2014

Hawai‘i State Epidemiological Outcomes Workgroup

State Epidemiological Profile:
Selected Youth and Adult Drug Indicators

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ABSTRACT

Background: *The State of Hawai'i Epidemiological Profile: Selected Youth and Adult Drug Indicators* was developed as one of the services provided by the Alcohol and Drug Abuse Division (ADAD) Epidemiology Team. The ADAD Epidemiology Team is a partner of the Strategic Prevention Framework Partnerships for Success (SPF-PFS), which is funded through a federal grant provided by the Substance Abuse and Mental Health Services Administration (SAMHSA). The purposes of this profile are identifying Hawai'i's status of drug use by youth and adults, detecting trends of drug use, and providing information in a user-friendly format for planning and implementation of drug use prevention and treatment programs.

Methods: The drug-related indicators in this profile were selected based on SAMHSA's National Outcome Measures (NOMs). In order to report those selected indicators, Hawai'i Youth Risk Behavior Survey (Hawai'i YRBS) and National Survey on Drug Use and Health (NSDUH) were utilized as primary data sources in this profile.

Results and Findings: The overall prevalence rates of each drug-related indicator among high school students in 2013 were: 18.9% for 30-day marijuana use; 10.4% for trying marijuana before age 13 years; 6.5% for ever using cocaine; 9.2% for ever using inhalants; 8.0% for ever using ecstasy; 3.4% for ever using heroin; 4.3% for ever using methamphetamine; and 12.9% for ever using prescription drugs without a doctor's prescription.

The findings indicated that there were no significant differences in drug indicators for youth (high school students or individuals aged from 12 to 17) in Hawai'i since 2007 except that rates of ever having used ecstasy were slightly but significantly higher in 2011 than 2009. Marijuana was the most prevalent illicit drug among youth with 18.9% reporting that they had used it in the past 30 days (2013). Prescription drugs and inhalants were two most common substances that were ever used by youth (12.9% and 9.2%, respectively in 2013). The least common illicit drug was heroin with 3.4% of youth reported that they had ever used it (2013). There were no sex differences for any youth drug indicator in any year from 2007 to 2013. Overall, no significant differences by grade were seen for any drug indicator except for prescription drug misuse (use without a doctor's prescription), in which 12th graders had higher rates than 9th graders in 2011 and 2013. Native Hawaiians, Caucasians, and other Pacific Islanders generally had the highest rates of youth drug use.

The overall prevalence rates of each drug-related indicator among adults in 2010-2011 were: 6.9% for 30-day marijuana use; 22.1% for ever using cocaine; 10.4% for ever using inhalants; 9.4% for ever using ecstasy; 2.5% for ever using heroin; 7.1% for ever using methamphetamine; and 13.6% for ever using prescription drugs without a doctor's prescription.

There were no significant differences in adult drug indicators for Hawai'i since 2007. Other than marijuana use (data of ever having used marijuana is not available, but 6.9% of adults in Hawai'i reported that they had used marijuana in the past 30 days in 2010-2011), rates of ever having used illicit drugs were highest for cocaine (22.1%) followed by prescription pain relievers (13.6%), and lowest for heroin (2.5%) in 2010-2011, the most current year available.

Program Recommendations: Prevention efforts should be strengthened in response to the fact that the prevalence rates of illicit drugs have not changed in the past seven years. Focus should be on marijuana

use and prescription drug misuse as usage rates for these substances are relatively high (prevalence ≥ 10%) among youth and the interventions should equally target both boys and girls since there were no sex differences in any indicator. To reduce health disparities among ethnic groups in Hawai‘i, culturally appropriate and evidence-based programs are strongly recommended, especially for the groups with the highest rates, such as Native Hawaiians and Caucasians, and other Pacific Islanders. For the drugs with relatively lower prevalence rates such as cocaine, ecstasy, heroin, or methamphetamine, interventions that are highly targeted towards people at greatest risk are recommended. Moreover, prevention programs should be provided to middle school students in order to lower the prevalence rates in high school students.

Prevention efforts for adults also should be strengthened since prevalence rates of illicit drugs have not significantly changed in the past seven years. Focus should be on marijuana, and other drugs with relatively high lifetime use rates (prevalence ≥ 10%), such as cocaine, pain relievers, and inhalants. More young adults (aged 18 – 25) than older adults (age 26 and older) perceived no risk or slight risk of experiencing adverse health effects from marijuana use, which may indicate that young adults have an increased risk of marijuana use. Thus, it is recommended that communities have prevention interventions specifically designed for young adults and focus on risks and negative health outcomes of marijuana consumption.

Data Recommendations: Currently substance use data specifically among college students are not available in Hawai‘i and this gap should be filled by establishing a statewide health survey for college students in which multiple campuses representing Hawai‘i participate. Currently Hawai‘i Behavioral Risk Factor Surveillance System (Hawai‘i BRFSS) does not have any illicit drug indicators therefore it is highly recommended that the survey add some drug indicators, especially for drugs with relatively high prevalence rates such as marijuana, cocaine, prescription pain relievers, and inhalants. It is also important that data be collected from a larger sample size and that reported data be broken into detailed ethnic groups instead of using aggregated categories such as “Asian” or “Native Hawaiian and Pacific Islanders.” This is especially crucial for communities in Hawai‘i that are ethnically and culturally diverse.

ACKNOWLEDGEMENTS

The contents of the State of Hawai‘i Epidemiological Profile: Selected Youth and Adult Drug Indicators are a collaborative effort on the part of numerous individuals and agencies throughout the State of Hawai‘i. It is because of the knowledge and dedication of these entities that Hawai‘i’s SPF-PFS partners are able to provide the leadership necessary for the development and delivery of quality substance abuse prevention, intervention, and treatment services for the youth and adults of the State of Hawai‘i.

The Alcohol and Drug Abuse Division (ADAD) of the Hawai‘i State Department of Health (HIDOH)

ADAD of HIDOH is the primary source of public funds for many substance abuse treatment and prevention services in Hawai‘i. This profile would not have been possible without funding and support from ADAD. ADAD is supported by the SPF-PFS 2013 of SAMHSA, under grant number 1U79SP020167-01.

Evaluation Team at Center on the Family (COF) of the University of Hawai‘i

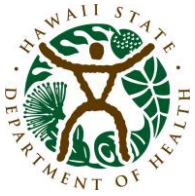
The University of Hawai‘i COF has research and evaluation expertise with substance use prevention programs and has collaborated with ADAD. COF was the evaluator for the Strategic Prevention Framework – State Incentive Grant (SPF-SIG) from 2007 to 2012 and continues their services for the current project SPF-PFS 2013 as one of our partners. The ADAD Epidemiology Team would like to express our gratitude to the Evaluation Team at COF who works collaboratively with the ADAD Epidemiology Team and ADAD at HIDOH.

State Epidemiological Outcomes Workgroup (SEOW) Members

SEOW membership is comprised of directors, epidemiologists and data managers from the government, community stakeholders, and individuals from educational institutions in Hawai‘i (the list of members is available in Appendix E). The ADAD Epidemiology Team appreciates the support and help from these members, and their feedback and suggestions were reflected throughout this profile.

Hawai‘i School Health Survey (HSHS) and Hawai‘i Health Data Warehouse (HHDW)

The HSHS is a joint effort between HIDOH and the Hawai‘i Department of Education (HIDOE) to monitor the health status and needs of students in 6th through 12th grade. Data for a large portion of this profile have been collected and provided by Hawai‘i YRBS, which is one of two survey modules (the other one is Youth Tobacco Survey) that are coordinated by HSHS committee members. HHDW analyzes those datasets and provides detailed reports of results. This profile is designed to provide an overview of alcohol use in Hawai‘i and it would not have been possible without invaluable assistance from HSHS committee members and epidemiologists at HHDW.



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INTRODUCTION

Background

The SAMHSA Center for Substance Abuse Prevention (CSAP), has granted funding to the ADAD Epidemiology Team since fiscal year 2013 through the SPF-PFS. Hawai‘i SPF-PFS is designed to address one of the nation’s top substance abuse prevention priorities: underage drinking among persons aged 12 to 20. To facilitate this, the Hawai‘i ADAD Epidemiology Team, guided by the State Epidemiological Outcomes Workgroup (SEOW), selected the following indicators to be highlighted in this State of Hawai‘i Epidemiological Profile: Selected Youth and Adult Drug Indicators.

Indicators (from SAMHSA’s National Outcome Measures)

Youth (grades 9-12[*1] or aged 12-17[*2]) trends from 2007 to most current year

- 30 day marijuana use
- Age at first use
- Perceived risk/harm of marijuana use
- Disapproval of marijuana use
- Lifetime cocaine use
- Lifetime inhalant use
- Lifetime ecstasy use
- Lifetime heroin use
- Lifetime methamphetamine use
- Lifetime prescription drug use without a doctor’s prescription
- Lifetime being offered, given, sold illegal drugs on school property

[*1] Date from Hawai‘i YRBS
[*2] Data from NSDUH

Adults (18 years or older) trends from 2007 to most current year

- 30 day marijuana use
- Perceived risk/harm of marijuana use
- Lifetime cocaine use
- Lifetime inhalant use
- Lifetime ecstasy use
- Lifetime heroin use
- Lifetime methamphetamine use
- Lifetime prescription pain reliever use without a doctor’s prescription

SPF Program Model

The purpose of Hawai‘i’s SPF-PFS Project is to improve the quality of life for residents of Hawai‘i by continuing to implement the five steps of SAMHSA’s SPF process. This will aid in the development of more effective prevention strategies and sustainable prevention infrastructures statewide to reduce and prevent underage drinking. The five steps included in the SPF process are as follows:

1. Assess Needs

2. Build Capacity

3. Plan

4. Implement

5. Evaluate

These five steps are informed and made relevant by sustainability and cultural competency considerations throughout the project (Figure A).

Figure A. SPF Program Model

The SPF-PFS builds upon the accomplishments of the SPF-SIG and Substance Abuse Block Grants (SABG) to achieve the project goals. The purpose of this profile is to summarize and characterize behavioral health indicators related to drug use area in Hawai‘i, while incorporating SAMHSA’s National Outcome Measures (NOMs).

About the Authors

The ADAD Epidemiology Team has been providing epidemiological services to and works with the ADAD of HIDOH from 2006 to present as a SPF partner. The past three profiles and this current one have been put together by the ADAD Epidemiology Team with guidance from SEOW. SEOW was established in March 2006 with grant funds from the SAMHSA CSAP to HIDOH, ADAD. The ADAD Epidemiology Team also provides technical assistance and training for state and community level stakeholders and sub-recipients in evidence-based programs, data usage, program evaluation, grant writing, needs assessment, and addresses other identified-training needs.

Demographic Profile of the State of Hawai‘i

The State of Hawai‘i is comprised of eight main islands divided into five counties with a total population of approximately 1.4 million. Division of islands by counties is depicted in Table 1. According to the 2013 US Census, this population is composed of the following race/ethnicities: 26.6% Caucasian alone[(a)]; 2.3% Black or African American alone[(a)]; 0.4% American Indian and Alaska Native alone[(a)]; 37.7% Asian alone[(a)]; 10.0% Native Hawaiian and Other Pacific Islander alone[(a)]; 23.1% two or more races; 9.8% Hispanic or Latino[(b)]; and 23.0% Caucasian alone but not Hispanic or Latino[(b)]. Percentages total to be greater than 100% due to overlap of ethnicities.

(a) Includes persons reporting only one race.
(b) Hispanics may be of any race, so also are included in applicable race categories.

Table 1. Division of counties in the State of Hawai‘i

County	Island(s)
Hawai‘i	Big Island
Honolulu	O‘ahu
Kalawao	Kalaupapa Peninsula of Moloka‘i
Kaua‘i	Kaua‘i, Ni‘ihau
Maui	Maui, Lana‘i, Kaho‘olawe, Rest of Moloka‘i

The City and County of Honolulu is the largest of the five counties in terms of population with 987,019 persons as of 2013, whereas the Kalawao County is a smallest with 89 persons. The percentage of persons below poverty level in the State of Hawai‘i was 11.2% (five year estimate of 2009 – 2013) – with Hawai‘i County having the highest rate of 18.3% (five year estimate of 2009 – 2013). Additional individual county information is located in Table 2.

Table 2. State of Hawai‘i social and economic characteristics by county in 2013.

County	Population (estimate)	Persons below poverty level (%, 2009-2013)[*1]	Native Hawaiian and Pacific Islander alone[*2] population (%)
Hawai‘i	191,409	18.3%	12.7%
Honolulu	987,019	9.8%	9.4%
Kalawao	89	14.7%	47.8%
Kaua‘i	69,679	11.2%	9.1%
Maui	160,791	10.6%	10.6%
Overall (State of Hawai‘i)	1,408,987	11.2%	10.0%

Source: U.S. Census Bureau

[*1] Five-year estimates are “period” (not “point-in-time”) estimates that represent data collected over 60 months. The American Community Survey (ACS), which provides data on poverty, reports data with single-year, 3-year, and 5-year estimates. The primary benefit of using multiyear estimates is the increased statistical reliability of the data due to the larger sample size. The data from states and communities with populations of less than 65,000 is not collected for ACS’s single-year estimates.

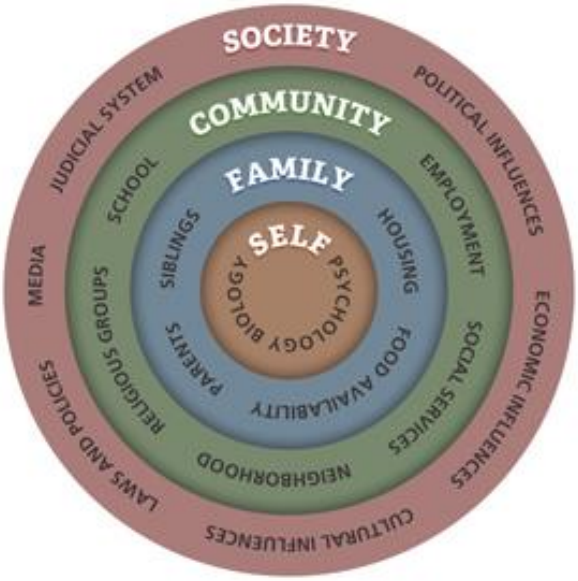
[*2] Includes persons reporting only one race.

Risk and Protective Factors for Substance Use Prevention

Over the past few decades, research has been aimed at identifying patterns and factors that commonly exist among youth and adults who initiate risky behaviors. Risk and protective factors affect individuals’ decisions and behaviors at multiple levels. Figure B shows these levels as the social ecological model: individual or self; family, school/workplace or community; and society.

When community planners, prevention and treatment providers, and policymakers design substance use prevention interventions, it is crucial to look across these different contexts because targeting multiple levels of factors is often more effective than targeting just one level. For example, alcohol and substance use prevention interventions that focus on the risk and harm of substance use for adolescents will have less impact if there is easy access to alcohol and drugs in the community or there is no parental supervision.

Figure B. Risk and protective factors by social ecological model levels



Source: SAMHSA Center for the Application of Prevention Technologies (CAPT)

Youth

Individual's perceived risk is one of the strongest concepts of behavioral theories for predicting substance use among adolescents. Multiple studies have shown that substance use, including marijuana and other drugs, is less prevalent among individuals with greater risk perception than those who think there is small or no risk and harm in substance use (Andersson et al., 2009; Kilmer et al., 2007; Lopez-Quintero & Neumark, 2010).

Family factors can act as both risk and protective factors for adolescents' substance use. Parental approval or favorable attitudes towards alcohol or substance use are reliable predictors of a youth's substance use. Adolescents who perceive that their parents would strongly disapprove if they use specific substances are less likely to use these substances. For example, youth who perceived strong parental disapproval for trying marijuana once or twice have a much lower 30-day marijuana use rate compared to those who did not perceive this level of parental disapproval (4.1% vs. 29.3%, respectively) (SAMHSA, 2014).

Several studies have shown that substance use by a close family member may increase the risk of a youth's initiation of underage drinking and other drug use (Kuntsche & Kuendig, 2006; Latendresse et al., 2008; Ewing et al., 2014). On the other hand, monitoring or supervision from parents was found to work as a protective factor that reduces substance use among teenagers (Cleveland et al., 2010; Lac et al., 2009; Schinke et al., 2009). Also, youth with low school commitment seem to be associated with more risk of substance use-related problems (Rhodes & Jason, 1990; Ellickson & Hays, 1992).

Table 3 displays a list of risk and protective factors for youth at four levels: peer and individual, family, school/work, and community. Data on risk and protective factors among youth in this report can be found in the sections of tried marijuana before age 13 years, perceived risk from marijuana use, and disapproval of marijuana use.

Table 3. Risk and protective factors for substance use among youth

Domain	Risk Factors	Protective Factors
Peer and Individual	• Early onset of risky behaviors • Psychological distress • Lower quality of life • Impulsiveness • Favorable attitudes toward substance use • Low perceived risk of substance use • Antisocial behaviors • Friends' substance use • Interaction with antisocial peers • Rebelliousness • Sensation seeking	• Peer disapproval of substance use • High perceived risk of substance use • Belief in the moral order • Education aspirations • Religiosity • Social or refusal skills • Use of health care services for mental health
Family	• Poor family supervision • Lack of parental sanctions for antisocial behaviors • Parental attitudes favorable toward substance use • Parental attitudes favorable toward antisocial behavior • Substance use by a close family member • Close family member history of antisocial behaviors	• Family attachment • Family opportunities for positive involvement • Family rewards for positive involvement • Balance of autonomy and relatedness to family • Behavioral and emotional autonomy
School/Work	• Low school/work commitment • Poor academic/work performance • Attending college	• School/work opportunities for positive involvement • School rewards for positive involvement • Attending/completing college
Community	• Community disorganization • Transition and mobility • Exposure to community substance use • Laws and norms favorable to substance use • Perceived availability of drugs and handguns • Ability to purchase alcohol or tobacco	• Community opportunities for positive involvement • Community rewards for positive involvement • Connectedness to adults outside of family

Sources: Fleury et al. (2014), Guo et al. (2001), Mason and Windle (2001), Pearson (2004), and Tam et al. (2000).

Adults

Although many studies on risk and protective factors have focused on adolescents or early adulthood, risk and protective factors can affect individuals' initiation to substance use or development of other mental health disorders over a lifetime. Several risk and protective factors, such as age of onset, family history of alcohol or drug problems, sensation-seeking, and anti-social attitude commonly predicts adults' substance behaviors as well as those of adolescents and youth.

For example, early age of alcohol onset is associated with not only alcohol abuse, but also drug use and other substance use-related behaviors later in life (McGue et al., 2001). Alcohol use and drug use seem closely linked to each other as individuals' early onset of drug use has also been associated with their lifetime development of alcohol and drug dependence (Grant & Dawson, 1998; Lynskey et al., 2003; Robins & Przybeck, 1985).

Mental health conditions, such as depression and anxiety disorders, are risk factors for self-medication with alcohol and other substances (Oslin et al., 2006). A study found that middle aged adults with symptoms of depression are more likely to cope with stress by consuming substances including alcohol, cigarettes, and prescription and other drugs (Mauro et al., 2015).

Social factors, such as living in a disadvantaged neighborhood, also seem to be associated with increased risk of drug use among adults. Research by Boardman et al (2001) with a sample size of >1000 found that neighborhood disadvantage has a strong association with higher levels of stress, lower levels of social support, and higher levels of psychological distress. In this study, neighborhood disadvantage was measured by percentage of people living below the poverty line, percentage of households that are headed by females, percentage of male unemployment, and percentage of family receiving public assistance. The same study also addressed the relationship between residing in disadvantaged neighborhood and drug use, and found that individuals with high neighborhood disadvantage score are more likely to consume drugs compared to ones with a lower score. This relationship was even more prominent among individuals with lower income.

Finally, studies on adults' (older than 26 years) risk and protective factors for alcohol and drug use are scarce as most behavioral research on substance use focused on adolescents and emerging adulthood (typically age 18 – 26). Thus future studies are needed to explain how and what factors predict and are associated with adults' behaviors surrounding substances. Moreover, those studies should examine adults in several age groups, such as adults aged 26 – 40, adults aged 40 – 59 (midlife), and senior adults aged 60 and older (retirement age) as factors may affect individuals differently in different stages of adulthood.

Risk and protective factors for adults are summarized in Table 4. In this profile, adult indicators related to risk and protective factors can be found in the section on perceived risk of harm of marijuana use in the adult section.

Table 4. Risk and protective factors for substance use among adults

Domain	Risk Factors	Protective Factors
Peer and Individual	• Early onset of risky behaviors • Psychological distress • Lower quality of life • Impulsiveness • Favorable attitudes toward substance use • Low perceived risk of substance use • Antisocial behaviors • Friends' substance use • Interaction with antisocial peers • Rebelliousness • Sensation seeking • Lack of commitment to conventional adult roles • Personal history of past problem with substance use • Poor health status, particularly chronic and disabling disorders • Low physical activity • Physical impairments • Untreated depression • Perceived autonomy, well-being, and control over life events	• Peer disapproval of substance use • High perceived risk of substance use • Belief in the moral order • Education aspirations • Social or refusal skills • Use of health care services for mental health • Identity exploration in love and work • Developing a world view • Subjective sense of adult status • Subjective sense of self-sufficiency • Making independent decisions • Becoming financially independent • Future orientation • Achievement motivation • Physical activity • Religiosity and attitudes toward spiritual/religious affiliations • Coping skills and personal resilience
Family	• Substance use by a close family member • Close family member history of antisocial behaviors • Leaving parents' home • Loss of spouse through death or divorce • Transitional life events (e.g., death in the family, children leaving home, menopause, and relocation) • Relationship strains, such as stress with a spouse or family member and the stress of caring for a sick family member or the sick • Low quality of caregivers, whether family members or professionals • Presence or threat of physical, sexual, or emotional abuse • Family's favorable attitudes toward substance use	• Family attachment • Family opportunities for positive involvement • Family rewards for positive involvement • Balance of autonomy and relatedness to family • Behavioral and emotional autonomy
Workplace	• Low school/work commitment • Poor academic/work performance • Attending college • Actual or perceived loss of status through retirement or job loss	• School/work opportunities for positive involvement • School rewards for positive involvement • Attending/completing college • Presence of protective workplace structure, policies, and programs, such as drug-free workplace programs or medication workshops • Access to healthcare benefits

Community/ Environment	• Community disorganization • Having no mobility and ability to access community services • Having no physical and financial access to quality healthcare services • Exposure to community substance use • Laws and norms favorable to substance use • Polypharmacy, including concurrent use of multiple drugs and substandard prescribing practices by healthcare providers, such as inattention to potential drug interactions and side effects, inadequate pain control, and subtherapeutic prescribing	• Community opportunities for positive involvement • Having mobility and ability to access community services • Having physical and financial access to quality healthcare services • Community rewards for positive involvement • Sense of attachment or inclusion in larger community • Sense of safety from risk of physical or emotional harm • Nature of community norms related to substance use • Availability of specialized care from gerontologists and other specialists familiar with needs of older adults

Sources: O'Connell et al. (2009), Oslin et al (2006), and Substance Abuse and Mental Health Services Administration (SAMHSA) Center for the Application of Prevention Technologies (CAPT). (n. d.).

About This Profile

A brief description is provided for each graph in this profile. Descriptions are generally structured in the following order: overall result summary (comparison between the state and overall US rate), comparison between males and females, comparison among different grade levels, and comparison among different ethnic groups.

Hawai‘i YRBS data in 2007 and 2009 for some of the ethnic groups was not reported due to insufficient sample sizes. In later years, the 2011 and 2013 Hawai‘i YRBS had larger samples and therefore better ethnicity data. The purpose of the graphs by ethnic group is to identify differences between ethnic groups rather than differences between years. Thus, the rates of drug indicators for youth that are broken down by ethnic groups are displayed only for 2011 and 2013 in this profile.

METHODS

Section Overview

Indicators were selected from SAMHSA's list of NOMs based on data source availability. The purpose of this section is to provide a brief description of primary and secondary data sources used for this State Epidemiological Profile. Primary data sources are entities of data collected and analyzed by the same organization whereas secondary data sources are entities of available data that were aggregated into an accessible format by someone/place other than the origin. Limitations of each source were evaluated based on the following criteria: data availability, methodology of the data collection, frequency of data collection, and population sampled. Data were analyzed and structured into an easy-to-read format by the ADAD Epidemiology Team. All descriptions below were obtained from the official sites of each database.

Primary Data Sources

Hawai'i Youth Risk Behavior Survey (Hawai'i YRBS)

Description: The YRBS is a national health survey conducted by the Centers for Disease Control and Prevention (CDC). The YRBS monitors six types of health-risk behaviors that contribute to the leading causes of death and disability among youth, and also prevalences of obesity and asthma among youth and young adults. Data are collected regarding health-risk behaviors among 9^{th} through 12^{th} grade students in the US. These behaviors include behaviors that contribute to injuries and violence, alcohol or other drug use, tobacco use, sexual risk behaviors, unhealthy dietary behaviors, and physical inactivity. Hawai'i YRBS is administered by HIDOE in partnership with HIDOH, and the HHDW provides detailed reports for the state YRBS data.

Limitations: Although quality of the data are demonstrated as acceptable, there might be potential underreporting or overreporting of behaviors from the participants since data are self-reported and includes sensitive topics such as underage drinking and other substance use. Also, the YRBS is a school-based survey that is only generalizable to students of public high schools. Counties that have a response rate less than 60% are not analyzed, which may lower the representativeness across geographic areas. Although Hawai'i YRBS includes middle school data, there are fewer alcohol-related items compared to high school data. Other than core questions that are standardized by CDC, comparable national data are not available for some of the indicators in Hawai'i YRBS. The most recent data available is 2013.

Website: http://www.hhdw.org/cms/index.php?page=yrbss-reports

National Survey on Drug Use and Health (NSDUH)

Description: The NSDUH is an annual nationwide survey that involves interviews with roughly 70,000 randomly selected individuals aged 12 and older. The collected data are used to provide state-level estimates on mental health and the use of tobacco products, alcohol, illicit drugs, in the

United States. Participants are given cash incentives and interviewed in their home by a professional interviewer of the Research Triangle Institute (RTI).

Limitations: The survey is all self-reported and the survey methodology may cause respondents to answer questions based upon their perception of their interviewer's desired response. Incentives provided from survey completion may lead to certain populations being more willing to participate in the survey than other populations. Data collected are only reported as state-specific and county-level data are not provided with publically available data. NSDUH is designed for national data, thus state-level data are limited. For example, due to small sample sizes, state-level data are only available for combined years (e.g, 2006-2007, and 2008-2009) instead of as annual data. The most current combined year available for this profile was 2010-2011. Although the NSDUH collects data from individuals aged 12 and older, it doesn't provide data specifically for college students and sample size would be too small when the data are broken down by state and college-age group (typically 18 – 25).

Website: http://www.samhsa.gov/data/population-data-nsduh

Secondary Data Sources

Hawai'i Health Data Warehouse (HHDW)

Description: HHDW was created through the partnership between HIDOH and the University of Hawai'i's John A. Burns School of Medicine (JABSOM). The database is one of the five components under the Healthy Hawai'i Initiative (HHI), which was created to address and monitor the Healthy People 2010 goals. The five interrelated components are the following: schools, communities, public and professional education, research and evaluation, and nutrition education network.

Limitations: Compiled data are specific to each included data source.

Website: http://www.hhdw.org/

Substance Abuse Prevention Planning and Epidemiology Tool (SAPPET)

Description: SAPPET, formerly named the Behavioral Health Indicators System (BHIS), is an interactive, web-based data and monitoring system sponsored by SAMHSA's Center for the Application of Prevention Technologies. The goal of this database is to create a comprehensive national and state-level interactive substance abuse monitoring system that includes mental/behavioral health indicators and shared risk/protective factors as they relate to substance abuse. The website is designed for guiding prevention planning and epidemiological analysis. Currently SAPPET contains 151 behavioral health key indicators from 11 national date sources, and these data are available by state.

Limitations: Only state-level data are included and county-level data are not available. Data sets are missing from certain indicators. The site is also updating at an unknown rate.

Website: https://www.sappet-epi.com/

National Outcome Measures (NOMs)

Overview

The SAMHSA NOMs are an effort to develop a reporting system that will create an accurate and current national picture of substance abuse and mental health services. This system was developed jointly by SAMHSA, the states, and the District of Columbia. Ten domains below were identified in an effort to limit the number of outcomes to measure, which allowed for an increase in focus on those particular areas to see if the outcomes were met.

- Reduced Morbidity: Abstinence from Drug Use/Alcohol Use
- Employment/Education
- Crime and Criminal Justice
- Stability in Housing
- Access/Capacity
- Retention
- Social Connectedness
- Perception of Care
- Cost Effectiveness
- Use of Evidence-based Practices

The matrix for the NOMs can be found in Appendix C. For the epidemiological purposes of this profile and due to data availability, this profile will only contain the domain of reduced morbidity: abstinence from drug use/alcohol use. This domain includes lifetime use and 30-day indicators.

How to Read Graphs

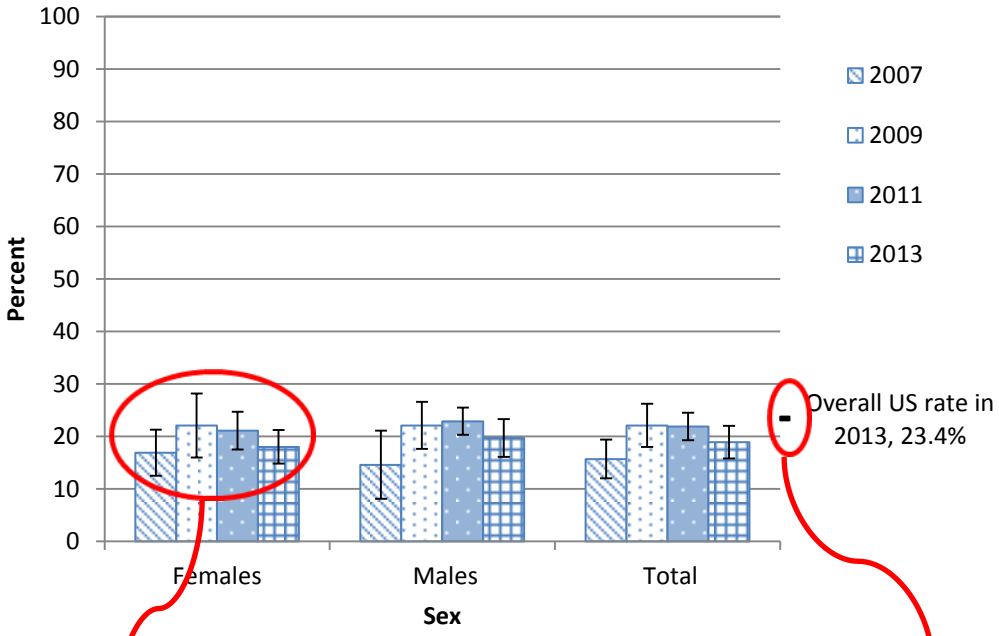
Data Assistance: Understanding a Graph

Section Overview

Data of select indicators are presented as bar graphs that are intended to assist in utilizing the data to further efforts in substance abuse prevention. The following two sections illustrate how to read and interpret the graphs in this profile.

Tells you the substance and indicator represented in the graph. The age group represented in the graph is specified in parentheses.

Figure 1. 30-day marijuana use by sex (high school students)



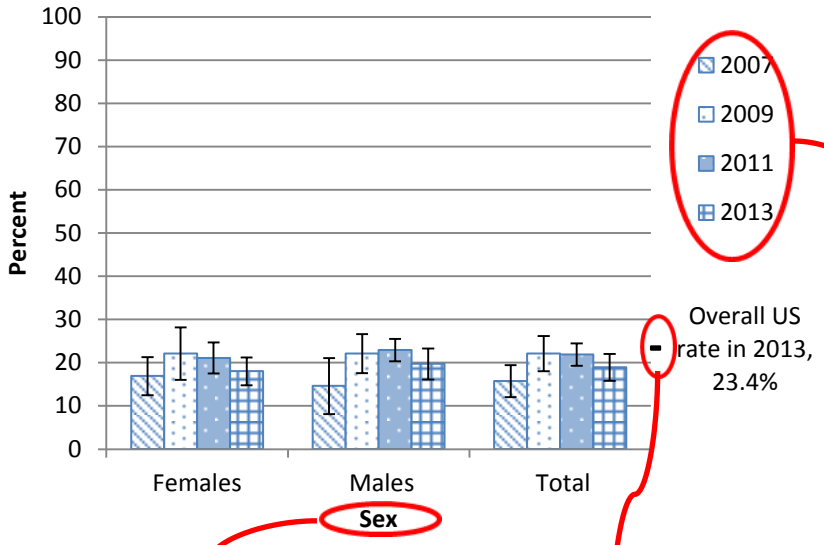
Whiskers indicate 95% confidence intervals of individual bars. The true values of the data have 95% probability of falling within the whiskers.

The dash shows the 2013 rate for the United States.

How to Interpret Graphs

Step 1: Pick a substance, indicator, and age group

Figure 1. 30-day marijuana use by sex (high school students)



Step 4: Compare trends over time.

Ex: From 2007 to 2013, there were no significant changes in 30-day marijuana use in Hawai‘i.

Step 2: Pick a variable of interest.

Ex: sex, ethnicity, or age group (youth).

Step 3: Determine US overall rate in 2013.

Ex: The Hawai‘i total in 2013 was slightly lower than the overall US rate of 2013.

Step 5: Put it all together.

Ex There were no significant differences between high school males and females in 30-day marijuana use across years.

Step 6: Set goals

Ex: We recommend that the outcome of a 10-year goal for lowering substance abuse indicator rates should be 10% lower than the most current average. HP 2020 goals for Hawai‘i are also suggested and can be found at:

http://www.hawaiihealthmatters.org/index.php?module=Trackers&func=display&tid=1003.

YOUTH MARIJUANA AND OTHER DRUG INDICATORS

Youth: 30-Day Marijuana Use by Sex, Grade, and Ethnicity

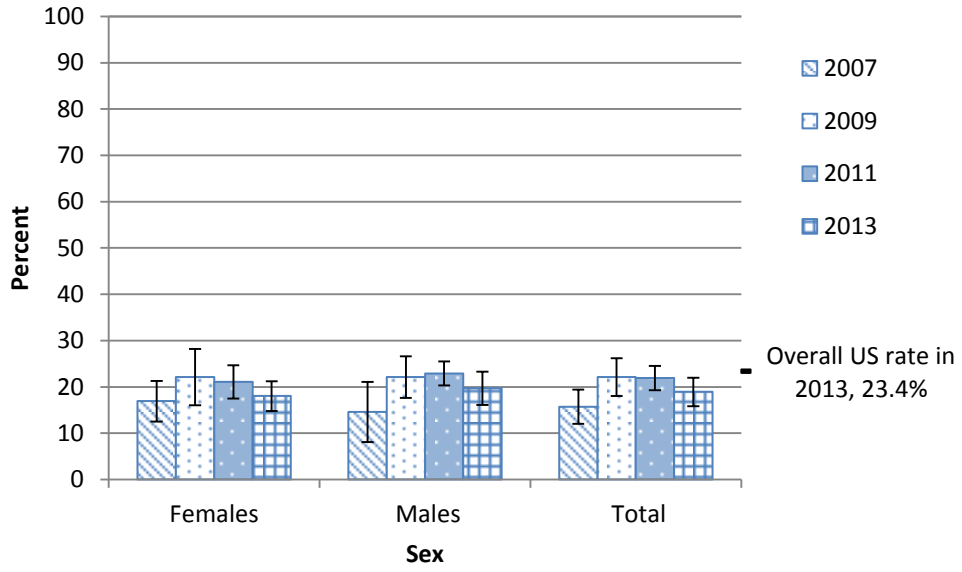
30-day marijuana use indicates youths' current marijuana use, measured as whether he or she has used marijuana in the 30 days preceding the survey. Figures 1, 2, and 3 show the percentage of high school students in Hawai‘i who are 30-day marijuana users by sex, grade, and ethnicity, respectively.

In 2013, high school students in Hawai‘i had a slightly lower rate (18.9%) than the overall US rate in the same year (23.4%).

There were no significant differences in the percentages of current marijuana use by sex (Figure 1) or grade (Figure 2) across years.

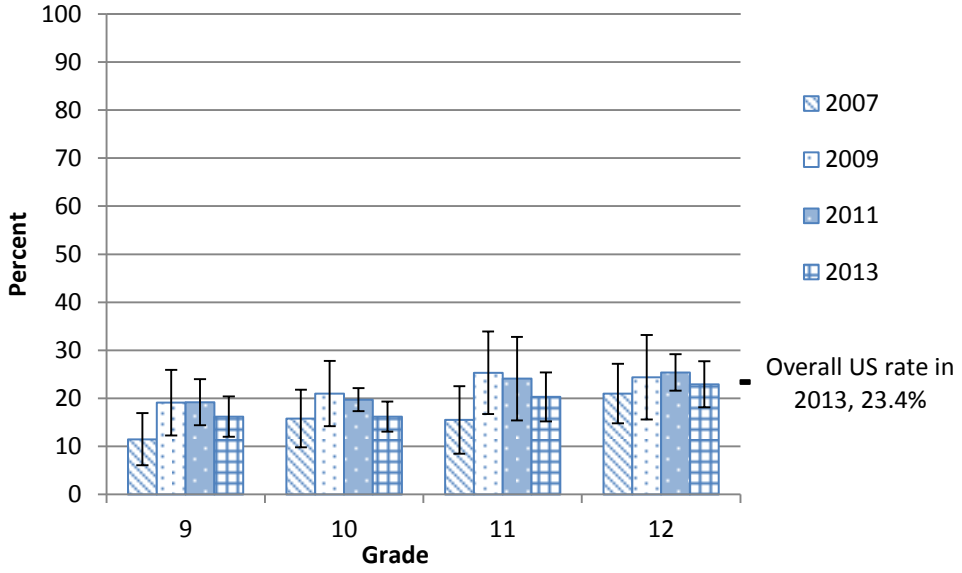
Native Hawaiians had significantly higher rates of 30-day marijuana use than Filipinos, Japanese, and other Asians for in both 2011 and 2013 (Figure 3).

Figure 1. 30-day marijuana use by sex (high school students)



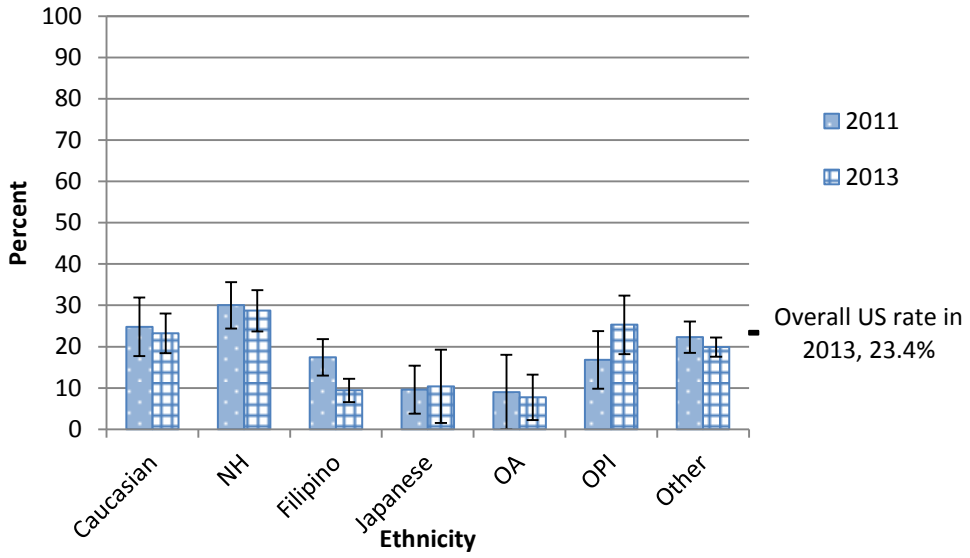
Source: HHDW 2007, 2009, 2011, and 2013

Figure 2. 30-day marijuana use by grade (high school students)



Source: HHDW 2007, 2009, 2011, and 2013

Figure 3. 30-day marijuana use by ethnicity (high school students)



Source: HHDW 2011 and 2013
NH= Native Hawaiians; OA = Other Asians; OPI = Other Pacific Islanders

Youth: Tried Marijuana before Age 13 Years (for the first time) by Sex, Grade, and Ethnicity

Tried marijuana before age 13 years indicates early onset marijuana use. Figures 4, 5, and 6 show the percentage of youth (9^{th} – 12^{th} graders) in Hawai‘i who tried marijuana for the first time before age 13 years.

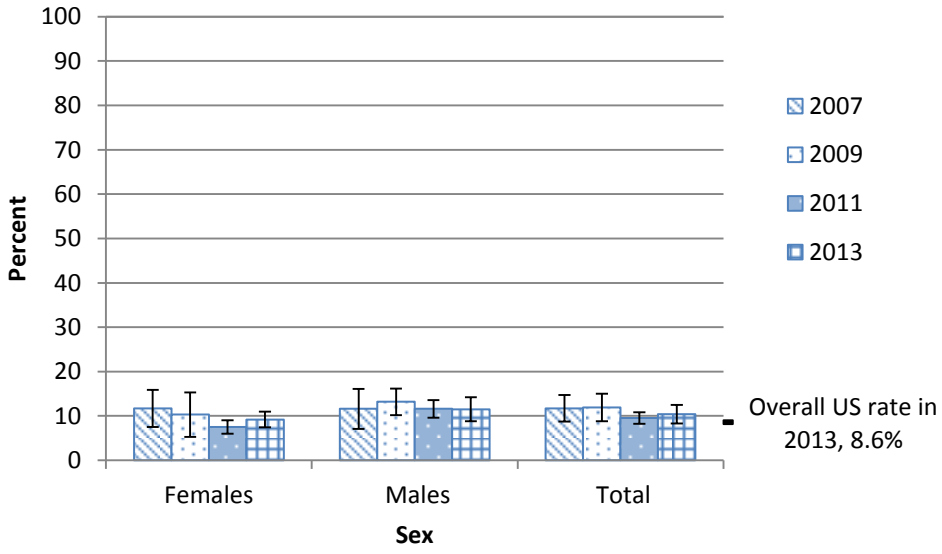
There were no significant differences in the total rate of youth in Hawai‘i who had tried marijuana for the first time before age 13 years from 2007 to 2013 (Figure 4). In 2013, the rate of youth in Hawai‘i who had tried marijuana before age 13 years (10.4%) was not significantly different from the overall US rate (8.6%) for the same year.

There were no significant differences in the rate of trying marijuana before age 13 years by sex except in year 2011 when males had a significantly higher rate than females (Figure 4).

There were no significant differences in the rate of trying marijuana before age 13 years by grade (Figure 5).

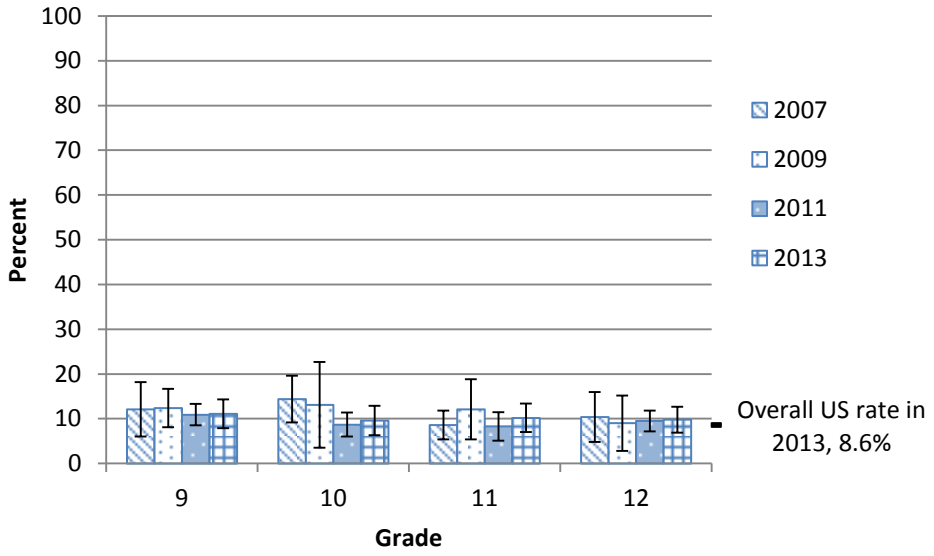
Across years, Native Hawaiians usually had significantly higher rates of trying marijuana before age 13 years than Caucasians, Filipinos, Japanese, and other Asians (Figure 6).

Figure 4. Tried marijuana for the first time before age 13 years by sex (high school students)



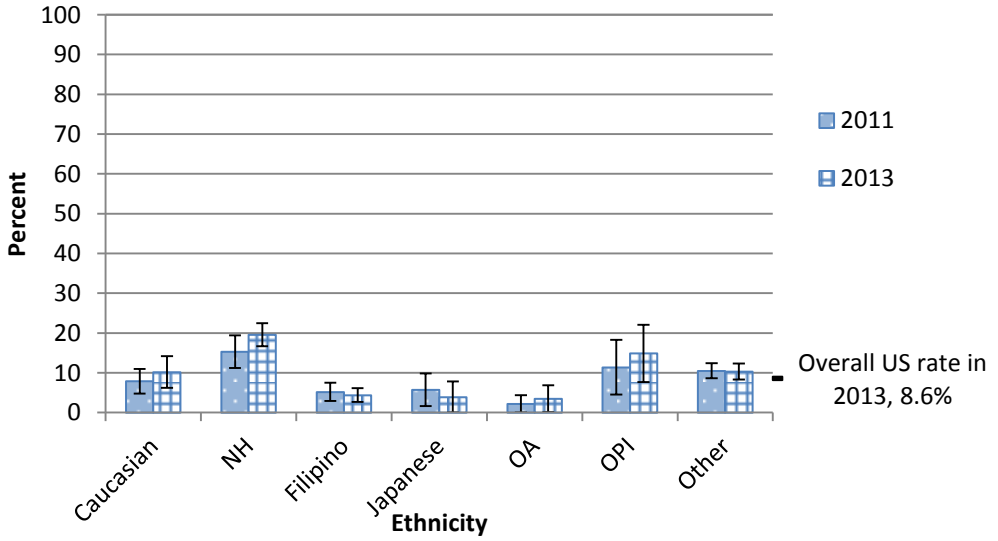
Source: HHDW 2007, 2009, 2011, and 2013

Figure 5. Tried marijuana for the first time before age 13 years by grade (high school students)



Source: HHDW 2007, 2009, 2011, and 2013

Figure 6. Tried marijuana for the first time before age 13 years by ethnicity (high school students)



Source: HHDW 2011 and 2013

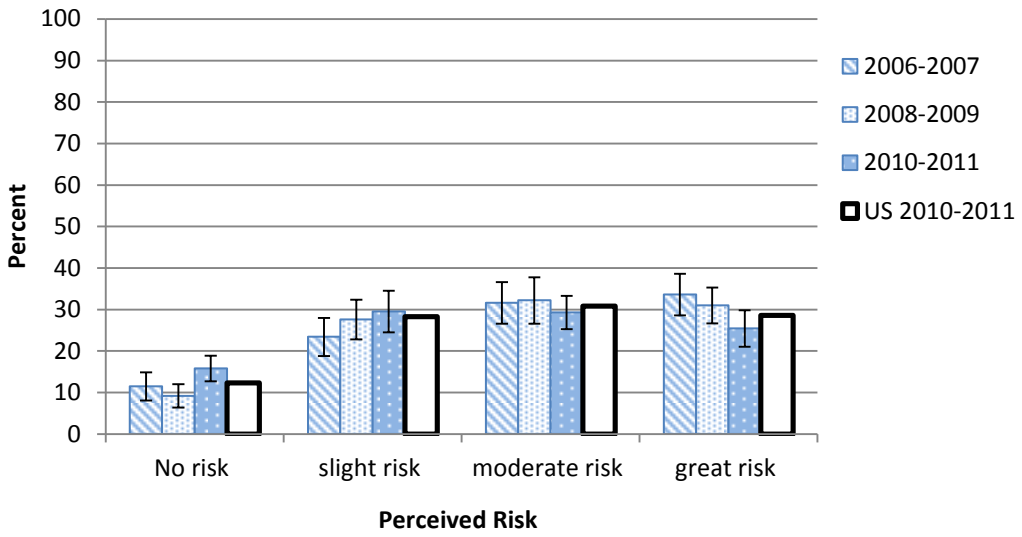
NH= Native Hawaiians; OA = Other Asians; OPI = Other Pacific Islanders

Youth: Perceived Risk from Marijuana Use

Perceived risk from marijuana use indicates how risky people perceive smoking marijuana once a month to be. Figure 7 shows the perceived risk from smoking marijuana once a month for youth aged 12 to 17 years in Hawai‘i.

Significantly more youth perceive the risk of smoking marijuana once a month as being great, moderate, or slight compared to no risk. About 20% to 40% of youth aged 12 to 17 years in Hawai‘i reported slight, moderate, or great risk of smoking marijuana once a month and these rates did not change significantly over time. There were no significant differences by levels of perceived risk. Hawai‘i’s rates in 2010-2011 were closely paralleled the overall US distribution in 2010-2011.

Figure 7. Perceived risk from smoking marijuana once a month (12 – 17 years old)



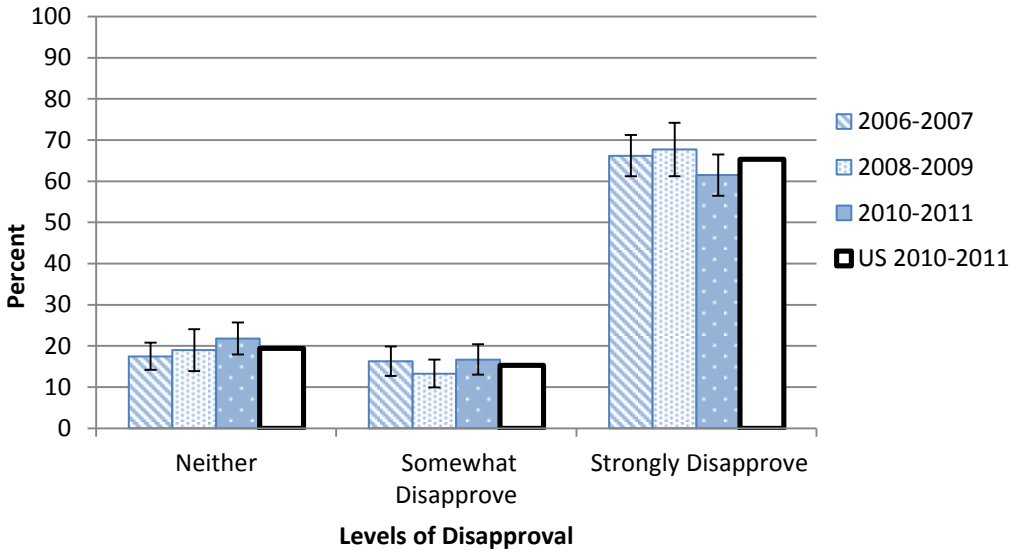
Source: NSDUH 2007-2008, 2008-2009, and 2010-2011

Youth: Disapproval of Marijuana Use

Figure 8 shows how youth aged 12 to 17 years old feel about someone their age trying marijuana or hashish once or twice.

Significantly more youth (over 55%) strongly disapprove of someone their age trying marijuana or hashish once or twice compared to somewhat disapprove or neither in all year groups in Hawai‘i and the U.S. The distribution of disapproval levels did not change significantly across year groups and closely paralleled the overall US distribution in 2010-2011.

Figure 8. How do you feel about someone your age trying marijuana or hashish once or twice?



Source: NSDUH 2007-2008, 2008-2009, and 2010-2011

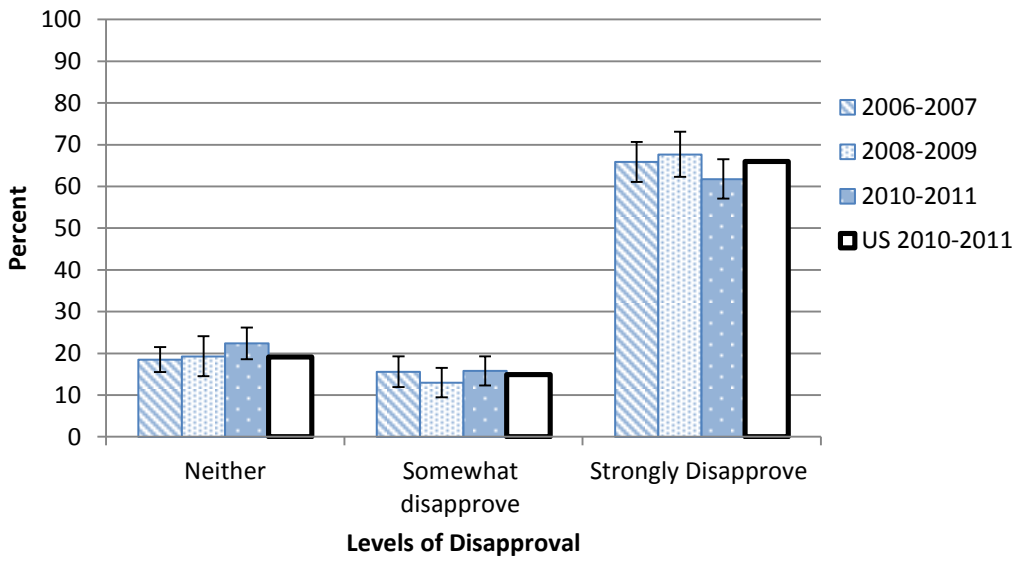
Figure 9 shows how youth aged 12 to 17 years old feel about someone their age using marijuana once a month or more.

The rates and distribution of how youth feel about someone their age using marijuana or hashish once a month or more (Figure 9) are similar to the rates and distribution of how youth feel about someone their age trying marijuana or hashish once or twice (Figure 8).

Significantly more youth (over 55%) strongly disapprove of someone their age using marijuana or hashish once a month or more compared to somewhat disapprove or neither.

The distribution of disapproval levels did not change significantly across year groups and closely paralleled the overall US distribution in 2010-2011 (Figure 9).

Figure 9. How do you feel about someone your age using marijuana or hashish once a month or more?



Source: NSDUH 2007-2008, 2008-2009, and 2010-2011

Youth: Ever Used Cocaine by Sex, Grade, and Ethnicity

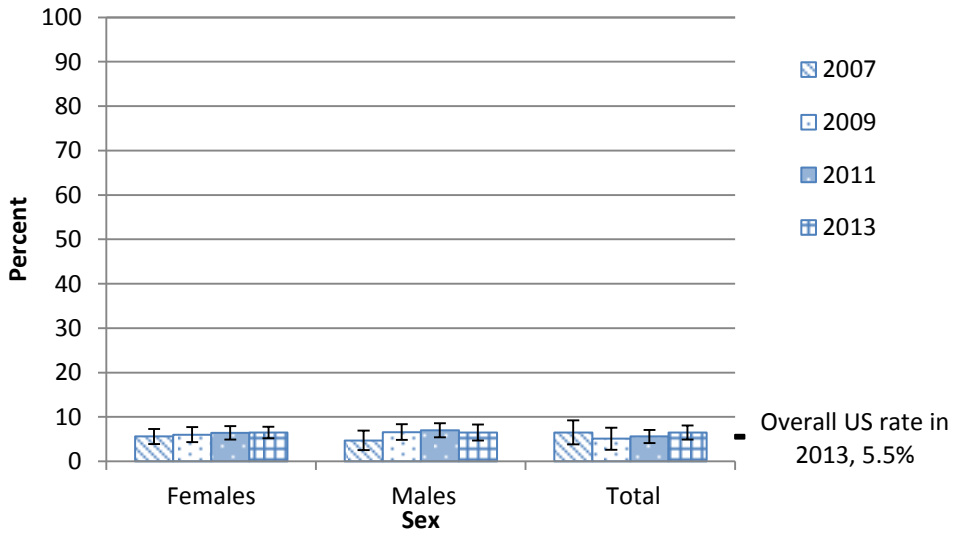
Ever used cocaine indicates whether someone has ever, even once, used any form of cocaine. Figures 10, 11, and 12 show the percentage of high school students in Hawai‘i who have ever used cocaine.

There were no significant differences in the total rate of youth in Hawai‘i who had ever used cocaine from 2007 to 2013 (Figure 10). In 2013, the rate of youth in Hawai‘i ever using cocaine (6.5%) was not significantly different from the overall US rate (5.5%) for the same year.

There were no significant differences in the rate of ever using cocaine by sex (Figure 10). 11th graders had particularly low rates of ever using cocaine in 2007 compared to other years. In general, there were no significant differences by grade in any year except that 12th graders had higher rate than 10th graders in 2011 (Figure 11).

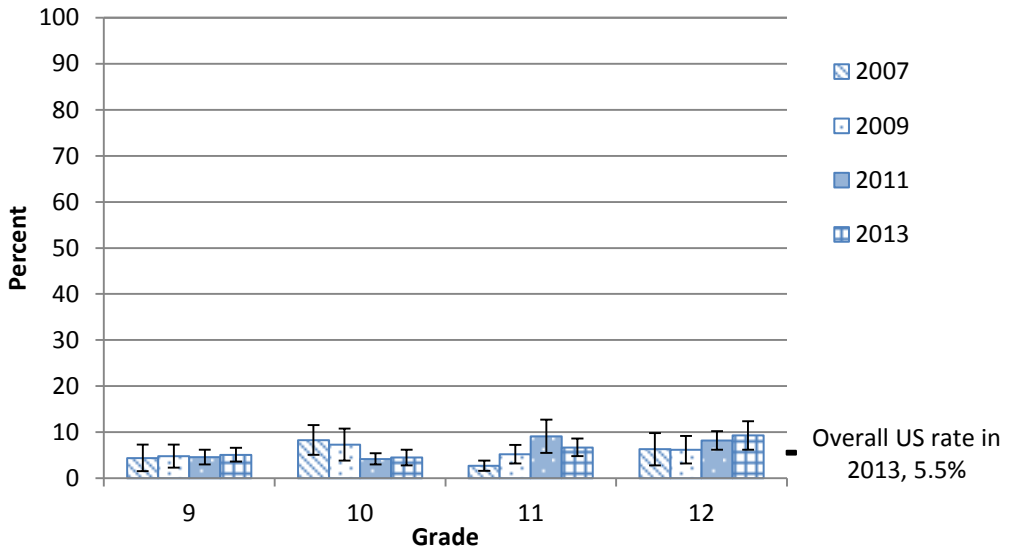
There were mostly no significant differences in the rate of ever using cocaine by ethnicity in both 2011 and 2013, but Caucasians and Native Hawaiians had significantly higher rates than Other Asians in 2013 (Figure 12).

Figure 10. Ever used cocaine by sex (high school students)



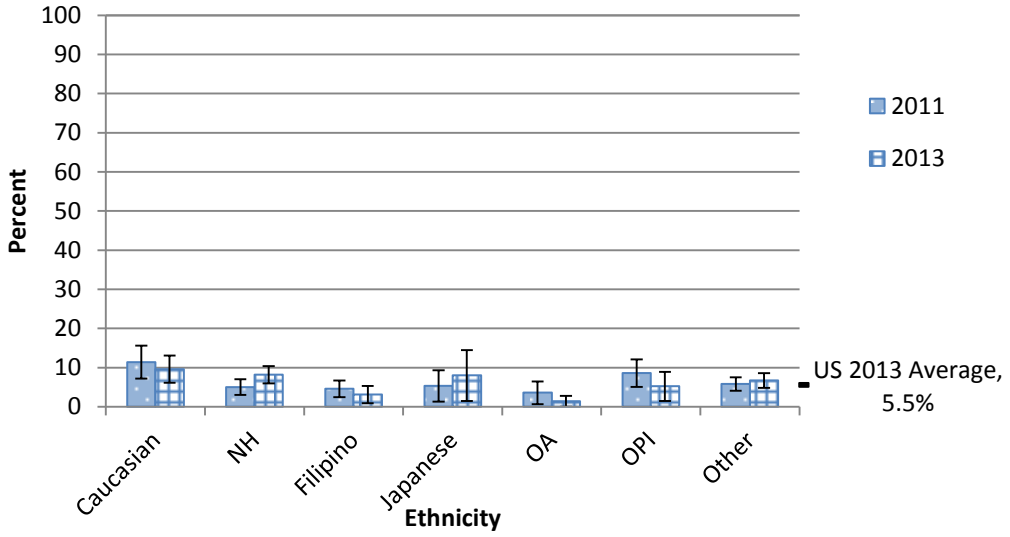
Source: HHDW 2007, 2009, 2011, and 2013

Figure 11. Ever used cocaine by grade (high school students)



Source: HHDW 2007, 2009, 2011, and 2013

Figure 12. Ever used cocaine by ethnicity (high school students)



Source: HHDW 2011 and 2013

NH= Native Hawaiians; OA = Other Asians; OPI = Other Pacific Islanders

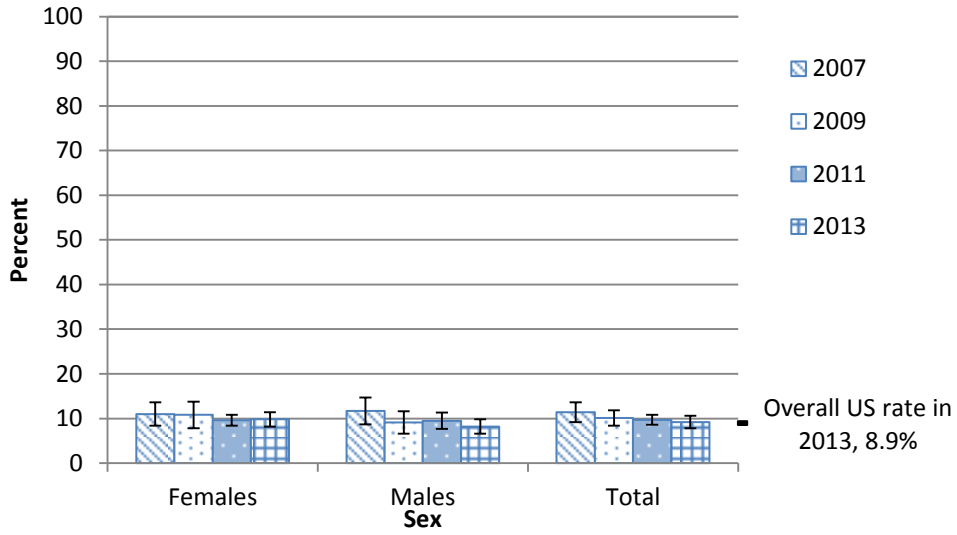
Youth: Ever Used Inhalants by Sex, Grade, and Ethnicity

Ever used inhalants indicates whether someone has ever, even once, inhaled a liquid, spray, or gas for kicks or to get high. Figures 13, 14, and 15 show the percentage of high school students in Hawai‘i who have ever used inhalants.

There were no significant differences in the total rate of youth in Hawai‘i who had ever used inhalants from 2007 to 2013 (Figure 13). In 2013, the rate of youth in Hawai‘i ever using inhalants (9.2%) was not significantly different from the overall US rate (8.9%) for the same year.

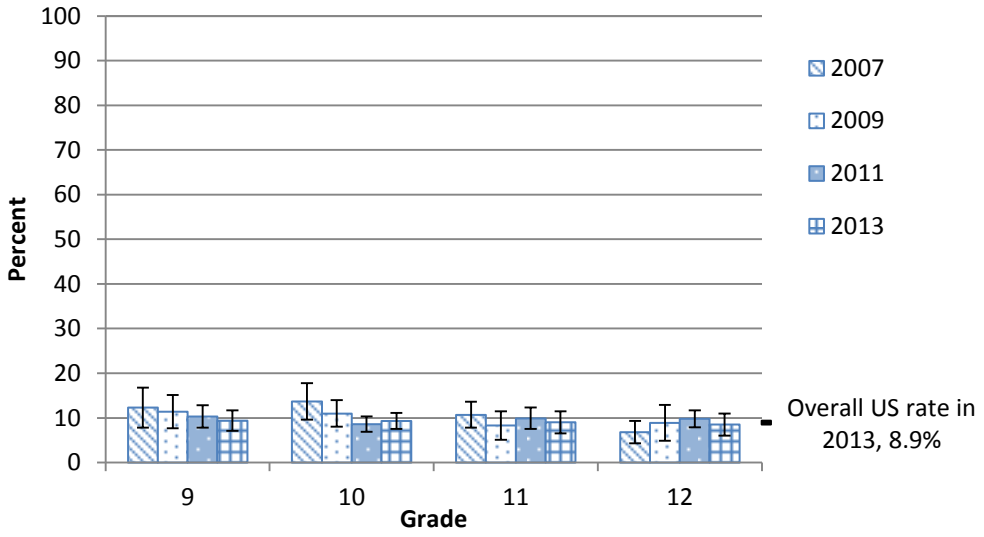
There were no significant differences in the rate of ever using inhalants by sex (Figure 13), grade (Figure 14), or ethnicity (Figure 15).

Figure 13. Ever used inhalants by sex (high school students)



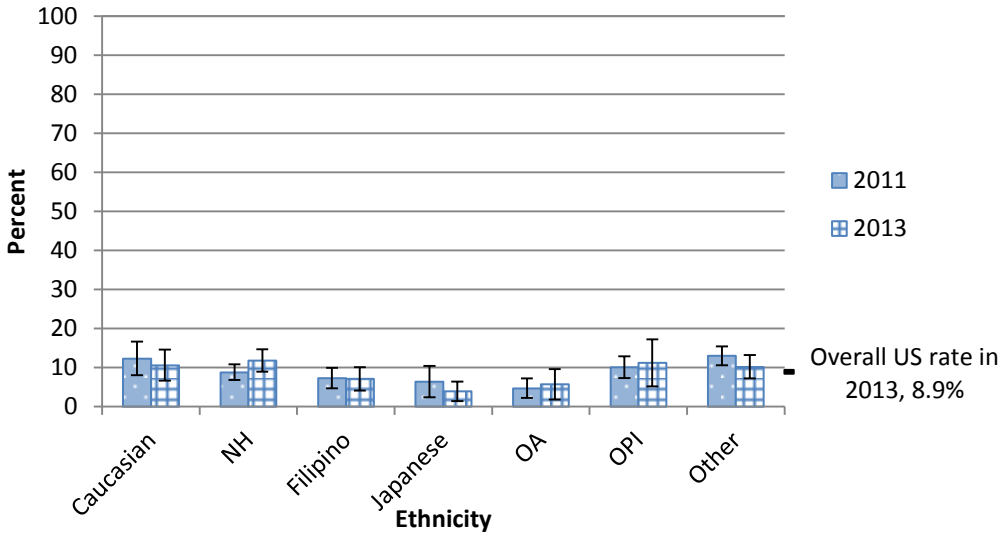
Source: HHDW 2007, 2009, 2011, and 2013

Figure 14. Ever used inhalants by grade (high school students)



Source: HHDW 2007, 2009, 2011, and 2013

Figure 15. Ever used inhalants by ethnicity (high school students)



Source: HHDW 2011 and 2013

NH= Native Hawaiians; OA = Other Asians; OPI = Other Pacific Islanders

Youth: Ever Used Ecstasy by Sex, Grade, and Ethnicity

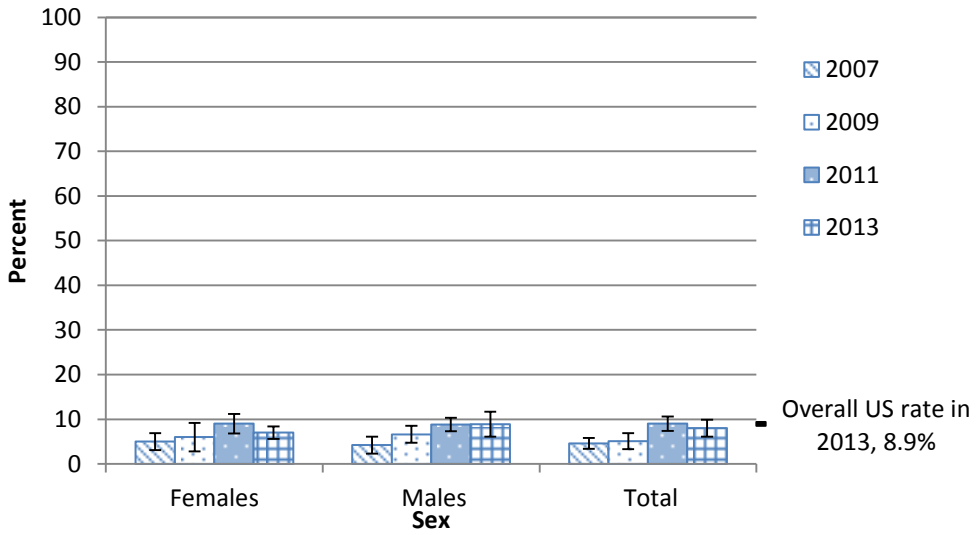
Ever used ecstasy indicates whether someone has ever, even once, used ecstasy (including MDMA). Figures 16, 17, and 18 show the percentage of high school students in Hawai‘i who have ever used ecstasy.

Significantly more high school students had ever used ecstasy in 2011 than in 2007. This trend was also observed among male students (Figure 16). In 2013, the rate of youth in Hawai‘i ever using ecstasy (8.0%) was not significantly different from the overall US rate (8.9%) for the same year.

Among each graders – 9th, 11th, and 12th – except 10th graders showed higher rates of ever using ecstasy in 2011 compared to the rate in 2007. Overall, there were no significant differences by grade across years except that 10th graders had higher rate than 9th and 11th graders in 2007 (Figure 17).

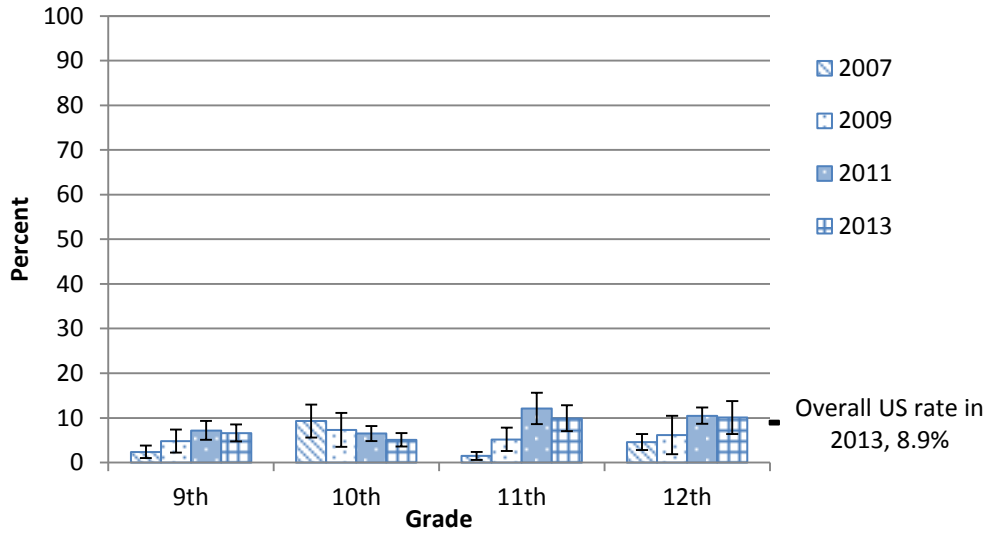
There were no significant differences in the rate of ever using ecstasy by ethnicity for 2011 and 2013 except that Caucasians and Native Hawaiians had significantly higher rates of ever using ecstasy than other Asians in 2013 (Figure 18).

Figure 16. Ever used ecstasy by sex (high school students)



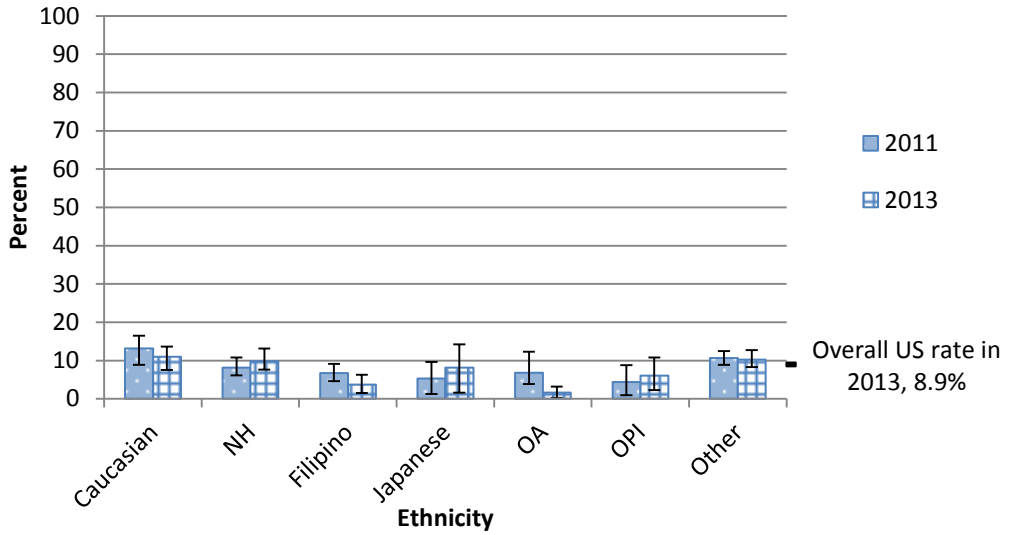
Source: HHDW 2007, 2009, 2011, and 2013

Figure 17. Ever used ecstasy by grade (high school students)



Source: HHDW 2007, 2009, 2011, and 2013

Figure 18. Ever used ecstasy by ethnicity (high school students)



Source: HHDW 2011 and 2013

NH= Native Hawaiians; OA = Other Asians; OPI = Other Pacific Islanders

Youth: Ever Used Heroin by Sex, Grade, and Ethnicity

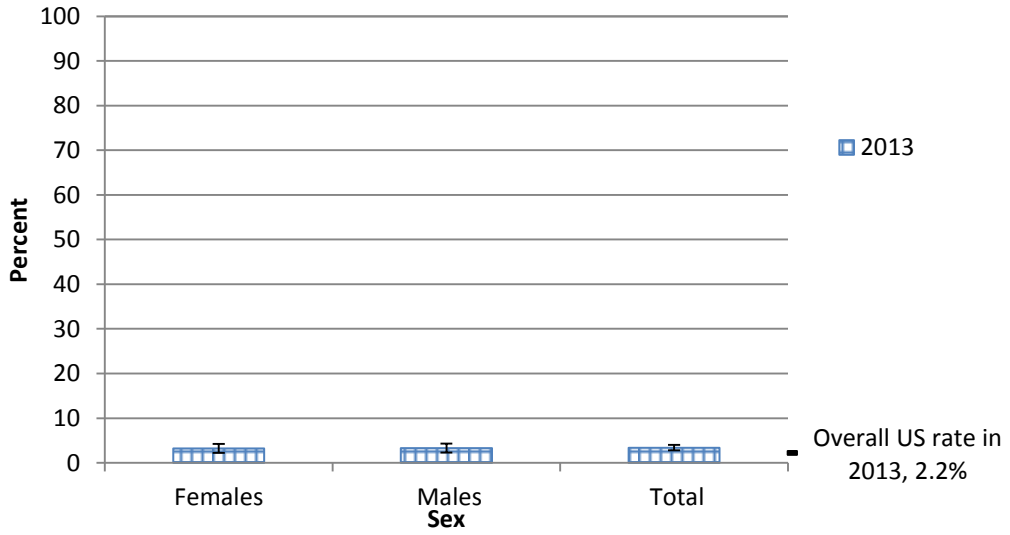
Ever used heroin indicates whether someone has ever, even once, used heroin. Figures 19, 20, and 21 show the percentage of high school students in Hawai‘i have ever used heroin.

In 2013, the rate of high school students in Hawai‘i having ever used heroin (3.4%) was higher than the overall US rate (2.2%) for the same year.

There were no differences by sex (Figure 19), or grade (Figure 20).

Caucasians had higher rate (4.6%) than Asians (2.1%) or Multiple Race (2.2%) in 2013 (Figure 21).

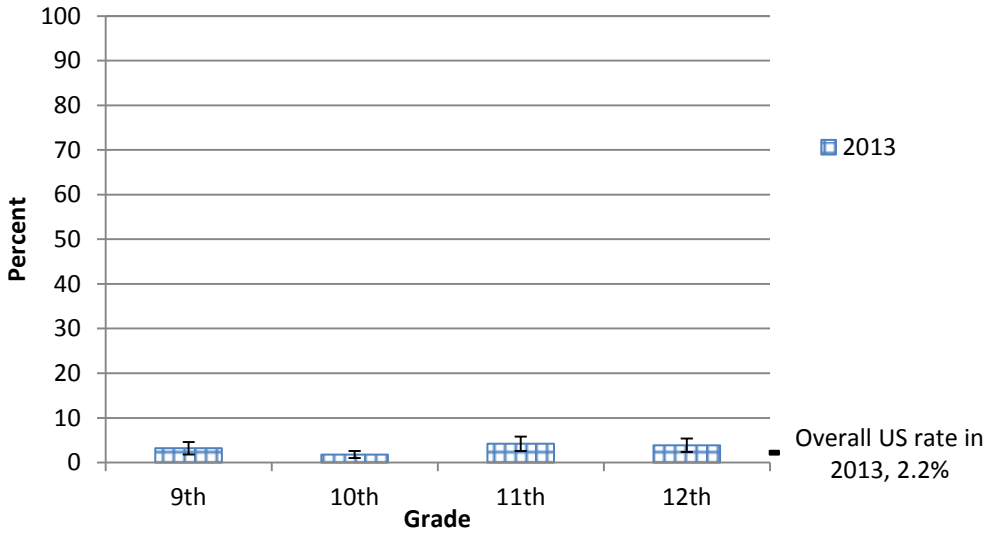
Figure 19. Ever used heroin by sex (high school students)



Source: YRBS Youth Online in 2013

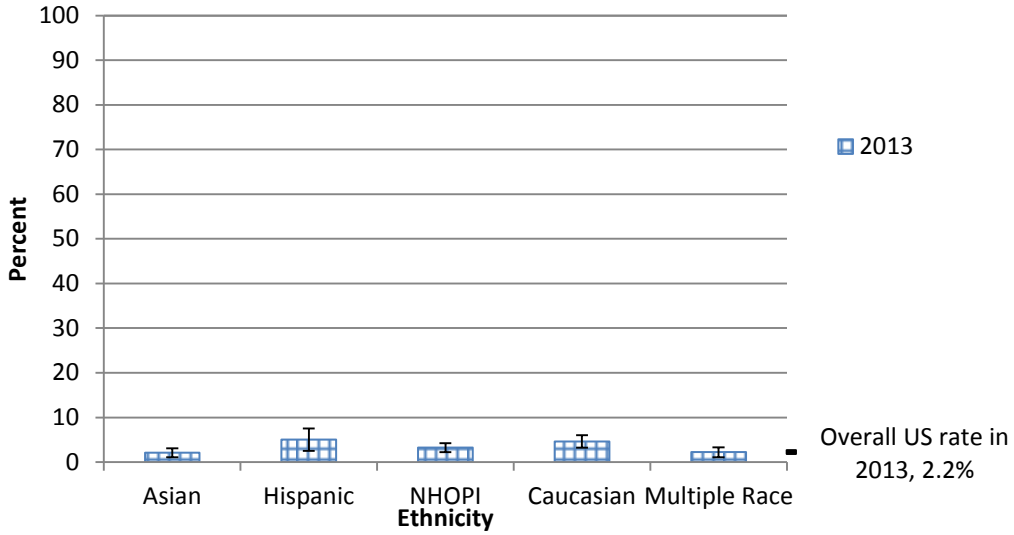
***** Data are unavailable for 2007, 2009, and 2011

Figure 20. Ever used heroin by grade (high school students)



Source: YRBS Youth Online in 2013
***** Data are unavailable for 2007, 2009, and 2011

Figure 21. Ever used heroin by ethnicity (high school students)



Source: YRBS Youth Online in 2013
NH= Native Hawaiians; OA = Other Asians; OPI = Other Pacific Islanders
***** Data are unavailable for 2011

Youth: Ever Used Methamphetamine by Sex, Grade, and Ethnicity

Ever used methamphetamine indicates whether someone has ever, even once, used any form of methamphetamines (including crystal, ice, and crank). Figures 22, 23, and 24 show the percentage of high school students in Hawai‘i who have ever used methamphetamine.

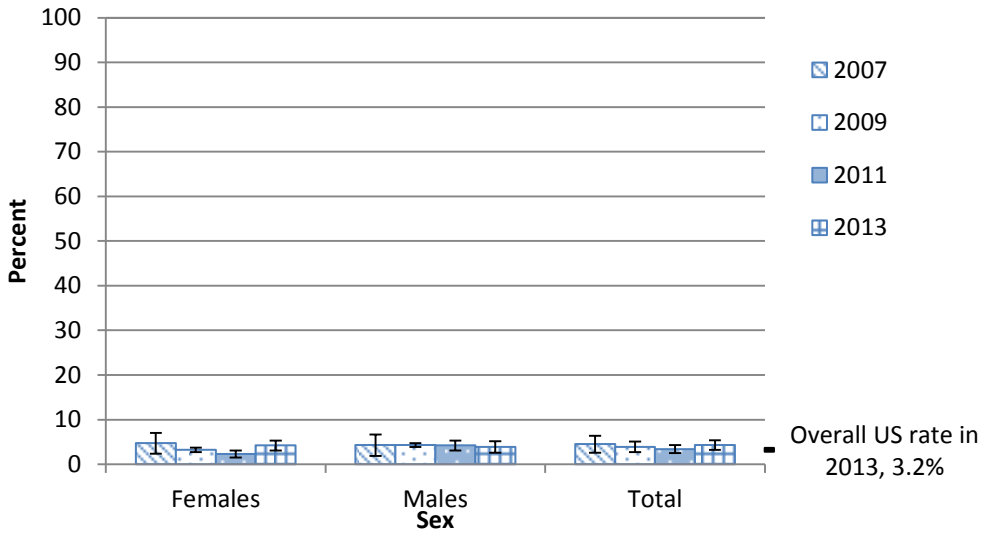
In 2013, the rate of youth in Hawai‘i ever using methamphetamine (4.3%) was not significantly different from the overall US rate (3.2%) for the same year.

There were no significant differences by sex (Figure 22).

Among 11th graders, the rate in 2013 was significantly higher than the rate in 2007. There were no significant differences by grade in any given year (Figure 23).

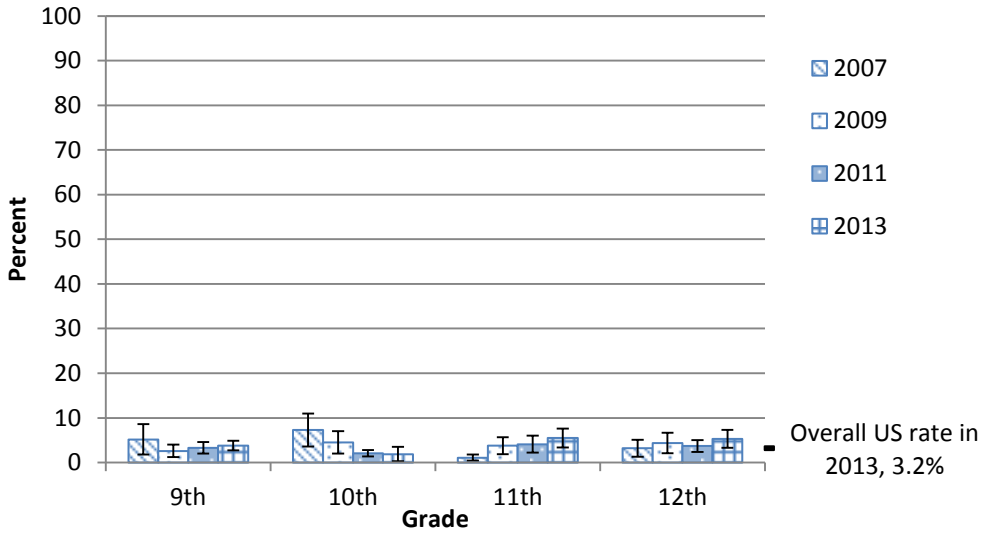
There were no significant differences by ethnicity (Figure 24).

Figure 22. Ever used methamphetamine by sex (high school students)



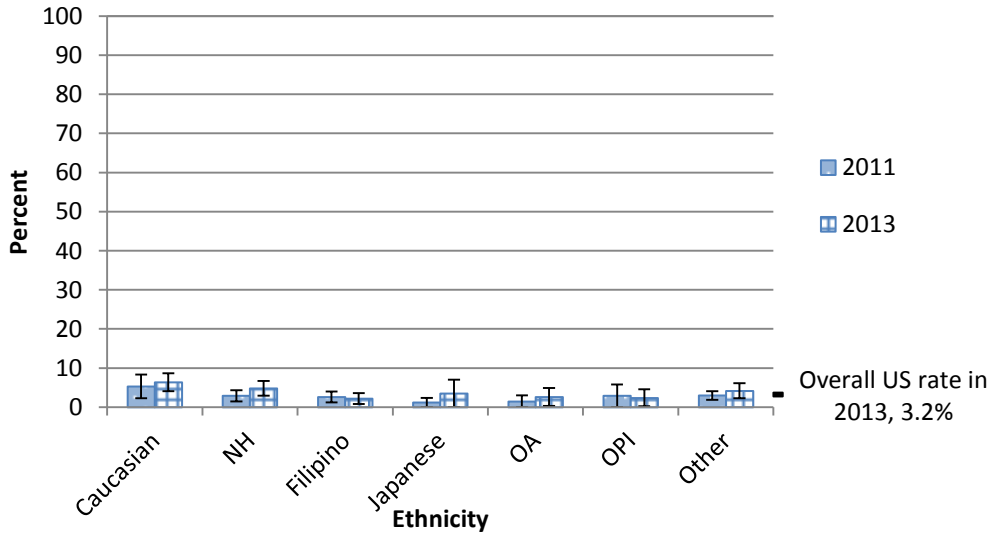
Source: HHDW 2007, 2009, 2011, and 2013

Figure 23. Ever used methamphetamine by grade (high school students)



Source: HHDW 2007, 2009, 2011, and 2013

Figure 24. Ever used methamphetamine by ethnicity (high school students)



Source: HHDW 2011 and 2013

NH= Native Hawaiians; OA = Other Asians; OPI = Other Pacific Islanders

Youth: Ever Used Prescription Drugs without a Doctor's Prescription by Sex, Grade, and Ethnicity

Ever used prescription drugs without a doctor's prescription indicates whether someone has taken prescription drugs (e.g., Oxycontin, Percocet, Vicodin, Codeine, Adderall, Ritalin, or Xanax) without a doctor's prescription one or more times during their life. Figures 25, 26, and 27 show the percentage of high school students in Hawai'i who have ever used prescription drugs without a doctor's prescription.

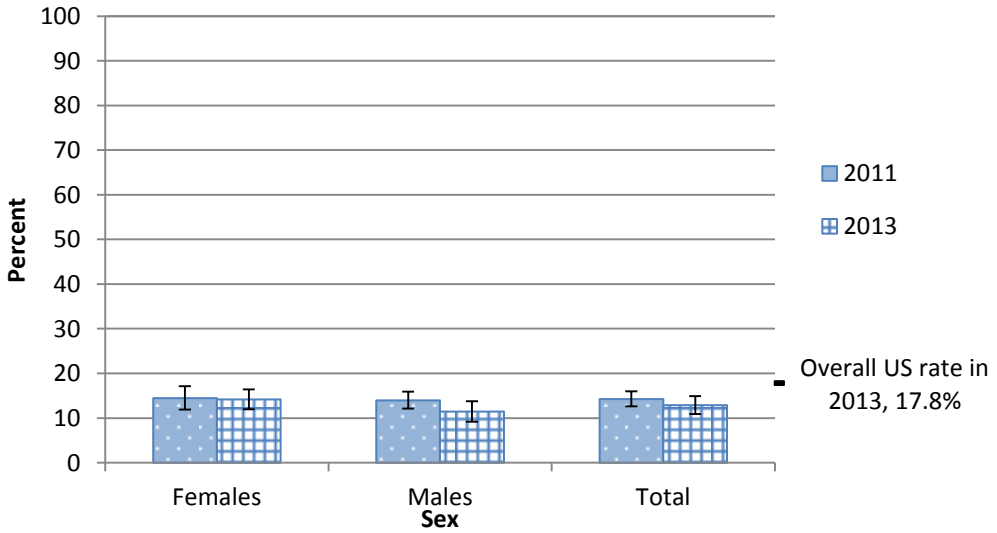
There was no significant difference in Hawai'i's total rates between 2011 and 2013 (Figure 25). In 2013, the rate of youth in Hawai'i ever using prescription drugs without a doctor's prescription (12.9%) was lower than overall US rate (17.8%) for the same year.

There were no significant differences in ever used prescription drugs by sex between 2011 and 2013 (Figure 25).

In both 2011 and 2013, 12th graders had higher rates in ever used prescription drugs without a doctor's prescription than 9th graders (Figure 26).

In 2011, Caucasians had the highest rate of ever using prescription drugs without a doctor's prescription than all other ethnic groups except Other. In 2013, ethnic groups of Caucasians, Native Hawaiians, and Other had higher rates than Filipinos and Other Asians, and Other Pacific Islanders (Figure 27).

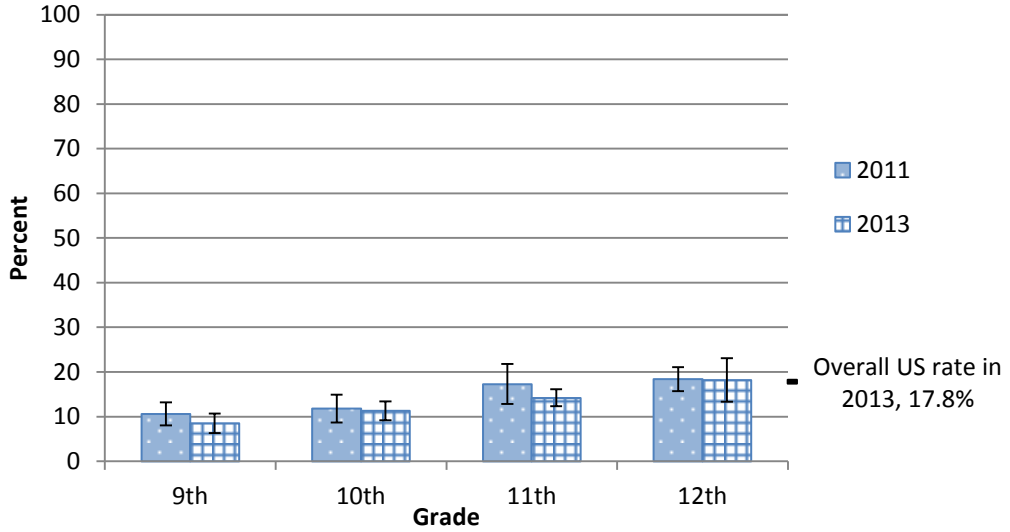
Figure 25. Ever used prescription drugs without a doctor's prescription by sex (high school students)



Source: HHDW 2011 and 2013

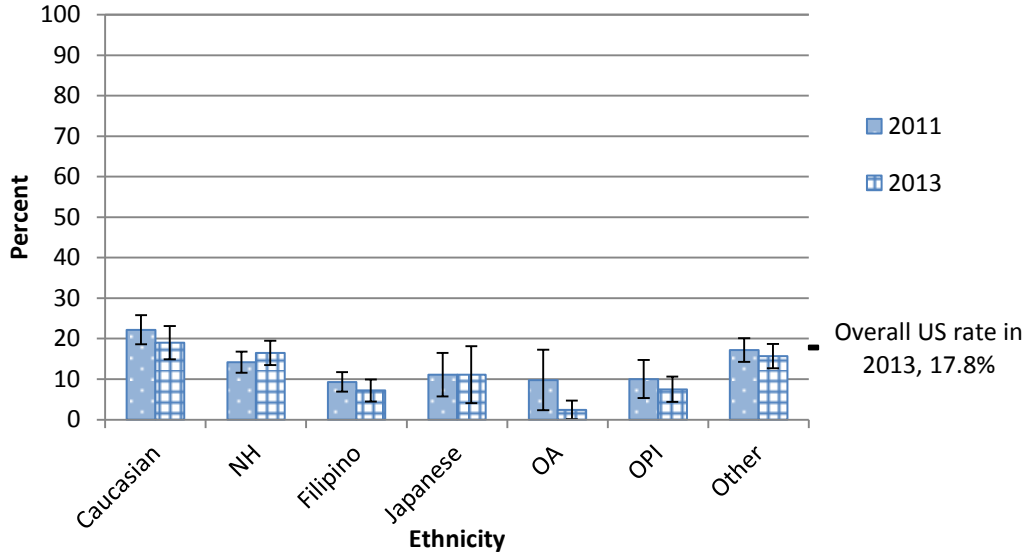
***** Data are unavailable for 2007 and 2009

Figure 26. Ever used prescription drugs without a doctor's prescription by grade (high school students)



Source: HHDW 2011 and 2013
***** Data are unavailable for 2007 and 2009

Figure 27. Ever used prescription drugs without a doctor's prescription by ethnicity (high school students)



Source: HHDW 2011 and 2013
NH= Native Hawaiians; OA = Other Asians; OPI = Other Pacific Islanders

Youth: Ever Offered, Given, or Sold Illegal Drugs on School Property by Sex, Grade, and Ethnicity

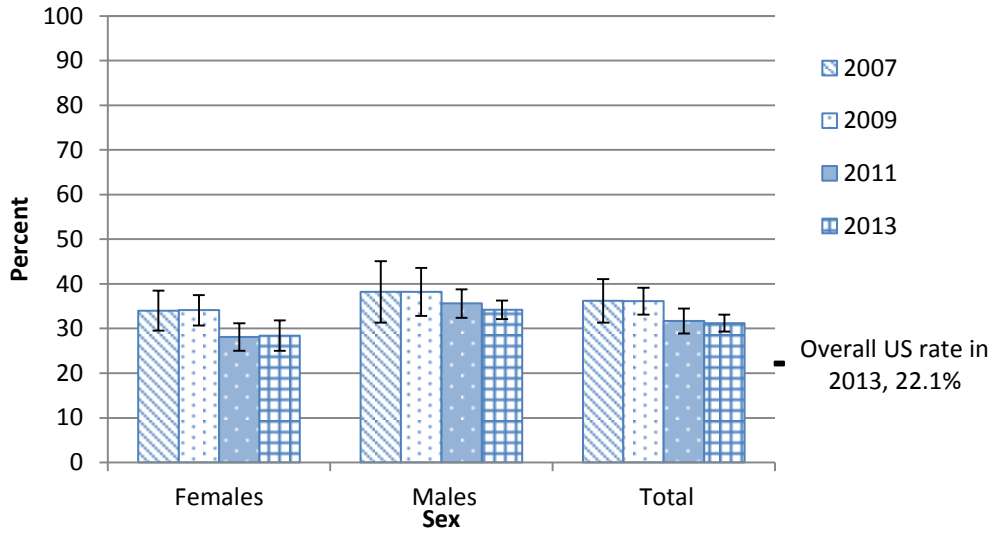
Figures 28, 29, and 30 show the percentage of high school students in Hawai‘i who have ever been offered, given, or sold illegal drugs at school property.

There were no significant differences in the rates from 2007 to 2013 (Figure 28). In 2013, the rate of youth in Hawai‘i who ever been offered, given, or sold illegal drugs at school (31.2%) was significantly higher than the overall US rate (22.1%) for the same year.

Over all there were no significant differences by sex (Figure 28) or grade (Figure 29) across year.

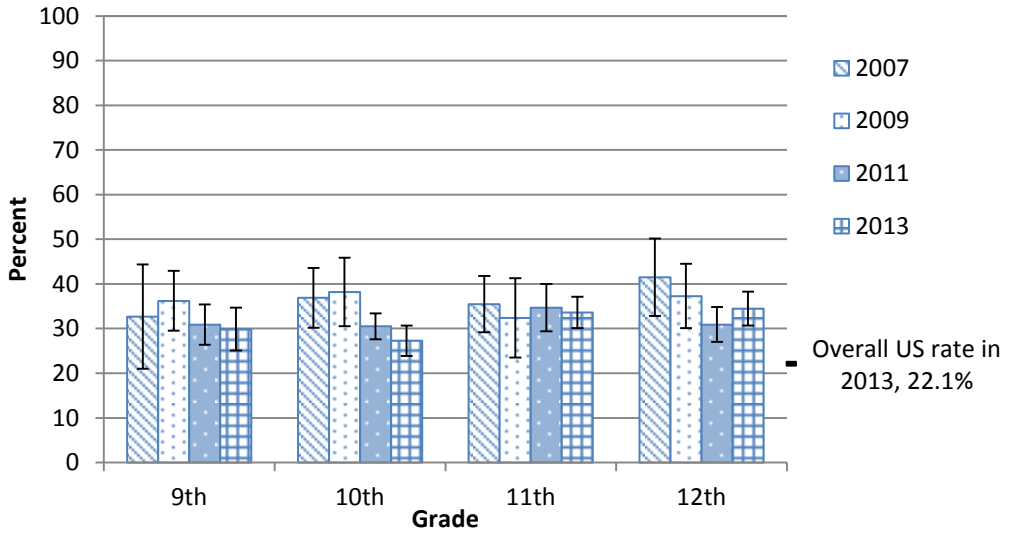
In 2011, Caucasians had a significantly higher rate than Asians or Native Hawaiians and Other Pacific Islanders (NHOPIs). In 2013, Hispanics and NHOPIs had significantly higher rates than Asians (Figure 30).

Figure 28. Ever offered, given, sold illegal drugs on school property by sex (high school students)



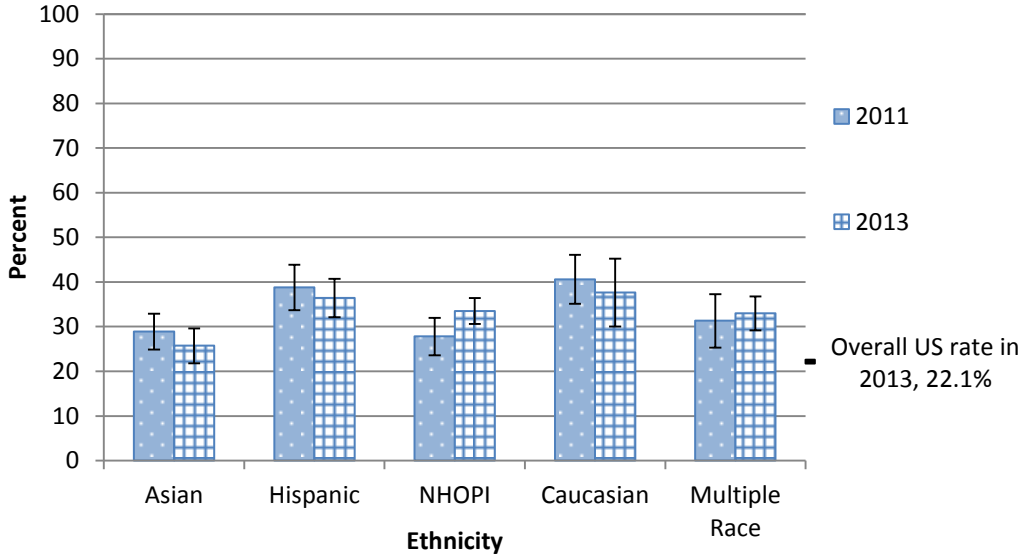
Source: YRBS 2007, 2009, 2011, and 2013

Figure 29. Ever offered, given, sold illegal drugs on school property by grade (high school students)



Source: YRBS 2007, 2009, 2011, and 2013

Figure 30. Ever offered, given, sold illegal drugs on school property by ethnicity (high school students)



Source: YRBS 2011 and 2013
NHOPI = Native Hawaiians and Other Pacific Islanders

ADULT MARIJUANA AND OTHER DRUG INDICATORS

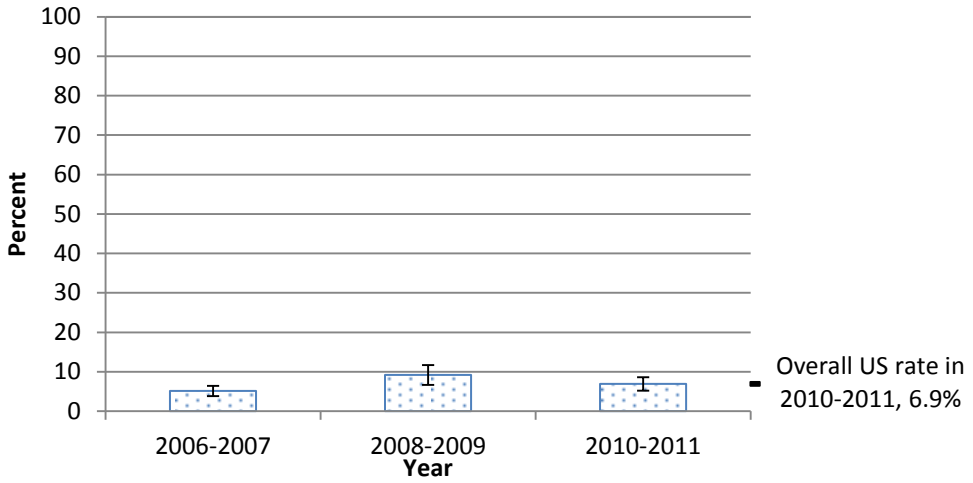
Note: Data for 30-day use of illicit drugs other than marijuana are restricted due to too few responses. In these cases "ever used" indicators are used in lieu of "30-day use" indicators.

Adult: 30-Day Marijuana Use

30-day marijuana use indicates current marijuana use of adults (age 18 and older), measured as whether someone has used marijuana in the 30 days preceding the survey.

Adults in 2008-2009 had significantly higher rates of 30-day marijuana use than in 2006-2007. The rates of 30-day marijuana use in Hawai'i and the overall US in 2010-2011 were both 6.9% (Figure 31).

Figure 31. 30-day marijuana use



Source: NSDUH 2006-2007, 2008-2009, and 2010-2011

Adult: Perceived Risk from Marijuana Use

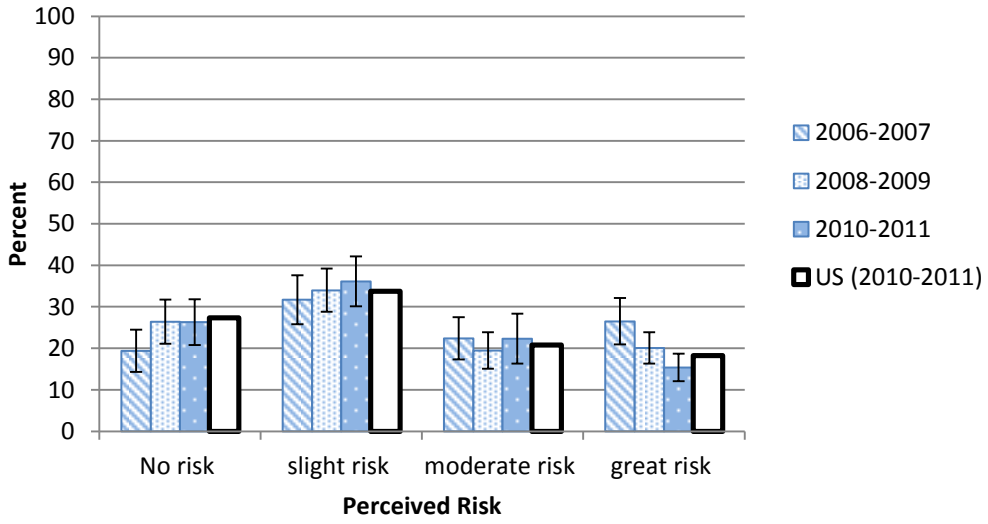
Figure 32 and 33 shows individual's perception of risk getting adverse health effects from smoking marijuana once a month amongst adults aged 18 to 25 and adults 26 and older respectively.

Individuals aged 18-25 in Hawai'i, or typical college age population, reported a lower rate of "great risk" in 2010-2011 than in 2006-2007. The rates of other risk categories, "no risk", "slight risk", and "moderate risk" did not significantly change across year. There were no significant differences between the rates of individuals aged 18-25 in Hawai'i and US overall rates for the same age population in any given year group, except that Hawai'i had a higher rate of "great risk" in 2006-2007 (Figure 32).

Adults who are 26 and older in Hawai'i had higher rates of "no risk" in 2008-2009 and 2010-2011 than the rate in 2006-2007. The rates of other risk categories, "slight risk", "moderate risk", and "great risk" did not significantly change across year (Figure 33).

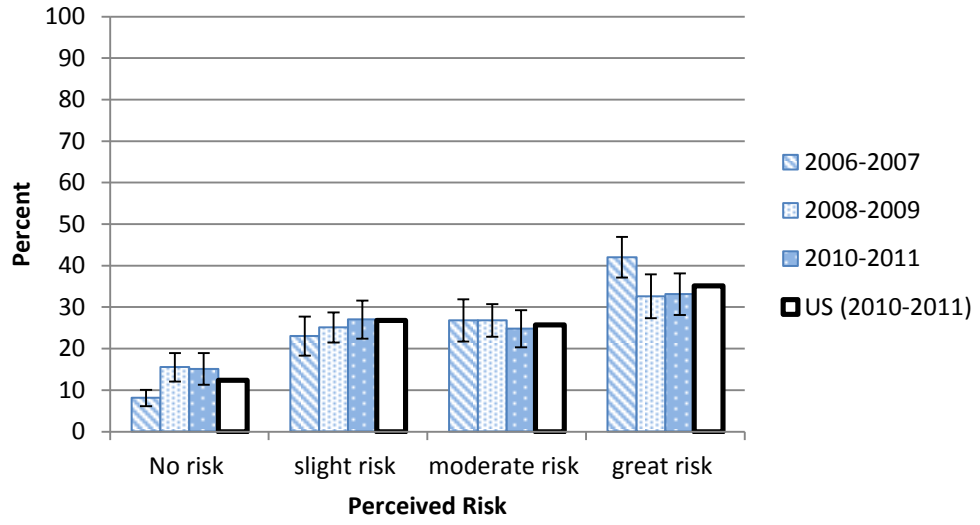
When compared rates between two age groups (18-25 and 26 and older), more people aged 26 and older reported that they perceived "great risk" in smoking marijuana once a month compared to the people aged 18-25 in all year groups. Also, more people aged 18-25 reported that they perceived there is "no risk" compared to people aged 26 and older across years. There were no significant differences by age group in the rates of "slight risk" and "moderate risk" in any year group.

Figure 32. Perceived risk from smoking marijuana once a month (aged 18 - 25)



Source: NSDUH 2007-2008, 2008-2009, and 2010-2011

Figure 33. Perceived risk from smoking marijuana once a month (aged 26 and older)



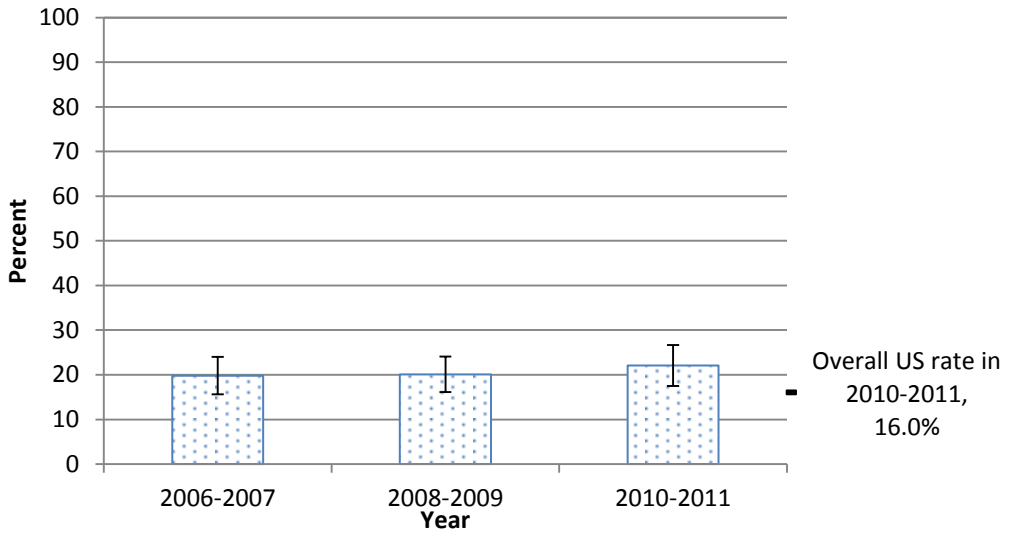
Source: NSDUH 2007-2008, 2008-2009, and 2010-2011

Adult: Ever Used Cocaine

Ever used cocaine indicates whether someone has ever, even once, used any form of cocaine. Figure 34 shows the percentage of adults (age 18 and older) in Hawai‘i who have ever used cocaine.

There were no significant differences in the rate of ever using cocaine by year group. The rate of ever using cocaine in Hawai‘i in 2010-2011 (22.1%) was significantly higher than the overall US rate for the same year (16.0%).

Figure 34. Ever used cocaine



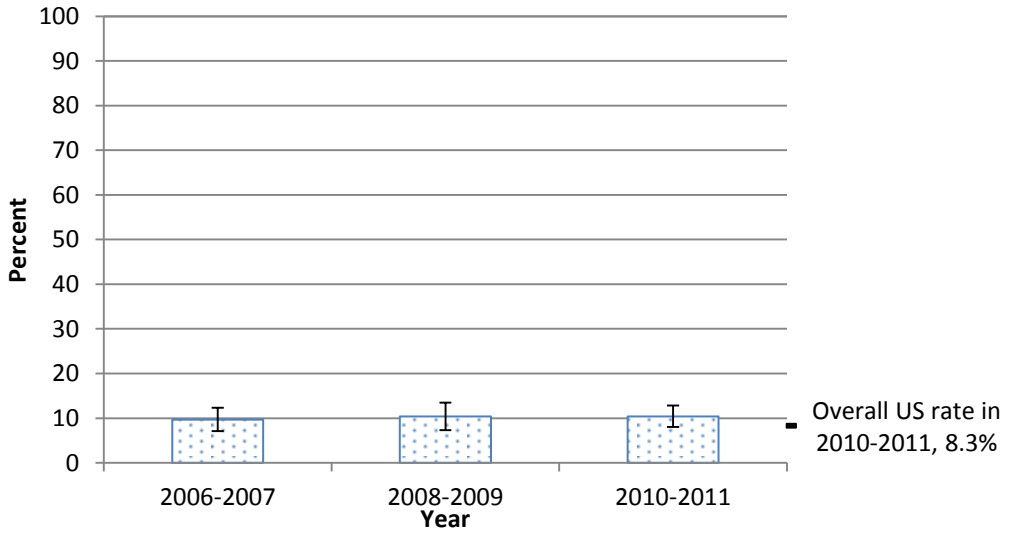
Source: NSDUH 2006-2007, 2008-2009, and 2010-2011

Adult: Ever Used Inhalants

Ever used inhalants indicates whether someone has ever, even once, inhaled a liquid, spray, or gas for kicks or to get high. Figure 35 shows the percentage of adults (age 18 and older) in Hawai‘i who have ever used inhalants.

There were no significant differences in the rate of ever using inhalants by year group. The rate of ever using inhalants in Hawai‘i in 2010-2011 (10.4%) did not differ significantly from the overall US rate for the same year (8.3%).

Figure 35. Ever used inhalants



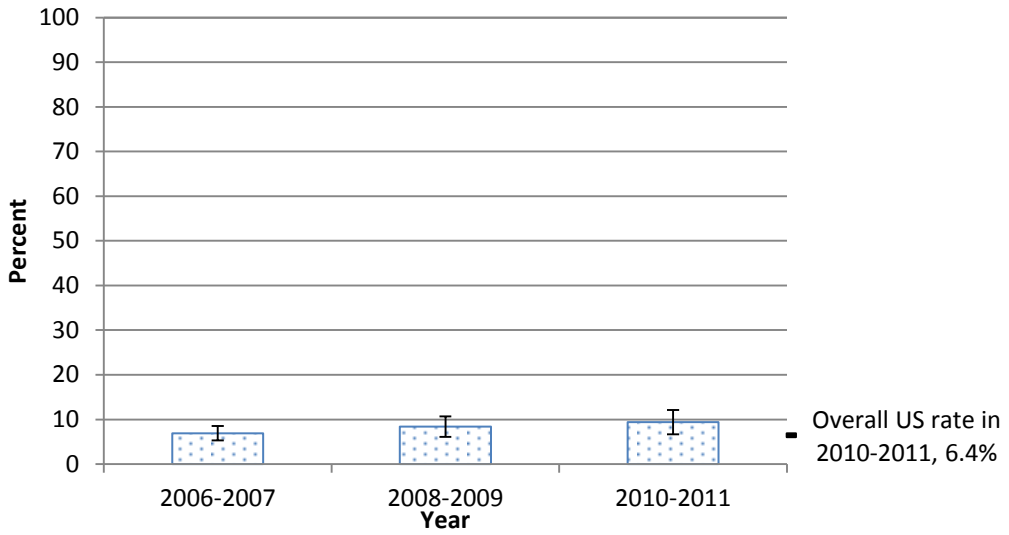
Source: NSDUH 2006-2007, 2008-2009, and 2010-2011

Adult: Ever Used Ecstasy

Ever used ecstasy indicates whether someone has ever, even once, used ecstasy (including MDMA). Figure 36 shows the percentage of adults (age 18 and older) in Hawai‘i who have ever used ecstasy.

There were no significant differences in the rate of ever using ecstasy by year group. The rate of ever using ecstasy in Hawai‘i in 2010-2011 (9.4%) was significantly higher than the overall US rate for the same year (6.4%).

Figure 36. Ever used ecstasy



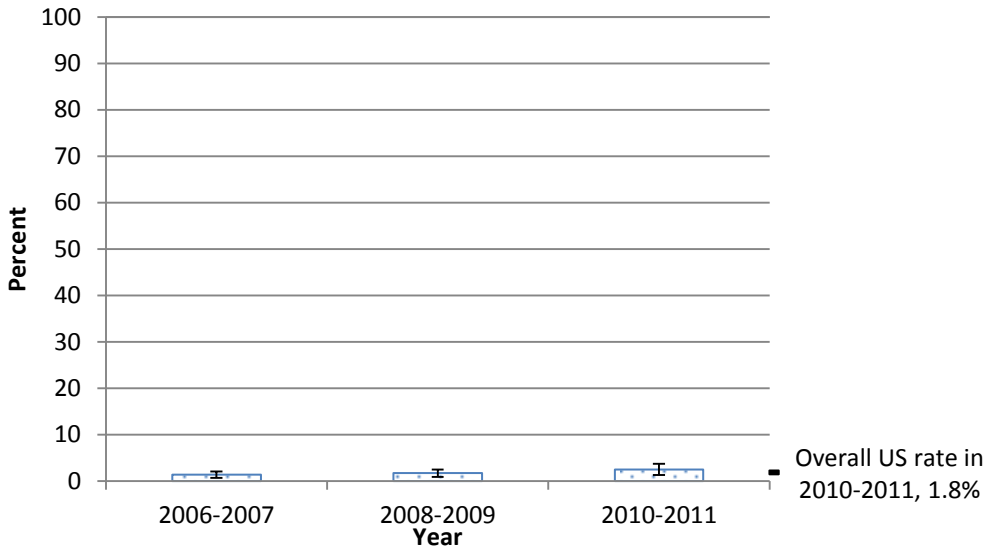
Source: NSDUH 2006-2007, 2008-2009, and 2010-2011

Adult: Ever Used Heroin

Ever used heroin indicates whether someone has ever, even once, used heroin. Figure 37 shows the percentage of adults (age 18 and older) in Hawai‘i who have ever used heroin.

There were no significant differences in the rate of ever using heroin by year group. The rates of ever using heroin in Hawai‘i (2.5%) in 2010-2011 and the overall US rate (1.8%) in the same year were not significantly different.

Figure 37. Ever used heroin



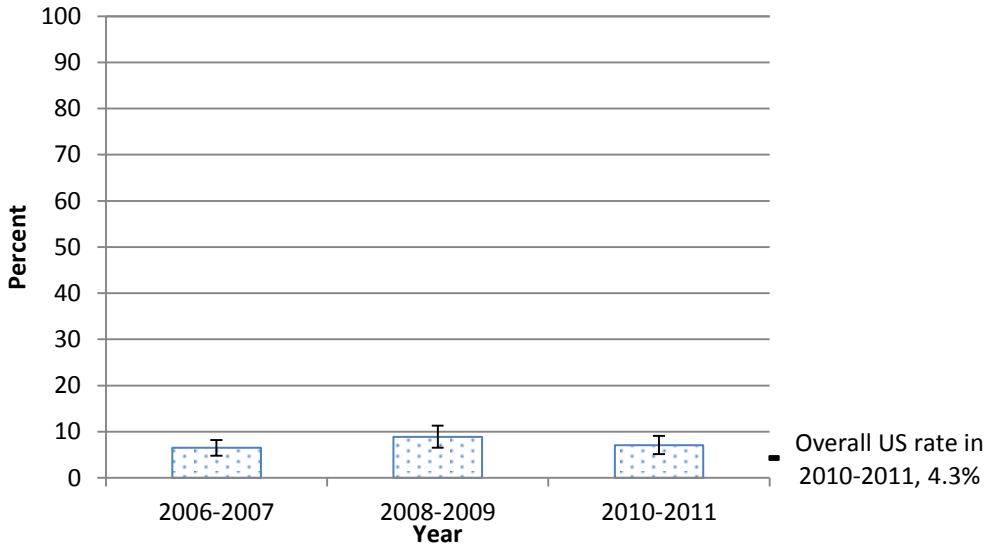
Source: NSDUH 2006-2007, 2008-2009, and 2010-2011

Adult: Ever Used Methamphetamine

Ever used methamphetamine indicates whether someone has ever, even once, used any form of methamphetamines (including crystal, ice, and crank). Figure 38 shows the percentage of adults (age 18 and older) in Hawai‘i who have ever used methamphetamine.

There were no significant differences in the rate of ever using methamphetamine by year group. The rate of ever using methamphetamine in Hawai‘i in 2010-2011 (7.1%) was significantly higher than the overall US rate for the same year (4.3%).

Figure 38. Ever used methamphetamine



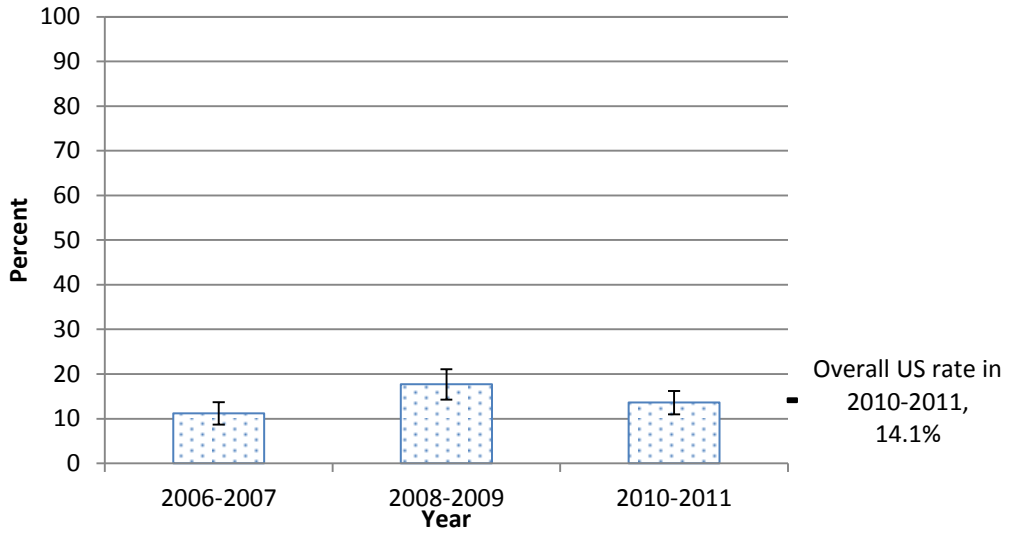
Source: NSDUH 2006-2007, 2008-2009, and 2010-2011

Adult: Ever Used Prescription Pain Relievers without a Doctor's Prescription

Ever used prescription pain relievers indicates whether someone has ever taken any prescription pain reliever without a doctor's prescription or in any other way a doctor did not direct them to use it. Figure 39 shows the percentage of adults (age 18 and older) in Hawai‘i who have ever used prescription pain relievers without a doctor's prescription.

In 2008-2009, the rate of ever using prescription pain relievers without a doctor's prescription was significantly higher than in 2006-2007 while the rates in 2008-2009 and 2010-2011 were not significantly different. The rate of ever using prescription pain relievers in Hawai‘i in 2010-2011 (13.6 %) did not differ significantly from the overall US rate for the same year (14.1%).

Figure 39. Ever used prescription pain relievers without a doctor's prescription



Source: NSDUH 2006-2007, 2008-2009, and 2010-2011

SUMMARY

Youth

Overall, rates of most drug usage indicators, including 30-day marijuana use, tried marijuana before age 13 years, ever used cocaine, ever used inhalants, ever used heroin, ever used methamphetamines, and ever used prescription drugs without a doctor's prescription have not changed over time. The exception is that the rate of ever having used ecstasy in 2011 was slightly higher than the rate in 2009.

Although ever used marijuana data for youth was not available, the fact that 18.9% of youth had used it in the past 30 days in 2013 indicates marijuana is the most common illicit drug among youth. Except for marijuana use, youth rates of ever using illicit drugs were highest for prescription drugs without a doctor's prescription (12.9%) followed by inhalants (9.2%) in the most current year available (2013). The least common illicit drug was heroin with 3.4% of youth in Hawai'i ever having used it in 2013.

There were generally no differences by sex amongst drug indicators for youth across year.

There were generally no differences by grade amongst most drug indicators, except for prescription drug misuse where 12th graders had higher rates than 9th graders in both 2011 and 2013.

In general, Native Hawaiians, Caucasians, and other Pacific Islanders had the highest rates of youth drug use in Hawai'i. Asian groups, including Japanese, Filipinos, and other Asians, generally had the lowest rates of youth drug use in Hawai'i.

Adults

Overall, there have been no significant differences in adult drug indicators for Hawai'i since 2007.

Other than marijuana use (data of ever using marijuana is not available, but 6.9% of adults in Hawai'i reported that they had used marijuana in the past 30 days in 2010-2011), rates of ever using illicit drugs were highest for cocaine (22.1%) followed by prescription pain relievers (13.6%), and lowest for heroin (2.5%) in 2010-2011, the most current year available.

Comparisons Between Youth and Adults

30-day marijuana use was more prevalent amongst youth (18.9% in 2013) than amongst adults (6.9% in 2010-2011), suggesting that marijuana use is more common amongst youth than amongst adults. Ever used cocaine was more prevalent amongst adults (22.1% in 2010-2011) than amongst youth (6.5% in 2013), suggesting that there is one age of onset for cocaine use before high school and a second age of onset after high school. Ever used inhalants, ecstasy, heroin, and methamphetamines did not change in prevalence between youth and adults by more than a few percentage points, if at all. Also, when the rates of perceived risk from smoking marijuana once a month amongst aged 12 – 17 (youth), aged 18 – 25 (young adults/typical college age population), and age 26 and older (older adults) are compared, more young adults reported there was "no risk" in smoking marijuana once a month than youth or older adults in general. This implies that college age population may be at increased risk of marijuana use than other age groups.

Recommendations for Drug Prevention Programs

Youth

- Prevention efforts should be strengthened in response to the fact that the rates of marijuana and other drug use have not changed in the past seven years. Prescription painkiller overdoses kill 44 people in the U.S. each day (CDC, 2015), and prescription drug abuse is a growing health problem in the nation. Thus, focus should also be on prevention of prescription drug misuse as usage rates for this substance in Hawai‘i are relatively high (prevalence ≥ 10%).

- Since drug use is almost equally prevalent among both sexes in the past few years, prevention programs for substance use among youth in Hawai‘i should focus on both boys and girls.

- Based on the findings regarding ethnic differences, culturally appropriate and evidenced-based programs are strongly recommended especially for the highest rate groups such as Native Hawaiians, Caucasians, and other Pacific Islanders.

- Because of the low rates of ever having used cocaine, ecstasy, heroin, or methamphetamine, the ADAD Epidemiology Team recommends that interventions for these drugs be highly targeted towards people at greatest risk for initiating these drugs. More research should be conducted on which groups are at highest risk of using cocaine, ecstasy, heroin, and/or methamphetamine. Because ever using prevalence of inhalants, ecstasy, heroin, or methamphetamine did not change significantly over grade levels, interventions targeting pre-high school youth would be most effective at lowering overall rates.

- While 6.5% of high school students had ever used cocaine (2013), 22.1% of adults ever used cocaine (2010-2011). There seem to be two age of onset periods: one during high school and one after high school. Interventions targeting high school students may help prevent the prevalence and lower the rate of ever having used cocaine amongst adults. Moreover, prevention programs should also be provided to middle school students in order to lower the prevalence rates of high school students.

Adults

- Prevention efforts should be strengthened in response to the fact that the rates of marijuana and other drug use have not changed in the past seven years. Focus should be on marijuana as 30-day use rate was 6.9% for adults in 2010-2011 and also substances with relatively high ever using rates (prevalence ≥ 10%), such as cocaine, pain relievers, and inhalants.

- Data for “30-day use” indicators of drugs other than marijuana was restricted due to too few responses, so this profile used “ever used” indicators. “Ever used” indicators do not convey information about rates of current drug usage or about which drugs currently have the greatest impact on the communities of Hawai‘i. More research is needed on current usage rates for non-marijuana drugs.

- Perceived risk from marijuana use data may indicate that young adults (aged 18 – 25) have an increased risk of marijuana use compared to older adults (age 26 and older). Therefore it is recommended that communities have prevention interventions specifically designed for young adults and focus on risks and negative health outcomes of marijuana consumption.

Data Recommendations

- Primary data sources that were utilized for this profile — Hawai‘i YRBS for youth data and NSDUH for both youth and adults — do not provide data for college students in Hawai‘i. Although the NSDUH collects data from people 12 and older, they do not collect data specifically from college students. This data gap should be filled by establishing a statewide health survey for college students in which multiple campuses in Hawai‘i participate in order to understand and monitor behaviors surrounding alcohol and substance use among this unique population. For example, participating in American College Health Association's National College Health Assessment (ACHA-NCHA) would be recommended for all college and university campuses in the state of Hawai‘i in order to gain alcohol and drug use data with good quality that can be representative of college students in the state. Please see Methods section "Primary Data Sources" for more details of Hawai‘i YRBS and the NSDUH.

- Currently, Hawai‘i BRFSS, which is Hawai‘i version of the national health survey (BRFSS) with large sample size, does not have any marijuana and other illicit drug indicators. It is highly recommended that the survey add some drug indicators, especially the drugs with relatively high prevalence rates, such as marijuana, cocaine, prescription pain relievers without a doctor's prescription, and inhalants. The NSDUH is the only publically available data source for illicit drug use data for adults, but the sample size for Hawai‘i is very small since it is designed as national survey.

- For all of the data sources or surveys that have illicit drug use indicators, it is important to collect data from a larger sample size and report data broken into detailed ethnic groups instead of using aggregated ethnic categories such as "Asian" or "Native Hawaiian and Pacific Islanders." This is especially crucial for communities in Hawai‘i which are ethnically and culturally diverse, as detailed ethnicity data will help us to design and implement better policies and intervention programs for addressing health disparities and health needs for specific ethnic groups.

Setting 10-Year Goals

ADAD Epidemiology Team recommends that a 10-year goal for each objective or indicator be 10% improvement from the baseline measure or the most current year data. For example, 30-day marijuana use amongst adults in 2013 was 6.9%; therefore we suggest reducing this rate by 0.69% to 6.2% by 2023. Hawai‘i's Healthy People 2020 Progress Tracker website (http://www.hawaiihealthmatters.org/index.php?module=Trackers&func=display&tid=1003) also has goals for some of the substance indicators.

Appendix A: Data Tables for Youth Marijuana and Other Drug Indicators

Table A-1. YOUTH 30-day marijuana use by sex, grade, and ethnicity in 2007, 2009, 2011, and 2013

	2007			2009			2011			2013			Overall US 2013
Population	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%
Total	15.7	12.0	19.3	22.1	18.0	26.2	21.9	19.3	24.5	18.9	15.8	21.9	23.4
Males	14.6	8.1	21.0	22.1	17.6	26.6	22.9	20.3	25.5	19.7	16.1	23.2	
Females	16.9	12.5	21.3	22.1	16.0	28.2	21.1	17.5	24.6	18.0	14.8	21.1	
9th	11.5	6.1	16.9	19.1	12.3	25.9	19.2	14.4	24.0	16.2	12.0	20.4	
10th	15.8	9.8	21.9	21.0	14.2	27.8	19.7	17.3	22.1	16.2	13.1	19.3	
11th	15.5	8.5	22.5	25.3	16.7	33.9	24.1	15.4	32.8	20.3	15.2	25.4	
12th	21.0	14.8	27.2	24.4	15.6	33.2	25.4	21.6	29.2	22.9	18.1	27.7	
Caucasian	9.3	2.4	16.3	19.9	8.2	31.5	24.8	17.7	32.0	23.2	18.4	27.9	
Native Hawaiian	35.0	25.4	44.5	37.8	30.6	45.1	30.0	24.4	35.5	28.7	23.7	33.8	
Filipino	5.9	2.1	9.8	13.7	8.5	18.8	17.4	13.0	21.9	9.4	6.6	12.2	
Japanese	3.3	0.0	6.9	9.8	2.1	17.6	9.6	3.8	15.3	10.4	1.5	19.3	
Other Asian	-	-	-	6.5	0.9	12.1	9.0	0.0	18.0	7.7	2.2	13.3	
Other Pacific Islander	-	-	-	-	-	-	16.8	9.8	23.9	25.3	18.2	32.5	
Other	17.1	12.7	21.4	25.5	19.2	31.9	22.3	18.5	26.1	19.9	17.6	22.1	

Source: Hawai‘i YRBS via HHDW
Data not available for Other Asians in 2007 or for other Pacific Islanders in 2007 or 2009.
Confidence Intervals are at 95%

Table A-2. YOUTH Tried marijuana before age 13 years by sex, grade, and ethnicity in 2007, 2009, 2011, and 2013

	2007			2009			2011			2013			Overall US 2013
Population	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%
Total	11.7	8.7	14.7	11.9	8.8	15.1	9.5	8.2	10.8	10.4	8.3	12.5	8.6
Males	11.6	7.1	16.1	13.2	10.2	16.3	11.6	9.6	13.6	11.5	8.8	14.1	
Females	11.7	7.5	15.9	10.3	5.3	15.4	7.5	6.0	8.9	9.2	7.4	11.1	
9th	12.1	6.0	18.3	12.4	8.1	16.7	10.9	8.5	13.3	11.1	7.9	14.3	
10th	14.4	9.2	19.7	13.1	3.5	22.7	8.7	6.0	11.3	9.6	6.3	12.8	
11th	8.6	5.4	11.8	12.1	5.4	18.9	8.3	5.1	11.5	10.2	7.0	13.4	
12th	10.4	4.8	16.0	9.0	2.8	15.3	9.5	7.2	11.8	9.8	6.9	12.8	
Caucasian	7.4	0.8	13.9	10.2	0.8	19.6	7.9	4.8	11.0	10.2	6.2	14.2	
Native Hawaiian	25.0	14.8	35.3	26.5	18.2	34.8	15.3	11.2	19.3	19.6	16.7	22.5	
Filipino	4.8	2.1	7.4	4.9	2.4	7.5	5.2	2.9	7.5	4.4	2.7	6.1	
Japanese	2.8	0.0	6.1	0.0	0.0	0.0	5.7	1.6	9.8	3.9	0.0	8.0	
Other Asian	-	-	-	3.8	0.0	7.7	2.2	0.0	5.1	3.5	0.1	6.8	
Other Pacific Islander	-	-	-	-	-	-	11.4	4.5	18.3	14.9	7.7	22.1	
Other	12.1	6.6	17.6	11.4	8.1	14.7	10.5	8.6	12.4	10.3	8.3	12.3	

Source: Hawai‘i YRBS via HHDW

Data not available for Other Asians in 2007 or for other Pacific Islanders in 2007 or 2009.

Confidence Intervals are at 95%

Table A-3. YOUTH Perceived risk from smoking marijuana once a month among youth aged 12-17 years in 2006-2007, 2008-2009, and 2010-2011

	2006-2007			2008-2009			2010-2011			Overall US 2010-2011
Population aged 12-17 years	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%
No risk	11.5	8.1	16.0	9.2	6.4	12.9	15.8	12.7	19.5	12.3
Slight risk	23.4	18.8	28.7	27.6	22.8	32.9	29.5	24.5	35.2	28.3
Moderate risk	31.6	26.6	37	32.2	26.6	38.4	29.3	25.3	33.3	30.8
Great risk	33.6	28.6	38.9	31	26.7	35.7	25.4	21	30.2	28.6

Source: NSDUH
Confidence Intervals are at 95%

Table A-4. YOUTH Disapproval of substance use among youth aged 12-17 years in 2006-2007, 2008-2009, and 2010-2011

		2006-2007			2008-2009			2010-2011			Overall US 2010-2011
Population aged 12-17 years	Disapproval level	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%
How do you feel about someone your age trying marijuana or hashish once or twice?	Somewhat disapprove	16.3	12.7	20.7	13.3	9.9	17.6	16.7	13.0	21.2	15.3
	Strongly disapprove	66.2	61.2	70.8	67.7	61.2	73.6	61.5	56.5	66.2	65.3
	Neither	17.5	14.2	21.3	19.0	13.9	25.4	21.8	17.9	26.4	19.4
How do you feel about someone your age using marijuana once a month or more?	Somewhat disapprove	15.6	11.9	20.3	13	9.5	17.6	15.8	12.3	20.2	14.9
	Strongly disapprove	65.9	61.1	70.4	67.7	62.3	72.7	61.8	57.1	66.3	66.0
	Neither	18.5	15.5	21.9	19.3	14.5	25.2	22.4	18.6	26.2	19.1

Source: NSDUH
Confidence Intervals are at 95%

Table A-5. YOUTH Ever used cocaine by sex, grade, and ethnicity in 2007, 2009, 2011, and 2013

	2007			2009			2011			2013			Overall US 2013
Population	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%
Total	5.6	3.6	7.5	6.0	4.0	8.0	6.4	4.8	8.1	6.5	5.1	8.0	5.5
Males	4.7	1.7	7.8	6.6	4.6	8.5	7.0	5.2	8.7	6.5	4.6	8.4	
Females	6.5	3.1	9.9	5.1	1.8	8.4	5.6	3.8	7.4	6.5	4.5	8.4	
9th	4.4	0.0	9.3	4.8	1.4	8.3	4.6	2.7	6.5	5.1	3.3	6.8	
10th	8.3	4.3	12.2	7.3	2.7	11.9	4.2	2.8	5.7	4.5	2.4	6.7	
11th	2.7	1.2	4.3	5.2	2.7	7.6	9.1	4.6	13.6	6.7	4.4	9.0	
12th	6.3	1.3	11.3	6.2	2.1	10.3	8.2	5.9	10.5	9.3	5.6	13.0	
Caucasian	2.4	0.5	4.3	6.5	0.6	12.5	11.4	7.2	15.7	9.6	6.1	13.1	
Native Hawaiian	11.5	4.4	18.6	9.6	1.5	17.6	5.0	3.0	7.1	8.2	6.0	10.3	
Filipino	2.3	0.2	4.4	2.1	0.3	3.9	4.6	2.5	6.6	3.1	0.9	5.2	
Japanese	0.7	0.0	2.1	4.2	0.0	8.7	5.3	1.3	9.3	8.0	1.5	14.6	
Other Asian	-	-	-	3.0	0.0	7.2	3.6	0.7	6.5	1.4	0.0	3.2	
Other Pacific Islander	-	-	-	-	-	-	8.6	5.1	12.1	5.2	1.5	8.8	
Other	6.4	3.7	9.1	8.0	5.4	10.6	5.8	4.1	7.6	6.7	4.8	8.5	

Source: Hawai‘i YRBS via HHDW
Data not available for Other Asians in 2007 or for other Pacific Islanders in 2007 or 2009.
Confidence Intervals are at 95%

Table A-6. YOUTH Ever used inhalants by sex, grade, and ethnicity in 2007, 2009, 2011, and 2013

	2007			2009			2011			2013			Overall US 2013
Population	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%
Total	11.4	9.0	13.8	10.1	8.2	11.9	9.7	8.5	10.8	9.2	7.6	10.8	5.5
Males	11.7	8.3	15.1	9.1	6.2	12.1	9.5	7.6	11.5	8.2	6.4	10.0	
Females	11.0	8.1	14.0	10.8	7.4	14.3	9.6	8.3	11.0	9.8	8.1	11.6	
9th	12.3	6.8	17.9	11.4	7.0	15.8	10.3	7.5	13.0	9.4	6.7	12.1	
10th	13.7	8.9	18.5	11.0	6.2	15.8	8.6	6.7	10.4	9.3	7.3	11.2	
11th	10.7	7.3	14.2	8.3	4.4	12.1	9.9	7.1	12.6	9.0	6.1	11.9	
12th	6.8	3.7	9.8	8.9	3.7	14.0	9.8	7.7	11.9	8.5	5.5	11.5	
Caucasian	10.7	6.4	15.0	7.7	0.0	15.4	12.3	8.0	16.6	10.6	6.6	14.5	
Native Hawaiian	11.4	5.0	17.8	12.4	4.8	20.0	8.8	6.8	10.9	11.8	8.9	14.8	
Filipino	13.0	7.4	18.5	8.6	6.3	10.9	7.3	4.7	9.9	7.1	4.1	10.0	
Japanese	7.3	3.7	10.8	3.6	0.1	7.1	6.4	2.4	10.5	3.9	1.4	6.4	
Other Asian	-	-	-	9.8	3.3	16.3	4.7	2.2	7.2	5.7	1.8	9.5	
Other Pacific Islander	-	-	-	-	-	-	10.1	7.3	13.0	11.2	5.2	17.2	
Other	12.1	8.4	15.8	14.0	10.6	17.4	9.7	10.6	15.5	10.2	7.2	13.2	

Source: Hawai‘i YRBS via HHDW
Data not available for Other Asians in 2007 or for other Pacific Islanders in 2007 or 2009.
Confidence Intervals are at 95%

Table A-7. YOUTH Ever used ecstasy by sex, grade, and ethnicity in 2007, 2009, 2011, and 2013

	2007			2009			2011			2013			Overall US 2013
Population	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%
Total	4.6	3.2	6.0	8.2	6.1	10.3	9.0	7.2	10.8	8.0	5.8	10.2	8.9
Males	4.2	1.7	6.8	8.3	6.2	10.4	8.8	7.2	10.5	8.9	5.6	12.1	
Females	5.0	2.7	7.3	7.9	3.9	11.9	9.0	6.5	11.6	7.0	5.4	8.5	
9th	2.4	0.4	4.4	5.6	2.2	8.9	7.2	4.7	9.7	6.6	4.4	8.9	
10th	9.3	4.7	13.9	7.5	2.3	12.8	6.5	4.5	8.6	5.1	3.4	6.9	
11th	1.5	0.1	3.0	8.4	5.3	11.6	12.1	8.0	16.2	9.9	6.5	13.3	
12th	4.6	2.3	6.8	11.5	6.2	16.7	10.5	8.6	12.4	10.1	5.6	13.0	
Caucasian	4.1	0.0	8.1	8.7	1.7	15.8	13.1	9.7	16.6	11.0	8.4	13.6	
Native Hawaiian	7.3	3.2	11.3	11.6	4.2	19.1	8.1	5.4	10.9	9.8	6.5	13.1	
Filipino	1.5	0.4	2.7	5.2	1.8	8.5	6.7	4.3	9.1	3.7	1.1	6.3	
Japanese	1.6	0.0	3.8	5.5	1.1	9.8	5.3	1.0	9.6	8.1	2.0	14.3	
Other Asian	-	-	-	10.9	3.4	18.5	6.8	1.3	12.2	1.6	0.0	3.4	
Other Pacific Islander	-	-	-	-	-	-	4.4	0.0	0.9	6.0	1.2	10.7	
Other	5.8	2.8	8.7	9.6	6.3	13.0	10.6	8.7	12.5	10.2	7.7	12.7	

Source: Hawai‘i YRBS via HHDW

Data not available for Other Asians in 2007 or for other Pacific Islanders in 2007 or 2009.

Confidence Intervals are at 95%

Table A-8. YOUTH Ever used heroin by sex, grade, and ethnicity in 2013

	2007			2009			2011			2013			Overall US 2013
Population	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%
Total	Data not available			Data not available			Data not available			3.4	2.8	4.2	2.2
Males	-	-	-	-	-	-	-	-	-	3.3	2.3	4.8	
Females	-	-	-	-	-	-	-	-	-	3.2	2.2	4.6	
9th	-	-	-	-	-	-	-	-	-	3.2	1.8	5.8	
10th	-	-	-	-	-	-	-	-	-	1.8	1.0	3.3	
11th	-	-	-	-	-	-	-	-	-	4.2	2.6	6.8	
12th	-	-	-	-	-	-	-	-	-	3.9	2.4	6.4	
Asian	-	-	-	-	-	-	-	-	-	2.1	1.1	4.0	
Hispanic	-	-	-	-	-	-	-	-	-	5.0	2.5	9.8	
NHOPI	-	-	-	-	-	-	-	-	-	3.2	2.2	4.7	
Caucasian	-	-	-	-	-	-	-	-	-	4.6	3.2	6.5	
Multiple Race	-	-	-	-	-	-	-	-	-	2.2	1.1	4.2	

Source: Hawai‘i YRBS via HHDW
Data not available for any groups in 2007, 2009, or 2011
Confidence Intervals are at 95%
NHOPI = Native Hawaiian or Other Pacific Islander (non-Hispanic)

Table A-9. YOUTH Ever used methamphetamine by sex, grade, and ethnicity in 2007, 2009, 2011, and 2013

	2007			2009			2011			2013			Overall US 2013
Population	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%
Total	4.5	2.1	6.9	3.9	2.5	5.3	3.4	2.4	4.3	4.3	3.1	5.5	3.2
Males	4.3	0.8	7.9	4.3	2.6	6.1	4.2	2.9	5.5	3.9	2.4	5.4	
Females	4.7	1.6	7.8	3.2	1.2	5.3	2.3	1.3	3.3	4.2	3.0	5.4	
9th	5.2	0.0	10.7	2.6	0.7	4.5	3.3	1.6	5.0	3.8	2.5	5.2	
10th	7.3	2.2	12.5	4.5	0.8	8.2	2.1	1.2	2.9	1.9	1.1	2.8	
11th	1.1	0.0	2.3	3.8	1.1	6.4	4.1	1.6	6.5	5.5	2.9	8.1	
12th	3.2	0.4	6.0	4.4	1.3	7.6	3.7	2.1	5.4	5.3	2.7	7.9	
Caucasian	2.9	0.0	6.7	2.2	0.0	4.8	5.3	2.3	8.2	6.4	4.1	8.6	
Native Hawaiian	10.0	1.5	18.5	7.5	1.8	13.2	2.9	1.5	4.3	4.8	2.9	6.7	
Filipino	1.7	0.0	3.4	0.4	0.0	1.1	2.6	1.2	4.0	2.2	0.8	3.7	
Japanese	0.7	0.0	2.1	1.4	0.0	3.6	1.2	0.0	2.9	3.5	0.0	7.7	
Other Asian	-	-	-	4.2	0.4	8.1	1.5	0.0	3.7	2.6	0.3	4.9	
Other Pacific Islander	-	-	-	-	-	-	2.9	0.0	6.3	2.4	0.2	4.5	
Other	3.7	1.2	6.1	5.6	3.0	8.2	3.0	1.9	4.2	4.2	2.3	6.1	

Source: Hawai‘i YRBS via HHDW
Data not available for Other Asians in 2007 or for other Pacific Islanders in 2007 or 2009.
Confidence Intervals are at 95%

Table A-10. YOUTH Ever used prescription drugs without a doctor's prescription by sex, grade, and ethnicity in 2011 and 2013

	2007			2009			2011			2013			Overall US 2013
Population	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%
Total	Data not available			Data not available			14.3	12.5	16.2	12.9	10.7	15.1	17.8
Males	-	-	-	-	-	-	14.0	12.0	16.1	11.5	8.9	14.1	
Females	-	-	-	-	-	-	14.5	11.7	17.3	14.2	11.9	16.4	
9th	-	-	-	-	-	-	10.6	7.7	13.5	8.5	6.0	11.1	
10th	-	-	-	-	-	-	11.8	8.3	15.2	11.3	9.1	13.5	
11th	-	-	-	-	-	-	17.3	12.2	22.4	14.2	12.2	16.2	
12th	-	-	-	-	-	-	18.4	15.5	21.3	18.2	12.7	23.7	
Caucasian	-	-	-	-	-	-	22.2	18.6	25.9	19.0	14.9	23.1	
Native Hawaiian	-	-	-	-	-	-	14.2	11.6	16.8	16.5	13.5	19.6	
Filipino	-	-	-	-	-	-	9.3	6.9	11.7	7.2	4.5	9.8	
Japanese	-	-	-	-	-	-	11.1	5.7	16.5	11.1	4.1	18.2	
OA	-	-	-	-	-	-	9.8	2.3	17.4	2.4	0.1	4.7	
OPI	-	-	-	-	-	-	10.0	5.3	14.7	7.5	4.4	10.6	
Other	-	-	-	-	-	-	17.2	14.3	20.0	15.7	12.7	18.8	

Source: Hawai'i YRBS via HHDW
Data not available for any groups in 2007 or 2009
Confidence Intervals are at 95%

Table A-11. YOUTH Ever offered, given, or sold illegal drugs on school property by sex, grade, and ethnicity, in 2007, 2009, 2011, and 2013

	2007			2009			2011			2013			Overall US 2013
Population	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%
Total	36.2	31.3	41.3	36.1	33.1	39.2	31.7	28.9	34.7	31.2	29.3	33.2	22.1
Males	38.2	32.8	44.0	38.2	32.8	44.0	35.6	32.4	38.9	34.2	32.1	36.4	
Females	34.0	29.5	38.7	34.1	30.7	37.7	28.1	25.0	31.3	28.4	25.0	32.0	
9th	32.7	21.0	46.9	36.2	29.5	43.6	30.9	26.4	35.8	29.9	25.1	35.1	
10th	36.9	30.2	44.3	38.2	30.5	46.7	30.5	27.6	33.7	27.3	23.9	30.9	
11th	35.5	29.2	42.3	32.4	23.5	42.8	34.7	29.4	40.5	33.6	30.1	37.3	
12th	41.5	32.8	50.6	37.3	30.1	45.2	30.9	27.0	35.1	34.5	30.7	38.4	
Asian	32.5	26.9	38.5	28.2	21.9	35.5	28.9	24.9	33.1	25.7	21.8	29.9	
Hispanic	35.9	29.4	43.0	43.1	34.4	52.2	38.8	33.7	44.2	36.4	32.1	40.9	
NHOPI	40.4	28.8	53.1	44.8	39.8	49.9	27.8	23.6	32.5	33.5	30.6	36.4	
Caucasian	38.7	29.7	48.5	40.5	31.0	50.8	40.6	35.1	46.3	37.6	30.0	45.8	
Multiple Race	35.9	29.3	43.2	35.0	30.0	40.4	31.3	25.3	37.9	33.0	29.2	37.1	

Source: Hawai‘i YRBS via YRBS Youth Online
Confidence Intervals are at 95%
NHOPI = Native Hawaiian or Other Pacific Islander (non-Hispanic)

Appendix B: Data Tables for Adult Marijuana and Other Drug Indicators

Table B-1. ADULT Drug use indicators in 2006-2007, 2008-2009, and 2010-2011

		2006-2007			2008-2009			2010-2011			Overall US 2010-2011
Measure	Population	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%
30 day marijuana use	Age 18+ years	5.1	3.8	6.8	9.2	6.7	12.5	6.9	5.2	9.1	6.9
Ever used Cocaine	Age 18+ years	19.8	15.6	24.7	20.1	16.1	24.9	22.1	17.5	27.6	16.0
Ever used Inhalants	Age 18+ years	9.7	7.1	13.1	10.4	7.3	14.6	10.4	8.0	13.3	8.3
Ever used Ecstasy	Age 18+ years	6.9	5.3	8.9	8.4	6.1	11.4	9.4	6.7	13.1	6.4
Ever used Heroin	Age 18+ years	1.4	0.7	2.9	1.7	0.9	3.5	2.5	1.3	5.0	1.8
Ever used Methamphetamine	Age 18+ years	6.5	4.8	8.7	8.9	6.5	12.0	7.1	5.1	9.6	4.3
Ever used prescription pain relievers without doctor's prescription	Age 18+ years	11.2	8.7	14.4	17.7	14.3	21.1	13.6	11.0	16.7	14.1

Source: NSDUH

Confidence Intervals are at 95%

Table B-2. ADULT Perceived risk from marijuana use in 2006-2007, 2008-2009, and 2010-2011

		2006-2007			2008-2009			2010-2011			Overall US 2010-2011, Age 18+ years
Measure	Population	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%
No risk	Age 18-25 years	19.4	14.3	25.6	26.4	21.1	32.5	26.3	20.8	32.6	3.1
Slight risk	Age 18-25 years	31.7	25.8	38.4	34.0	28.8	39.7	36.1	30.1	42.5	17.4
Moderate risk	Age 18-25 years	22.4	17.3	28.6	19.5	15.1	24.8	22.3	16.3	29.8	36.6
Great risk	Age 18-25 years	26.5	20.9	32.9	20.1	16.3	24.7	15.4	12.1	19.3	42.8
No risk	Age 26+ years	8.1	6.1	10.7	15.5	12.1	19.7	15.1	11.3	20	
Slight risk	Age 26+ years	23	18.3	28.4	25.1	21.5	29	27	22.4	32.1	
Moderate risk	Age 26+ years	26.8	21.7	32.7	26.8	22.9	31	24.8	20.3	29.9	
Great risk	Age 26+ years	42	37.1	47.2	32.6	27.3	38.5	33.1	28.1	38.5	

Source: NSDUH

Confidence Intervals are at 95%

Appendix C: SAMHSA's Substance Abuse Prevention National Outcome Measures (NOMs)

Measure	Source Item and Measure Calculation	Source of Data	Item Code (If survey based)	Respondent Age Group	Level of Aggregation and Data Source
Reduced Morbidity: Abstinence from Drug Use/Alcohol Use					
30-Day Use	*"During the past 30 days, that is, since **[DATEFILL]**, on how many days did you smoke part or all of a cigarette?"* [Response option: Write in a number between 0 and 30.] **Outcome Reported:** Percent who reported having smoked a cigarette during the past 30 days.	NSDUH	CG07	Adult, Youth	**State** (NSDUH), **Community** (Community Survey), **Program** (Program NOMs Instrument)
	*"During the past 30 days, that is, since **[DATEFILL]**, on how many days did you use [other tobacco products]"* [Response option: Write in a number between 0 and 30.] **Outcome Reported:** Percent who reported having used a tobacco product other than cigarettes during the past 30 days, calculated by combining responses to questions about individual tobacco products (snuff, chewing tobacco, pipe tobacco).	NSDUH	Multiple Items	Adult, Youth	**State** (NSDUH), **Community** (Community Survey), **Program** (Program NOMs Instrument)

Measure	Source Item and Measure Calculation	Source of Data	Item Code (If survey based)	Respondent Age Group	Level of Aggregation and Data Source
	*"Think specifically about the past 30 days, that is from **[DATEFILL]** through today. During the past 30 days, on how many days did you drink one or more drinks of an alcoholic beverage?"* [Response option: Write in a number between 0 and 30.] **Outcome Reported:** Percent who reported having used alcohol during the past 30 days.	NSDUH	ALCC29a	Underage, Legal Age	**State** (NSDUH), **Community** (Community Survey), **Program** (Program NOMs Instrument)
	*"Think specifically about the past 30 days, from **[DATEFILL]** up to and including today. During the past 30 days, on how many days did you use marijuana or hashish?"* [Response option: Write in a number between 0 and 30.] **Outcome Reported:** Percent who reported having used marijuana or hashish during the past 30 days.	NSDUH	MJ06	Adult, Youth	**State** (NSDUH), **Community** (Community Survey), **Program** (Program NOMs Instrument)
	"Think specifically about the past 30 days, from [DATEFILL] up to and including today. During the past 30 days, on how many days did you use [any other illegal drug]?" **Outcome Reported:** Percent who reported having used illegal drugs other than marijuana or hashish during the past 30 days, calculated by combining responses to questions about individual drugs (heroin, cocaine, stimulants, hallucinogens, inhalants, prescription drugs used without doctors' orders).	NSDUH	Multiple Items	Adult, Youth	**State** (NSDUH), **Community** (Community Survey), **Program** (Program NOMs Instrument)

Measure	Source Item and Measure Calculation	Source of Data	Item Code (If survey based)	Respondent Age Group	Level of Aggregation and Data Source
Age at First Use	*"How old were you the first time you smoked part or all of a cigarette?"* [Response option: Write in age at first use.] **Outcome Reported:** Average age at first use of cigarettes.	NSDUH	CG04	Adult, Youth	**State** (NSDUH), **Community** (Community Survey), **Program** (Program NOMs Instrument)
	"How old were you the first time you used [any other tobacco product] †?" [Response option: Write in age at first use.] **Outcome Reported:** Average age at first use of tobacco products other than cigarettes.	NSDUH	Multiple Items	Adult, Youth	**State** (NSDUH), **Community** (Community Survey), **Program** (Program NOMs Instrument)
	"Think about the first time you had a drink of an alcoholic beverage. How old were you the first time you had a drink of an alcoholic beverage? Please do not include any time when you only had a sip or two from a drink." [Response option: Write in age at first use.] **Outcome Reported:** Average age at first use of alcohol.	NSDUH	AL02	Adult, Youth	**State** (NSDUH), **Community** (Community Survey), **Program** (Program NOMs Instrument)

Measure	Source Item and Measure Calculation	Source of Data	Item Code (If survey based)	Respondent Age Group	Level of Aggregation and Data Source
	"How old were you the first time you used marijuana or hashish?" [Response option: Write in age at first use.] **Outcome Reported:** Average age at first use of marijuana or hashish.	NSDUH	MJ02	Adult, Youth	**State** (NSDUH), **Community** (Community Survey), **Program** (Program NOMs Instrument)
	"How old were you the first time you used [other illegal drugs] ‡?" [Response option: Write in age at first use.] **Outcome Reported:** Average age at first use of other illegal drugs.	NSDUH	Multiple Items	Adult, Youth	**State** (NSDUH), **Community** (Community Survey), **Program** (Program NOMs Instrument)
Perceived Risk of Harm of Use	*"How much do people risk harming themselves physically and in other ways when they smoke one or more packs of cigarettes per day?"* [Response options: No risk, slight risk, moderate risk, great risk, "don't know"] **Outcome Reported:** Percent reporting moderate or great risk.	NSDUH	RK01a	Adult, Youth	**State** (NSDUH), **Community** (Community Survey), **Program** (Program NOMs Instrument)

Measure	Source Item and Measure Calculation	Source of Data	Item Code (If survey based)	Respondent Age Group	Level of Aggregation and Data Source
	"How much do people risk harming themselves physically and in other ways when they smoke marijuana once or twice a week?" [Response options: No risk, slight risk, moderate risk, great risk, "don't know"] **Outcome Reported:** Percent reporting moderate or great risk.	NSDUH	RK01c	Adult, Youth	**State** (NSDUH), **Community** (Community Survey), **Program** (Program NOMs Instrument)
	"How much do people risk harming themselves physically and in other ways when they have five or more drinks of an alcoholic beverage once or twice a week?" [Response options: No risk, slight risk, moderate risk, great risk, "don't know"] **Outcome Reported:** Percent reporting moderate or great risk.	NSDUH	RK01k	Underage, Legal Age	**State** (NSDUH), **Community** (Community Survey), **Program** (Program NOMs Instrument)
Disapproval of Substance Use	*"How do you feel about someone your age smoking one or more packs of cigarettes a day?"* [Response options: Neither approve nor disapprove, somewhat disapprove, strongly disapprove] **Outcome Reported:** Percent somewhat or strongly disapproving.	NSDUH	YE19a	Youth	**State** (NSDUH), **Community** (Community Survey), **Program** (Program NOMs Instrument)

Measure	Source Item and Measure Calculation	Source of Data	Item Code (If survey based)	Respondent Age Group	Level of Aggregation and Data Source
	"How do you think your close friends would feel about you smoking one or more packs of cigarettes a day?" [Response options: Neither approve nor disapprove, somewhat disapprove, strongly disapprove] **Outcome Reported:** Percent reporting that their friends would somewhat or strongly disapprove.	NSDUH	YE20a	Youth	**State** (NSDUH), **Community** (Community Survey), **Program** (Program NOMs Instrument)
	"How do you feel about someone your age trying marijuana or hashish once or twice?" [Response options: Neither approve nor disapprove, somewhat disapprove, strongly disapprove] **Outcome Reported:** Percent somewhat or strongly disapproving.	NSDUH	YE19b	Youth	**State** (NSDUH), **Community** (Community Survey), **Program** (Program NOMs Instrument)
	"How do you feel about someone your age using marijuana once a month or more?" [Response options: Neither approve nor disapprove, somewhat disapprove, strongly disapprove] **Outcome Reported:** Percent somewhat or strongly disapproving.	NSDUH	YE19b1	Youth	**State** (NSDUH), **Community** (Community Survey), **Program** (Program NOMs Instrument)

Measure	Source Item and Measure Calculation	Source of Data	Item Code (If survey based)	Respondent Age Group	Level of Aggregation and Data Source
	"How do you feel about someone your age having one or two drinks of an alcoholic beverage nearly every day?" [Response options: Neither approve nor disapprove, somewhat disapprove, strongly disapprove] **Outcome Reported:** Percent somewhat or strongly disapproving.	NSDUH	YE19c	Youth	**State** (NSDUH), **Community** (Community Survey), **Program** (Program NOMs Instrument)
Employment/Education					
Perception of Workplace Policy	*"Would you be more or less likely to want to work for an employer that tests its employees for drug or alcohol use on a random basis? Would you say more likely, less likely, or would it make no difference to you?"* [Response options: More likely, less likely, would make no difference] **Outcome Reported:** Percent reporting that they would be more likely to work for an employer conducting random drug and alcohol tests.	NSDUH	QD53	Adult, Youth 15 years or older	**State** (NSDUH), **Community** (Community Survey), **Program** (Program NOMs Instrument)
ATOD-Related Suspensions and Expulsions	– MEASURE UNDER DEVELOPMENT –				
Daily School Attendance	**Measure calculation:** Average daily attendance (NCES defined) divided by total enrollment and multiplied by 100.	National Center for Education Statistics, Common Core of Data: The National Public Education Finance Survey available for download at http://nces.ed.gov/ccd/stfis.asp		Not collected from individuals	**State** (NCES) **Community** (State Dept. of Ed., Local School

Measure	Source Item and Measure Calculation	Source of Data	Item Code (If survey based)	Respondent Age Group	Level of Aggregation and Data Source
					District)
Crime and Criminal Justice					
Driving While Under the Influence of Alcohol	*"During the past 12 months, have you driven a vehicle while you were under the influence of alcohol?"* [Response Options: Yes, No, "don't know"] **Outcome Reported:** Percent reporting "Yes."	NSDUH	SP06b	Underage, Legal Age - 16 years or older	**Program** (Program NOMs Instrument)
Alcohol-Related Traffic Fatalities	**Measure calculation:** The number of alcohol-related traffic fatalities divided by the total number of traffic fatalities and multiplied by 100.	National Highway Traffic Safety Administration Fatality Analysis Reporting System		Not collected from individuals	**State** (NHTSA-FARS)
Alcohol and Drug-Related Arrests	**Measure calculation:** The number of alcohol and drug-related arrests divided by the total number of arrests and multiplied by 100.	Arrest data by state obtainable from the report Crime in the United States, issued annually by FBI's Uniform Crime Reporting Program. Obtainable at http://www.fbi.gov/ucr/05cius/index.html		Not collected from individuals	**State** (UCR-FBI) **Community** (State and/or Local Law Enforcement Agencies)
Social Support/Social Connectedness					
Family Communication Around Drug Use	*"During the past 12 months, how many times have you talked with your child about the dangers or problems associated with the use of tobacco, alcohol, or other drugs?"** [Response options: 0 times, 1 to 2 times, A few times, Many times] **Outcome Reported:** Percent of parents reporting that they have	NSDUH	PE03	Adult	**State** (NSDUH), **Community** (Community Survey), **Program** (Program NOMs

Measure	Source Item and Measure Calculation	Source of Data	Item Code (If survey based)	Respondent Age Group	Level of Aggregation and Data Source
	talked to their child at least once.				Instrument)
	"Now think about the past 12 months, that is, from [DATEFILL] through today. During the past 12 months, have you talked with at least one of your parents about the dangers of tobacco, alcohol, or drug use? By parents, we mean either your biological parents, adoptive parents, stepparents, or adult guardians, whether or not they live with you." [Response options: Yes, No] **Outcome Reported:** Percent reporting having talked with a parent.	NSDUH	YE08	Youth	**State** (NSDUH), **Community** (Community Survey), **Program** (Program NOMs Instrument)
Access/Service Capacity					

Measure	Source Item and Measure Calculation				Source of Data	Item Code (If survey based)	Respondent Age Group	Level of Aggregation and Data Source
Number of Persons Served by Age, Gender, Race, Ethnicity	**Age** 0-4 5-11 12-14 15-17 18-20 21-24 25-44 45-64 65+ Total	**Race** • Am. Indian / AK Native • Asian • Black / African American • Native Hawaiian / Other Pacific Islander • White • More than one race • Unknown • Other • Total	**Ethnicity** • Not Hispanic / Latino • Hispanic / • Latino • Total	**Gender** • Female • Male • Total	MDS, Prevention Database Builder, Program Outcome Data		Not collected from individuals	**State** (MDS, Prevention Database Builder), **Program** (Program Outcome Data)

Measure	Source Item and Measure Calculation	Source of Data	Item Code (If survey based)	Respondent Age Group		Level of Aggregation and Data Source
Retention						
Percentage of Youth Seeing (Reading, Watching, Listening) a Prevention Message	*During the past 12 months, do you recall [hearing, reading, or watching an advertisement about the prevention of substance use]**?"* [Response options: Yes, No, "don't know"] **Outcome Reported:** Percent reporting having been exposed to prevention message.	NSDUH		Multiple Items	Youth	**State** (NSDUH), **Community** (Community Survey), **Program** (Program NOMs Instrument)

† The question was asked about each tobacco product separately and the youngest age at first use was taken as the measure.

‡ The question was asked about each drug in this category separately and the youngest age at first use was taken as the measure.

*NSDUH does not ask this question of all sampled parents. It is a validation question posed to parents of 12-year-old through 17-year-old survey respondents. Therefore, the responses are not representative of the population of parents in a state. The sample sizes are often too small for valid reporting.

** This is a summary of four separate NSDUH questions each asking about a specific type of prevention message delivered within a specific context.

Appendix D: References

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* Race-ethnicity data from 2011 forward may not be comparable to data from previous years

Appendix E: List of SEOW Members

As of April 2015 (listed by organization)

SEOW Members Name	Organization
Meredith Hersh	Drug Enforcement Administration
Dixie Thompson	Hawai'i Department of Health, Alcohol and Drug Abuse Division
Ebru Yilmaz-Pedro	Hawai'i Department of Health, Alcohol and Drug Abuse Division
Wendy Nihoa	Hawai'i Department of Health, Alcohol and Drug Abuse Division
Scott Keir	Hawai'i Department of Health, Child and Adolescent Mental Health Division
Ranjani Starr	Hawai'i Department of Health, Communicable Disease and Public Health Nursing Division
Tonya Lowery St. John	Hawai'i Department of Health, Epidemiology and Evaluation Office
Dan Galanis	Hawai'i Department of Health, Injury Prevention and Control Section
Therese Argoud	Hawai'i Department of Health, Injury Prevention and Control Section, Poisoning Prevention
Florentina (Tina) Salvail	Hawai'i Department of Health, Office of Health Status Monitoring
Kathleen Baker	Hawai'i Department of Health, Office of Health Status Monitoring
Julia Chosy	Hawai'i Health Data Warehouse (HHDW)
Gary Yabuta	Hawai'i High Intensity Drug Trafficking Areas (HIDTA)
Cynthia Okazaki	Parents And Children Together
Sachin Ruikar	University of Hawai'i, Center on the Family
Sarah Yuan	University of Hawai'i, Center on the Family
Eileen Sabino	University of Hawai'i, Center on the Family
Deborah Goebert	University of Hawai'i, Department of Psychiatry
Jane Onoye	University of Hawai'i, Department of Psychiatry
Susana Helm	University of Hawai'i, Department of Psychiatry
Rebecca Williams	University of Hawai'i, Department of Public Health Sciences
Claudio Nigg	University of Hawai'i, Department of Public Health Sciences
Minami Konishi	University of Hawai'i, Department of Public Health Sciences
Zoe Durand	University of Hawai'i, Department of Public Health Sciences
Angelie Cook	University of Hawai'i, Department of Public Health Sciences
Stephanie Nishimura	University of Hawai'i, John A. Burns School of Medicine