HB

296

<TARGET><BILL>HB 296</BILL><SUBJECT>HB 296</SUBJECT><COMM>HHSS30</COMM></TARGET>

Alaska State Legislature

Representative Matt Claman

Session: State Capitol, Rm 118 Juneau, AK 99801 Phone: 465-4919
Interim: 1500 W. Benson Blvd., Anch, AK 99503 Phone: 269-0130

House Bill 296

"An Act creating the Alaska marijuana use prevention youth services grant program; creating the Alaska marijuana use prevention, education, and treatment fund; relating to the duties of the Alaska Children's Trust Board; creating the marijuana use education and treatment program; and relating to the duties of the Department of Health and Social Services."

Sponsor Statement:

In 2014, Alaskans legalized the use and possession of marijuana in the state. Ballot measure 2 gave the state the ability to tax and regulate the production, sale, and use of marijuana. In 2015 the Alaska Legislature decided to implement a $50/ounce tax on marijuana sales. Since the measure went into effect in early 2015 the state has collected more than $6 million dollars in tax revenue.

HB 296 creates the *Alaska marijuana use prevention, education, and treatment fund.* Under current statute, fifty percent of the tax revenue generated from marijuana sales is designated to go to the recidivism reduction fund established within the general fund. The remaining fifty percent goes directly into the general fund. Under HB 296, the remaining fifty percent would be allocated into the new fund.

Under HB 296, fifty percent of the new fund may be allocated to the Department of Health and Social Services (DHSS) for a comprehensive marijuana use education and treatment program, and the remainder of the funds will go to the newly established *Alaska marijuana use prevention youth services grant program* which is administered by the Alaska Children's Trust Board.

The program implemented by DHSS will focus on statewide misuse prevention and education on the effects of marijuana and the Alaska marijuana laws. It also funds substance abuse screening and treatment as well as monitoring public perception. Separately, the Alaska Children's Trust Board will administer the *Alaska marijuana use prevention youth services grant program,* giving grants to non-profit out-of-school programs that provide youth marijuana use prevention and reduction curriculums.

It is the intent that the Legislature treat marijuana much like alcohol and tobacco and invest in prevention, education, and treatment services in youths and adults to reduce long-term associated costs. House Bill 296 creates statewide programs as well as the funding structure to do so.

BOYS & GIRLS CLUBS
OF AMERICA

HB296 Testimony February 8, 2018

Noelle Hardt, Boys & Girls Clubs of America, Pacific Region Government Relations Director. I reside in Anchorage, Alaska, District N-28.

My work is to support legislative policy and funding development in 9 Pacific states, notably 5 of which have legalized recreational marijuana. I also consult throughout the country with Boys & Girls Clubs and government officials addressing the policy and funding impact of serving youth in a changing drug culture.

As an Alaskan, mother of two and children's advocate, thank you for addressing this important issue in collaboration with service providers and the Department of Health and Social Services. For four years I have been embedded in the issue of the marijuana policy and funding impact on Boys & Girls Clubs. From our work in the region and throughout the country, there has emerged a prevention funding model from Colorado that is proactive, intentional and most importantly, has had early success. It is this model that motivated the collaboration between Alaska Children's Trust, Boys & Girls Clubs, the Afterschool Alliance and the Department of Health and Social Services, as it appears in the House bill addressing marijuana impact.

Colorado's Tony Grampsas Youth Services Fund was originally established from tobacco settlement dollars then pivoted to target marijuana prevention with legalization in 2014. This fund works collaboratively with the Colorado Department of Human Services and is a clearinghouse for accepting dedicated marijuana tax revenue for youth prevention and distributing the dollars to community-based organizations with broad reach and big impact.

Two years into Colorado's targeted prevention effort (6,235 youth surveyed), a Colorado State University research team concluded:

- For children grades 1 through 5 involved in marijuana prevention programs: More youth reported talking to the parents about marijuana and youth perceptions about the harm of marijuana use increased.
- For tweens and teens in grades 6 through 12 involved in prevention programs: 75% reported that they had never tried marijuana and half believed use in their age group was wrong.
    - More work to be done as most youth also acknowledged marijuana would be easy to obtain, one-third thought regular use posed no risk, and perception of parental acceptance of use increased.
- Two key recommendations to leverage greater influence came from this study
    - Emphasize prevention in middle school youth
    - Enlist peer educators

  Both of these recommendations rest squarely in Boys & Girls Clubs service model.

A dedicated effort to youth prevention must be included so that community-based after school programs can counteract the long-term consequences of legalization. The proposed involvement of the Alaska Children's Trust in delivering prevention programs efficiently throughout Alaska is largely based

on the successful prevention work in Colorado and is a thoughtful solution. I appreciate Representative Claman's attention to this detail and encourage the committee to demonstrate a commitment to Alaska's children and teens by supporting a meaningful prevention effort in all tax revenue proceeds and legislation.

Noelle Hardt
17401 Mount McKinley Drive
Anchorage, Alaska 99516
(907)947-8680

Fiscal Note

State of Alaska
2018 Legislative Session

Bill Version: HB 296
Fiscal Note Number:
() Publish Date:

Identifier: HB296-DHSS-BHA-2-2-18
Title: YOUTH MARIJUANA PREVENTION PROGRAMS/FUND
Sponsor: CLAMAN
Requester: House HSS

Department: Department of Health and Social Services
Appropriation: Behavioral Health
Allocation: Behavioral Health Administration
OMB Component Number: 2665

Expenditures/Revenues

Note: Amounts do not include inflation unless otherwise noted below. (Thousands of Dollars)

	FY2019 Appropriation Requested	Included in Governor's FY2019 Request	Out-Year Cost Estimates				
OPERATING EXPENDITURES	**FY 2019**	**FY 2019**	**FY 2020**	**FY 2021**	**FY 2022**	**FY 2023**	**FY 2024**
Personal Services	13.0		26.0	26.0	26.0	26.0	26.0
Travel	15.0		179.0	179.0	179.0	179.0	179.0
Services	85.0		100.0	100.0	100.0	100.0	100.0
Commodities	12.0		70.0	70.0	70.0	70.0	70.0
Capital Outlay							
Grants & Benefits							
Miscellaneous							
Total Operating	**125.0**	**0.0**	**375.0**	**375.0**	**375.0**	**375.0**	**375.0**
Fund Source (Operating Only)							
1178 temp code (UGF)	125.0		375.0	375.0	375.0	375.0	375.0
Total	**125.0**	**0.0**	**375.0**	**375.0**	**375.0**	**375.0**	**375.0**
Positions							
Full-time							
Part-time							
Temporary							
Change in Revenues							
None							
Total	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Estimated SUPPLEMENTAL (FY2018) cost: 0.0 *(separate supplemental appropriation required)*
(discuss reasons and fund source(s) in analysis section)

Estimated CAPITAL (FY2019) cost: 0.0 *(separate capital appropriation required)*
(discuss reasons and fund source(s) in analysis section)

ASSOCIATED REGULATIONS

Does the bill direct, or will the bill result in, regulation changes adopted by your agency? No
If yes, by what date are the regulations to be adopted, amended or repealed? N/A

Why this fiscal note differs from previous version/comments:

Not applicable; initial version.

Prepared By: Randall Burns, Director — Phone: (907)269-5948
Division: Behavioral Health — Date: 02/02/2018 03:00 PM
Approved By: Shawnda O'Brien, Asst. Commissioner — Date: 02/02/18
Agency: Health and Social Services

FISCAL NOTE ANALYSIS

STATE OF ALASKA **BILL NO.** HB296
2018 LEGISLATIVE SESSION

Analysis

HB 296 (version I) would establish a new Marijuana Use Prevention, Education & Treatment Fund ("Fund") as an account within the general fund. The bill directs 50% of the marijuana excise tax proceeds levied under AS 43.61.010 currently distributed to the general fund to instead go to the Marijuana Use Prevention, Education & Treatment Fund. The remaining proceeds would continue to be distributed to the recidivism reduction fund (AS 43.61.101(c)).

The bill allows the legislature to make equal appropriations from this Fund to a marijuana use prevention youth services grant program to be administered by the Alaska Children's Trust Board established under AS 37.14.225, and a comprehensive marijuana use education and treatment program to be administered by the Department of Health and Social Services (i.e., 25% to each program).

This fiscal note assumes $10 million in marijuana excise tax revenue per year based on monthly taxes collected for September to November 2017.

The marijuana use education treatment program must include:

(A) a community-based marijuana misuse prevention component;
(B) marijuana public education designed to communicate messages to help prevent youth initiation of marijuana use, educate the public about the effects of marijuana use, educate the public about marijuana laws;
(C) surveys of youth and adult populations concerning knowledge, awareness, attitude, and use of marijuana products;
(D) monitoring of population health status related to consequences of marijuana use; and,
(E) substance abuse screening, brief intervention, referral, and treatment.

The Division of Behavioral Health would be responsible for components (E). Components (A)-(D) will be appropriated to the Division of Public Health in a separate fiscal note. Currently, the department does not have any funds to direct to these efforts.

The Division of Behavioral Health would promote health and behavioral health care provider awareness of substance use screening and increase provider capabilities through the use of Screening Brief Intervention, and Referral to Treatment (SBIRT) services. SBIRT aligns with prevention efforts in clinical settings for opioid and alcohol misuse by identifying clients who are engaging in risky substance use behaviors—even if their use does not meet criteria for a substance use disorder. SBIRT is a tool for clinicians and other service providers to identify at-risk clients and give immediate feedback and coaching regarding strategies to lower their risk behaviors. Effective use of SBIRT can offer healthcare providers an opportunity to efficiently intervene and curb high-risk substance use behaviors before they progress to substance use disorders.

Year 1 reflects costs associated with startup activities. Subsequent years' costs reflect training, fully implementing SBIRT services across the state, and evaluation. These are on-going costs as new professionals will continually enter into primary and behavioral health care services.

The Division will provide education of community behavioral health providers, pediatricians and primary care providers through in-person live trainings, teleconferences and webinars. The training may be integrated into child, adolescent and family behavioral health conferences. Training materials and trainers will be necessary costs to ensure proper skills-building of primary health and behavioral health care providers prior to SBIRT services being implemented. Travel will be needed to allow trainers and providers to fully participate in educational opportunities. Evaluation to ensure fidelity of the program and monitor outcomes will be included in the project.

Analysis

The Division has two people on staff expert in SBIRT who will be available for the development and implementation of the training. In year 1, a Health Program Manager IV and Mental Health Clinician III will each contribute 5% level of effort towards SBIRT. In year 2 and beyond the two positions will each contribute 10% level of effort.

Personal Services
FY 2019
PCN 06-0644, JNU/GP range 23 Health Program Manager IV, 5% level of effort towards SBIRT: $6,828.00
PCN 06-5128, JNU/GP range 21 Mental Health Clinician III, 5% level of effort towards SBIRT: $6,119.00

FY 2020-2024
PCN 06-0644, JNU/GP range 23 Health Program Manager IV, 10% level of effort towards SBIRT: $13,656.00
PCN 06-5128, JNU/GP range 21 Mental Health Clinician III, 10% level of effort towards SBIRT: $12,238.00

Travel
Year 1: $15,000 – 6 roundtrips by 2 staff from Juneau to various parts of the state to meet with stakeholders; evaluators and start SBIRT training ($1,200 X 2 X 6= $15,000)

Years 2-5: $179,000 annually
Travel for out years will be determined during the first year startup planning. Funds are intended to travel two DBH staff from Juneau to regional areas of the state to provide individualized SBIRT training for primary and behavioral health care practitioners;
* travel non-state employees to in-state child, adolescent and family behavioral health conferences, allowing professionals to join in those training opportunities, enhancing reach of the training;
* travel educators to regional sites;
* travel potential trainers to face-to-face skills building opportunities and
* travel non-state employee trainers to communities within their regions to train practitioners.

Services
Year 1: $85,000
Years 2-5: $100,000
Service spending for out years will be determined during the first year startup planning.
The Division anticipates entering into contracts
* for qualitative/quantitative evaluation of the five year project
* to develop and film training videos
* to develop web-based training materials
* for translation services
There will also be opportunities for SBIRT experts outside of the state to provide consultation services when a population is unique or calls for a special set of skills (i.e. sex offenders, severely mentally ill).

Commodities
Year 1: $12,000
Years 2-5: $70,000
Startup expenditures will include a limited number of training manuals, handouts, and supplies (such as digital audio recorders, compact discs, thumb drives)
Out year expenses will include alcohol and drug screening tools, training manuals, videos, compact discs, paper handouts

Fiscal Note

State of Alaska
2018 Legislative Session

Bill Version: HB 296
Fiscal Note Number:
() Publish Date:

Identifier: HB296-DHSS-PHAS-2-2-18
Title: YOUTH MARIJUANA PREVENTION PROGRAMS/FUND
Sponsor: CLAMAN
Requester: House HSS

Department: Department of Health and Social Services
Appropriation: Public Health
Allocation: Public Health Administrative Services
OMB Component Number: 292

Expenditures/Revenues

Note: Amounts do not include inflation unless otherwise noted below. (Thousands of Dollars)

	FY2019 Appropriation Requested	Included in Governor's FY2019 Request	Out-Year Cost Estimates				
OPERATING EXPENDITURES	**FY 2019**	**FY 2019**	**FY 2020**	**FY 2021**	**FY 2022**	**FY 2023**	**FY 2024**
Personal Services	100.9		100.9	100.9	100.9	100.9	100.9
Travel	5.0		5.0	5.0	5.0	5.0	5.0
Services	597.4		1,231.6	1,231.6	1,231.6	1,231.6	1,231.6
Commodities							
Capital Outlay							
Grants & Benefits			787.5	787.5	787.5	787.5	787.5
Miscellaneous							
Total Operating	**703.3**	**0.0**	**2,125.0**	**2,125.0**	**2,125.0**	**2,125.0**	**2,125.0**
Fund Source (Operating Only)							
1178 temp code (UGF)	703.3		2,125.0	2,125.0	2,125.0	2,125.0	2,125.0
Total	**703.3**	**0.0**	**2,125.0**	**2,125.0**	**2,125.0**	**2,125.0**	**2,125.0**
Positions							
Full-time	1.0		1.0	1.0	1.0	1.0	1.0
Part-time							
Temporary							
Change in Revenues							
None							
Total	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Estimated SUPPLEMENTAL (FY2018) cost: 0.0 *(separate supplemental appropriation required)*
(discuss reasons and fund source(s) in analysis section)

Estimated CAPITAL (FY2019) cost: 0.0 *(separate capital appropriation required)*
(discuss reasons and fund source(s) in analysis section)

ASSOCIATED REGULATIONS

Does the bill direct, or will the bill result in, regulation changes adopted by your agency? No
If yes, by what date are the regulations to be adopted, amended or repealed? n/a

Why this fiscal note differs from previous version/comments:

Not applicable; initial version.

Prepared By: Jay C. Butler, MD, Chief Medical Officer/Director Phone: (907)269-6680
Division: Public Health Date: 02/02/2018
Approved By: Shawnda O'Brien, Asst. Commissioner Date: 02/02/18
Agency: Health and Social Services

FISCAL NOTE ANALYSIS

STATE OF ALASKA **BILL NO.** HB296
2018 LEGISLATIVE SESSION

Analysis

HB 296 version "I" would establish a new Marijuana Use Prevention, Education & Treatment Fund ("Fund") as an account within the general fund. The bill directs 50% of the marijuana excise tax proceeds levied under AS 43.61.010 to the Fund. The remaining proceeds will be distributed to the recidivism reduction fund (AS 43.61.010(c)). Currently 50% of marijuana excise tax proceeds is distributed to the recidivism reduction fund and 50% to the general fund. The legislature may make equal appropriations from this Fund to a marijuana use prevention youth services grant program to be administered by the Alaska Children's Trust Board established under AS 37.14.225, and a comprehensive marijuana use education and treatment program to be administered by the Department of Health and Social Services. This fiscal note assumes $10 million in marijuana excise tax revenue per year based on monthly taxes collected for September to November 2017 (Department of Revenue http://tax.alaska.gov/programs/programs/reports/index.aspx?60000), and appropriations to DHSS of 25% or $2.5 million annually.

The Department of Health and Social Services would administer a marijuana use education treatment program that must include:

(A) a community-based marijuana misuse prevention component;
(B) marijuana public education designed to communicate messages to help prevent youth initiation of marijuana use, educate the public about the effects of marijuana use, educate the public about marijuana laws;
(C) surveys of youth and adult populations concerning knowledge, awareness, attitude, and use of marijuana products;
(D) monitoring of population health status related to consequences of marijuana use; and,
(E) substance abuse screening, brief intervention, referral, and treatment.

The Division of Public Health would be responsible for components (A)-(D), while the treatment component (E) will be appropriated to the Division of Behavioral Health in a separate fiscal note. Currently, the department does not have any funds to direct to these efforts.

The Division of Public Health would enhance existing, related grant programs for public health, behavioral health, children's services, juvenile justice, and education (e.g. suicide prevention, tobacco prevention, etc.) to expand their current activities to include evidence-based, substance misuse prevention programming; create education materials including webinars, print materials, Internet resources, and parent and teacher toolkits that focus on preventing youth initiation of marijuana and unsafe marijuana uses in adult populations (e.g. prevent drugged driving, promote safe storage); support existing surveys of youth, pregnant women, and adult risk factors and behaviors by including marijuana-specific questions; track trends in health outcomes related to marijuana use; and provide resources for poison control.

The division would hire a new Public Health Specialist (Range 18, ANC/GP) to serve as consultant and subject matter expert in planning and implementing programmatic evaluations, health surveys and assessments, health education materials, and delivery of the community program services. Travel will be needed to bring stakeholders and partners to Anchorage to gather input on program goals and objectives. Services would provide technical assistance to grantees on marijuana prevention programming, production of educational materials, health surveys and assessments, program evaluation, and support for the poison control hotline. Grant funds would support marijuana programming efforts in existing grant programs targeted at youth (tobacco prevention, suicide prevention, etc.). The program will leverage these existing grants to minimize the need for additional staffing and administrative expenses. Year 1 reflects the start up and implementation activities needed so that the program would be fully implemented in year 2.

Alaska State Legislature

Representative Matt Claman

Session: State Capitol, Rm 118 Juneau, AK 99801 Phone: 465-4919
Interim: 1500 W. Benson Blvd., Anch, AK 99503 Phone: 269-0130

House Bill 296

"An Act creating the Alaska marijuana use prevention youth services grant program; creating the Alaska marijuana use prevention, education, and treatment fund; relating to the duties of the Alaska Children's Trust Board; creating the marijuana use ducation and treatment program; and relating to the duties of the Department of Health and Social Services."

Sectional Summary

Section 1
Adds new sections to AS 17.38:
Creates the *Alaska marijuana use prevention youth services grant program* and designates that it is administered by the Alaska Children's Trust (ACT) Board. The program provides funds and training to statewide and community based programs that focus on reducing the number of youth trying marijuana for the first time, and the number of youth consistently using marijuana as well as reducing youth access to marijuana and exposure to impaired driving. The programs selected by the Board must be either 501c(3) or federally recognized tribes, a municipal or state government, or a school. The ACT Board is charged with adopting regulations to carry out the grant program including application requirements and reporting criteria.

17.38.410
Creates the *Alaska marijuana use prevention, education, and treatment fund.* The fund is part of the general account and may be added to by appropriation or donation. The legislature appropriates the 50% of the marijuana sales tax revenue that is not used for recidivism reduction fund toward the fund. Up to fifty percent (50%) of the fund may go to the *Alaska marijuana use prevention, education, and treatment program* administered by the ACT Board while an equal amount may go toward the *marijuana use education and treatment program* administered by the Department of Health and Social Services.

Section 2
Amends AS 37.14.230(a)
Updates the responsibilities of the Alaska Children's Trust Board to include the administration of the *Alaska marijuana use prevention youth services grant program.*

Section 3
Amends AS 43.61.010(c):
Designates that the 50 percent of the marijuana sales tax revenue that is not being used for the recidivism reduction fund may be appropriated to the *Alaska marijuana use prevention, education, and treatment fund.*

Section 4
Amends 43.61.010(d):

Updates language to distinguish *recidivism reduction fund* in place of 'fund'.

Section 5

Amends AS 44.29.020(a):

Updates the responsibilities of the Department of Health and Social Services (DHSS)to include the administration of a comprehensive marijuana use education and treatment program which must include a misuse prevention component, a public education campaign, surveys of Alaskan populations about attitudes and perceptions towards marijuana use, monitoring of public health status related to marijuana usages, and a substance abuse screening, intervention and treatment component. To the extent possible, the Department should administer the program by grant or contract.

ASD: Marijuana-related suspensions up since cannabis legalization

By Beth Verge |
Posted: Tue 9:45 PM, Jan 16, 2018 |
Updated: Wed 8:52 AM, Jan 17, 2018

ANCHORAGE (KTUU) - With marijuana now legal in the state of Alaska, the Anchorage School District is grappling with a growing problem of its own: Pot seems to be sprouting up more often in ASD schools.

"We are finding more suspensions due to marijuana and marijuana edibles from three years ago to now," said ASD Superintendent Dr. Deena Bishop.

Joe Zawodny, ASD Dir. of Secondary Education, said the increase in suspension numbers is significant, and includes offenses for both possession and distribution of marijuana.

However, he said, he can't necessarily empirically attribute the rise to any one thing.

"We're assuming there is some connection to that legalization," he said, "but we're not sure how that's exactly affecting our students and behavior in our schools."

The prevalence of the drug has made its mark on Alaska communities, such as Anchorage, and now the school district has numbers of its own to prove it.

"Really, it does affect learning, and we want people to know that," Bishop said, "that smoking marijuana in a child's teen years will affect his or her ability to learn. And we want to curb that, and ensure our kids can learn at their best."

A summary report provided by ASD states, "When comparing first semester drug suspension data from the past three years, it is clear that marijuana abuse by ASD students has risen significantly."

According to the report, during the 2015-2016 school year, 69 students were suspended for marijuana-related offenses. A year later, 97 were out of school at some point during the first semester for the same thing. And over the course of the first semester this school year, 166 students have already been suspended over marijuana incidents.

That's nearly two-and-a-half times the rate three years ago. Zawodny, though, said the increase isn't entirely surprising.

"We expected when marijuana would be legalized, we'd start to see more usage in the buildings and with students," he said. "And we're seeing that now."

However, he said, there's also a silver lining here, too.

"To know there's an increase in students coming forward I think is the positive outtake here," he said. "Students want to ensure they have a safe learning environment, so they're communicating with adults.

"From the district perspective, we just want to make sure our students have a safe play to go every day and learn," he said.

Zawodny and Bishop both said they're working on programs to help educate students about marijuana. Additionally, Cary Carrigan of the Alaska Marijuana Industry Assn. said Tuesday that the group is working on a similar program to try to steer minors away from pot, which - like alcohol - does remain illegal for those under the age of 21.

More information on marijuana, including data specifically for parents, can be found at the Alaska Dept. of Health and Social Services website.

January 2018

Protective Factors for Youth Substance Abuse and Delinquency

The Role of Afterschool Programs

PREPARED FOR

Alaska Afterschool Network

PREPARED BY

McDowell GROUP

Protective Factors for Youth Substance Abuse and Delinquency: The Role of Afterschool Programs

Prepared for:

Alaska Afterschool Network

A Program of:

act
alaska children's trust

Prepared by:

McDowell Group Anchorage Office
1400 W. Benson Blvd., Suite 510
Anchorage, Alaska 99503

McDowell Group Juneau Office
9360 Glacier Highway, Suite 201
Juneau, Alaska 99801

Website: www.mcdowellgroup.net

McDowell GROUP

January 2018

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Introduction

The Alaska Children's Trust (ACT) asked McDowell Group to create a brief that describes how protective factors reduce youth substance abuse and delinquency and the role that afterschool programs (ASPs) can play within this context. First, this brief defines protective factors and describes their capacity to reduce youth substance abuse and delinquency. Recent data from the Anchorage Youth Risk Behavior Survey (YRBS) is presented to underscore the experience of local youth. Next, it presents an overview of afterschool programs (ASPs) and their potential to provide and enhance protective factors for youth. Distinguishing features of successful ASPs are noted. In closing, a case study of the Icelandic Model showcases a leading-edge preventive strategy that cultivates youth protective factors at multiple levels of the social ecology.

McDowell Group conducted a literature review of relatively recent, peer-reviewed research from a number of online resources. Additional resources were provided by the Alaska Afterschool Network, Afterschool Alliance, and the American Institutes for Research. To help interpret the results, several informal interviews were conducted with ASP professionals. All photos were provided by the Alaska Afterschool Network from local programming.

McDowell Group thanks Barbara Dubovich of Camp Fire Alaska, the National Institute on Out-of-School Time, and the American Institutes for Research for their support on this project.

The following definitions are used in this report:

> **Afterschool programs** (ASPs) are regular, structured or semi-structured activities for school-age (K-12) youth that occurs before school, after school, between school terms, or during the summer. Other terminology—out-of-school time or OST, extra-curricular activities, organized activities, expanded learning time, school-age care—is synonymous in this context and used interchangeably.[1,2]
>
> **Protective factors** are features within an individual, family, or community that enhance healthy development and help a person cope successfully with life's challenges.
>
> **Risk factors** are individual, family, school, or community features that increase the likelihood youth will engage in unhealthy behavior.

[1]American Youth Policy Forum (2006). *Helping Youth Succeed through Out-of-School Time Programs.* Washington, DC: American Youth Policy Forum
[2]Little, P., Wimer, C., & Weiss, H. B. (2008). After school programs in the 21st century: Their potential and what it takes to achieve it. *Issues and opportunities in out-of-school time evaluation, 10*(1-12).

Risk & Protective Factors

This section first describes how risk and protective factors influence behavior through conditions at the individual, family, and community levels, then presents risk and protective factors linked with decreasing youth risk behaviors. Finally, it displays analysis of protective factors and efforts to prevent risk behaviors among students in the Anchorage School District (ASD).

Overview

Extensive research has shown an individual's social conditions, personal traits, genetic disposition, and life experiences are associated with different types of healthy or unhealthy behavior. These social and personal influences are defined as risk and protective factors.[3]

> **Risk factors** are individual, family, school, or community features that increase the likelihood youth will engage in unhealthy behavior (such as substance abuse or misuse [e.g. alcohol, tobacco, marijuana, and other drugs] or personal, domestic, or interpersonal violence). The more risk factors present in a child's life, the greater likelihood unhealthy behavior will develop.
>
> **Protective factors** are features within an individual, family, or community that enhance healthy development and help a person cope successfully with life's challenges. Protective factors are sometimes called resiliency factors or developmental assets. They are integral to strength-based abuse-prevention efforts.

Some protective and risk factors are fixed and cannot change, while others are considered variable. Factors are also cumulative and interrelated: the more protective factors in place for an individual, family, school, and community, the less likelihood of community members engaging in unhealthy behavior. Researchers believe an imbalance of risk and protective factors leads to negative outcomes. This means, if a person has enough protective factors in his or her life, s/he may be able to navigate even numerous risk factors to positive outcomes.[4]

Individual protective factors are associated with each phase of a child's life. Infancy and early childhood factors (under age 5) include self-regulation, secure attachment, mastering communication and language skills, and the ability to make friends and get along with others. Factors specific to middle childhood (age 5-12) include increasing academic skills, positive behavior at home, school, and in public, and the ability to make and keep friends.

For adolescents and youth (over age 12), protective factors also include engagement in meaningful activities (e.g. participation in clubs, sports teams, volunteering activities, service-learning projects and/or peer-based programs); social, emotional, and life skills (e.g. problem-solving, decision-making, grades, educational attainment); connection to culture, religion, peers, and/or community; and positive personal qualities, self-awareness, and peer influence. As youth enter early adulthood, this base of protective factors increases their

[3] Alaska Department of Health and Social Service's Division of Behavioral Health. (2011). "Risk and Protective Factors for Adolescent Substance Use (and other Problem Behavior)." http://dhss.alaska.gov/dbh/Documents/Prevention/programs/spfsig/pdfs/Risk_Protective_Factors.pdf.
[4] Bernat, D. H., & Resnick, M. D. (2006). Healthy youth development: Science and strategies. Journal of Public Health Management Practice (Supplement), S10-S16.

capacity to explore their identity, self-sufficiency and independent decision-making, and helps them be future- and achievement-orientated.

Family protective factors include family connectedness, attachment, and bonding; positive parenting styles characterized by reliable and consistent responsiveness, support, and discipline; adequate socioeconomic supports for the family; clear expectations for family behavior and values; and strong family communication, attention, and sense of caring.

School protective factors include a strong connection to school; a caring school climate with positive norms; participation in extracurricular activities and healthy peer groups; positive teacher expectations; reliable and steady school administration and management; positive partnerships and overlap between family, school, and community life; physical and psychological safety, including policies to ensure a welcoming atmosphere from school staff and other students; and high academic expectations.

Community protective factors include positive connection to other adults and strong role models; safe, supportive, and connected neighborhoods and communities; strong community infrastructure, including access to mental health and health care; a strong regulatory system for childcare providers; healthy social norms and programs to enhance them; a variety of opportunities for youth engagement; a sense of belonging and connection to community and culture; and strong cultural traditional activities.

Factors that Impact Youth Substance Abuse and Delinquency

Numerous risk and protective factors affect youth substance abuse, delinquency, and other risk behaviors. The more risk factors an adolescent has at the individual, family, school or community level, the more likely s/he is to engage in risk behaviors. The more protective factors present in an adolescent's life, the more likely s/he is to engage in prosocial and developmentally-healthy behaviors. For example, youth who experience adverse childhood experiences (ACEs), witness family members engaging in substance use, and live in disconnected or transient communities are more likely to engage in risk behaviors themselves. On the other hand, youth who have a positive self-concept, are engaged in meaningful activities, and are connected to their families and other adults in their community are more likely to avoid risk behaviors.

Table one summarizes risk and protective factors shown in national research to be associated with increases and decreases in adolescent risk behavior.

(See next page.)

Table 1. Types of Risk and Protective Factors for Adolescent Risk behaviors

Level	Risk Factor	Protective Factor
Individual	• Early initiation of risk behavior • Depression or suicidal ideation • Loss of cultural identity and connection • Childhood media exposure to violence and alcohol • Friends who engage in risk behavior • Early and persistent antisocial behavior • Low perceived risk of harm from risk behavior • Gang involvement • Older physical appearance than peers • Working more than 20 hours/week • Perceived risk of early death • Academic failure • Lack of personal commitment to school • Experience of child abuse and/or other family violence	• Engagement in meaningful activities (e.g. organized activities outside of school such as clubs, lessons, sports or volunteering) • Life skills and social competence • Cultural identity and connection • Positive personal qualities • Positive self-concept • Positive peer role models • Religious identity • High grade point average • Student participation in extracurricular activities
Family	• Family history of risk behavior, adverse childhood experiences (ACEs), and family violence • Family management problems • Family conflict • Favorable parental attitudes towards and involvement in risk behavior • Household access to guns or substances (alcohol, tobacco, marijuana, or other illegal drugs)	• Family connectedness • Positive parenting style • Living in a two-parent family • Higher parent education • High parental expectations about school
School	• Disconnected from school	• Connected to school • Caring school climate
Community	• Availability of drugs and alcohol • Community norms and laws favorable toward drug use and crime • Availability of firearms • Transitions and mobility • Low neighborhood attachment • Community disorganization • Poverty	• Positive connection to other adults • Safe, supportive, and connected neighborhoods • Strong community infrastructure • Local, state policies and practices that support healthy norms and child-youth programs • Range of opportunities within the community for meaningful youth engagement (e.g. volunteering or participation in community-based projects)

Source: Adapted from Alaska Department of Health and Social Service's Division of Behavioral Health. (2011). "Risk and Protective Factors for Adolescent Substance Use (and other Problem Behavior)."

Local Protective Factor Data

The relationships in the table above have been identified in Alaska as well. Analysis of 2003-2013 YRBS[5] data from ASD traditional high schools shows protective factors perform a preventive function for student risk behaviors.[6] Using correlational and multiple regression analyses, Garcia, Price, and Tabatabai examined the relationships between eight protective factors for ASD students—talking to parents about school every day, having one adult besides a parent to ask for help, spending at least one hour a week volunteering or helping at school or in the community, engaging in organized after school activities at least one day a week, not feeling alone, feeling like s/he matters to the community, having teachers who care and provide individual encouragement, and attending schools with clear rules and consequences for behavior—and substance abuse and delinquency.

The study found that "[f]or every one unit increase in the number of protective factors, youth are 15% less likely to currently drink alcohol; 16% less likely to binge drink; [and] 20% less likely to smoke marijuana."[7] The study also analyzed the associations between the eight protective factors and the following risk behaviors:

1. Alcohol use during the past 30 days
2. Binge drinking (five or more servings of alcohol in one sitting)
3. Smoking marijuana during the past 30 days
4. Missing class without permission during the past 30 days

The protective factors associated with the greatest reduction in likelihood a student will drink alcohol, binge drink, or smoke marijuana are 'having teachers who students feel really care' and 'regularly talking to their parents about school.' The strongest protective factors for reducing school absenteeism are 'having teachers who students feel really care' and 'attending schools with clear rules and consequences.'[8] In addition, the study illustrated a dosage effect related to afterschool program participation. The next table details the strength of association between each of protective factors and risk behaviors measured. Statistically significant results are highlighted in blue. The impacts of afterschool programming are discussed in detail in the following chapter.

(See next page.)

[5] The Youth Risk Behavior Survey (YRBS) is a risk-based survey administered to all high school students (grades 9 through 12) every other year regarding risk-related behaviors. The nationwide survey assesses youth risk in six main areas:

1. Behaviors that contribute to unintentional injuries and violence
2. Sexual behaviors that contribute to unintended pregnancy and sexually transmitted diseases
3. Alcohol and other drug use
4. Tobacco use
5. Unhealthy dietary behaviors
6. Inadequate physical activity

[6] Garcia, G. M., Price, L. and Tabatabai, N. (2014). Anchorage Youth Risk Behavioral Survey Results: 2003-2013 Trends and Correlation Analysis of Selected Risk Behaviors, Bullying, Mental health conditions, and protective factors. UAA Department of Health Sciences. This study was completed at the request of the Anchorage Youth Development Coalition (AYDC), in partnership with United Way of Anchorage.

[7] Garcia, G. M., Price, L. and Tabatabai, N. (2014). Anchorage Youth Risk Behavioral Survey Results: 2003-2013 Trends and Correlation Analysis of Selected Risk Behaviors, Bullying, Mental health conditions, and protective factors. UAA Department of Health Sciences. This study was completed at the request of the Anchorage Youth Development Coalition (AYDC), in partnership with United Way of Anchorage.

[8] Ibid.

Table 2. Strength of Association Between Protective Factors and Risk Behaviors for Anchorage Students at Traditional High Schools

Protective Factor		Risk Behavior			
		Current Alcohol Use	Binge Drinking Ever	Current Marijuana Use	Recently Missed Class without Permission
Talking to parents about school everyday		32% less likely	34% less likely	39% less likely	32% less likely
Having one or more adults to ask for help		not significant	20% less likely	not significant	27% less likely
Spending at least one hour/week volunteering at school or in the community		18% less likely	21% less likely	33% less likely	not significant
Feeling like s/he matters to people in the community		19% less likely	17% less likely	35% less likely	34% less likely
Not feeling alone		21% less likely	24% less likely	30% less likely	29% less likely
Having teachers who really care about him/her		51% less likely	46% less likely	45% less likely	44% less likely
Attending a school with clear rules and consequences for behavior		25% less likely	23% less likely	29% less likely	34% less likely
Participating in organized after school activities...	at least one day per week	not significant	16% less likely	31% less likely	not significant
	at least two days per week	18% less likely	not significant	39% less likely	28% less likely

Source: Garcia, G. M., Price, L. and Tabatabai, N. (2014). Anchorage Youth Risk Behavioral Survey Results: 2003-2013 Trends and Correlation Analysis of Selected Risk Behaviors, Bullying, Mental health conditions, and protective factors. UAA Department of Health Sciences. Note: Table results are rounded to the nearest percent.

Afterschool Programs

This section presents an overview of afterschool programming followed by a discussion of the role of ASPs within the context of protective factors. Then it describes features linked with successful ASP outcomes.

Overview

ASPs can vary tremendously in structure, content, emphases, goals, and student demographics. Some ASPs are sponsored within schools, others are hosted by private organizations, religiously affiliated entities, community organizations, park districts, youth service agencies, health agencies, libraries, museums, etc.[9,10] Except for summer programs, most ASPs operate for 2 to 3 hours a day, 4 to 5 days a week.[11] One useful way to differentiate ASPs is by activity category, whether they are structured as:

1. Team sports, sports clubs, or organized sports activities out of school.
2. Prosocial activities, such as participation in volunteering, service clubs, and/or religious service activities in the community.
3. Performing arts, including participation in band, drama, art, or dance.
4. Academic-oriented clubs and experiential/enriched learning programs.
5. School involvement, such as participation in student government.[12]

ASPs are tasked with a range of goals "from providing supervision and reliable and safe childcare for youth during the afterschool hours to alleviating many of society's ills, including crime, the academic achievement gap, substance use, and other behavioral problems and academic shortcomings."[13] ASPs vary in the degree to which they articulate and target their goals. For example, some ASPs explicitly target outcomes such as improved school attendance, while other ASPs have unwritten goals or lack overt outcome goals altogether.[14]

Not all youth have access to ASPs. A consistent finding in the literature is that substantial barriers—cost, availability, travel, etc.—disproportionally limit participation for lower-income and ethnic minority youth.[15] Although many ASPs specifically target underserved youth in their missions, children of higher income families are most likely to participate in ASPs and at a greater frequency; they are also more likely to participate in diverse programming with an enrichment (rather than tutorial) emphasis.[16]

[9] American Youth Policy Forum. (2006). *Helping Youth Succeed through Out-of-School Time Programs.* Washington, DC. American Youth Policy Forum
[10] Little, P., Wimer, C., & Weiss, H. B. (2008). After school programs in the 21st century: Their potential and what it takes to achieve it. *Issues and opportunities in out-of-school time evaluation, 10*(1-12).
[11] Ibid.
[12] Fredricks, J. A., & Eccles, J. S. (2006). Extracurricular involvement and adolescent adjustment: Impact of duration, number of activities, and breadth of participation. *Applied Developmental Science, 10*(3), 132–146.
[13] Kremer, K. P., Maynard, B. R., Polanin, J. R., Vaughn, M. G., & Sarteschi, C. M. (2015). Effects of after-school programs with at-risk youth on attendance and externalizing behaviors. a systematic review and meta-analysis. *Journal of youth and adolescence, 44*(3), 616-636.
[14] Ibid.
[15] Ibid.
[16] Little, P., Wimer, C., & Weiss, H. B. (2008). After school programs in the 21st century: Their potential and what it takes to achieve it. *Issues and opportunities in out-of-school time evaluation, 10*(1-12).

Researchers tend to categorize afterschool programming in terms of several broad, often overlapping, purposes:

- **Enrichment** – to augment the educational experience of youth by offering skill-development, training, and other enrichment opportunities outside of the regular school day.[17,18]
- **Development** – to improve the academic, social and emotional learning, and health outcomes of youth and that are not a focus during the standard school day. [19]
- **Supervision** – to provide afterschool care for the children of full-time working parents who would either not be able to work or be required to leave their children in some form of self-care.
- **Prevention** – to prevent delinquency and other risk behaviors by keeping youth occupied during the peak hours for juvenile crime.

While these purposes are not mutually-exclusive—enrichment experiences, for example, can improve physical health—programs adopt a variety of target populations, strategies, and levels of sophistication to reach their identified outcomes.

Afterschool Programs Outcomes and Protective Factors

ASPs have the potential to serve as protective factors in and of themselves, as well as present youth with opportunities to develop or experience other protective factors. Several studies link ASP participation directly to reduced risk behaviors:

- Locally, University of Alaska Anchorage researchers found that students who participate in organized ASPs at least once a week are 16 percent less likely to binge drink and 31 percent less likely to use marijuana. Students who participate in ASPs at least two days a week are 18 percent less likely to use alcohol, 39 percent less likely to use marijuana, and 28 percent less likely to miss class without permission.[20]
- A review of youth risk and protective factors related to substance abuse found engagement in meaningful activities—volunteering or participating in peer-based programs or service learning projects—was associated with reduced alcohol, tobacco, and drug use, teen pregnancy, school suspensions, and school dropouts.[21]
- Analysis of 43 studies of ASPs serving children between the ages of 5 and 14 observed declines in drug use or arrests and/or changes in attitudes towards drugs.[22]
- A review of 2,587 citations related to youth externalizing behaviors (delinquency, maladjustment, drug use, discipline problems, alcohol use etc.) found a positive, but not statistically significant, effect on externalizing behaviors.[23]

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[17] American Youth Policy Forum. (2006). *Helping Youth Succeed through Out-of-School Time Programs.* Washington, DC: American Youth Policy Forum.
[18] Little, P., Wimer, C., & Weiss, H. B. (2008). After school programs in the 21st century: Their potential and what it takes to achieve it. *Issues and opportunities in out-of-school time evaluation, 10*(1-12).
[19] American Youth Policy Forum. (2006). *Helping Youth Succeed through Out-of-School Time Programs.* Washington, DC: American Youth Policy Forum.
[20] Garcia, G. M., Price, L. and Tabatabai, N. (2014). Anchorage Youth Risk Behavioral Survey Results: 2003-2013 Trends and Correlation Analysis of Selected Risk Behaviors, Bullying, Mental health conditions, and protective factors. UAA Department of Health Sciences. This study was completed at the request of the Anchorage Youth Development Coalition (AYDC), in partnership with United Way of Anchorage.
[21] Alaska Department of Health and Social Service's Division of Behavioral Health. (2011). "Risk and Protective Factors for Adolescent Substance Use (and other Problem Behavior)." http://dhss.alaska.gov/dbh/Documents/Prevention/programs/spfsig/pdfs/ Risk_Protective_Factors.pdf.
[22] Mahoney, J. L., Parente, M. E., & Zigler, E. F. (2010). After-school program participation and children's development. In J. L. Meece & J. S. Eccles (Eds.), *Handbook of research on schools, schooling, and human development* (pp. 379–397). New York, NY: Routledge.
[23] Kremer, K. P., Maynard, B. R., Polanin, J. R., Vaughn, M. G., & Sarteschi, C. M. (2015). Effects of after-school programs with at-risk youth on attendance and externalizing behaviors: a systematic review and meta-analysis. *Journal of youth and adolescence, 44*(3), 616-636.

- A longitudinal study of 3,000 elementary and middle school students participating in ASPs in eight states found reports of misconduct declined and, among middle school students, use of drugs and alcohol was less than their unsupervised peers.[24]

Depending on purpose and design, ASPs have the potential to cultivate a variety of protective factors linked with youth substance abuse and delinquency prevention including:

- Life skills and social competence
- Cultural identity and connection
- Positive personal qualities
- Positive self-concept
- Positive peer role models
- Religious identity
- High grade point average
- Connected to school
- Positive connection to other adults
- Safe, supportive, and connected neighborhoods
- Range of opportunities within the community for meaningful youth engagement

Many studies and evaluations have found that ASPs can cultivate protective factors:

- In their review of the value of ASPs, RAND found evidence that multipurpose programs (such as 21st Century Learning Centers, school-aged childcare and Boys and Girls Clubs) can improve youth's feelings of safety.[25]
- The same review found that ASPs that specifically target academic instruction and skill development can improve student achievement.[26]
- Similarly, ASPs that deliberately focus on social and emotional skill development have been linked to reduced risk behaviors.[27]
- Lauer et al. found that ASPs can have positive effects on math and reading achievement for at-risk students.
- A review of 43 studies of ASPs found most describe positive associations between ASP participation and increases in student motivation, effort and attachment to school.[28] Likewise, most studies included in the review found that participants experienced an improved sense of well-being (increased self-efficacy and self-concept, and decreased anxiety and depression) compared to non-participants.[29]
- A longitudinal study of 3,000 students' participation in ASPs in eight states found participating elementary school students showed gains in social skills with peers and prosocial behaviors, as well as decreases in aggressive behaviors with peers.[30]

In addition to cultivating specific protective factors for youth substance abuse and delinquency, ASPs can yield other positive outcomes for participating youth as well. An extensive range of positive academic, social/emotional, prevention, and health outcomes are associated with ASPs. While many of these outcomes are identified by research as protective factors for youth substance abuse and delinquency, others—such as

[24] Vandell, D. L., Reisner, E. R., & Pierce, K. M. (2007). *Outcomes linked to high-quality afterschool programs: Longitudinal findings from the study of promising afterschool programs.* Washington, DC: Policy Studies Associates.
[25] McCombs, J.S., Whitaker, A., and Youngmin Yoo, P. (2017) The Value of Out-of-School Time Programs. Santa Monica, CA: RAND Corporation. Available at https://www.rand.org/pubs/perspectives/PE267.html.
[26] Ibid.
[27] Ibid.
[28] Mahoney, J. L., Parente, M. E., & Zigler, E. F. (2010). After-school program participation and children's development. In J. L. Meece & J. S. Eccles (Eds.), *Handbook of research on schools, schooling, and human development* (pp. 379–397). New York, NY: Routledge.
[29] Ibid.
[30] Vandell, D. L., Reisner, E. R., & Pierce, K. M. (2007) *Outcomes linked to high-quality afterschool programs: Longitudinal findings from the study of promising afterschool programs.* Washington, DC: Policy Studies Associates.

improved homework completion or improved body image—support positive youth development in other important ways. The following table groups ASP associated outcomes by domain.

Table 3. Anticipated Outcomes of Participation in After School Programs

Supportive Outcomes by Domain
Academic Outcomes
Better attitudes towards school and higher educational aspirations
Higher school attendance rates and less tardiness
Less disciplinary action
Lower dropout rates
Better performance in school (achievement test scores, grades)
Greater on-time promotion
Improved homework completion
Engagement in learning
Social/Emotional Outcomes
Decreased behavioral problems
Improved social and communication skills and/or relationships with peers, parents, and teachers
Increased self-confidence, self-esteem, and self-efficacy
Lower levels of depression and anxiety
Development of initiative
Improved feelings and attitudes toward self and school
Prevention
Avoidance of drug and alcohol use
Decreases in delinquency and violent behavior
Increased knowledge of safe sex
Avoidance of sexual activity
Reduction in juvenile crime
Health and Wellness Outcomes
Better food choices
Increased physical activity
Increased knowledge of nutrition and health practices
Reduction in BMI
Improved blood pressure
Improved body image

Source: Table compiled by McDowell Group using information from Little, P., Wimer, C., & Weiss, H. B. (2008). After school programs in the 21st century: Their potential and what it takes to achieve it. *Issues and opportunities in out-of-school time evaluation, 10*(1-12).

Success Features Among Afterschool Programs

Several modifier effects—including intensity of participation, program type, program quality, and system integration—influence ASP outcomes.

Participation Intensity

For ASPs to impact outcomes, the frequency, duration, and quality of participation matter.[31] Fredricks and Eccles researched how the duration of youth involvement in afterschool programming, the total number of activities pursued, and the breadth of participation affect youth development and risky behavior.[32] Analysis of longitudinal data showed that, in general, longer duration of participation predicted more positive outcomes, including higher grades, resilience, academic peer context, and a less risky peer context.[33] Likewise, the greater number of activities was associated with school belonging, resilience, academic peers, and negatively with stress and risky peers.[34] The number of different types of ASPs was indicative of positive school belonging, resilience, and academic peers.[35] Adolescents who participate in programs because of their own intrinsic interest or motivation realize a greater degree of developmental growth.[36]

Activity Type

Researchers have found that different types of ASPs—sports, academic clubs, performance arts, volunteering/service, community-based, and religious—support different developmental outcomes.[37] For example, some studies suggest that youth who participate in sports-based ASPs learn to sustain effort, set goals, and develop values like responsibility, persistence, and self-control; studies of academic-based clubs, predictably, are associated with positive academic outcomes; while research on participation in service activities develops moral and political identity and predicts subsequent civic engagement.[38] One study found that "ASPs that emphasize social skill and character development are more effective at reducing delinquent behavior than are programs lacking such an emphasis."[39]

Program Quality

Program quality is of paramount importance and varies greatly. Outcome gains appear to depend on the quality of an ASP's structure (smaller program size, educated staff, low turnover, more mature programs), process (positive social inter-changes among staff and participants), and participation (frequency, duration, intrinsic motivation to participate).[40] In a study of high-quality programs, researchers found positive outcomes for youth who regularly attended high-quality programs and negative outcomes for youth who intermittently attended unstructured programs.[41] Positive outcomes are more likely when the participant's needs are well-matched with

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[31] Weiss, H. B., Little, P., & Bouffard, S. M. (2005). More than just being there: Balancing the participation equation. *New Directions for Student Leadership, 2005*(105), 15-31
[32] Fredricks, J. A., & Eccles, J. S. (2006). Extracurricular involvement and adolescent adjustment: Impact of duration, number of activities, and breadth of participation. *Applied Developmental Science, 10*(3), 132–146.
[33] Ibid.
[34] Ibid.
[35] Ibid.
[36] Mahoney, J. L., Vandell, D., Simkins, S., & Zarrett, N. (2009). Adolescent out-of-school activities. In R. Lerner, & L. Steinberg (Eds.), *Handbook of adolescent psychology* (pp. 228–269). New York, NY: John Wiley.
[37] Ibid.
[38] Ibid
[39] Gottfredson, D. C., Gerstenblith, S. A., Soulé, D. A., Womer, S. C., & Lu, S. (2004). Do after school programs reduce delinquency? *Prevention Science, 5*(4), 253-266.
[40] Mahoney, J. L., Parente, M. E., & Zigler, E. F. (2010). After-school program participation and children's development. In J. L. Meece & J. S. Eccles (Eds.), *Handbook of research on schools, schooling, and human development* (pp. 379–397). New York, NY: Routledge.
[41] Vandell, D. L., Reisner, E. R., & Pierce, K. M. (2007). *Outcomes linked to high-quality afterschool programs: Longitudinal findings from the study of promising afterschool programs.* Washington, DC: Policy Studies Associates.

the intentions of the ASP.[42] In a review of 69 ASPs, Durlack et al. found that four SAFE qualities differentiated programs with positive outcomes:[43]

1. **Sequenced:** Does the program use a connected and coordinated set of activities to achieve skill development objectives?
2. **Active:** Does the program use active learning to help youth learn?
3. **Focused:** Does the program have at least one component that addresses personal and social skills?
4. **Explicit:** Does the program target specific personal or social skills?

Compared to programs that did not follow these evidence-based practices, the researchers found that "SAFE programs were associated with significant improvements in self-perceptions, school bonding and positive social behaviors; significant reductions in conduct problems and drug use; and significant increases in achievement test scores, grades and school attendance."[44]

System Integration

In recent years, the Icelandic Model—a prevention effort that includes ASPs in a multi-dimensional strategy to combat youth substance abuse in Iceland—has demonstrated the power to reduce risk factors for substance use while increasing protective factors by integrating efforts at family, school, and community levels. The government-led response has three main components:

1. **Parental education** about the importance of providing emotional support, reasonable monitoring, and time with their teenage children;
2. **Youth participation** in organized sports, extracurricular activities, and other recreational programs; and
3. **Strengthened networks** between agencies in the community and schools. [45]

In addition to the components mentioned above, the model has several other elements:

- National media campaigns to discourage alcohol and cigarette use
- A national, school-based anti-smoking initiative focused on positive peer influence
- Legislation to decrease the visibility of and access to alcohol and tobacco .
- Mandated labelling of cigarettes with anti-smoking messages
- A national ban on alcohol and tobacco-related advertising, display of tobacco products in shops, and smoking in all outdoor places
- Increasing the legal age of maturity from 16 to 18
- A publicized Prevention Day[46]

Survey data and evaluation findings have found substantial declines in national rates of substance use and simultaneous increases in protective factors coinciding with the Icelandic Model's interventions.[47]

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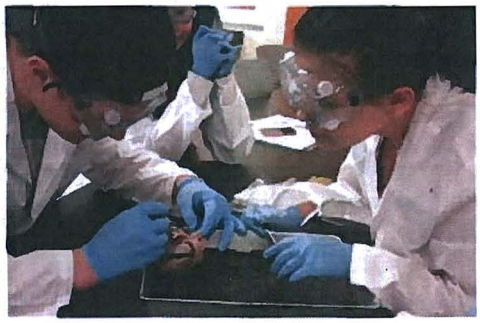
[42] Ibid.
[43] Durlak, J. A., Weissberg, R. P., & Pachan, M. (2010). A meta-analysis of after-school programs that seek to promote personal and social skills in children and adolescents. *American journal of community psychology*, *45*(3-4), 294-309.
[44] Durkak, J. A., & Weissberg, R. P. (2013). Afterschool programs that follow evidence-based practices to promote social and emotional development are effective. In *Expanding Minds and Opportunities: Leveraging the Power of Afterschool and Summer Learning for Student Success*. Available at http://www.expandinglearning.org/expandingminds/article/afterschool-programs-follow-evidence-based-practices-promote-social-and.
[45] Sigfusdottir, I. D., Kristjansson, A. L., Thorlindsson, T., & Allegrante, J. P. (2008). Trends in prevalence of substance use among Icelandic adolescents, 1995–2006. *Substance Abuse Treatment, Prevention, and Policy*, *3*(1), 12.
[46] Kristjansson, A. L., James, J. E., Allegrante, J. P., Sigfusdottir, I. D., & Helgason, A. R. (2010). Adolescent substance use, parental monitoring, and leisure-time activities: 12-year outcomes of primary prevention in Iceland. *Preventive medicine*, *51*(2), 168-171.
[47] Sigfusdottir, I. D., Kristjansson, A. L., Thorlindsson, T., & Allegrante, J. P. (2008). Trends in prevalence of substance use among Icelandic adolescents, 1995–2006. *Substance Abuse Treatment, Prevention, and Policy*, *3*(1), 12.

Concluding Remarks

The research supports the following general conclusions:

- **Reduction of risk factors and promotion of protective factors are linked with decreases in youth substance abuse and delinquency.** These findings are demonstrated nationally and have been replicated for local Alaska students.
- **ASPs can serve as protective factors as well as cultivate protective factors at individual, family, school, and community levels,** but not all youth have access to ASPs. A consistent finding in the literature is that barriers limit participation for lower-income and minority youth.
- **ASPs vary in structure, content, emphases, goals, and student demographics.** Some ASPs are sponsored within schools, others are hosted by private organizations, religiously affiliated entities, community organizations, park districts, youth service agencies, health agencies, libraries, and more.
- **Different types of ASPs—volunteering/service, community-based, performance arts, academic clubs, and sports—support different developmental outcomes.** For ASPs to impact outcomes, the frequency, duration, and quality of participation matter. Program quality is also of paramount importance.
- **Effective ASPs share design features.** ASP best practices include explicit targeting of outcomes, engaging supportive and trained staff, and utilizing sequenced programming.
- **ASPs work best as part of a systemic prevention effort.** The Icelandic Model, a leading-edge prevention effort, exemplifies inclusion of ASPs in a multi-dimensional strategy to combat youth substance abuse.



TGYS Program – Aggregate Data Report SFY 2015-16

CSU Evaluation Team

Colorado State University, Fort Collins, CO 80523

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Further Details

Further details about the TGYS Program can be found at:
http://www.colorado.gov/CDHS/TGYS

For further details about the evaluation, contact: **jamaertens@lamar.colostate.edu**

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Table of Contents

Report Introduction and Results Summary

Background

The Tony Grampsas Youth Services Program (TGYS) is a program authorized by § 26-6.8-101 through 106, C.R.S., to provide funding to community-based organizations that serve children, youth, and their families with programs designed to 1) reduce youth crime and violence, 2) prevent youth marijuana use, and 3) prevent child abuse and neglect. Eligible TGYS applicants include local governments, schools, nonprofit organizations, state agencies and institutions of higher education. Funded programs strive to reduce the risk factors and enhance the protective factors among youth and parents that are inherent to meeting the objectives mentioned above. Types of programs include before and after school programs, in-school programs, mentoring programs, and restorative justice programs, to name a few.

In order to measure TGYS-focused risk and protective factors, TGYS contracted with the Colorado State University Evaluation Team (CSU) to manage a statewide outcome evaluation of the direct, measurable impacts among individuals served through the TGYS program. Using TGYS-selected survey instruments, grantees collected risk and/or protective factor data on program participants at the beginning and end of their program cycle or the grant period. Grantees were generally required to collect data on all participants in TGYS-funded programs. In some cases, such as school-based programs that serve a high number of youth (>100), CSU worked with these sites to select a representative sample of participants. This pre-/post-test evaluation design yielded both local-level and aggregate data.

Some of the risk and protective factors that are of utmost interest to the TGYS program are reflected by observable, self-reported behaviors (e.g., substance use), while others are represented by unobservable, self-reported attitudes and beliefs (e.g., perceived risk of substance use, self-efficacy). In order to measure an unobservable trait, it is customary to identify observable behaviors thought to represent that trait, and then use a self-report survey instrument as a way to sample the behaviors thought to be sensitive to the underlying attribute of interest. With such a large and wide range of organizations and programs, it is necessary to choose validated instruments that capture broad-level change on the factors of interest.

CSU and TGYS have together created a menu of 17 validated survey instruments to measure participants' self-reported behaviors and attitudes as a way to measure their capacity on the risk and protective factors of interest. These instruments are used throughout the grant cycle, which spans three years (2014-17), to collect data that can be aggregated in order to gain an overall picture of participant change in risk and protective factors associated with a reduction in substance use, youth crime and violence, and child abuse and neglect. Parent Possible, a TGYS

statewide intermediary agency, conducts independent evaluation specific to its subgrantees' implementation of parent home visiting programs. Those results are included and summarized in this report.

In addition to aggregate reporting, data analysis and reporting at the individual grantee level is also conducted and distributed to grantees in order to provide further evaluation of potential program successes and opportunities for adjustment or improvement. A summary of program characteristics and annual results using TGYS instruments has been created for each grantee and is included in Appendix F of this report.

The constructs measured by TGYS survey instruments, derived from *Stakeholder Short-Term Outcomes* delineated in the TGYS Logic Model (Table 1), have a documented link to the long-term outcomes and objectives of TGYS in the social sciences research literature. A summary of these constructs and research links may be found in Appendix D. As a result of 1) the legalization of retail marijuana in Colorado, 2) the addition of youth marijuana prevention as a statutorily defined goal of TGYS, and 3) a continued effort to assess the effort to build protective factors and reduce risk factors associated with the prevention of risky behaviors, a Marijuana Attitudes assessment for grades one through five, a Marijuana Use and Attitudes assessment for grades 6-12, and a Marijuana Use and Attitudes assessment for ages 18-25 were developed by CSU and are included in the TGYS survey instrument list. These survey tools were administered broadly among a range of TGYS grantees serving diverse ages and implementing a diverse range of programming. The results of these data will be utilized to inform site- and state-level marijuana prevention evaluation plans.

Table 1. *Excerpt from the TGYS logic model delineating risk factors, protective factors, and outcomes of interest*

Stakeholder Short-Term Outcomes	Long-Term Outcomes	TGYS Goals
Improve school performance Increase life effectiveness skills Decrease bullying Decrease alcohol, tobacco, and other drug use Decrease delinquency Increase negative attitudes/perceptions toward youth marijuana use Improve quality of early care and education programs Improve progress toward achieving developmental	Reduce youth crime and violence Prevent youth marijuana use Prevent child abuse and neglect	**Colorado's Youth are Safe, Healthy, Educated, Connected, and Contributing**

milestones Increase positive parenting skills/practices		

Method

The CSU Evaluation Team provided technical assistance to 63 grantees during 2015-16 in order to collect pretest and post-test data from TGYS-funded program participants using 15 selected survey instruments of the 17 available. Parent Possible also used two parent surveys to assess parent knowledge and confidence related to parenting and child development, as well as a validated scale to assess children's readiness for school. The TGYS survey instrument questions are provided in Appendix B of this report. Statistical methods including factor analysis, item response theory and differential item functioning were used to determine instrument performance. Statistical methods including paired *t*-tests and analysis of variance were used to determine whether changes in individual youth from pretest to post-test were statistically significant. Statistical 'significance' is indicated by the probability (statistical *p*-value) that the difference is likely due to program effects. As is typical in social science research, tests yielding a *p*-value of less than 0.05 (i.e., there was a less than a five percent likelihood that a pre-post difference was due to chance alone) were considered significant.

Pretest percentile scores were used as a proxy for participant risk. Often, pre-post change results may be masked by the effect of high scores on pretests wherein participants score higher on pretests and subsequently show little or no change at post-test. When scores start out higher than average at pretest, they likely cannot be maintained at that level and will drift, or regress downward at post-test. Thus, where *t*-tests include the entire sample, participants who started out with higher than average scores at pretest will tend to wash out the level of pre-post change for participants who started out showing vulnerability (risk) on the instrument constructs. Separating out potential ceiling effects (which is what is accomplished by looking at the lowest and highest scorers separately) provides the potential for finding realistic pre-post changes in both groups, which provides a perspective different from reviewing the results derived from the whole sample. As such, current analyses examined pre-post change among the overall group, as well as among the two participant groups that demonstrated the most and least desirable 25 percent of scores at pretest. On some survey instruments, higher scores are desirable, where on other instruments lower scores are desirable. These differences, along with the pre-post change recorded among each of the 3 groups, are delineated in Table 2 of the report.

Where data were available and sample sizes were large enough, results were compared based on grantee funding category and on whether grantees provided substance use prevention programming as part of their overall curriculum. Where possible, results were also compared based on the socioeconomic status (SES) of the schools participating youth attended during the

2015-16 school year. Percent of students receiving free or reduced cost lunches, graduation rate, and dropout rate were used as indicators of SES.

Overall, grantees submitted **13,772** pretests and **8,784** post-tests using 15 TGYS instruments during state fiscal year (FY) 2015-16, and TGYS grantees successfully obtained *matched* evaluation data on approximately **6,235** participants. The number of participants with matched data represents **45%** of all submitted pretests. Many TGYS-funded grantees implement after-school drop-in programs. Within these programs attrition (youth dropout) is common, often due to psychosocial influences such as family disruptions or moving/changing schools, as well as to factors such as participant involvement in sports or other activities at post-test as opposed to pretest making them unavailable for testing at both time points. Therefore, obtaining matched data can be difficult. Though not ideal, the percentage of matched post-tests to pretests for the FY 2015-16 represents a higher rate of matched data than is typical in most youth treatment and community prevention programs (Apsler, 2009).

Aims

The objectives/aims of collecting these data were to:

1) Assess participant pretest to post-test change in TGYS risk- and protection-related outcomes as measured by each instrument.
2) Assess the psychometric quality and performance of each selected instrument.
3) Provide recommendations for future program years.

Moreover, collected data will help the TGYS program focus future efforts toward parent and youth prevention programs, and may be used, where available, to facilitate statewide prevention efforts.

Survey Results

Results Related to General TGYS Youth Risk and Protective Factors. Participating youth experienced differential change during the course of the grant year on a number of risk and protective factors important to the TGYS program.

Significant desired change:

- Significantly lower tolerance of deviant behaviors (e.g., stealing, vandalism, lying, skipping school)
- Significant increase in perceived social support from family, friends, and significant others
- Significant increase in life skills such as resilience and social competence

No change:

- Improvement, but no significant change, in the perception that regular use of substances is harmful
- Improvement, but no significant change, in academic grades
- No significant change in reported school bonding or school engagement
- No significant change in self-efficacy

Significant undesired change:

- Slight increase in reported substance use among youth not in a substance use prevention program
- Slight increase in reported experiences of bullying, fighting, or victimization

Results Related to Marijuana Use and Attitudes. Findings reflected what would be expected among this age group based on similar data.

Marijuana attitudes among children in grades 1-5:

- More youth reported talking to their parents about marijuana
- Youth were more likely to say that their friends would not like them if they used marijuana
- Fewer youth thought using marijuana would make them more popular
- Youth perceptions of harm about marijuana use increased

Marijuana use and attitudes among youth in grades 6-12:

Most (75%) youth in grades 6-12 reported that they have never tried marijuana. There were no changes from pretest to post-test in youths' perception of harm related to marijuana use, where about one-third thought regular use posed 'no risk.' At post-test youth were more likely to report that they marijuana would be easy to obtain. Additionally:

- 85% of youth who had tried marijuana reported they had used it zero times in the last 30 days
- Half of youth indicated they believed marijuana use among their age group was 'very wrong'
- Most (75%) agreed their parent would disapprove of marijuana use, although belief of parental acceptance increased slightly at post-test
- One-fifth of youth reported friends would not try to stop them from using marijuana
- The most commonly reported consequences of marijuana use were reported as problems with schoolwork and fighting with parents

- Those in dropout prevention programs appeared to be at higher risk for acceptance and use of marijuana
- Those exposed to substance use prevention programs were less likely report decreased 30-day use of marijuana
- Socioeconomic status was not related to reported marijuana use

Marijuana use and attitudes among young adults ages 18-25:
Most (64%) young adults ages 18-25 reported they have tried marijuana in the past.
Additionally:

- Nearly 85% of participants reported they had not used marijuana in the past 30 days, and significant decreases in frequency of use were reported from pretest to post-test
- One-fifth reported that almost all of their peers used marijuana
- The most common reasons reported for use were reducing negative feelings and enhancing introspection
- The most commonly reported consequences of marijuana use were internal factors such as feeling unmotivated or having a poor memory

Results Related to TGYS Parent Risk and Protective Factors. Parent Possible collects annual evaluation data for Parents as Teachers (PAT) and Home Instruction for Parents of Preschool Youngsters (HIPPY) programs. Two parent surveys were used to assess parent knowledge and confidence related to parenting and child development, and one scale (the Bracken School Readiness Assessment; BSRA-3) was used to assess children's readiness for school.

Parent Possible reported primarily positive program findings for each program, including:

- PAT and HIPPY programs were successful in providing literacy services to Colorado's most vulnerable populations
- Parents in the HIPPY program increased the frequency of literacy activities
- In the PAT program, 98% of the parents were able to correctly answer questions about the importance of parental bonding on development and learning
- There was a statistically significant reduction in the number of parents in the HIPPY program who report 'spanking' as a discipline technique they use
- Children in both programs increased their school readiness skills from a percentile rank of 39 to a percentile rank of 49
- Children in both programs had a statistically significant increase in their average percent mastery in each of the school readiness domain areas
- Significantly fewer children scored in the very delayed and delayed categories, and significantly more children scored in the advanced and very advanced categories on the school readiness assessment

Recommendations

Taken together, results indicate that an emphasis on specific types of programming may be helpful to the overall group, including efforts aimed at:

- Preventing substance use
    - Emphasize a prevention focus in middle school youth
- Addressing the high acceptability/low perceived risk of marijuana use
    - Enlist peer educators with life experience around risks associated with use
- Bolstering life skills that cultivate healthy attitudes toward substance use
    - Focus on conflict management, healthy risk-taking, and effective decision-making
- Addressing bullying and victimization
    - Train parents or other 'askable' adults to communicate with and instrumentally assist youth engaged in these behaviors

Demographic Information

Males were 51.5% and females were 48.5% of the total participants.

Figure 1. *Percent of TGYS youth by ethnicity*

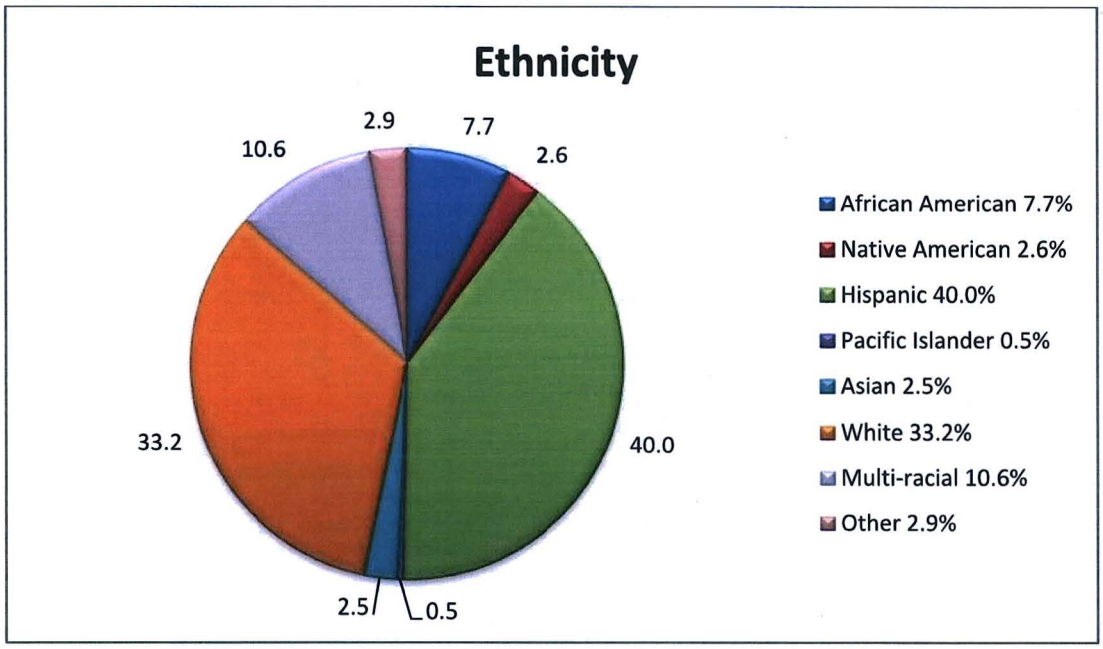
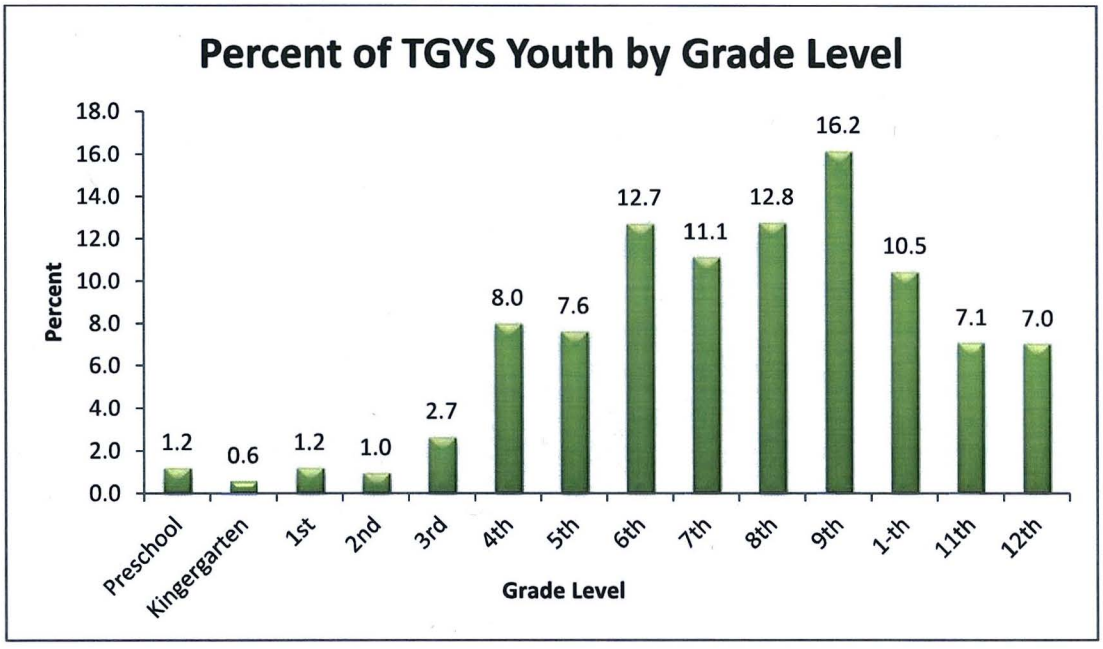


Figure 2. *Percent of TGYS youth by grade level*



Survey Results

Results Related to TGYS Youth Risk and Protective Factors

General Risk and Protective Behaviors and Attitudes

Analyses examined pre-post change among the overall group, as well as among the two participant groups that demonstrated the most and least desirable 25 percent of scores at pretest. These percentile scores were used as a proxy for participant risk, where those with more desirable scores fell in the 'low risk' group, and those with less desirable scores fell in the 'high risk' group.

Youth demonstrated significant positive change from pretest to post-test on a number of risk and protective factors (Table 2).

Table 2. *Mean change on risk and protective factors among TGYS youth*

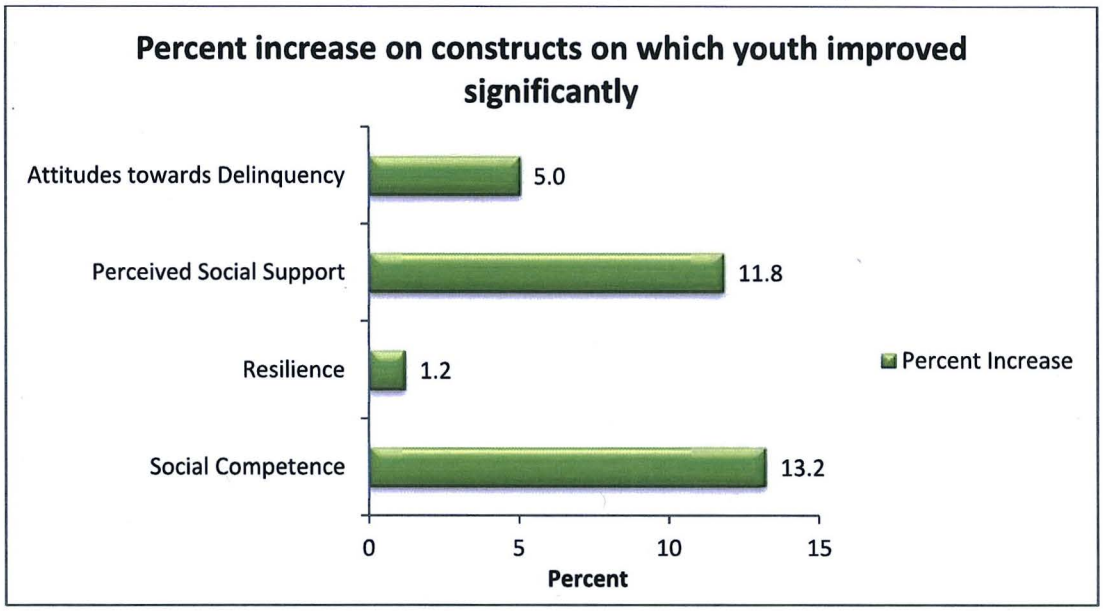
Construct (Response Scale Range)	Group	N	Pretest Mean (SD)	Post-test Mean (SD)	Mean Change	Desired Direction of Change?	Change Statistically Significant?
Significant Desired Change							
Attitudes towards Delinquency (1.00-4.00) *Higher scores are desired*	High Risk	121	2.70 (0.40)	3.31 (0.57)	0.61	Yes	Yes
Attitudes towards Delinquency (1.00-4.00)	**Overall**	**371**	**3.38 (0.57)**	**3.55 (0.48)**	**0.17**	**Yes**	**Yes**
Attitudes towards Delinquency (1.00-4.00)	Low Risk	94	3.98 (0.03)	3.84 (0.27)	-0.14	No	No
Perceived Social Support (1.00-7.00) *Higher scores are desired*	High Risk	27	3.58 (0.49)	4.71 (0.85)	1.13	Yes	Yes
Perceived Social Support (1.00-7.00)	**Overall**	**85**	**4.33 (0.62)**	**4.85 (0.94)**	**0.52**	**Yes**	**Yes**
Perceived Social Support (1.00-7.00)	Low Risk	27	4.91 (0.10)	4.90 (1.04)	-0.01	No	No
Resilience (1.00-5.00) *Higher scores are desired*	High Risk	388	3.34 (0.54)	3.76 (0.60)	0.42	Yes	Yes
Resilience (1.00-5.00)	**Overall**	**1439**	**4.07 (0.60)**	**4.12 (0.60)**	**0.05**	**Yes**	**Yes**
Resilience (1.00-5.00)	Low Risk	431	4.68 (0.20)	4.46 (0.52)	-0.22	No	Yes

Construct (Response Scale Range)	Group	N	Pretest Mean (SD)	Post-test Mean (SD)	Mean Change	Desired Direction of Change?	Change Statistically Significant?
Significant Desired Change (cont.)							
Social Competence (1.00-5.00) *Higher scores are desired*	High Risk	30	2.23 (0.61)	3.03 (0.69)	0.80	Yes	Yes
Social Competence (1.00-5.00)	**Overall**	**105**	**3.18 (0.84)**	**3.60 (0.87)**	**0.42**	**Yes**	**Yes**
Social Competence (1.00-5.00)	Low Risk	25	4.24 (0.34)	4.15 (0.89)	-0.09	No	No
No Significant Change							
ATOD Attitudes (1.00-4.00) *Higher scores are desired*	High Risk	62	1.73 (0.64)	2.45 (0.95)	0.72	Yes	Yes
ATOD Attitudes (1.00-4.00)	**Overall**	**232**	**2.94 (0.88)**	**3.00 (0.35)**	**0.06**	**Yes**	**No**
ATOD Attitudes (1.00-4.00)	Low Risk	83	3.74 (0.21)	3.38 (0.73)	-0.36	No	Yes
Life Effectiveness (1.00-5.00) *Higher scores are desired*	High Risk	143	3.52 (0.75)	4.26 (1.01)	0.74	Yes	Yes
Life Effectiveness (1.00-5.00)	**Overall**	586	**4.80 (0.91)**	**4.86 (0.86)**	**0.06**	**Yes**	**No**
Life Effectiveness (1.00-5.00)	Low Risk	127	5.80 (0.15)	5.30 (0.65)	-0.50	No	Yes
Grade Point Average (0.00-4.00) *Higher scores are desired*	High Risk	59	0.97 (0.36)	1.08 (0.43)	0.11	Yes	Yes
Grade Point Average (0.00-4.00)	**Overall**	**233**	**2.29 (0.93)**	**2.33 (0.93)**	**0.03**	**Yes**	**No**
Grade Point Average (0.00-4.00)	Low Risk	59	3.36 (0.29)	3.28 (0.50)	-0.08	No	No
School Bonding (1.00-5.00) *Lower scores are desired*	High Risk	51	1.72 (0.47)	2.14 (0.48)	0.42	No	Yes
School Bonding (1.00-5.00)	**Overall**	**154**	**1.54 (0.43)**	**1.59 (0.51)**	**0.05**	**No**	**No**
School Bonding (1.00-5.00)	Low Risk	24	1.06 (0.05)	1.33 (0.36)	0.27	No	Yes

Construct (Response Scale Range)	Group	N	Pretest Mean (SD)	Post-test Mean (SD)	Mean Change	Desired Direction of Change?	Change Statistically Significant?
No Significant Change (cont.)							
School Engagement (1.00-5.00) *Higher scores are desired*	High Risk	31	2.85 (0.62)	3.11 (0.59)	0.26	Yes	No
School Engagement (1.00-5.00)	**Overall**	**130**	**3.95 (0.79)**	**3.90 (0.87)**	**-0.05**	**No**	**No**
School Engagement (1.00-5.00)	Low Risk	34	4.81 (0.17)	4.57 (0.62)	-0.24	No	Yes
Self-Efficacy Grades 1-5 (1.00-5.00) *Higher scores are desired*	**Overall**	**12**	**3.42 (0.65)**	**3.77 (0.72)**	**0.35**	**Yes**	**No**
Self-Efficacy Grades 6-12 (1.00-5.00) *Higher scores are desired*	High Risk	67	3.13 (0.45)	3.43 (0.67)	0.30	Yes	Yes
Self-Efficacy (1.00-5.00)	**Overall**	**238**	**3.84 (0.61)**	**3.83 (0.61)**	**-0.01**	**No**	**No**
Self-Efficacy (1.00-5.00)	Low Risk	68	4.53 (0.30)	4.17 (0.58)	-0.36	No	Yes
Significant Undesired Change							
ATOD Use (1.00-5.00) *Lower scores are desired*	High Risk	72	1.66 (0.68)	1.71 (0.64)	0.05	No	No
ATOD Use (1.00-5.00)	**Overall**	**241**	**1.20 (0.48)**	**1.26 (0.48)**	**0.06**	**No**	**Yes**
ATOD Use (1.00-5.00)	Low Risk	169	1.00 (0.05)	1.07 (0.20)	0.07	No	Yes
Bullying (1.00-7.00) *Lower scores are desired*	High Risk	58	3.52 (0.92)	3.29 (1.39)	-0.23	Yes	No
Bullying (1.00-7.00)	**Overall**	**233**	**2.05 (1.04)**	**2.19 (1.20)**	**0.14**	**No**	**Yes**
Bullying (1.00-7.00)	Low Risk	68	1.12 (0.11)	1.53 (0.75)	0.41	No	Yes

Specifically, youth had significantly less tolerance of deviant behaviors (stealing, vandalism, lying, skipping school) after programming. There was also a significant improvement in perceived social support and in life skills measures including resilience and social competence, which indicate youth tendencies toward perseverance, self-reliance, and skill in social interactions. The overall percent increase on these constructs among youth is depicted in Figure 3.

Figure 3. *Percent increase on constructs on which youth improved significantly*



Risk and protective factors that demonstrated a trend toward improvement but no significant change over time were perceived harm around substance use, life effectiveness, grade point average, school bonding and engagement, and self-efficacy. There was a slight increase among youth on reports of bullying, fighting, and victimization. This is in part due to girls reporting significantly more incidents of victimization at post-test than at pretest. Furthermore, reported levels of substance use increased significantly from pretest to post-test among youth who did not receive exposure to any substance use programming. These results and some recommendations for future programming are discussed later in this report.

Marijuana-Related Behaviors and Attitudes

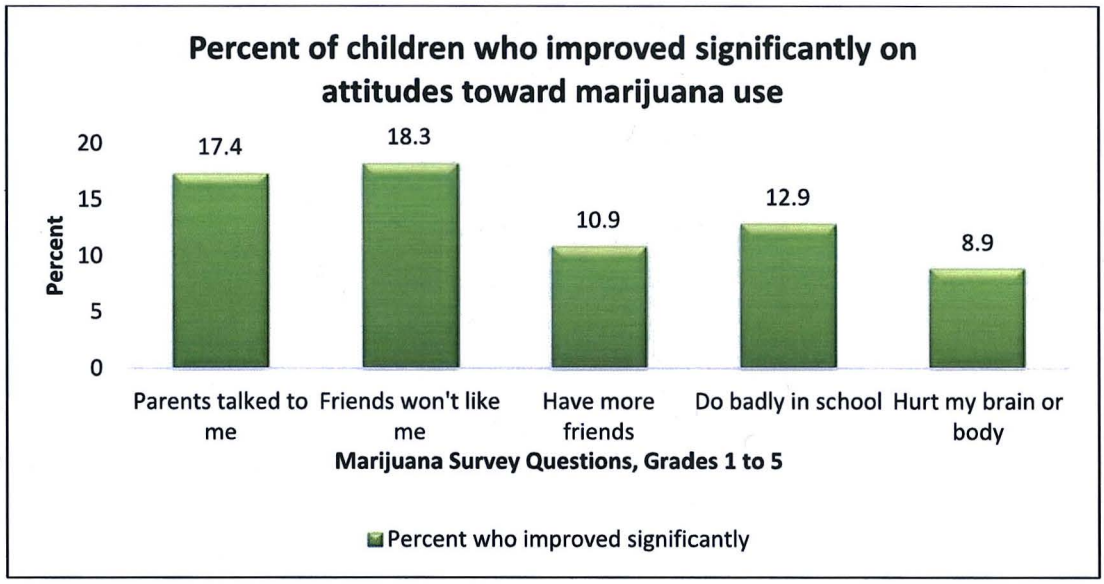
Results around marijuana use and attitudes largely reflected what would be expected among participating age groups.

Children in Grades 1-5

After TGYS programming, children in grades 1-5 (N=434) were more likely to report that their parents talked to them about marijuana, that their friends would not like them if they used it, that marijuana use would negatively affect their schoolwork, and that it would be harmful to their body (Table 4). They were also less likely to agree that using marijuana would help them

have more friends. These changes in attitudes reflect a positive change in the desirable direction.

Figure 4. *Percent of children in grades 1-5 who improved significantly on attitudes toward marijuana use*

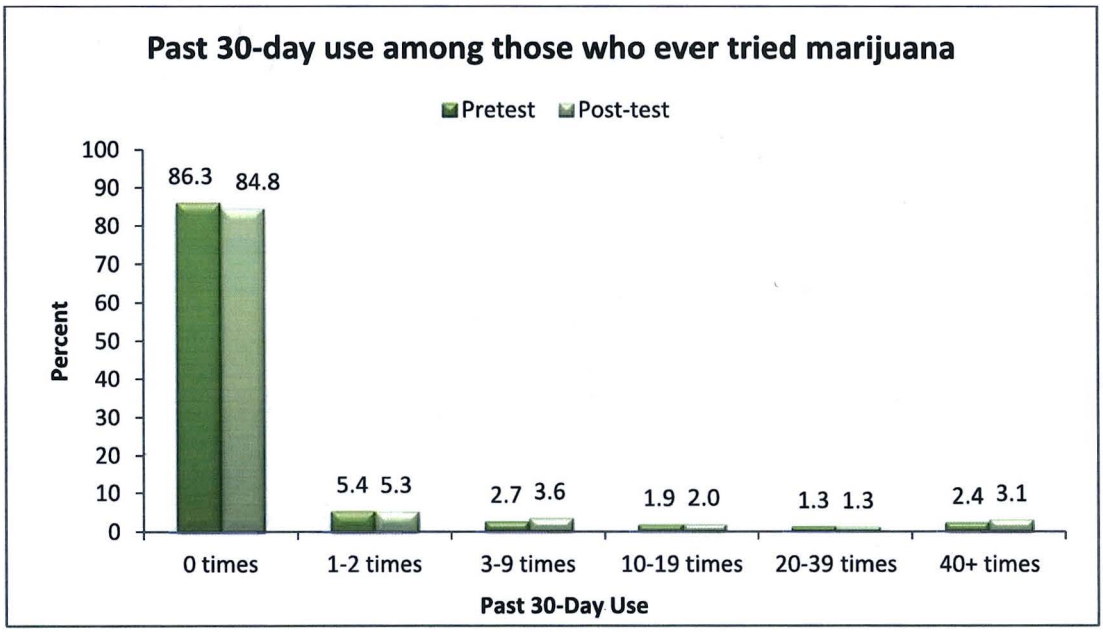


Youth in Grades 6-12

The vast majority of youth in grades 6-12 (N=1,876) reported that they have never tried marijuana (~75%).

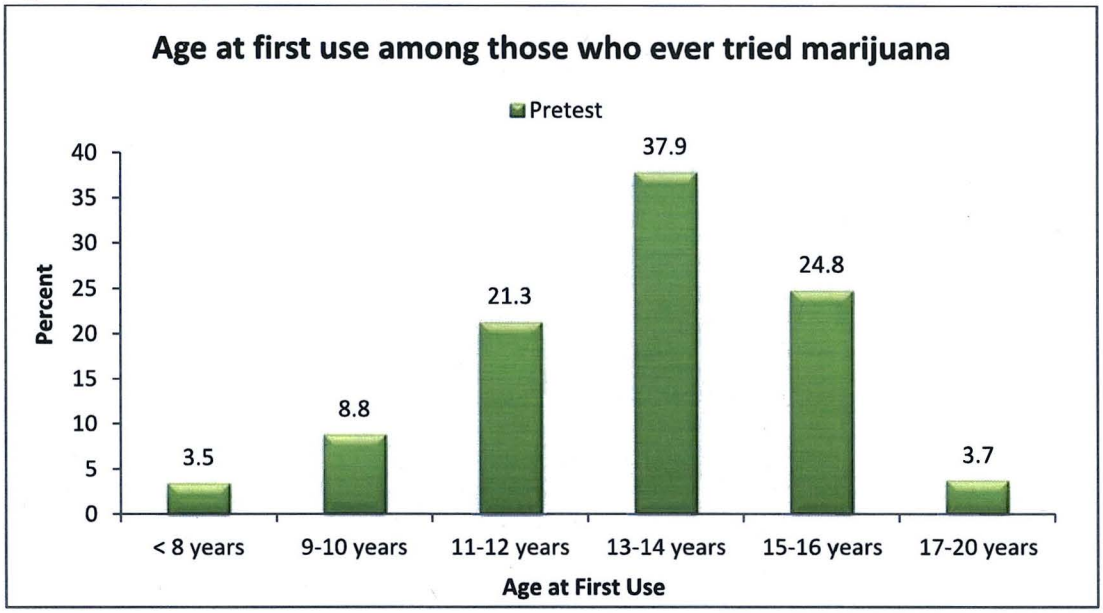
Past 30-day use. Of those who reported that they had tried it, most (~85%) had not used marijuana in the past 30 days (Figure 5). No significant change in use was reported from pretest to post-test.

Figure 5. *Past 30-day use among those who ever tried marijuana*



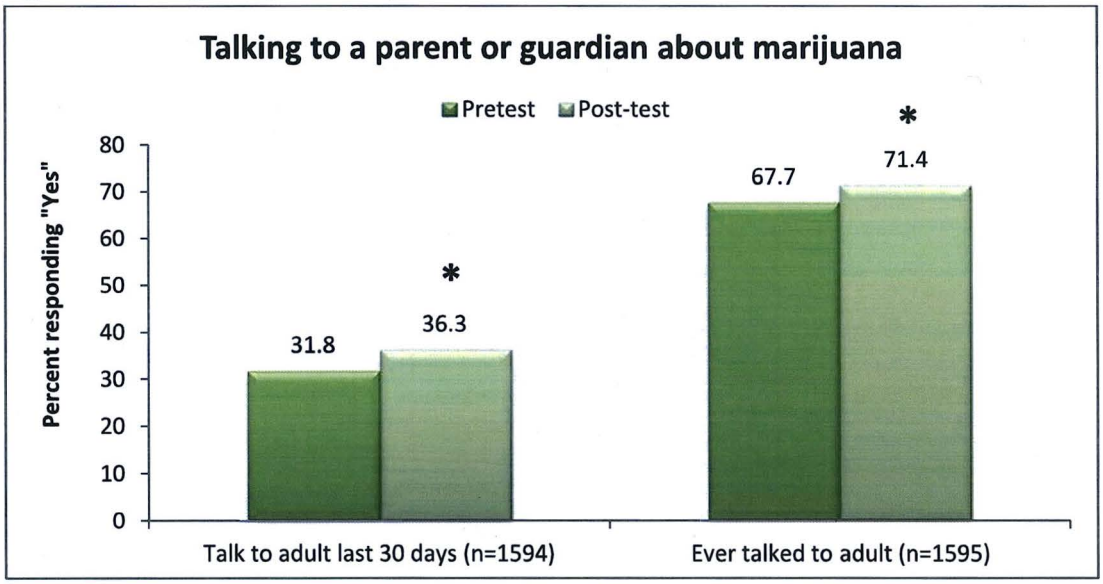
Age at first use. The average age at first use was about 13 to 14 years (Figure 6).

Figure 6. *Age at first use among those who ever tried marijuana*



'Askable' parent or guardian. A greater number of youth reported having talked to at least one parent or guardian about marijuana in the last 30 days at post-test than at pretest. Similarly, there was an increase in those who reported having ever talked to a parent or guardian about marijuana at post-test (Figure 7).

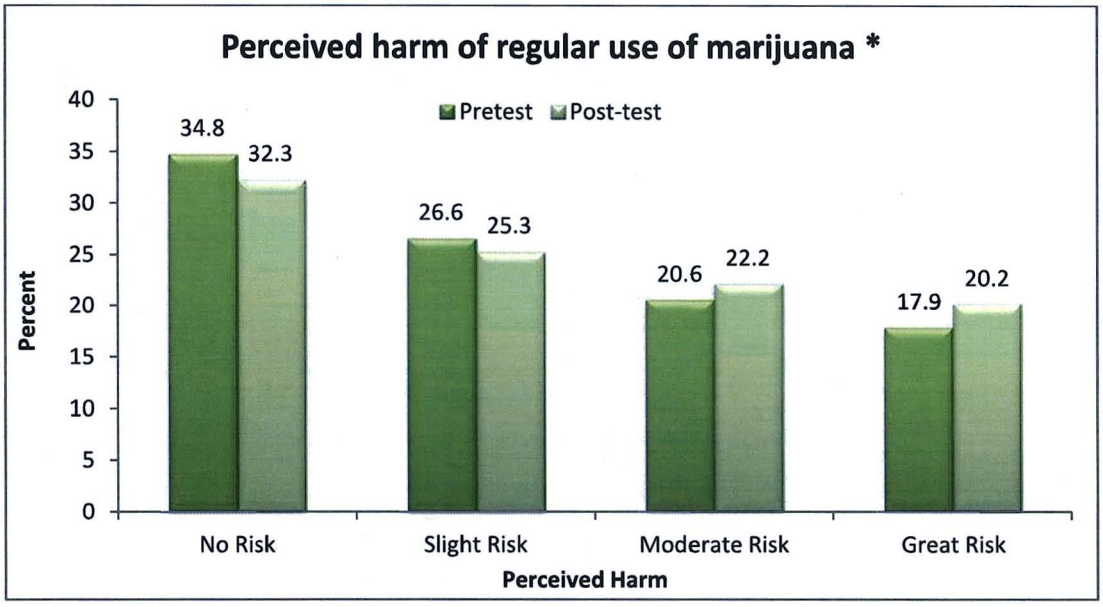
Figure 7. *Talking to a parent or guardian about marijuana*



*p<0.01

Perceived harm of regular use of marijuana. After programming, youth were less likely to believe there is 'slight' to 'no' risk of regular marijuana use and more likely to perceive there is 'moderate' to 'great' risk associated with regular marijuana use (Figure 8).

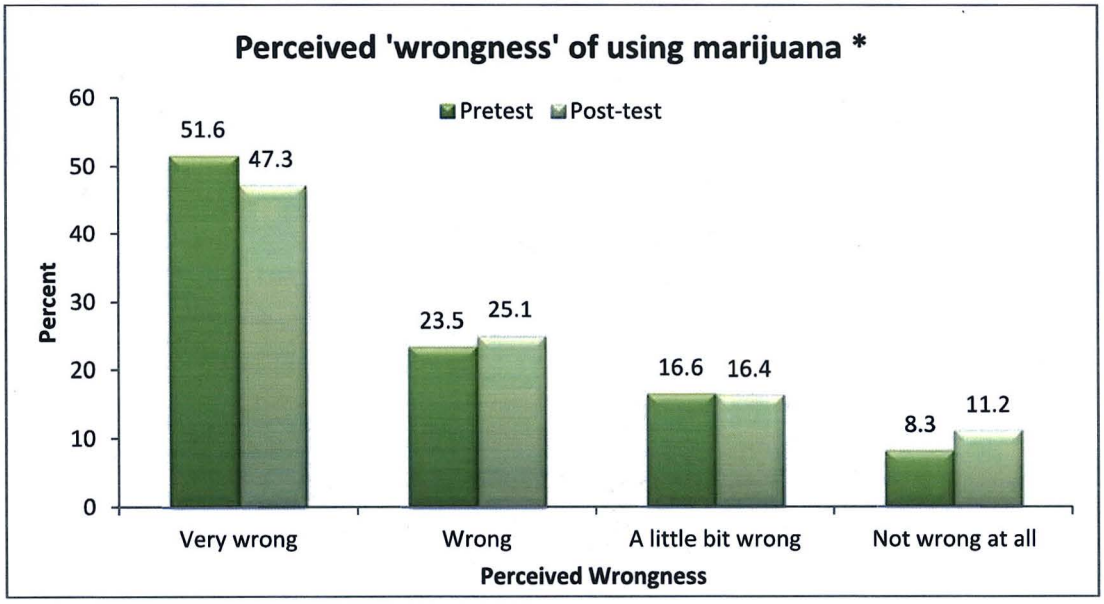
Figure 8. *Perceived harm of regular use (once or twice per week) of marijuana*



*p=0.01 for differences across categories

Perceived 'wrongness' of using marijuana. Youth were significantly **less** likely to think that it was 'wrong' or 'very wrong' for someone their age to use marijuana at post-test than they did at pretest. At post-test, 11.2% of the youth reported that it was 'not wrong at all,' which increased from 8.3% at pretest (Figure 9).

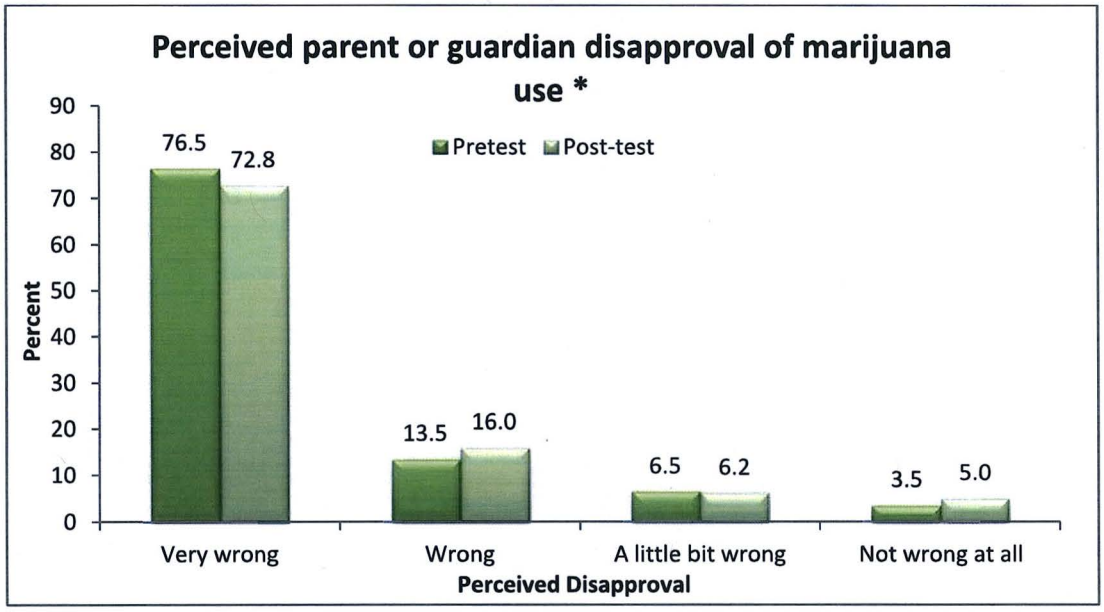
Figure 9. *Perceived 'wrongness' of using marijuana*



*p<0.0001 for differences across categories

Perceived parent or guardian disapproval of using marijuana. Youth reported perceived parent disapproval of marijuana use at very high frequencies at both time points. There was a slight decrease among those who thought their parents would think using marijuana was 'very wrong,' and a slight increase among those who thought their parents would think it was 'not wrong at all.' This indicates somewhat more perceived parental acceptance of potential marijuana use among youth in this age group (Figure 10).

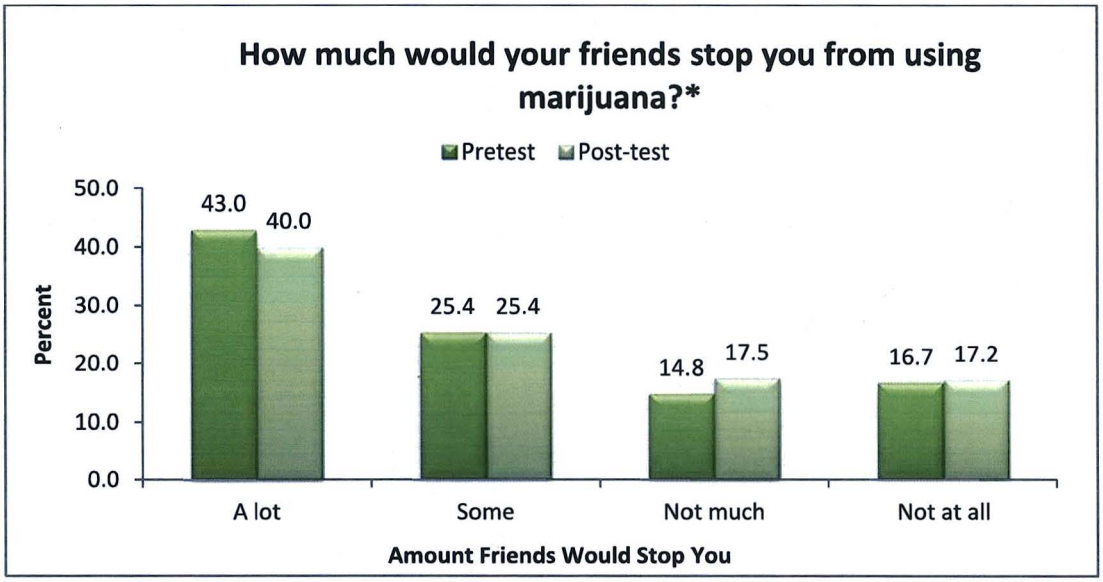
Figure 10. *Perceived parent or guardian disapproval of marijuana use*



*p=0.002 for differences across categories

Peer Influence. Overall, most youth believed their friends would try to stop them 'a lot' from using marijuana; however, they were less likely to think so at post-test. The number of youth reporting that friends would try to stop them 'not much' or 'not at all' increased over time (Figure 11).

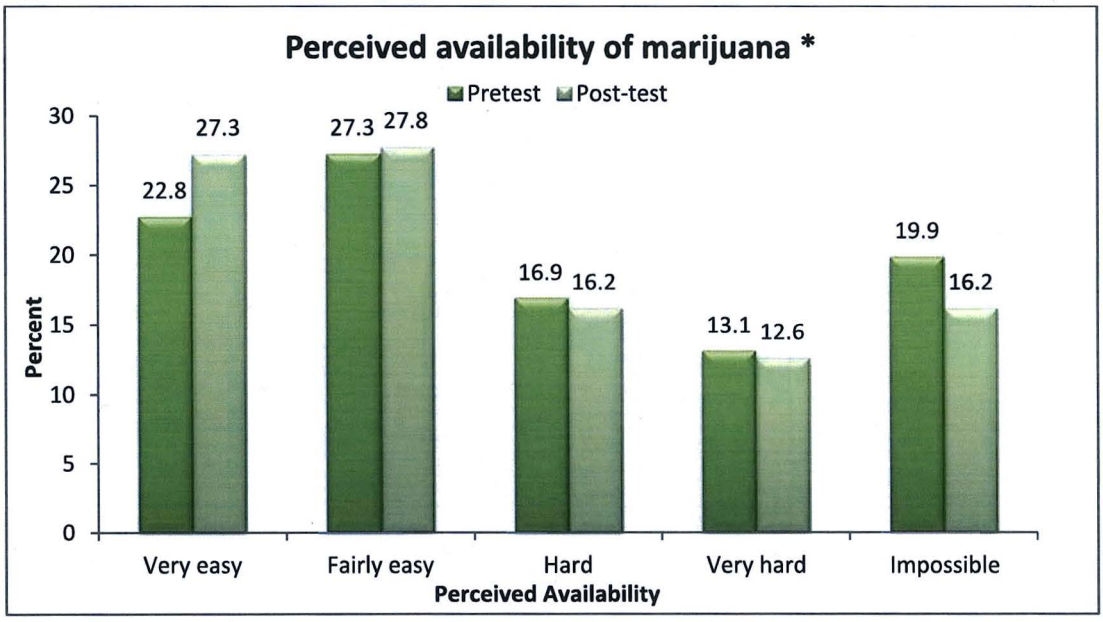
Figure 11. *Peer influence around marijuana use*



*p=0.02 for differences across categories

Accessibility of marijuana. At post-test, more youth reported that obtaining marijuana would be fairly or very easy, and less reported that it would be very hard or impossible, compared to the pretest beliefs (Figure 12).

Figure 12. *Perceived availability of marijuana*



*p<0.0001 for changes across categories

Perceived consequences of marijuana use. When asked about things that have happened to youth while under the influence of marijuana, youth reported increased problems overall between pretest and post-test. The most common problems reported were negative influences on schoolwork and fighting with parents. Increased reports of negative consequences are likely due to the increased ability of many youth to recognize how marijuana use impacted their lives.

Youth were also asked about expectancies youth have around using marijuana. In terms of positive expectancies, youth tended to agree most that use of marijuana would help them relax. Negative expectancies among youth were focused on specific effects on the body such as having a dry mouth or eating more than normal. There was fairly low agreement that using marijuana has generally 'bad effects on people.'

Differences in marijuana use and attitudes by program funding category. The majority of youth participated in a violence prevention program (56.8%). Mentoring, restorative justice, early childhood and before and after school programs comprised only 12.2% so they were categorized into an "all other programs" category due to small sample size. The remaining 31% were in a school dropout prevention program.

The most significant differences were observed among youth in dropout prevention programs compared to other types of programs. Specifically, these youth reported higher rates of ever using marijuana and more use of marijuana in the past 30 days than youth in other program funding categories. Those participating in dropout prevention programs and violence prevention programs perceived using marijuana as less wrong for their age than did youth in mentoring and other programs.

Differences in marijuana use and attitudes by availability of substance use programming. Whether or not youth had been exposed to specific substance use programming was not influential in terms of use of attitudes toward marijuana. In fact, those who had received this type of program exposure were less likely to reduce their marijuana use over time compared to those who were not exposed.

Socioeconomic effects on marijuana use and attitudes. Overall, marijuana use was not associated with any SES indicators. However, student attitudes about marijuana use differed where those attending schools with a higher rate of those on a free or reduced lunch program tended to view youth marijuana use as more wrong. Additionally, free lunch rate, graduation rate, and dropout rate were associated with whether youth reported talking to a parent or guardian about marijuana. In schools where fewer students were on a free or reduced lunch

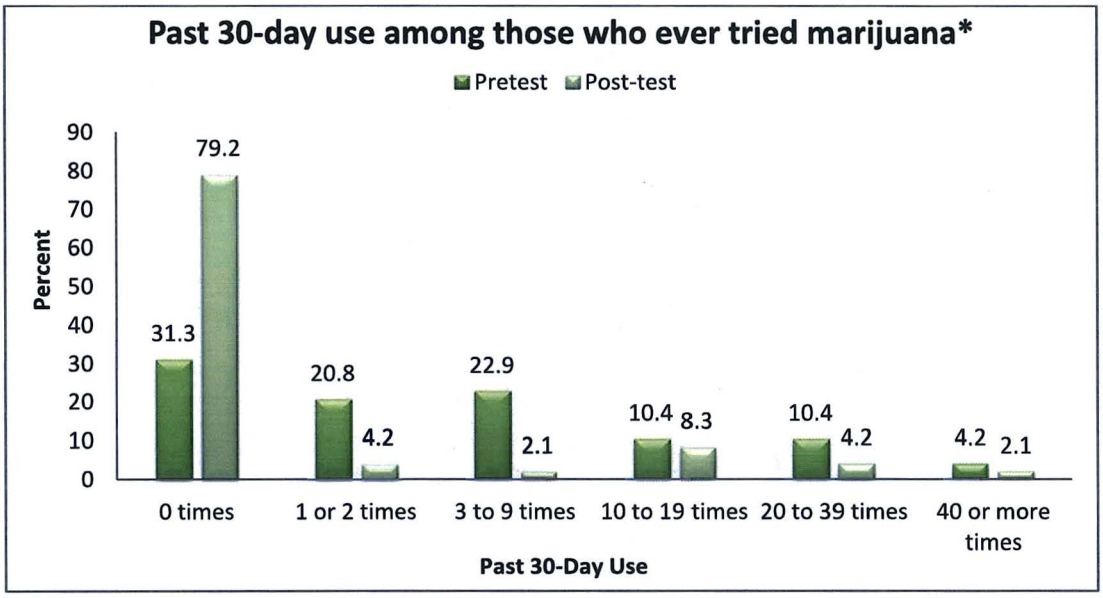
program, where graduation rates were higher, and where dropout rates were lower, youth were more likely to report that they had talked to a parent or guardian about marijuana.

Young Adults Ages 18-25

The majority of young adults ages 18-25 (N=91) reported that they have tried marijuana before (~64%).

Past 30-day use. Of those who reported that they had tried it, most (~85%) had not used marijuana in the past 30 days (Figure 13). Significant decreases in use were reported from pretest to post-test.

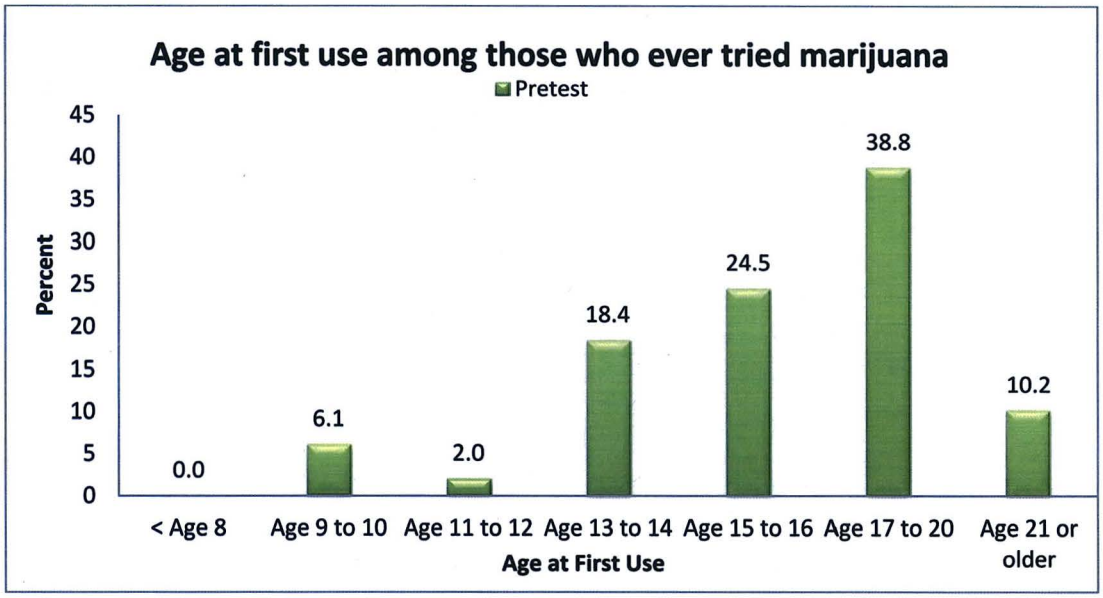
Figure 13. *Past 30-day use among those who ever tried marijuana*



*p<0.01 for significant change

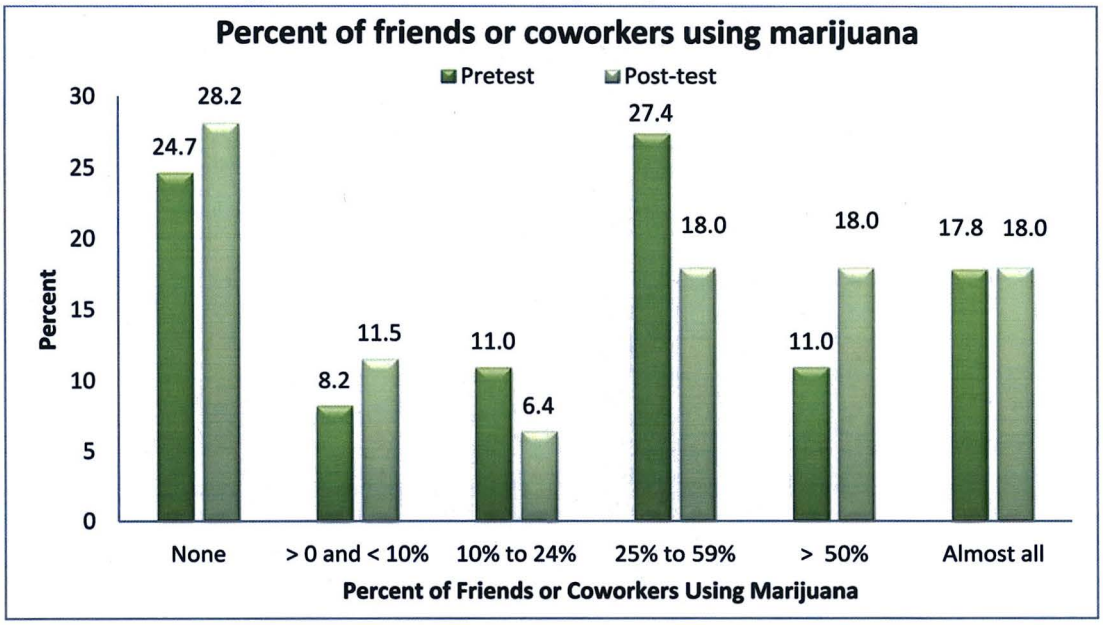
Age at first use. The average age at first use was about 17 to 20 years (Figure 14).

Figure 14. *Age at first use among those who ever tried marijuana*



Peer-related use. The percentage of friends or coworkers who smoked marijuana at least once in the last year was also somewhat high. Nearly one-fifth reported that almost all of their peers used marijuana (Figure 15).

Figure 15. *Percent of friends or coworkers using marijuana*



Reasoning and consequences around marijuana use. Reasons young adults gave for using marijuana fell into one of four groups, including reducing negative feelings, enhancing positive feelings, increasing personal introspection, and avoiding negative consequences. The most common reasons young adults gave for using marijuana were to reduce negative feelings and to enhance introspection. A number of consequences were noted among respondents including external factors such as missing school or work or fighting with friends or family members; internal factors were also noted, such as changes in personality, feeling paranoid or unmotivated, or having a poor memory. Although both types of reported consequences increased from pretest to post-test, young adults were more likely to cite internal factors as the most recently experienced negative consequences to using marijuana. An increase in reports of consequences likely indicates increased awareness among participants about how reported consequences are related to their marijuana use.

Results Related to TGYS Early Childhood and Parent Risk and Protective Factors
(Summarized from data collection/analysis conducted by Parent Possible)

Parent Possible is funded through TGYS as an intermediary agency distributing sub-grants to local providers implementing one or both of the national evidence-based models (PAT and/or HIPPY).

The PAT program is an evidence-based early childhood program that includes home visits, group meetings, health and developmental screenings, and development of resource networks. Parent educators utilize the PAT curriculum to promote positive parent-child interaction from pregnancy through kindergarten. The PAT curriculum is designed to increase parent knowledge of early childhood development, improve parenting practices, provide early detection of developmental delays and health issues, prevent child abuse and neglect, and increase children's school readiness and school success.

HIPPY is also an evidence-based home visitation program for parents of children aged three through Kindergarten. Peer educators work with parents in their homes to provide books, activities, and skills that assist parents in preparing their children for school. The HIPPY curriculum focuses on supporting children's language development, problem solving, logical thinking and perceptual skills. HIPPY's primary goal is to increase vulnerable children's success in school and, ultimately, in life.

For each of the programs, parents were asked to complete a parent/caregiver survey that consists of several items intended to assess knowledge and behavior on a number of parenting practices including child development, health behaviors, and literacy activities. The HIPPY

parent survey consists of several items intended to assess parental outcomes in areas including literacy activities, confidence in parenting activities, knowledge of child development, and knowledge of healthy behaviors. The PAT parent survey has four sections: questions about parental behaviors; questions about parental knowledge; questions specific to literacy/reading activities; and questions about the quality and skills of the parent educator.

The BSRA-3 is a validated scale used to assess a child's readiness for school by evaluating a child's understanding of colors, letters, numbers/counting, sizes/comparison, and shapes. The assessment is appropriate for children aged three through six years. The percent mastery, or percentage of items correct, is used to compute a total school readiness raw score and percentile rank.

Results from the 2016 evaluation indicate positive findings overall in both the HIPPY and PAT programs. Both programs demonstrate positive findings in parental knowledge and confidence, as well as trust and respect of the parent educators. Both programs demonstrated positive findings related to literacy, with the HIPPY program showing positive changes in the use of literacy materials and frequency of literacy activities and the PAT program reporting that parents are using literacy and reading activities almost daily.

The children served by these programs have demonstrated positive gains as well. In general, children's percentile rank in school readiness increased by 10% and children improved in all of the sub-domain categories. There was also a statistically significant decrease in the proportion of children who were delayed or very delayed in their school readiness skills.

In addition to school readiness, there were other positive outcomes including a decrease in the number of parents who reported use of spanking, and an increase in parents gaining more awareness about the importance of healthy childhood behaviors such as nutritious eating and exercise.

As a whole, the HIPPY and PAT programs appear to have an important benefit to the families and children they serve.

Discussion and Recommendations

General Youth Risk and Protective Factors

In summary, research among adolescents indicates that a variety of protective factors work toward preventing or limiting criminal and violent behavior in this population. As shown in Appendix D, positive change on outcomes measured by TGYS has been demonstrated by scientific studies to be linked to decreased involvement with deviant peers, involvement in less serious forms of delinquency, fewer legal contacts, and a lower tendency toward crime and violence, as well as better grades and attachment to school and less school truancy. TGYS-funded programs are designed to strengthen and foster these factors among participating youth.

Using validated and well-performing measurement tools to collect pretest and post-test data, TGYS has demonstrated that participating youth have experienced gains in perceived social support from family, friends, and significant others; an increase in life skills such as resilience and social competence; and a lower overall tolerance of deviant behaviors during FY 2015-16. These gains were particularly strong among those youth who entered programs with less desirable scores on attitudes and behaviors. There were few grantee program or SES category differences in these results, except that restorative justice programs were more successful at reducing tolerance of delinquent behaviors than other types of programs, and mentoring programs excelled at building resilience relative to other types of programs.

Programs that collected data with the Alcohol, Tobacco, and other Drug Use (ATOD) survey instrument and that administered substance use prevention programs were successful in decreasing overall reported substance use among youth, while youth not exposed to this type of program significantly increased their reported use on the ATOD. This increase was specifically related to reported alcohol use. It should be noted that the significant increase in reported use went from a mean of 1.18 at pretest to a mean of 1.36 at post-test, where a score of 1 indicates 'never' used, and 2 indicates 'a few times per year.' Moreover, reported use was very low among all participants.

In contrast to this finding, programs that collected data with the Marijuana Use and Attitudes survey instrument and that administered substance use prevention programs were <u>not</u> more successful in decreasing overall reported marijuana use among youth than those that did not provide such a program. These differences are likely due to the difference in participants that completed the two different surveys. Only 232 youth, in a small number of programs, completed the ATOD survey instrument. Over 1,875 youth, in a large number of programs,

completed the Marijuana Use and Attitudes survey instrument. Thus, it seems that targeted substance use prevention in specific types of programs may be especially useful in reducing overall reported use of substances. It may be more difficult to detect meaningful changes in reported use where substance use prevention activities and program types are widely varied.

Other data demonstrated a significant increase in scores on the bullying, fighting, and victimization scale. This was due in part to girls reporting a nearly 2-fold increase in instances of victimization. Grantee programs that use this scale are most likely the ones who administer programs specifically to bullying and violence prevention. It is thus possible that reported increases are due to a higher awareness of behaviors that could be labeled as bullying and victimization, as opposed to an actual increase in the behaviors themselves.

Marijuana Use and Attitudes

Overall, the trajectory of reported use of and attitudes toward marijuana are what would be expected among the ages surveyed based on other research. Children in grades 1 to 5 reported healthy attitudes toward marijuana, in that they believed it to be socially and physically undesirable. Their perceptions became even more positive after participating in TGYS programs.

Within the other age groups, there was a quite low percentage of youth in middle and high school who reported ever having tried marijuana (25%), with increases commensurate with age; in other words, youth in older grades were more likely to have tried it, and over half of 18 to 25 year-olds reported having used it before. Youth in grades 6-12 who had talked with a parent or guardian in the past 30 days were less likely to have tried marijuana, and reported use was less frequent among those who had tried it.

Although overall reported use in all age groups was quite low, attitudes toward marijuana use and its effects were strikingly moderate. Specifically, although youth in grades 6 to 12 agreed marijuana use among those in their age group is wrong (50% agreed) and their parents or guardians would strongly disapprove of use (75% agreed), about one-third of youth this age believed that regular use poses 'no risk' to people in general, and this perception did not change over time. One-fifth of youth believed their friends would not try to stop them from using marijuana, and fewer believed their friends would disapprove at post-test than at pretest. There was also an increased perception over time that marijuana would be 'very easy' for someone their age to get if desired. Similarly, one-fifth of young adults ages 18-25 reported that almost all of their peers use marijuana. Participants did not indicate especially negative expectancies around using marijuana, and expectancies were more positive among those who

had tried marijuana before. Few incidences of negative consequences of marijuana use were reported.

Several variables were assessed to determine their relationship to marijuana assessment results. From a program funding category perspective, those youth in dropout prevention programs appeared to be at higher risk for acceptance and use of marijuana. SES was not related to reports of marijuana use.

It is important to note that data on some measurement instruments demonstrated little or no change in the overall sample but did demonstrate improvement in the risk-identified group. **Because TGYS programs provide primarily universal programming and prevention services, all participants would not be expected to have low pretest scores and experience marked improvement over time.** The fact that results show that overall sample scores on the outcomes of interest remained stable or improved, and that risk-group scores markedly improved is a positive finding. Moreover, it indicates that currently funded TGYS programming appears to be effective at serving both the general population and those who may be more at risk.

Taken together, results indicate that an emphasis on specific adjustments to programming, described below, may be helpful to the overall group.

As demonstrated by results on the ATOD instrument, efforts aimed at reduction of substance use could be influential among youth in grades 6-12. Where substance use prevention did not appear to be particularly useful, it is possible that youth who did not improve already had a history of use, based on reported age of first use. Overall low reported use of marijuana, and substances in general, as well as skepticism about the acceptability of using substances, were strong findings. However, there is clearly a growing level of youth acceptance, peer support, and availability around the use of marijuana. Prevention of this substance may require additional or alternative types of effort. Qualitative data collected among youth during FY 2014-15 suggest that providing or enhancing skills for resisting substance use, making one's own decisions even in the face of peer substance use, and understanding the risks and negative consequences of use will be important to focus on beginning in middle school programming. Additional research around which specific strategies may work best is needed.

Beyond taking the preventative measures mentioned above, increasing life skills such as conflict management, healthy risk-taking, and effective decision-making will be helpful in cultivating healthy attitudes toward violence and substance use. This connection has been demonstrated in numerous research studies (e.g., Hodder et al., 2011; Stepp et al., 2011). Additionally, current TGYS data indicate that youth with stronger life skills were more likely to agree that marijuana

can produce negative effects on users. Results indicated that reports of youth bullying and victimization increased over time in programs, especially among girls. Youth who are being victimized are in a situation that is more difficult to control because it is dependent, in part, on other people's behavior. Learning about effective ways to prevent or cope with these behaviors, as well as having a reliable adult to consult with and receive regular guidance from, is imperative to this group. In particular, training parents or other 'askable' adults to communicate with youth about these issues in a straightforward and unscripted way may be extremely influential for youth.

Appendix A. Data Quality

Instrument	Pretests Submitted	Post-tests Submitted	Matched Pres and Posts	α Pretest*	α Post-test*
Alcohol, Tobacco and Other Drug Use	387	348	248	N/A**	N/A**
Attitudes toward Delinquency	540	457	371	0.94	0.92
Bullying, Fighting, and Victimization	636	351	233	0.89	0.91
Grade Point Average	307	248	233	N/A**	N/A**
Life-Effectiveness	1315	701	586	0.88	0.90
Marijuana Assessment Grades 1-5	864	496	434	N/A**	N/A**
Marijuana Assessment Grades 6-12	3950	2513	1876	N/A**	N/A**
Marijuana Assessment Ages 18-25	227	125	91	N/A**	N/A**
Resilience	3926	2248	1439	0.86	0.87
Perceived Social Support	210	274	85	0.89	0.95
School Bonding	371	197	154	0.69	0.76
School Engagement	336	317	130	0.97	0.97
Self-Efficacy Grades 3-5	14	13	12	N/A**	N/A**
Self-Efficacy Grades 6-12	551	378	238	0.79	0.80
Social Competence	138	118	105	0.98	0.98

*Cronbach's α (alpha) is used as an estimate of the reliability of a survey instrument. It can be viewed as the expected correlation of two tests that measure the same construct; so, it can be used as a measure of how well an instrument measured a construct at 2 time points. It has a maximum value of 1.0, and any value above 0.7 is considered to reflect acceptable reliability.

**For some instruments, Cronbach's is either not applicable as a measure of reliability, or the sample size was not large enough to calculate this statistic.

Attrition

Attrition occurs when members of the pretest survey group are not part of the post-test survey group, due to missing data, leaving a program, or otherwise not being available for post-testing.

Attrition bias refers to systematic differences between groups in withdrawals from a survey sample of participants. For example, if those who do not complete a post-test are systematically found to be of a specific ethnicity, or systematically scored lower on their pretests, overall findings may be biased accordingly.

Attrition was assessed among all instruments and no systematic differences were detected.

Appendix B. Instrument Descriptions

ATOD Use and Attitudes

Questions	Response Scale
About how often (if ever) do you:	Behavior is rated on a 5-Point Scale as: 1=Never, 2=A few times a year, 3=Once a month to a few times a month 4=Once a week to a few times a week 5=Once a day to more than once a day Attitudes are rated on a 4-Point Scale as: 1=No risk 2=Slight risk 3=Moderate risk 4=Great risk
1. Drink beer, wine, wine coolers, or liquor (more than just a few sips)?	
2. Drink until you get drunk?	
3. Smoke cigarettes?	
4. Smoke marijuana (grass, pot) or hashish (hash)?	
5. Take prescription drugs that aren't yours?	
How much do you think people risk harming themselves (physically or in other ways) if they:	
6. Smoke one or more packs of cigarettes per day?	
7. Try marijuana once or twice?	
8. Smoke marijuana regularly?	
9. Take one or two drinks of an alcoholic beverage (beer, wine, liquor) nearly every day?	

Attitudes toward Delinquency

Questions	Response Scale
How wrong is it to:	4-point Likert Scale 1 through 4 1=Not wrong 4=Very wrong
1. To start a fistfight or shoving match?	
2. To shoplift from a store?	
3. To damage or mark up public or private property on purpose?	
4. To lie to a teacher to cover up something you did?	
5. To take things that don't belong to you?	
6. To stay out all night without permission?	
7. To damage school property on purpose?	
8. To lie to your parents about where you have been or who you were with?	

9. To skip school without permission?	
10. To hit someone because you didn't like what they said or did?	
11. To be in a fight with members of a gang?	
12. To carry a weapon, like a knife or gun?	
13. To have a serious fight at school?	

Bullying, Fighting and Victimization Scale

Subscales	Questions	Response Scale
Bullying	1. I teased other students	8-point Likert Scale 1 through 8 1=Never 8=7 or more times
Bullying	2. In a group I teased other students.	
Bullying	3. I upset other students for the fun of it.	
Bullying	4. I excluded others.	
Bullying	5. I encouraged people to fight.	
Bullying	6. I spread rumors about others.	
Bullying	7. I was mean to someone when angry.	
Bullying	8. I helped harass other students.	
Bullying	9. I started arguments or conflicts.	
Fighting	10. I got in a physical fight.	
Fighting	11. I got into a physical fight when angry.	
Fighting	12. I threatened to hit or hurt another student.	
Fighting	13. I hit back when someone hit me first.	
Fighting	14. I fought students I could easily beat.	
Victimization	15. Other students made fun of me.	
Victimization	16. Other students picked on me.	
Victimization	17. Other students called me names.	
Victimization	18. I got hit and pushed by other students.	

Life Effectiveness Scale

Questions	Response Scale
1. I plan and use my time well.	6-point Scale 1 through 6 1=Not like me at all 6=Exactly like me
2. Goals are important to me.	
3. I do not waste time.	
4. I have specific goals to aim for.	
5. I am successful in social situations.	
6. I work hard at solving what's causing my problems.	
7. I like to be busy and actively involved in things.	
8. I understand issues of personal space, touch, and appropriate behavior towards other people.	
9. I behave appropriately towards other people.	
10. I avoid unnecessary conflicts with others.	

Marijuana Attitudes Assessment among Grades 1-5

Questions	Response Scale
1. My parents have talked to me about marijuana.	1=Yes 2=No
2. I would be sad if my friends used marijuana.	
3. If I used marijuana my friends would not like me.	
4. My parents would be sad if I used marijuana.	
Do you think that a kid who used marijuana would:	
5. Have more friends?	
6. Do badly in school?	
7. Be hurting their brain or body?	

Marijuana Use and Attitudes Assessment among Grades 6-12

Questions	Response Scale
1. I resolve my conflicts with other people.	5-Point Likert Scale 1 through 5 1=Strongly disagree 5=Strongly agree
2. I avoid unnecessary conflicts with others.	
3. Other people look up to the way I handle conflict.	
4. During the last 30 days, have you talked with at least one of your parents about the effects of marijuana use? (Either adoptive, biological, stepparents, or guardians, whether or not they live with you)	1=Yes 2=No
5. Have you ever talked with at least one of your parents about the effects of marijuana use? (Either adoptive, biological, stepparents, or guardians, whether or not they live with you)	1=Yes 2=No
6. Below are some messages about marijuana. Which have you ever seen or heard (check any that apply)?	7-Point Scale 1=Above the Influence 2=Don't be a Lab Rat 3=Good to Know Colorado 4=What's Next? 5=Drive High, Get a DUI 6=Speak Now 7=None of these
7. How much do you think people risk hurting themselves if they use marijuana regularly (once a week or more)?	4-Point Likert Scale 1 through 4 1=Great risk 4=No risk
8. How wrong do you think it is for someone your age to use marijuana?	4-Point Likert Scale 1 through 4 1=Very wrong 4=Not wrong at all
9. How wrong do you think your parents or guardians feel it would be for you to use marijuana?	
10. Please indicate your agreement with the following statements:	5-Point Likert Scale 1 through 5 1=Strongly disagree 5=Strongly agree
a. Marijuana makes it harder to think about do things (harder to concentrate or understand; slows you down when you move)	
b. Marijuana helps a person relax and feel less tense (helps you unwind and feel calm)	
c. Marijuana helps people get along better with others and it can help you talk more or feel more romantic	

d. Marijuana makes a person feel more creative and perceive things differently (music sounds different; things seem more interesting)	
e. Marijuana generally has bad effects on a person (you become angry or careless; after feeling high you feel down)	
f. Marijuana has effects on a person's body and gives a person cravings (get the munchies/hungry; have a dry mouth; hard to stop laughing)	
11. How much would your friends try to stop you from using marijuana?	4-Point Likert Scale 1 through 4 1=A lot 4=Not at all
12. How easy do you think it would be to get marijuana if you wanted some?	5-Point Likert Scale 1 through 5 1=Probably impossible 5=Very easy
13. Have you ever tried marijuana (pot, grass, hash, edibles, etc.)?	1=Yes 2=No
14. How old were you the first time you used marijuana?	7-Point Scale 1=I've never used marijuana 2=8 years old or younger 3=9 to 10 years old 4=11 or 12 years old 5=13 or 14 years old 6=15 or 16 years old 7=17 years or older
15. During the past 30 days, how many times did you use marijuana?	6-Point Scale 1=0 times 2=1 or 2 times 3=3 to 9 times 4=10 to 19 times 5=20 or 39 times 6=40 times or more
16. How likely is it that you will use marijuana, even once or twice, over the next 12 months?	4-point Likert Scale 1 through 4 1=I definitely will not 4=I definitely will
17. During the past 30 days, have any of the following things happened to you when you were under the influence of marijuana?	4-Point Scale 1=No 2=Yes: 1-2 times

a. Got in trouble at school?	3=Yes: 3-9 times 4=Yes: 10 or more times
b. Hurt yourself?	
c. Couldn't remember what happened?	
d. Hurt your schoolwork?	
e. Fought with your parents?	
f. Damaged a friendship?	
g. Hurt someone else?	

Marijuana Use and Attitudes Assessment among Ages 18-25

Questions	Response Scale
1. Have you smoked one or more cigarettes in the past year?	1=Yes 2=No
2. If you answered "yes" to number 1 above, what was your usual frequency of smoking when you did smoke cigarettes in the last 12 months?	5-Point Scale 1=Every day 2=5 to 6 days per week 3=3 to 4 days per week 4=1 to 2 days per week 5=Once a month or less
3. How often did you drink any kind of alcoholic drink in the last 12 months?	6-Point Scale 1=Every day/almost every day 2=3 or 4 times per week 3=1 or 2 times per week 4=Once a month 5=Less than once a month 6=Did not drink in the last 12 months
4. What percent of your friends, colleagues or coworkers smoked marijuana at least once in the last year?	6-Point Scale 1=None 2=Fewer than 10% 3=At least 10% but fewer than 25% 4=25% to 50% 5=More than half of them 6=Almost all of them
5. Below is a list of reasons that a person might give for using marijuana, or for not using marijuana. Think about how much you	

agree or disagree with a reason. There are no "right" or "wrong" answers. a. To be sociable	5-Point Likert Scale 1 through 5 1=Strongly disagree 5=Strongly agree
b. Friends would object to my using marijuana	
c. Because it makes social gatherings more fun	
d. Because it improves parties and celebrations	
e. To forget about my problems	
f. Because it helps me when I feel depressed or nervous	
g. Marijuana impairs my judgment	
h. To cheer me up when I am in a bad mood	
i. To forget my worries.	
j. Because I like the feeling	
k. Marijuana can cause a person to feel tired	
l. To get high	
m. Marijuana can cause a person to feel depressed	
n. Because it gives me a pleasant feeling	
o. Because it is fun	
p. To know myself better	
q. Because it helps me be more creative and original	
r. To understand things differently	
s. To expand my awareness	
6. Below are some messages about marijuana please mark the ones that you have seen or heard:	7-Point Scale 1=Above the Influence 2=Don't be a Lab Rat 3=Good to Know 4=Drive High, Get a DUI 5=Marijuana and You 6=Speak Now 7=None of these
7. Have you ever tried marijuana (pot, grass, hash, edibles, etc.)	1=Yes 2=No
8. Have you used marijuana (pot, grass, hash, edibles, etc.) in the last 12 months?	1=Yes 2=No

9. About how old were you the first time you used marijuana?	7-Point Scale 1=8 years old or younger 2=9 or 10 years old 3=11 or 12 years old 4=13 or 14 years old 5=15 or 16 years old 6=17 to 20 years old 7=21 years old or older
10. How many years have you been using marijuana?	5-Point Scale 1=< 1 year 2=1-2 years 3=2-5 years 4=5-10 years 5=>10 years
11. During the past 30 days, how many times did you use marijuana?	6-Point Scale 1=0 times 2=1 or 2 times 3=3 to 9 times 4=10 to 19 times 5=20 to 39 times 6=40 or more times
12. How often did you use marijuana in the last 12 months?	6-Point Scale 1=Every day/almost every day 2=3 to 4 times per week 3=1 to 2 times per week 4=Once a month 5=Less than once a month 6=Did not use marijuana in the last 12 months
13. How many times did the following things happen to you while you were smoking marijuana or because of your marijuana use during the last year? a. Missed out on other things because you spent too much money on marijuana.	5-Point Scale 1=Never 2=1-2 times 3=3-5 times 4=6-10 times 5=More than 10 times
b. Went to work or school high or stoned	
c. Noticed a change in your personality	
d. Missed a day (or part of a day) of school or work	
e. Tried to cut down on smoking marijuana	
f. Suddenly found yourself in a place that you could not remember getting to	

g. Had a fight or argument with a friend	
h. Had a fight or argument with a family member	
i. Felt paranoid or overtly nervous in everyday life	
j. Felt unmotivated to do things you needed to do in your everyday life	
k. Noticed that your memory was not as good as it used to be	
l. Lost some physical coordination in everyday activities	
m. Had trouble thinking clearly in everyday activities	

Perceived Social Support Scale

Subscales	Questions	Response Scale
Support from significant other	1. There is a special person who is around when I am in need.	7-Point Likert Scale 1 through 7 1=Very strongly disagree 7=Very strongly agree
Support from significant other	2. There is a special person with whom I can share my joys and sorrows.	
Support from family	3. My family really tries to help me.	
Support from family	4. I get the emotional help and support I need from my family.	
Support from significant other	5. I have a special person who is a real source of comfort to me.	
Support from friends	6. My friends really try to help me.	
Support from friends	7. I can count on my friends when things go wrong.	
Support from family	8. I can talk about my problems with my family.	
Support from friends	9. I have friends with whom I can share my joys and sorrows.	
Support from significant other	10. There is a special person in my life who cares about my feelings.	
Support from family	11. My family is willing to help me make decisions.	
Support from friends	12. I can talk about my problems with my friends.	

Resilience Scale

Questions	Response Scale
1. I feel proud that I have accomplished things in my life.	7-Point Likert Scale 1 through 7 1=Strongly disagree 7=Strongly agree
2. I am determined.	
3. I can get through difficult times because I've experienced difficulty before.	
4. I have self-discipline.	
5. I keep interested in things.	
6. I can usually find something to laugh about.	
7. In an emergency, I'm someone people can generally rely on.	
8. My life has meaning.	
9. When I'm in a difficult situation, I can usually find my way out of it.	

School Performance-Direct School Records

Questions	Response Scale
1. What was the overall Grade Point Average (GPA) of the student? If there is no overall GPA, choose the GPA for one primary class (English or Math).	Grantees complete questions at pre- and post-test using data obtained directly from schools
2(a). How many total school days in this quarter/trimester/semester?	
2(b). How many full-day unexcused absences in this quarter/trimester/semester?	
3. For high school students only: Did the child graduate in the past year?	

School Performance-School Bonding Scale (Grades 3-6)

Questions	Response Scale
1. How often do you feel that the school work you are assigned is meaningful and important?	5-Point Likert Scale 1 through 5 1=Almost always 5=Never
2. How interesting are most of your courses to you?	5-Point Likert Scale

	1 through 5 1=Very interesting 5=Very dull
3. How important do you think things you are learning in school are going to be for your later life?	5-Point Likert Scale 1 through 5 1=Very Important 5=Not at all important
4. Now thinking back over the past year in school, how often did you try your best in school?	5-Point Likert Scale 1 through 5 1=Almost always 5=Never
5. How much do you care if your homework is done correctly?	5-Point Likert Scale 1 through 5 1=Very much care 5=Do not care at all
6. How much does it matter to you what your grades are?	5-Point Likert Scale 1 through 5 1=Matters very much 5=Does not matter at all
7. How much education do you want to have before you stop going to school?	5-Point Scale 1=Want to finish middle school 2=Want to finish high school 3=Want to take some college courses 4=Want to finish a 2-year college 5=Want to finish a 4-year college
8. How often do you take part in class discussions?	5-Point Likert Scale 1 through 5 1=Almost always 5=Never
9. How often do you pay attention to what your teachers are saying?	5-Point Likert Scale 1 through 5 1=Almost always 5=Never
10. How often do you get your homework done?	5-Point Likert Scale 1 through 5 1=Almost always 5=Never

School Performance-School Engagement Scale (Grades 6-12)

Subscales	Questions	Response Scale
Productivity	1. My family knows how I am doing in school.	5-Point Likert Scale 1 through 5 1=Very strongly disagree 5=Very strongly agree
Belonging	2. I like most of my teachers.	
Productivity	3. If I do not know what something means, I do something to figure it out.	
Productivity	4. I study at home.	
Aspirations	5. I plan to pursue more education after high school.	
Productivity	6. There is someone in my family who helps me when I have trouble completing my homework.	
Belonging	7. Most days, I look forward to going to school.	
Productivity	8. I pay attention to my teachers.	
Productivity	9. When I am doing school work, I make sure I understand what I am learning.	
Productivity	10. There is a special person in my life who cares about my feelings.	
Aspirations	11. My family is willing to help me make decisions.	
Aspirations	12. I can talk about my problems with my friends.	
Belonging	13. I am proud to be a student at this school.	
Productivity	14. When learning new things, I try to connect them to things I already know.	
Productivity	15. When I have an assignment due, I keep working until it is finished.	
Aspirations	16. Getting good grades is important to me.	
Aspirations	17. It is important to me to be successful in a job.	
Productivity	18. I talk to my family about problems I have at school.	
Belonging	19. There is a lot I can learn from my teachers.	
Belonging	20. Teachers help me to be successful at school.	

Productivity	21. I know how to study for tests.	
Belonging	22. I feel like a part of my school.	

Self-Efficacy Scale - Grades 3-6

Questions	Response Scale
1. I can manage to solve difficult problems if I try hard enough.	5-Point Likert Scale 1 through 5 1=Never 5=Often
2. If someone tries to keep me from getting what I want, I can find a way to get what I want.	
3. It is easy for me to stick to my goals and reach them.	
4. I am confident that I could do a good job dealing with unexpected events.	
5. Thanks to my talents and skills, I know how to handle unexpected situations.	
6. I can solve most problems if I try hard enough.	
7. I can stay calm when facing difficulties because I can handle them.	
8. When I have a problem, I can find several ways to solve it.	
9. If I am in trouble, I can think of a solution.	
10. I can handle whatever comes my way.	

Self-Efficacy Scale - Grades 6-12

Questions	Response Scale
1. When I make plans, I am certain I can make them work.	5-Point Likert Scale 1 through 5 1=Disagree strongly 5=Agree strongly
2. If I can't do a job the first time, I keep trying until I can.	
3. When I have something unpleasant to do, I stick to it until I finish it.	
4. When I decide to do something, I go right to work on it.	
5. Failure just makes me try harder.	

6. I am a self-reliant person.	

Social Competence Scale

Subscales	Questions	Response Scale
Social Competence	1. Functions well even with distractions.	5-Point Likert Scale 1 through 5 1=Not at all 5=Very well
Social Competence	2. Can accept things not going his/her way.	
Social Competence	3. Copes well with failure.	
Social Competence	4. Is a self-starter.	
Social Competence	5. Works/plays well without adult support.	
Social Competence	6. Accepts legitimate imposed limits.	
Social Competence	7. Expresses needs and feelings appropriately.	
Social Competence	8. Thinks before acting.	
Social Competence	9. Resolves peer problems on his/her own.	
Social Competence	10. Stays on task.	
Social Competence	11. Can calm down when excited or all wound up.	
Social Competence	12. Can wait in line patiently when necessary.	
Social Competence	13. Very good at understanding other people's feelings.	
Social Competence	14. Is aware of the effect of his/her behavior on others.	
Social Competence	15. Works well in a group	
Social Competence	16. Plays by the rules of the game.	
Social Competence	17. Pays attention.	
Social Competence	18. Controls temper when there is a disagreement.	
Social Competence	19. Shares materials with others.	
Social Competence	20. Cooperates with peers without prompting.	
Social Competence	21. Follows teacher's verbal directions.	
Social Competence	22. Is helpful to others.	

Social Competence	23. Listens to others' points of view.	
Social Competence	24. Can give suggestions and opinions without being bossy.	
Social Competence	25. Acts friendly toward others.	

Appendix C. Instruments Used by Each Grantee*

Survey Instrument	Grantee	Totals
Alcohol, Tobacco and Other Drugs (ATOD)	Chaffee County Department of Human Services Friends First I Have a Dream of Boulder County North Range Behavioral Health	4
Attitudes towards Delinquency	Chaffee County Department of Human Services City of Commerce City Denver Youth Program Mental Health America of Colorado Victim Offender Reconciliation Program (VORP)	5
Bullying, Fighting and Victimization	Bright Future Foundation of Eagle County Playworks Education Energized San Miguel Resource Center The Conflict Center	4
Direct School Records/Grade Point Average	Colorado Youth for a Change Denver Urban Scholars Gunnison Hinsdale Youth Services Summit County Government YESS Institute	5
Life Effectiveness	Boys and Girls Clubs of Metro Denver (All)	1
Perceived Social Support	Aurora Community Connection Clayton Early Learning Colorado Youth at Risk Ethiopian Community Development Council Live the Victory Mesa County School District 51 Partners in Routt County, Inc. YWCA of Boulder	8
Resilience	Access After School Art from Ashes Asian Pacific Development Center Aurora Youth Options Bright Future Foundation of Eagle County Chaffee County Department of Human Services City of Aurora CitiWILD Colorado Youth Matter (All) Colorado Seminary Environmental Learning for Kids Ethiopian Community Development Council Florence Crittenton Full Circle	23

	Goodwill Industries Gunnison County Mentors Rocky Mountain Youth Corps San Miguel Resource Center Safehouse Progressive Alliance for Nonviolence TEENS, Inc. Mile High Youth Corps Whiz Kids Tutoring YMCA of Boulder Valley	
School Bonding	America SCORES Live the Victory Playworks Education Energized	3
School Engagement	Big Brothers Big Sisters of Colorado Chaffee County Department of Human Services Ethiopian Community Development Council Generation Schools Network Live the Victory Mi Casa Resource Center Mesa County School District 51 TEENS, Inc. YWCA of Boulder	9
Self-Efficacy (Grades 3-6)	Ethiopian Community Development Council Summit County Government	2
Self-Efficacy (Grades 6-12)	Colorado Uplift Ethiopian Community Development Council Groundwork Denver, Inc. Live the Victory Onward! Su Teatro, Inc. Summit County Government Turning Point YESS Institute	9
Social Competence	Chaffee County Department of Human Services Scholars Unlimited	2
Parents as Teachers (PAT) Post-only Survey Home Instruction for Parents of Preschool Youngsters (HIPPY) Pre-post Bracken School	Catholic Charities Pueblo Community Coalition for Families and Children Family Star La Llave Mountain Resource Center Rocky Mountain Parents as Teachers	6

Readiness Assessment; BSRA-3		
Method of Data Collection		
Online Data Collection		43%
Paper Data Collection		49%
Mix Online & Paper Data Collection		8%

*In addition to the listed instruments, each grantee was required to use one of the Marijuana Assessments commensurate with the age-range served.

Appendix D. Literature-Based Connections between Survey Tool Constructs and TGYS Goals

Survey Tool	TGYS Goal	Literature Reference
Resilience & Life Effectiveness Scales	Youth with high levels of resilience and social competence decrease their involvement with deviant peers throughout adolescence, which in turn predicts less serious forms of delinquency in early adulthood. Those with more resilience and social competence also tend to do better in school.	Hodder et al., 2011; Stepp et al., 2011
Perceived Social Support Scale	Both self-efficacy and social connectedness are protective against, and limit delinquent behaviors and violence among adolescents.	Kort-Butler, 2010; Stoddard et al., 2011; Yu & Gamble, 2010
Direct School Records	Kids with lower academic performance offend more frequently, commit more serious and violent offenses, and persist in their offending over time.	Borowsky et al., 2002; Maguin & Loeber, 1996
School Engagement & Bonding Scales	Higher degrees of behavioral and emotional school engagement predict significantly lower risk of substance use and involvement in delinquency among youth.	Benner et al., 2013; Li et al., 2011; Savolainen et al., 2012; Smith & Snyder, 2015
Self-Efficacy Scales	Both self-efficacy and social connectedness are protective against, and limit delinquent behaviors and violence among adolescents.	Kort-Butler, 2010; Mileviciute et al., 2014; Stoddard et al., 2011
Bullying, Fighting, and Victimization Scale	Higher levels of bullying and fighting are linked to more violent behavior among youth; being victimized is associated with substance abuse, low academic achievement and school truancy.	DeLisi et al., 2015; Hong et al., 2014; Kim et al., 2011
ATOD Use and Attitudes	Decreasing substance use and increasing perceived risk of substances are protective against both teen and adult violence, as well as teen dating violence.	Temple et al., 2013; Epstein-Ngo et al., 2013
Attitudes toward Delinquency	Positive attitudes about delinquent behavior (i.e., perceiving these behaviors as wrong) help teens resist activities related to violence, such as bullying and delinquency.	Herrenkohl et al., 2009
Colorado Criminal Contacts/Re-offenses	This tool was created specifically for TGYS, under the assumption that fewer legal contacts are linked to less crime and violence among youth.	
Social Competence	Youth with high levels of resilience and	Stepp et al., 2011

Scale	social competence decrease their involvement with deviant peers throughout adolescence, which in turn predicts less serious forms of delinquency in early adulthood. Those with more resilience and social competence also tend to do better in school.	
Parenting Practices Interview	Improved parenting skills can prevent later substance abuse, delinquency and violence and improve school readiness among young children. Better parenting is also instrumental in preventing child abuse and neglect.	Gershater-Molko et al., 2002; Peterson et al., 1997; Webster-Stratton et al., 2008; Webster-Stratton & Taylor, 2001
Marijuana Use and Attitudes Assessments	These tools were created specifically for TGYS. Although not all programs target substance use, there is scientific evidence that an increase in youth protective factors of interest to TGYS is associated with lower risk of overall substance use.	Torrealday et al., 2008

Appendix E. References

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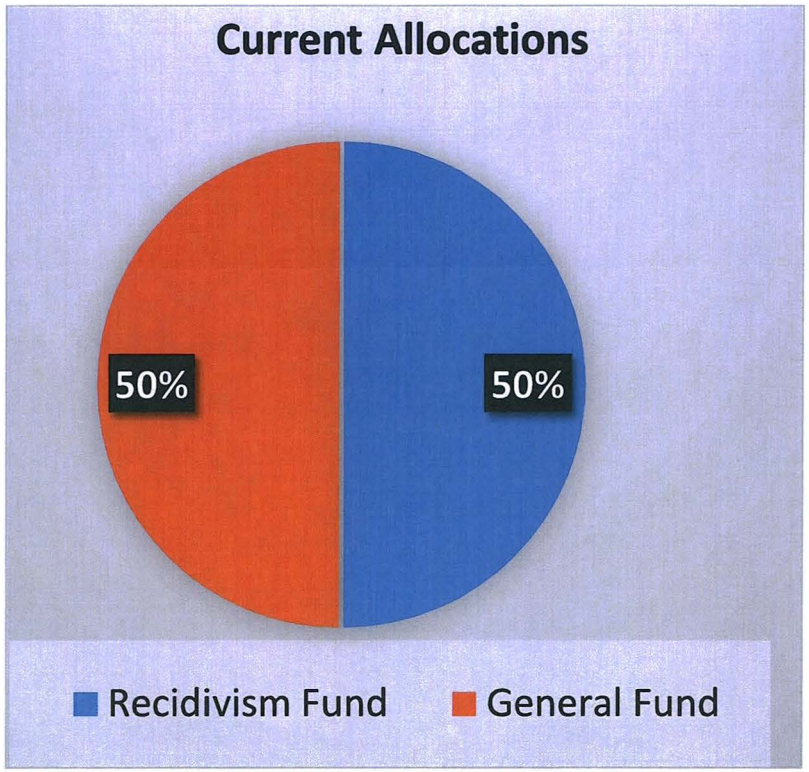
Marijuana Use Prevention, Education, and Treatment Fund

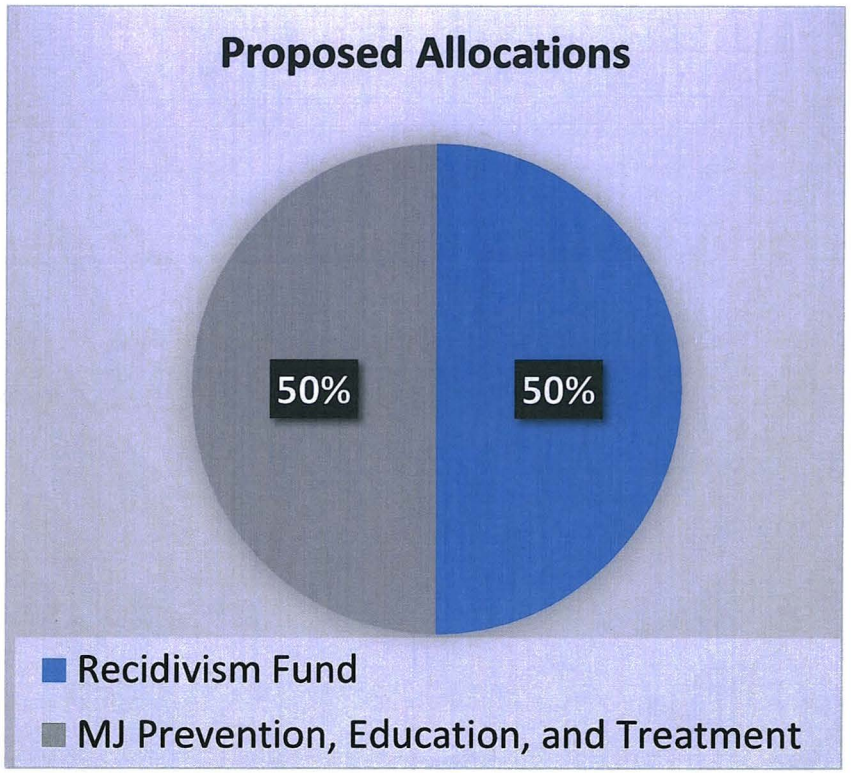
Alaska Department of Health and Social Services, 2018

Marijuana Use Prevention, Education, and Treatment Fund

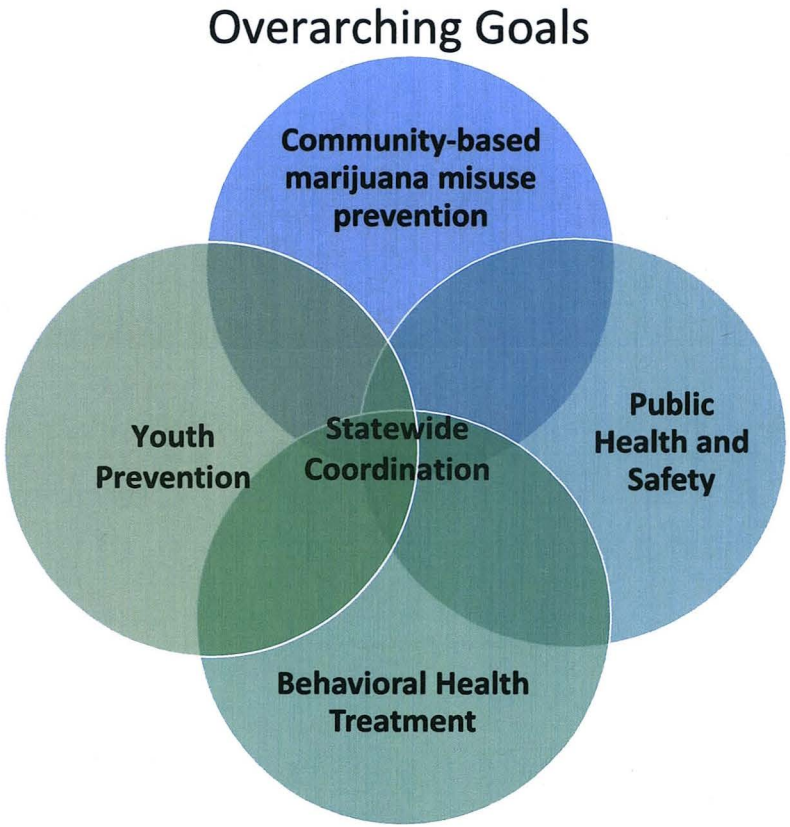
- This bill establishes a Marijuana Use Prevention, Education, and Treatment Fund
- Account within the general fund to which the legislature may make equal appropriations from this fund to:
  1) the Alaska marijuana use prevention youth services program to be administered by the Alaska Children's Trust board; and
  2) the Alaska marijuana use prevention, education, and treatment program to be administered by the Department of Health and Social Services.
- Similar to the Tobacco Use Education and Cessation Fund

This bill would direct 50% of the marijuana excise tax levied under AS 43.61.010 to the Marijuana Use Prevention, Education, and Treatment Fund





Marijuana Use Prevention, Education, and Treatment Fund



DHSS – Marijuana Use Education and Treatment Program

Statewide Coordination

Comprehensive program:

- Community-based marijuana misuse prevention, with a focus on youth prevention
- Assessment of knowledge and awareness of laws, and use of marijuana products
- Monitoring of population health impact related to marijuana use and legalization
- Marijuana education
- Substance abuse screening, brief intervention, referral, and treatment

Community-based marijuana misuse prevention

Local efforts to prevent misuse before it starts:

- Mitigating risk factors
- Strengthening protective factors

Enhance existing programs for public health and education to address substance misuse prevention

- Alaska Adolescent Health Program
- Department of Education and Early Development
- Division of Juvenile Justice
- Community-based programs

Assessment and Monitoring

Assessment of trends in *knowledge, awareness, attitudes, and behaviors* to address misperceptions and knowledge gaps

Monitoring health status and use trends to identify any health or health system effects of legalization

Some questions that require answers:

- *Do youth perceive marijuana as a less harmful substance due to legalization?*
- *Do youth and adults see driving under the influence of marijuana as dangerous?*
- *How has marijuana legalization affected Alaskan's health and safety?*

Marijuana education

Will be used to improve the public's knowledge, attitudes, and awareness about marijuana and educate the public about healthy behavior choices in their lives. Materials will be designed to communicate messages to

1) help prevent youth initiation of marijuana use,
2) educate the public about the health effects of marijuana use, and
3) educate the public about marijuana laws.

Treatment

Provider education and awareness of substance use screening.

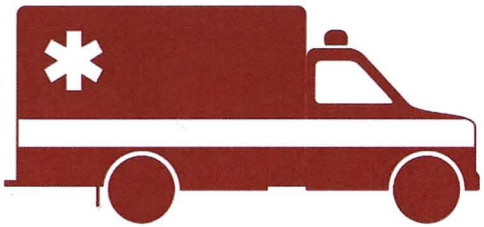
Substance abuse screening, brief intervention, referral, and treatment (SBIRT).

- Assesses for the presence of substance use behaviors.
- Tools for clinicians and other service providers to identify at-risk clients and give immediate feedback and coaching regarding strategies to lower their risk behaviors.

Why does this matter?

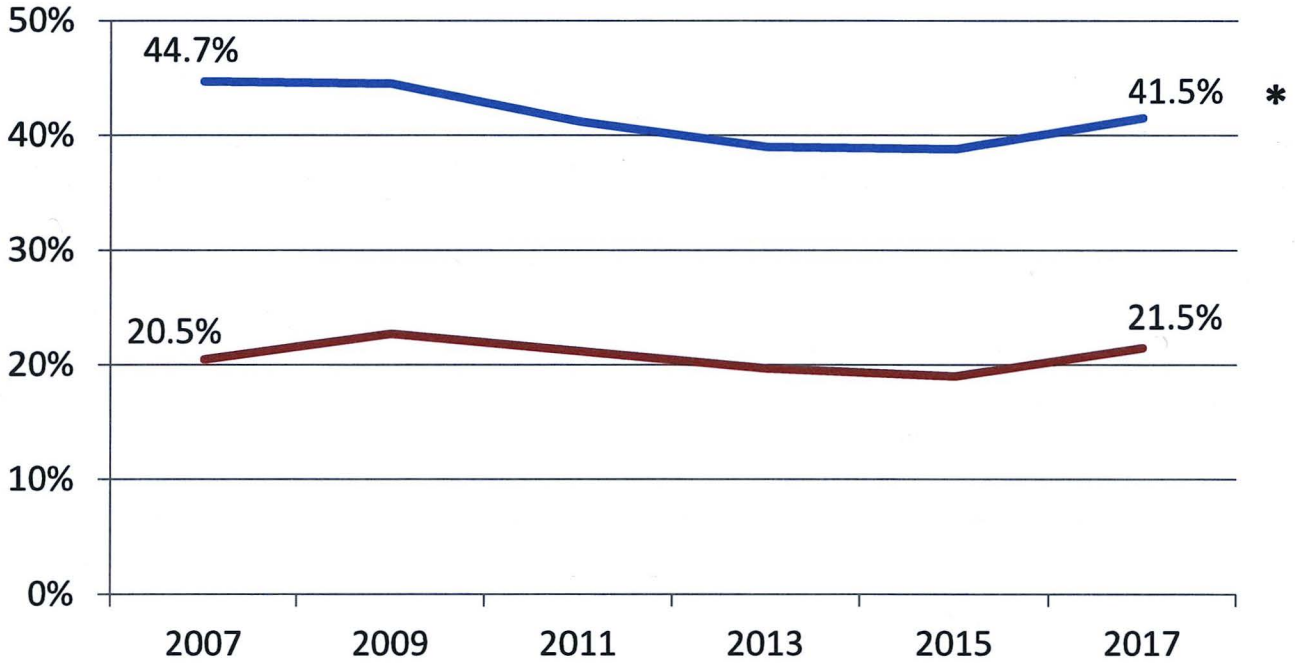
Public health and safety:

- Adolescent health
- Reproductive/maternal/child health
- Injury prevention and control *(drugged driving, accidental consumption/ingestion)*
- Environmental health *(pesticides, lab testing, food safety, secondhand smoke exposure)*
- Mental health and other substance abuse
- Occupational health
- Health Equity/Disparities



Adolescent Health: A closer look

Percentage of Alaska traditional high school students who use marijuana



- 10.7% of students tried marijuana before age 13 (in 2017)

(Alaska Youth Risk Behavior Survey, 2017)

* $p < 0.05$ for 10-year trend

YRBS
AK Youth Risk Behavior Survey

Adults can help reduce youth marijuana use

Supportive Teachers: Youth who agree that teachers care and encourage them are 52% less likely to have used marijuana in the past month.

Talking with Parents: Youth whose parents talk with them about what they are doing in school every day are 29% less likely to have used marijuana in past month.

Community Connections: Youth who feel connected to their community are 38% less likely to have used marijuana in the past month.

Afterschool Programs: Youth who take part in afterschool activities are 29% less likely to have used marijuana in the past month.

(Alaska Youth Risk Behavior Survey, 2017)

YRBS
AK Youth Risk Behavior Survey

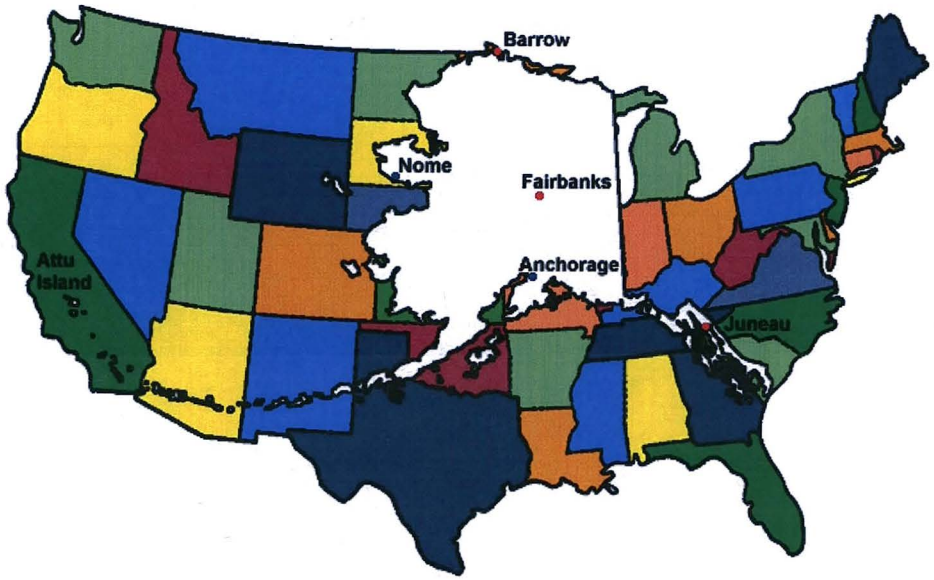
Prevalence of Current Marijuana Use*, OR, WA, CO, and AK, 2016

State	Year Legalized	Adult (18+) current use
Oregon	2014	16%
Washington	2012	14%
Colorado	2012	14%
Alaska	2014	15%

* Any use in the 30 days prior to interview

Oregon, Colorado, Washington, California have all funded programs in their states to aid in

- public education
- monitoring health status
- community-based programming
- screening and treatment



Source: National Council of State Legislatures

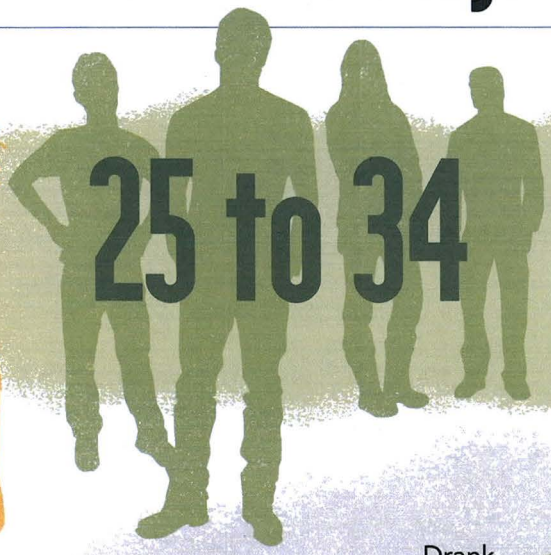
Marijuana Use in Alaska

Personal recreational marijuana has been legal for use by adults in Alaska since 2015. Retail sales began in late 2016. Here's what we know about its impact on public health and safety.

Who's using?

15.4%
of Alaskan adults reported marijuana use in the past 30 days.[1]

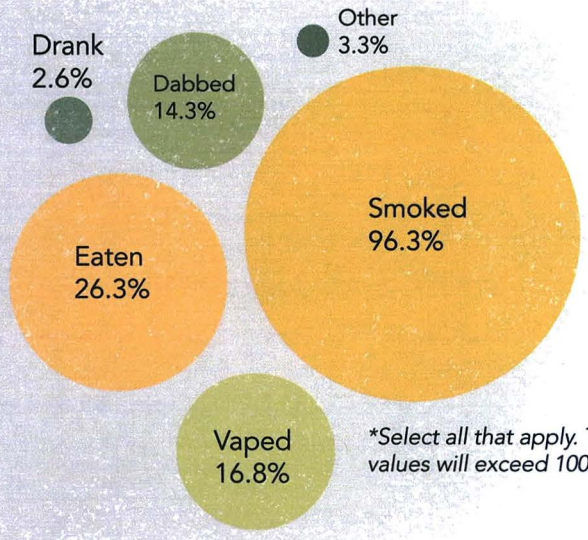
24%
among Alaska Native people.[1]



25 to 34

Marijuana use in Alaska has been **highest among 25-to 34-year-olds**[1].

Smoking marijuana was the most commonly reported method of consumption among all Alaskans (96.3%) and Alaska Native people (99.3%). [1]



**Select all that apply. Total values will exceed 100%.*

1 IN 10
reported using marijuana for medical purposes in past 30 days.[1]

Adults who identified as gay, lesbian, or bisexual reported higher prevalence of current marijuana usage at **28.9%** compared to **14.9%** among those who identify as heterosexual.[1]

Total marijuana tax revenue FY17:	$1,748,848
Total marijuana tax revenue FY18 (first 5 months):	$3,784,599
Total marijuana tax as of November 2017:[2]	**$5,533,447**

Alaska youth profile

78%
of Alaska traditional high school students do not use marijuana.[3]

11%
of those who tried marijuana tried before age 13.[3]

Marijuana is the second most used substance.
Percent of traditional high school students who have used substances at least once in their lifetime.[3]

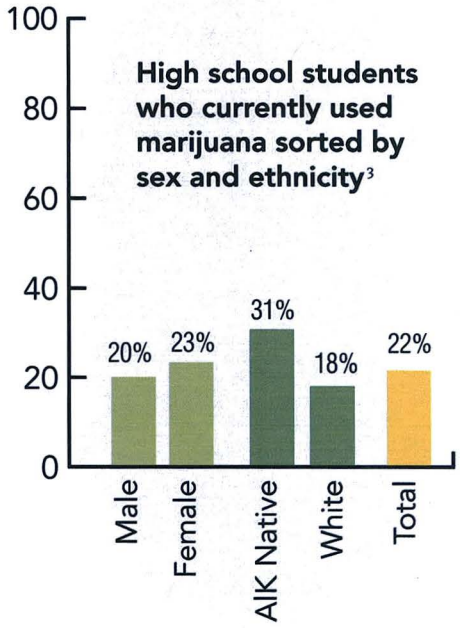
- Alcohol 57%
- Marijuana 42%
- Cigarettes 34%

Other than alcohol, marijuana is the drug most commonly used by high school students who use drugs. The percentage of high school students who have ever used marijuana significantly declined between 2007 (45%) and 2017 (42%).[3]

However disparities do exist: In 2017, Alaska Native high school students were significantly more likely to have ever used marijuana than white high school students (56% vs. 39%). The percentage of female high school students who ever used marijuana increased significantly between 2015 (35%) and 2017 (44%).[3]

In 2017, about 22% of Alaska students report having used marijuana in the past 30 days.[3] Young people who use marijuana regularly may have a harder time learning and remembering things, and marijuana use has been associated with poorer academic performance, which may lead to a higher risk of dropping out of school.[4,5,6]

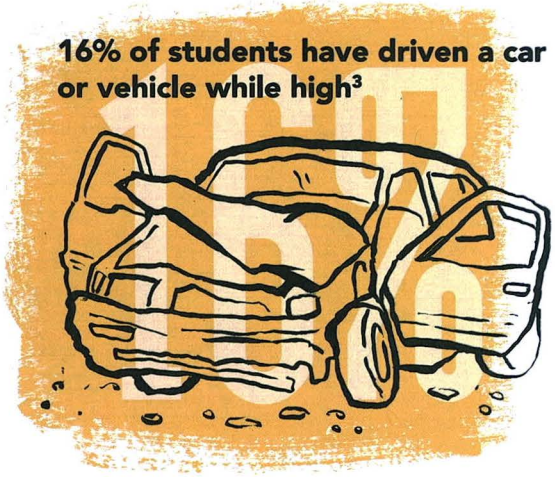
High school students who currently used marijuana sorted by sex and ethnicity[3]



Risk factors correlated to youth marijuana use, compared to youth who have not used marijuana in the past month, include:

- **Depression:** Youth who have used marijuana in the past month are 2 times as likely to have felt so sad or hopeless that they stopped doing usual activities during the past year
- **Suicide Ideation:** Youth who have used marijuana in the past month are 3 times as likely to have seriously considered attempting suicide and made a plan about how they would attempt suicide during the past year
- **Suicide Attempt:** Youth who have used marijuana in the past month are 4 times as likely to have attempted suicide one or more times during the past year[3]

16% of students have driven a car or vehicle while high[3]



Adults can help reduce youth marijuana use:

- **Supportive Teachers:** Youth who agree that teachers care and encourage them are less likely to have used marijuana in the past month.
- **Talking With Parents:** Youth whose parents talk with them about what they are doing in school every day are less likely to have used marijuana in past month.
- **Community Connections:** Youth who feel connected to their community are less likely to have used marijuana in the past month.
- **After-school Programs:** Youth who take part in after-school activities are less likely to have used marijuana in the past month.[3]

Marijuana use and pregnancy

In 2015 in Alaska, about 15% of pregnant women reported smoking marijuana in the 12 months before getting pregnant, about **6% reported smoking marijuana during pregnancy,** and about 8% reported smoking marijuana since their baby was born.[7]

Marijuana during pregnancy
There is no known safe amount of marijuana to use while pregnant. That's because no matter how it's used (smoked, eaten etc.), THC gets passed to your baby and may have a long-term impact on your child's ability to learn.[8]

Marijuana while breastfeeding
Breastfeeding is the optimal feeding choice for most infants. However, any THC consumed enters your breast milk and can be passed to your baby. Talk to your healthcare provider about how to reduce the amount of marijuana consumed during breastfeeding.[9]

Among Alaska adults ages 18 and older during 2008–2009 to 2013–2014, there was a statistically **significant decrease in the perception of great risk of monthly marijuana use.**[10]

Number of marijuana-related calls to the Alaska poison center

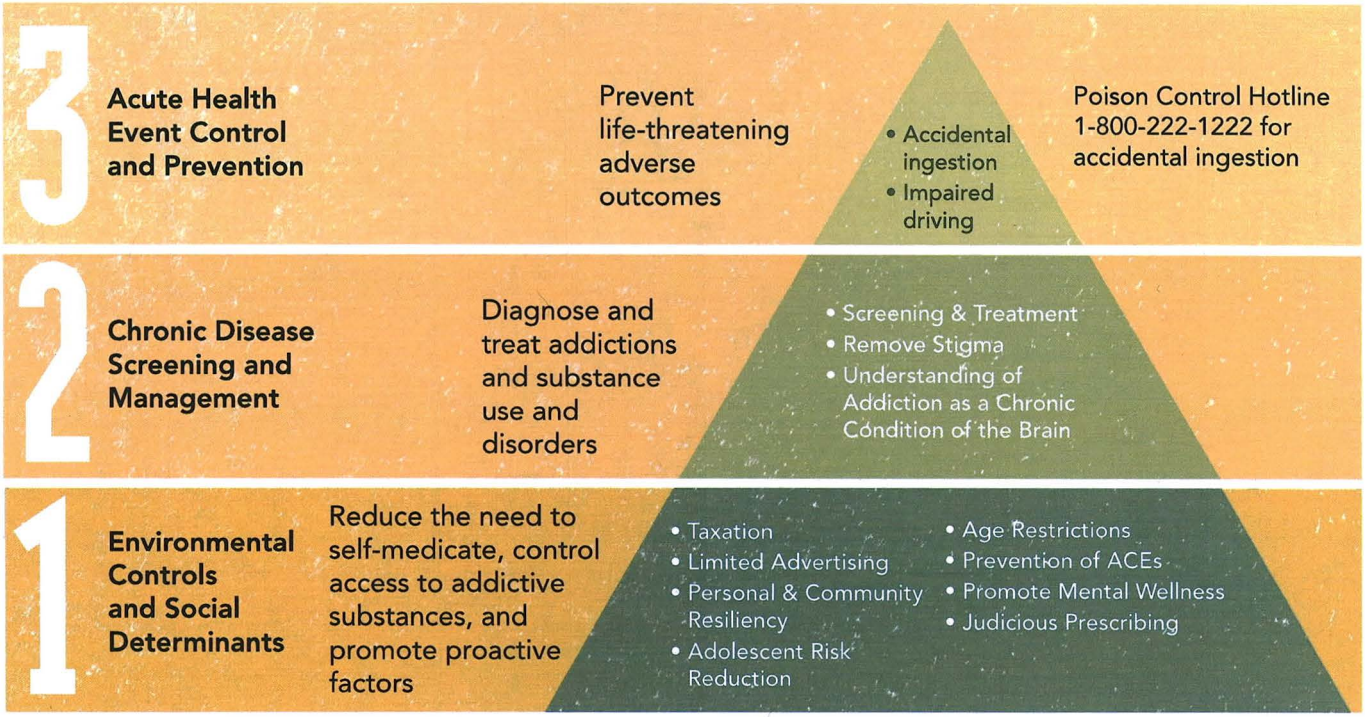
2013 =10
2014 = 8
2015 =10
2016 = 22

Poison Control Center receives over 6,000 calls each year.

Response

Establishing a sustainable public health program aimed at preventing marijuana misuse and addiction is vital to keeping all Alaskans healthy and safe. It's important to keep the public informed of the potential health effects of marijuana products and trends in use.

PUBLIC HEALTH PRACTICE PARADIGMS



A Conceptual Framework of Public Health Approaches to Preventing Substance Misuse and Addictions (See Text for Details) Abbreviations: ACEs, adverse childhood experiences. 2017 ASTHO President's Challenge: Public Health Approaches to Preventing Substance Misuse and Addiction. Butler, Jay C. MD. Journal of Public Health Management and Practice: September/October 2017 - Volume 23 - Issue 5 - p 531–536.

1. Alaska Behavioral Risk Factor Surveillance System (BRFSS), 2016
2. Alaska Department of Revenue - Tax Division
3. Youth Risk Behavior Survey (YRBS), 2017
4. National Institute on Drug Abuse. Drug Facts: Marijuana; 2012.
5. Partnership for a Drug-Free Kids
6. Volkow, ND, et al. Adverse Health Effects of Marijuana. Use. N Engl J Med 2014 Jun; 370:2219-2227
7. Pregnancy Risk Assessment Monitoring System (PRAMS), 2015
8. Fried PA, Smith AM. A literature review of the consequences of prenatal marihuana exposure. An emerging theme of a deficiency in aspects of executive function. Neurotoxicol Teratol. 2001;23(1):1-11
9. Reece-Stremtan S, Marinelli KA. ABM Clinical Protocol #21: Guidelines for Breastfeeding and Substance Use or Substance Use Disorder, Revised 2015. Breastfeeding Medicine. 2015;10(3):135-141.
10. National Survey on Drug Use and Health (NSDUH), 2015

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Statement of Support for HB296

The AMIA would like to make clear its support for HB296, the Act to create a marijuana use prevention, education, and treatment fund. This is a very good common-sense approach after creating the Adult-use market to making sure all means possible are utilized to steer youth away from participating. The AMIA strongly supports the use of taxation for education specifically, for preventative measures to help deter children from trying marijuana while they are still in their formative years. The current system prevents the use or purchase by anyone under the age of 21 and we feel that this is only a good first step. Education and Prevention components should be included in every health curriculum, and especially in Junior High Schools with reinforcement at the Senior High School level.

We would also like to suggest the inclusion of a social media campaign for education and prevention to really reach the targeted younger component of this group.

We would also hope that as this program comes to fruition that thought is given to how adults can dissuade their children from involvement.

In all, we feel like the act of protecting the Youth of Alaska while helping keep the industry health and focused on Adult-use is a most beneficial scenario.

The AMIA would like to offer its support and endorsement for HB 296.

Respectfully Submitted on behalf of the AMIA Board,

Carroll Carrigan

Executive Director

Alaska Marijuana Industry Association