Vermont Regional Prevention Partnerships Final Evaluation Report

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Acknowledgments

Vermont's Regional Prevention Partnerships (RPP) initiative, including its evaluation, was funded by a Partnerships for Success (PFS) 2015 grant to the Vermont Department of Health, Division of Alcohol and Drug Programs (VDH/ADAP). The federal funding agency for PFS is the Substance Abuse and Mental Health Services Administration (SAMHSA). This report was prepared for VDH/ADAP by PIRE in its role as the evaluator for the RPP project. Contributors to this report were Bob Flewelling, Amy Livingston, and Sean Hanley.

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Other products from the RPP evaluation are available at http://www.vt-rpp-evaluation.org/ .

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Introduction

Background

Vermont's Strategic Prevention Framework Partnerships for Success (SPF-PFS) 2015 project, known within Vermont as Regional Prevention Partnerships or "RPP," was a federally funded substance misuse prevention grant awarded to the Vermont Department of Health (VDH), Division of Alcohol and Drug Abuse Programs (ADAP) in 2015 by the Substance Abuse and Mental Health Services Administration (SAMHSA). Vermont's RPP project was designed as an extension and expansion of the initial PFS grant awarded to Vermont by SAMHSA in 2012, which is referenced in this report simply as "PFS." PFS provided funding to six regions throughout the state to reduce underage and binge drinking among persons aged 12 to 20, and to prevent prescription drug misuse by persons aged 12 to 25. A third goal was to increase state, regional and community capacity to achieve these priorities through a targeted regional approach. PFS-funded prevention strategies were coordinated by a designated community-based "lead agency" in each region and VDH's existing health district structure was used to facilitate oversight of the project at the regional level. The Pacific Institute for Research and Evaluation (PIRE) completed an evaluation of the original PFS project in 2017[1] and conducted the evaluation of the RPP initiative as well.

In 2016, RPP funding was provided to six more regions in addition to the six regions funded by the original PFS grant, thereby expanding funding to almost the entire state.[2] Preventing marijuana use among persons aged 12 to 25 was added to RPP as an additional priority, and three specific populations were identified by ADAP as a focus for RPP because of health disparities experienced related to substance use: persons aged 12-25 who are of low socio-economic status, lesbian, gay, bisexual, transgender, and questioning (LGBTQ) youth and young adults, and military families. Funding continued for all twelve lead agencies through June 2020, and eleven of the twelve opted for an available additional three months of funding from July-September 2020.

Purpose and Scope of this Report

This report includes findings from both process and outcome evaluations of RPP. Process evaluation findings largely summarize information regarding project implementation that has

[1]A summary report from the PFS evaluation is available at: https://www.healthvermont.gov/sites/default/files/documents/2017/02/ADAP_VT%20PFS%20Evaluation%20Summary.pdf

[2]The six regions funded by PFS are referred to in this report as "cohort 1" regions and were served by six "cohort 1" lead agencies, also referred to in this report simply as cohort 1 grantees. These regions were closely aligned to six specific counties. The six new regions to be funded through RPP were also defined primarily by county (or pairs of counties), were served by six "cohort 2" grantees, and are referred to as "cohort 2" regions.

previously been reported through annual evaluation updates and a report on a qualitative study of the regional structure of RPP. Some additional findings and observations are reported based on implementation data and grantee perspectives collected during the final year of the project.

The outcome evaluation was based on measures of substance misuse and risk factors related to substance misuse at the regional and statewide levels. The approach used was designed to accommodate certain features unique to RPP relative to other previous federally funded projects in Vermont such as the State Incentive Grant (SIG), SPF-SIG, and PFS. Specifically, RPP funding was allocated statewide rather than to selected communities or regions only and (for cohort I grantees) RPP was in large part a continuation of the efforts that began under PFS. Consequently, this report focuses on how changes in outcome measures over time differed for cohort 1 and cohort 2 regions, during both PFS and RPP. Additionally, statewide measures are compared to national measures and outcome data are examined for evidence of reductions in health disparities among vulnerable subpopulations.

Some of the findings presented here includes information provided in previously shared evaluation reports. We briefly summarize these findings in order to provide a comprehensive report of the RPP evaluation. Previously released reports are referenced when appropriate so that they may be accessed for additional information.

Process Evaluation

This section of the report describes how the RPP project was implemented at both the state and grantee levels, including accomplishments, barriers that were encountered, and lessons learned that can help inform future projects. Data sources used in the process evaluation include quarterly reports submitted by grantees through an online reporting tool managed by PIRE called the Community Grantee Reporting System (CGRS), a qualitative study on regional capacity conducted in 2018 and 2019, interviews conducted with grantees in September 2020, and responses to a brief survey of grantees in September 2020.

Overall Structure of RPP

ADAP's Central Office provided overall project and financial oversight of RPP, including all communications with SAMHSA, facilitation of the State Epidemiological Outcomes Workgroup (SEOW), coordination of networking and training opportunities, and the statewide evaluation led by PIRE. In addition, communications contracts for statewide messaging related to the goals of RPP were managed by ADAP's Central Office.

As with the previous PFS grant, the project used VDH's existing health district office structure to facilitate VDH oversight and involvement at the regional level. A requirement of the grant was that each region conduct a data-driven assessment of their region to identify risk factors that are most prevalent, existing resources, and capacity and readiness of the community to engage

in the prevention of substance misuse. Following this assessment, each region was required to develop (or update, for regions that had done this for their PFS grant) a regional strategic plan that included logic models linking needs assessment findings with specific interventions to address local needs, and descriptions of interventions selected, staffing plans, how capacity will be built throughout the region, and how cultural competence will be addressed. District Directors from the twelve health districts took the lead on updating or developing the regional strategic plan and the selection of a community agency to be the fiscal agent and "lead agency" for the region's RPP work. These lead agencies were responsible for all fiscal management and reporting to ADAP for the project and were able to sub-grant to other community agencies as needed to implement portions of the strategic plan. ADAP's regionally assigned Prevention Consultants (PCs) assisted the District Directors in developing these plans and served as the primary resource to the lead agencies and sub-grantee organizations for support and technical assistance. Each region received funding of approximately $130,000 each year.

For the regions funded by PFS, prevention activity transitioned without any significant slow-downs or gaps from the PFS funding to the RPP funding. Cohort I grantees continued implementation of many of the strategies that were underway during PFS, and added those that were newly required by RPP, including strategies to prevent marijuana use. For the six lead agencies funded to serve the new regions, however, it was necessary to first conduct the required assessment, capacity building, and planning steps. So for these cohort 2 grantees, most strategies were not fully underway until the fall of 2017.

As with PFS, a menu of both required and optional evidence-based interventions and supporting activities was provided by ADAP. The required interventions were all designed to potentially affect large proportions of the target population and included community-wide information dissemination and outreach, media advocacy, and other environmentally-focused strategies such as education on policy approaches to prevention. Optional interventions and activities included educational programs, trainings, and peer leadership opportunities that focused directly on the provision of information, skills, and support to individual participants. Optional activities were selected in accordance with each region's strategic plan and with information provided about potential interventions in a set of logic models developed for ADAP by PIRE at the start of the PFS grant. For each intervention and activity, a planning tool was developed by PIRE and ADAP that included key steps for implementation with fidelity. These planning tools served as the basis for work plans for each intervention, which were developed by each grantee annually.

Implementation and other process measures were collected and monitored through grantees' quarterly reports submitted through CGRS. In these reports, grantees provided narratives that described their progress each quarter, and every six months provided progress ratings on each key step as identified in the planning tools for all active evidence-based interventions. They also reported specific process measures such as number of individuals served, policies adopted, number and types of media messages distributed, etc. Although there was no direct onsite assessment of the quality of implementation as part of the evaluation, ADAP, District Office staff, and PIRE reviewed these reports and worked with grantees continuously through regular

communication and annual site visits to address any implementation issues, improve implementation fidelity, and identify and address training and technical assistance needs.

Grantee Implementation

As noted above, grantees submitted information quarterly through CGRS. Tables 1 and 2 below summarize some of the accomplishments of grantees for each of the required and optional strategies implemented across the entire RPP project. Note that the efforts described here are those that are the direct result of RPP; additional work may have been done on these strategies across the state that was not related to RPP. The number of regions in parentheses indicates the total number of regions that implemented each activity at some point during RPP. The number of regions implementing each of the optional activities may have varied year-to-year).

Table 1. Accomplishments: Required Activities

Local Policy Enhancements to Reduce Underage Drinking and Youth Marijuana Use (all 12 regions)

- **A total of 25 new policies were established in 8 of 12 regions, including:**
  - **Eight municipalities** included language related to community health and/or substance misuse prevention measures into their town plans.
  - **Eleven communities** restricted or prohibited substance use (including alcohol, tobacco, vaping, and/or cannabis) in public parks or at public events including recreational sports leagues.
  - **Two municipalities** restricted or prohibited cannabis dispensaries.

Support Division of Liquor Control (DLC) and/or Local Retailers' Efforts to Prevent Underage Drinking (all 12 regions)

- **Supported 118 Division of Liquor Licensing (DLL) in-person Responsible Beverage Service Trainings** by securing locations, promoting with local merchants, sharing materials about local prevention resources, providing light refreshments, small incentives and/or acknowledgement to retailers for attendance.
- **Recognized 1,116 retailers for passing DLL Compliance Checks** by sending letters of appreciation, providing certificates, and/or recognizing through local media.
- **7 regions conducted Sticker Shock** events at **110 businesses** with a total of **291 youth participating.** Sticker Shock is an activity aimed at adults who might purchase alcohol and provide it to minors. Stickers warning about the penalties for providing alcohol to minors are placed on multi-packs of beer, and other alcohol products.
- **1 region supported DLL's fraudulent ID enforcement checks** resulting in an additional 16 days of enforcement details leading to 79 citations for possession of a fake ID and 41 citations for attempted underage alcohol purchase.

Enhanced Local Law Enforcement Efforts to Prevent Underage Drinking and DUI (all 12 regions)

- **8 regions supported sobriety checkpoints** by sharing notices of upcoming checkpoints via social and traditional media, providing materials on prevention and local resources for officers to distribute to drivers during checkpoints, and/or providing funding.
- **7 regions supported saturation patrols** by planning with local law enforcement on key times for increased patrols such as prom and graduation, sharing information via social and traditional media on upcoming patrols, and supporting collaboration between schools and local law enforcement to increase students' awareness of consequences for underage drinking and DUI.
- **All 12 regions supported DEA Drug Take Back Days** by reaching out to local law enforcement agencies to encourage participation, promoting Take-Back Day locations as well as permanent drug disposal sites through various media channels, posters and flyers, providing materials for local sites to distribute on safe medication storage and disposal, and/or providing coordination support to sites leading up to and on the day of events.

Education and Outreach to the Community on Proper Storage and Safe Disposal of Unused Prescription Drugs (all 12 regions)

- Outreach was done through the distribution of brochures, community events, ads in local newspapers, PSAs, and through social media and websites.
- **All regions** shared materials locally for the statewide campaign Do Your Part and helped promote and distribute prescription mail back envelopes.
- Materials for patients on safe storage and proper disposal of prescription medications were shared with a total of **199 pharmacies and 395 health care providers.**

Education and outreach to the community on youth marijuana use prevention (all 12 regions)

- **All 12 regions** shared information about prevention of youth marijuana use through the distribution of brochures, community events, presentations to students, ads in local newspapers, PSAs, and through social media and websites.

Media Outreach (all 12 regions)

- **All 12 regions** developed relationships with local media and submitted press releases, op-eds and other types of outreach to media on prevention topics and activities. This resulted in a total of **883 instances of earned media** across the regions.
- In years two and three of the grant, and the first half of year four, **11 out of 12 regions met or exceeded the performance measure goal** of reaching out to media at least twice every six months on the topic of prevention of prescription drug misuse. This measure is tracked on the VDH scorecard which can be found here: https://www.healthvermont.gov/scorecard-alcohol-drugs

Table 2. Accomplishments: Optional Activities

Evidence-based classroom curricula (2 regions) • **1,702 students** participated in evidence-based substance use prevention curricula in schools.
Support of peer leadership groups in schools (9 regions) • **3,070 students** participated in groups such as Dover Youth to Youth empowerment program, Above the Influence, and Getting to 'Y'.
Support of Gay-Straight Alliances/Gender and Sexualities Alliances (GSA) in Schools (4 regions) • **328 students** participated in GSAs.
Delivery of evidence-based parent and family prevention programs (1 region) • **75 parents** participated in Nurturing Parenting. • **81 parents and youth** participated in Strengthening Families.
Support of Youth Mental Health First Aid (YMHFA) training and/or Drug Impairment Training for Educational Professionals (DITEP) for teachers and other youth serving staff (7 regions) • A total of **448 staff** were trained in YMHFA. • A total of **325 staff** were trained in DITEP.
Electronic screening and brief intervention programs for college students (e.g. Alcohol Edu, eCheckup) (3 regions) • A total of **240 college students/young adults** participated in electronic screening and brief intervention.
Screening and referral to substance use and mental health services in schools (1 region) • A total of **116 middle and high school students** were screened for substance misuse and/or mental health issues.
Mentoring (4 regions) • A total of **108 youth** were matched with adult mentors in their communities.
Skills, Mastery and Resilience Training - SMART Moves (3 regions) • A total of **226 youth** completed SMART Moves, a prevention and education program offered through local Boys and Girls Clubs.
Expand Permanent Safe Prescription Disposal Locations (3 regions) • A total of 2**6 new prescription medication disposal kiosks** were established through the efforts of RPP grantees.

Along with the successes and accomplishments described above, grantees also reported challenges for each strategy every quarter. Frequently cited implementation challenges

described included the slow pace of working with communities to develop policy enhancements that support prevention, challenges with developing messaging around youth marijuana prevention within the climate of legalization and low perception of harm, and engaging parents with educational programs.

Progress with Transitioning to a Regional Prevention Structure

The RPP represents the continuation and expansion of a new regional funding approach for Vermont's prevention system. As part of the evaluation of progress toward the RPP goal of increasing state, regional and community capacity through this targeted regional approach, an assessment was completed to determine how well this expanded regional structure is working, including challenges that have been encountered in this effort and recommendations for addressing these challenges. A qualitative study conducted in 2015 at the end of the previous PFS grant focused on the Cohort 1 regions and explored the initial transition process to a regional prevention structure. A similar study conducted in 2018 and 2019 provided a follow-up examination of the transition with the Cohort I grantees and included a greater emphasis on sustainability. It also included new perspectives from the more recently funded Cohort II grantees[3]. These studies collected data through interviews and focus groups with individuals at the VDH Offices of Local Health, lead agencies, and community partners about their experiences with and perceptions of the transition to a regional approach to funding and implementing substance misuse prevention activities.

Overall the qualitative evidence collected for the more recent study suggested that Vermont's regionally coordinated approach to prevention through RPP has strengthened over time, particularly in those regions that had the PFS grant, and has continued to work well.

Identified **strengths** of this regional model included:

- The establishment of stronger and more intentional collaborations with partners, particularly those that already have a regional focus such as hospitals and regional planning commissions, and the sharing of skills and expertise across these partners.
- Efficiencies through regional coordination of strategies such as media outreach, expansion of prescription drug disposal options, strategies with retailers and law enforcement, and the development of prevention primers or guides for policy makers.
- The regional non-competitive distribution of funding which feels more equitable and leads to a greater sense of inclusion for traditionally underserved and/or more geographically isolated communities.
- The strengthening of regional partnerships has made it easier for community-based organizations to collectively apply for and leverage other funding.

[3]Summaries of both reports can be found at http://www.vt-rpp-evaluation.org/ under the Other Reports and Presentations section.

Some **challenges** were also identified, including:

- Perceived differences in guidance to grantees following turnover in ADAP program manager staff.
- Frustration with guidance on promotion of state communications campaigns and lack of timely messaging related to marijuana.
- The amount of funding is spread thin, particularly within regions that have numerous prevention coalitions that are working together and sharing the funds.
- Sometimes the geographic boundaries as defined by RPP are not aligned with how people access services or with the service areas of certain partners such as hospitals.
- Unpredictability of long-term funding and the reliance on federal discretionary grants.

As a result of RPP, the state now has a network of trained and skilled community-based partners who work in partnership with District Office staff to deliver prevention services across their regions. For Cohort I regions in particular, the ability to have seven years of continuous funding has allowed them to develop strong networks of prevention partners and raise the profile of prevention throughout their regions. Multiple recommendations meant to address the challenges identified as well as to help enhance and sustain the gains made through RPP in the development of a regional prevention structure were made as a result of this study and can be found in the full report referenced on the previous page.

End-of-Project Input and Reflection from Grantees

Follow-up interviews were conducted in September 2020 as part of ADAP's desk audits designed to monitor grant activity during the final quarter of the funding period (prior to the no-cost extension). The purpose of these interviews was to gather grantees' reflections on the most notable accomplishments and barriers during RPP implementation, as well as what they would have done differently with similar resources and also if more resources had been available.

Many of the strengths and challenges that were identified in the earlier qualitative study were reinforced again through these final interviews. Additional **strengths and accomplishments** identified included:

- Wider coverage of the community with prescription drug disposal options such as permanent drop-boxes and distribution of mail-back envelopes.
- Expanded youth engagement opportunities, including new opportunities to bring youth together from across the regions.
- Increased visibility for prevention throughout the region, resulting in the grantees being viewed as experts on prevention with an important perspective to share within community conversations and collaborations.

Some additional **barriers and challenges** identified through these interviews included:

- Challenges getting buy-in and/or developing relationships with community partners because of lack of readiness and/or staff turnover in key positions.
- Sometimes the shared responsibility for the work that comes with subgranting to partner agencies slowed progress or led to accountability challenges.
- The size of the regions and diversity of individual communities within them sometimes made it difficult to monitor the needs and provide services across entire regions.
- The COVID-19 emergency was cited as a major barrier for providing services during the final year of the grant, resulting in the need to provide services in new and creative ways.

It is worth noting that many of the coordinators again stated that reliance on short-term federal discretionary grants makes it challenging to develop an effective and sustainable prevention infrastructure and to foster a dedicated, experienced, and professional prevention workforce.

Table 3 shows the responses of coordinators to questions about what they would have done differently in implementing RPP given the same level of resources and if additional resources were available. In addition to the items identified below, many grantees also indicated that they wished they had more flexibility with how to use the funds.

Table 3. What RPP grantees would have done differently with…

Same resources	Additional resources
Provided more subgrants to partners to help secure buy-in (2 grantees)	Provided more funding to each coalition/community partner (4 grantees)
Enhance or expand social and other media presence earlier (3 grantees)	Enhanced communications campaigns (3 grantees)
Done more to engage youth and young adults earlier (2 grantees)	Done more outreach with subpopulations such as low SES youth, LGBTQ youth (2 grantees)
Sought out more training earlier (3 grantees)	Sought out more training on strategic planning, leadership skills, board development (3 grantees)
	Hired more staff (4 grantees)
	Taken more time to build capacity in the earlier years of the project (2 grantees)

In addition to the final interviews, as the final quarter of the funding period came to an end, a brief survey was sent to the RPP coordinators from each region in September 2020. All twelve of the RPP coordinators completed the survey.[4] The purpose of the survey was to obtain more information about the coordinators' assessment of their organizations' implementation of RPP. Questions included ratings of the overall level of collaboration among organizations in their

[4] Even though the United Way of Addison County did not elect to receive funding during the final quarter (July-Sept 2020), they did participate in the survey to share their experiences during their four years of RPP funding.

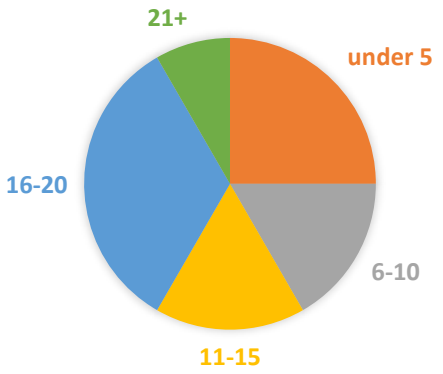
region, organizational structure and planning process, and the likelihood of sustaining RPP substance misuse prevention activities. Table 4 shows a summary of responses to items that asked the respondent to rate different aspects of their implementation. With a few exceptions, most grantees rated highly their overall collaboration, organizational visibility and structure, implementation tracking, and strategy selection for population-level change. The mean ratings for these features ranged from 7.7 to 8.8 (out of 10). A third of grantees, however, rated their confidence in the ability to fully sustain their prevention activities beyond the RPP at a five or lower (mean of 6.5), and confidence in sustaining their prevention activities at least partially was rated a bit higher with a mean of 7.4.

Table 4. Summary ratings from grant coordinators on their organization's capacity building and implementation efforts.

On a scale of 1 to 10 (with 10 being the highest or most favorable), how would you rate your organization's implementation of its RPP grant with respect to:	Range	Mean
The overall level and quality of collaboration and/or support from other organizations in your region	6-10	8.5
The overall level of outreach and visibility your organization had with the general public in your region	5-10	7.9
There was an effective organizational structure that used time efficiently	5-10	8.3
There was a clear and efficient planning process	4-10	7.7
There was a well-defined process for tracking completion of activities	7-10	8.8
Strategies were selected and implemented with the explicit goal of achieving population-level outcomes	5-10	8.3
Your level of confidence in the organization's ability to fully sustain its substance misuse prevention activities beyond the end of the grant	1-10	6.5
Your level of confidence in the organization's ability to at least partially sustain its substance misuse prevention activities beyond the end of the grant	2-10	7.4

RPP Coordinators were also asked to indicate their length of involvement with both the RPP and in substance misuse prevention work in general. All but two coordinators have been involved with RPP as the coordinator or in some other role since it began in 2016. One became involved shortly after the start of the grant, and one became involved only as of the very last quarter of the project. Over half of the coordinators indicated that they have been involved in substance misuse prevention for more than ten years (Figure 1).

Figure 1. Number of Years Coordinator Involved in Substance Misuse Prevention (N=12)



Impact of COVID-19 on Overall Coordination and Implementation of RPP

Vermont's governor declared a state of emergency on March 13, 2020 in response to the COVID-19 public health emergency. Shortly after that he issued a "Stay Home, Stay Safe" order and schools, childcare centers, restaurants, gyms, and many other non-essential business and workplaces were shut down. In order to better understand the impacts of the pandemic and the related restrictions on substance misuse prevention activities in Vermont, a set of questions were added to the quarterly reports submitted by grantees through CGRS in April and July. These questions asked grantees to describe the impacts of the COVID-19 emergency on the implementation of each of their interventions, impacts on overall capacity to do prevention work, and training and technical assistance needed and received related to providing prevention services during the pandemic. In this section we provide a summary of the key themes that emerged from responses to these questions.

All grantees reported that the main impact of COVID-19 was the cancellation and postponement of almost all in-person prevention activities and the need to adapt rapidly to working and providing services virtually. One grantee organization (a hospital) reported the temporary suspension of all RPP grant activities due to their organization's decision to redirect all staff efforts to the response to COVID-19. All other grantees reported continuation of many components of their work using online platforms, with varying degrees of success depending on the activity (described in Table 5). Many grantees reported that they were able to maintain relationships with many of their community partners remotely. Some grantees identified the need to pivot their focus to working with partners to meet basic needs such as food security and social connection as these quickly became priority issues. Most reported increasing skill with using online platforms to facilitate meetings and bring people together, and many reported

benefitting from a number of free virtual training and peer sharing opportunities which helped them to quickly adapt to the changing format and challenges of delivering services remotely.

Several additional challenges identified included engaging youth virtually, unreliable internet access in some parts of the state, difficulty getting messages out through schools as they were struggling to set up online learning for students, budgeting uncertainties, and difficulty filling staff vacancies. Some mentioned webinars that they had taken on some of these topics which were helpful and several mentioned that they appreciated the support that was provided by their regional Prevention Consultant as they adjusted to this new reality.

Table 5 summarizes specific impacts described for selected RPP interventions and activities that seemed more heavily impacted. Some interventions were able to continue with modifications, such as the promotion of prescription drug mail-back envelopes, peer leadership programs, and mentoring while others were suspended, at least temporarily, such as meeting with and providing education to local policy makers and collaboration with local law enforcement.

Table 5. Impacts of COVID-19 on selected RPP interventions

Intervention	Impacts of COVID-19 Emergency
Education on policy approaches to prevent underage drinking and youth marijuana use	• Concerns about the impact on underage access with changes to state policy which temporarily allows for delivery, take-out, and curbside pick-up alcohol sales • Meetings with policy makers have been cancelled and substance misuse prevention is not a priority topic for many municipalities right now • Concern that the economic impact of COVID-19 will lead to a rush to create a commercial cannabis market
Support for Responsible Beverage Service Training (RBST) and recognition of retailers for passing compliance checks	• In-person RBST trainings were cancelled • Lack of alcohol compliance checks for a period of time at the beginning of the pandemic
Community outreach and education on safe storage and disposal of prescription drugs	• The DEA drug take-back day scheduled for April 2020 was cancelled • Unable to distribute materials at events and through other sites because of cancellations and closures • Increased promotion of mail back envelopes, though some of the envelope distribution sites were closed
Support for law enforcement efforts	• Limited opportunities for collaboration with law enforcement due to cancellation of drug take-back day, proms and graduations • School Resource Officers were unavailable for collaboration due to reassignment as a result of school closures
Peer leadership programs	• Peer leadership events and in-person meetings were cancelled • Some meetings with youth continued virtually, but not as easy for some youth to fully participate due to privacy issues/lack of safe space to speak openly while at home • Youth are experiencing stress due to social isolation, adjustment to online learning
Mentoring	• In-person meetings have been limited, but mentors have continued to provide support via phone and online • Some matches able to continue to meet in-person following guidelines for meeting safely
Community outreach and education on youth marijuana prevention	• VDH conference on youth cannabis prevention scheduled for April was cancelled • Some have shifted messaging to focus on supporting youth mental health and addressing isolation • Concerns expressed about potential increased exposure to cannabis use at home and about more time spent on social media which may include content that normalizes or glorifies use

Outcome Evaluation

Approach

Each of the four strategies applied to this outcome evaluation are described below, followed by a description of the data sources and measures used and the findings from the various analyses conducted. One additional strategy that has been used in previous evaluations of community-based interventions involving multiple grantees is to examine the associations between measures of capacity and implementation as assessed at the community grantee level, and degree of success in achieving positive outcomes. Due to the small number of grantees (or regions, N=12) defined for RPP, however, correlations between grantee attributes and outcomes were unduly influenced by outliers and determined to be potentially misleading. This concern was compounded the fact that six of the twelve regions funded by RPP were funded previously through PFS, which we know from the PFS evaluation has impacted the outcome measures analyzed for this report.

Examination of changes in outcome measures over time

As was done for previous evaluations of Vermont's SAMHSA-funded discretionary grant programs, one key outcome evaluation question addressed in this report regarding RPP is whether and to what extent the substance misuse prevention goals of the program were met. For RPP, these goals were reductions in the prevalence of:

- underage drinking and binge drinking among persons aged 12 to 20
- misuse of prescription medications among persons aged 12 to 25
- marijuana use among persons aged 12 to 25

To answer this question, we examined changes over time in outcome measures linked to these goals for all areas of the state, collectively, that were funded by RPP[5]. Examination of trends over time in the areas served by RPP provides only speculative evidence regarding whether desirable changes could be attributed to the RPP-funded activities. But it is still helpful to know whether these goals were achieved regardless of the underlying reasons. Evidence of desirable changes in the targeted outcomes increases the plausibility that RPP has contributed to positive impacts on the substance use behaviors it targeted. To provide helpful context for interpreting the findings, we also examined changes in outcome measures during the implementation of the state's PFS project, separately for regions that were funded previously through PFS (cohort 1) and those that were not (cohort 2).

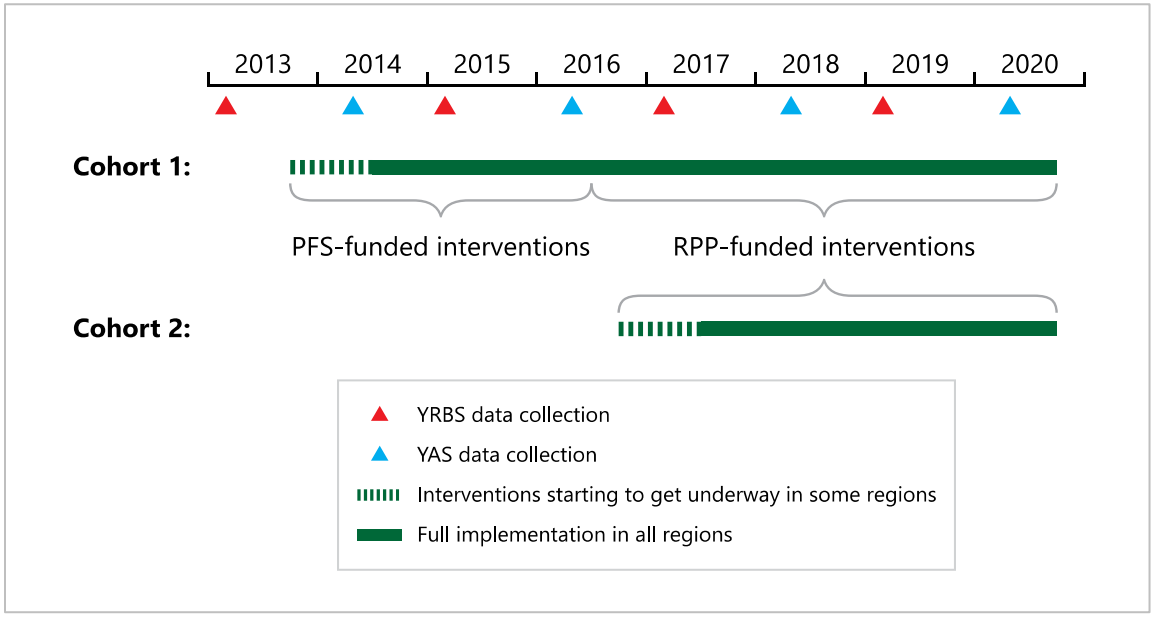
[5] Although almost all communities in Vermont were included in the regions served by RPP grantees, there were a few exceptions. See Appendix E for further information.

Outcome measure comparisons between cohorts 1 and 2

More definitive attribution to any particular program for positive outcomes requires a design in which there is a control or comparison group that does not receive the intervention. In this case, RPP is the intervention of interest. But because almost all communities across the state received RPP funding, the use of a suitably sized unfunded group of communities to compare with RPP-funded communities was not possible. As an alternative, we examined whether the infusion of RPP funding into the cohort 2 regions helped to diminish or even reverse the diverging trends in outcome measures that had emerged between cohort 1 and cohort 2 regions during PFS implementation. Even though all regions received RPP funds, evidence that the cohort 2 regions may have benefitted as much as or even more from RPP by gaining back ground that was lost during PFS would help support the effectiveness of RPP in achieving its substance misuse prevention goals.

To describe the patterns in the outcome data that would reflect this type of reversal, it is helpful to consider the timeline for intervention activities implemented in the cohort 1 and cohort 2 regions, and the timing of the outcome data collection points within that timeline (see Figure 2).

Figure 2. Timeline for PFS and RPP Intervention Activities and Outcome Data Collection



The timeline references data collected through the Youth Risk Behavior Survey (YRBS) and the Vermont Young Adult Survey (YAS), both of which are described in the next subsection. To more explicitly differentiate the two cohorts, cohort 1 regions are collectively referred to in the remainder of this report as the "PFS+RPP" condition, and cohort 2 regions are collectively referred to as the "RPP_only" condition. Patterns in the YRBS-based outcome measures that support the effectiveness of RPP and its predecessor, PFS, would be those in which more favorable changes over time are observed for the PFS+RPP condition relative to the RPP_only condition from 2013 to 2017. Those differential effects would become weaker or even be

reversed during the 2017 to 2019 timespan due to the introduction of RPP-funded activities into the RPP_only communities. For the YAS-based measures, the expectation would be to see more favorable changes over time in the PFS_RPP condition from 2014 to 2016, and a lessening or reversal of this pattern between 2016 and 2020.

Using the approach just described, evidence for positive effects of PFS have already been reported[6] as well as preliminary evidence of positive RPP effects on outcomes measured in the 2018 YAS.[7] The findings provided in this report build on this initial assessment of RPP effects. It is important to note that even with the availability of more recent outcome data (2019 YRBS and 2020 YAS), these data points occurred before the conclusion of RPP-funded activities, which for most regions was September of 2020, and therefore may not capture the full effects of RPP.[8]

Vermont statewide trends compared to the U.S.

An alternative approach for dealing with the absence of a true unfunded comparison condition within Vermont is to compare Vermont statewide trends on available outcome measures with the same measures (and from the same source) for the nation as a whole. Statewide and national estimates from CDC's YRBS and SAMHSA's National Household Survey on Drug Use and Health (NSDUH) were used for this purpose. Patterns supporting the effectiveness of RPP would show greater reductions in targeted substance use behaviors over time in Vermont relative to the nation. Findings from this approach are speculative, however, due to the many other factors that can differentially affect outcome trends in Vermont and other states, plus the fact that many if not most other states in the country have also benefitted from PFS funding over the past eight years. In addition, the 2019 YRBS data were collected a full year and a half before the conclusion of RPP. The more recently available state estimates from NSDUH are based on data collected even earlier than that (i.e., 2017/2018 combined) and therefore miss any RPP effects that occurred during the final two years of the program.

Reductions in substance misuse disparities

Based on data and research available at the time, three subpopulations in Vermont that have experienced generally higher rates of substance misuse behaviors and/or higher needs for services than the general population were identified for the RPP project: LGBTQ youths and young adults, persons with low SES, and active or former members of the military and their families. An additional goal of RPP, therefore, was to reduce existing disparities for these subpopulations. The YRBS and YAS both provide measures of sexual orientation/identity and SES and therefore provide an opportunity to assess the degree of disparity that existed at the beginning of the RPP project and the extent to which any such disparities were reduced during RPP implementation. Although active military status is also ascertained in the YAS, the low

[6] See the PFS Evaluation Summary and RPP Interim Outcome Evaluation reports available on the VDH/ADAP website.
[7] Available at http://www.vt-rpp-evaluation.org/ under the Other Reports and Presentations section.
[8] The YRBS is usually conducted in February and March of each odd-numbered year. The YAS was conducted during the months of March through May in each even-numbered year.

numbers of respondents who indicated being in the military precluded an analysis of trends over time for this subpopulation.

Data Sources and Measures

The primary sources of outcome data for this evaluation were Vermont's Youth Risk Behavior Survey (YRBS) and the Vermont Young Adult Survey (YAS). The YRBS is conducted early in each odd-numbered year in almost all middle schools and high schools across the state. Outcome measures provided in the YRBS that are relevant to this evaluation are self-reported substance misuse and risk factors for substance misuse, as described in Table 6.

Table 6. YRBS Outcome Measures and Definitions.

Measure	Definition
Substance use measures:	
Current alcohol use	Any use of alcohol within past 30 days
Current binge drinking	Having 5 or more drinks in a row within past 30 days[1]
Current marijuana use	Any use within the past 30 days
Lifetime R_x pain reliever misuse	Use of any prescription pain relievers without a doctor's prescription or in ways not prescribed in lifetime[2]
Lifetime R_x stimulant misuse	Use of any prescription stimulants without a doctor's prescription or in ways not prescribed in lifetime[2]
Perception measures:	
Low disapproval of alcohol use	A little bit wrong or not wrong at all for someone respondent's age to use alcohol
Low disapproval of marijuana use	A little bit wrong or not wrong at all or someone respondent's age to use marijuana
Low risk from binge drinking	No risk or slight risk for people to have 5+ drinks once or twice per weekend
Low risk from marijuana use	No risk or slight risk for people using marijuana regularly
Perceived availability of alcohol	Very easy for respondent to obtain alcohol
Perceived availability of marijuana	Very easy for respondent to obtain marijuana

[1] For the 2017 and 2019 YRBS, binge drinking for females was defined as having 4 or more drinks in a row within the past 30 days.

[2] The 2013 and 2015 version of this question only referred to use without a prescription.

For this evaluation only high school student data (grades 9 through 12) were used, as prevalence rates for middle school students are much lower and less useful for evaluation purposes. The individual respondent-level data were weighted to be representative of the demographic composition of each Supervisory Union with respect to grade level, sex, and racial/ethnic minority status. Respondents were assigned to the PFS+RPP and RPP_only conditions based on the towns where each student reported to reside, and according to the coverage areas defined for each PFS and RPP grantee.[9]

The YAS was conducted in the spring of even-numbered years from 2014 to 2020. Vermont residents in the age range from 18 to 25 were recruited primarily through ads on Facebook and Instagram, although some local recruitment by PFS and RPP grantees also occurred. The respondent-level data were weighted to be representative of the demographic composition of each county in Vermont with respect to age group (18 to 20 versus 21 to 25) and sex. Respondents were assigned to the two conditions based on either their town or zip code, depending on the year of the survey. The YAS-based outcome measures used for this evaluation are shown in Table 7. Because the stated RPP goals regarding alcohol misuse focus explicitly on underage drinking, outcome measures specific to underage drinkers (ages 18 to 20) were created. At the same time, however, certain interventions that target underage drinking are expected to have a more generalized effect. For that reason, outcome measures were also constructed for the ages 21-25 year subgroup, and for the entire young adult sample (ages 18 to 25).

For both the YRBS and the YAS, the perception measures are coded such that higher prevalence rates indicate higher levels of the underlying risk factor captured in each measure. Therefore, decreases in all perception measures (as well as all the substance use measures) are desirable.

[9] Details on the assignment of students to condition are provided in Appendix E.

Table 7. YAS Outcome Measures and Definitions.

Measure[1]	Definition
Substance use measures:	
Current alcohol use (ages 18-20)	Any use of alcohol within past 30 days (ages 18-20 only)
Current binge drinking (ages 18-20)	Having 5 or more drinks (if male) or 4 or more drinks (if female) on a single occasion within past 30 days (ages 18-20 only)
Current binge drinking (ages 21-25)	Having 5 or more drinks (if male) or 4 or more drinks (if female) on a single occasion within past 30 days (ages 21-25 only)
Current binge drinking	Having 5 or more drinks (if male) or 4 or more drinks (if female) on a single occasion within past 30 days
Current marijuana use	Any use of marijuana within past 30 days
Past year R_x pain reliever misuse	Any use of prescription pain relievers that were not prescribed, or at a higher dosage or for a different reason than prescribed, within the past year
Past year R_x sedative misuse	Any use of prescription sedatives that were not prescribed, or at a higher dosage or for a different reason than prescribed, within the past year
Past year R_x stimulant misuse	Any use of prescription stimulants that were not prescribed, or at a higher dosage or for a different reason than prescribed, within the past year
Perception measures:	
Easy for minors to buy alcohol	Very easy or somewhat easy for underage persons to buy alcohol in stores
Easy for minors to be served alcohol	Very easy or somewhat easy for underage persons to buy alcohol in bars and restaurants
Easy to obtain marijuana	Very easy for persons the age of respondent to obtain marijuana
Easy to obtain pain meds w/o R_x	Very easy or somewhat easy for persons the age of respondent to obtain R_x pain relievers without a prescription
Low risk from binge drinking	No risk or slight risk from having five or more drinks once or twice a week
Low risk from using marijuana	No risk from smoking marijuana once or twice per week
Low risk from using R_x pain meds than were not prescribed	No risk or slight risk from using R_x pain relievers that were not prescribed a few times a year
Don't recall info about R_x drug storage/disposal	Do not recall seeing or hearing information about safe storage/disposal of R_x drugs in the past year

[1]All measures pertain to the entire age range of eligible participants (ages 18 to 25) unless otherwise noted.

In addition to the outcome measures, the following measures were used to define the subgroups used in analyzing reductions in health disparities:

Data source	High-need group	Timespan	Definition
YRBS	LGBQ[1]	2015-2017	LGBQ: Self-identified as gay or lesbian, bisexual, or not sure. Not LGBQ: Self-identified as heterosexual/straight.
	LGBTQ[1]	2017-2019	LGBTQ: Self-identified as gay or lesbian, bisexual, or not sure, and/or self-identified as transgender or unsure if transgender. Not LGBTQ: Self-identified as both heterosexual/straight and as not transgender or unsure if transgender.
	Low SES[2]	2015-2017	Low SES: Highest level of education completed by mother (or person who is like a mother) was high school or less. Not low SES: Highest level of education completed by mother (or person who is like a mother) was at least some college.
YAS	LGBTQ	2016-2020	LGBTQ: Self-identified as gay or lesbian, bisexual, trans, transgender, gender non-conforming, other, and/or unsure. Not LGBTQ: Self-identified as straight.
	Low SES	2016-2020	Low SES: Highest level of education completed by mother (or person who is most like a mother) was high school or less. Not low SES: Highest level of education completed by mother (or person who is like a mother) was at least some college.

[1] Because the YRBS did not ask about transgender status in 2015, the changes calculated between 2015 and 2017 for disparities in among LGBTQ youth and young adults were based only on sexual identity (i.e., LGBQ status). The addition of a question in the YRBS regarding transgender status in 2017 allowed for an expanded definition that included this category as well (i.e., LGBTQ). For the sake of consistency, the acronym LGBTQ is used throughout this report when referring to this high need group whether based on the LGBQ measure or the LGBTQ measure unless otherwise noted.

[2] The 2019 YRBS did not include the question about mother's education, so RPP-related changes in disparities were limited to the 2015-2017 timespan.

The sample sizes for these two data sources, by year and condition are provided below. The Ns may be slightly lower for specific outcome measures due to missing values.

	PFS+RPP				RPP_only			
Year:	2013	2015	2017	2019	2013	2015	2017	2019
YRBS sample sizes	13741	12854	13247	11876	7431	7551	6842	6297
Year:	2014	2016	2018	2020	2014	2016	2018	2020
YAS sample sizes	2143	2241	1517	1677	702	800	815	639

For comparing Vermont with the U.S., it was necessary to obtain outcome measures from national surveys that provide both national and state-level estimates, To meet this requirement, state and national prevalence rates based on the YRBS and NSDUH were obtained from the CDC and SAMHSA websites. The measures used for this component of the evaluation were limited to substance misuse prevalence rates only. The definitions for some of these measures changed slightly over the years but were not significant enough to meaningfully distort the trends. Any such changes are noted in the tables that summarize these data.

Findings

Changes over time in outcome measures, by condition: YRBS-based outcome measures

The percentage point changes for each outcome measure derived from the YRBS for the timespan from 2013 to 2019 are displayed in Table 8. The year 2013 serves as the baseline year, as the 2013 YRBS was conducted before the start of any PFS funded interventions. Percentage point changes over this timespan in the outcome measures reflect changes associated with the implementation of PFS plus the first three years of RPP. These values are displayed separately for the PFS+RPP and PFS_only conditions in order to help distinguish potential contributions of PFS to any positive changes observed over the timespan.

As indicated in Table 8, most YRBS-based substance use and risk factor prevalence measures decreased over the time period from 2013 to 2019. The notable exception to this pattern was for marijuana use and two of the risk factors (low disapproval and low perceived risk) for marijuana use. Stronger decreases (or smaller increases) were observed for the PFS+RPP condition for all except one measure. This was expected due to the more favorable outcomes that have already been observed from 2013 through 2017 in the PFS-funded regions. Any changes in these patterns from 2017 to 2019 were insufficient to counteract the more favorable trends already established among the PFS+RPP regions. In fact, most of the differences between the two conditions that were favorable to PFS+RPP were statistically significant at the $p<.05$ level, as shown in the rightmost two columns of the table.

Table 8. Percentage point change for each YRBS-based outcome measure over the entire 2013 to 2019 timespan, by condition.

	Percentage point change[1] (2013 to 2019)		Condition with better performance[2]	
Outcome:	**PFS+RPP**	**RPP_only**	**PFS+RPP**	**RPP_only**
Current alcohol use	-3.5*	-0.7	✓*	
Current binge drinking	-5.2*	-3.0*	✓*	
Current marijuana use	1.7*	4.3*	✓*	
Lifetime R_x pain reliever misuse	-2.2*	-1.6*	✓	
Lifetime R_x stimulant misuse	-1.3*	1.0*	✓*	
Low disapproval of alcohol use	-3.9*	-3.4*	✓	
Low disapproval of marijuana use	4.6*	7.6*	✓*	
Low risk from binge drinking	-3.9*	-2.8*	✓	
Low risk from marijuana use	3.1*	5.4*	✓*	
Perceived availability of alcohol	-4.7*	-5.1*		✓
Perceived availability of marijuana	-3.5*	-0.5	✓*	

[1] Changes in the desired directions (i.e., decreases) are shaded in green. Differences that are statistically significant at the $p<.05$ level are followed by an asterisk.

[2] The condition that performed better over the entire time period is indicated with a check mark. If the performance was significantly better than the other condition at the $p<.05$ level the check mark is followed by an asterisk.

Table 9 provides similar information, but it breaks the 2013 to 2019 timespan into two more specific periods. For the period from 2013 to 2017, any intervention effects due to either PFS or RPP would likely be limited to the PFS_RPP condition only. Most RPP-funded interventions in the RPP_only regions were not fully underway until the summer of 2017, several months after the 2017 YRBS data collection (see Figure 2). From 2017 to 2019, however, RPP effects would be expected to be evident in both conditions. To the extent that the new RPP funding in the RPP_only condition could help to make up ground lost during the previous years, more favorable outcomes would be observed in the RPP_only condition (relative to the PFS+RPP condition). As shown in the two rightmost columns of the table, RPP_only regions performed better than PFS+RPP from 2017 to 2019 on six of the eleven outcome measures and they performed the same on four others. This was a remarkable reversal from the pattern observed during the 2013 to 2017 timespan as also shown in Table 9. These findings suggest that the infusion of RPP funds and the activities they supported into the RPP_only regions did help to

make positive differences in substance misuse and risk factor prevalence rates among high school students in those areas.

Table 9. Percentage point change for each YRBS-based outcome measure for the 2013-2017 and 2017-2019 timespans, by condition.

	Percentage point change[1]				Condition with the better performance[2]			
	PFS+RPP		RPP_only		13 to 17		17 to 19	
Outcome:	**13 to 17**	**17 to 19**	**13 to 17**	**17 to 19**	**PFS+ RPP**	**RPP only**	**PFS+ RPP**	**RPP only**
Current alcohol use	-1.1	-2.3*	2.3*	-3.0*	✓*			✓
Current binge drinking	-3.3*	-1.9*	-1.1	-1.9*	✓*		--	--
Current marijuana use	-1.2*	2.9*	1.5*	2.8*	✓*			✓
Lifetime R_x pain reliever misuse	-3.8*	1.6*	-3.2*	1.6*	✓		--	--
Lifetime R_x stimulant misuse	-1.4*	0.1	-0.7	1.8*	✓		✓*	
Low disapproval of alcohol use	-5.4*	1.5*	-4.4*	1.1	✓			✓
Low disapproval of marijuana use	0.5	4.1*	3.5*	4.1*	✓*		--	--
Low risk from binge drinking	-0.5	-3.3*	0.6	-3.4*	✓			✓
Low risk from marijuana use	5.2*	-2.2*	7.9*	-2.5*	✓*			✓
Perceived availability of alcohol	-3.5*	-1.2	-3.9*	-1.2		✓	--	--
Perceived availability of marijuana	-5.2*	1.7*	-1.1	0.7	✓*			✓

[1] Changes in the desired directions (i.e., decreases) are shaded in green. Differences that are statistically significant at the $p<.05$ level are followed by an asterisk.

[2] The condition that performed better for each time period is indicated with a check mark. If the performance was significantly better than the other condition at the $p<.05$ level the check mark is followed by an asterisk. A double dash (--) indicates that the percentage point change was the same for both conditions (when rounded to one decimal place).

Tests of statistical significance for Tables 8 and 9 were calculated using the respondent-level YRBS data files.[10] The prevalence rates upon which the percentage change values in Tables 8 and 9 are based are provided in Appendix A.1. For each data table in this appendix, a chart visually depicting the trends over time for the PFS+RPP and RPP_only conditions is also provided.

Changes over time in outcome measures, by condition: YAS-based outcome measures

The same strategy used to describe PFS and RPP effects for the YRBS-based outcome measures was applied to the measures provided by the YAS. As was the case with the YRBS-based measures, most measures showed an overall decrease during the combined PFS and RPP timeframe, with marijuana use and related risk factors being the primary exceptions. Table 10 displays the prevalence rates for the two conditions across the timespan from 2014 to 2020.[11] This timespan again includes a period during which only the PFS+RPP regions were receiving funds and implementing interventions (2014 through 2017) and a period in which regions in both conditions were implementing interventions (2017 through 2020). As with the YRBS-based outcomes, the expectation was for the PFS+RPP regions to perform better due to the longer period within the timespan that they were funded and implementing interventions. The differences, however, were expected to not be as robust as was seen with the YRBS outcome measures, due to the relatively greater amount of time within the 2014 to 2020 timespan that interventions were being implemented in the RPP_only condition before the final measurement point (i.e., all the way through spring of 2020).

The patterns shown in Table 10 are consistent with the expectation just described. For the majority of outcome measures examined, the PFS+RPP condition did experience more favorable changes in outcome measures than the RPP_only condition. But the differences in performance were generally not as large as was seen for the YRBS outcomes, and none was statistically significant. In addition, PFS_only regions performed better on four of the outcome measures examined, as opposed to only one measure for which this was true among the YRBS measures.

[10] Changes over time effects were assessed by testing the main effect of year within each condition (first and last year only) with a logistic regression model. Differences in performance between the two conditions were assessed by testing the year by condition interaction term, again with a logistic regression model.

[11] A slightly earlier starting point for outcome measurement would have been desirable given that PFS-funded activities in some regions were already being implemented in the fall of 2013. However, because most interventions were not underway until the summer of 2014, the effect of not having baseline measurement before any intervention activity began is not expected to substantively affect the findings from the analyses reported here.

Table 10. Percentage point change for each YAS-based outcome measure over the entire 2014 to 2020 timespan, by condition.

	Percentage point change[1] (2014 to 2020)		Condition with better performance[2]	
Outcome:	**PFS+RPP**	**RPP_only**	**PFS+RPP**	**RPP_only**
Current alcohol use (ages 18-20)	-4.8	1.7	✓	
Current binge drinking (ages 18-20)	-18.3*	-4.9	✓*	
Current binge drinking (ages 21-25)	-10.9*	-10.5*	✓	
Current binge drinking (ages 18-25)	-13.9*	-8.2*	✓	
Current marijuana use	6.6*	10.2*	✓	
Past year R_x pain reliever misuse	-5.7*	-4.8*	✓	
Past year R_x sedative misuse	-2.3*	0.3	✓	
Past year R_x stimulant misuse	-2.2	-1.2	✓	
Easy for minors to buy alcohol	8.6*	1.9		✓
Easy for minors to be served alcohol	4.0*	-2.6		✓*
Easy to obtain marijuana	2.0	2.6	✓	
Easy to obtain pain meds without Rx	-19.9*	-26.4*		✓
Low risk from binge drinking	-1.8	-1.1	✓	
Low risk from using marijuana	-2.3	-5.3		✓
Low risk from using R_x pain meds not prescribed	-5.1*	-3.3	✓	
Don't recall info about R_x drug storage/disposal	-19.0*	-15.8*	✓	

[1] Changes in the desired directions (i.e., decreases) are shaded in green. Differences that are statistically significant at the $p<.05$ level are followed by an asterisk.

[2] The condition that performed better over the entire time period is indicated with a check mark. If the performance was significantly better than the other condition at the $p<.05$ level the check mark is followed by an asterisk.

Parallel with the analysis of the YRBS outcome measures, Table 11 shows the relative performance of the PFS+RPP and RPP_only conditions for two different timespans within the entire period from 2014 to 20120. For the first period, 2014 to 2016, the PFS+RPP condition would be expected to perform better due to the lack of intervention activities during this time in the RPP_only condition. Effects of RPP during the second period, 2016 to 2020, would be expected to be evident in both the conditions given the timing of the RPP-funded interventions. The patterns shown in Table 11 reflect this expectation. For all but two of the outcome measures, the changes between 2014 and 2016 are more favorable for the PFS+RPP regions compared to RPP_only. For the period from 2016 to 2020, however, RPP_only regions performed better than the PFS+RPP condition for the majority (9 of 16) of the outcome measures examined. Additional analysis that examined changes between 2018 and 2020, a timespan when the RPP-funded interventions were active in the RPP_only regions for the entire period rather than only a significant portion of the period, showed that an even higher number of outcomes (12 of 16) for which the RPP_only regions outperformed the PFS+RPP regions (see Appendix B). Furthermore, for those four outcomes that still showed greater improvement among the PFS+RPP regions from 2018 to 2020, the performance differences between the two conditions were less pronounced for the 2018-2020 interval than during the 2014-2016 interval.

As was provided for the YRBS outcome measures, the prevalence rates corresponding to the values shown in Tables 10 and 11 are provided in the Appendices (Appendix A.2). The same tests used to determine statistical significance as described for the YRBS measures were applied to these outcome measures as well.

Table 11. Percentage point change for each YAS-based outcome measure for the 2014-2016 and 2016-2020 timespans, by condition.

	Percentage point change[1]				Condition with the better performance[2]			
	PFS+RPP		RPP_only		14 to 16		16 to 20	
Outcome:	**14 to 16**	**16 to 20**	**14 to 16**	**16 to 20**	**PFS+ RPP**	**RPP only**	**PFS+ RPP**	**RPP only**
Current alcohol use (ages 18-20)	-4.3	-0.5	3.8	-2.2	✓			✓
Current binge drinking (ages 18-20)	-10.7*	-7.6*	-0.2	-4.7	✓		✓	
Current binge drinking (ages 21-25)	-7.0*	-3.9	-5.7	-4.7	✓			✓
Current binge drinking (ages 18-25)	-8.6*	-5.3*	-3.5	-4.7	✓		✓	
Current marijuana use	2.4	4.2*	5.1	5.1	✓		✓	
Past year R_x pain reliever misuse	-1.8	-3.9*	-0.4	-4.5*	✓			✓
Past year R_x sedative misuse	1.3	-3.6*	2.0	-1.7	✓		✓	
Past year R_x stimulant misuse	1.1	-3.2*	-1.3	0.0		✓	✓	
Easy for minors to buy alcohol	1.5	7.1*	3.7	-1.8	✓			✓*
Easy for minors to be served alcohol	-1.6	5.6*	-1.3	-1.3	✓			✓*
Easy to obtain marijuana	1.5	0.5	3.4	-0.8	✓			✓
Easy to obtain pain meds without Rx	-2.7	-17.2*	-2.2	-24.1*	✓			✓
Low risk from binge drinking	-0.6	-1.2	-1.0	-0.1		✓	✓	
Low risk from using marijuana	1.4	-3.7*	5.9	-11.2*	✓			✓*
Low risk from using R_x pain meds not prescribed	-2.9*	-2.2	-2.1	-1.3	✓		✓	
Don't recall info re: R_x drug storage/disposal	-6.9*	-12.1*	-0.8	-15.0*	✓			✓

[1] Changes in the desired directions (i.e., decreases) are shaded in green. Differences that are statistically significant at the $p<.05$ level are followed by an asterisk.

[2] The condition that performed better for each time period is indicated with a check mark. If the performance was significantly better than the other condition at the $p<.05$ level the check mark is followed by an asterisk.

Comparisons of statewide trends in outcomes with those for the U.S.

Changes over time for the outcome measures relevant to RPP, and that are available from standardized surveys at both the state and national levels, are reported in Table 12 (for YRBS measures) and Table 13 (for NSDUH measures). Table 12 shows the percentage point changes in the YRBS-based outcome measures for both Vermont and the U.S. for the entire timespan of PFS/RPP (i.e., from baseline to the most current year available). It also reports the percentage point changes over just the period for which RPP was fully underway in both conditions, as this is the period over which RPP would be expected to have the strongest influence on statewide outcomes. The year 2017 was selected as the most appropriate baseline year for this period. A similar strategy was used for examining the NSDUH-based outcomes (Table 13).

Table 12. Percentage Point Change for Selected Outcome Measures from the YRBS: Vermont and the U.S.

Measure	Area	Percentage Point Change[1]	
		2013 to 2019	2017 to 2019
Current alcohol use	Vermont	-2.1	**-2.1**
	U.S.	**-5.7**	-0.6
Current Binge Drinking	Vermont	-4.1	**-1.7**
	U.S.	**-7.1**	0.2
Current Marijuana Use	Vermont	2.8	3.0
	U.S.	**-1.7**	**1.9**
Lifetime R_x drug misuse	Vermont	-1.5	1.8
	U.S.	**-3.5**	**0.3**

[1] For each comparison between Vermont and the U.S., the change value that reflects the more favorable performance is shown in bold. Cells indicating a decrease in the prevalence rates are green-shaded

Over the entire timespan of PFS and RPP, the findings in Tables 12 and 13 indicate that Vermont did not perform as well as the U.S. in reducing any of the outcome measures analyzed. This was true even though several of the measures did experience declines in Vermont as well as the U.S. For the smaller more recent timespan associated only with RPP, differences in performance between Vermont and the U.S. were generally smaller than for the entire time period and the findings were mixed across the outcome measures examined. For this timespan specifically, Vermont experienced at least slightly better outcomes than the U.S. for both current alcohol use and binge drinking among high school students, and current marijuana use and past year prescription pain reliever misuse among persons aged 18 to 25.

Table 13. Percentage Point Change for Selected Outcome Measures from the NSDUH: Vermont and the U.S.

Measure	Area	Percentage Point Change[1]	
		2012/13 to 2017/18	2016/17 to 2017/18
Current alcohol use ages 12-20	Vermont	1.9	3.4
	U.S.	**-4.2**	**-0.2**
Current binge drinking ages 12-20	Vermont	1.2	1.2
	U.S.	**-3.1**	**-0.3**
Current binge drinking ages 18-25	Vermont	2.8	-1.4
	U.S.	**-2.8**	**-1.7**
Current marijuana use	Vermont	9.0	**-1.1**
	U.S.	**3.2**	0.6
Past year R_x pain reliever misuse	Vermont	-2.0	**-0.9**
	U.S.	**-3.2**	-0.8

[1] For each comparison between Vermont and the U.S., the change that reflects the more favorable performance is shown in bold. Cells indicating a decrease in the prevalence rates are green-shaded.

Progress in reducing health disparities for the LGBTQ and low-SES sub-populations

Focusing first on the YRBS measures, we examined whether decreases in health disparities occurred between 2015 and 2017 within the PFS+RPP condition. For that timespan, RPP-funded interventions were full underway only in the PFS+RPP regions. The values shown in top half of Table 14 are the percentage point changes over time among LGBTQ students after adjusting for the change among non-LGBTQ students. Negative values indicate that the prevalence rate declined more (or increased less) among the LGBTQ students, which means that health disparities present in the baseline year (2015) decreased during the 2015 to 2017 timespan in the PFS+RPP condition. This was the case for all five YRBS outcome measures. The same was true for three of the five measures with respect to SES disparities (see bottom section of Table 14), although the decreases that occurred were smaller than what was observed for LGBTQ disparities.

Table 14. Reductions in High School Student Substance Misuse Disparities Experienced by LGBTQ and Low-SES Status

High need group	Outcome measure	Relative reduction[1] in disparity 2015 to 2017 (RPP+PFS)	Relative reduction[1] in disparity 2017 to 2019 (PFS+RPP & RPP_only)
LGBTQ[2]	Current alcohol use	-4.0	(1.4)
	Current binge alcohol use	-3.6	(0.6)
	Current marijuana use	-2.7	-1.6
	Lifetime R_x pain reliever misuse	-4.9	-1.5
	Lifetime R_x stimulant misuse	-1.0	-0.8
Low SES	Current alcohol use	0.6	
	Current binge alcohol use	-0.5	
	Current marijuana use	2.6	
	Lifetime R_x pain reliever misuse	-0.6	
	Lifetime R_x stimulant misuse	-0.4	

[1]Percentage point change in the prevalence of each substance misuse behavior for the high risk group (LGBTQ or low SES) after adjusting for change in the remainder of the sample.

[2]As explained in the description of the data sources and measures, the 2015 YRBS did not include a question about gender identity. The 2015 to 2017 reductions, therefore, the high need subgroup is actually defined as LGBQ only.

Notes: Negative values (shaded in green) indicate a relative reduction in prevalence for the high need group (in relation to the remainder of the sample). Values in parentheses indicate that the prevalence rate for the high need group was lower than the remainder of the sample in the initial year of the time frame being examined, and therefore no disparity existed for that particular measure at baseline. Gray-shaded cells indicate data were not available to perform the calculation.

For examining health disparity reductions in the YRBS measures from 2017 to 2019, the analysis was based on both conditions combined because RPP was fully underway during this timespan. Because the SES measure (mother's education level) available in the 2013 through 2017 surveys was not available in 2019, this analysis focused only on the LGBTQ disparity question. For this time period, health disparity reductions were still observed for marijuana use and misuse of both prescription drug categories, but that was not the case for the alcohol use and binge drinking measures. It was also the case, however, that prevalence rates for those behaviors were actually lower in 2017 for LGBTQ students than for non-LGBTQ students, so there was no disparity (in those outcome measures) to be reduced.

YRBS outcome prevalence rates and charts for the LGBTQ and low SES subgroups and their counterparts are provided in Appendices D.1 through D3. For the 2015 to 2017 intervals, the data for the RPP_only condition are displayed along with the PFS+RPP condition to provide a comparison between regions that had already begun full scale implementation of RPP-funded interventions and those that had not.

Table 15 presents similar information for the two high need subgroups with respect to YAS-based outcome measures. In this case, however, only a single timespan, 2016 to 2020, was examined. The measures for sexual orientation and low SES were not included in the 2014 YAS. The focus of this analysis is on the two conditions, PFS_RPP and RPP_only, combined, because the RPP-funded interventions were being implemented during this period in both conditions.

Table 15. Reductions in Young Adult Substance Misuse Disparities Experienced by the LGBTQ and Low-SES Communities

Subgroup	Outcome measure	Relative reduction[1] in disparity 2016 to 2020 (PFS+RPP & RPP_only)
LGBTQ	Current alcohol use (ages 18-20)	(-2.8)
	Current binge drinking (ages 18-20)	-8.5
	Current binge drinking (ages 21-25)	(3.7)
	Current binge drinking	(-1.8)
	Current marijuana use	-0.2
	Past year R_x pain reliever misuse	-1.6
	Past year R_x sedative misuse	-2.0
	Past year R_x stimulant misuse	-2.6
Low-SES	Current alcohol use (ages 18-20)	(-3.8)
	Current binge drinking (ages 18-20)	(8.9)
	Current binge drinking (ages 21-25)	(7.9)
	Current binge drinking	(5.9)
	Current marijuana use	(7.4)
	Past year R_x pain reliever misuse	-3.0
	Past year R_x sedative misuse	2.3
	Past year R_x stimulant misuse	(-1.8)

[1]Percentage point change in the prevalence of each substance misuse behavior for the LGBQ group after adjusting for change in non-LGBQ group.

Notes: Negative values (shaded in green) indicate a reduction in disparity over the time frame indicated. Values in parentheses indicate that the prevalence rate for the high need group was lower than the remainder of the sample in the initial year of the time frame being examined.

With only one exception, current binge drinking among persons aged 21 to 25, health disparities for LGBTQ young adults were reduced. And for that measure, there was no disparity present in the baseline year of 2016. Among young adults there were only two out of eight measures for which low SES young adults had higher prevalence rates than other young adults in 2016, so for most of these measures there were no disparities to reduce. This helps to

explain, or at least provides important context for interpreting, the greater reductions that occurred in these rates among higher SES young adults relative to the low SES group. In fact, there were only two measures for which rates were higher among low SES young adults in 2016, prescription pain reliever misuse and prescription sedative misuse. Of those two measures, by 2020 the disparity was reduced for pain reliever misuse but not sedatives.

As with the YRBS-based outcome measures, the data tables and charts for the YAS measures, by high needs subgroups, are available in the appendices (D.4 and D.5).

Discussion

Summary and Interpretation of Process and Outcome Evaluation Findings

Process evaluation summary

The process evaluation findings presented in this report are largely self-explanatory and do not require much additional interpretation. Overall, RPP facilitated both prevention capacity building and the implementation of numerous and wide-ranging prevention activities across the state from 2016 through 2020. The evaluation confirmed that the transition to a regional prevention structure begun under the state's PFS grant is working well and has successfully been expanded to all regions across the state. We also learned that this transition takes considerable time and for that reason Vermont was fortunate to have the PFS and RPP grants awarded consecutively with no gap in between. This allowed the cohort 1 grantees to be able to fully make the transition and sustain the infrastructure and capacity built during the PFS grant. For some of the cohort 2 grantees, understandably, it took some time for them to build the necessary capacity and regional connections to begin full implementation. By fall of 2017, however, the cohort 2 grantees were implementing multiple interventions even as they continued to build regional capacity.

One clear benefit of this continuous period of funding on strategy implementation has been the ability of grantees to make progress on the inclusion of prevention language in municipal policy and planning. These efforts require slow and steady relationship building, community education, and the ability to respond when readiness is there, all of which have benefited from having longer-term funding in place. Additional successes include more efficient and effective dissemination of prevention messages through media outreach, the development of strong youth leadership and empowerment opportunities, and the expansion of prescription medication disposal options around the state. Challenges included the impact of the legalization of marijuana on messaging about the harms associated with youth marijuana use, engaging parents in small group evidence-based education programs, and the significant impact of COVID-19 on the delivery of services during the final months of the grant.

Outcome evaluation summary

Looking first at whether targeted substance misuse behaviors and related risk factors among youth and young adults in Vermont have decreased over the combined timespan of the PFS and RPP projects, the answer is generally yes. The state experienced significant reductions in outcomes connected with both alcohol use and prescription drug misuse during this period. Marijuana use and risk factors for marijuana use is the very significant exception to this general

trend, a finding that certainly appears to be consistent with and probably influenced by the move towards, and eventual adoption of, state laws legalizing possession and use of marijuana by adults. The only other measures that did not show statewide decrease over the entire timespan based on the available data were for perceived underage ease of access to alcohol (as provided in the YAS data).

Interestingly, for the YRBS-based outcomes, a slowing and even a reversal of the downward trends for some measures in addition to marijuana use (e.g., lifetime misuse of prescription pain relievers and stimulants) occurred in the latter years of this timespan, i.e., between 2017 and 2019. That was not the case for YAS-outcomes, however, which saw continued decreases in all substance use measures (except marijuana) all the way through to 2020.

The constraints regarding attribution of positive trends to any particular program or intervention, in the absence of a comparison group, have already been noted. Further evidence for positive outcomes of RPP depended on assessing differences between regions of the state that had previously benefitted from PFS funding and those that did not. Because PFS and RPP had similar programmatic goals and approaches,[12] it was reasonable to believe that RPP would have similar positive impacts. If so, the different trajectories in the outcome measures between the PFS+RPP conditions and the RPP_only conditions established during PFS implementation would be expected to subside once RPP was underway statewide. Based on the data available from both the YRBS and YAS, that is exactly what happened. The regions of the state that were not previously funded by PFS but then received RPP funding showed remarkable progress in reducing substance misuse and related risk factors in the target population as compared to the regions that had received the PFS funding earlier. In other words, it appears that these regions were able to use their RPP funding to make up for some of the progress on which they missed out during the PFS years, even though the PFS-funded regions also received RPP funds. This is consistent with other findings in prevention research that have shown the strongest effects of new programs are sometimes seen in the early years of their implementation.

The comparisons between Vermont and the nation provide more of a mixed assessment of PFS and RPP impacts in Vermont. During the years of PFS and initial RPP implementation in the PFS+RPP regions (but before the interventions in the RPP_only regions were fully underway), Vermont's performance in reducing underage alcohol use, binge drinking, marijuana use, and prescription drug misuse among both high school students and young adults did not compare favorably to the U.S. as a whole for any of these outcomes. When examining changes across just the most recent available years of data, however, which are years in which RPP-sponsored prevention activities were underway in <u>all</u> regions of the state, Vermont did achieve greater reductions relative to the U.S. in several of the substance misuse outcome measures from both the YRBS and NSDUH. This is a hopeful sign that full statewide implementation of RPP may be starting to make a positive difference in how Vermont is progressing in its RPP goals relative to progress being made across the country. Furthermore, even the most recently available

[12] Except for the addition of marijuana use reduction to RPP.

estimates from the YRBS and NSDUH are based on time periods that occurred well before the conclusion of Vermont's RPP-funded interventions in 2020. It is possible that estimates based on YRBS and YAS data from more recent years, if and when they become available, may show further progress in Vermont relative to the nation in reaching its RPP-related goals.

The health disparities analysis shows that steady progress has been made on reducing disparities in substance use behaviors between LGBTQ and non-LGBTQ youth and young adults. The finding regarding SES disparities are mixed and less pronounced, although the data also show that for some measures there were no SES-related disparity to begin with at the start of the RPP program. An important caveat to this encouraging finding regarding sexual orientation/identity disparities is that the percentages of high school students, especially, but also young adults, who self-identify as LGBQ has increased over the past several years. For high school students the increases are pronounced. In the 2013 YRBS, 9 percent of high school students self-reported as LGBQ. That percentage increased to 18 percent by 2019. The expanding size of the self-reporting LGBTQ population may also mean there are some differences about this subgroup as identified in 2013 versus 2019 that may also be contributing to changes in substance misuse prevalence rates (including reductions in disparities) over this timespan. The second caveat is that although reductions in disparities were observed for LGBTQ youth between 2015 and 2017 in the PFS+RPP regions, similar reductions in disparities also occurred in the RPP_only regions (see charts in Appendix D.1). This also suggests that the observed reductions in LGBTQ disparities are likely tied more to general cultural shifts (including the expanding size of the self-identified LGBTQ population) than to specific RPP-funded substance use prevention activities. In this context, specific contributions of RPP-funded prevention efforts on reducing disparities are difficult to determine.

Conclusions and Recommendations

The process information gathered and analyzed for this report, in combination with the outcome data examined, provide ample evidence to support the success of RPP in expanding state and regional substance misuse prevention capacity through a regional prevention structure. The intentional development and support of this structure over the combined seven years of the PFS and RPP has resulted in a strong network of community partners working collaboratively in twelve regions across the state to reduce the rates of substance misuse among youth and young adults. While there is variation around the state in the strength and effectiveness of these regional partnerships and the resulting prevention system is not without its challenges and deficiencies, a strong foundation has been built which can be strengthened and expanded in ways that will help sustain and have the potential to increase positive outcomes for Vermont's youth and young adults.

The enhanced regional prevention structure has likely contributed to successful bids within the last two years by community-based organizations in several RPP regions for direct federal funding through SAMHSA's Partnerships for Success and the Center for Disease Control's Drug

Free Communities grant programs. These grants, along with continued federal funding provided through ADAP to community organizations, provide opportunities to sustain the gains made during PFS and RPP in prevention infrastructure and outcomes. The increase in direct federal funding to community-based organizations over the past several years presents some challenges for ADAP in the coordination of a statewide system of prevention that is working together toward the state's prevention priorities, but it also provides opportunities for leveraging funds that are managed by ADAP to address gaps and inequities and to bring partners from around the state together for collaboration and shared learning.

Based on the findings from the outcome evaluation, the primary outcome objectives of RPP were generally achieved, with marijuana use reductions being the one important caveat. Specifically:

- Targeted substance misuse outcomes and related risk factors decreased during the years of PFS and RPP implementation, with the notable exceptions of marijuana use, perceptions regarding marijuana use (including low risk of harm, low disapproval of use, and ease of obtaining marijuana), and perceived ease of underage access to alcohol.
- This was true for both the later years of this timespan (i.e., just the RPP years) and the PFS years, with the additional notable exception of recent increases (from 2017 to 2019) in prescription drug misuse among high school students.
- The RPP funding and consequent activities appears to have helped previously unfunded regions enhance their performance on nearly all outcome objectives, relative to regions that had previously benefitted from PFS funding.
- Comparisons between Vermont and the U.S. regarding progress in reducing targeted outcomes during RPP implementation provide mixed evidence for positive RPP effects, but they do show improvements in Vermont's performance compared to the U.S. relative to the years before RPP was fully underway. Additional years of state and national data are needed to fully assess the degree to which RPP may have contributed to favorable statewide outcomes in Vermont relative to the country as a whole.
- Disparities (i.e., higher rates of substance misuse) among LGBTQ adolescents and young adults were identified for almost all outcome measures examined and these disparities decreased during the years of RPP implementation. Fewer disparities were found to exist for low SES persons. For those disparities that did exist, slight reductions in the disparity were achieved for most of them. It was not possible to determine, however, whether and to what extent RPP contributed to the observed reductions in LGBTQ and low SES disparities, as opposed to broader sociocultural changes occurring statewide. The limited evidence available to help address that question points to broader sociocultural influences as the primary explanation. But that does not negate the importance of recognizing and continuing to address specific needs of LGBTQ and low SES youth and young adults through programmatic substance misuse prevention efforts as well.

Based on the entirety of the RPP evaluation, the following recommendations to ADAP are offered. These are meant to apply not only to federally-funded substance misuse prevention discretionary grants awarded to the state, but more broadly to the state's substance misuse prevention system.

Recommendations

Planning, capacity building and implementation
Provide opportunities for prevention partners from around the state, regardless of their funding source(s), to convene and collaborate on shared goals and priorities. Encourage and facilitate the inclusion of schools in these efforts.
Continue to develop statewide prevention messaging campaigns that can be promoted regionally, particularly messages related to the harms associated with youth marijuana use.
Identify and implement other effective and promising strategies to prevent and reduce marijuana use among youth and young adults, especially in consideration of the current climate of legalization and pending retail availability.
Continue to identify training and resource needs of prevention practitioners, bringing in outside experts as needed to help meet these needs.
Maintain a state-level workgroup to identify and/or review nominations for prevention strategies that are "evidence-based."
Funding
Identify and advocate for long-term, sustained prevention funding sources that are less reliant on discretionary federal grants, especially as needed to cover periodic gaps in federal funding.
Ensure that <u>all</u> communities are covered in the state's overarching regional prevention system.
Identify and work proactively with organizations in regions that foresee losses or reductions in funding in the near future.
If resources were available, provide assistance if requested to community-based organizations interested in applying for various federal and foundation prevention funding programs.
Data collection and evaluation
Continue to implement the Young Adult Survey every two years as an important data source for state and community-level assessment and evaluation.
Keep a close eye on data for signs of new or increasing substance misuse behaviors, such as the recent increases in high school student prescription drug misuse seen in the YRBS data.
Continue to track and address disparities experienced by high need subpopulations, but also recognize that the impacts of programs designed to meet these specific needs may not be discernable in population-based surveys due to broader sociocultural influences and tends.
Consider ways to facilitate sharing of evaluation approaches and findings across state-level and community-based substance misuse prevention projects.
Maintain expertise within ADAP (either internal or contracted) to provide evaluation services for ADAP-managed prevention projects.

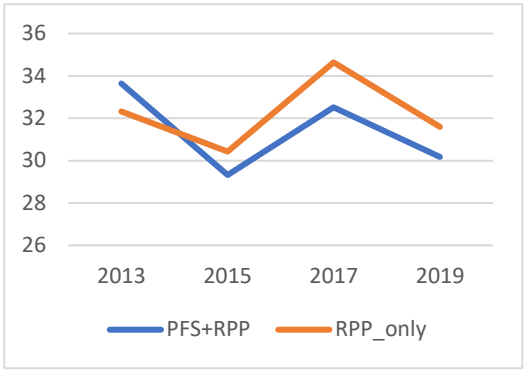
Appendices

Appendices

A.1 Data tables and charts for YRBS outcome measures by condition

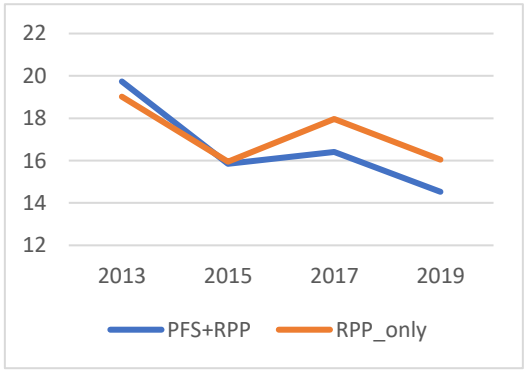
Current alcohol use

	2013	2015	2017	2019
PFS+RPP	33.6	29.3	32.5	30.2
RPP_only	32.3	30.4	34.6	31.6



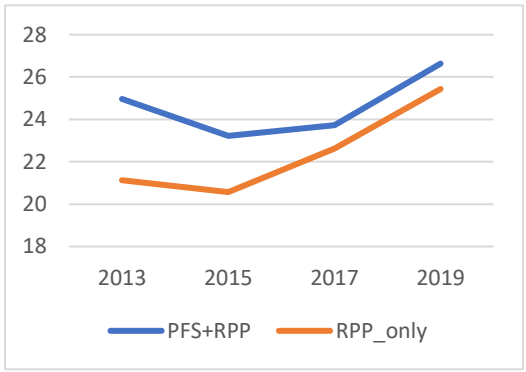
Current binge use

	2013	2015	2017	2019
PFS+RPP	19.7	15.9	16.4	14.5
RPP_only	19.0	15.9	18.0	16.0



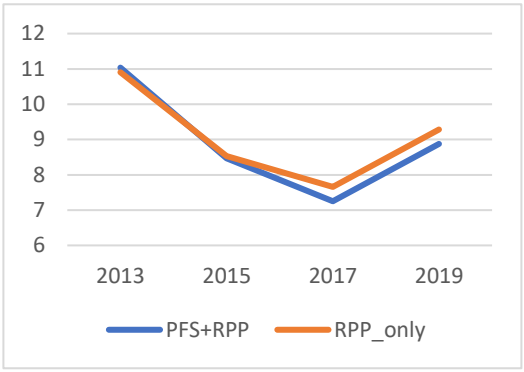
Current marijuana use

	2013	2015	2017	2019
PFS+RPP	25.0	23.2	23.7	26.6
RPP_only	21.1	20.6	22.6	25.4



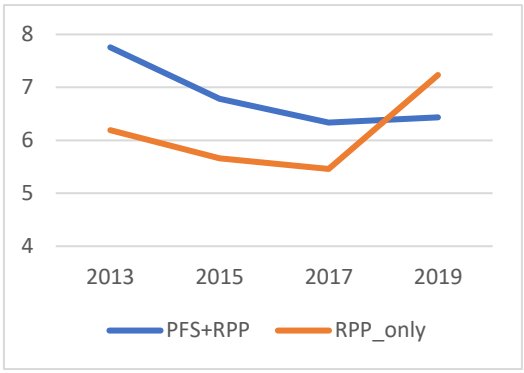
Lifetime Rx pain reliever misuse

	2013	2015	2017	2019
PFS+RPP	11.0	8.5	7.3	8.9
RPP_only	10.9	8.5	7.7	9.3



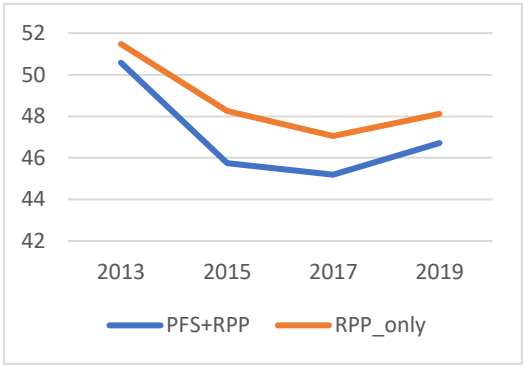
Lifetime Rx stimulant misuse

	2013	2015	2017	2019
PFS+RPP	7.8	6.8	6.3	6.4
RPP_only	6.2	5.7	5.5	7.2



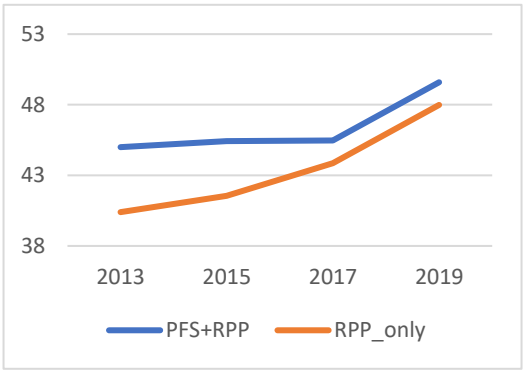
Low disapproval of alcohol use

	2013	2015	2017	2019
PFS+RPP	50.6	45.7	45.2	46.7
RPP_only	51.5	48.3	47.1	48.1



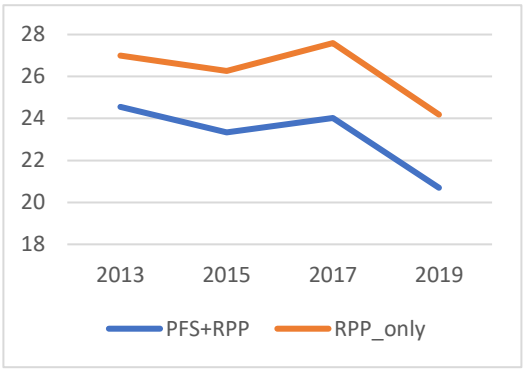
Low disapproval of marijuana use

	2013	2015	2017	2019
PFS+RPP	45.0	45.4	45.5	49.6
RPP_only	40.4	41.6	43.9	48.0



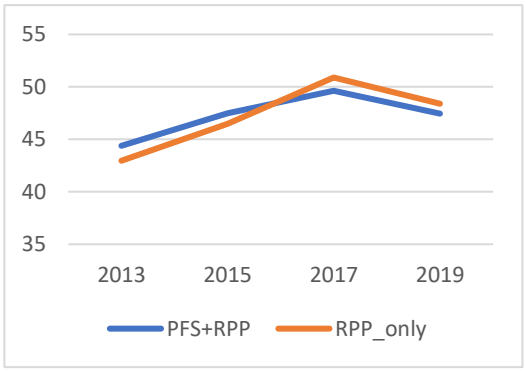
Low risk from binge drinking

	2013	2015	2017	2019
PFS+RPP	24.6	23.3	24.0	20.7
RPP_only	27.0	26.3	27.6	24.2



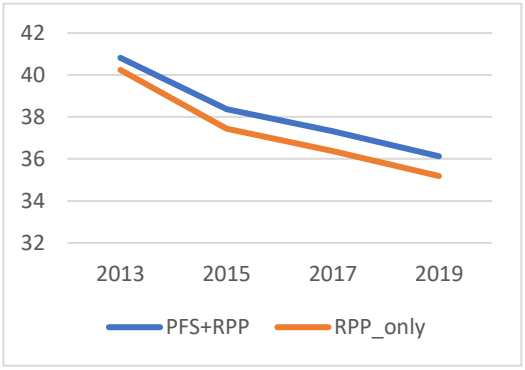
Low risk from marijuana use

	2013	2015	2017	2019
PFS+RPP	44.4	47.5	49.6	47.4
RPP_only	43.0	46.5	50.9	48.4



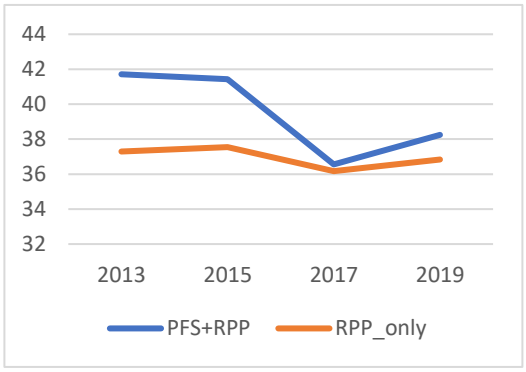
Perceived availability of alcohol

	2013	2015	2017	2019
PFS+RPP	40.8	38.4	37.3	36.1
RPP_only	40.2	37.4	36.4	35.2



Perceived availability of marijuana

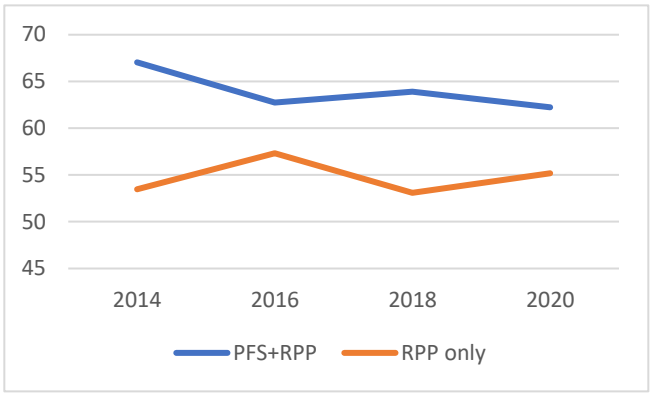
	2013	2015	2017	2019
PFS+RPP	41.7	41.4	36.6	38.2
RPP_only	37.3	37.5	36.2	36.8



A.2 Data tables and charts for YAS outcome measures by condition

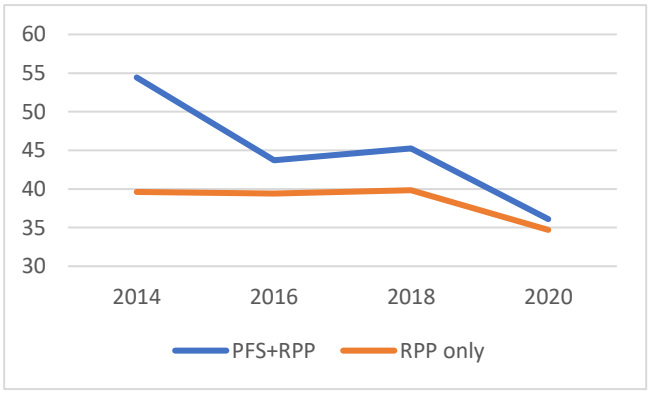
Current alcohol use (ages 18-20)

	2014	2016	2018	2020
PFS+RPP	67.05	62.76	63.90	62.24
RPP only	53.49	57.32	53.09	55.17



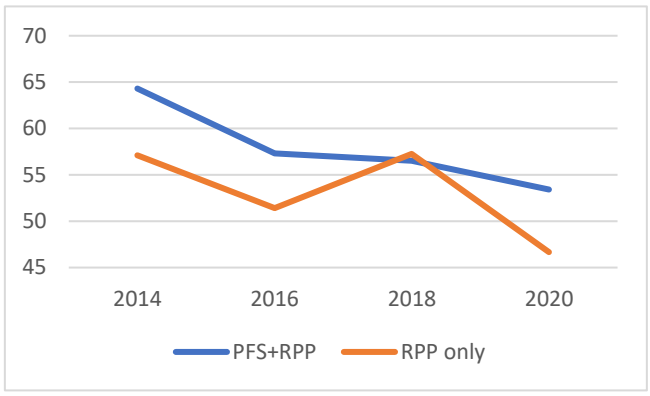
Current binge drinking (ages 18-20)

	2014	2016	2018	2020
PFS+RPP	54.43	43.72	45.27	36.10
RPP only	39.61	39.43	39.84	34.71



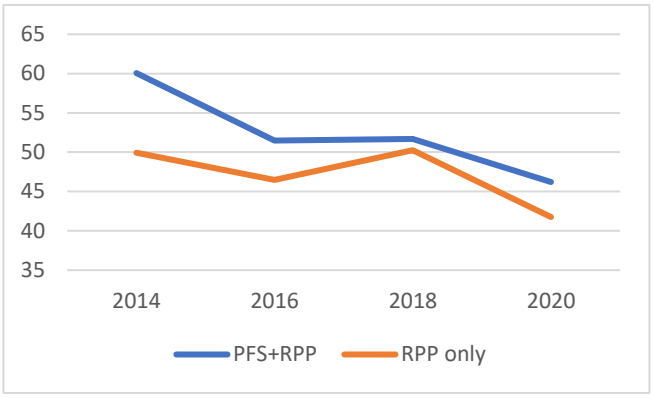
Current binge drinking (ages 21-25)

	2014	2016	2018	2020
PFS+RPP	64.31	57.32	56.52	53.41
RPP only	57.12	51.41	57.26	46.67



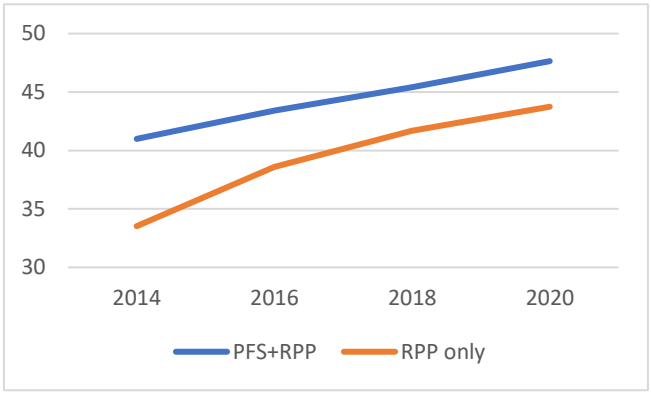
Current binge drinking (ages 18-25)

	2014	2016	2018	2020
PFS+RPP	60.07	51.50	51.70	46.21
RPP only	49.95	46.49	50.26	41.75



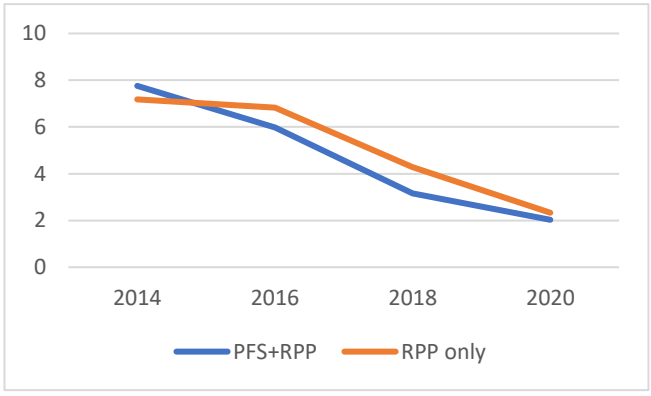
Current marijuana use

	2014	2016	2018	2020
PFS+RPP	40.99	43.42	45.40	47.64
RPP only	33.53	38.61	41.68	43.74



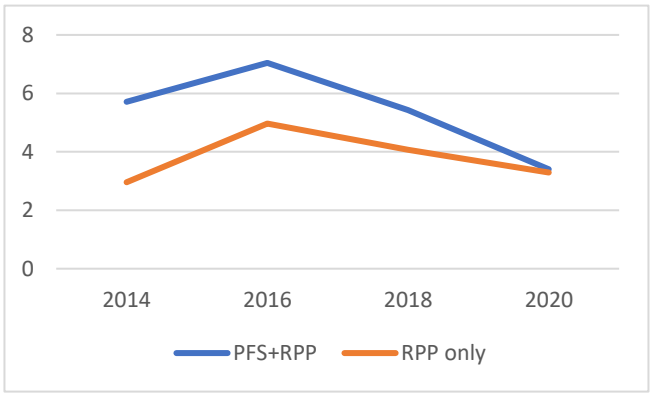
Past year Rx pain reliever misuse

	2014	2016	2018	2020
PFS+RPP	7.76	5.97	3.16	2.03
RPP only	7.18	6.82	4.28	2.33



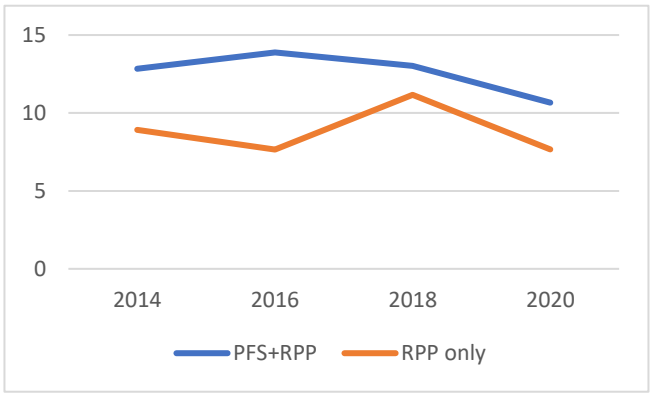
Past year Rx sedative misuse

	2014	2016	2018	2020
PFS+RPP	5.71	7.04	5.43	3.40
RPP only	2.96	4.97	4.07	3.30



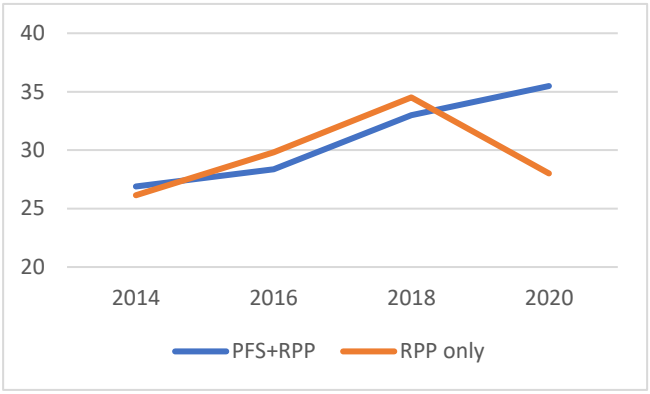
Past year Rx stimulant misuse

	2014	2016	2018	2020
PFS+RPP	12.83	13.88	13.03	10.66
RPP only	8.91	7.65	11.16	7.66



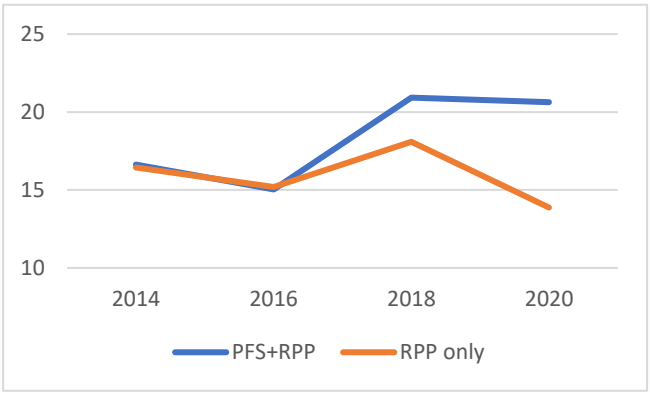
Easy for minors to buy alcohol

	2014	2016	2018	2020
PFS+RPP	26.89	28.37	32.98	35.48
RPP only	26.14	29.83	34.51	28.00



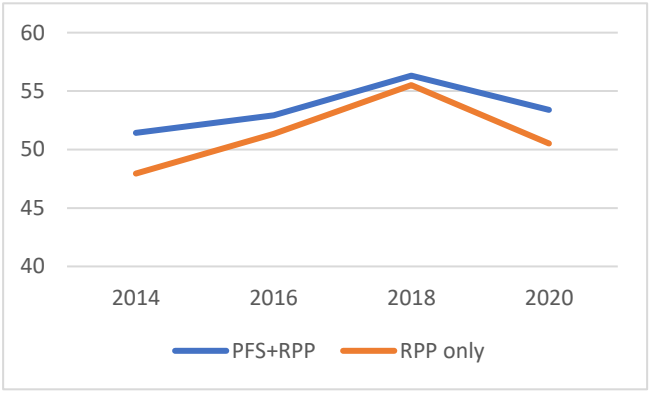
Easy for minors to be served alcohol

	2014	2016	2018	2020
PFS+RPP	16.63	15.03	20.92	20.64
RPP only	16.44	15.18	18.09	13.88



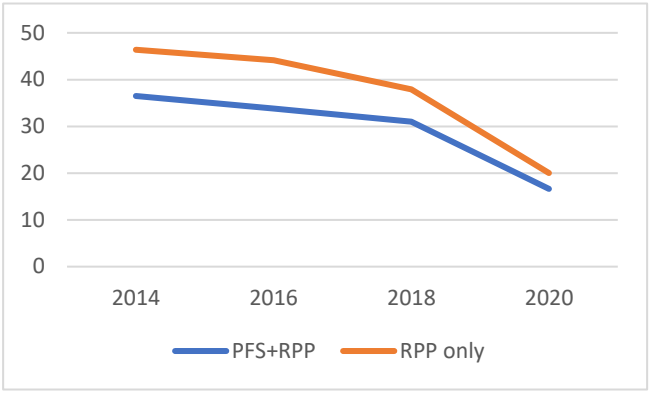
Easy to obtain marijuana

	2014	2016	2018	2020
PFS+RPP	51.43	52.92	56.32	53.39
RPP only	47.94	51.34	55.51	50.52



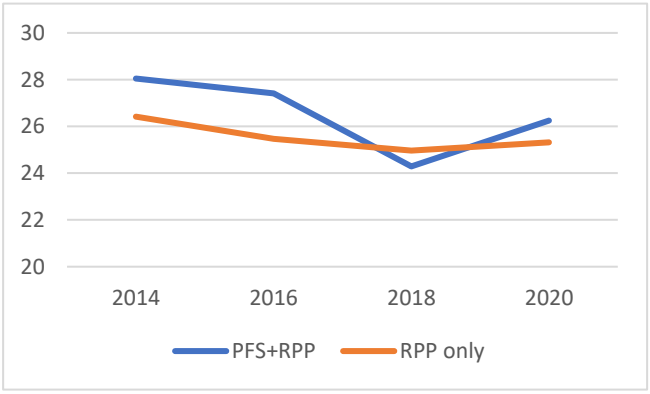
Easy to obtain pain meds without Rx

	2014	2016	2018	2020
PFS+RPP	36.49	33.82	31.00	16.63
RPP only	46.38	44.17	37.90	20.02



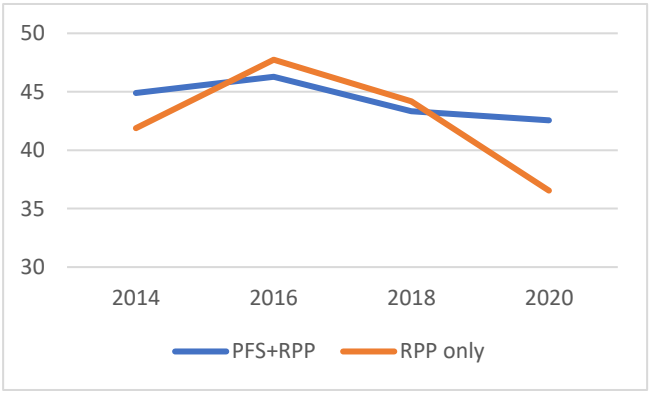
Low risk from binge drinking

	2014	2016	2018	2020
PFS+RPP	28.05	27.41	24.29	26.25
RPP only	26.42	25.46	24.97	25.33



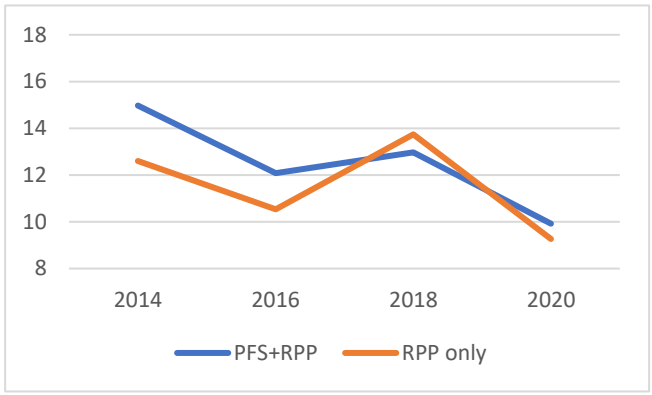
Low risk from using marijuana

	2014	2016	2018	2020
PFS+RPP	44.89	46.28	43.35	42.56
RPP only	41.89	47.74	44.18	36.55



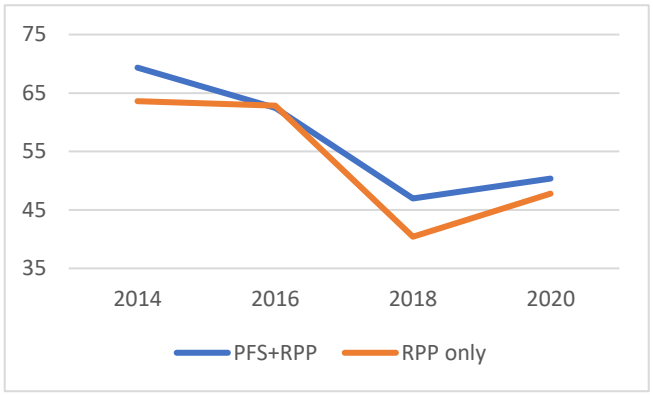
Low risk from using Rx pain meds that were not prescribed

	2014	2016	2018	2020
PFS+RPP	14.97	12.08	12.97	9.92
RPP only	12.60	10.54	13.74	9.27



Don't recall info about Rx drug storage/disposal

	2014	2016	2018	2020
PFS+RPP	69.34	62.46	46.96	50.35
RPP only	63.61	62.83	40.41	47.80



B. Percentage point change for each YAS-based outcome measure for the 2014-2016 and 2018-2020 timespans, by condition

Table B.1. Percentage point change for each YAS-based outcome measure for the 2014-2016 and 2018-2020 timespans, by condition.

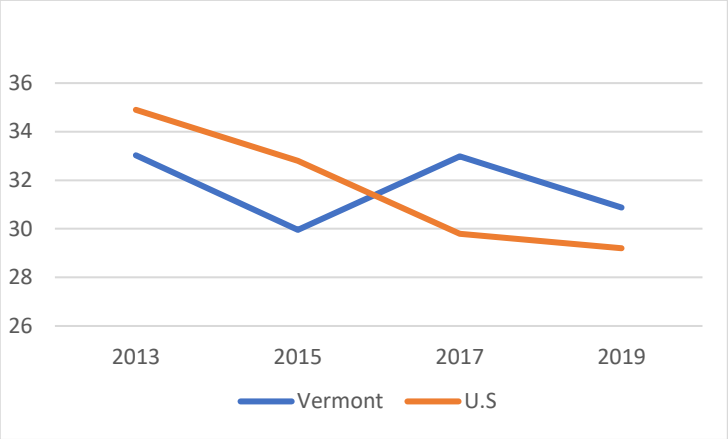
	Percentage point change[1]				Condition with the better performance[2]			
	PFS+RPP		RPP_only		14 to 16		18 to 20	
Outcome:	**14 to 16**	**18 to 20**	**14 to 16**	**18 to 20**	**PFS+ RPP**	**RPP only**	**PFS+ RPP**	**RPP only**
Current alcohol use (ages 18-20)	-4.3	-1.7	3.8	2.1	✓		✓	
Current binge drinking (ages 18-20)	-10.7*	-9.2*	-0.2	-5.1	✓		✓	
Current binge drinking (ages 21-25)	-7.0*	-3.1	-5.7	-10.6*	✓			✓
Current binge drinking (ages 18-25)	-8.6*	-5.5*	-3.5	-8.5*	✓			✓
Current marijuana use	2.4	2.2	5.1	2.1	✓			✓
Past year R_x pain reliever misuse	-1.8	-1.1	-0.4	-1.9	✓			✓
Past year R_x sedative misuse	1.3	-2.0*	2.0	-0.8	✓		✓	
Past year R_x stimulant misuse	1.1	-2.4	-1.3	-3.5		✓		✓
Easy for minors to buy alcohol	1.5	2.5	3.7	-6.5*	✓			✓*
Easy for minors to be served alcohol	-1.6	-0.3	-1.3	-4.2*	✓			✓
Easy to obtain marijuana	1.5	-2.9	3.4	-5.0	✓			✓
Easy to obtain pain meds without R_x	-2.7	-14.4*	-2.2	-17.9*	✓			✓
Low risk from binge drinking	-0.6	2.0	-1.0	0.4		✓		✓
Low risk from using marijuana	1.4	-0.8	5.9	-7.6*	✓			✓
Low risk from using R_x pain meds not prescribed	-2.9*	-3.0*	-2.1	-4.5*	✓			✓
Don't recall info re: R_x drug storage/disposal	-6.9*	3.4	-0.8	7.4*	✓		✓	

[1] Changes in the desired directions (i.e., decreases) are shaded in green. Differences that are statistically significant at the $p<.05$ level are followed by an asterisk.

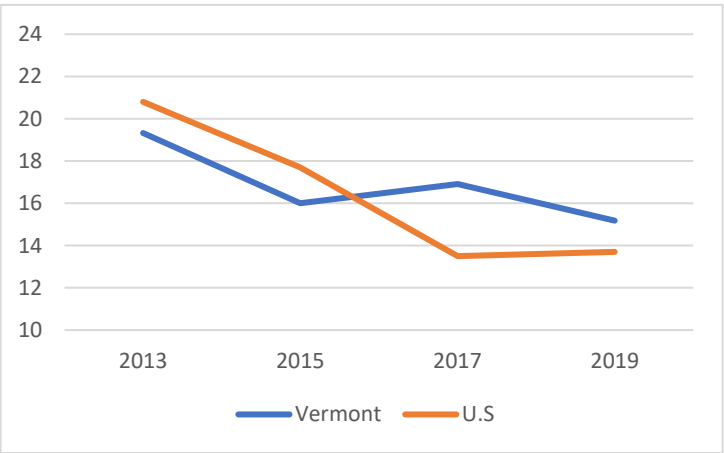
[2] The condition that performed better for each time period is indicated with a check mark. If the performance was significantly better than the other condition at the $p<.05$ level the check mark is followed by an asterisk.

C.1 Data tables and charts for state and national YRBS outcome measures

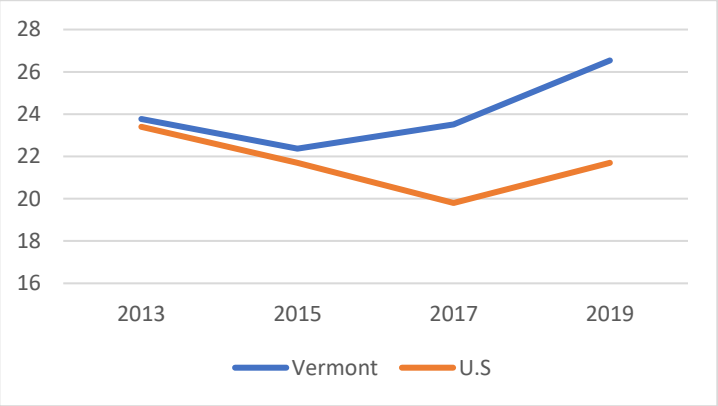
Current alcohol use						
	2013	2015	2017	2019	Dif 13-19	Dif 17-19
Vermont	33.0	30.0	33.0	30.9	-2.1	-2.1
U.S	34.9	32.8	29.8	29.2	-5.7	-0.6



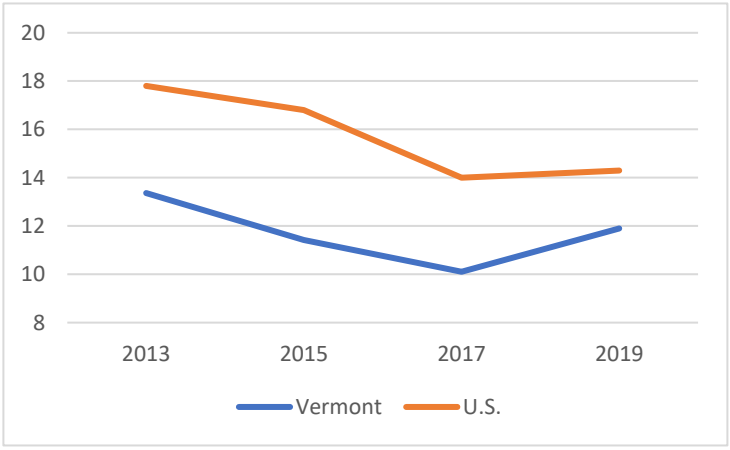
Current Binge Drinking						
	2013	2015	2017	2019	Dif 13-19	Dif 17-19
Vermont	19.3	16.0	16.9	15.2	-4.1	-1.7
U.S	20.8	17.7	13.5	13.7	-7.1	0.2



Current Marijuana Use						
	2013	2015	2017	2019	Dif 13-19	Dif 17-19
Vermont	23.8	22.4	23.5	26.5	2.8	3.0
U.S	23.4	21.7	19.8	21.7	-1.7	1.9

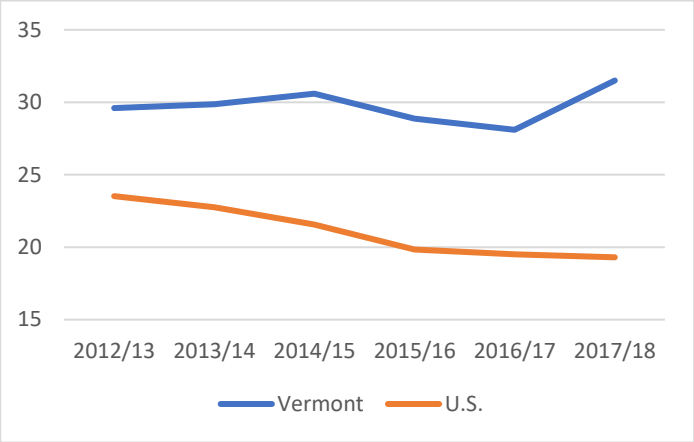


Lifetime Rx drug misuse						
	2013	2015	2017	2019	Dif 13-19	Dif 17-19
Vermont	13.4	11.4	10.1	11.9	-1.5	1.8
U.S.	17.8	16.8	14.0	14.3	-3.5	0.3

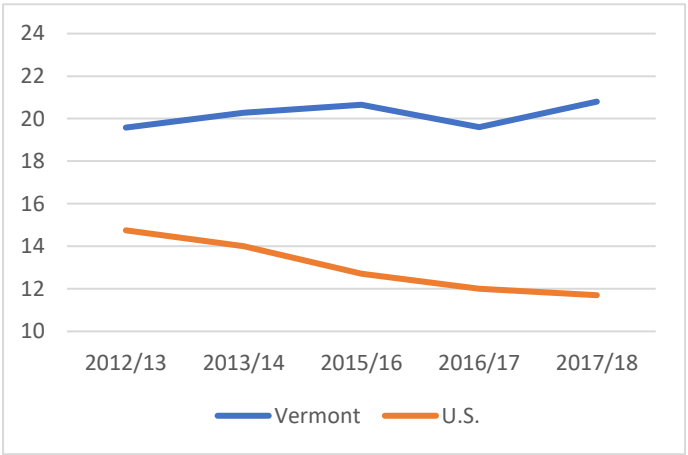


C.2 Data tables and charts for state and national NSDUH outcome measures

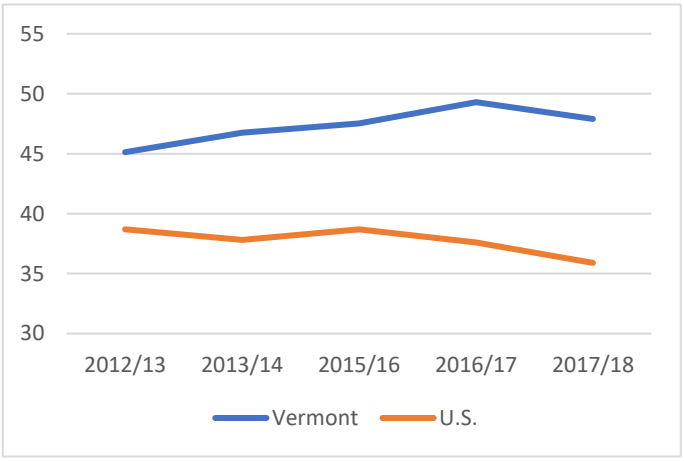
Current alcohol use ages 12-20								
	2012/13	**2013/14**	**2014/15**	**2015/16**	**2016/17**	**2017/18**	**Dif 12/13 to 17/18**	**Dif 16/17 to 17/18**
Vermont	29.6	29.9	30.6	28.9	28.1	31.5	1.9	3.4
U.S.	23.5	22.8	21.6	19.8	19.5	19.3	-4.2	-0.2



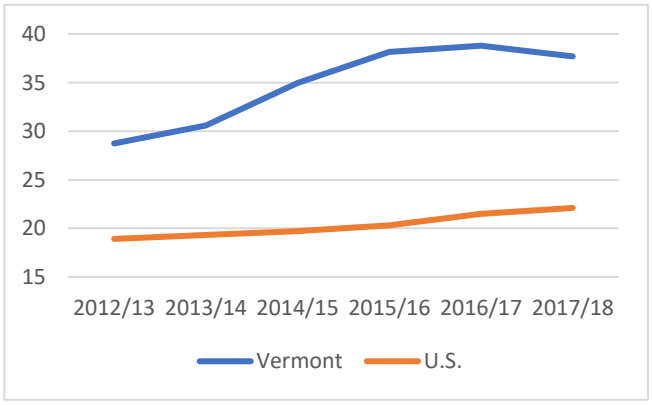
Current binge drinking ages 12-20							
	2012/13	**2013/14**	**2015/16**	**2016/17**	**2017/18**	**Dif 12/13 to 17/18**	**Dif 16/17 to 17/18**
Vermont	19.6	20.3	20.7	19.6	20.8	1.2	1.2
U.S.	14.8	14.0	12.7	12.0	11.7	-3.1	-0.3



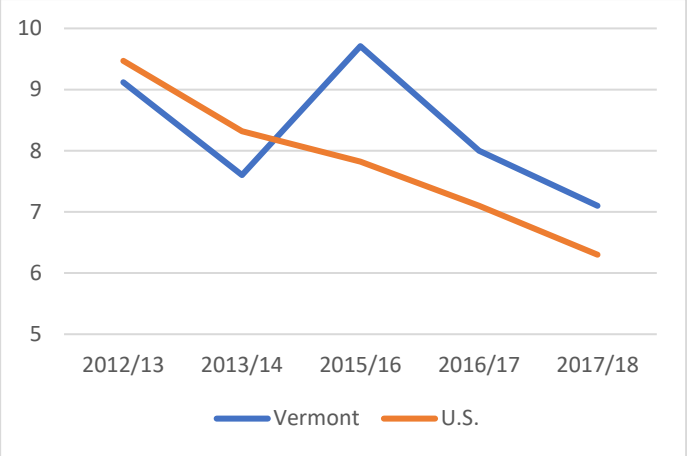
Current binge drinking ages 18-25							
	2012/13	2013/14	2015/16	2016/17	2017/18	Dif 12/13 to 17/18	Dif 16/17 to 17/18
Vermont	45.1	46.8	47.5	49.3	47.9	2.8	-1.4
U.S.	38.7	37.8	38.7	37.6	35.9	-2.8	-1.7



Current marijuana use								
	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	Dif 12/13 to 17/18	Dif 16/17 to 17/18
Vermont	28.7	30.6	35.0	38.2	38.8	37.7	9.0	-1.1
U.S.	18.9	19.3	19.7	20.3	21.5	22.1	3.2	0.6



Past year R_x pain reliever misuse							
	2012/13	**2013/14**	**2015/16**	**2016/17**	**2017/18**	**Dif 12/13 to 17/18**	**Dif 16/17 to 17/18**
Vermont	9.1	7.6	9.7	8.0	7.1	-2.0	-0.9
U.S.	9.5	8.3	7.8	7.1	6.3	-3.2	-0.8

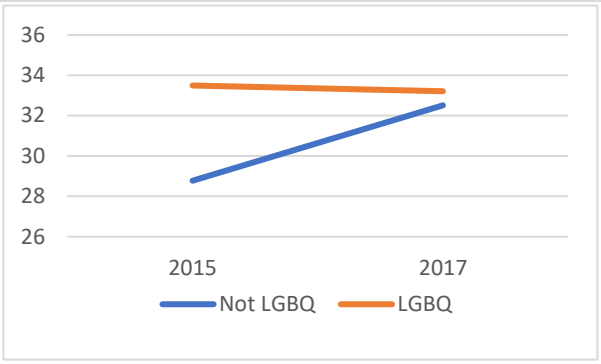


D.1 Data tables and charts for YRBS measures for 2015 and 2017, by LGBTQ status (Separately for PFS+RPP and RPP_only)

Current alcohol use

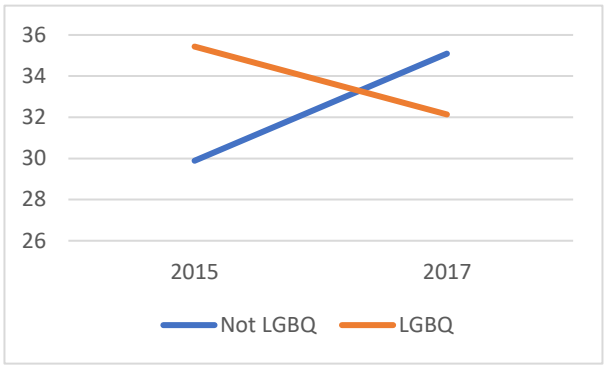
PFS+RPP

	2015	2017
Not LGBQ	28.8	32.5
LGBQ	33.5	33.2



RPP only

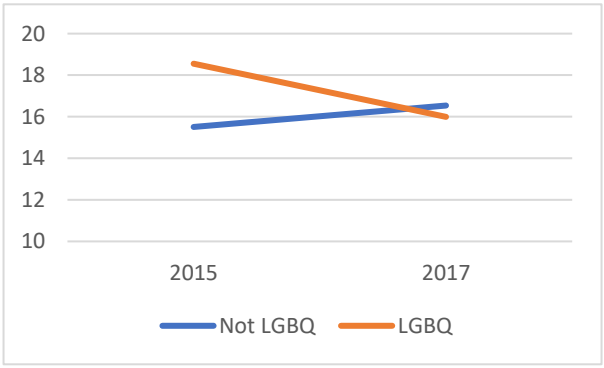
	2015	2017
Not LGBQ	29.9	35.1
LGBQ	35.4	32.1



Current binge alcohol use

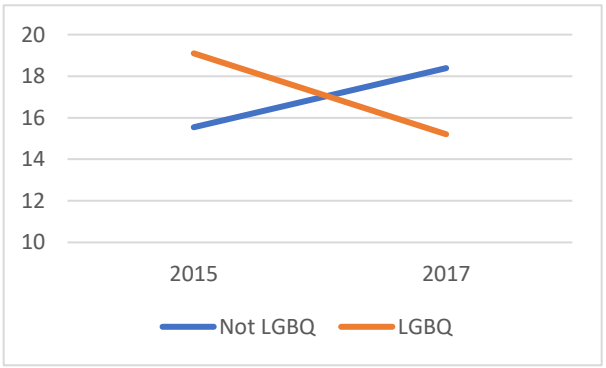
PFS+RPP

	2015	2017
Not LGBQ	15.5	16.5
LGBQ	18.6	16.0



RPP only

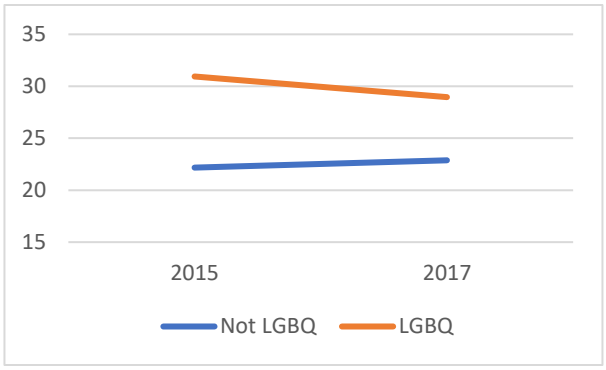
	2015	2017
Not LGBQ	15.5	18.4
LGBQ	19.1	15.2



Current marijuana use

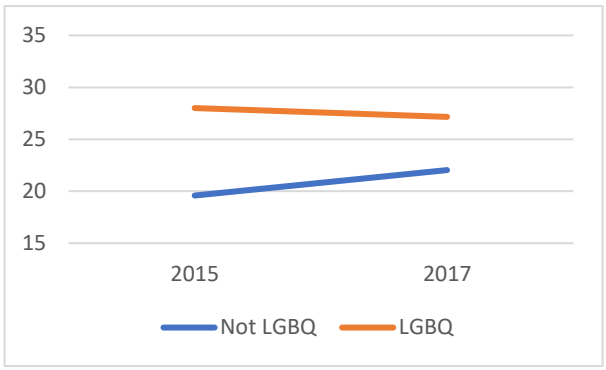
PFS+RPP

	2015	2017
Not LGBQ	22.2	22.9
LGBQ	30.9	29.0



RPP only

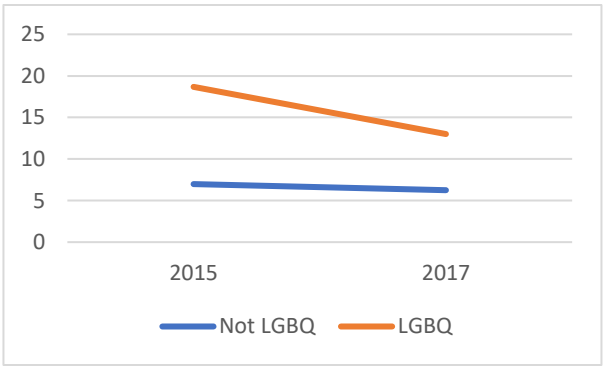
	2015	2017
Not LGBQ	19.6	22.0
LGBQ	28.0	27.2



Lifetime Rx pain reliever misuse

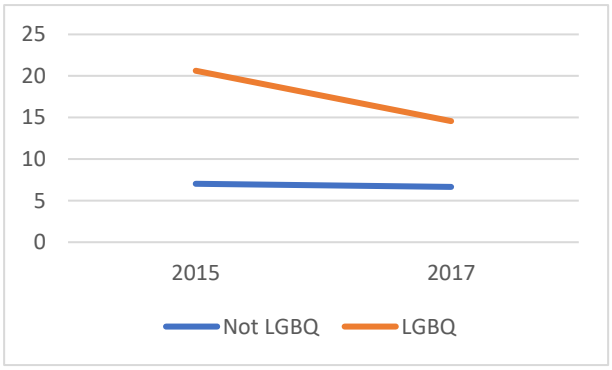
PFS+RPP

	2015	2017
Not LGBQ	7.0	6.2
LGBQ	18.7	13.0



RPP only

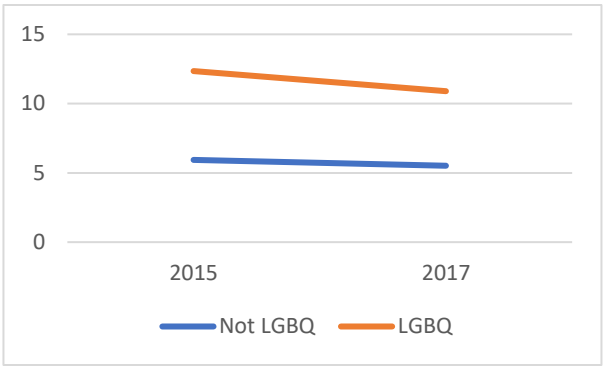
	2015	2017
Not LGBQ	7.0	6.7
LGBQ	20.6	14.6



Lifetime Rx stimulant misuse

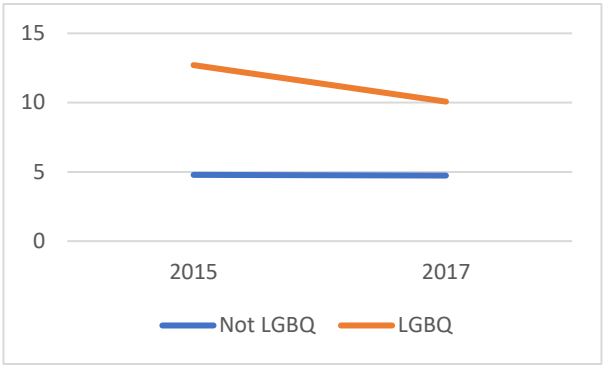
PFS+RPP

	2015	2017
Not LGBQ	5.9	5.5
LGBQ	12.3	10.9



RPP only

	2015	2017
Not LGBQ	4.8	4.7
LGBQ	12.7	10.1

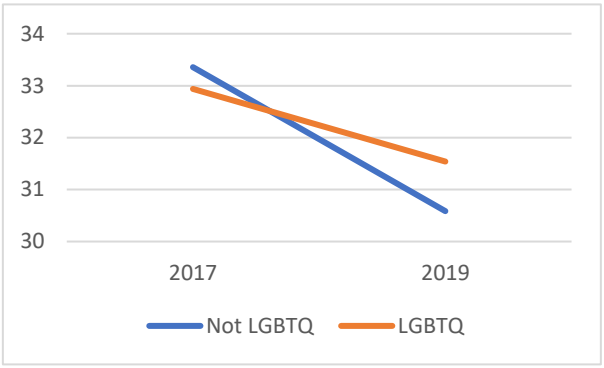


D.2 Data tables and charts for YRBS measures for 2017 and 2019, by LGBTQ status (Both conditions combined)

Current alcohol use

Both conditions

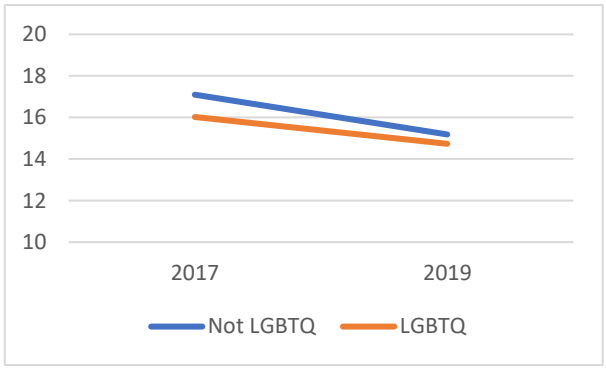
	2017	2019
Not LGBTQ	33.4	30.6
LGBTQ	32.9	31.5



Current binge alcohol use

Both conditions

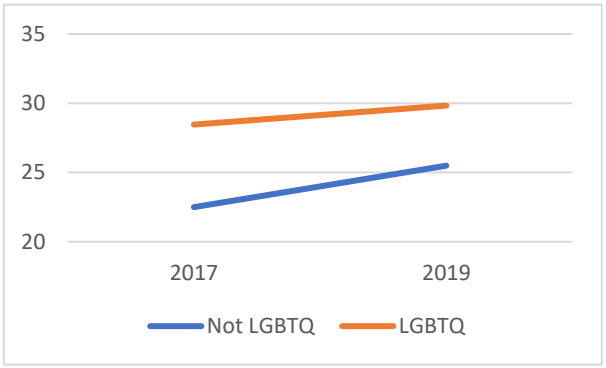
	2017	2019
Not LGBTQ	17.1	15.2
LGBTQ	16.0	14.7



Current marijuana use

Both conditions

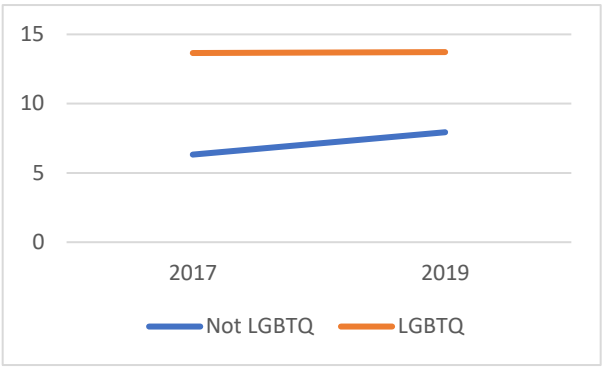
	2017	2019
Not LGBTQ	22.5	25.5
LGBTQ	28.5	29.8



Lifetime Rx pain reliever misuse

Both conditions

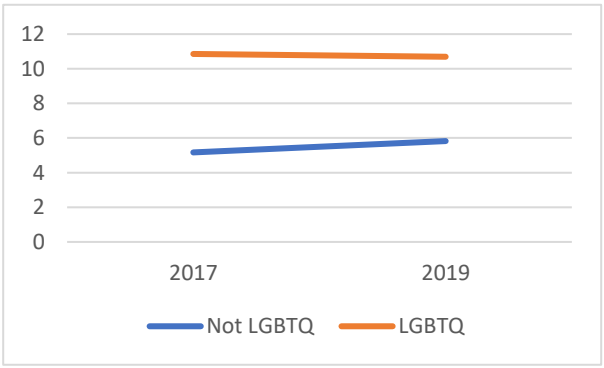
	2017	2019
Not LGBTQ	6.3	7.9
LGBTQ	13.7	13.7



Lifetime Rx stimulant misuse

Both conditions

	2017	2019
Not LGBTQ	5.2	5.8
LGBTQ	10.9	10.7



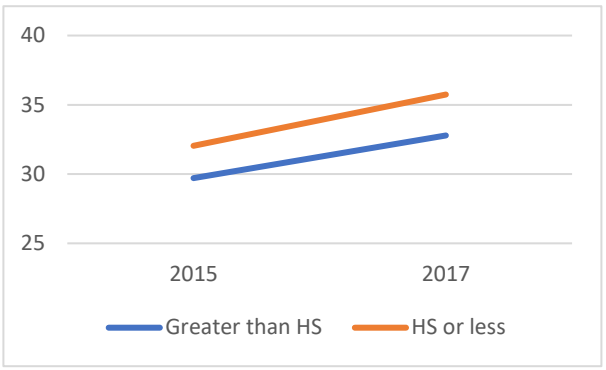
D.3 Data tables and charts for YRBS measures for 2015 and 2017, by SES

(Separately for PFS+RPP and RPP_only)

Current alcohol use

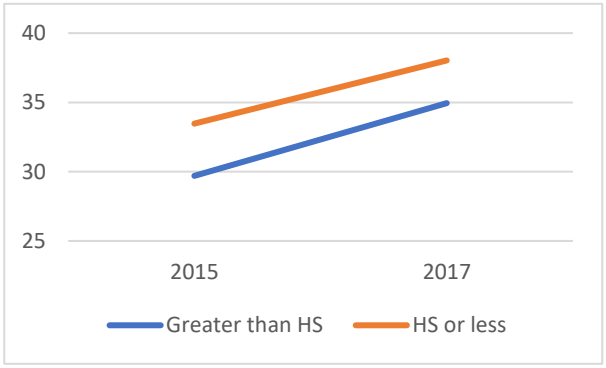
PFS+RPP

	2015	2017
Greater than HS	29.7	32.8
HS or less	32.0	35.7



RPP only

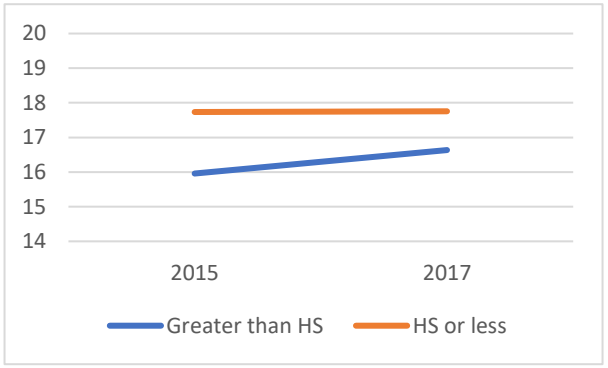
	2015	2017
Greater than HS	29.7	34.9
HS or less	33.5	38.0



Current binge alcohol use

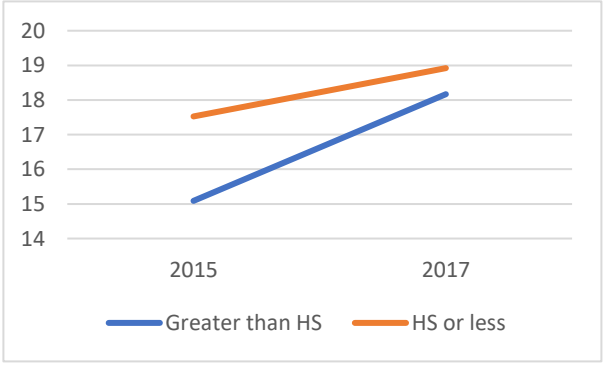
PFS+RPP

	2015	2017
Greater than HS	16.0	16.6
HS or less	17.7	17.8



RPP only

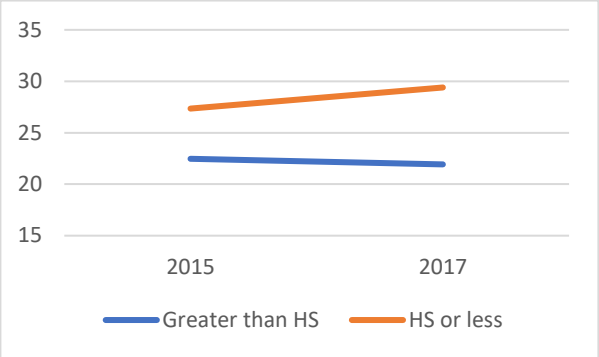
	2015	2017
Greater than HS	15.1	18.2
HS or less	17.5	18.9



Current marijuana use

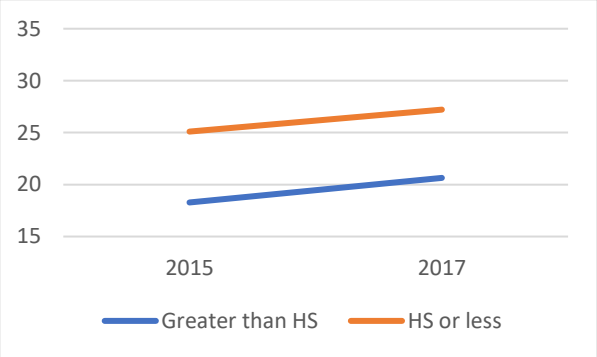
PFS+RPP

	2015	2017
Greater than HS	22.5	21.9
HS or less	27.3	29.4



RPP only

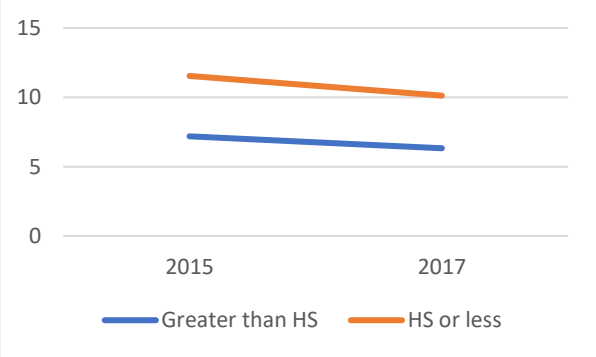
	2015	2017
Greater than HS	18.3	20.6
HS or less	25.1	27.2



Lifetime Rx pain reliever misuse

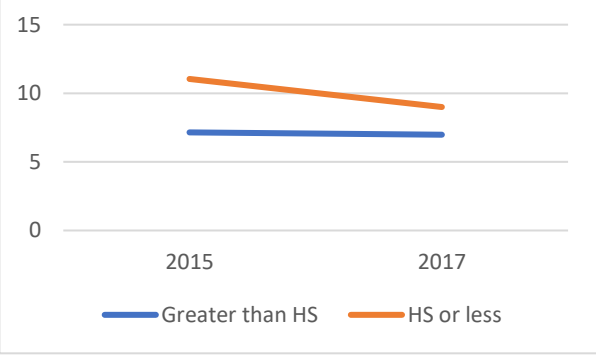
PFS+RPP

	2015	2017
Greater than HS	7.2	6.3
HS or less	11.5	10.1



RPP only

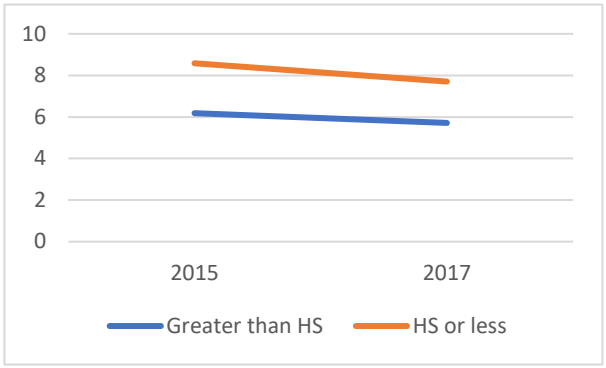
	2015	2017
Greater than HS	7.1	7.0
HS or less	11.0	9.0



Lifetime Rx stimulant misuse

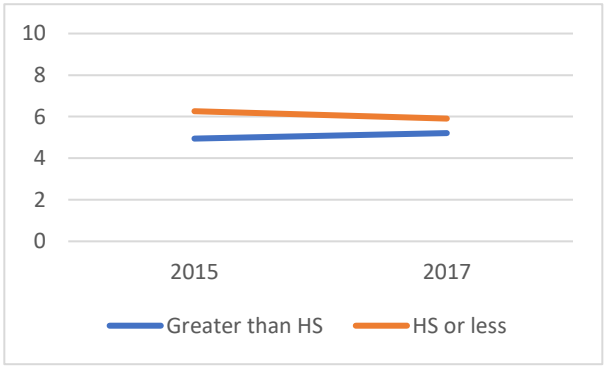
PFS+RPP

	2015	2017
Greater than HS	6.2	5.7
HS or less	8.6	7.7



RPP only

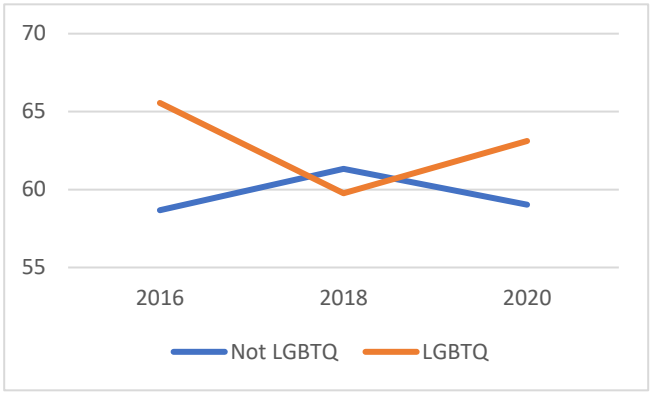
	2015	2017
Greater than HS	4.9	5.2
HS or less	6.3	5.9



D.4 Data tables and charts for YAS measures for 2016 to 2020, by LGBTQ status (Both conditions combined)

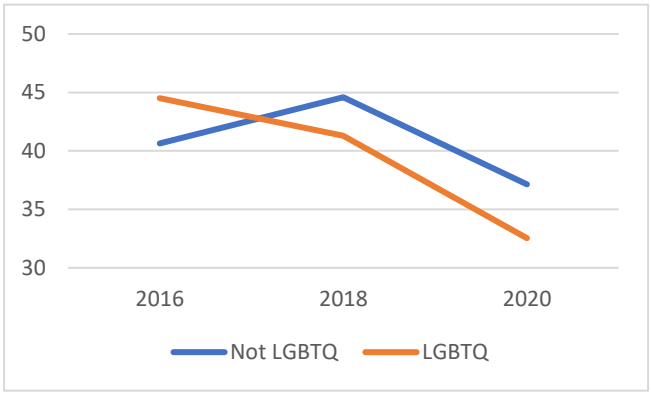
Current alcohol use (ages 18-20)

	2016	2018	2020
Not LGBTQ	58.7	61.3	59.0
LGBTQ	65.6	59.8	63.1



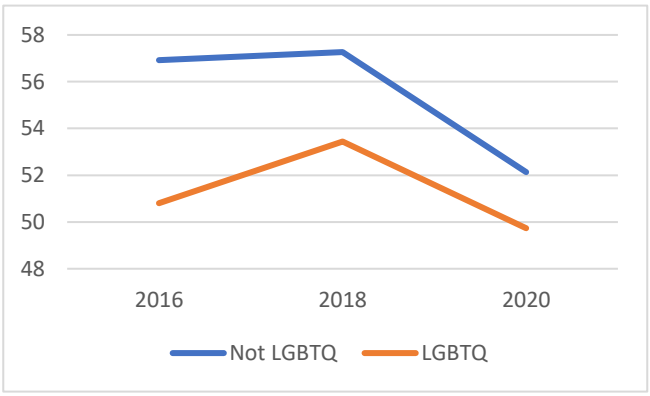
Current binge drinking (ages 18-20)

	2016	2018	2020
Not LGBTQ	40.6	44.6	37.1
LGBTQ	44.5	41.3	32.5



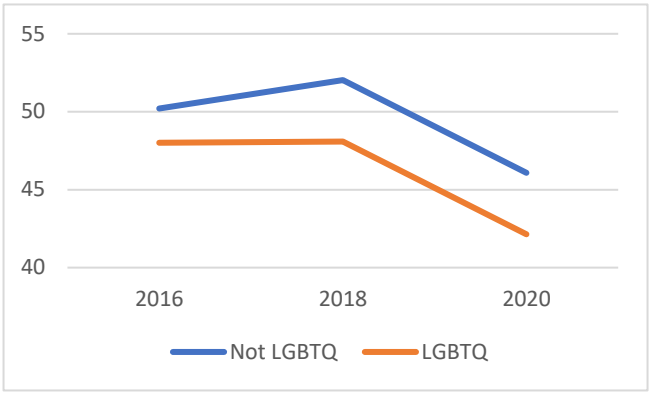
Current binge drinking (ages 21-25)

	2016	2018	2020
Not LGBTQ	56.9	57.3	52.1
LGBTQ	50.8	53.4	49.7



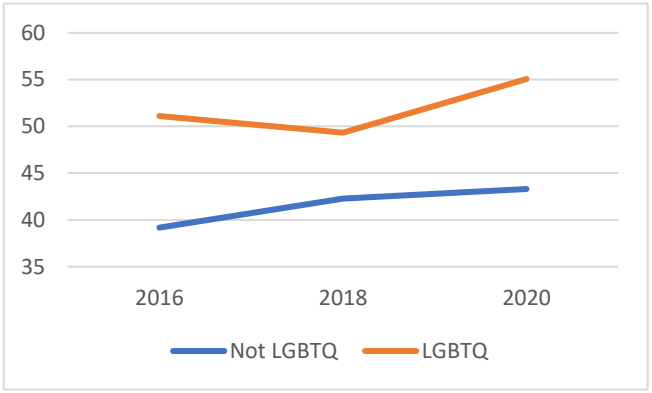
Current binge drinking (ages 18-25)

	2016	2018	2020
Not LGBTQ	50.2	52.0	46.1
LGBTQ	48.0	48.1	42.1



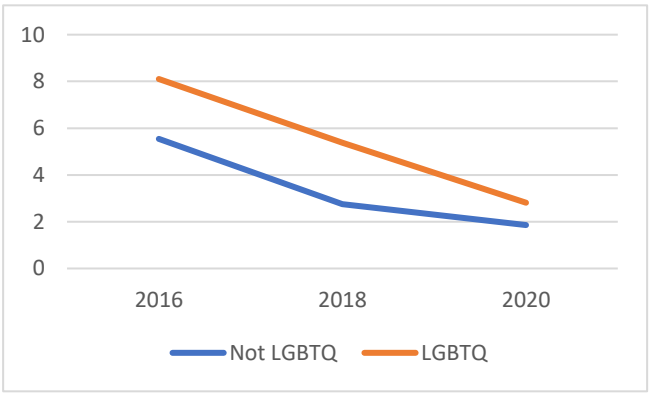
Current marijuana use

	2016	2018	2020
Not LGBTQ	39.2	42.3	43.3
LGBTQ	51.1	49.3	55.1



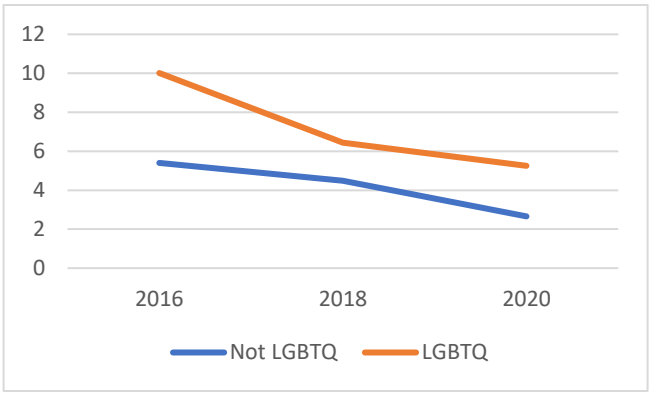
Past year Rx pain reliever misuse

	2016	2018	2020
Not LGBTQ	5.5	2.8	1.9
LGBTQ	8.1	5.4	2.8



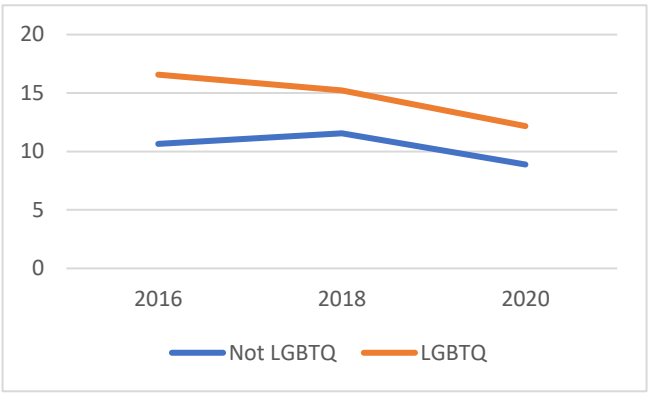
Past year Rx sedative misuse

	2016	2018	2020
Not LGBTQ	5.4	4.5	2.7
LGBTQ	10.0	6.4	5.3



Past year Rx stimulant misuse

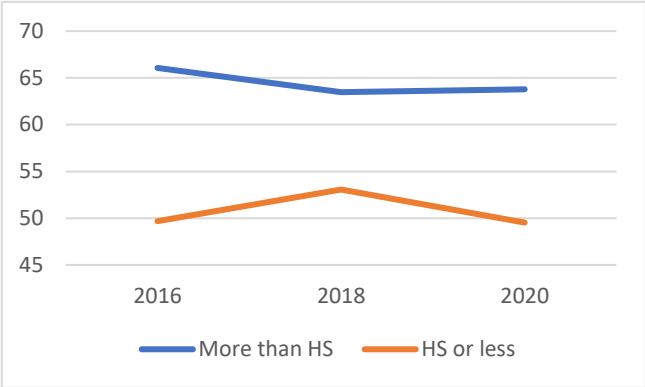
	2016	2018	2020
Not LGBTQ	10.7	11.6	8.9
LGBTQ	16.6	15.2	12.2



D.5 Data tables and chart for YAS measures for 2016 to 2020, by SES (Both conditions combined)

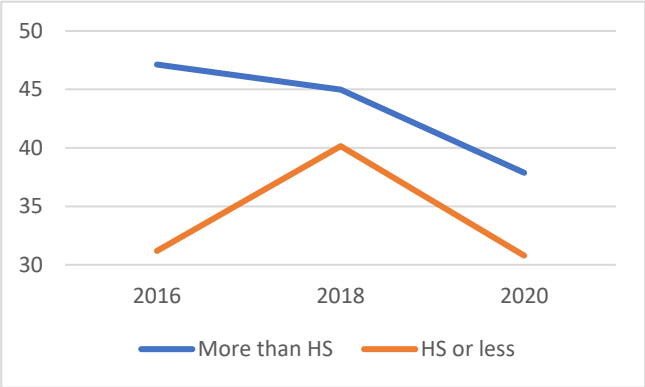
Current alcohol use (ages 18-20)

	2016	2018	2020
More than HS	66.1	63.5	63.8
HS or less	49.7	53.1	49.5



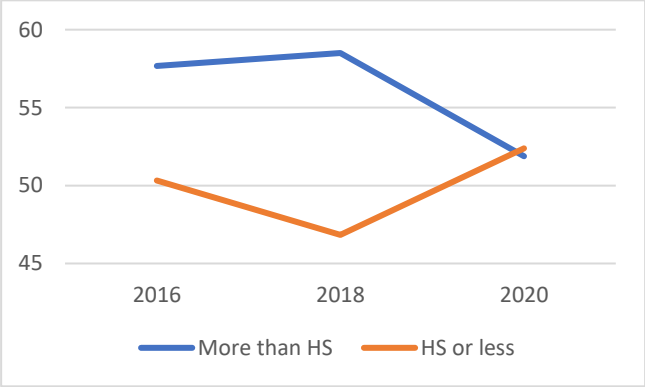
Current binge drinking (ages 18-20)

	2016	2018	2020
More than HS	47.1	45.0	37.9
HS or less	31.2	40.2	30.8



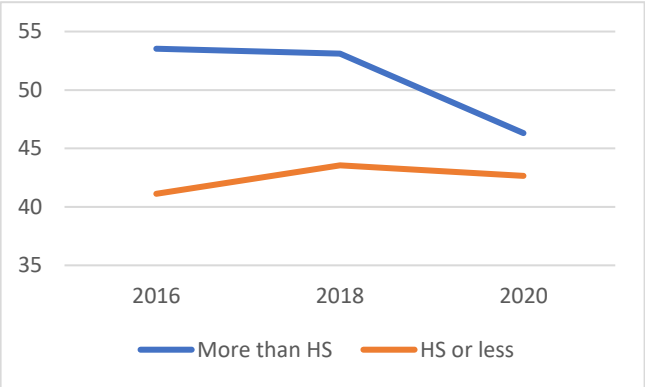
Current binge drinking (ages 21-25)

	2016	2018	2020
More than HS	57.7	58.5	51.9
HS or less	50.3	46.8	52.4



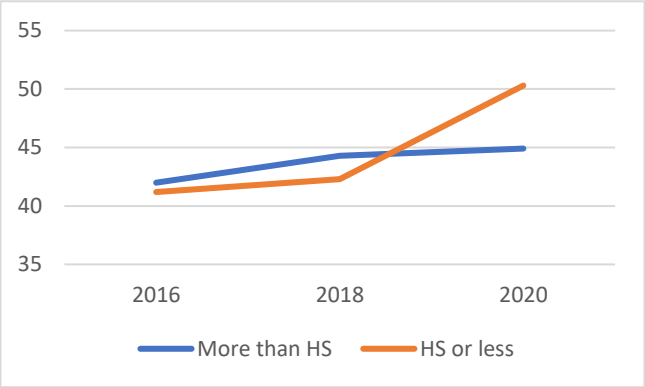
Current binge drinking (ages 18-25)

	2016	2018	2020
More than HS	53.5	53.1	46.3
HS or less	41.1	43.6	42.6



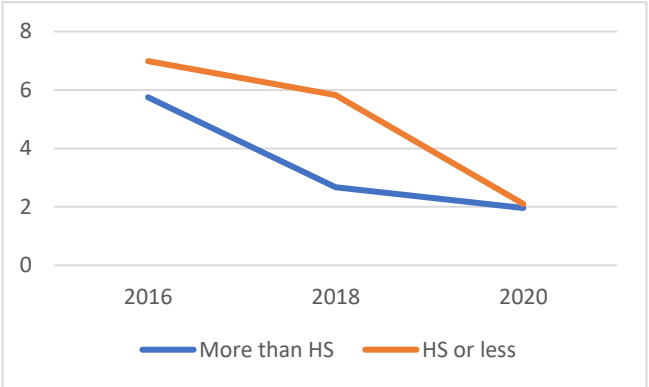
Current marijuana use

	2016	2018	2020
More than HS	42.0	44.3	44.9
HS or less	41.2	42.3	50.3



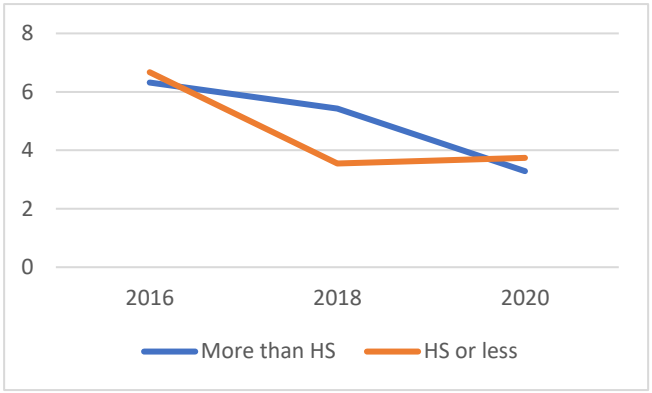
Past year Rx pain reliever misuse

	2016	2018	2020
More than HS	5.7	2.7	2.0
HS or less	7.0	5.8	2.1



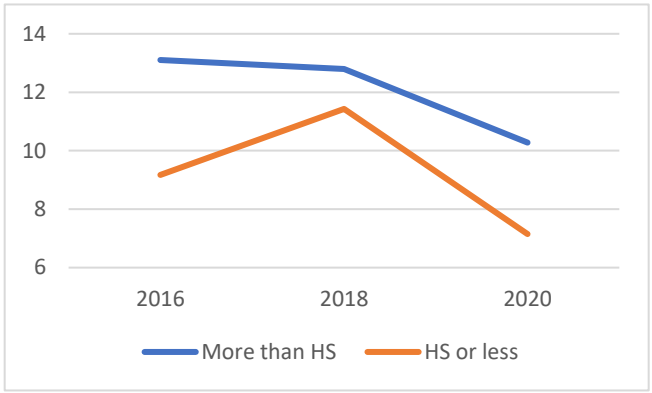
Past year Rx sedative misuse

	2016	2018	2020
More than HS	6.3	5.4	3.3
HS or less	6.7	3.5	3.7



Past year Rx stimulant misuse

	2016	2018	2020
More than HS	13.1	12.8	10.3
HS or less	9.2	11.4	7.1



E. Assignment of YRBS and YAS respondents to condition

Assignment of YRBS and YAS respondents to condition

The records from the YRBS data files, 2013 through 219, were categorized into one of three mutually exclusive conditions:

1) student lived in a town served by a PFS grantee and later by a RPP grantee[13]
2) student lived in a town not served by a PFS grantee but was served by an RPP grantee for at least the last two fiscal years of the RPP funding (i.e., FY19 and FY20)[14]
3) student lived in a town that was not served by either a PFS or RPP grantee, or was served by a RPP grantee but not for both FY19 and FY20

The first condition listed above is the **PFS+RPP** condition and the second is the **RPP_only** condition. Assignment to condition was made based on the town code included in the YRBS data file. Because the town code was not provided, or was invalid, for about 10 percent of the students, the school code was used instead to make the assignment for these students.[15]

Each YRBS record was also categorized according to the RPP grantee that served the town where the student lived during fiscal year 2019. The school attended by the student was again used to determine the RPP grantee assigned to those students who did not provide a town code.

Using the school codes to determine the likely condition category and RPP grantee for those students that did not provide a town code, the percentages of students for whom these assignments could not be made was reduced from 10 percent to 2.5 percent and 1 percent, respectively.

YAS Respondents were assigned to the same three groupings as based on either their zip code (for the 2014 and 2016 surveys) or town names (for the 2018 and 2020 surveys).

Note: PIRE created a data file that tracks the assignment of each town in Vermont to the coverage areas served by the PFS and RPP grantees, and the three conditions identified above. This file is not part of this report, but has been submitted separately to the VDH/ADAP project manager for RPP.

[13] All towns that were served by PFS grantees were later served by RPP grantees. This is the "PFS+RPP" condition.
[14] Although most RPP grantees served the same towns for all years of the project, some towns in the Mount Ascutney Hospital's region were served only some of years.
[15] Students who did not provide a valid town code were assigned to a condition category based on where the vast majority (i.e., 90 percent or more) of students from the same school (who did have a valid town code) were assigned. The same cut-point of 90% was used for assigning students to a FY19 RPP grantee. For many schools, these percentages were at or very close to 100%.