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Hawai‘i State Epidemiological Outcomes Workgroup

Maui County Epidemiological Profile:
Selected Youth Alcohol Indicators

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ABSTRACT

Background: *The Maui County Epidemiological Profile: Selected Youth Alcohol 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) Center for Substance Abuse Prevention (CSAP). The purposes of this profile are identifying Maui County's status of alcohol use by youth, detecting trends of youth alcohol use, and providing information in a user-friendly format for planning and implementation of alcohol use prevention and treatment programs.

Methods: The alcohol-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) was utilized as a primary data source and Hawai'i Health Data Warehouse (HHDW) was utilized as a secondary data source.

Results and Findings: The overall prevalence rates of each alcohol-related indicator among high school students in 2013 were: 57.8% for ever having at least one drink of alcohol; 17.7% for having a first drink of alcohol before age 13 years; 30.9% for 30-day alcohol use; and 15.9% for 30-day binge drinking. There were no significant differences between the total rate of Maui County and overall state rate in 2013 for any indicator. The findings indicated that there were no significant differences in alcohol indicators for youth in Maui County between 2011 and 2013. There were also no sex differences in any indicator. Students in 12^{th} grade had higher rates than students in 9^{th} grade for ever having at least one drink and 30-day alcohol use. There were no grade differences for having a first drink before age 13 years and 30-day binge drinking.

Program Recommendations: Continuous effort and enhancement of underage drinking prevention and treatment programs that are targeted to both boys and girls are crucial for improving underage drinking rates among adolescents in Maui County. Because ever having at least one drink of alcohol and 30-day alcohol use were more prevalent among older high school students than younger students, it is recommended that prevention programs be started at earlier stages of adolescence. It is especially important to delay the first initiation of alcohol use for youth in order to prevent development of alcohol- and other substance-related problems later in life.

Data Recommendations: Currently data by ethnic group are not available for counties due to small sample size. It is important to report ethnicity data not just for state but also for counties, since each county has a different ethnic distribution. This is especially crucial for communities in Maui which are ethnically and culturally diverse, as detailed ethnicity data will help us to design and implement better policies and interventions to address health disparities and health needs for specific ethnic groups. In addition, indicators about risk and protective factors, such as perceived risk of alcohol/substance use, disapproval of alcohol/substance use are available only for state level from the National Survey on Drug Use and Health (NSDUH), but not for county level at this point. It is highly recommended to collect these types of data from a larger sample in order to report them by each county.

ACKNOWLEDGEMENTS

The contents of *Maui County Epidemiological Profile: Selected Youth Alcohol Indicators* is 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 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 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 the members is available in Appendix D). 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 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 from 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.

INTRODUCTION

Background

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

Indicators (from SAMHSA’s National Outcome Measures)

Youth (grades 9-12) trends from 2011 to 2013

- Ever had at least one drink of alcohol
- Had a first drink of alcohol before age 13 years
- 30-day alcohol use
- 30-day binge drinking
- Usual source for alcohol: someone gave alcohol to them

SPF Program Model

The purpose of Hawai‘i’s SPF-PFS Project is to improve the quality of life for the 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 alcohol use area in Maui County, 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 Maui County

The State of Hawai'i is comprised of eight main islands divided into five counties with a total population of approximately 1.4 million. According to the 2013 US Census, the population of Maui County is composed of the following race/ethnicities: 35.9% Caucasian alone [(a)]; 0.8% Black or African American alone [(a)]; 0.6% American Indian and Alaska Native alone [(a)]; 28.8% Asian alone [(a)]; 10.6% Native Hawaiian and Other Pacific Islander alone [(a)]; 23.3% two or more races, 10.7% Hispanic or Latino [(b)]; and 31.5% 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.

The population estimate of Maui County was 160,791 in 2013. Table 1 indicates that the percentage of persons below poverty level in the entire State of Hawai‘i was 11.2% (five-year estimate of 2009-2013) and it was 10.6% for Maui County (five-year estimate of 2009-2013).

Table 1. Maui County and State of Hawai‘i social and economic characteristics in 2013.

County	Population (estimate)	Persons below poverty level (%, 2009-2013)[*1]	Native Hawaiian and Other Pacific Islander alone[*2] population (%)
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 a 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 are not collected for ACS’s single-year estimates.

[*2] Includes persons reporting only one race.

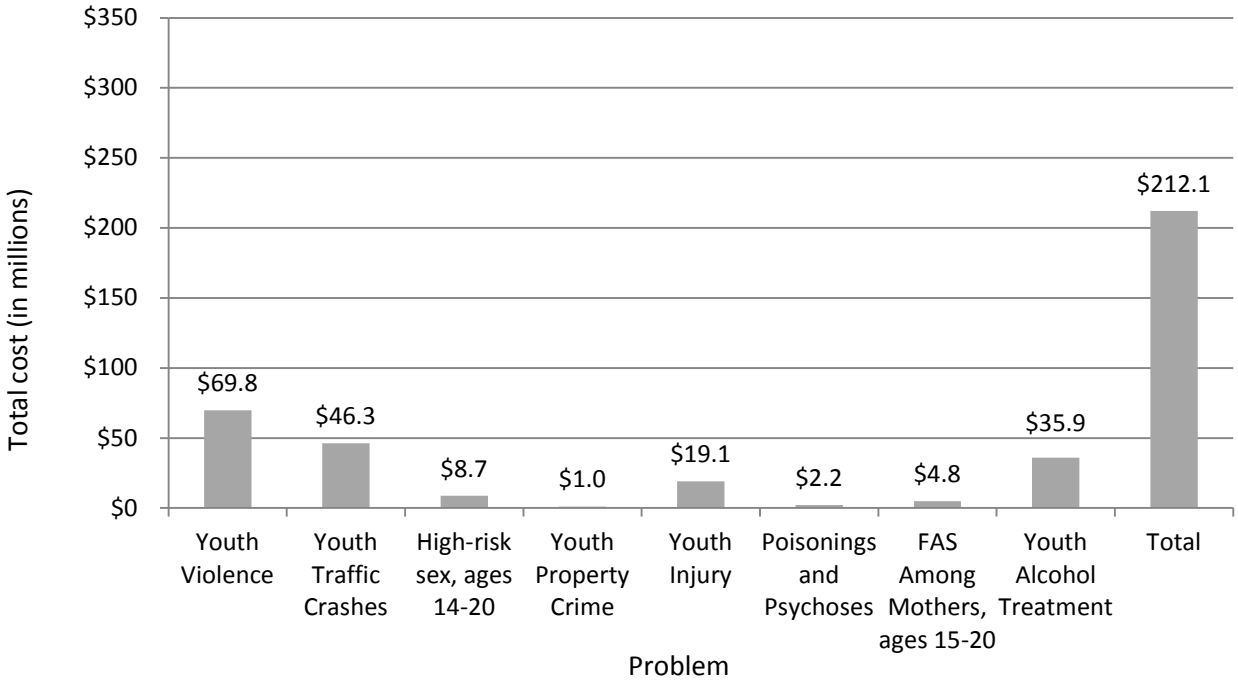
Costs of Underage Drinking in the State of Hawai‘i

Underage drinking has been the causal factor of numerous problems in the United States. These issues include homicide, traumatic injury, fetal alcohol syndrome, alcohol poisoning, and crime. Pacific Institute for Research and Evaluation (PIRE) reported that underage drinking cost the citizens of the state of Hawai‘i approximately $0.2 billion in 2013, which included medical care, work loss, and pain/suffering associated with the problems induced from youth alcohol use. This total cost from underage drinking in 2013, $0.2 billion can be converted into $1,939 per year for each youth in Hawai‘i, or $5.49 per drink consumed underage.

The total cost of underage drinking in the state (approximately $0.2 billion) consists of tangible costs of $106.3 million (including medical care, criminal justice, property damage, and loss of work) and pain and suffering costs of $113.2 million.

Figure B shows the cost of underage drinking by problem in 2013. Youth violence (homicide, suicide, and aggravated assault) and youth traffic crashes costs the state the most.

Figure B. Cost of underage drinking in the State of Hawai‘i as reported by the PIRE in 2013.



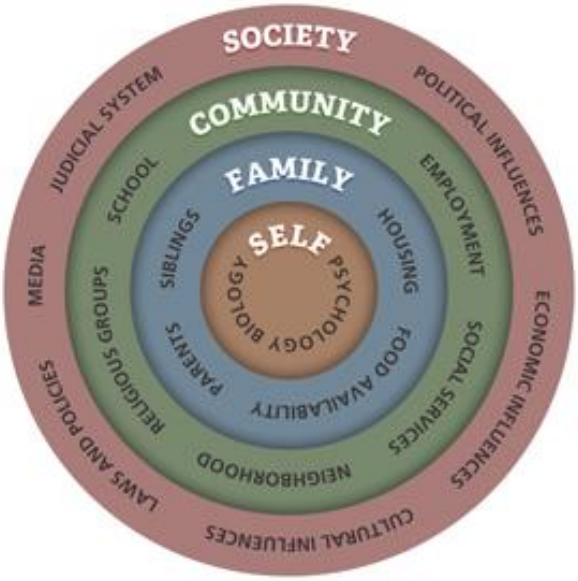
*FAS=fetal alcohol syndrome
Source: PIRE, 2013

Risk and Protective Factors for Substance Use Prevention Among Youth

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, as shown in Figure C, which shows the levels of 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 in the community or there is no parental supervision.

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



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

Family factors can act as both risk and protective factors for substance use for youth. 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 alcohol are less likely to initiate alcohol use (SAMHSA, 2014; Brook et al., 1985). Several studies have shown that substance use by a close family member may increase the risk of a youth's initiation of underage drinking (Ewing et al., 2014; Kuntsche & Kuendig, 2006; Latendresse et al., 2008). 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 seems to be associated with more risk of substance use-related problems (Rhodes & Jason, 1990; Ellickson & Hays, 1992).

Table 2 displays a list of risk and protective factors for youth at four levels: peer and individual; family; school/work; and community. The data specifically about risk and protective factors among youth in this report can be found in the sections of "Had a first drink of alcohol before age 13 years."

Table 2. 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).

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 males and females, and comparison among different grade levels. Ethnicity data for county profiles are not reported due to insufficient sample sizes.

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 County Epidemiological Profile. Primary data source is entity of data collected and analyzed by the same organization whereas secondary data source is entity 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 Source

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 prevalence 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 is demonstrated as acceptable, there might be potential underreporting or over-reporting 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 of 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

Secondary Data Source

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/

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 B. For the epidemiological purposes of this profile and due to data availability, only two domains will be addressed: reduced morbidity: abstinence from drug use/alcohol use and access/capacity.

How to Read Graphs

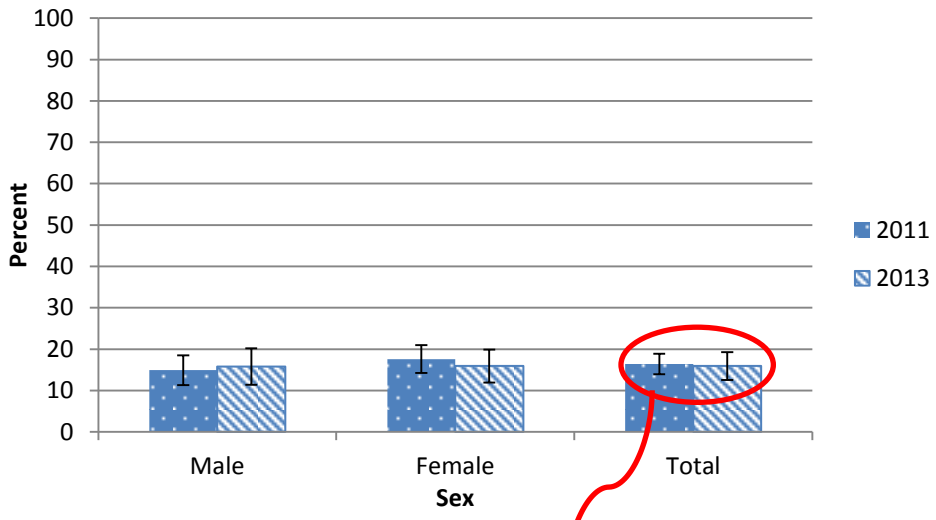
Data Assistance: Understanding a Graph

Section Overview

Data of select indicators are presented as bar graphs, which are intended to assist in utilizing the data to further efforts in substance abuse prevention. The following sub-sections are illustrated explanations on 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 7. 30-day binge drinking by sex (high school students)

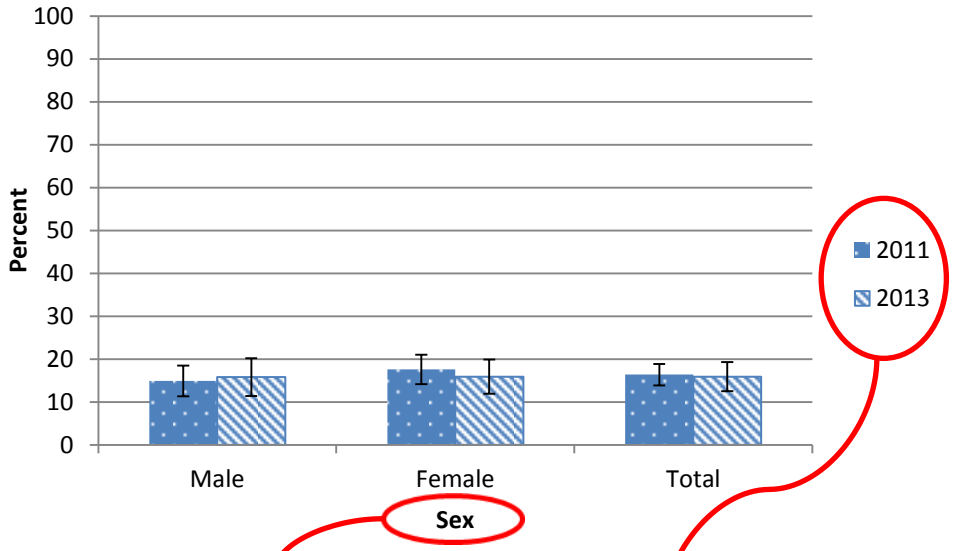


Whiskers indicate 95% confidence intervals of individual bars. The true values of the data have 95% probability of falling within the whiskers.

How to Interpret Graphs

Step 1: Pick an indicator

Figure 7. 30-day binge drinking by sex (high school students)



Step 2: Pick a variable of interest.

Ex: sex or grade

Step 3: Compare trends over time

Ex: Binge drinking did not differ significantly by year for 2011 and 2013.

Step 4: Put it all together.

Ex: Binge drinking among high school students in Maui County did not differ significantly by sex or by year.

Step 5: 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. We recommend decreasing the rate of binge drinking amongst high school students from 15.9% in 2013 to 14.3% in 2023.

MAUI COUNTY: SELECTED YOUTH ALCOHOL INDICATORS

Ever had at Least One Drink of Alcohol by Sex and Grade

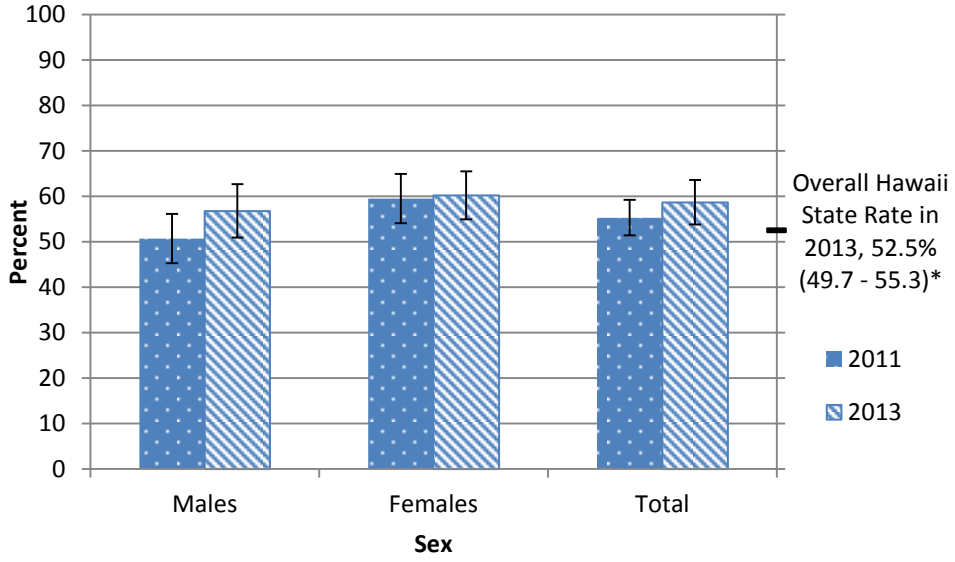
Ever had at least one drink of alcohol indicates whether someone has ever had a drink (more than a few sips) of alcohol during their life. Figures 1 and 2 show the percentages of ever having at least one drink of alcohol among high school students in Maui County by sex and grade.

In 2013, the total rate of ever having at least one drink of alcohol in Maui County (58.7%) was not significantly different from the overall state rate (52.5%) for the same year (Figure 1).

Rates of ever having at least one drink of alcohol did not vary by sex in 2011 and 2013 (Figure 1).

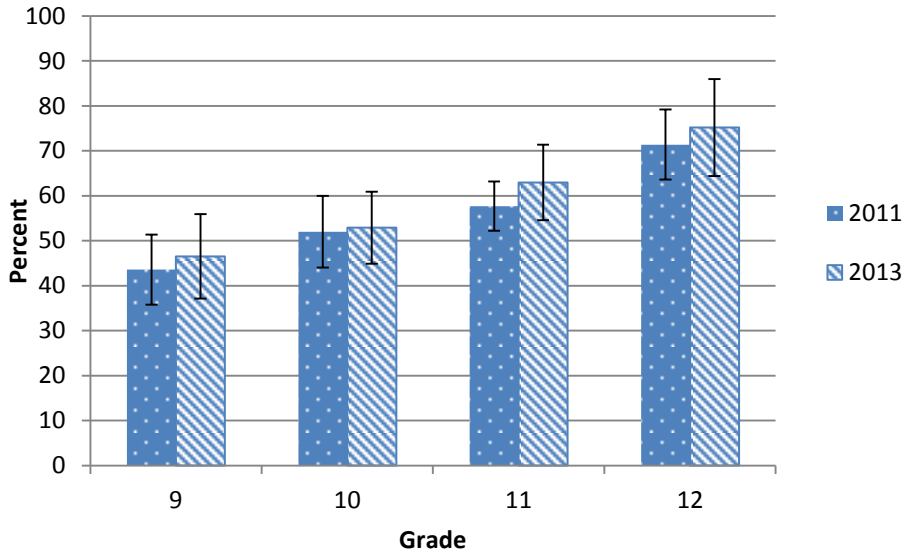
In both 2011 and 2013, 12th graders had significantly higher rates of ever having at least one drink of alcohol than 9th graders. In 2011, 11th and 12th graders had significantly higher rates of ever having at least one drink of alcohol than 9th graders (Figure 2).

Figure 1. Ever had at least one drink of alcohol by sex (high school students)



*95% confidence interval
Source: HHDW

Figure 2. Ever had at least one drink of alcohol by grade (high school students)



Source: HHDW

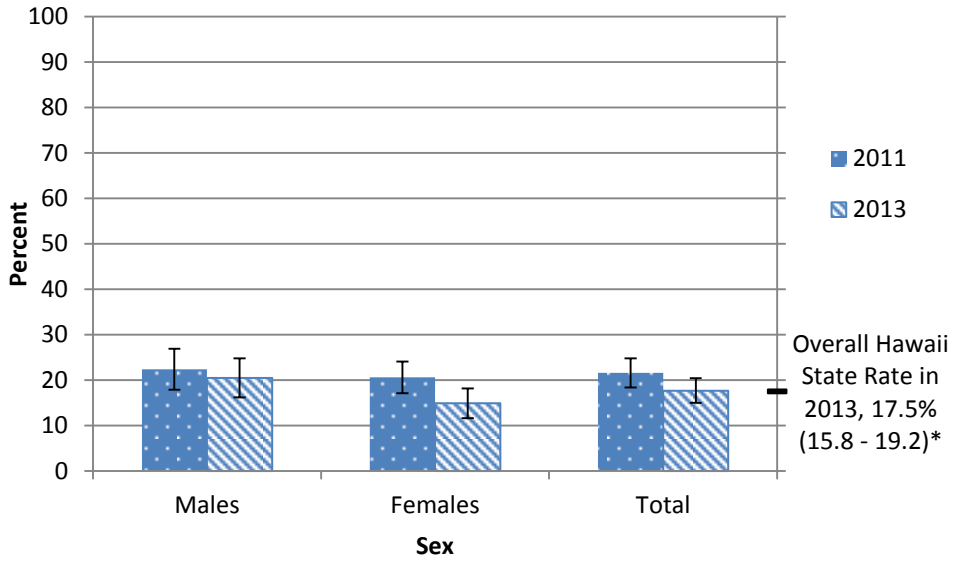
Had a First Drink of Alcohol Before Age 13 Years by Sex and Grade

Had a first drink of alcohol before age 13 years indicates whether someone had a first drink of alcohol (more than a few sips) before they were 13 years old. Figures 3 and 4 show the percentages of having a first drink of alcohol before age 13 years among high school students in Maui County by sex and grade.

In 2013, the total rate of having a first drink of alcohol before age 13 years in Maui County (17.7%) was not significantly different from the overall state rate (17.5%) for the same year (Figure 3).

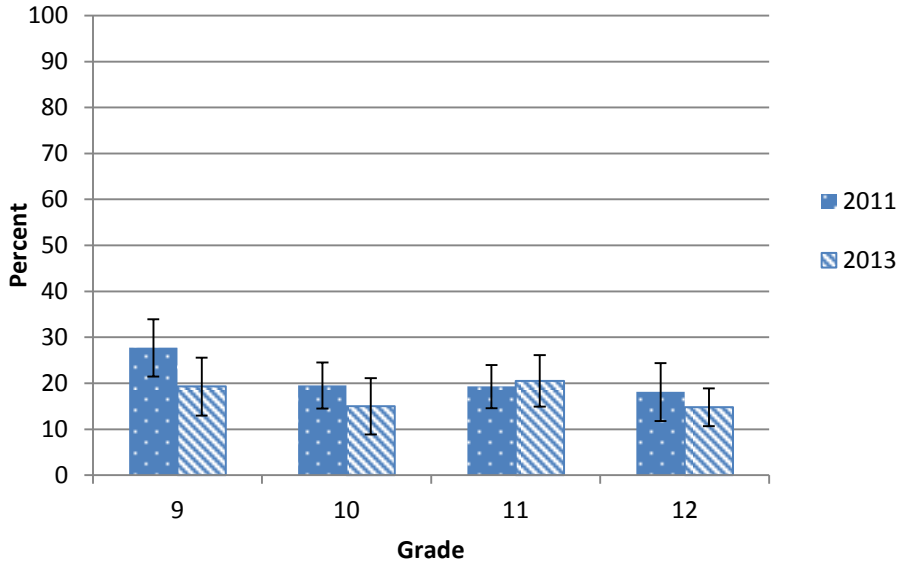
Rates of having a first drink of alcohol before age 13 years did not have significant differences by year, sex (Figure 3), or grade (Figure 4).

Figure 3. Had a first drink of alcohol before age 13 years by sex (high school students)



*95% confidence interval
Source: HHDW

Figure 4. Had a first drink of alcohol before age 13 years by grade (high school students)



Source: HHDW

30-Day Alcohol Use by Sex and Grade

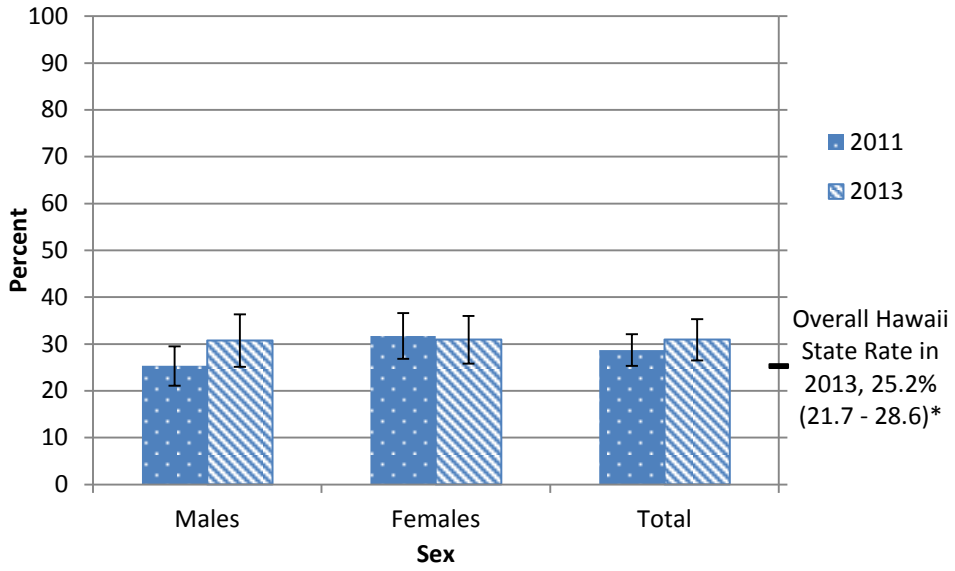
30-day alcohol use indicates current alcohol use, measured as whether someone has consumed a drink of alcohol in the 30 days preceding the survey date. Figures 5 and 6 show the percentages of 30-day alcohol use among high school students in Maui County by sex and grade.

In 2013, the total rate of 30-day alcohol use in Maui County (30.9%) was not significantly different from the overall state rate (25.2%) for the same year (Figure 5).

30-day alcohol use rates did not vary by year or sex (Figure 5).

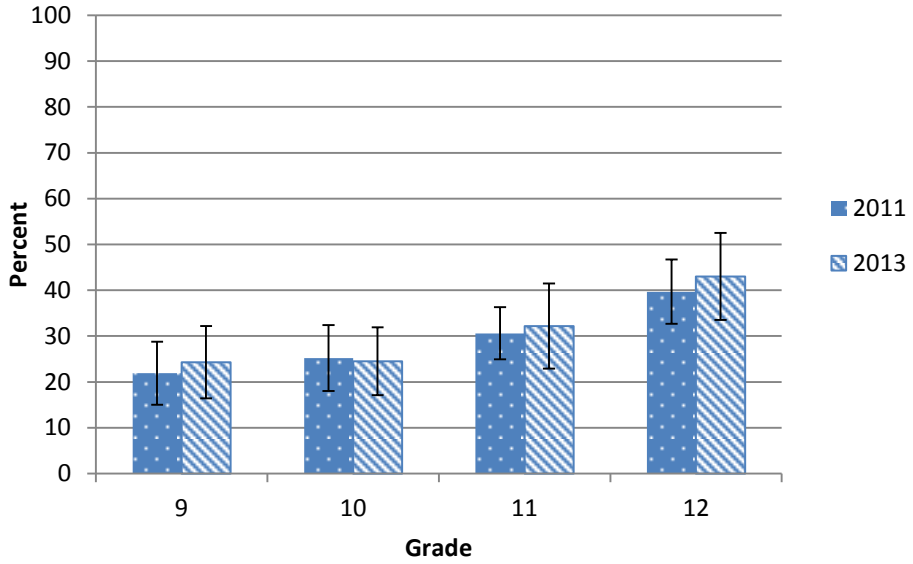
In both 2011 and 2013, 12th graders had significantly higher 30-day alcohol use rates than 9th graders in the same year (Figure 6).

Figure 5. 30-day alcohol use by sex (high school students)



*95% confidence interval
Source: HHDW

Figure 6. 30-day alcohol use by grade (high school students)



Source: HHDW

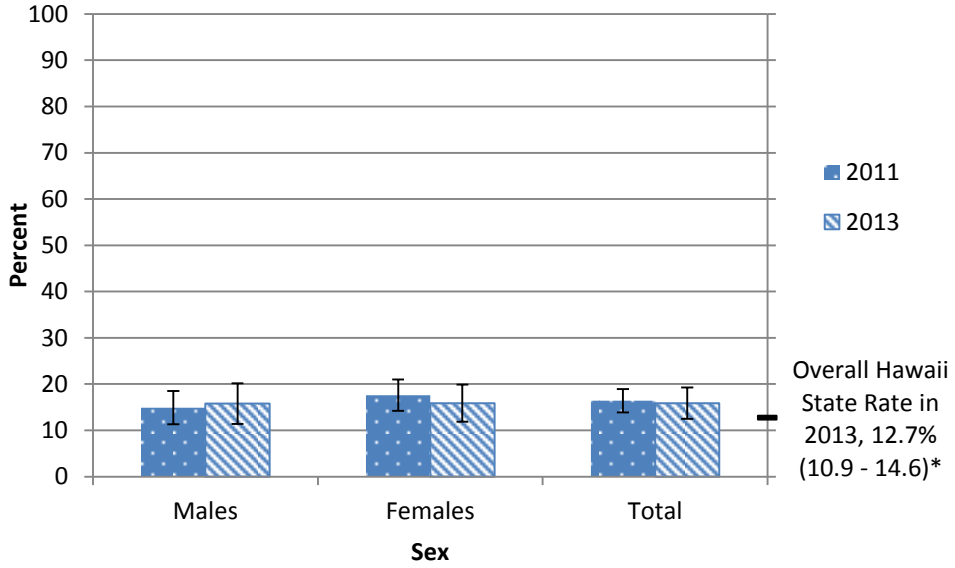
30-Day Binge Drinking by Sex and Grade

Binge drinking of youth is having five or more drinks of alcohol in a row within a couple of hours on one occasion. 30-day binge drinking indicates current binge drinkers, measured as whether someone binge drank in the 30 days preceding the survey date. Figures 7 and 8 show 30-day binge drinking rates among high school students in Maui County by sex and grade.

In 2013, the total rate of 30-day binge drinking in Maui County (15.9%) was not significantly different from the overall state rate (12.7%) for the same year (Figure 7).

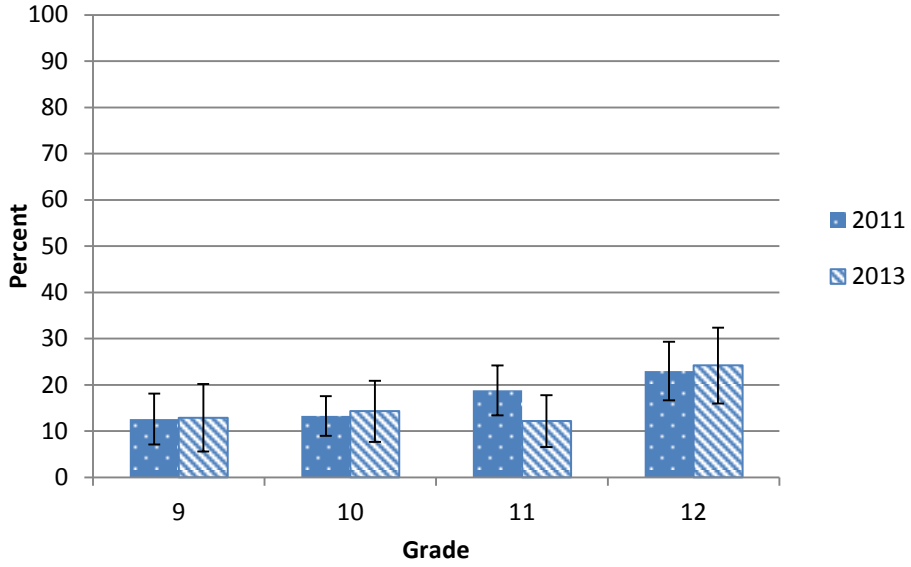
30-day binge drinking rates did not have significant differences by sex (Figure 7) or grade (Figure 8) across years.

Figure 7. 30-day binge drinking by sex (high school students)



*95% confidence interval
Source: HHDW

Figure 8. 30-day binge drinking by grade (high school students)



Source: HHDW

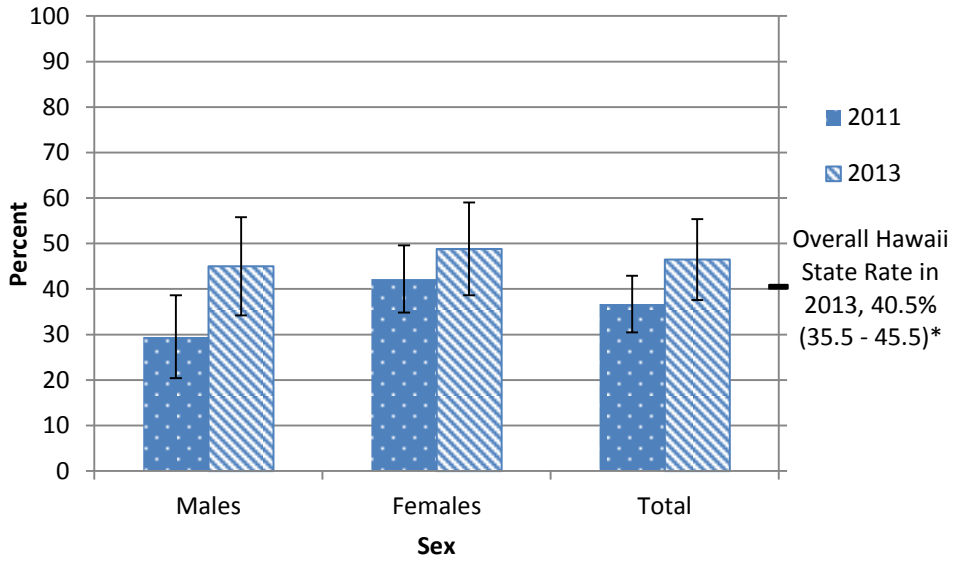
Usual Source for Alcohol: Someone Gave Alcohol to Them by Sex

Usual source for alcohol: someone gave alcohol to them indicates that among the high school students in Maui County who currently drank alcohol, whether they usually obtained their alcohol from someone giving it to them. Figure 9 shows percentages of usual source for alcohol: someone gave alcohol to them among high school students in Maui County by sex. There was not enough data to show this indicator by grade.

In 2013, the rate of youth who reported someone gave them alcohol in Maui County (46.5%) was not significantly different from the overall state rate (40.5%) for the same year (Figure 9).

There were no significant differences by year or sex (Figure 9).

Figure 9. Usual source for alcohol: someone gave alcohol to them by sex (high school students)



*95% confidence interval
Source: HHDW

SUMMARY

Findings

No alcohol usage indicators had significant differences between 2011 and 2013 in Maui County.

Comparing the total rate of Maui County and overall state rate in 2013, there were no significant differences in any alcohol-related indicator.

There were no significant differences in any indicator by sex.

Ever having at least one drink of alcohol and 30-day alcohol use were more prevalent among older high school students as 12th graders had higher rates than 9th graders for ever having at least one drink of alcohol and 30-day alcohol use in 2011 and 2013. There were no grade differences for having a first drink of alcohol before age 13 years and 30-day binge drinking.

Recommendations for Prevention Programs

- There were no significant differences between 2011 and 2013 in any indicator. This finding suggests a great need of continuous effort and enhancement of underage drinking prevention and treatment programs in order to improve underage drinking rates among adolescents.
- Sex differences in alcohol indicators were not found, thus prevention programs should target both boys and girls.
- Since older high school students had higher rates in some of the alcohol use indicators compared to younger grades, it is strongly recommended to start prevention programs at earlier stages of adolescence. It is especially important to delay the first initiation of alcohol use for youth in order to prevent development of alcohol- and other substance-related problems later in life.

Data Recommendations

- It is important to collect data from a larger sample size and reach an acceptable response rate on surveys so that data can be reported by detailed demographic group. Currently data by ethnic group are not available for county data due to small sample size. It is important to report ethnicity data not just for state but also for counties, since each county has a different ethnic distribution. This is especially crucial for communities in Maui which are ethnically and culturally diverse, as detailed ethnicity data will help us design and implement better policies and intervention programs to address health disparities and health needs for specific ethnic groups.
- Currently indicators about risk and protective factors, such as perceived risk of alcohol/substance use and disapproval of alcohol/substance use are not available for county-level data (these data are available only for state level from the NSDUH that is administered by SAMHSA). It is highly recommended to collect these types of data from a larger sample in order to report them by each

county in Hawai‘i. NSDUH’s state-level data are available at SAMHSA’s website http://www.samhsa.gov/data/population-data-nsduh.

Setting 10-Year Goals

The 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, in 2013 the 30-day binge drinking among high school girls in Maui County was 15.9% (in 2013); therefore reducing this rate to 14.3% (10% improvement) by 2023 would be suggested. 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 alcohol and substance use indicators.

Appendix A: Maui County Youth Data Tables

Table A-1. MAUI COUNTY YOUTH Ever had at least one drink of alcohol by sex and grade in 2011 and 2013

	2011			2013		
Population	%	Lower CI	Upper CI	%	Lower CI	Upper CI
Total	55.3	51.4	59.2	58.7	53.8	63.5
Male	50.7	45.3	56.2	56.8	50.9	62.9
Female	59.5	54.1	64.9	60.2	54.9	65.6
9th grade	43.6	35.8	51.3	46.5	37.1	55.9
10th grade	52.0	44.0	59.9	52.9	44.9	60.9
11th grade	57.7	52.2	63.2	63.0	54.6	71.3
12th grade	71.4	63.6	79.2	75.2	64.4	86.0

Source: Hawai‘i YRBS via HHDW
Confidence Intervals are at 95%

Table A-2. MAUI COUNTY YOUTH Had a first drink of alcohol before age 13 years by sex and grade in 2011 and 2013

	2011			2013		
Population	%	Lower CI	Upper CI	%	Lower CI	Upper CI
Total	21.6	18.4	24.7	17.7	15.0	20.5
Male	22.4	17.9	27.0	20.5	16.2	24.8
Female	20.6	17.1	24.0	14.9	11.6	18.2
9th grade	27.7	21.5	33.8	19.3	13.0	25.6
10th grade	19.5	14.5	24.4	15.0	8.9	21.0
11th grade	19.3	14.6	24.0	20.5	14.9	26.2
12th grade	18.1	11.8	24.4	14.8	10.7	18.8

Source: Hawai‘i YRBS via HHDW
Confidence Intervals are at 95%

Table A-3. MAUI COUNTY YOUTH 30-day alcohol use by sex and grade in 2011 and 2013

	2011			2013		
Population	%	Lower CI	Upper CI	%	Lower CI	Upper CI
Total	28.7	25.3	32.2	30.9	26.5	35.2
Male	25.3	21.1	29.6	30.7	25.1	36.4
Female	31.7	26.8	36.7	30.9	25.8	36.1
9th grade	21.9	15.0	28.7	24.3	16.4	32.2
10th grade	25.2	18.0	32.4	24.5	17.1	32.0
11th grade	30.6	24.9	36.3	32.2	22.9	41.5
12th grade	39.7	32.7	46.7	43.0	33.5	52.4

Source: Hawai‘i YRBS via HHDW
Confidence Intervals are at 95%

Table A-4. MAUI COUNTY YOUTH 30-day binge drinking by sex and grade in 2011 and 2013

	2011			2013		
Population	%	Lower CI	Upper CI	%	Lower CI	Upper CI
Total	16.4	13.9	19.0	15.9	12.5	19.4
Male	14.9	11.3	18.5	15.8	11.4	20.2
Female	17.6	14.2	21.0	15.9	11.9	19.9
9th grade	12.6	7.1	18.2	12.9	5.6	20.2
10th grade	13.3	9.0	17.6	14.3	7.7	20.9
11th grade	18.8	13.4	24.1	12.2	6.6	17.9
12th grade	23.0	16.7	29.2	24.2	16.0	32.4

Source: Hawai‘i YRBS via HHDW
Confidence Intervals are at 95%

Table A-5. MAUI COUNTY YOUTH Usual source of alcohol: someone gave it to me, by sex, in 2011 and 2013

	2011			2013		
Population	%	Lower CI	Upper CI	%	Lower CI	Upper CI
Total	36.7	30.5	42.9	46.5	37.6	55.4
Male	29.5	20.4	38.7	45.0	34.2	55.8
Female	42.2	34.8	49.6	48.8	38.6	58.9

Source: Hawai‘i YRBS via HHDW
Data by grade not available due to small sample size
Confidence Intervals are at 95%

Appendix B: 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)
	*"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

Measure	Source Item and Measure Calculation	Source of Data	Item Code (If survey based)	Respondent Age Group	Level of Aggregation and Data Source
					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 District)

Measure	Source Item and Measure Calculation	Source of Data	Item Code (If survey based)	Respondent Age Group	Level of Aggregation and Data Source
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 talked to their child at least once.	NSDUH	PE03	Adult	**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
	"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					
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 C: References

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

Appendix D: 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