PACIFIC INSTITUTE FOR RESEARCH AND EVALUATION

State of South Carolina
Department of Alcohol and Other Drug Abuse Services
Partnerships for Success - ECHO Project
Final Evaluation Report

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Pacific Institute for Research and Evaluation
Chapel Hill Center
101 Conner Drive, Suite 200
Chapel Hill, NC 27514
www.pire.org

Contributors to this Report

Al Stein-Seroussi, PhD
Michael George, PhD
Elaine Dowdy Melvin, MPH
Dave Currey, PhD

For Inquiries about this Report

Al Stein-Seroussi
stein@pire.org
919-265-2616

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EXECUTIVE SUMMARY

In 2015, the State of South Carolina was awarded a Strategic Prevention Framework Partnerships for Success (PFS) grant from the US Substance Abuse and Mental Health Services Administration (SAMHSA). This comprehensive five-year grant was administered by the South Carolina Department of Alcohol and Other Drug Abuse Services (DAODAS). The primary aim of the South Carolina PFS project (known as ECHO – Empowering Communities for Healthy Outcomes) was to reduce prescription drug abuse/misuse among persons 12 – 25 and impaired driving among the general population. To accomplish this aim, DAODAS funded five county coalitions to address prescription drug abuse/misuse and five to address impaired driving.

DAODAS contracted with Pacific Institute for Research and Evaluation (PIRE) to conduct a process and outcome evaluation of the ECHO project at the state and community levels. The primary goal of the evaluation was to document and assess the activities, accomplishments, and outcomes associated with ECHO so that state and community stakeholders could learn from the experience and use their prevention resources effectively during and after the initiative. PIRE used a multi-method approach to answer five evaluation questions.

Q1. How was the ECHO project implemented throughout South Carolina?

DAODAS and the funded coalitions took comprehensive steps to implement the PFS. DAODAS selected 10 high-need communities based on available data about rates of prescription drug abuse and impaired driving. Five coalitions were funded to address prescription drug abuse/misuse and five were funded to address impaired driving. In addition, DAODAS provided more limited funds to additional counties to install or enhance prescription drug drop boxes, some of which were already receiving impaired driving funds.

DAODAS staff provided direct training and technical assistance (TTA) to the coalitions through webinars, conference calls, and in-person meetings during which the coalitions gathered in Columbia to discuss project updates, share information, and receive training. DAODAS also provided indirect TTA to the coalitions by funding regional Capacity Coaches that were mandated to provide TTA to coalitions as needed.

The ten coalitions implemented a series of strategies including the following:

- Educating health care providers about best practices for prescribing pain medications.
- Distributing safe storage devices (lock boxes) and disseminating information about safe storage of prescription drugs.
- Establishing and supporting safe disposal mechanisms (e.g., Deterra bags, community drop boxes, and Take Back events) and disseminating information about safe disposal of prescription drugs.
- Conducting sobriety checkpoints and saturation patrols to reduce impaired driving.
- Conducting social marketing and media campaigns about the risks of impaired driving.
- Implementing school-based programs to prevent impaired driving and prescription drug misuse.

Q2. To what extent did prevention capacity increase as a result of ECHO?

Coalition members reported a high level of capacity to function as effective coalitions at the beginning of the project and reported even higher levels of capacity near the end of the project. This suggests that even strong coalitions can demonstrate continued growth over time.

Interviews with the coalition staff provided many examples of how the coalitions developed more effective partnerships throughout the project, thereby enhancing their capacity to play a prominent role in prevention in their communities and to sustain strategies to reduce prescription drug misuse/abuse and impaired driving.

Q3. To what extent did impaired driving in South Carolina decrease?

Data from the Young Adult Survey indicate that self-reported impaired driving did not decrease in the counties funded by the ECHO project. That is, young adults reported driving while drinking or drugging, or riding with someone who had been drinking or drugging, at the same rate at the beginning of the project and at the end. (See Figures 8 and 9).

Traffic crash data indicate that alcohol-related traffic crashes decreased in South Carolina in the impaired driving sites, prescription drug sites, and overall. The alcohol-related crash rates for drivers under the age of 21 decreased only in the impaired driving sites, although this decrease was evident only in the final year. (See Figures 17 and 18.)

The data are mixed, with the survey providing no evidence that the ECHO project contributed to reductions in impaired driving. The crash data provide some data to suggest that the ECHO project may have contributed to reductions in alcohol-related crashes.

Q4. To what extent did prescription drug misuse/abuse among people ages 12 to 25 in South Carolina decrease?

Data from the Young Adult Survey indicate that the self-reported use of sedatives decreased in the prescription drug sites but not in the impaired driving sites, suggesting that the ECHO project may have contributed to the decrease. There were no similar reductions in pain reliever or stimulant use. (See Figures 12 and 13.)

Emergency Department visits for opioid use increased in prescription drug sites, impaired driving sites, and overall but the rate of increase was substantially lower in the prescription drug sites and the rates have been declining since 2016. (See Figure 19.)

The state rate of prescription drug overdose deaths steadily increased during the project (though we only have data through 2018) and the death rate in the prescription drug sites increased substantially in 2018 after being steady for several years. (See Figure 20.)

These data suggest that the ECHO project contributed to reductions in sedative use (but not opioid use) and a lower rate of increase in Emergency Department visits for opioid use.

Q5. To what extent did the risk and protective factors of prescription drug misuse/abuse and impaired driving change as a result of ECHO?

For most risk and protective factors measured, we found no differences over time. Prescription rates decreased slightly in the prescription drug sites and the state overall but did not change for the impaired driving sites. The prescription rates specifically for opioids and benzodiazepines decreased for all three groups.

These data suggest there were no observed project related changes in risk and protective factors associated with prescription drug misuse/abuse and impaired driving as a result of the ECHO project.

INTRODUCTION

In 2015, the State of South Carolina was awarded a Strategic Prevention Framework Partnerships for Success (PFS) grant from the US Substance Abuse and Mental Health Services Administration (SAMHSA). This comprehensive five-year grant was administered by the South Carolina Department of Alcohol and Other Drug Abuse Services (DAODAS). The primary aim of the South Carolina PFS project (known as ECHO – Empowering Communities for Healthy Outcomes) was to reduce prescription drug abuse/misuse among persons 12 – 25 and impaired driving among the general population. To accomplish this aim, DAODAS funded five county coalitions to address prescription drug abuse/misuse and five to address impaired driving.

In October of 2016, DAODAS contracted with Pacific Institute for Research and Evaluation (PIRE) to provide evaluation services for this project. The PIRE evaluation team conducted a process and outcome evaluation of the ECHO project at both the state and community levels. The primary goal of the evaluation was to document and assess the activities, accomplishments, and outcomes associated with ECHO so that state and community stakeholders could learn from the experience and use their prevention resources effectively during and after the initiative.

Evaluation Goals and Questions

The overall goals of the evaluation were to assess (a) the implementation of the PFS at the state and community levels; (b) changes in prescription drug abuse/misuse and related intervening variables and consequences; and (c) changes in impaired driving and related intervening variables and consequences. More specifically, the South Carolina ECHO evaluation aimed to answer the following five overarching evaluation questions regarding the project.

1. How was the ECHO project implemented throughout South Carolina?
2. To what extent did prevention capacity increase as a result of ECHO?
3. To what extent did impaired driving in South Carolina decrease?
4. To what extent did prescription drug misuse/abuse among people ages 12 to 25 in South Carolina decrease?
5. To what extent did the risk and protective factors of prescription drug misuse/abuse and impaired driving change as a result of ECHO?

Evaluation Methods and Design

The evaluation team used a multi-method approach with a quasi-experimental pre-post design. We gathered data from the following sources to track programmatic activities and assess changes over time on key project-related indicators:

- Program activity (output) data from the coalitions' Management Information System (MIS) spreadsheets, 2016 - 2020
- Coalition Capacity Survey, conducted by PIRE in 2017 and 2020
- Young Adult Survey, conducted by PIRE in 2017 and 2019
- Key Informant Interviews, conducted annually by PIRE with ECHO project coordinators
- Administrative Data
    - Alcohol-related traffic crashes, SC Department of Public Safety, 2015 – 2019
    - Opioid-related emergency department visits, SC Office of Revenue and Fiscal Affairs, 2015 – 2019
    - Prescription drug-related overdose deaths, SC Department of Health and Environmental Control, 2015 – 2018
    - Prescriptions Dispensed, SC Department of Health and Environmental Control, 2015 - 2019

We capitalized on the fact that half the sites received funding to address prescription drug abuse/misuse and half to address impaired driving. Where possible, we used data from one county group to serve as a comparison for the other county group. We hypothesized that we would find an interaction effect between site type and time, such that changes over time in indicators related to prescription drug abuse/misuse would be more pronounced in the prescription drug sites than in the impaired driving sites; conversely, we hypothesized that changes in indicators related to impaired driving would be more pronounced in the impaired driving sites than the prescription drug sites.

EVALUATION RESULTS

Question 1. How was the ECHO project implemented throughout South Carolina?

Data Sources: Discussions with DAODAS staff, Grantee Logic Models, Grantee MIS Spreadsheets, Key Informant Interviews

State Implementation

DAODAS applied for and received the PFS grant in 2015. DAODAS, in turn, distributed PFS funds to countywide substance abuse prevention coalitions across the state to implement a comprehensive mix of programs, policies, and practices in their respective communities. DAODAS selected high-need communities based on available data about rates of prescription drug abuse and impaired driving. In 2016, four coalitions were funded to address prescription drug abuse/misuse and five were funded to address impaired driving. In 2017, DAODAS added a prescription drug county (Horry) and provided temporary ECHO funding to 21 counties to install or enhance prescription drug drop boxes, some of which were already receiving impaired driving funds. In 2018, DAODAS funded 10 temporary drop box sites, some of which had been funded in 2017. Figure 1 provides a map of the 10 fully funded ECHO counties and the temporary ECHO drop box counties. As can be seen, the fully funded ECHO coalitions were dispersed across the state. (The remainder of this report focuses solely on the fully funded sites.)

Figure 1. Map of South Carolina PFS Coalitions

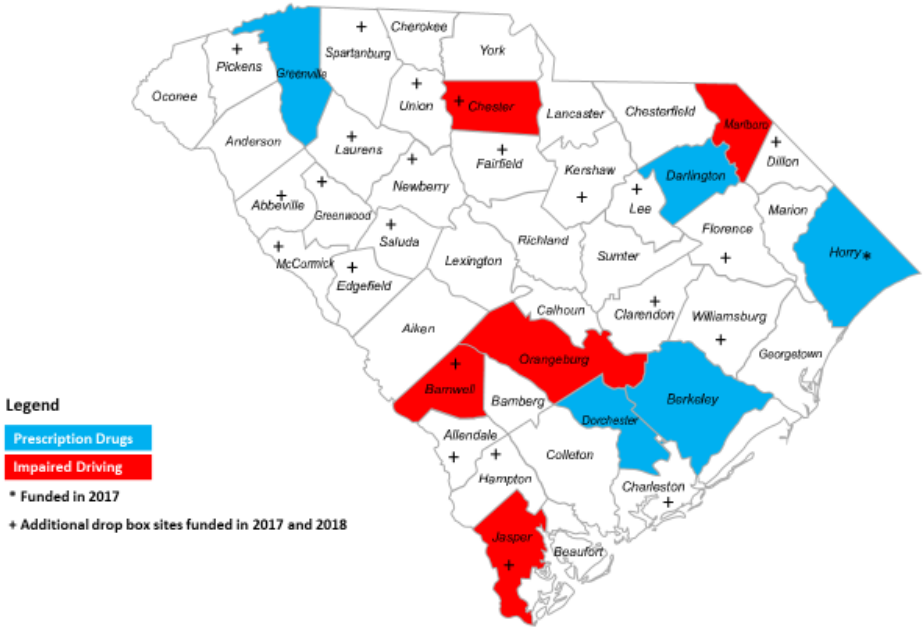


Table 1 lists the 10 fully funded counties, their coalition/agencies, and their target populations. The target populations range from 21,577 to 514,213. Notably, the prescription drug counties are much more populous than the impaired driving counties, accounting for 86.6% of the population served by the ECHO project.

Table 1. South Carolina PFS Coalitions, Counties, and Populations

County	Coalition/Agency Name	County Population[a]
Prescription Drugs		
Berkeley	Kennedy Center	209,065
Darlington	Rubicon	66,802
Dorchester	Dorchester Alcohol and Drug Commission	155,474
Greenville	Phoenix Center	514,213
Horry	Shoreline Behavioral Health Services	320,915
TOTAL		1,266,469
Impaired Driving		
Barnwell	Axis 1 Center	21,577
Chester	Hazel Pittman	32,326
Jasper	New Life Center	27,900
Marlboro	Trinity Behavioral Care	27,131
Orangeburg	Tri-County Commission on Alcohol and Drug Abuse	86,934
TOTAL		195,868

[a] US Census Bureau, https://data.census.gov/cedsci/, 2019 Annual Estimates of the Resident Population for Counties in South Carolina, American Community Survey 5-Year Estimates.

Throughout the project, DAODAS provided programmatic and fiscal oversight of the coalitions, communicated frequently with local project coordinators, and offered guidance as needed. DAODAS used IMPACT to collect planning and output data from the coalitions on a monthly basis. IMPACT is a cloud-based reporting tool designed to allow prevention providers to document all their activities related to the SPF steps. DAODAS reviewed monthly IMPACT data to determine if coalitions were implementing their projects as planned.

DAODAS staff provided direct training and technical assistance (TTA) to the coalitions through webinars, conference calls, and in-person meetings during which the coalitions gathered in Columbia to discuss project updates, share information, and receive training. DAODAS also provided indirect TTA to the coalitions by funding regional Capacity Coaches that were mandated to provide TTA to coalitions as needed.

Figure 2 displays the general ECHO prescription drug abuse prevention logic model, with the connections between consequences, consumption, intervening variables, and strategies. Moving from left to right in the figure, we see that the project was focused on negative events associated with the prescription drug abuse (e.g., deaths, emergency department visits, and hospital admissions) and consumption patterns associated with abuse (e.g., using prescription drugs without a doctor's prescription or using prescribed drugs in improper doses). Consumption patterns are influenced by a series of intervening variables, including retail access, perceptions of the risks, and social access to prescription drugs. Those intervening variables, in turn, are potentially influenced by the strategies being implemented in the funded communities (e.g., prescriber education, promoting and enforcing the SCRIPTS prescription drug monitoring program, media campaigns, take back events/drop boxes, and safe home storage and disposal).

Figure 2. South Carolina ECHO General Prescription Drug Abuse/Misuse Prevention Logic Model

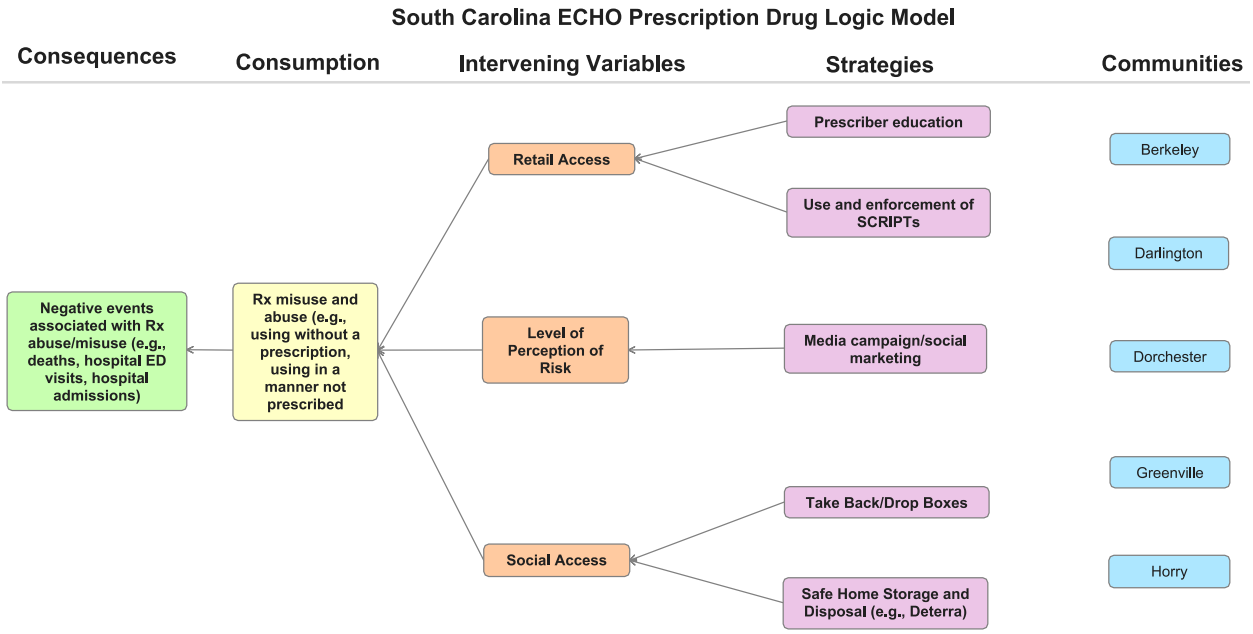
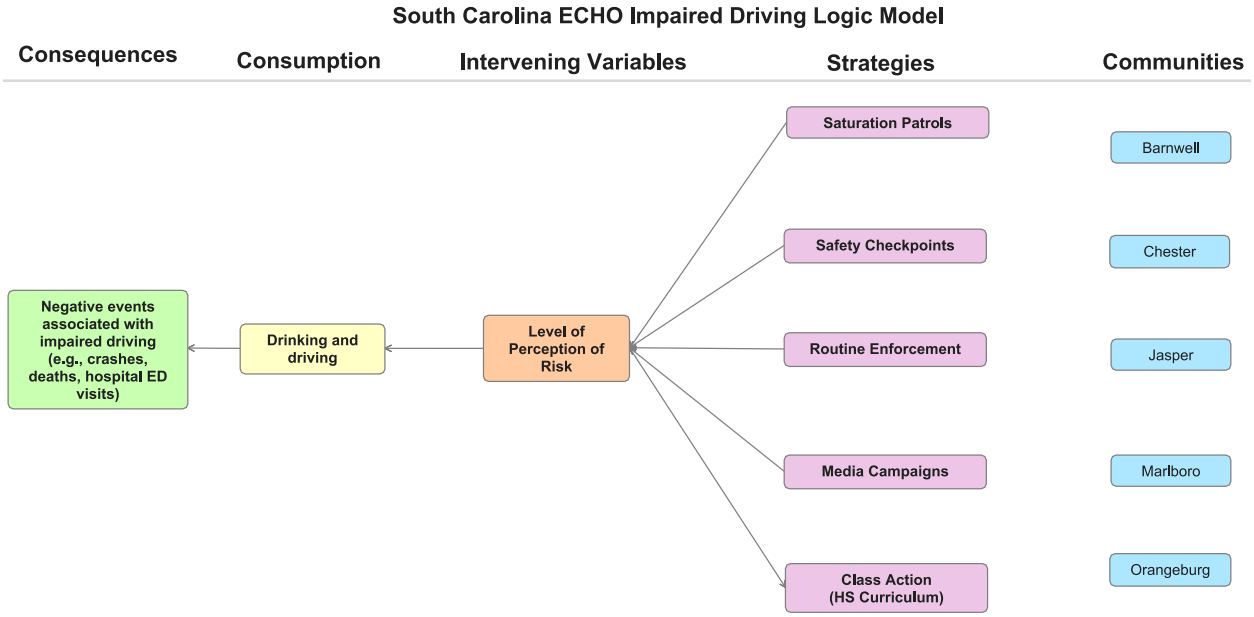


Figure 3 displays a similar ECHO impaired driving prevention logic model. Moving from left to right in the figure, we see that the project was focused on negative events associated with impaired driving (e.g., crashes, deaths, and emergency department visits) and consumption (i.e., drinking and driving). For this project, coalitions primarily worked to influence consumption by focusing on increasing the perceived risks of drinking and driving, particularly the risk of being arrested. To influence perceptions of risk, the funded communities implemented strategies such as saturation patrols, safety checkpoints, routine law enforcement, a high school curriculum, and media campaigns.

Figure 3. South Carolina ECHO General Impaired Driving Prevention Logic Model



Coalition-Level Implementation

Prescription drug coalitions implemented their ECHO strategies from July 2016 to September 2020, and impaired driving coalitions implemented strategies from August 2016 to September 2020. This section provides data on the implementation of the ECHO project at the coalition level, based on information gathered through interviews with coalition staff and information inputted into the coalitions' Management Information System (MIS) spreadsheets.

Table 2 shows the strategies that were implemented by the coalitions. For prescription drug abuse coalitions, the most common strategies were community safe disposal (all five coalitions), social marketing/media (5), and safe home storage and disposal (4). For impaired driving coalitions, all five implemented high visibility sobriety checkpoints, saturation patrols, and social marketing/media campaigns.

Table 2. South Carolina ECHO Coalitions and Strategies

Strategies	*Berkeley*	*Darlington*	*Dorchester*	*Greenville*	*Horry*	*Barnwell**	*Chester**	*Jasper**	*Marlboro*	*Orangeburg*	*Total by Strategy*
Prescription Drug Abuse/Misuse Prevention											
Education/Training: Providers (doctors, dentists, PAs)	X	0	X	X	X						***4***
Community Safe Disposal (drop boxes, Take Back events)	X	X	X	X	X						***5***
Home Storage/Disposal (lock boxes, Deterra)	X	X	X	0	X						***4***
Social Marketing/Media Campaign	X	X	X	X	X						**5**
School-based Curriculum	0	0	X	0	0						**1**
TOTAL	**4**	**3**	**5**	**3**	**4**						**19**
Impaired Driving Prevention											
Sobriety Checkpoints						X	X	X	X	X	**5**
Saturation Patrols						X	X	X	X	X	**5**
Social Marketing/Media Campaign						X	X	X	X	X	**5**
School-based Curriculum						X		X			**2**
TOTAL						**4**	**3**	**4**	**3**	**3**	**17**
* Barnwell, Chester, and Jasper also received temporary ECHO funds to install or support drop boxes.											

Outputs

The next section of the report provides data on coalition activities (outputs) from October 2016 to September 2020. Table 3 displays outputs for non-media activities. During the past year, prescription drug coalitions established no new drop box locations, supported two Take Back events, collaborated with two new pharmacies to distribute Deterra home disposal bags, and distributed Deterra to 2,721 people. Looking across all years, peak years of activity for each strategy occurred in Year 1 for drop boxes, Year 2 for Take Back events, Year 3 for pharmacies, and Year 2 for distributing Deterra. During the past year, impaired driving coalitions conducted 653 sobriety checkpoints and saturation patrols, with nearly 44,000 cars passing through. Year 1 was the peak year for number of checkpoints and saturation patrols, whereas this past year was the peak for number of cars passing through. We should note that the final two quarters of the project (April through September 2020) were in the midst of the COVID-19 pandemic and likely limited the extent to which coalitions implemented ECHO strategies.

Table 3. South Carolina ECHO Outputs by Coalition for 2019 – 2020 and Totals for All Years

Strategies	Berkeley	Darlington	Dorchester	Greenville	Horry	Barnwell	Chester	Jasper	Marlboro	Orangeburg	Total[a]			
											2019/ 20	2018/ 19	2017/ 18	2016/ 17
Prescription Drug Abuse/Misuse Prevention														
Number of new permanent safe drop-off locations established	0	0	0	0	0						**0**	**1**	**15**	**23**
Number of Take Back events	1	1	1	0	0						**3**	**11**	**24**	**18**
Number of pharmacies that began to give away Deterra	0	1	1	0	0						**2**	**4**	**0**	**1**
Number of people that received Deterra	371	1,096	964	0	290						**2,721**	**3,408**	**6,137**	**2,172**
Impaired Driving Prevention														
Number of checkpoints/ patrols						400	139	76	75	28	**718**	**459**	**626**	**897**
Number of cars passing through						2,650	5,737	32,500	3,149	459	**44,495**	**30,223**	**21,108**	**22,540**

[a] Green cell indicates the peak year.

As shown in Table 4, coalitions were heavily engaged in media campaigns and information dissemination activities through paid ads (TV, radio, and print), PSAs, special events, presentations, posters, brochures, websites, and social media.

Table 4. South Carolina ECHO Media Activities by Coalition for 2019 – 2020 and Totals for All Years

Activities	Berkeley	Darlington	Dorchester	Greenville	Horry	Barnwell	Chester	Jasper	Marlboro	Orangeburg	Total[a]			
											2019/ 20	2018/ 19	2017/ 18	2016/ 17
# of times TV ads aired	0	0	0	0	0	0	0	0	0	0	0	0	32	511
# of weeks TV ads aired	0	0	0	0	0	0	0	0	0	0	0	0	3	21
# of TV stations on which ads aired	0	0	0	0	0	0	0	0	0	0	0	0	1	2
# of times radio ads aired	0	0	0	0	0	0	0	0	0	3,600	3,600	797	1,126	165
# of weeks radio ads aired	0	0	0	0	0	0	0	0	0	15	15	286	51	46
# of radio stations on which ads aired	0	0	0	0	0	0	0	0	2	0	2	28	14	4
# of times print ads ran	96	0	15	0	0	3	22	0	4	25	165	111	111	127
# of different newspaper ads ran in	10	0	6	0	0	2	13	0	0	0	31	35	37	11
# of special events	4	10	48		5	1	7	3	2		80	155	100	101
# of other promotional activities	0	0	0	0	0	0	5	0	0	0	5	16	47	534
# of community meetings	0	6	10	23	4	18	23	9	27	0	120	137	131	165
# of participants at community meeting	0	104	38	313	174	216	290	79	105	0	1,319	851	3,047	1,420
# of letters published	0	0	0	0	0	0	0	0	0	0	0	1	14	7
# of PSAs broadcast	0	0	0	0	0	0	0	0	0	90,078	90,078	55	263	43
# of posters distributed	0	0	0	485	0	0	1,130	0	0	0	1,615	3,230	4,704	1,202
# of brochures distributed	710	1,575	290	460	2,250	0	200	800	1,000	0	7,285	8,830	30,974	8,545

Table 4. South Carolina ECHO Media Activities by Coalition for 2019 – 2020 and Totals for All Years

Activities	Berkeley	Darlington	Dorchester	Greenville	Horry	Barnwell	Chester	Jasper	Marlboro	Orangeburg	Total[a]			
											2019/ 20	2018/ 19	2017/ 18	2016/ 17
# of visitor sessions to webpage dedicated to this strategy	0	0	0	0	0	0	0	0	4,840	0	4,840	130,691	185,163	78,594
# of new visitor sessions to webpage dedicated to this strategy	0	0	0	0	0	0	0	0	3,995	0	3,995	2,240	1,757	2,399
# of unique pay views to webpage dedicated to this	0	0	923,772	0	0	0	0	0	52	0	923,824	230,950	142	0
# average amount of time spent on website	0	660	10	0	0	58	30	0	25	0	783	460	392	599
# of FB likes related to this strategy	134	990	92	875	9	1,008	5,265	30,720	129	13,878	53,100	36,512	26,333	29,696
# of FB shares	23	471	8	0	3	478	1,126	191	197	341	2,838	14,015	2,523	21,401
# of FB Videos	0	0	0	0	0	0	38	0	0	0	38	16	16	2
# of FB Reaches	0	0	0	0	0	0	283,301	0	0	0	283,301	104,338	101,017	11
# of tweets initiated by you	0	7	0	0	0	0	202	0	0	0	209	175	235	2
# of retweets	0	2	0	0	0	0	18	0	0	0	29	48	101	11
Other: # of Facebook posts	0	0	0	0	0	6	285	0	0	0	291	384	13	15
Other: Portable/Billboard Signs	0	0	0	0	0	16	0	0	0	205,934	205,950	1,504,067	41,500	8

[a] Green cell indicates the peak year.

Key Informant Interviews

During the spring of 2020, we conducted virtual interviews with each of the local ECHO project directors. We asked them about significant accomplishments, major partners, and barriers encountered related to the Strategic Prevention Framework during the five years of the project's implementation. In this section, we describe the successes and challenges as reported by the ECHO project directors. In addition, we asked about the project director's relationship with its Regional Capacity Coach and plans to sustain the project. Note that comments in this section are derived from the project director during the virtual interviews and are not necessarily conclusions that we, as the evaluators, have drawn. In addition, comments do not necessarily represent the majority opinion but do convey ideas and comments that we felt rose to a level worthy of documenting in this report.

Most Significant Accomplishments

Impaired Driving Sites. Over the past five years, all sites reported that they achieved tremendous success in addressing impaired driving in the general population utilizing a myriad of strategic planning activities and engaging key partners. Major accomplishments included the following: high visibility of law enforcement, increased awareness of consequences of impaired driving, formation of coalitions that are representative of major sectors of the community, building capacity of coalitions through training, multi-agency collaboration, media campaigns focused on underage drinking and impaired driving, social media outlets that promoted prevention messages, the hiring of a youth coordinator and formation of a youth board to plan and implement activities to prevent underage drinking, and the implementation of the Class Action curriculum.

Law enforcement played a significant role in addressing the goals of the project by conducting DUI arrests, public safety checkpoints, compliance checks, and saturation patrols. One respondent cited that a Memorandum of Agreement was initiated that allowed law enforcement jurisdictions to work collaboratively. Additionally, two coalitions purchased equipment to assist law enforcement in their efforts (e.g., flashlights, power flares, and body cameras).

Prescription Drug Sites. Respondents noted several successes during the grant period, such as placement of drop boxes, partnership with and training of law enforcement officials, distribution of Deterra packets, and Take Back events. Coalitions worked to educate the community through community forums, websites, billboards, public service announcements and print materials. Two coalitions also worked to train medical staff about evidence-based prescriber practices.

Other successes included forming strategic partnerships, including those with the host agency's Medicaid Assisted Treatment (MAT) program, a senior citizen center, and an LGBTQ organization. One respondent noted that the periodic sharing of the logic model helped to educate the coalition about the reduction of prescription drugs in the targeted area. Another respondent cited special one-time funding to the Coroner's Office to purchase software to

allow for the loading of data collected since 1989. The availability of this software was shared with the other prescription drug sites.

Contributors to Progress or Accomplishments

Impaired Driving Sites. Impaired driving sites noted that law enforcement, community-based organizations, and media organizations were major contributors to the project's accomplishments. Law enforcement agencies contributed by serving on the coalitions, and by conducting compliance checks, public safety checkpoints, and saturation patrols. Community-based organizations played a key role by serving on the coalition, supporting community events, and helping to educate the community about the consequences of impaired driving. The coalitions also used various media outlets (newspaper, television, radio, and billboards) to help educate the public about the hazards of drinking and driving and to inform the public about the ECHO strategies that were being implemented in communities. Other important partnerships for some coalitions included schools, the faith-based community, the solicitor's office, and the coroner.

When we asked the local project directors if there were other entities they wish had been involved in the project, most responded that they were no others with whom they would have liked to engage. Two respondents, however, noted they would have liked to engage with local health providers, other schools, and local businesses. One respondent mentioned the desire to have parents serve on the coalition specifically representing a parent group.

Prescription Drug Sites. We received a variety of answers about significant contributors to the progress and accomplishments of the ECHO project. Two respondents cited the host alcohol and drug abuse agency's unwavering support throughout the grant period, with agency staff being involved in various activities and events. A variety of other key partners were mentioned, including the following: coalition board members, media outlets, a hospital system, a coroner, law enforcement, a Drug Enforcement Administration (DEA) representative, a Department of Health and Environmental Control (DHEC) representative, and the AmericCorps Vista Program.

When asked if there were entities they wish had been involved, two respondents mentioned a desire for more involvement from the physician and dental communities. Although physicians and dentists attended trainings, additional participation would have been helpful.

Barriers or Challenges

Impaired Driving Sites. When asked about barriers or challenges to the progress of the county's ECHO project, respondents cited that COVID-19 posed a challenge during the latter half of the project's fifth year of implementation. A few respondents noted that impairing driving was challenging to enforce because of interstate travel, with traffic crossing the state line to 'party' and then return to home. Other respondents expressed concerns that DUI laws are ambiguous and that communities lack support from solicitors and judges to enforce the laws.

Two respondents noted the two-year lag in much of the data was a barrier to effective planning. Other concerns included resistance from school administration to offer education and awareness surrounding underage drinking and to administer the school survey, as well as the limited availability of law enforcement staff (either because of staffing shortages or turnover) to enforce environmental strategies. A few others noted that impaired driving was challenging to enforce because of interstate travel (i.e., people traveling across state lines to 'party').

We asked project directors whether they wish they had done anything differently in implementing the ECHO project. Most respondents remarked that despite challenges, they would not change a thing. One respondent, however, commented that they would have more outreach to the media.

Prescription Drug Sites. There was consensus among the respondents that the state's inability to have a plan to incinerate medications collected at drop boxes was a major barrier. Sites have been successful in encouraging residents to dispose of their medication at designated drop boxes but unsuccessful in the final disposal of medications. As previously mentioned, the timely receipt of data from state agencies continued to be a barrier. Additionally, staff turnover within the ECHO agencies was cited as a barrier. One respondent noted that the school district initially declined to participate in the school survey, but the district is now on board. Another respondent noted that veterans can receive medications automatically by mail, mitigating some prevention efforts in communities. Finally, it was noted that the availability of non-prescription opioids (e.g., fentanyl) was a barrier to widespread project success.

When asked to reflect on what they would have done differently, if anything, there were several responses, including the following: greater involvement with social media, more involvement with data collection and presenting data to the coalition more often, more youth involvement including creation of a youth board, and participation from physicians.

Additional Comments

We asked respondents if they would like to add anything else prior to the conclusion of the interview. The following comments were provided:

- I have truly enjoyed working on this project and have learned so much during my time as ECHO Coordinator;
- I'm so grateful for ECHO as it was the first opportunity to address opioids;
- I want to continue this work. There is a great need for education, most people think [using] prescription drugs is okay even when it's not your medication;
- The host alcohol and drug agency believed so strongly in ECHO that it provided lunch for each coalition meeting. This was a way not only to encourage attendance, but also an informal networking time among partners prior to the start of the meeting; and
- Our scope broadened from impaired driving to drug impaired driving as we realized how much drug impaired driving was occurring.

Q1. How was the ECHO project implemented throughout South Carolina?

DAODAS and the funded coalitions took comprehensive steps to implement the PFS. DAODAS selected 10 high-need communities based on available data about rates of prescription drug abuse and impaired driving. Five coalitions were funded to address prescription drug abuse/misuse and five were funded to address impaired driving. In addition, DAODAS provided more limited funds to additional counties to install or enhance prescription drug drop boxes, some of which were already receiving impaired driving funds.

DAODAS staff provided direct training and technical assistance (TTA) to the coalitions through webinars, conference calls, and in-person meetings during which the coalitions gathered in Columbia to discuss project updates, share information, and receive training. DAODAS also provided indirect TTA to the coalitions by funding regional Capacity Coaches that were mandated to provide TTA to coalitions as needed.

The ten coalitions implemented a series of strategies including the following:

- Educating health care providers about best practices for prescribing pain medications.
- Distributing safe storage devices (lock boxes) and disseminating information about safe storage of prescription drugs.
- Establishing and supporting safe disposal mechanisms (e.g., Deterra bags, community drop boxes, and Take Back events) and disseminating information about safe disposal of prescription drugs.
- Conducting sobriety checkpoints and saturation patrols to reduce impaired driving.
- Conducting social marketing and media campaigns about the risks of impaired driving.
- Implementing school-based programs to prevent impaired driving prescription drug misuse.

Question 2. To what extent did prevention capacity increase as a result of ECHO?

Data Sources: Coalition Capacity Survey, Key Informant Interviews

Coalition Capacity Survey

In the springs of 2017 and 2020, PIRE administered an online survey to assess coalition capacity. We used a coalition capacity survey that is widely used among coalitions and evaluators.[1] The survey assesses 10 constructs:

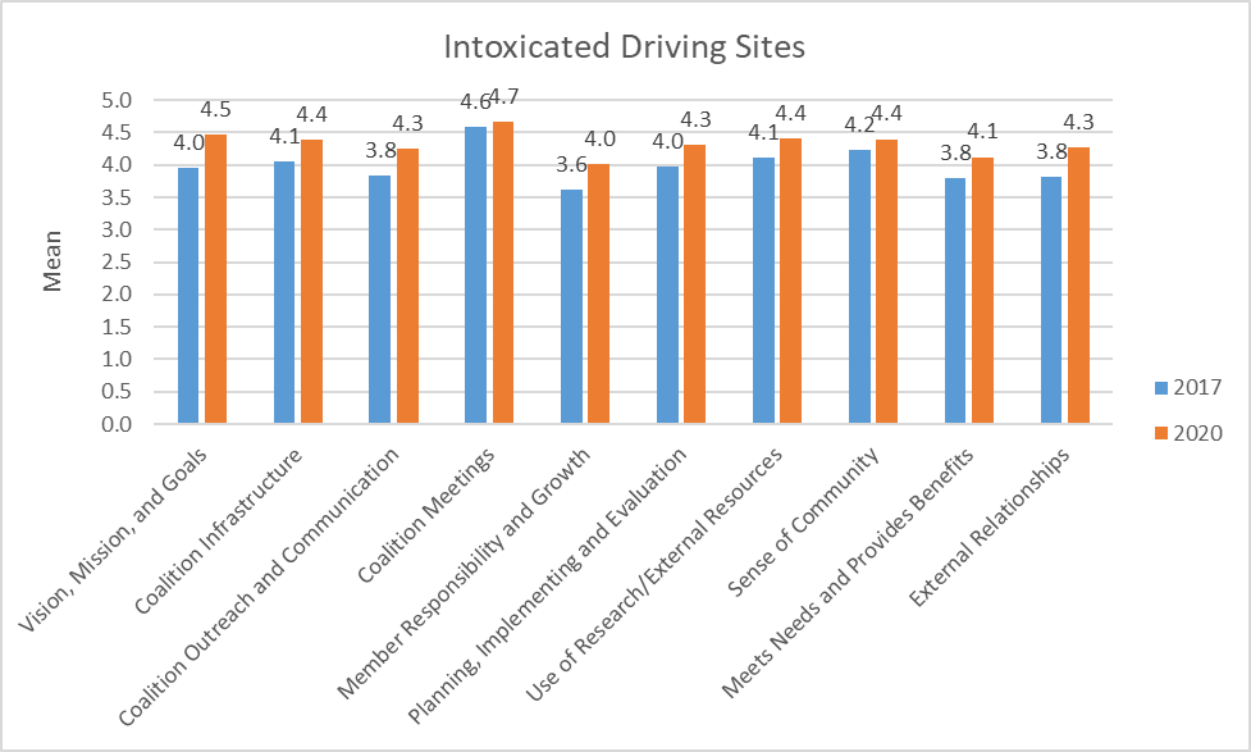
- Vision, mission, and goals
- Coalition infrastructure
- Coalition outreach and communication
- Coalition meetings
- Membership responsibility and growth
- Planning, implementation, and evaluation
- Use of research/external resources
- Sense of community
- Meets needs and provides benefits
- External relationships

For both waves, we sent the survey link to the ECHO coordinators and asked them to distribute the link to their coalition members. Seven coalitions participated in our online survey at baseline, and eight coalitions participated near the end of the project (Horry had not yet joined the ECHO project in 2017 so it was not asked to participate either year, and Dorchester had recently completed a similar assessment in 2017, so did not participate in our baseline survey). All five of the Intoxicated Driving sites and one of the Prescription Drug sites participated both years. Below we present information about the changes across time for the five Intoxicated Driving sites as a group. We do not present information about the prescription drug sites as a group because we only have data from one coalition for both waves of data collection.

Figure 4 shows that the Intoxicated Driving coalitions reported moderately high levels of capacity across the domains in 2017. The lowest mean scale score was 3.6 for the Membership Responsibility and Growth construct, and the mean was 4.0 or above for six of the ten scores. The 2020 scores were even higher for each of the constructs. All ten scale score means were 4.0 or above, with the largest increases being for Vision, Mission and Goals; Coalition Outreach and Communication; and External Relationships. These positive changes indicate that the coalitions improved their ability to serve their communities during the project, which should contribute to the sustainability of positive aspects of the project after the grant funding ends.

[1] Frances Dunn Butterfoss, "Coalitions and Partnerships in Community Health."

Figure 4. 2017 and 2020 Coalition Capacity Survey Construct Scale Means



Key Informant Interviews

Strengthened Coalitions and Communities

We asked respondents how, if at all, their coalitions and communities were strengthened by the ECHO project. Below is a list of responses.

- Attendance at coalition meetings;
- Expansion of the coalition membership (e.g., to include the coroner's office and law enforcement agencies);
- Collaboration between coalition members;
- Collaboration between law enforcement agencies;
- The coalitions' understanding the Strategic Prevention Framework process;
- The coalitions' use of the logic model as a 'road map' for coalition members in addressing prescription drugs;
- Youth engagement (e.g., in one community, youth sponsored a local ordinance that requires businesses to reduce number of ads displayed on front of a business);
- Partnerships with the coroner's office and the ability to access data (e.g., demographics and zip codes);
- Knowledge base of prescribers because of ECHO training events; and
- Knowledge base of coalition partners because of attendance at national conferences.

Technical Assistance Provided by Capacity Coaches

We asked respondents to identify the most significant ways in which their regional capacity coaches assisted their projects. Most sites were pleased with the technical assistance provided by the regional capacity coaches during the implementation of the project. They were considered vital to the success of the project by doing the following:

- Delivering training to the coalition;
- Always being available to answer questions;
- Assisting with IMPACT data entry;
- Reviewing deliverables submitted to DAODAS.
- Contributing a strong understanding of data analysis;
- Having good ideas about how to best present data to community partners;
- Being organized and helping to move the project forward; and
- Generally providing guidance, support, and encouragement.

One respondent described the regional capacity coach as "awesome," always there to assist. Another respondent said, "the regional capacity coach made everything easy to understand."

A few sites mentioned having little to no contact with the regional capacity coach. One respondent noted that this lack of contact may have been because the project director was a seasoned prevention professional.

Sustainability

Impaired Driving Sites. Two sites noted that two components of the grant—law enforcement and the coalition—will be sustained. One site has been awarded a Drug Free Communities (DFC) grant and another site received a Partnerships for Success Grant and a DFC grant. Other respondents cited their intent to continue to seek funding to address impaired driving and prescription drugs.

Prescription Drug Sites. One prescription drug site was awarded a DFC grant and another a PFS community grant. Respondents also indicated that components of ECHO will be integrated into the host alcohol and drug abuse agency's prevention department. One respondent stated that the city will maintain the drop boxes after the termination of the project. Many sites indicated that efforts to secure funding to address prescription drug will continue.

Q2. To what extent did prevention capacity increase as a result of ECHO?

Coalition members reported a high level of capacity to function as effective coalitions at the beginning of the project and reported even higher levels of capacity near the end of the project. This suggests that even strong coalitions can demonstrate continued growth over time.

Interviews with the coalition staff provided many examples of how the coalitions developed more effective partnerships throughout the project, thereby enhancing their capacity to play a prominent role in prevention in their communities and to sustain strategies to reduce prescription drug misuse/abuse and impaired driving.

Question 3. To what extent did impaired driving in South Carolina decrease?

Question 4. To what extent did prescription drug misuse/abuse among people ages 12 to 25 in South Carolina decrease?

Question 5. To what extent did the risk and protective factors of prescription drug misuse/abuse and impaired driving change as a result of ECHO?

Data Sources: Young Adult Survey, Traffic Crash Data, Hospital Data, SCRIPTS Data

To answer these three questions, PIRE conducted a Young Adult Survey and gathered data from administrative sources to assess changes over time in outcomes associated with the ECHO project. The sections below describe our methods, data sources, and results. At the end of this section, we summarize our findings to answer the three evaluation questions.

Young Adult Survey[2]

In this section, we present data related to consumption and risk factors as they relate to impaired driving and prescription drug misuse among young adults (ages 18 – 25) in the ECHO counties. To collect these data, PIRE developed and administered an on-line survey from October through November of 2017 and again from November through December of 2019. PIRE advertised the survey through Facebook and encouraged ECHO coalitions to provide links to the surveys through their Facebook pages and websites. Respondents were eligible to enter a weekly cash prize drawing of $100 and a final drawing of $500.

This report presents population estimates for the two survey years, and the results of the associated inferential statistical analyses that assess change between 2017 and 2019. The data used in the analyses were cleaned to remove any response which appeared to be a partial submission by a person who later completed the survey more fully, as well as any which did not complete at least 25% of the core survey items.

Table 5 provides demographic information about the analysis sample. Of the 923 respondents in 2017 and 890 respondents in 2019, 81% in 2017 and 86% in 2019 were from prescription drug counties, which is not surprising given that the prescription drug counties account for 86% of the population served by the project (see Table 1). It was also not surprising that the counties with the largest populations in the two site groupings (Greenville for prescription drug counties, and Orangeburg for impaired driving counties) had the highest number of sample respondents in each group for each year. Approximately one-third of the sample respondents were 18-20 and two-thirds were ages 21-25 each year, consistent with what we would expect in the population. The sex of the sample was disproportionately female, accounting for 75% of the overall sample in 2017 and 71% in 2019 rather than the expected 50%. African American/Black respondents were under-represented in the sample, being 7% of the prescription drug and 26%

[2] This section is unchanged from the 2019 Annual Evaluation Report.

of the impaired driving counties samples in 2017, and 7% and 35% respectively in 2019, but 20% and 52% of those respective populations.

Table 5. Young Adult Survey Sample Demographics by Site Type and Year

	2017				2019			
	Prescription Drug (n=747)		Impaired Driving (n=176)		Prescription Drug (n=763)		Impaired Driving (n=127)	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Age								
18 – 20	253	34	74	42	276	36	51	40
21 – 25	494	66	102	58	487	64	76	60
Total	*747*	*100*	*176*	*100*	*763*	*100*	*127*	*100*
Sex								
Female	539	77	109	66	518	72	77	65
Male	162	23	55	34	202	28	41	35
Total	*701*	*100*	*167*	*100*	*720*	*100*	*118*	*100*
Race								
Black	49	7.0	42	25.8	50	6.9	41	34.8
White	567	80.9	98	60.1	582	80.8	68	57.6
Bi or Multi Racial	38	5.4	7	4.3	31	4.3	5	4.2
Hispanic	27	3.9	8	4.9	34	4.7	0	0
Asian/Pacific Islander	7	1.0	2	1.2	11	1.5	1	0.9
Amer. Ind./AK or HI Native	5	0.7	2	1.2	4	1.1	1	0.9
Other	8	1.1	4	2.5	8	1.1	2	1.7
Total	*701*	*100*	*163*	*100*	*720*	*100*	*118*	*100*
County								
Berkeley	129	17			163	21		
Darlington	53	7			31	4		
Dorchester	107	14			122	16		
Greenville	296	40			294	39		
Horry	162	22			153	20		
Barnwell			35	20			21	17
Chester			21	12			25	20
Jasper			29	16			26	20
Marlboro			21	12			10	8
Orangeburg			70	40			45	35
Total	*747*	*100*	*176*	*100*	*763*	*100*	*127*	*100*

For this report, we chose to weight the data for each year using four bi-variate factors: site type (prescription drug vs. impaired driving counties), age (18-20 vs. 21-25), sex (M vs. F), and a race variable (White vs. other). This weighting accounts for some of the most relevant differences between the samples each year and the full populations for each site type, and thus helps to provide the most precise population estimates that can be generated from these survey data.

When comparing consumption and risk factor estimates between the prescription drug and impaired driving counties, it is important to note that these sites were selected based on their needs in these areas and that the prescription drug counties tend to have much larger populations and thus are more urban.

To investigate changes between 2017 and 2019, we explored whether there were statistically significant differences across the years for the two site types using analysis of variance (for continuous variables) and logistic regression (for dichotomous variables) inferential test procedures. We were interested in identifying whether the counties that focused on an issue (prescription drugs or impaired driving) were more likely to see positive changes across time on related variables than the counties focusing on the other issue, and thus we were testing for site type by survey year interaction effects. The effects with p-values of less than .05 are indicated in Figures 5 through 15 with highlighted values. (A p-value of .05 is the historical scientific standard for concluding that there is a difference between the groups.)

Alcohol Consumption

Figures 5 to 7 provide survey data about alcohol consumption and risk factors. The figures provide data for the prescription drug sites, the impaired driving sites, and combined for each year, with none of the differences across time being statistically significant between the two groups.

Figure 5 displays past 30-day alcohol use by age. Young adults in the prescription drug sites were more likely than those in the impaired driving sites to report alcohol use in both years; drinking among underage youth was roughly half that of drinking among those of legal age.

Figure 5. 30-Day Alcohol Use by Site Type, Year and Age

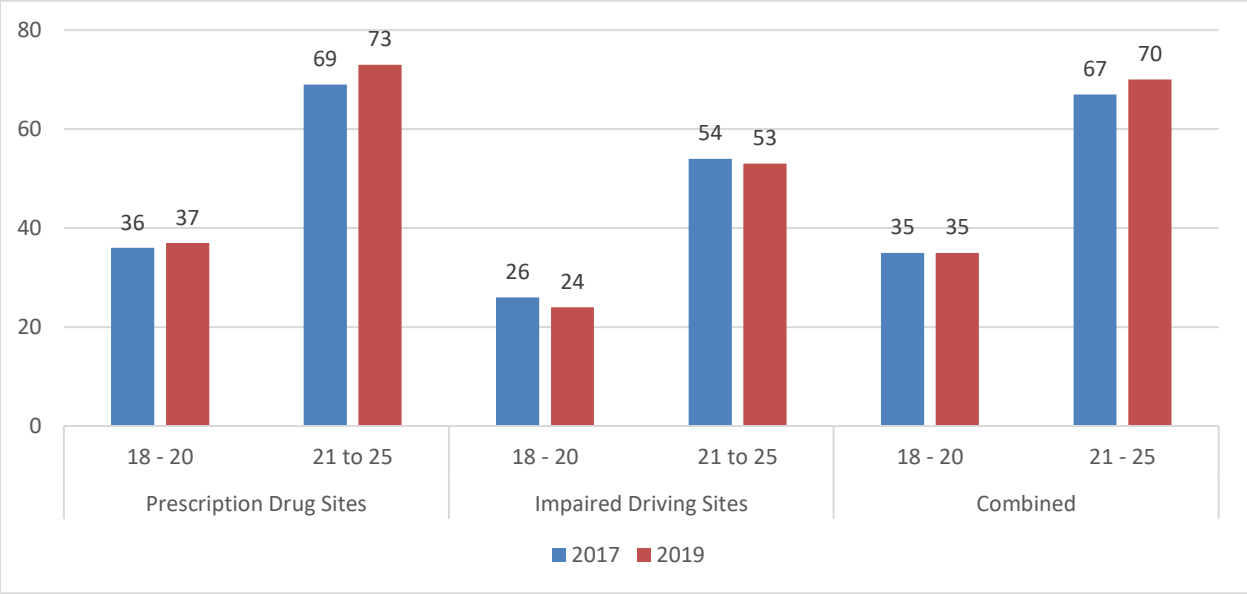


Figure 6 shows that respondents in both county groups and overall reported a high level of difficulty for a person aged 18 to 20 to purchase alcohol in a store or bar, but much lower levels of difficulty for a person aged 18 to 20 to obtain alcohol from a family member.[3] The pattern of results suggests that across the years respondents thought that it might be getting a little more difficult to purchase alcohol in stores, but a little easier to purchase in a bar.

Figure 6. Difficulty of Persons Aged 18 to 20 Obtaining Alcohol by Site Type and Year (Somewhat or Very Difficult)

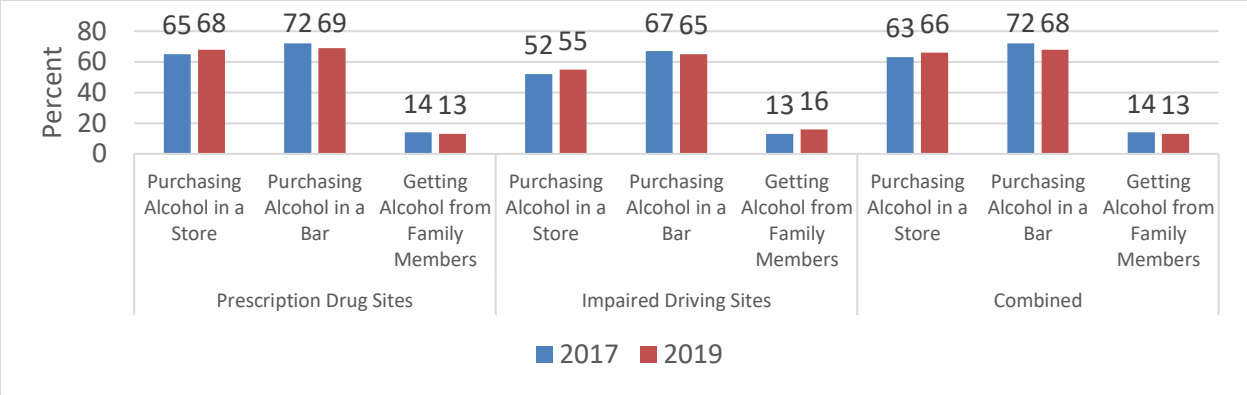
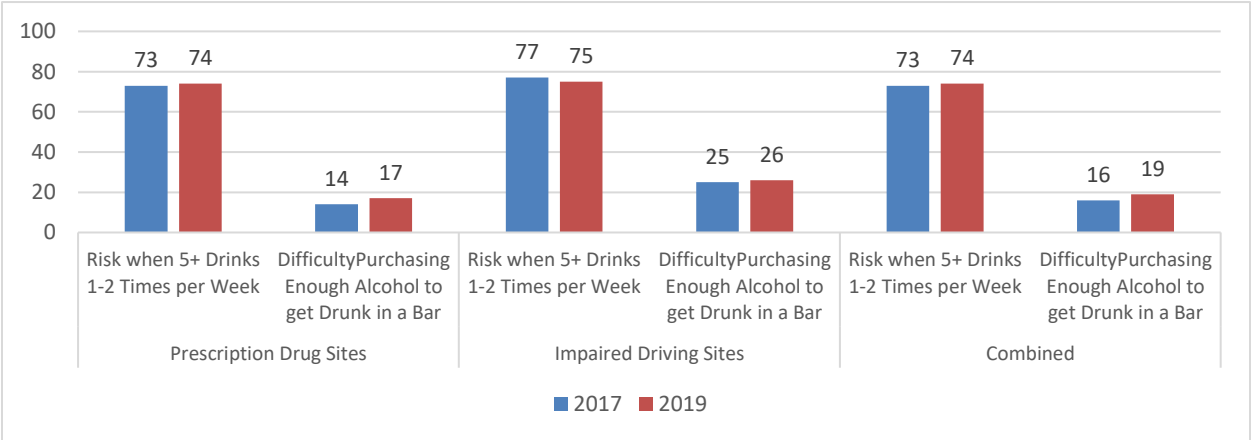


Figure 7 displays the findings from two items concerning heavy drinking. Three-quarters of the respondents in both county groups and overall indicated that they believed it was at least moderately risky for a person to have five or more drinks once or twice per week. In all groups, most respondents did not believe that it was difficult for a person to purchase enough alcohol to get drunk in a bar, with this being particularly true in the prescription drug communities (perhaps because they are more urban with a higher number of bars).

Figure 7. Perceptions Concerning Heavy Drinking Behavior by Site Type and Year (Moderate or Great Risk; Somewhat or Very Difficult)



[3] Data are from all respondents, not just those under the age of 21.

Impaired Driving

Figures 8 to 11 display data about impaired driving behaviors and related attitudes. As with the alcohol variables, none of the observed differences over time among the prescription drug sites, the impaired driving sites, or all sites combined was statistically significant.

Figure 8 indicates that, across all groupings, riding with a driver who drank too much appeared to be more prevalent than driving oneself after drinking too much (though we did not conduct significance tests across the outcomes). Figure 9 indicates that driving after taking illicit drugs appeared to be more common than driving after taking prescriptions drugs.

Figure 8. Impaired by Alcohol Driving Behaviors by Site Type and Year

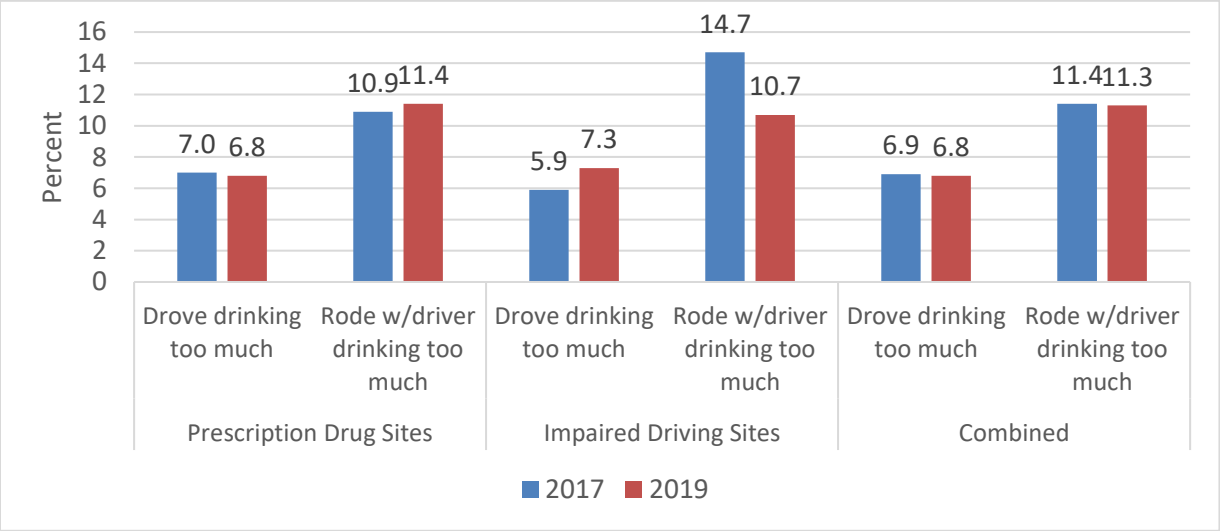


Figure 9. Impaired by Drugs Driving Behaviors by Site Type and Year

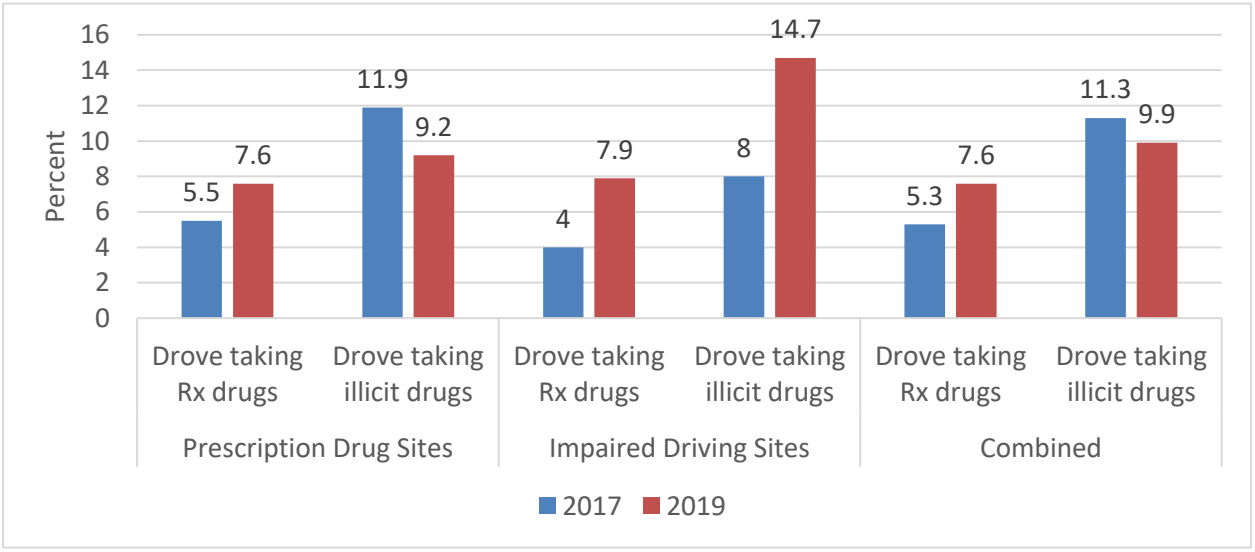
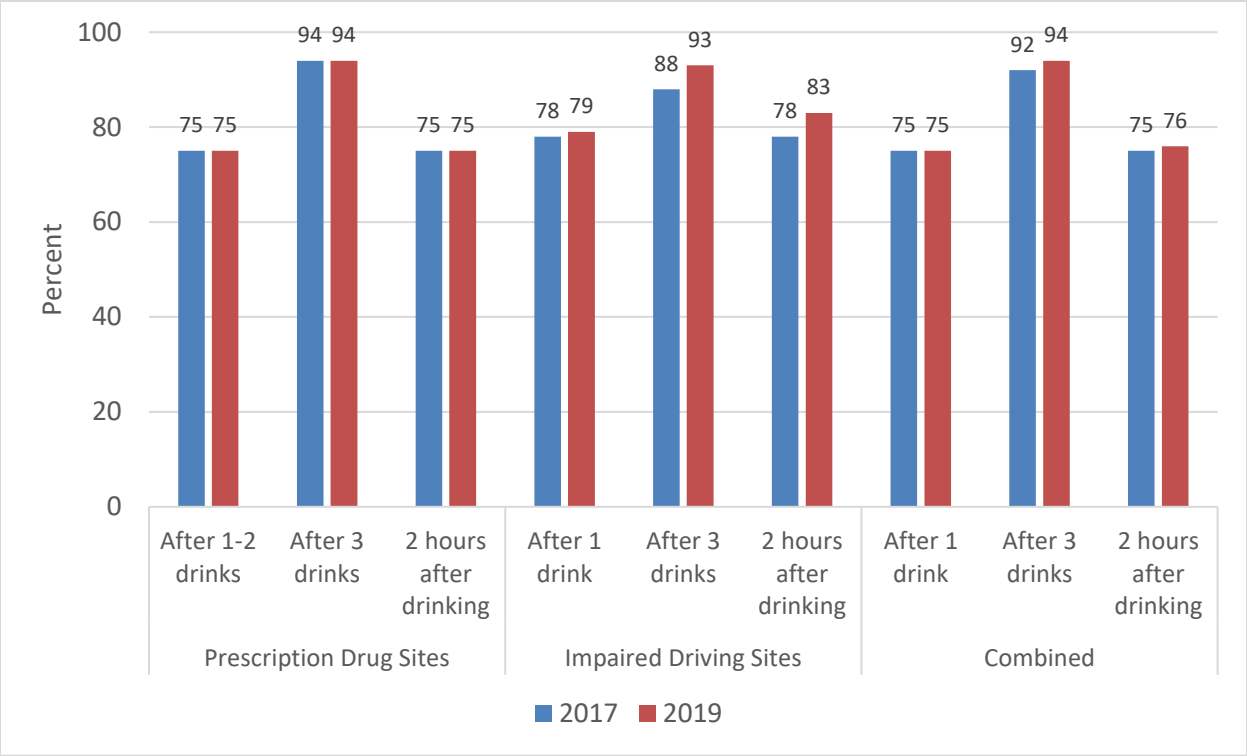


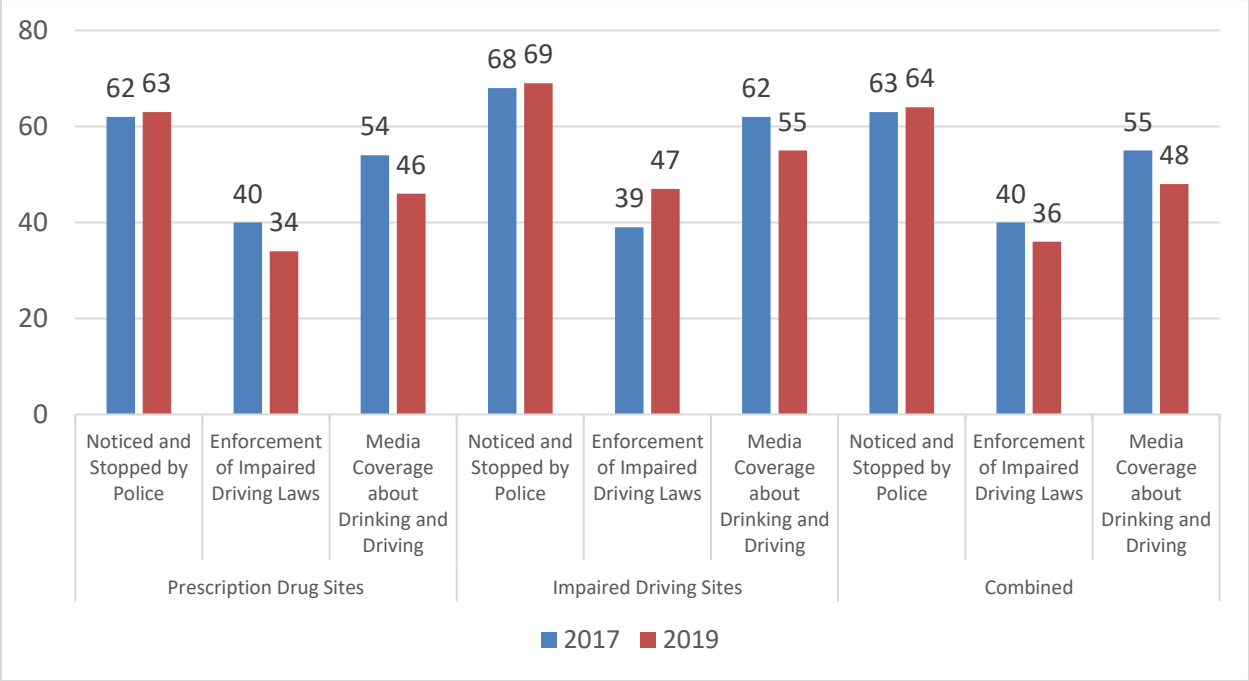
Figure 10 shows that perceptions of drinking and driving risk are similar across county types. In all groups, at least three-fourths of respondents reported that they believe there is moderate or great risk of harm if driving after one or two drinks, or if driving within 2 hours of drinking, and appreciably higher percentages indicated such risk if driving after three drinks.

Figure 10. Impaired Driving Perceptions of Moderate or Great Risk by Site Type and Year



We asked respondents about enforcement levels and media coverage related to drinking and driving in their community (see Figure 11). About two-thirds of respondents reported that they would be somewhat or very likely to be stopped by police if they were driving through their community after having too much to drink, with a bit higher likelihood of this in the impaired driving sites. In 2017, about 40% said that enforcement efforts were stronger than the prior year, with that rate decreasing in the prescription drug sites but increasing in the impaired diving sites in 2019. The inferential test of the interaction effect for this variable was, however, not statistically significant. About half of the respondents said that media coverage was more common than the prior year and the proportions in all groups decreased in 2019, but not significantly.

Figure 11. Perceptions about Enforcement and Media by Site Type and Year (Somewhat or Very Likely; a Little or Much Stronger than Last Year; a Little or Much More Common)



Prescription Drugs

Figures 12 displays data about using prescription drugs with a doctor's prescription and Figure 13 displays data about using prescription drugs differently than the way they were prescribed. Both figures show trends of lower rates of prescription drug misuse in prescription drug sites in 2019. Reported misuse of pain relievers decreased by 32% and 48%; misuse of sedatives decreased by 36% and 13%; and misuse of stimulants without a prescription decreased by 26%. Note we did not test the statistical significance of the main effects because our primary interest was the interaction between site type and time.

Looking at the predicted interactions, the figures indicate that respondents from prescription drug counties were more likely to report decreases in misuse in 2019 than were respondents from impaired driving counties. This potential interaction effect was not statistically significant for pain reliever or stimulant use but was significant for sedatives—that is, there was reduction in sedative abuse in the prescription drug sites relative to the sedative abuse rates within impaired driving sites.

Figure 12. Prescription Drug Use Without a Doctor's Prescription by Site Type and Year

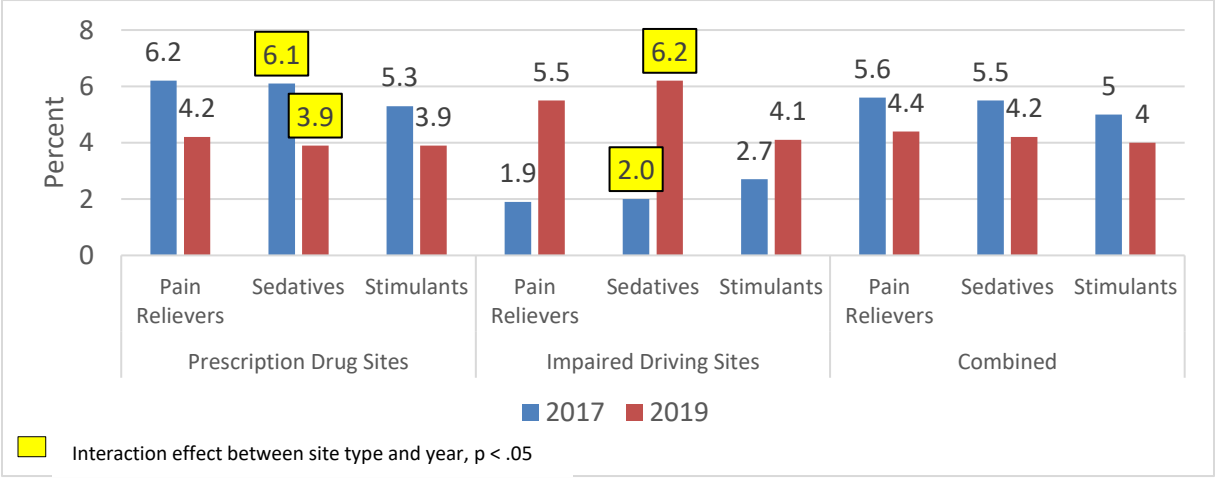


Figure 13. Prescription Drug Use Different than Prescribed by Site Type and Year

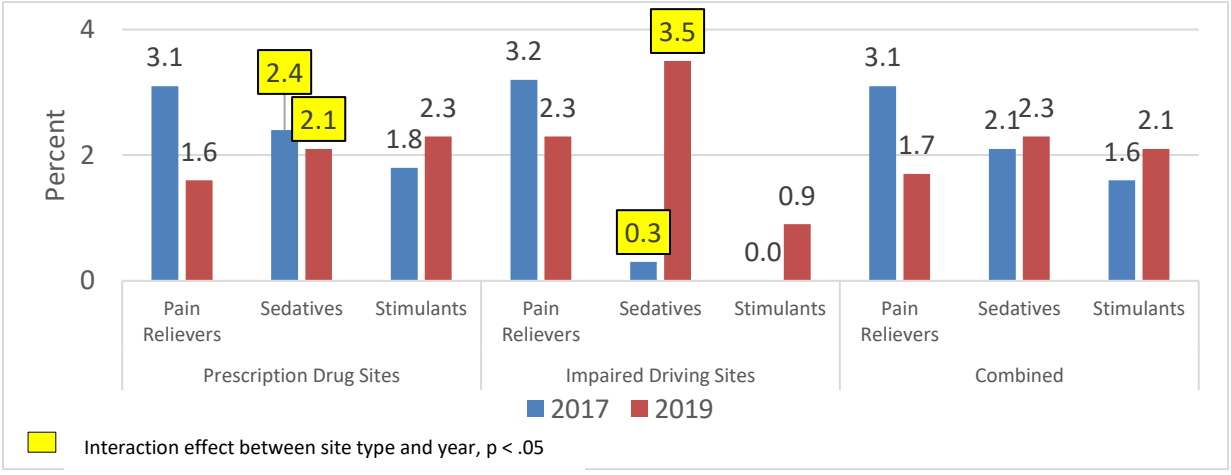
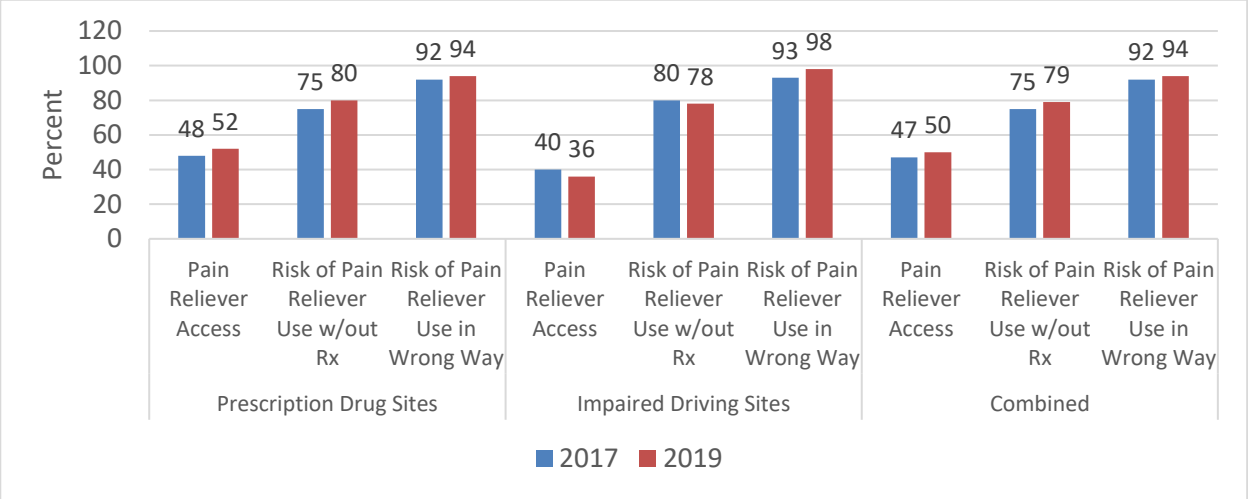


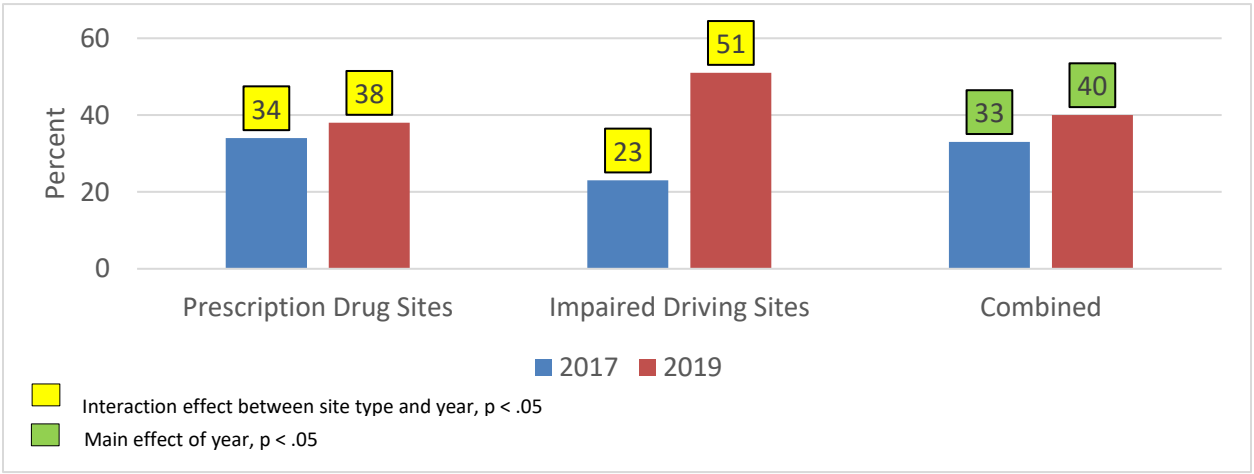
Figure 14 shows that less than half of the respondents indicated that accessing prescription pain relievers without a prescription was at least somewhat difficult, with more believing it to be difficult within prescription drug communities both years. Generally, the risk of misusing pain relievers was thought to be high across both years in both site groupings and overall.

Figure 14. Prescription Drugs Access and Risk by Site Type and Year
(Somewhat or Very Difficult; Moderate or Great Risk)



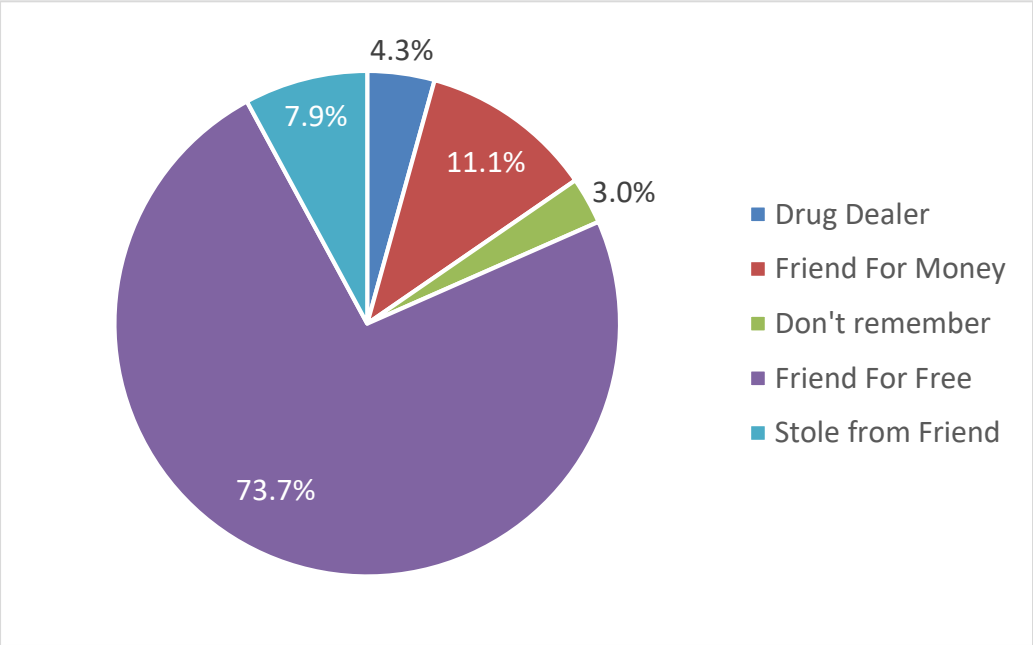
When respondents were asked whether they recalled seeing or hearing any information regarding safe storage and disposal of prescription drugs, higher percentages responded yes in 2019 relative to 2017 (see Figure 15). Unexpectedly, the statistically significant interaction indicated that this effect was much more pronounced for the impaired driving sites than the prescription drug sites, with the impaired driving sites having a much higher rate in 2019 than had been the case in 2017. In addition, there was a significant main effect for the combined data—that is, overall, respondents were significantly more likely to report seeing or hearing safe storage or disposal messages in 2019 than 2017.

Figure 15. Seeing or Hearing Safe Storage and Disposal Information in Past Year by Site Type and Year



Although we did not investigate change across time concerning the sources of non-prescribed drugs, we report recent information from the survey below because it can be helpful in thinking about future prevention efforts. Figure 16 displays the sources of non-prescribed pain relievers among those who took nonprescribed pain relievers (n = 33) across all ECHO communities in 2019. By far, the most common source was getting it from a friend, with 74% getting it from a friend for free and another 11% getting it from a friend for money.

Figure 16. Sources of Non-Prescribed Pain Relievers, 2019



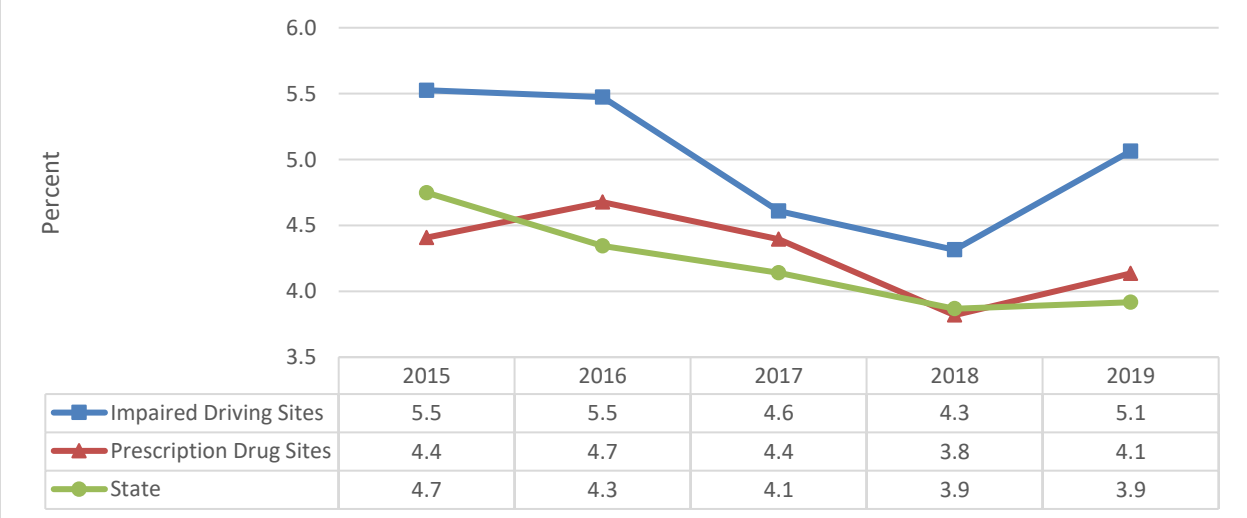
Administrative Data

In this section, we present trend data, using the most recent data available from the South Carolina Department of Public Safety (DPS) on alcohol-related traffic crashes, the South Carolina Office of Revenue and Fiscal Affairs (ORFA) on opioid-related hospital emergency department visits, and the South Carolina Department of Health and Environmental Control (DHEC) on prescription drug overdose deaths and opioid prescriptions filled. DPS data on 2019 crashes are preliminary. We compare data trends between the two types of sites (impaired driving and prescription drug), as well as the overall state. Because 2016 was the first year of project implementation (although not all coalitions were in full implementation until 2017), we are considering 2015 to be the baseline year and are monitoring whether the trends begin to change in the project sites at that point based on their areas of focus, and relative to the trends for the state.

Alcohol-Related Traffic Crashes

Figure 17 displays 2015 - 2019 data on the percent of crashes that were alcohol-related for all ages. We see that rates of alcohol-related crashes for all groups were lower in 2019 than in 2015 (baseline), that 2018 had the lowest rates during the project, and that all groups increased in 2019. Comparing 2015 with 2019, impaired driving sites decreased by 7.3%, prescription drug sites by 6.8%, and the state by 17.0%.

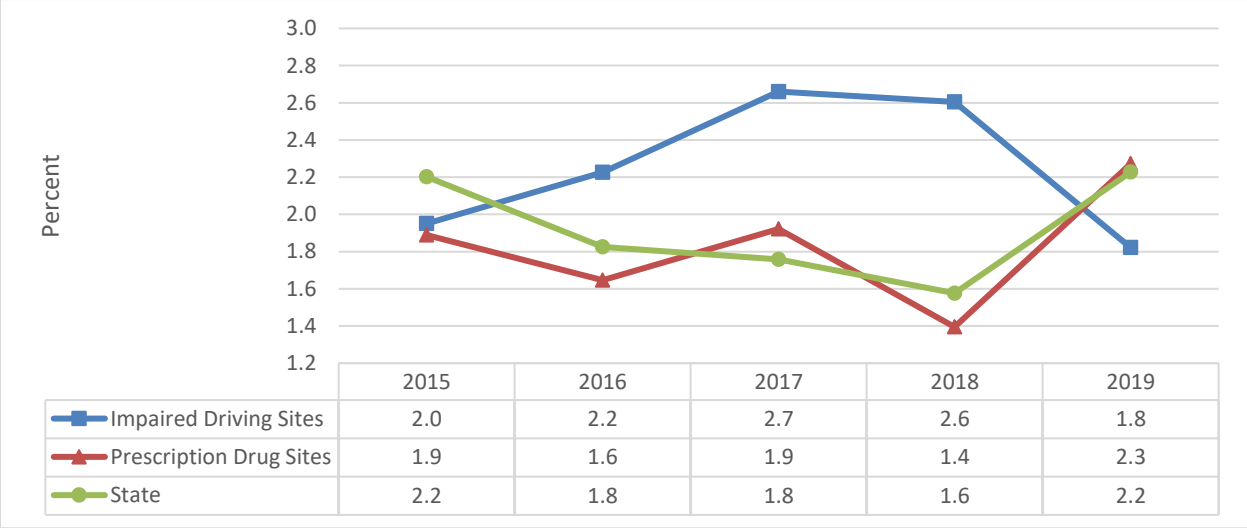
Figure 17. Percent of Traffic Crashes that Were Alcohol-Related by Site Type and Year



	2015	2016	2017	2018	2019
Impaired Driving Sites	5.5	5.5	4.6	4.3	5.1
Prescription Drug Sites	4.4	4.7	4.4	3.8	4.1
State	4.7	4.3	4.1	3.9	3.9

Figure 18 displays 2015 - 2019 data on the percent of crashes that were alcohol-related for drivers under the age of 21. Despite rising rates of alcohol-related crashes through 2018 for the impaired driving sites, the rate in 2019 actually decreased 10% below the 2015 baseline rate. The opposite pattern is seen for the prescription drug sites—i.e., decreases during most project years and then an increase in 2019 of 21.1% compared to 2015. The rates for the state were the same in 2015 and 2019. It should be noted that the annual number of alcohol-related crashes in the five impaired driving sites was very low by drivers under 21 (ranging from a total of 12 to 23 each year), and thus more susceptible to be influenced by chance variation than the much larger numbers of alcohol-related crashes by the full driving population and the prescription drug sites.

Figure 18. Percent of Traffic Crashes that Were Alcohol-Related, Drivers Under the Age of 21, by Site Type and Year

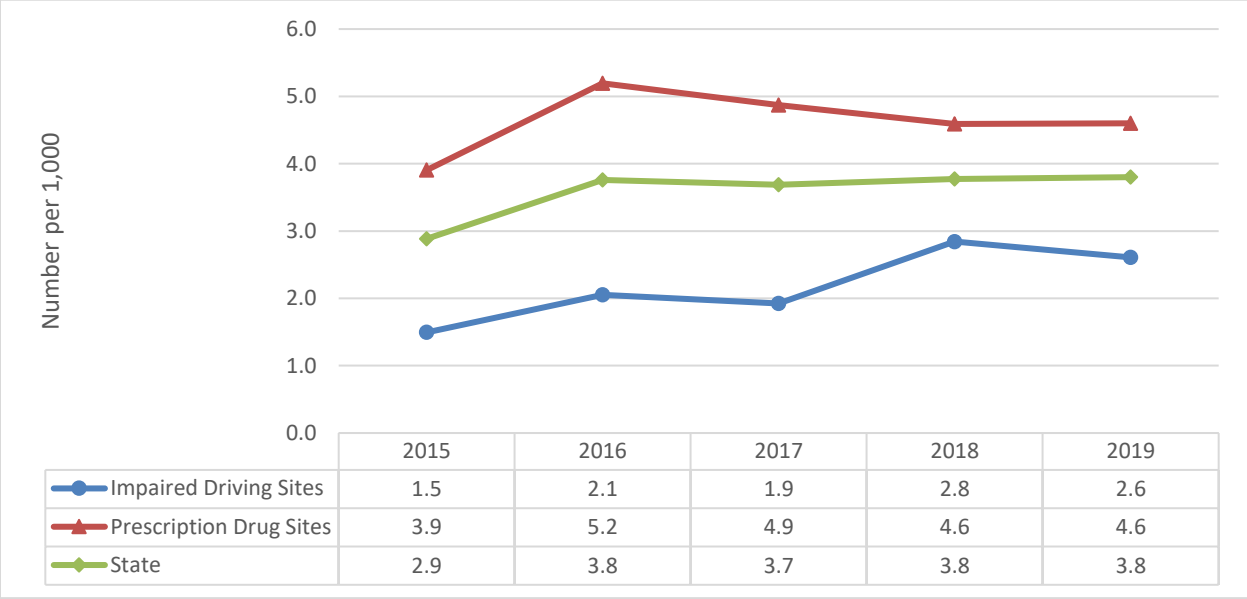


	2015	2016	2017	2018	2019
Impaired Driving Sites	2.0	2.2	2.7	2.6	1.8
Prescription Drug Sites	1.9	1.6	1.9	1.4	2.3
State	2.2	1.8	1.8	1.6	2.2

Emergency Department Visits

Figure 19 displays 2015 - 2019 data on the rate of emergency department visits that were opioid-related. Across all of the years, the prescription drug sites had a higher rate of opioid-related emergency department visits than the impaired driving sites and the state overall. When comparing the 2015 baseline to 2019, the prescription drug sites experienced a 17.9% increase in the rate of emergency department visits, although they peaked in 2016 and have been declining since. In contrast, the impaired driving sites increased by 73.3% and the state overall increased by 31.0%.

Figure 19. Rate of Emergency Department Visits that Were Opioid Related, per 1,000 Visits, by Site Type and Year

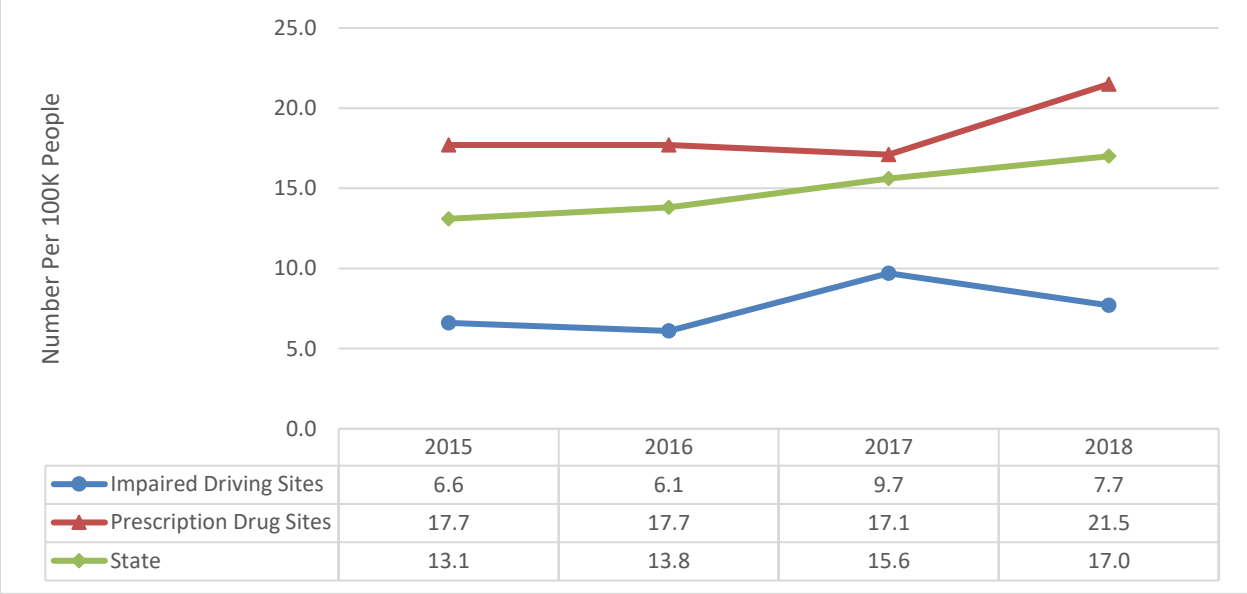


	2015	2016	2017	2018	2019
Impaired Driving Sites	1.5	2.1	1.9	2.8	2.6
Prescription Drug Sites	3.9	5.2	4.9	4.6	4.6
State	2.9	3.8	3.7	3.8	3.8

Prescription Drug Deaths

Figure 20 shows the number of prescription drug overdose deaths per 100,000 residents from 2015 to 2018 (2019 data were not available at the time this report was completed). The state rate steadily increased across the four years, and the rates for the two groups of project counties also rose across time. Comparing 2015 to 2018, the death rate in the prescription drug sites increased by 21.5%, compared to a 16.7% increase in the impaired driving sites and 29.8% overall.

Figure 20. Number of Prescription Drug Overdose Deaths Per 100,000 People, by Site Type and Year

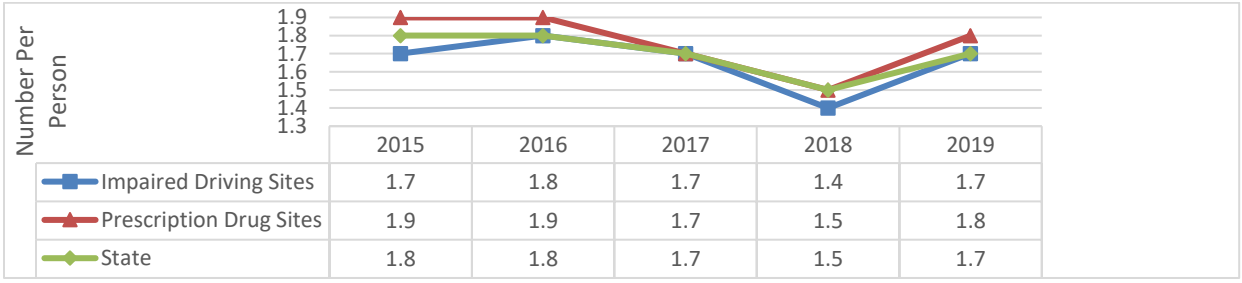


	2015	2016	2017	2018
Impaired Driving Sites	6.6	6.1	9.7	7.7
Prescription Drug Sites	17.7	17.7	17.1	21.5
State	13.1	13.8	15.6	17.0

Prescriptions Dispensed

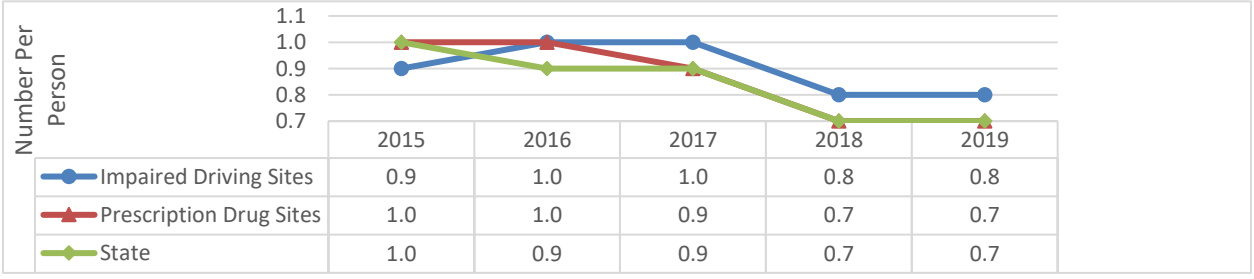
Figure 21 shows the number of prescriptions dispensed per person from 2015 through 2019 by site type and year. The rates are similar for all three county groupings, with consistent decreases from 2015 to 2018, followed by an upturn in the rates for 2019 that resulted in all three groupings having equal or slightly lower rates in 2019 than in 2015 (prescription drug sites decreased by 5.2% and impaired driving sites had no change). For opioids and benzodiazepines specifically (Figures 22 and 23), there were consistent decreases in the rates across the years for the three county groupings. Although, the changes in these rates were small overall (ranging from 0.1 to 0.3 fewer prescriptions per person), opioid and benzodiazepine prescriptions dropped by at least 30% between 2015 and 2019 in the prescription drug sites.

Figure 21. Number of Prescriptions Dispensed Per Person, by Site Type and Year
(Overall Rx consists of benzos, opioids, stimulants, and muscle relaxers)



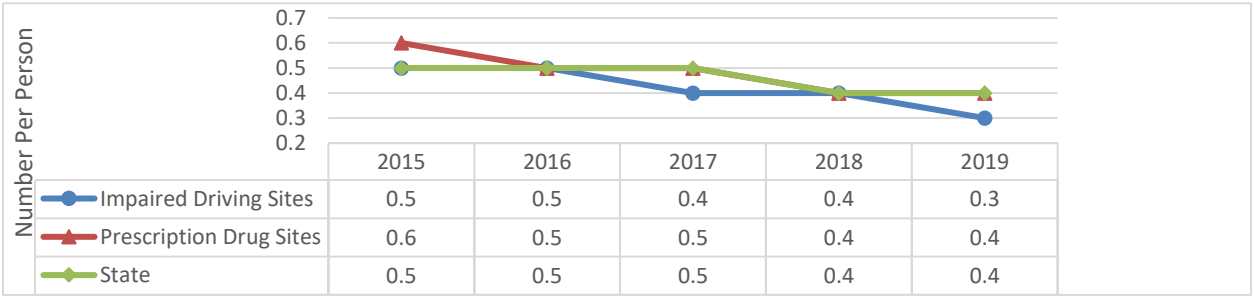
	2015	2016	2017	2018	2019
Impaired Driving Sites	1.7	1.8	1.7	1.4	1.7
Prescription Drug Sites	1.9	1.9	1.7	1.5	1.8
State	1.8	1.8	1.7	1.5	1.7

Figure 22. Number of Opioid Prescriptions Dispensed Per Person, by Site Type and Year



	2015	2016	2017	2018	2019
Impaired Driving Sites	0.9	1.0	1.0	0.8	0.8
Prescription Drug Sites	1.0	1.0	0.9	0.7	0.7
State	1.0	0.9	0.9	0.7	0.7

Figure 23. Number of Benzodiazepine Prescriptions Dispensed Per Person, by Site Type and Year



	2015	2016	2017	2018	2019
Impaired Driving Sites	0.5	0.5	0.4	0.4	0.3
Prescription Drug Sites	0.6	0.5	0.5	0.4	0.4
State	0.5	0.5	0.5	0.4	0.4

Summary of Outcome Findings

Table 6 summarizes the main findings regarding attitude and behavior change as measured by the young adult survey and data from administrative sources. The bullet points after the table provide additional comments about the data in the table.

Table 6. Summary of Outcomes

CONSUMPTION			
	Prescription Drug Sites	Impaired Driving Sites	All ECHO Combined
Use of Prescription Drugs without Doctor's Rx			
Pain Relievers			
Sedatives	*		
Stimulants			
Use of Prescription Drugs Differently than Prescribed			
Pain Relievers			
Sedatives	*		
Stimulants			
Perceptions about Prescription Drug Use			
Access to Pain Relievers			
Risk of Harm of Pain Reliever Use without Rx			
Risk of Harm of Pain Reliever Use in Wrong Way			
Saw or Heard Safe Storage and Disposal	**		***
CONSEQUENCES[a]			
	Prescription Drug Sites	Impaired Driving Sites	South Carolina
Alcohol-Related Traffic Crashes, All Ages			
Alcohol-Related Traffic Crashes, Under 21			
Emergency Department Visits	^		
Rx Drug Deaths (through 2018)			
Rx Drugs Dispensed			
Prescriptions			
Opioids			
Benzodiazepines			

[a] Because these are population-based counts of incidents (rather than samples), we did not conduct tests of statistical significance. Green cell indicates any change in the desired direction compared to 2015; red cell indicates any change in the undesired direction; white cells indicate no change.

* Indicates a significant interaction between site group and year, such that the two groups were affected differently over time, as predicted.

** Indicates a significant interaction between site group and year, such that the two groups were affected differently over time *contrary* to the predicted direction.

*** Indicates significant main effect of time in the desired direction.

^ Prescription drug sites had a lower rate of increase than the other sites.

- Most items on the young adult survey (most are not displayed in Table 6) showed no statistically significant changes in reported attitudes or behaviors from 2017 to 2019.
- Statistically significant reductions in sedative use were reported in prescription drug sites relative to the impaired driving sites, as might be expected.
- Respondents in both sets of sites reported seeing or hearing more messages about safe storage or disposal within the past year, though it was much more pronounced in the impaired driving sites, contrary to what might be expected.
- There were reductions in alcohol-related crash rates in both sets of sites and the state. Looking only at drivers under 21, there was a reduction in the alcohol-related crash rate in the impaired driving sites, but there was an increase in the prescription drug sites and no change for the state.
- Although the opioid-related emergency department visit rates increased in the prescription drug sites, impaired driving sites, and across the state overall, they increased substantially less in the prescription drug sites. In addition, the rates peaked in the prescription drug sites in 2016 and have been steadily decreasing since.
- Prescription drug overdose death rates continued to increase in both groups and across the state overall.
- Prescription rates decreased very slightly in the prescription drug sites and the state overall but did not change for the impaired driving sites. The prescription rates for opioids and benzodiazepines decreased for all three groups.

Q3. To what extent did impaired driving in South Carolina decrease?

Data from the Young Adult Survey indicate that self-reported impaired driving did not decrease in the counties funded by the ECHO project. That is, young adults reported driving while drinking or drugging, or riding with someone who had been drinking or drugging, at the same rate at the beginning of the project and at the end. (See Figures 8 and 9).

Traffic crash data indicate that alcohol-related traffic crashes decreased in South Carolina in the impaired driving sites, prescription drug sites, and overall. The alcohol-related crash rates for drivers under the age of 21 decreased only in the impaired driving sites, although this decrease was evident only in the final year. (See Figures 17 and 18.)

The data are mixed, with the survey providing no evidence that the ECHO project contributed to reductions in impaired driving. The crash data provide some data to suggest that the ECHO project may have contributed to reductions in alcohol-related crashes.

Question 4. To what extent did prescription drug misuse/abuse among people ages 12 to 25 in South Carolina decrease?

Data from the Young Adult Survey indicate that the self-reported use of sedatives decreased in the prescription drug sites but not in the impaired driving sites, suggesting that the ECHO project may have contributed to the decrease. There were no similar reductions in pain reliever or stimulant use. (See Figures 12 and 13.)

Emergency Department visits for opioid use increased in prescription drug sites, impaired driving sites, and overall but the rate of increase was substantially lower in the prescription drug sites and the rates have been declining since 2016. (See Figure 19.)

The state rate of prescription drug overdose deaths steadily increased during the project (though we only have data through 2018) and the death rate in the prescription drug sites increased substantially in 2018 after being steady for several years. (See Figure 20.)

These data suggest that the ECHO project contributed to reductions in sedative use (but not opioid use) and a lower rate of increase in Emergency Department visits for opioid use.

Question 5. To what extent did the risk and protective factors of prescription drug misuse/abuse and impaired driving change as a result of ECHO?

To assess risk and protective factors associated with prescription drug misuse/abuse and impaired driving, we examined a number of factors, including the following:

- Alcohol use
- Perceived about access to alcohol for minors
- Perceptions about risks associated with heavy drinking and impaired driving
- Perceptions about access to prescription drugs
- Perceptions of risks associated with prescription drug use
- Exposure to messages about safe storage and disposal of prescription drugs
- Rates of prescribing drugs

For most risk and protective factors measured, we found no differences over time. Prescription rates decreased slightly in the prescription drug sites and the state overall but did not change for the impaired driving sites. The prescription rates specifically for opioids and benzodiazepines decreased for all three groups.

These data suggest there were no observed project related changes in risk and protective factors associated with prescription drug misuse/abuse and impaired driving as a result of the ECHO project.

EVALUATION LIMITATIONS

As with many SAMHSA substance abuse prevention grants, the focus of this grant was programmatic in nature, with an emphasis on ensuring that communities selected evidence-based strategies and implemented them to the best of their capabilities. This was not a research-driven project and, as such, the evaluation *supported* the program, rather than driving programmatic decisions. The evaluation was designed to collect and track data on outputs and outcomes, interpret trends over time, provide ongoing feedback to program staff to help them learn from their efforts and make data-driven decisions, and help determine whether to attribute any observed changes over time to the ECHO project. It was not designed to determine definitely whether the ECHO project caused changes over time in key outcomes.

There were three important limitations to the data that hampered our ability to determine whether changes over time existed. First, because of the time needed to develop and implement the survey, as well as prepare analyses for the final report, the Young Adult Survey had only two years between Wave 1 and Wave 2, limiting the amount of time to observe any changes in attitudes and behaviors that may have taken place among young adults. Second, the most recent drug-related overdose death data are from 2018, making it impossible to determine whether there were any observed changes in overdose deaths during the final 18 months of the project. Third, some key indicators in the low-population impaired driving sites had a relatively low number of occurrences (e.g., alcohol-related traffic crashes and opioid overdose deaths), making them somewhat unstable. Thus, it was difficult to determine whether fluctuations in the data from year to year were the result of the ECHO project or random fluctuation.

In addition to data limitations, there were also two design limitations that hampered our ability make definitive statements about whether the ECHO project contributed to observed changes over time (where they existed). First, the counties were selected for programmatic purposes based on needs assessment data—i.e., high rates of impaired driving and prescription drug abuse/misuse for the respective groups. As such, changes in the desired direction may have been the result of natural regression towards the mean rather than an effect of programmatic activity.

Second, we chose to use the site types as built-in comparison groups knowing that they were not necessarily the most optimal comparisons. There may have been a better set of comparison counties for the impaired driving sites and a better set of comparisons for the prescription drug sites—for example, counties with more similar population sizes and demographics. Identifying different comparison groups, however, would have brought its own limitations (e.g., the need to expand our survey data collection efforts to 10 additional counties and the likelihood that we would not know the types of prevention activities that were occurring in those counties).

CONCLUSIONS

Based on data from a wide range of sources, we conclude the following about the activities and outcomes associated with the ECHO project:

- The ECHO grantees engaged in a considerable amount of programmatic activity aimed at reducing impaired driving and prescription drug misuse/abuse in their communities, using many evidence-based strategies and best practices.
- DAODAS supported the grantees by providing regular oversight, direct technical assistance and training (TTA), and indirect TTA through the Regional Capacity coaches.
- Coalition staff reported increases in capacity to function effectively in their communities and developed critical partnerships to sustain their prevention efforts.
- Although different data sources provided different pictures, the crash data suggest that the ECHO project may have contributed to reductions in alcohol-related crashes, particularly among drivers under the age of 21.
- The data suggest that the ECHO project may have contributed to reductions in sedative use (but not opioid use) and a lower rate of increase in Emergency Department visits for opioid use.
- Despite the apparent influence of the ECHO project on some of the key outcomes, we did not detect project related changes in risk and protective factors associated with prescription drug misuse/abuse and impaired driving as a result of the ECHO project.