)	**	**	**	**	**							
American Indian (26)		**										
Asian (49)	**		**									
Black/African American (587)	**	**	**	**	**							
Multi-racial (250)	**			*				**				_**
Other (168)	**	**	**					**		**		
White (1,013)	**		**	**								
Hispanic (261)	**		**	**				**				
Not Hispanic (1,826)	**	**	**	**	**							
PROGRAMS												
Alcohol-Drug Stories (2 sites; n = 429)	**			**				**				
Keepin' It Real (2 sites; n = 57)								*				
Life Skills (9 sites; n =1,425)	**		**	**	**	*		**				
Project Alert (2 site; n = 106)		**	**					**		**		
Project Northland (1 site; n=40)			**	*								
Tobacco Education Program (1 site; n = 166)	**	**	**	**	**			**				
LEGEND												
Desired Marginally Significant (p<.10)	*											
Desired Significant (p<.05)	**											
Undesired Marginally Significant (p<.10)	*											
Undesired Significant (p<.05)	**											

Table 5. Summary of Statistically Significant Results, High School[a]

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	CBD use
OVERALL																
Overall High School (257)	**		**	**	**				**						*	
DEMOGRAPHIC GROUPS																
Females (79)	**		**		**											
Males (140)	*		*													
Black/African American (116)	**		**		**											
Multi-racial (15)		*	**	*	**											
Other (9)																
White (74)																
Hispanic/Latino/Spanish (17)		**														
Not Hispanic (202)	**		**	*	**											
PROGRAMS																
Life Skills (4 sites; n =219)	**		**	**	**											
Keeping It Real (1 site, n=43)				*												
LEGEND																
Desired Marginally Significant (p<.10)	*															
Desired Significant (p<.05)	**															
Undesired Marginally Significant (p<.10)	*															
Undesired Significant (p<.05)	**															

Table 6 provides information about the significant and marginally significant changes in substance use for all programs that have been implemented at least once since 2020, when we began separating program outcomes for middle and high school. Note that programs with more participants have more statistical power to detect significant results and programs with more years of implementation have more opportunities for more significant results. Finally, programs that are more limited in their target outcomes (e.g., focus primarily on alcohol) should be expected to have fewer opportunities for significant changes. Notably, LifeSkills has been implemented in middle and high schools in all years since 2020, has reached the most participants, and has the greatest number of decreases in substance use.

Table 6. Statistically Significant or Marginally Significant Changes in Substance Use by Program, 2020 - 2024

	Years Implemented Since 2020	Avg N	Decreases in Use	Increases in Use
MIDDLE SCHOOL				
Alcohol Drug Stories	4	300	4	2
All Stars	1	94	0	0
Girls Circle	1	22	0	0
Keepin' It Real	5	143	2	2
LifeSkills	5	987	5	1
Operation Prevention	2	112	0	0
Prime for Life: Exploring	1	10	1	0
Project Alert	3	87	1	1
Project Northland*	2	31	0	0
Tobacco Education Program*	1	166	1	0
Too Good for Drugs	1	60	0	0
Why Try	2	31	0	0
HIGH SCHOOL				
ATOD 101	1	65	0	0
Class Action	2	41	1	0
Keepin' It Real	2	110	0	0
LifeSkills	5	122	3	0
Operation Prevention	1	52	2	0
Prime for Life: Exploring	2	29	0	0
Project TND	1	53	0	0
* Indicates a program that is targeted to a smaller set of substance use outcomes.				

SECTION III: ALCOHOL AND TOBACCO ENVIRONMENTAL PREVENTION STRATEGIES

Environmental strategies are policies, laws, and regulations that shape and manage access to alcohol, tobacco, and other legal substances. County authorities have long been involved in implementing environmental strategies throughout South Carolina, most notably through Synar Tobacco Enforcement Partnerships (STEP) and Alcohol Enforcement Teams (AET).

STEP FY24 offers year-end monetary incentives to local providers based on tobacco-related environmental strategies. Prevention providers earn points by educating merchants in the Palmetto Retailers Education Program (PREP), conducting compliance checks, securing multi-jurisdictional agreements, and submitting new tobacco outlet names.

AETs are single and multi-jurisdictional law enforcement teams that support efforts in every South Carolina judicial circuit to prevent and reduce underage drinking and harmful adult drinking. The AET model includes community coalition maintenance and development, merchant education, and law enforcement partnerships in communities 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.

The remainder of this section provides data about community-based environmental strategies, including alcohol and tobacco compliance checks, bar checks, shoulder taps, sobriety checkpoints, party patrols, merchant education, and AET training 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 offering 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 Grant Management System (GMS) Reporting system version of the OSUS 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 FY24, there were 5,530 alcohol compliance checks, and 767 tobacco compliance checks submitted to the online AET reporting system. In FY24, 38 counties submitted alcohol compliance checks, and 29 counties submitted tobacco forms, compared to 39 counties and 19 counties, respectively, in FY23. There may have been additional compliance checks for which a form was not entered in 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 alcohol non-compliance rates (buy rates) decreased from 8.9% in FY23 to 8.0% in FY24 but the tobacco buy rates increased from 9.3% to 13.7%. Table 7 shows the buy-rates by county.

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

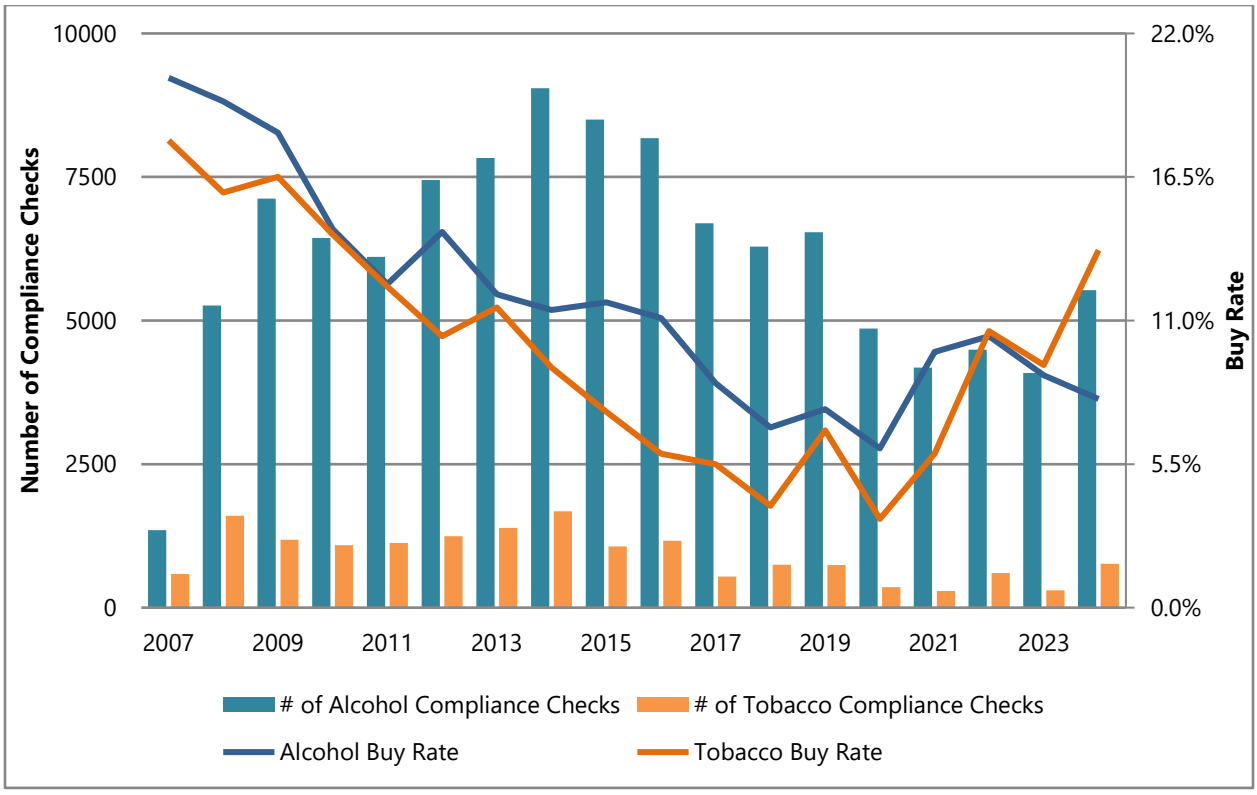


Table 7. Alcohol and Tobacco Buy Rates by County

County Name	Alcohol			Tobacco		
	Total Eligible Purchase Attempts	Buy	Buy Rate	Total Eligible Purchase Attempts	Buy	Buy Rate
Abbeville	0	NA	NA	0	NA	NA
Aiken	151	27	17.9%	20	6	30.0%
Allendale	5	0	0.0%	0	NA	NA
Anderson	117	10	8.5%	0	NA	NA
Bamberg	32	4	12.5%	34	3	8.8%
Barnwell	59	4	6.8%	10	4	40.0%
Beaufort	10	0	0.0%	0	NA	NA
Berkeley	163	6	3.7%	12	3	25.0%
Calhoun	16	3	18.8%	16	3	18.8%
Charleston	281	21	7.5%	10	2	20.0%
Cherokee	33	5	15.2%	5	1	20.0%
Chester	0	NA	NA	0	NA	NA
Chesterfield	98	4	4.1%	10	3	30.0%
Clarendon	30	7	23.3%	5	3	60.0%
Colleton	8	2	25.0%	3	1	33.3%
Darlington	92	5	5.4%	10	NA	0.0%
Dillon	78	13	16.7%	14	2	14.3%
Dorchester	22	0	0.0%	27	1	3.7%
Edgefield	66	4	6.1%	3	NA	0.0%
Fairfield	62	6	9.7%	18	NA	0.0%
Florence	162	4	2.5%	21	2	9.5%
Georgetown	178	14	7.9%	7	NA	0.0%
Greenville	700	74	10.6%	120	22	18.3%
Greenwood	0	NA	NA	0	NA	NA
Hampton	21	4	19.0%	0	NA	NA
Horry	640	41	6.4%	80	20	25.0%
Jasper	20	1	5.0%	0	NA	NA
Kershaw	145	5	3.4%	14	1	7.1%
Lancaster	109	17	15.6%	0	NA	NA
Laurens	0	NA	NA	17	6	35.3%
Lee	29	7	24.1%	0	NA	NA
Lexington	711	49	6.9%	103	8	7.8%
Marion	120	6	5.0%	10	2	20.0%
Marlboro	11	0	0.0%	0	NA	NA
McCormick	25	1	4.0%	7	NA	0.0%

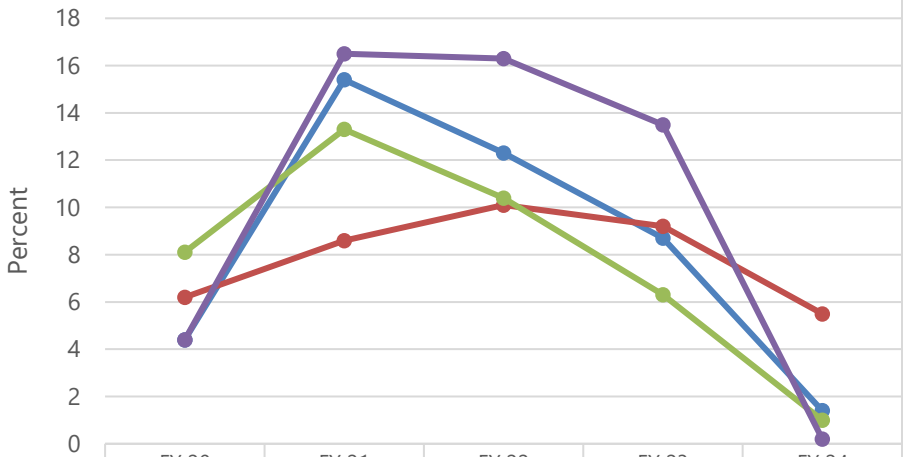
County Name	Alcohol			Tobacco		
	Total Eligible Purchase Attempts	Buy	Buy Rate	Total Eligible Purchase Attempts	Buy	Buy Rate
Newberry	0	NA	NA	0	NA	NA
Oconee	0	NA	NA	0	NA	NA
Orangeburg	41	2	4.9%	41	3	7.3%
Pickens	67	3	4.5%	11	4	36.4%
Richland	58	7	12.1%	13	NA	0.0%
Saluda	0	NA	NA	0	NA	NA
Spartanburg	275	6	2.2%	0	NA	NA
Sumter	83	11	13.3%	0	NA	NA
Union	0	NA	NA	0	NA	NA
Williamsburg	60	3	5.0%	7	2	28.6%
York	752	67	8.9%	119	3	2.5%

Half of the FY24 alcohol compliance checks were conducted at convenience stores/gas stations (49.1%). The next most common type of location was liquor stores (14.1%), followed by large grocery stores (8.7%), convenience stores (7.5%), small grocery stores (6.7%), restaurants (6.2%), drug stores (4.7%), other outlets (2.2%), hotels (0.1%), and vape stores (0.1%). In most cases, the youth attempted to buy beer (71.8%) although a substantial number attempted to buy alcopop drinks (13.2%) or liquor (13.0%). Wine or wine coolers were attempted 2.0% of the time. Nearly all youth volunteers were between the ages of 16 and 19 (95.5%). More purchase attempts were made by females (58.3%) than males (41.7%). Most alcohol purchase attempts were conducted by White youth (89.5%), followed by Black or African American youth (7.9%).

For tobacco compliance checks, 42.8% were conducted at convenience store/gas stations, followed by vape stores (34.9%), large grocery stores (6.3%), small grocery stores (5.2%), other outlets (4.4%), convenience stores (4.2%), drug stores (1.8%), and liquor stores (0.1%). In most cases, youth attempted to buy cigarettes (44.6%). The remaining attempts were made for other tobacco products (55.4%). To place this in context, in FY08, only 5% of attempts were for these non-cigarette tobacco products. In FY24, the most common age for youth volunteers was 17 (46.4%) and 16 (30.1%). More purchase attempts were made by females (56.1%) than males (43.9%). White youth conducted 75.1% of tobacco compliance checks, and Black or African American youth conducted 22.1% of the checks.

Figure 9 shows how buy rates for different alcohol products have changed over the past five years. Buy rates for alcopops, liquor, and wine peeked in FY21 and have decreased steadily since. The buy rate for beer peeked in FY22 and has decreased since.

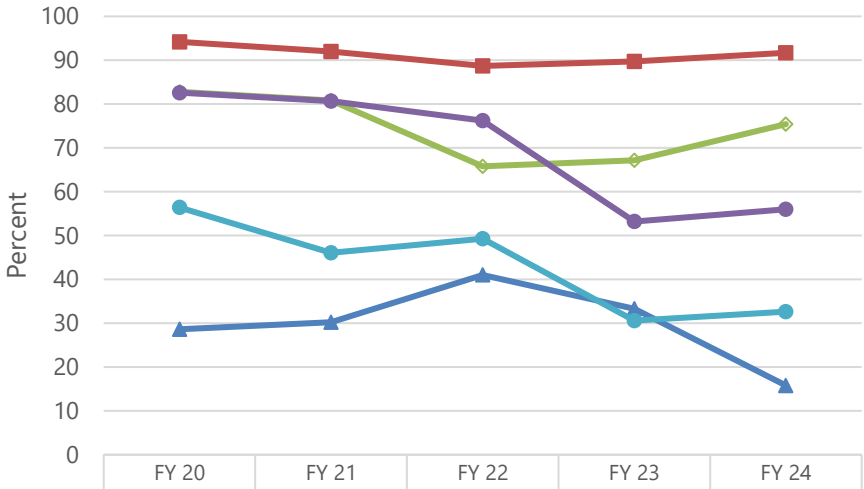
Figure 9. Alcohol Buy Rates by Type of Product, Five-Year Trends



	FY 20	FY 21	FY 22	FY 23	FY 24
Alcopops/alcohol energy drinks	4.4	15.4	12.3	8.7	1.4
Beer	6.2	8.6	10.1	9.2	5.5
Liquor	8.1	13.3	10.4	6.3	1.0
Wine/wine coolers	4.4	16.5	16.3	13.5	0.2

Figure 10 shows alcohol merchant practices over the past five years. Notably, merchants asking the buyers age (the least effective method other than not asking at all) decreased this past year while visible signage about ID checking, merchants asking for an ID, using age verification equipment, and merchants studying the ID all increased.

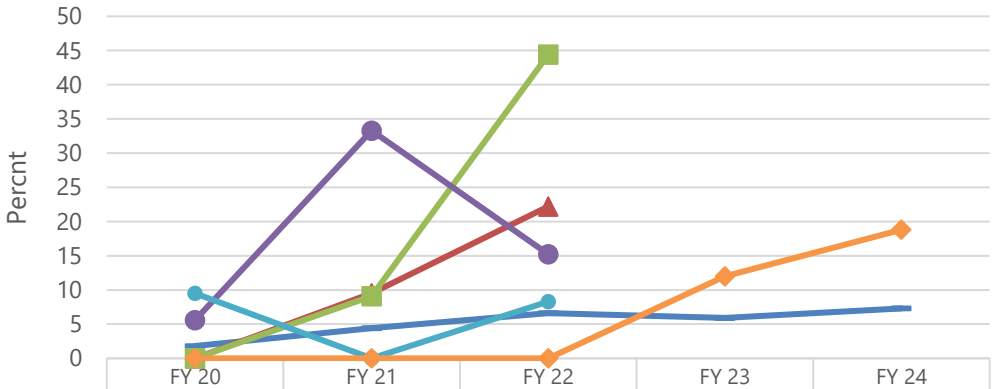
Figure 10. Alcohol Merchant Practices, Five-Year Trends



	FY 20	FY 21	FY 22	FY 23	FY 24
Merchant Asked Buyers Age	28.6	30.2	41.0	33.3	15.8
Merchant Asked to See ID	94.2	92	88.7	89.7	91.7
Merchant Studied ID	82.8	80.8	65.8	67.2	75.4
Visible ID-Checking Signage in Store	82.6	80.7	76.2	53.2	56.0
Age-Verification Equipment Used	56.4	46.1	49.3	30.6	32.6

Figure 11 illustrates the changes in buy rates for various tobacco products over the past five years. In FY23 the reporting requirements were changed to include only two categories of tobacco products: cigarettes and other tobacco products. As can be seen, the cigarette buy rate has been relatively stable for the past several years, whereas there has been a substantial increase in the buy rate of other tobacco products.

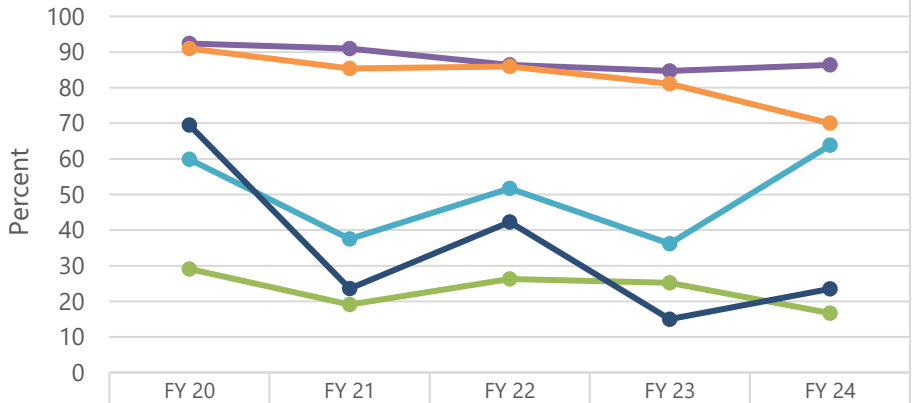
Figure 11. Tobacco Buy Rates by Type of Product, Five-Year Trends



	FY 20	FY 21	FY 22	FY 23	FY 24
Cigarettes	1.8	4.4	6.6	5.9	7.3
Cigarillos	0.0	9.5	22.2		
Cigars	0.0	9.1	44.4		
Electronic Cigarettes	5.6	33.3	15.2		
Vaping Juice	9.5	0.0	8.3		
Other Tobacco Product	0.0	0.0	0.0	12.0	18.8

Figure 12 shows tobacco merchant practices over the past five years. Notably, merchants asking buyer's age and visible ID checking signage decreased during the past year, with increases in asking for an ID, merchants studying the ID, and age verification equipment used.

Figure 12. Tobacco Merchant Practices, Five Year Trends



	FY 20	FY 21	FY 22	FY 23	FY 24
Merchant Asked Buyers Age	29.1	19.1	26.3	25.2	16.7
Merchant Asked to See ID	92.4	91	86.4	84.7	86.4
Merchant Studied ID	59.9	37.5	51.7	36.2	63.8
Visible ID-Checking Signage in Store	91	85.4	85.9	81.1	70.0
Age-Verification Equipment Used	69.5	23.6	42.3	15.0	23.5

Figure 13 shows the percentage of alcohol sales completed by type of business for places that had at least 50 attempts for FY23 and FY24. As shown, non-compliance sales increased at convenience stores (standalone and with fuel pumps), and large and small grocery stores. For both years, bars and hotels had less than 50 attempts each.

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

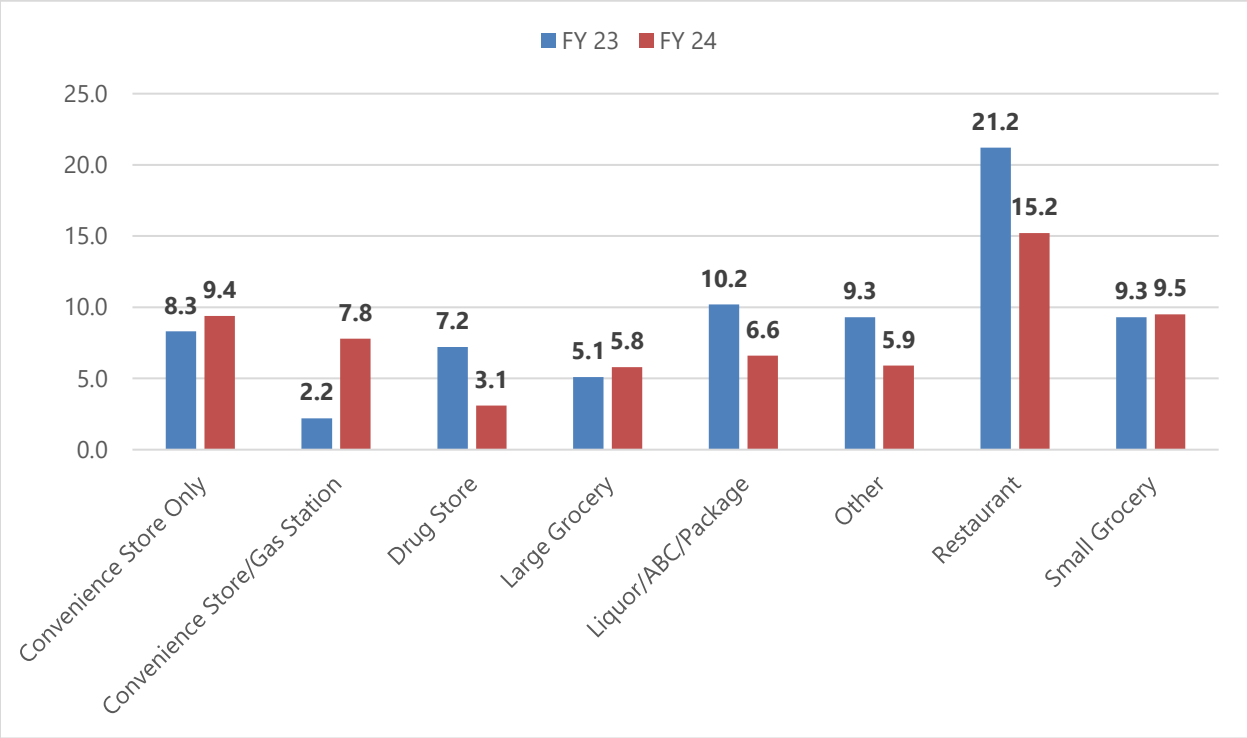
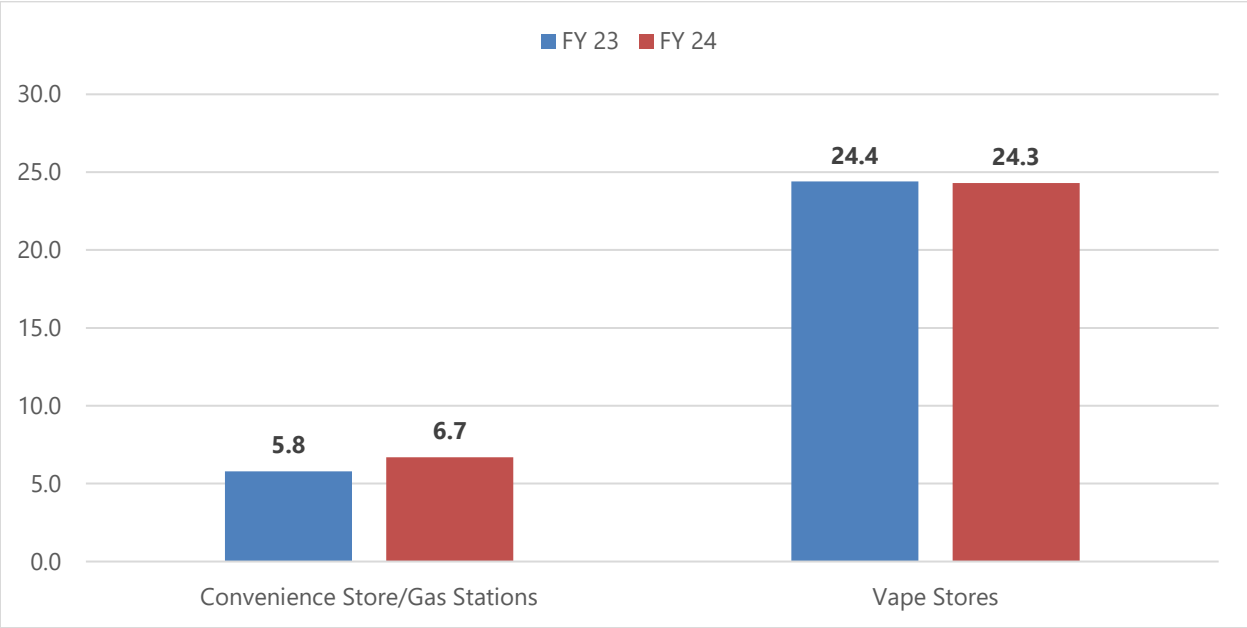


Figure 14 shows the percentage of tobacco sales completed by type of business for places that had at least 45 attempts for FY23 and FY24.

Figure 14. Percentage of Completed Tobacco Sales by Type of Business



Note: In FY23, 45 attempts were made in vape stores; however, vape stores were included for comparison to FY 24.

Table 8 displays the percentages of sales completed based on demographic characteristics of the clerks and buyers. For alcohol, sales were higher depending on the clerk's age (higher sales by clerks 15-17 years old), clerk's race (higher sales rates with American Indian, Black, Pacific Islander clerks), buyer's age (higher sales for buyers 20 years old), and buyer's sex (females). For tobacco, sales were higher depending on the clerk's age (lower sales among clerks ages 45-64) and buyer's age (more sales when their age was 16, 17, 18, or 20).

Table 8. Percentage of Retailer Sales by Demographic Characteristics

Compliance Check Characteristic	% Completed Sales	
	Alcohol	Tobacco
CLERK AGE	***	**
12--14	0.0	--
15 - 17	14.3	0.0
18- 20	6.9	20.8
21 - 24	10.5	17.1
25 - 44	8.5	14.8
45 – 64	6.2	6.2
65+	5.8	20.0
CLERK SEX		
Female	8.2	13.3
Male	7.9	14.1
CLERK RACE	***	
American Indian/Native	10.8	0.0
Asian	5.2	12.4
Black	11.2	13.3
Multiracial	2.1	15.4
Other	6.8	12.6
Pacific Islander	50.0	0.0
White	7.3	14.9
BUYER AGE	***	*
14	--	8.3
15	2.6	6.7
16	7.3	15.2
17	6.6	15.2
18	9.2	14.3
19	9.6	0.0
20	16.7	100.0
BUYER SEX	***	
Female	8.4	15.8
Male	7.4	11.0
BUYER RACE		
Asian	12.9	6.7
Black	6.4	13.2
Multiracial	6.5	0.0
Other	5.0	--
Pacific Islander	33.3	0.0
White	8.2	14.1
* 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 and tobacco, there were no statistically significant differences in sales based on matches between clerk and buyer sex 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 were more likely to occur after 3:00 than during school hours. The second analysis indicated that sales of tobacco were more likely to occur in the day than at night.

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

Compliance Check Characteristic	% Completed Sales	
	Alcohol	Tobacco
CLERK – BUYER SEX		
Different	8.1	13.4
Same	7.9	14.6
CLERK – BUYER RACE		
Different	8.3	13.6
Same	6.2	15.2
SCHOOL DAY	***	
7:00 am – 2:59 pm	8.0	14.7
3:00 pm – 11:59 pm	9.1	13.0
DAY VS. NIGHT		**
6:00 am – 5:59 pm	7.6	15.5
6:00 pm – 5:59 am	8.8	10.6
* p < .05 ** p < .01 *** p < .001		

The average clerk's fine for an alcohol sale, at the time of ticketing, was $610.17, and the most common amount was $610.17. The average fine for a tobacco sale ticket was $479.57, with $470.00 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 548 cases in which a sale was made (alcohol and tobacco), there were 6 instances (1.1%) in which the offender indicated they had taken a class.

Bar Checks

Bar checks at retailers can serve multiple purposes: checking patrons for underage drinking or fake IDs, identifying retailer violations such as selling alcohol to minors, or building rapport with retailers and reminding them of relevant laws. A single bar check can address several environmental prevention objectives.

Bar Checks are conducted at on-premises alcohol establishments by law enforcement officers. Unlike compliance checks that involve undercover youth, bar checks occur 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 92 operations recorded in FY24 in eight counties, down from 350 operations in six counties FY23. In FY24, the officers issued 22 fake ID summons, 13 summons for various charges, 5 summons for retailer violations, and 24 verbal or written warnings. In FY23, officers dispensed 58 tickets for fake IDs, 26 verbal or written warnings, and 88 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 or in some cases, arrested. In FY24, four counties representing three AET Circuits conducted shoulder tap operations with 64 people being approached by the underage volunteer. Ultimately, 4 cases were made regarding alcohol transfer to the volunteer, 2 other alcohol-related offenses, and 1 other offense not related to alcohol. The FY24 operations increased from the previous year. In FY23, one county representing one circuit conducted shoulder taps a total of one time with no cases being made at the shoulder tap operation.

Public Safety Checkpoints/Saturation Patrols

In FY24, AETs across South Carolina recorded 798 public safety checkpoints in 28 counties. The checkpoints expended more than 5,596 hours. Officers recorded contact with approximately 41,371 vehicles resulting in 3,269 citations and arrests. Highlights of those citations and arrests were 216 arrests for drug possession, 120 adult DUI arrests (.08 or greater BAC [Blood Alcohol Concentration]), 2 minor DUIs (.02 BAC or greater), 30 fugitives apprehended, 191 tickets for open containers, and 45 felony arrests. Twenty-nine (29) underage individuals were ticketed for alcohol possession/consumption/possession of fake IDs at the checkpoints.

Saturation patrols, also called directed patrol, are sometimes described as "roving checkpoints." Public safety checkpoints are stationary 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 FY24, there were 104 saturation patrols that expended almost 840 hours and involved 342 officers. This type of operation was recorded in 13 counties. The patrols resulted in 1,227 citations and arrests. In those violations, there were 99 arrests for drug possession, 43 DUI arrests, of which 2 involved drivers under 21 years, 6 fugitives apprehended,

26 tickets for open containers, and 8 felony arrests. The enforcement also involved 22 summons involving offenders 17 to 20 years old, 2 individuals possessing fake IDs, and 2 youth for underage tobacco possession.

Controlled Party Dispersals/Party Patrols

Alcohol Enforcement Teams in five counties recorded 107 party dispersals in FY24. 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 FY24, the predominant source for the party investigation was a party dispersal/noise complaint, either through a call for service or an observation while patrolling the jurisdiction. There was a total of 206 officer hours recorded at the gatherings involving 3,920 people. Officers recorded 216 tickets and arrests at the gatherings.

Multi-Jurisdictional Law Enforcement Agreements and Efforts

Provider agencies 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 sustain consistent enforcement. In FY24, all 46 counties contributed data to the STEP program.

One part of the STEP program involves county agencies signing a multi-jurisdictional agreement regarding tobacco enforcement and education reporting. Multi-jurisdictional alcohol enforcement agreements are in place (often as part of the same document that serves as the tobacco agreement), but OSUS does not formally collect or count them.

In FY24, 41.4% of the alcohol compliance check operations were reported as multi-jurisdictional or involving more than one law enforcement agency, compared to 54.9% in FY23.FY24FY23 The State Law Enforcement Division (SLED) collaborates with many local law enforcement agencies on underage alcohol enforcement. Although the reporting system implemented in FY23 does not track specific law enforcement partners on compliance checks, previously in FY22, SLED partnered with local law enforcement on 50.3% of the alcohol compliance checks, 34.2% in FY21, 42.7% in FY20, 42.1% in FY19, 38% in FY18, and 27% in FY17. This attests to the growing strength of the partnership between SLED and local law enforcement over the last few years and their combined commitment to reducing underage access to alcoholic beverages through retail outlets.

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 FY24 and collectively served 967 retail staff, up from 747 in FY23. Thirty-eight of the 46 counties served at least one retailer in PREP, with Greenville (158) serving the most. Horry served 133, Richland 107, Lexington 98, and York 86.

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 PREP in FY24, the average score was 93.5%.

Diversionary or Court-mandated Youth Programs

County authorities often handle post-arrest processes for youth violating alcohol or tobacco laws. For alcohol violations, county providers offer programs like the Alcohol Education Program (AEP), which many first-time offenders receive instead of a conviction. FY24 saw 76 youth served versus 137 in FY23, possibly due to individual solicitor offices offering their own diversion programs or fewer tickets issued. In FY24, most youth were served in Pickens (52) and Charleston Center (16). Nexus Care of Beaufort County served 2 youths, while Alpha Center offices in Lee, Kershaw, Chesterfield counties and Clarendon BHS, Dorchester ADC, Fairfield BHS each served 1 youth.

For tobacco, the Tobacco Education Program (TEP) operates in two capacities: as a referral program and as an education program. Regarding TEP as a referral program in FY24, 767 youth participated in TEP, up from FY23 when 95 youth participated. Also, in FY24, 243 youth participated with TEP as an educational program. Two counties reported using TEP as an educational program while another 19 counties reported using TEP as a referral program.

Alcohol Enforcement Team Awareness Activities

High Visibility Enforcement (HVE) is a universal community safety approach designed to create deterrence and change unlawful traffic behaviors. It combines highly visible and proactive law enforcement targeting a specific community safety issue, such as impaired driving, or youth alcohol use. HVE is meant to move traditional enforcement of laws from a specific deterrence to a general deterrence, so the community is aware of visible consequences of the behavior.

Since AETs are committed to the HVE concept, AET awareness activities include holding town hall meetings, doing educational sessions for youth or adults, and conducting local media campaigns. Activities also include casual contacts, which are typically law enforcement officers making community contacts with youth or merchants to keep a high visibility presence and warning them of upcoming enforcement efforts. In FY23, AETs reported media placements (e.g.

articles, TV stories, webpages, and social media posts) resulting in 307,904 likes, 12,227 shares, and 42,381,369 impressions. Assuming at least 2 individuals viewed or interacted with each like, share, impression, and engagement, approximately 8.3 million people were estimated to view or interact because of underage drinking or impaired driving awareness events.

AETs across the state conducted additional prevention activities meant to educate residents about substance abuse and misuse. Officers, AET Coordinators, and Prevention personnel estimated 377,420 individuals were exposed to (participating in or observed) the events.

Since 2010, AETs have participated in April's statewide Out of Their Hands campaign. Out of Their Hands involves high-visibility enforcement focused on reducing alcohol access for individuals under 21 years old. Although high school proms and other school year end activities traditionally are held beginning the last week of March through the first week of June, April was chosen because it is also recognized nationally as "Alcohol Awareness Month." As a result, law enforcement across South Carolina stepped-up enforcement of underage drinking laws and conducted education and community awareness of the public health and public safety consequences of consuming alcoholic beverages in collaboration with prevention personnel.

In FY24, AETs continued to use social media and other earned media, such as press releases and media ride-along events to extend the message that high school proms, spring break, and other end-of-the-school year activities should not include alcoholic beverages. For social media posts, media campaigns, and radio and television public service announcements, Prevention personnel and law enforcement officers reported 90,369 social media likes, 2,655 social media shares, with a combined over 31.4 million views/impressions. Additionally, they reported 1,240 speaking events, 244 casual contacts, 19 MADD Power of Parent and Power of Youth sessions, 11 town halls, 857 health fairs, 4,117 alternative activities attendees, and distributed handouts at 633 events focused on the Out of Their Hands messages and other substance misuse topics in FY24.

Because OOTH combines media with enforcement operations, law enforcement officers working with AET reported 2,563 enforcement operations resulting in 1,110 tickets and arrests. By comparison, in the FY23 OOTH campaign, AETs conducted 1,189 enforcement operations and reported 2,244 tickets and arrests.

Alcohol Enforcement Team Training

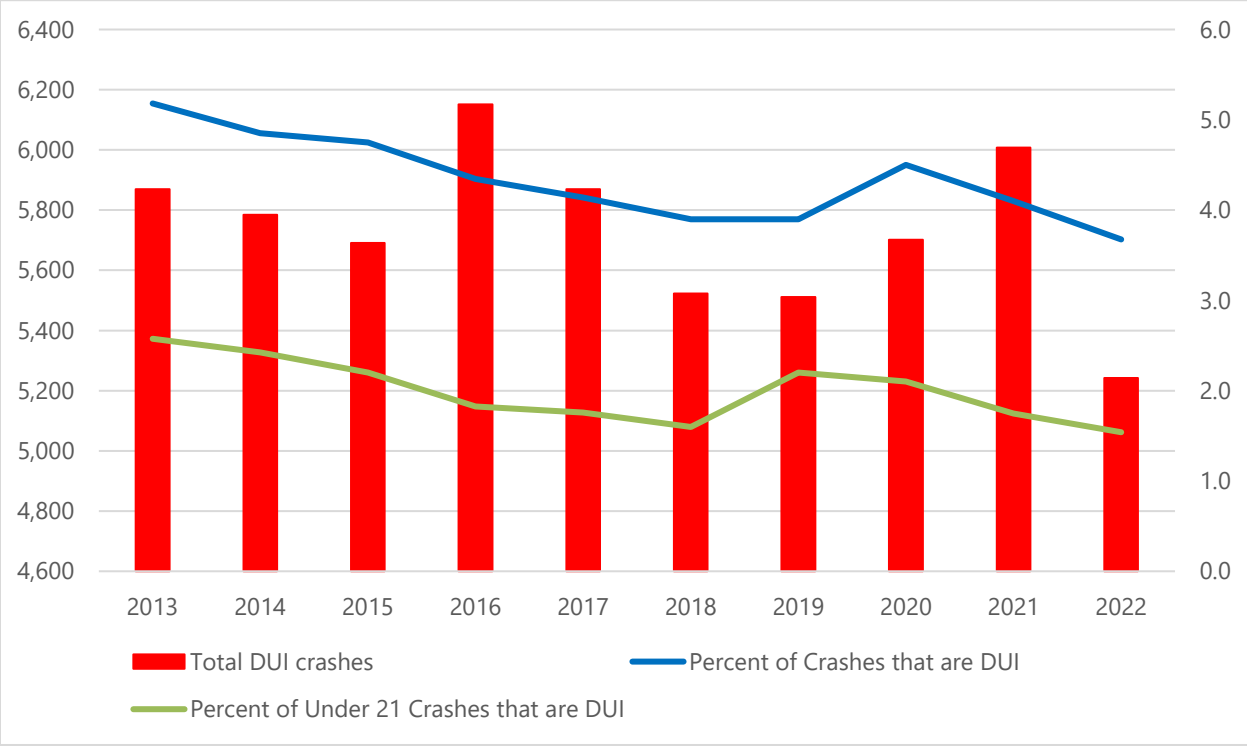
South Carolina's AET model focuses on building local law enforcement capacity for underage drinking prevention and enforcement. Training on topics like Fake IDs, Public Safety Checkpoints, and Source Investigation aims to enhance officers' skills and educate the community about enforcing these laws.

While the pandemic introduced virtual training, in-person sessions by a state training cadre remain popular among law enforcement and community members. In FY23, an AET Training of Trainers class revitalized the cadre. In FY24, OSUS co-hosted six regional sessions with 68 participants from law enforcement and community partners. Additionally, five regional sessions and two local AETs conducted their own training in FY23.

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 alcohol-related crashes from 2013 to 2022, the last year for which we have data. The figure shows that the total number of alcohol-related crashes fluctuated between 2013 and 2022, peaking in 2015 and again in 2021. In 2022 (for which we have only preliminary data), the number of alcohol-related crashes decreased to its lowest level in a decade. The pattern for the percentage of crashes that were alcohol-related is a bit different, peaking in 2020 for all drivers and 2019 for those under the age of 21. That is, when the number of alcohol-related crashes increased dramatically in 2016, the percentage of crashes that were alcohol related continued to decline, suggesting that factors other than alcohol contributed to a higher number of overall crashes. In 2022, the percentage of alcohol-related crashes for all groups dropped for the second straight year to 3.7%. Alcohol-related crashes for drivers under the age of 21 decreased for the third year in a row, to 1.5%.

Figure 15. Alcohol-Related Traffic Crashes, 2013 - 2022



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, law enforcement officers, and AET Coordinators submitted electronic forms on 5,530 alcohol compliance checks and 767 tobacco compliance checks. Sales were completed for 8.0% of alcohol attempts and 13.7% of tobacco attempts.

Most merchants asked to see the buyers' IDs (91.7% and 86.4% for alcohol and tobacco, respectively). For alcohol, sales were higher when the clerk was younger, Black/African American, American Indian, or Native Hawaiian/Pacific Islander; when the buyer was older or female; and when the attempt was made after 3:00 pm on school days. For tobacco, sales were lower when the clerk's age was between 45 and 64 and higher when the buyer's age was 16, 17, 18, or 20. Tobacco sales were also higher during daytime hours than nighttime hours.

The counties served 967 merchants in the Palmetto Retailers Education Program (PREP) in FY24, up from 747 in FY23.

AETs reported 798 public safety checkpoints. Among the violations, there were 122 DUIs. In addition, there were 104 saturation patrols reported. This operation generated another 1,227 tickets. The enforcement activity included 43 DUIs, 222 drug possession cases, 6 fugitives apprehended, 26 open container tickets, and 8 felony arrests.

AETs dispersed 107 parties attended by 3,920 people, with 216 tickets and arrests recorded at the gatherings. Sixty-four individuals were approached by the cooperating youth to purchase alcohol as part of Shoulder Tap operations, with 4 individuals purchasing alcohol for them.

In FY24, there were 92 bar checks conducted, resulting in 22 fake ID violations, 24 warnings for various activity, and 18 retailer and patron violations.

In FY24, 843 youth were in a diversion program for youth alcohol and tobacco offenses (76 served in the Alcohol Education Program and 767 served in the Tobacco Education Program).

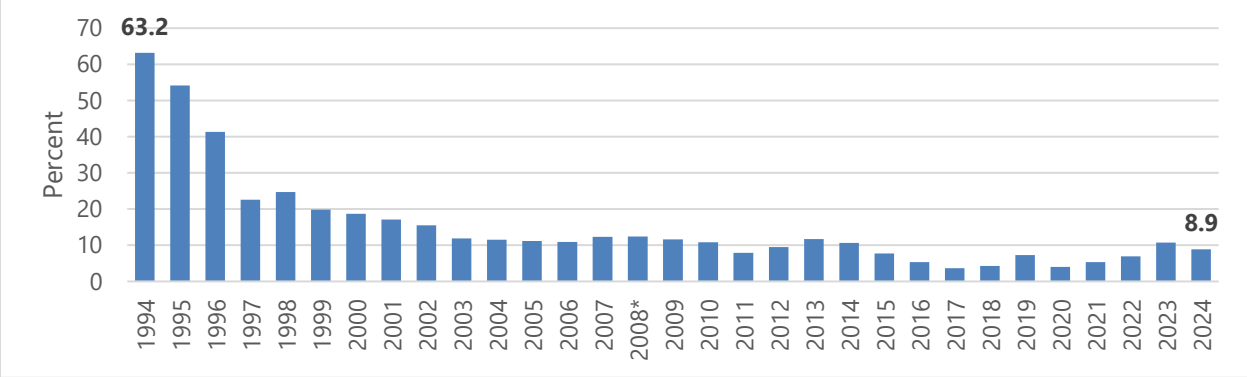
Using the latest crash data from SC Department of Public Safety and comparing preliminary 2022 data to preliminary 2021 data, the percentage of crashes that were DUI for all age groups decreased from 4.1% to 3.7%. Similarly, the percentage of crashes that were DUI for people under the age of 21 decreased from 1.7% to 1.5%.

SECTION IV: YOUTH ACCESS TO TOBACCO STUDY (SYNAR)

As per the Federal Synar Regulation, South Carolina conducts annual, unannounced inspections of a valid sample of tobacco outlets that are accessible to minors.[1] 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 21 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. Synar reviews tobacco outlet compliance with federal law, while county checks in South Carolina use minors under 18 to test compliance with state law.

Between December 11, 2023, and May 24, 2024, 110 youth volunteers aged 16-20, under trained adult supervision, conducted unannounced cigarette purchase attempts in 268 randomly selected retail outlets in 46 counties. The 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 2024, the estimated overall sales rate (also known as a Retailer Violation Rate or RVR) was 8.9%, lower than 2023 10.7% rate. This is the first year out of the previous four years when the buy rate decreased. The rate is better than the federal minimum 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 - 2024)[a]



[a] Data are labeled based on when they were collected. Typically, these data are collected in January through May, 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 2023 data match the FY 2024 submission to SAMHSA by OSUS.

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

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

Table 10. YATS (Synar) Raw Buy Rates 2024

County Name	Total Eligible Attempts	No Buy	Buy	Buy Rate
Abbeville	2	2	0	0.0%
Aiken	9	9	0	0.0%
Allendale	1	1	0	0.0%
Anderson	10	10	0	0.0%
Bamberg	1	1	0	0.0%
Barnwell	2	2	0	0.0%
Beaufort	6	6	0	0.0%
Berkeley	9	8	1	11.1%
Calhoun	1	1	0	0.0%
Charleston	21	21	0	0.0%
Cherokee	4	2	2	50.0%
Chester	2	2	0	0.0%
Chesterfield	4	2	2	50.0%
Clarendon	3	3	0	0.0%
Colleton	3	3	0	0.0%
Darlington	5	2	3	60.0%
Dillon	3	3	0	0.0%
Dorchester	7	6	1	14.3%
Edgefield	2	2	0	0.0%
Fairfield	1	1	0	0.0%
Florence	12	10	2	16.7%
Georgetown	5	5	0	0.0%
Greenville	21	17	4	19.0%
Greenwood	4	3	1	25.0%
Hampton	2	1	1	50.0%
Horry	23	23	0	0.0%
Jasper	2	2	0	0.0%
Kershaw	4	4	0	0.0%
Lancaster	5	4	1	20.0%
Laurens	5	5	0	0.0%
Lee	1	1	0	0.0%
Lexington	16	15	1	6.3%
Marion	2	2	0	0.0%
Marlboro	3	3	0	0.0%
McCormick	1	1	0	0.0%

County Name	Total Eligible Attempts	No Buy	Buy	Buy Rate
Newberry	2	2	0	0.0%
Oconee	5	5	0	0.0%
Orangeburg	7	7	0	0.0%
Pickens	8	7	1	12.5%
Richland	18	17	1	5.6%
Saluda	1	1	0	0.0%
Spartanburg	17	17	0	0.0%
Sumter	7	7	0	0.0%
Union	2	1	1	50.0%
Williamsburg	3	1	2	66.7%
York	12	12	0	0.0%

Table 11 shows Synar buy rates, broken down by the demographic characteristics of the youth purchaser. Our analysis showed statistically significant differences in buy rates based on the buyer's age and buyer race-sex combined.

Table 11. YATS (Synar) Percent of Outlets Selling Cigarettes to Youth by Characteristics of Youth, 2024

Characteristic	Buy Rate (%)
AGE	**
16	4.8
17	3.3
18	18.6
19	14.8
20	12.5
SEX	
Female	8.0
Male	8.8
RACE	
Black	6.1
Other	7.4
White	11.1
BUYER RACE – SEX	***
Black-Female	6.1
Other-Female	8.7
White-Female	10.1
Black-Male	6.0
Other-Male	0.0
White-Male	12.5
* p < .05; ** p < .01; *** p < .001	

Table 12 shows Synar buy rates, broken down by the demographic characteristics of the clerk. The clerk age was significantly related to the likelihood of a successful buy.

Table 12. YATS (Synar) Percent of Outlets Selling Cigarettes to Youth by Characteristics of Clerk, 2024

Characteristic	Buy Rate (%)
AGE	***
Teenager	16.7
20's	9.4
30's	9.4
40's	6.5
50's	3.5
60+	22.2
SEX	
Female	6.8
Male	11.9
RACE	
Black	4.1
Hispanic	8.3
Other	15.3
White	7.9
CLERK RACE – SEX	
Black-Female	3.6
Hispanic-Female	0.0
Other-Female	18.8
White-Female	7.1
Black-Male	6.3
Hispanic-Male	16.7
Other-Male	15.4
White-Male	10.0
* p < .05; ** p < .01; *** p < .001	

SECTION V: STATEWIDE YOUTH SUBSTANCE USE TRENDS

One reason for OSUS and the State of South Carolina devoting resources to prevention efforts is to prevent and reduce youth substance use across the state. Just as it is beneficial for OSUS 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, OSUS can gauge the changes in use over time and determine if its efforts should be modified to better address the trends.

NSDUH Data

Figures 17 – 22 show trends in youth substance use (ages 12 -17) since 2014-2015 using data from the National Survey on Drug Use and Health (NSDUH).[2] As can be seen, South Carolina trends are like national trends, with slight reductions in marijuana and alcohol use, and more substantial reductions in tobacco use, illicit drug use, and pain reliever misuse. Although the overall reductions in South Carolina cannot be attributed directly to the OSUS-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.

[2] In previous reports, we displayed data from the Youth Risk Behavior Survey (YRBS) rather than the NSDUH. The YRBS has not been administered in South Carolina since 2021 so we are using NSDUH data for the current report.

Figure 17. Past Month Alcohol Use, Ages 12-17, South Carolina and United States (NSDUH)

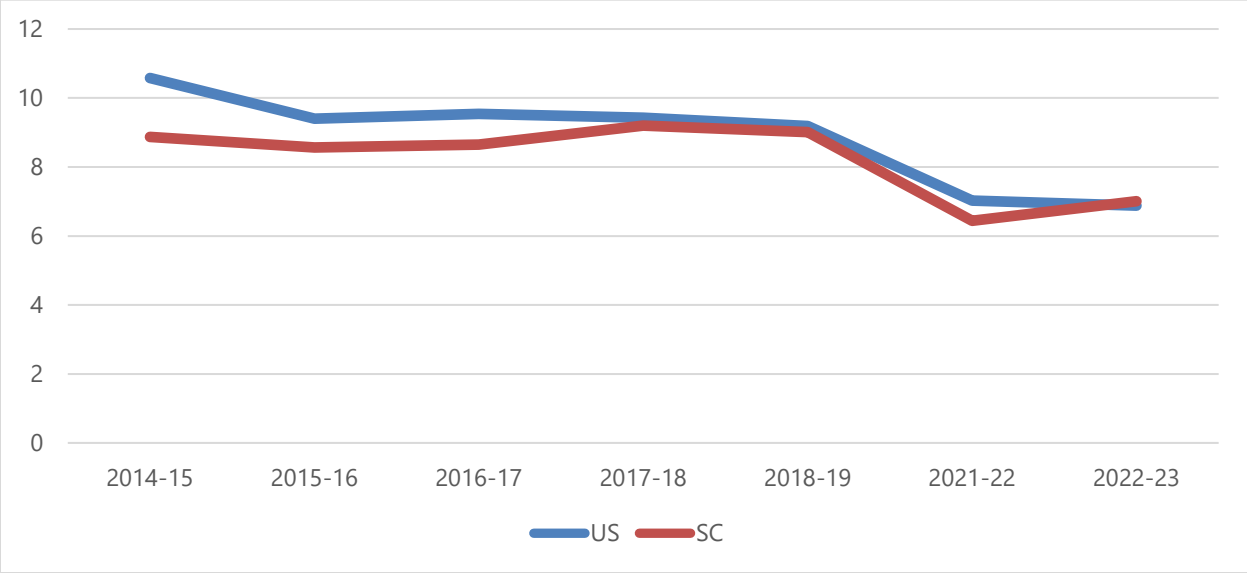


Figure 18. Past Month Binge Drinking, Ages 12-17, South Carolina and United States (NSDUH)

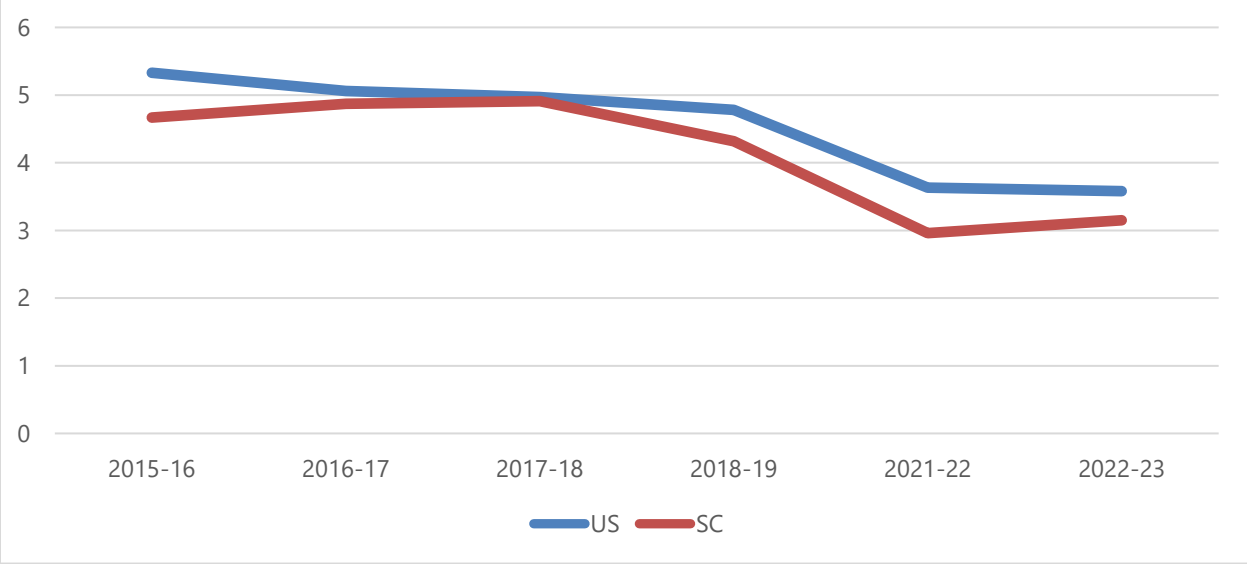


Figure 19. Past Month Tobacco Use, Ages 12-17, South Carolina and United States (NSDUH)

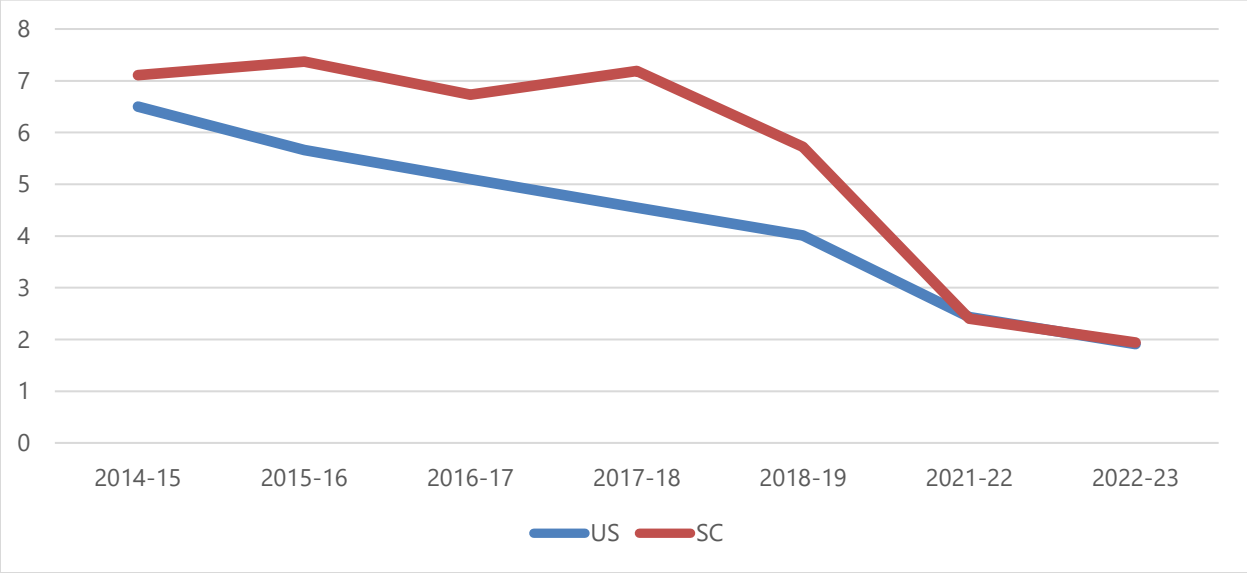


Figure 20. Past Month Marijuana Use, Ages 12-17, South Carolina and United States (NSDUH)

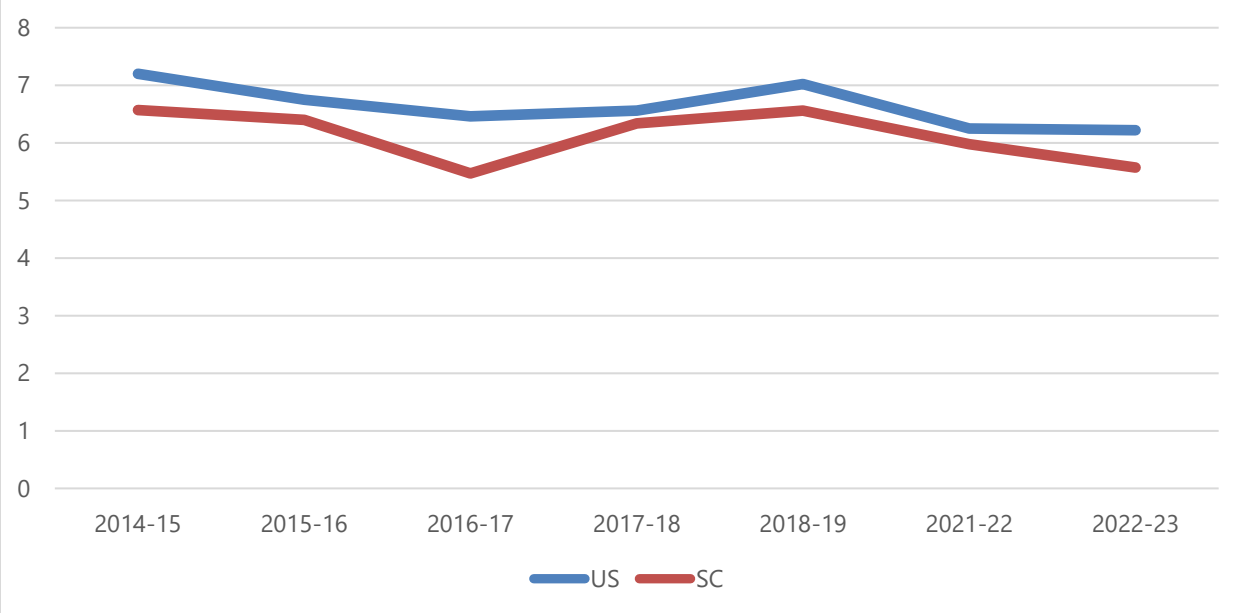


Figure 21. Past Month Illicit Drug Use Other Than Marijuana, Ages 12-17, South Carolina and United States (NSDUH)

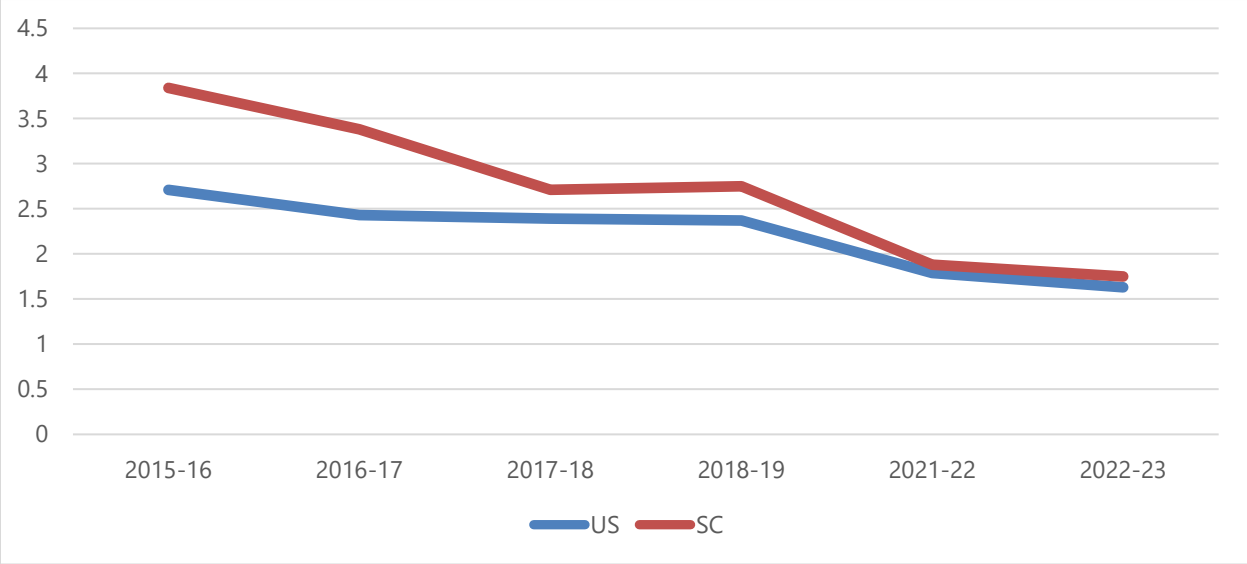
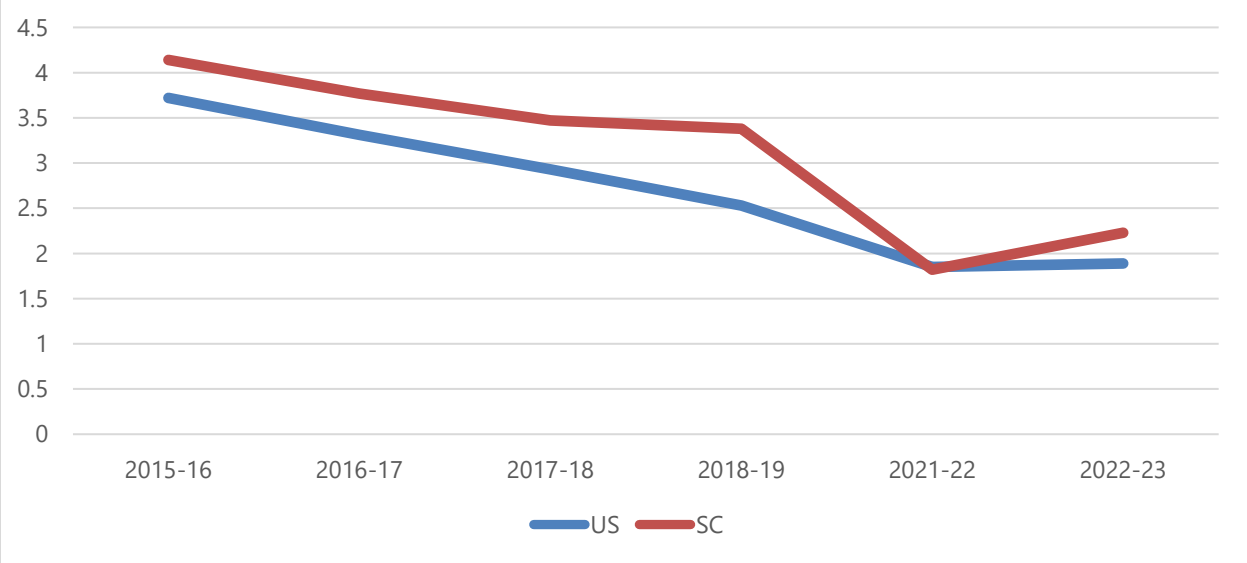


Figure 22. Past Year Pain Reliever Misuse, Ages 12-17, South Carolina and United States (NSDUH)



CSAP State Block Grant Goals

Table 13 displays statewide data in relation to the Block Grant goals set by OSUS for FY24 and FY25. As can be seen, 9 of the 10 Year 1 (FY24) targets for which data are available have been met. The only unmet target was retail tobacco access for youth, as measured by the OSUS supported community-based compliance checks. Notably, however, the target for retail tobacco access for youth, as measured by Synar compliance checks, was met.

Table 13. Statewide Substance Use Data and Block Grant Goals

Priority Area	**Underage Alcohol Use**			**Alcohol-Related Crashes**	**Youth Tobacco Use**						**Youth Marijuana Use**		**Youth Rx Misuse**	
Indicator	30-day use	30-day use	Retail access	Alcohol-related fatalities	30-day use of cigarettes or vape products	30-day use of cigarettes	30-day use of smokeless	30-day use of vapes	Retail access	Retail access	30-day use	30-day use	Ever used	30-day used
Data Source	YRBS	CTC	GMS	FARS	YRBS	CTC	CTC	CTC	Synar	GMS	YRBS	CTC	YRBS	CTC
Baseline	19.2% (2021)	9.8% (2022)	10.4% (2022)	30% (2020)	17.4% (2021)	1.3% (2022)	3.4% (2022)	13.4% (2022)	10.6% (2022)	6.9% (2022)	14.7% (2021)	8.9% (2022)	15.6% (2021)	2.8% (2022)
Year 1 Target	20% or below	10% or below	10% or below	29% or below	18% or below	5% or less	5% or less	12% or less	10% or below	10% or below	15% or below	10% or below	10% or below	5% or below
Year 2 Target	20% or below	10% or below	10% or below	28% or below	18% or below	5% or less	5% or less	12% or less	10% or below	10% or below	15% or below	10% or below	10% or below	5% or below
Most Recent Data	No new data available	**7.4% (2024)**	**8.0% (2024)**	**19.9% (2023)**	No new data available	**0.9% (2024)**	**1.9% (2024)**	**5.8% (2024)**	**8.9% (2024)**	**13.7% (2024)**	No new data available	**5.0% (2024)**	No new data available	**1.2% (2024)**

Legend:

YRBS = Youth Risk Behavior Survey, conducted at the state-level every two years (odd years). The last YRBS survey was conducted in 2021. The SC Department of Education has decided to not continue to lead the survey. Negotiations are in the process of finding another organization to lead the survey.

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. Alcohol-related crashes were calculated by dividing the number of drivers that were involved in fatal crashes who were under the influence of alcohol, drugs, or medication (208) by the total number of people killed in a motor vehicle crashes (1,047).

Green cell indicates that the Year 2 Target was met. **Blue cell** indicates that the Year 2 target was not met.

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=1046)			Middle School- Males (n=1011)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	2.22	2.42	9.23**	2.16	2.39	10.32**
Decision-Making Skills, 0-3	1.94	1.95	0.49	1.85	1.90	2.68**
Disapproval of Use, 0-3	2.59	2.67	3.25**	2.55	2.64	3.35**
Perceived Peer Norms, 0-3	2.47	2.54	2.92**	2.41	2.51	4.10**
Perceived Parental Attitudes, 0-3	2.80	2.83	0.82**	2.73	2.79	1.97**

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Other Tobacco	0.37	1.19	225.60**	1.31	1.87	42.99
Cigarettes	0.64	0.37	-42.75	1.40	1.03	-26.67
E-Cigarettes or Vapes	6.15	0.55	-91.02	5.44	1.40	-74.21
Alcohol	5.14	4.60	-10.39	4.95	4.78	-3.59
Marijuana	2.11	4.05	91.66	3.19	4.20	31.74
Non-Medical Prescription Drug Use	1.56	1.75	12.28	3.09	1.69	-45.45
CBD use	1.57	0.74	-52.64*	1.69	1.41	-16.43

* 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=26)			Asian participants (n=49)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	2.16	2.39	10.32	2.16	2.39	10.32**
Decision-Making Skills, 0-3	1.85	1.90	2.68**	1.85	1.90	2.68
Disapproval of Use, 0-3	2.55	2.64	3.35	2.55	2.64	3.35**
Perceived Peer Norms, 0-3	2.41	2.51	4.10	2.41	2.51	4.10
Perceived Parental Attitudes, 0-3	2.73	2.79	1.97	2.73	2.79	1.97

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Other Tobacco	0.00	0.00	--	0.00	0.00	--
Cigarettes	3.85	0.00	-100.00	1.92	0.00	-100.00
E-Cigarettes or Vapes	3.85	3.85	0.00	0.00	0.00	--
Alcohol	3.85	7.69	100.00	0.00	0.00	--
Marijuana	3.85	0.00	-100.00	0.00	0.00	--
Non-Medical Prescription Drug Use	0.00	7.69	--	3.85	0.00	-100.00
CBD use	0.00	0.00	--	1.92	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)	Black/African American participants (n=587)			Multi-racial participants (n=250)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	2.16	2.39	10.32**	2.16	2.39	10.32**
Decision-Making Skills, 0-3	1.85	1.90	2.68**	1.85	1.90	2.68
Disapproval of Use, 0-3	2.55	2.64	3.35**	2.55	2.64	3.35
Perceived Peer Norms, 0-3	2.41	2.51	4.10**	2.41	2.51	4.10*
Perceived Parental Attitudes, 0-3	2.73	2.79	1.97**	2.73	2.79	1.97

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Other Tobacco	1.41	2.04	45.13	1.14	3.42	200.00
Cigarettes	1.88	1.26	-33.02	0.76	0.38	-49.81
E-Cigarettes or Vapes	7.21	1.42	-80.31	9.89	0.00	-100.00**
Alcohol	6.10	5.69	-6.82	6.84	6.13	-10.43
Marijuana	3.92	4.41	12.35	5.32	5.73	7.55
Non-Medical Prescription Drug Use	2.83	2.06	-27.21	3.42	3.05	-10.77
CBD use	1.74	1.28	-26.69	4.58	1.56	-66.02**

* 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)	Other participants (n=168)			White participants (n=1013)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	2.16	2.39	10.32**	2.16	2.39	10.32**
Decision-Making Skills, 0-3	1.85	1.90	2.68**	1.85	1.90	2.68
Disapproval of Use, 0-3	2.55	2.64	3.35**	2.55	2.64	3.35**
Perceived Peer Norms, 0-3	2.41	2.51	4.10	2.41	2.51	4.10**
Perceived Parental Attitudes, 0-3	2.73	2.79	1.97	2.73	2.79	1.97

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Other Tobacco	0.00	1.16	--	0.48	0.95	100.57
Cigarettes	1.16	0.00	-100.00	0.48	0.76	59.85
E-Cigarettes or Vapes	7.60	1.16	-84.79**	3.62	1.14	-68.51
Alcohol	6.98	4.05	-42.00	3.62	4.09	13.05
Marijuana	1.75	6.94	295.38**	1.24	3.23	160.54
Non-Medical Prescription Drug Use	2.34	1.16	-50.58	1.52	1.33	-12.42
CBD use	2.31	1.16	-50.00	0.86	0.86	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 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=261)			Participants Not of Hispanic, Latino, or Spanish Descent or Origin (n=1826)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	2.17	2.36	9.15**	2.19	2.41	10.09**
Decision-Making Skills, 0-3	1.83	1.84	0.48	1.90	1.93	1.63**
Disapproval of Use, 0-3	2.53	2.60	2.90**	2.57	2.66	3.38**
Perceived Peer Norms, 0-3	2.40	2.48	3.45**	2.44	2.52	3.31**
Perceived Parental Attitudes, 0-3	2.75	2.77	0.90	2.77	2.81	1.31**

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Other Tobacco	1.12	3.76	235.84	0.78	1.20	53.57
Cigarettes	1.87	0.75	-59.85	0.94	0.78	-16.58
E-Cigarettes or Vapes	8.96	0.75	-91.64**	5.31	1.14	-78.44
Alcohol	10.82	5.24	-51.54	4.31	4.69	8.77
Marijuana	4.48	7.49	67.29	2.40	3.80	58.45
Non-Medical Prescription Drug Use	4.10	3.00	-27.00	2.03	1.62	-20.31
CBD use	4.12	1.88	-54.37	1.30	1.00	-23.60

* 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=2,229)			Alcohol-True Stories (n=429)		
	Pre-Average	Post Average	% Change	Pre-Average	Post Average	% Change
Perceived Risk, 0-3	2.19	2.40	9.80**	2.21	2.36	6.61**
Decision-Making Skills, 0-3	1.89	1.92	1.53**	1.87	1.87	0.00
Disapproval of Use, 0-3	2.57	2.65	3.24**	2.52	2.56	1.44
Perceived Peer Norms, 0-3	2.43	2.52	3.36**	2.41	2.49	3.20**
Perceived Parental Attitudes, 0-3	2.77	2.80	1.31**	2.76	2.78	0.62

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	1.12	67.16**	0.70	1.65	135.53
Cigarettes	1.79	0.67	-62.57	0.93	0.00	-99.50
E-Cigarettes or Vapes	8.54	0.67	-92.15**	10.07	1.64	-83.72**
Alcohol	7.83	6.92	-11.62	9.79	8.22	-16.08
Marijuana	3.36	5.36	59.52**	4.45	6.07	36.52
Non-Medical Prescription Drug Use	2.46	2.91	18.29	3.04	3.29	8.20
CBD use	1.57	1.91	15.29*	2.58	1.17	-54.44

* 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=57)			Life Skills (n=1,425)		
	Pre-Average	Post Average	% Change	Pre-Average	Post Average	% Change
Perceived Risk, 0-3	2.04	2.19	7.20	2.20	2.44	10.89**
Decision-Making Skills, 0-3	1.67	1.65	-1.05	1.91	1.92	0.72
Disapproval of Use, 0-3	2.51	2.43	-2.99	2.60	2.69	3.57**
Perceived Peer Norms, 0-3	2.18	2.01	-7.70	2.50	2.56	2.33**
Perceived Parental Attitudes, 0-3	2.69	2.72	1.11	2.78	2.82	1.45**

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre-Average	Post Average	% Change	Pre-Average	Post Average	% Change
Other Tobacco	3.51	3.51	0.00	0.91	1.69	85.01**
Cigarettes	1.79	0.00	-100.00	1.05	0.99	-6.47
E-Cigarettes or Vapes	8.77	0.00	-100.00*	4.37	1.06	-75.81**
Alcohol	5.26	8.77	66.67	3.87	3.18	-18.01
Marijuana	1.75	7.02	300.00	2.47	3.10	25.54
Non-Medical Prescription Drug Use	7.02	1.75	-75.00	1.83	1.41	-22.97
CBD use	3.51	3.51	0.00	1.34	0.92	-31.34

* 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)	Project Alert (n=106)			Project Northland (n=40)		
	Pre-Average	Post Average	% Change	Pre-Average	Post Average	% Change
Perceived Risk, 0-3	2.08	2.14	2.58	2.24	2.15	-3.72
Decision-Making Skills, 0-3	1.94	1.79	-7.35**	1.69	1.84	9.01
Disapproval of Use, 0-3	2.57	2.45	-4.41**	2.31	2.56	10.68**
Perceived Peer Norms, 0-3	2.36	2.30	-2.49	2.16	2.40	10.92*
Perceived Parental Attitudes, 0-3	2.70	2.67	-0.79	2.79	2.77	-0.60

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre-Average	Post Average	% Change	Pre-Average	Post Average	% Change
Other Tobacco	0.00	0.94	--	0.00	0.00	--
Cigarettes	1.89	0.00	-100.00	0.00	0.03	--
E-Cigarettes or Vapes	7.62	0.95	-87.50**	0.00	0.03	--
Alcohol	6.60	8.49	28.57	0.00	0.05	--
Marijuana	0.94	11.32	1100.00**	0.00	0.05	--
Non-Medical Prescription Drug Use	3.77	1.89	-50.00	0.05	0.03	-50.00
CBD use	1.89	1.89	0.00	0.08	0.03	-66.67

* 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)	Tobacco Education Program (n=166)		
	Pre-Average	Post Average	% Change
Perceived Risk, 0-3	2.15	2.53	17.48**
Decision-Making Skills, 0-3	1.87	2.20	17.77**
Disapproval of Use, 0-3	2.44	2.71	10.78**
Perceived Peer Norms, 0-3	2.14	2.57	20.22**
Perceived Parental Attitudes, 0-3	2.75	2.86	3.74**

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre-Average	Post Average	% Change
Other Tobacco	0.00	0.00	--
Cigarettes	1.21	0.00	-100.00
E-Cigarettes or Vapes	4.85	0.00	-100.00**
Alcohol	3.64	4.82	32.53
Marijuana	1.21	3.01	148.49
Non-Medical Prescription Drug Use	1.21	0.61	-50.00
CBD use	0.00	0.62	--

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

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

Table A5. Overall Results by Sex – High School

Risk Factor Scores, Range (Positive score is favorable)	High School - Females (n=79)			High School- Males (n=140)		
	Pre-Average	Post Average	% Change	Pre-Average	Post Average	% Change
Perceived Risk, 0-3	2.06	2.35	14.44**	2.14	2.25	5.03*
Decision-Making Skills, 0-3	1.81	1.85	1.86	1.86	1.88	1.06
Disapproval of Use, 0-3	2.23	2.39	7.15**	2.26	2.37	4.65*
Perceived Peer Norms, 0-3	2.11	2.23	5.53	1.92	2.04	6.47
Perceived Parental Attitudes, 0-3	2.56	2.69	5.17**	2.54	2.62	3.18

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre-Average	Post Average	% Change	Pre-Average	Post Average	% Change
Other Tobacco	0.00	1.12	--	3.68	1.22	-66.87
Cigarettes	1.11	3.41	206.82	5.52	5.52	0.00
E-Cigarettes or Vapes	17.78	19.10	7.44	15.85	18.40	16.09
Alcohol	13.33	12.36	-7.30	15.24	15.53	1.86
Marijuana	13.64	15.73	15.36	15.24	16.56	8.66
Non-Medical Prescription Drug Use	2.22	2.25	1.12	5.49	3.66	-33.33
Prescription Pain Pills	2.22	3.37	51.69	4.88	4.29	-11.96
Heroin or Fentanyl	1.11	1.12	1.12	0.61	0.61	0.00
Cocaine	0.00	1.12	--	1.22	2.47	102.47
Other Illegal Drugs	1.12	1.12	0.00	1.85	1.85	0.00
CBD use	3.37	3.41	1.14	4.35	3.73	-14.29

* 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=116)			Multi-racial Participants (n=15)		
	Pre-Average	Post Average	% Change	Pre-Average	Post Average	% Change
Perceived Risk, 0-3	2.11	2.33	10.54**	2.13	2.42	13.87
Decision-Making Skills, 0-3	1.87	1.88	0.99	1.95	2.36	20.80*
Disapproval of Use, 0-3	2.29	2.46	7.13**	1.87	2.42	29.08**
Perceived Peer Norms, 0-3	2.11	2.18	3.71	1.80	2.45	35.64**
Perceived Parental Attitudes, 0-3	2.58	2.70	4.52**	2.12	2.74	29.37**

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre-Average	Post Average	% Change	Pre-Average	Post Average	% Change
Other Tobacco	0.00	0.74	-	6.25	0.00	-100.00
Cigarettes	0.74	2.22	202.22	6.25	0.00	-100.00
E-Cigarettes or Vapes	13.87	14.07	1.48	25.00	12.50	-50.00
Alcohol	11.68	10.45	-10.54	6.25	0.00	-100.00
Marijuana	14.71	16.18	10.00	18.75	6.25	-66.67
Non-Medical Prescription Drug Use	5.84	3.68	-37.04	0.00	0.00	-
Prescription Pain Pills	7.30	5.88	-19.41	0.00	0.00	-
Heroin or Fentanyl	0.74	0.74	0.74	6.25	0.00	-100.00
Cocaine	0.00	2.22	-	6.25	0.00	-100.00
Other Illegal Drugs	1.48	0.74	-50.37	6.67	0.00	-100.00
CBD use	2.96	2.27	-23.30	6.25	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 A6. Overall Results by Race Group – High School (continued)

Risk Factor Scores, Range (Positive score is favorable)	Other Participants (n=9)			White Participants (n=74)		
	Pre-Average	Post Average	% Change	Pre-Average	Post Average	% Change
Perceived Risk, 0-3	2.26	2.21	-2.11	2.10	2.18	3.76
Decision-Making Skills, 0-3	2.00	2.20	10.23	1.75	1.70	-2.81
Disapproval of Use, 0-3	2.40	2.55	5.94	2.21	2.17	-1.66
Perceived Peer Norms, 0-3	2.32	2.30	-1.12	1.77	1.88	6.08
Perceived Parental Attitudes, 0-3	2.62	2.66	1.49	2.54	2.52	-0.77

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre-Average	Post Average	% Change	Pre-Average	Post Average	% Change
Other Tobacco	8.33	0.00	-100.00	4.88	2.41	-50.60
Cigarettes	8.33	0.00	-100.00	8.43	10.98	30.14
E-Cigarettes or Vapes	0.00	8.33	-	22.89	28.92	26.32
Alcohol	8.33	8.33	0.00	20.48	23.17	13.13
Marijuana	8.33	8.33	0.00	13.41	19.51	45.45
Non-Medical Prescription Drug Use	0.00	0.00	-	3.61	3.61	0.00
Prescription Pain Pills	0.00	0.00	-	0.00	2.44	-
Heroin or Fentanyl	0.00	0.00	-	0.00	1.20	-
Cocaine	0.00	8.33	-	1.22	1.22	0.00
Other Illegal Drugs	0.00	0.00	-	1.20	3.66	203.66
CBD use	9.09	8.33	-8.33	3.66	6.02	64.66

Table A7. Overall Results by Ethnicity – High School

Risk Factor Scores, Range (Positive score is favorable)	Participants of Hispanic, Latino, or Spanish Descent or Origin (n=17)			Participants Not of Hispanic, Latino, or Spanish Descent or Origin (n=302)		
	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Perceived Risk, 0-3	2.13	2.22	4.20	2.11	2.29	8.57**
Decision-Making Skills, 0-3	1.90	2.29	20.00**	1.84	1.83	-0.49
Disapproval of Use, 0-3	2.33	2.48	6.32	2.24	2.37	5.63**
Perceived Peer Norms, 0-3	2.18	2.48	13.72	1.97	2.07	5.00*
Perceived Parental Attitudes, 0-3	2.60	2.82	8.38	2.55	2.63	3.26**

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre Average	Post Average	% Change	Pre Average	Post Average	% Change
Other Tobacco	10.00	0.00	-100.00	1.72	1.29	-24.68
Cigarettes	15.00	0.00	-100.00	3.00	5.22	73.66
E-Cigarettes or Vapes	15.00	9.52	-36.51	16.67	19.48	16.88
Alcohol	20.00	4.76	-76.19	14.10	15.28	8.38
Marijuana	15.79	9.52	-39.68	14.59	16.88	15.70
Non-Medical Prescription Drug Use	0.00	0.00	-	4.70	3.45	-26.65
Prescription Pain Pills	0.00	0.00	-	4.27	4.33	1.30
Heroin or Fentanyl	5.00	0.00	-100.00	0.43	0.87	101.73
Cocaine	5.00	4.76	-4.76	0.43	1.74	305.22
Other Illegal Drugs	5.00	0.00	-100.00	1.30	1.74	33.91
CBD use	10.53	0.00	-100.00	3.46	3.95	13.98

* 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)			Life Skills (n=202)		
	Pre-Average	Post Average	% Change	Pre-Average	Post Average	% Change
Perceived Risk, 0-3	2.10	2.29	8.71**	2.11	2.34	10.67**
Decision-Making Skills, 0-3	1.85	1.87	1.33	1.86	1.89	1.70
Disapproval of Use, 0-3	2.24	2.37	5.73**	2.25	2.43	8.07**
Perceived Peer Norms, 0-3	1.98	2.10	6.20**	2.03	2.16	6.37**
Perceived Parental Attitudes, 0-3	2.54	2.64	3.93**	2.55	2.68	5.22**

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre-Average	Post Average	% Change	Pre-Average	Post Average	% Change
Other Tobacco	2.34	1.17	-50.00	0.00	0.50	--
Cigarettes	3.91	4.72	20.94	0.50	2.53	405.05
E-Cigarettes or Vapes	16.34	18.43	12.78	13.93	13.57	-2.60
Alcohol	14.40	14.23	-1.16**	11.44	11.17	-2.41
Marijuana	14.90	16.47	10.53	14.00	14.07	0.50
Non-Medical Prescription Drug Use	4.28	3.13	-26.99	4.98	3.50	-29.65
Prescription Pain Pills	3.89	3.92	0.78	4.98	4.02	-19.20
Heroin or Fentanyl	0.78	0.78	0.39	0.50	0.50	0.00
Cocaine	1.35	1.63	*20.74*	0.00	2.02	--
Other Illegal Drugs	3.03	0.41	*-86.47**	1.01	1.01	0.00
CBD use	3.05	2.37	*-22.30*	3.05	3.06	0.51

* 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)	Keeping It Real (n=43)		
	Pre-Average	Post Average	% Change
Perceived Risk, 0-3	2.04	2.09	2.72
Decision-Making Skills, 0-3	1.81	1.77	-2.56
Disapproval of Use, 0-3	2.13	2.08	-2.34
Perceived Peer Norms, 0-3	1.56	1.80	15.54*
Perceived Parental Attitudes, 0-3	2.45	2.44	-0.37

Substance Use, % Users in Past 30 Days (Negative change is favorable)	Pre-Average	Post Average	% Change
Other Tobacco	13.95	4.65	-66.67
Cigarettes	20.93	16.28	-22.22
E-Cigarettes or Vapes	32.56	46.51	42.86
Alcohol	27.91	32.56	16.67
Marijuana	23.26	0.33	-98.60
Non-Medical Prescription Drug Use	2.33	2.33	0.00
Prescription Pain Pills	0.00	4.65	--
Heroin or Fentanyl	2.33	2.33	0.00
Cocaine	4.65	2.33	-50.00
Other Illegal Drugs	4.65	4.65	0.00
CBD use	9.52	6.98	-26.74

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 OSUS Standard Survey asks for 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. OSUS 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 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 an 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 set 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. Many 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, 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 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, 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 over 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 SPSS statistical software for all analyses. We conducted paired-samples t-tests to compare the means of the pre-survey and post-survey scores for each risk-factor measure assessed on the surveys. This test computed the difference (change) between the pre- and post-survey means for each factor and then tested whether the mean difference was "significantly different" from zero. A statistically significant difference means that the observed difference was too large to occur because 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.