

2018 Hawai‘i State Epidemiologic Profile

Selected Youth and Adult Alcohol Indicators

(Data from 2011-2017)

State Epidemiologic Outcomes Workgroup
6th Edition

University of Hawai‘i at
Mānoa Office of Public
Health Studies

Hawai‘i State Department
of Health Alcohol and
Drug Abuse Division



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

ADAD of DOH is a major 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 at Mānoa

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 providing their services for the current project SPF-PFS 2013 as one of our partners. The authors express our gratitude to the Evaluation Team at COF who works collaboratively with the Epidemiology Team and ADAD at DOH.

State Epidemiologic Outcomes Workgroup (SEOW)

SEOW comprises directors, epidemiologists and data managers from the government, community stakeholders, and individuals from educational institutions. The Epidemiology Team appreciates feedback and suggestions from members, which 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 DOH and the Hawai‘i Department of Education (DOE) 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. Based at the University of Hawai‘i through a contract with DOH, HHDW analyzes the YRBS and BRFSS and provides detailed reports of results. This profile would not have been possible without invaluable data and analysis provided by these resources.

Suggested citation

Hawai‘i State Epidemiological Outcomes Workgroup. (2018). 2018 State Epidemiologic Profile: Selected Youth and Adult Alcohol Indicators. Honolulu, HI.

PROFILE SUMMARY

Background: ADAD and the University of Hawai‘i Office of Public Health Studies Epidemiology Team produce two epidemiologic profiles: the *Hawai‘i State Epidemiologic Profile for Selected Youth and Adult Alcohol Indicators* and the *Hawai‘i State Epidemiologic Profile for Selected Youth and Adult Drug Use Indicators*. The Epidemiology Team is a partner of the Strategic Prevention Framework Partnerships for Success (SPF-PFS), which is funded through the Substance Abuse and Mental Health Services Administration (SAMHSA) Center for Substance Abuse Prevention. The purpose of these profiles is to identify recent rates, patterns, and trends of alcohol or drug use in Hawai‘i among youth and adults. These profiles are intended to present information in a user-friendly format for planning and implementation of alcohol and substance use prevention and treatment programs in Hawai‘i.

Data Sources: The alcohol-related indicators in this profile were selected in order to be consistent with previous years’ reports, which used SAMHSA’s National Outcome Measures (NOMs). The original data sources in this profile are: the Hawai‘i Youth Risk Behavior Survey (Hawai‘i YRBS), the National Survey on Drug Use and Health (NSDUH), the Behavioral Risk Factor Surveillance System (BRFSS), Uniform Crime Reporting (UCR) data, Fatality Analysis Reporting System (FARS) data, and the Pregnancy Risk Assessment Monitoring System (PRAMS).

Results and Findings: Youth alcohol use remained largely flat between 2011 and 2017. Rates of ever drinking alcohol decreased in these six years, but current use, current binge drinking, and early alcohol use showed no significant changes. There were no apparent differences between genders across indicators. With regards to differences across grade levels of high school, 12th graders reported significantly higher percentages of youth reporting use than did 9th graders for every year examined. Additionally, Native Hawaiian and Caucasian students reported the highest rates of use across the majority of indicators compared to other major ethnicities.

In recent years, current alcohol use remained flat among youth, but current alcohol use declined among adults in Hawai‘i. Men reported significantly higher usage rates than women, and Caucasian, Native Hawaiian, and black adults had higher rates of use compared to other ethnicities. The vast majority of adults reported that in the past 30 days they had not driven after drinking too much. There was a decrease in the percentage of alcohol-related traffic fatalities (Blood Alcohol Content $\geq 0.08\%$) between 2012 and 2016. Finally, rates of alcohol consumption during the last three months of pregnancy remained flat over the years examined.

Program Recommendations: Given the research substantiating early alcohol use and binge drinking as particularly risky behaviors and predictors of later problematic alcohol use, evidence-based prevention practices should be implemented to address these indicators. Moreover, the overall pattern of increased use during the progression through high school should inform age-specific prevention and intervention efforts. Further research should attempt to understand how to incorporate differences among adults by gender and by age into prevention and intervention efforts.

Data Recommendations: Data should continue to be collected consistently to allow for better cross-year comparisons. New efforts should be devoted to collect data specifically for college students in Hawai‘i, given the findings about young adults. Further studies should analyze use among individuals above and individuals below 21 years of age.

DATA SUMMARY

Youth

In Hawai‘i among youth, overall rates of lifetime alcohol use decreased from 55.8% in 2011 to 50.3% in 2017. By comparison, the national rate of youth lifetime alcohol use was 60.4% in 2017. However, current alcohol use, binge drinking, and early alcohol use, showed no significant changes.

Across indicators, there were no significant differences between genders. There was a general pattern of increased rates in higher-grade levels, such that 12th graders consistently reported higher rates than 9th graders for the indicators of lifetime use, current use, and binge drinking.

Interpreting the differences between ethnic groups was difficult across indicators due to wide margins of error. However, despite these wide margins of error, Native Hawaiian and Caucasian students tended to report the highest rates of use across the majority of indicators.

Perception of great risk for binge drinking and riding in a car with someone who was high or drank alcohol had no change. Compared to some other ethnicities, Native Hawaiian students had a higher percentage who reported to have ridden in a car with someone who was high or drank alcohol.

Adults

Current alcohol use among adults in Hawai‘i significantly decreased from 53.1% in 2011 to 49.6% in 2016. Thirty-day binge drinking rates also decreased from 21.5% in 2011 to 18.6% in 2016.

Men compared to women reported higher rates of alcohol use, with rates of binge drinking for men more than double that for women. Caucasian, Native Hawaiian, and Black adults had higher alcohol usage rates when compared to Filipino, Japanese, Other Pacific Islander, and Chinese adults.

There were differences by age in the perception of the risk of harm from alcohol consumption. Consuming five or more alcoholic drinks once or twice a week was perceived by adults 18-25 years as less risky compared to adults aged 26 and older.

The vast majority of respondents reported that, in the past 30-days, they had not driven after drinking too much. The number of alcohol-related arrests also remained stable across the sampled years. There was a decrease in the number of alcohol-related traffic fatalities ($BAC \geq 0.08\%$) from 37.6% in 2012 to 28.3% in 2016.

The rates of alcohol use three months before pregnancy remained stable, with the lowest prevalence among those women younger than age 20. Rates of binge drinking before pregnancy decreased from 24% in 2011 to 16.6% in 2014. The rate for women aged 25-34 decreased substantially from 25.9% in 2011 to 17.4% in 2014. Rates of alcohol consumption during the last three months of pregnancy remained stable during the years sampled.

RECOMMENDATIONS FOR PREVENTION PROGRAMS

Youth

- Current alcohol use, binge drinking, and early use remained stable. Given the risky nature of binge drinking and early use in particular, evidence-based prevention practices should be utilized to target these behaviors.
- There were no differences between genders across indicators, signifying that prevention services should be targeted to both boys and girls.
- There was a pattern such that older high school grades showed greater alcohol use across multiple indicators when compared to younger grades. Thus, prevention programs should be age-specific, targeting younger youth to prevent the initiation of alcohol use. Evaluation practices should be used to understand whether and how those programs should be altered for older youth.
- Based on the few findings regarding ethnic differences, culturally appropriate and evidence-based programs are recommended for groups with consistently higher use, specifically Native Hawaiian and Caucasian youth. This represents the same pattern seen in the previous report, underscoring the need for additional research on these groups.

Adults

- Adult current alcohol use and 30-day binge drinking was much more common in adult men than in women. This pattern is consistent with previous findings regarding alcohol use in Hawai‘i. Evidence-based prevention practices and services tailored towards men should be further utilized across the state.
- Prevention strategies and programs should be tailored to young adults to address their perception of risk of alcohol overuse. A lower percentage of adults aged 18-25 years perceived the risk of alcohol overuse as great compared to those aged 26 and older.
- Though the majority of adults reported that they had not driven after drinking too much, the high stakes of doing so means that prevention efforts should continue to target this domain.
- Rates of alcohol consumption during the last three months of pregnancy remained stable, indicating a high-risk group towards which prevention efforts should be targeted.

Data

- The original data sources used for this profile – Hawai‘i YBRS for youth data, BRFSS and NSDUH for both youth and adults, and PRAMS for pregnancy – do not identify current college enrollment. As was recommended in past reports, this data gap should be filled by establishing a statewide health survey for college students throughout all college campuses in Hawai‘i. It may be useful to better understand if and how college students differ from their peers who choose not to attend college at that age.
- Questions about sexual and gender identity should be canvassed in questionnaires related to alcohol and substance use. The limited data available for youth drug use indicate that sexual minority youth may be using certain substances at higher rates than their heterosexual peers. Consequently, new research should also focus on whether such a difference also appears for alcohol use.

- Certain indicators for alcohol use are not available consistently for every year. For example, the indicators for youth disapproval of alcohol use, youth driving while under the influence of alcohol, family communication around substance use, and percentage of youth seeing a prevention message were canvassed in previous years' questionnaires but are no longer available.
- It is important to continue to increase the sample size, particularly to examine disparities across ethnic groups and other vulnerable groups and to justify greater tailoring of programs and interventions. Large margins of error make cross-group comparison difficult.

Setting 10-Year Goals

The Epidemiology Team recommends that a 10-year goal for each objective or indicator be 15% improvement from the baseline measure or the most current year data. For example, in 2016, the current drinking rate among adult men was 56.6%; therefore reducing this rate to 48.1% (15% improvement) by 2026 would be suggested.

INTRODUCTION

Background

The SAMHSA Center for Substance Abuse Prevention (CSAP) has granted funding to the Epidemiology Team since fiscal year 2013 through the SPF-PFS grant. 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 years old. To facilitate this, the 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 Alcohol Indicators.

Indicators from SAMHSA's National Outcome Measures

Youth trends from 2011 to most recent year:

- Ever consumed alcohol
- 30-day alcohol use
- 30-day binge drinking rate
- First drink before the age of 13
- Perceived risk of harm for drinking five or more alcoholic beverages in one sitting
- Ridden in a car with someone high or had been drinking or using other drugs

Data from YRBS cover youth grades 9-12 whereas data from NSDUH covers youth aged 12-17.

Adults (18 years or older) trends from 2011 to most recent year:

- 30-day alcohol use
- 30-day binge drinking rate
- Perceived risk of harm for drinking five or more alcoholic beverages in one sitting
- Driving after drinking too much
- Alcohol-related arrests
- Alcohol-involved traffic fatalities
- Alcohol use 3 months before pregnancy
- Alcohol use during the last 3 months of pregnancy
- Binge drinking during the last 3 months of pregnancy

Past Epidemiologic Profiles

This profile builds upon previous epidemiologic profiles produced as follows:

- Nigg, C., Wagner, A., Garza, C., & Goya, D. (2017). State Epidemiological Profile 2011-2015: Selected Youth and Adult Alcohol Indicators. Honolulu, HI: Hawai‘i State Epidemiological Outcomes Workgroup.
- Nigg, C., Wagner, A., Konishi, M., Durand, Z., & Cook, A. (2014). State Epidemiological Profile: Selected Youth and Adult Alcohol Indicators. Honolulu, HI: Hawai‘i State Epidemiological Outcomes Workgroup.

SPF Program Model

The purpose of Hawai‘i’s Strategic Planning Framework – Partnership for Success (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. A goal of the SPF process aims to 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 1).



Figure 1. SPF Program Model

About the Authors

This report was prepared by Danilyn Goya, Constance Emory, and Victoria Y Fan on behalf of the State Epidemiologic Outcomes Workgroup (SEOW). The UH Epidemiology Team has been providing epidemiologic services to and working with the ADAD of DOH from 2006 to present as a SPF partner. The SPF-PFS builds upon the accomplishments of the SPF-SIG and Substance Abuse Block Grants. Since 2010, the profiles have been put together and updated by the Epidemiology Team with guidance from the SEOW. The SEOW was established in March 2006 with grant funds from the SAMHSA CSAP to DOH, ADAD. The 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 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 1.4 million. Population and division of islands by counties are depicted in Table 1.

Table 1. Population and division of counties in the State of Hawai‘i, 2017

County	Island(s)	Population
Kaua‘i	Kaua‘i, Ni‘ihau	72,159
Honolulu	O‘ahu	988,650
Kalawao	Kalaupapa Peninsula of Moloka‘i	88
Maui	Maui, Lāna‘i, Kaho‘olawe, Moloka‘i (excluding Kalaupapa)	166,260
Hawai‘i	Hawai‘i island	200,381
Total, State of Hawai‘i		1,427,538

Source: U.S. Census Bureau

Hawai‘i’s population self-identifies across multiple races (Table 2): 37.8% identified as Asian, 25.7% as White, 25.8% as multiple races, and 10.2% as Native Hawaiian and Other Pacific Islander.

Table 2. Population of the State of Hawai‘i by race, 2017

Race	Percent
One race	76.3
White	25.7
Black or African American	2.2
American Indian and Alaska Native	0.4
Asian	37.8
Native Hawaiian and Other Pacific Islander	10.2
Two or more races	23.8

Source: U.S. Census Bureau

County information with specific population, social, and economic characteristics is depicted in Table 3. The City and County of Honolulu is the largest of the five counties in terms of population with 988,650 persons as of 2017. The percentage of persons below poverty level in the state was 9.5% – with Hawai‘i County having the highest rate of 15.4% across counties.

Table 3. State of Hawai‘i social and economic characteristics by county, 2017.

	% of persons below poverty level	% of population that identifies as Native Hawaiian and Pacific Islander alone ¹
Kaua‘i County	8.1%	9.2%
Honolulu County	8.5%	9.6%
Kalawao County (Kalaupapa)	N/A	47.7%
Maui County	9.5%	10.9%
Hawai‘i County	15.4%	13.1%
State of Hawai‘i	9.5%	10.2%

Source: U.S. Census Bureau

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 U.S. rate), comparison between males and females, comparison among different grade levels (for youth), and comparison among different ethnic groups.

DATA SOURCES

Section Overview

Indicators were selected from SAMHSA’s list of National Outcome Measures (NOMs). The purpose of this section is to provide a brief description of original and processed data sources used for this State Epidemiologic Profile. Original data sources refer to data collected and analyzed by the same organization whereas processed data sources are entities of available data that were aggregated. 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 by the Epidemiology Team.

¹ Includes persons reporting only one race.

Original Data Sources

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

Description: The YRBS is a national health survey of the Centers for Disease Control and Prevention (CDC). The YRBS monitors six types of self-reported health-risk behaviors that contribute to the leading causes of death and disability among youth, and prevalence of obesity and asthma among youth and young adults. Data are collected regarding health-risk behaviors among 9th through 12th grade students in the United States (US) including alcohol or other drug use, tobacco use, sexual risk behaviors, unhealthy dietary behaviors, and physical inactivity. Hawai'i YRBS is administered by DOE in partnership with DOH, and HHDW provides detailed aggregate reports for the state YRBS data.

Limitations: Although quality of the data are 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. In Hawai'i, the YRBS is a school-based survey that collects data for public middle schools and high schools. 84.5% of students in Hawai'i are enrolled in public schools in the 2016-2017 year (Hawai'i Department of Education, 2018). 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 for 2017.

Website: <http://hhdw.org/health-reports-data/data-source/yrbs-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, and illicit drugs in the U.S. Participants are given cash incentives and interviewed in their home.

Limitations: Responses are self-reported. Incentives provided from survey completion may lead to certain populations being more willing to participate in the survey than others. Data collected are only reported as state specific, and data collected at the county level are not provided with publicly available data. The 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 annually. The most current combined year available for this profile was 2015-2016.

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

Hawai‘i Behavioral Risk Factor Surveillance System (Hawai‘i BRFSS)

Description: The BRFSS is coordinated by the CDC by phone. Data are collected monthly, and covers all 50 states, the District of Columbia, Guam, and Puerto Rico. Survey questions include alcohol and marijuana usage, and demographics of age, gender, ethnicity/race, education attainment, marital status, land tenure, and telephone ownership. In addition to landlines, the BRFSS also started to incorporate cellphone-based surveys in 2011. Hawai‘i BRFSS is administered by DOH. HHDW provides detailed aggregate reports for the state BRFSS data.

Limitations: The BRFSS is self-reported with challenges of under- or over-reporting. Surveys are only distributed to those who are in possession of landlines or cellphones, which may not be representative of the entire population. The most recent data available is 2016.

Website: <http://health.hawaii.gov/brfss/>

Uniform Crime Reporting (UCR)

Description: The UCR program is maintained by the Federal Bureau of Investigation (FBI) and its purpose is to have a reliable set of crime statistics for use in a variety of settings and functions. This data is meant to inform policies and staffing internally, as well as allow the American public to monitor yearly fluctuations in crime. The FBI provides local law enforcement agencies with standardized definitions for classifying offenses, and local law enforcement agencies then report these statistics to the FBI.

Limitations: Despite best efforts, local law enforcement agencies have yet to provide data to the FBI for publication each year.

Website: <https://ucr.fbi.gov/>

Fatality Analysis Reporting System (FARS)

Description: FARS data is compiled and managed by the National Highway Traffic Safety Administration. Yearly data is reported regarding fatal injuries suffered in motor vehicle traffic crashes. To qualify for inclusion in FARS data, a crash must involve a motor vehicle traveling on a road typically open to the public and must result in the death of at least one person within 30 days of the crash. The data is provided to NHTSA directly from the State Department of Transportation.

Limitations: FARS data reports overall percentage of fatalities at varying levels of blood alcohol content (BAC). Further, the definition used to determine inclusion in the FARS data set may exclude some cases with injuries resulting in death after 30 days following the crash.

Website: <https://www.nhtsa.gov/research-data/fatality-analysis-reporting-system-fars>

Pregnancy Risk Assessment Monitoring System (PRAMS)

Description: PRAMS is a project sponsored by the CDC to collect state-specific, population-based data on maternal attitudes and experiences before, during, and after pregnancy. A questionnaire is mailed to approximately 200 new mothers per month on all islands of Hawai‘i. Questions were intended to address critical maternal and child health issues. Relevant to this report are their questions about use of alcohol before and during pregnancy.

Limitations: Responses are self-reported. Additionally, the absence of national level statistics and differences in methodology between states makes cross-state comparison difficult. The most recent data available is from 2014.

Website: <http://health.hawaii.gov/fhsd/home/hawaii-pregnancy-risk-assessment-monitoring-system-prams/>

Processed Data Sources

Hawai‘i Health Data Warehouse (HHDW) and Indicator Based Information System (IBIS)

Description: HHDW was created through the partnership between DOH and the University of Hawai‘i in an effort to standardize the collection and management of Hawai‘i’s health data. The database is one of the five components under the Healthy Hawai‘i Initiative, which was initially created to address and monitor the Healthy People 2010 goals.

IBIS was created by HHDW to measure outcomes through indicators of important public health constructs. IBIS is an interactive tool that queries data directly and has the ability to build reports. IBIS aggregates YRBS, BRFSS, PRAMS and Youth Tobacco Survey data.

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

National Outcome Measures (NOMs)

Overview

The SAMHSA NOMs were 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 prioritized domains were identified as follows:

- 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 the Appendix D. For the epidemiologic 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.

YOUTH ALCOHOL INDICATORS

Youth: Ever Drank Alcohol by Gender, Grade, and Ethnicity

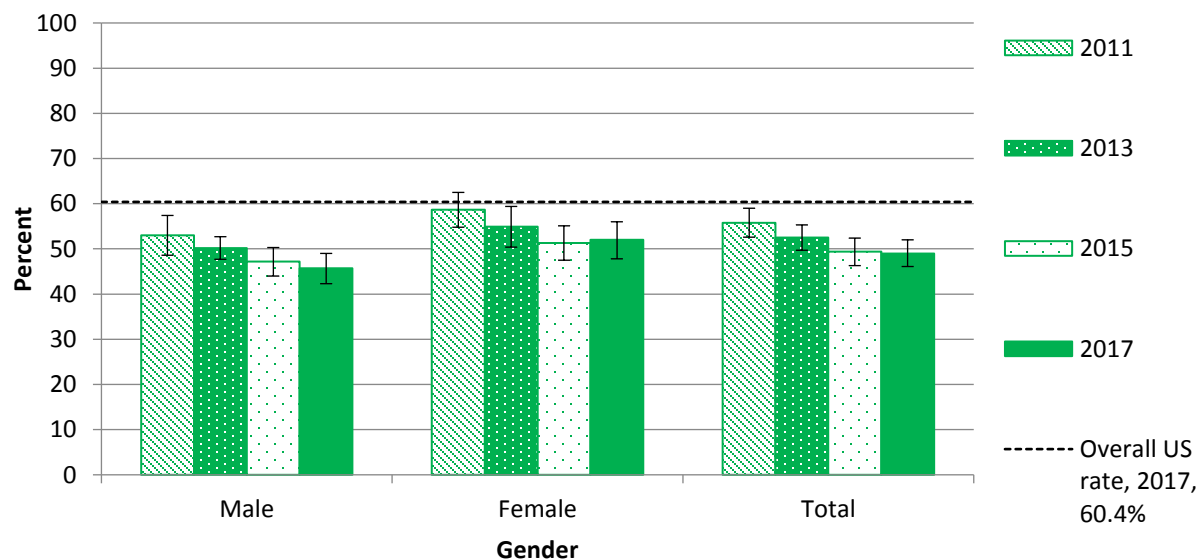
Ever drank alcohol is defined by whether a public high school student in Hawai‘i had at least one drink of alcohol on one or more days during their lifetime.

Figure 2 indicates that there was a significant decrease in percentage of high school students in Hawai‘i who have consumed alcohol in their lifetime from 55.8% in 2011 to 49% in 2017. The percentage in Hawai‘i remained lower than the 2017 national rate of 60.4%. There were no significant differences across gender within any of the years, nor were there differences between years when examining males and females separately.

Figure 3 displays the percentage of students in Hawai‘i who reported having ever consumed alcohol increased as students progressed through high school. The percentages for 9th and 10th graders was significantly lower than that for 12th graders across all years sampled.

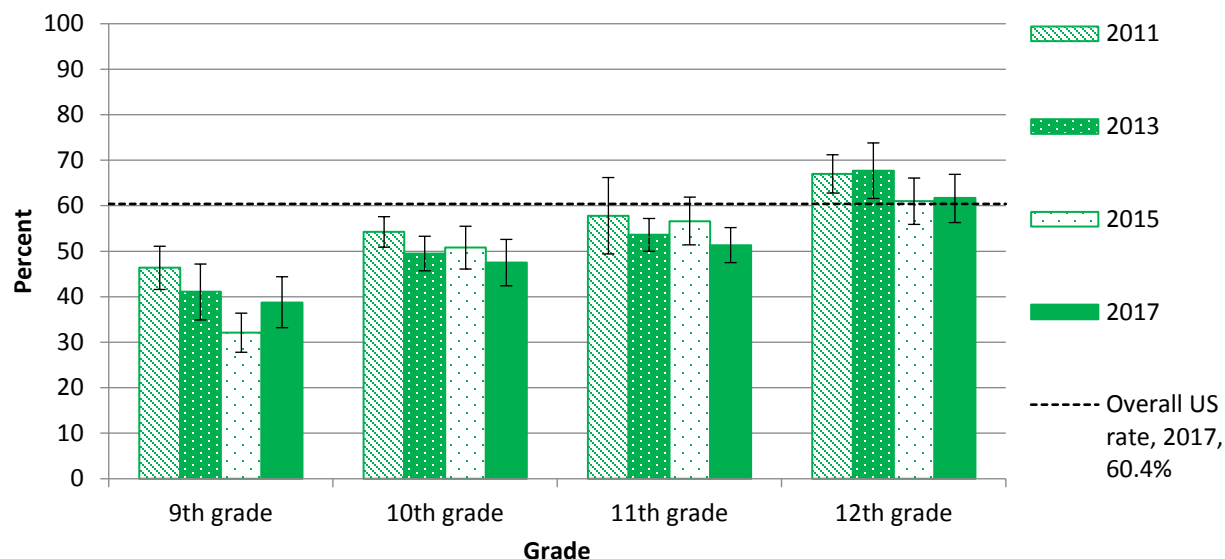
Figure 4 indicates that percentages among most ethnicities did not significantly change across sequential years. The only significant difference occurred among Caucasian students between 2011 (63.2%) and 2013 (52.2%). There was a significantly higher percentage of Native Hawaiian and Caucasian students who reported drinking alcohol compared to Japanese and Other Asians throughout all years examined.

Figure 2. Youth: Ever had at least one drink of alcohol among public high school students in Hawai‘i, by gender



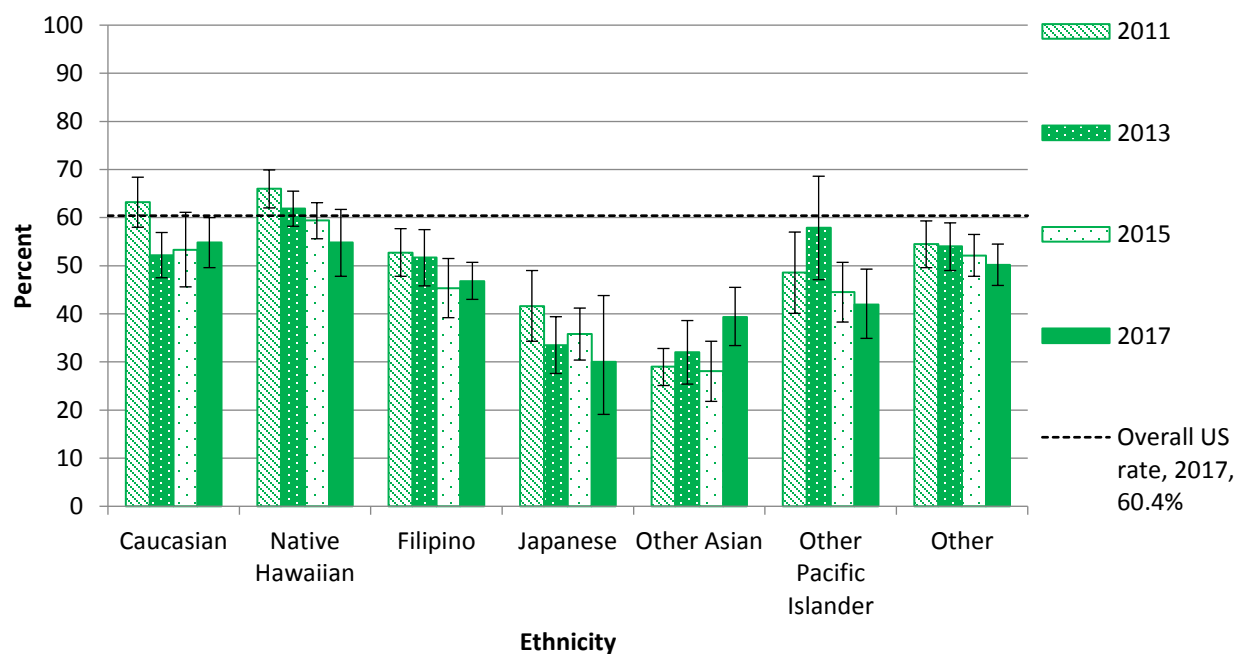
Source: YRBS 2011, 2013, 2015 and 2017 via HHDW IBIS

Figure 3. Youth: Ever had at least one drink of alcohol among public high school students in Hawai'i, by grade



Source: YRBS 2011, 2013, 2015 and 2017 via HHDW IBIS

Figure 4. Youth: Ever had at least one drink of alcohol among public high school students in Hawai'i, by ethnicity



Source: YRBS 2011, 2013, 2015 and 2017 via HHDW IBIS

Youth: Current Alcohol Use by Gender, Grade, and Ethnicity

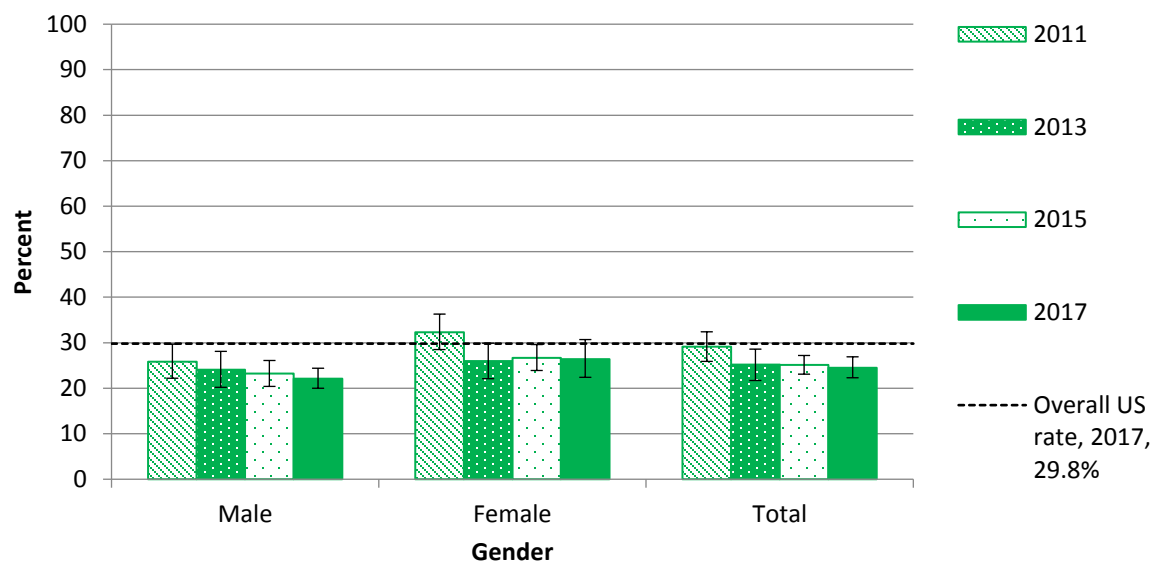
Current alcohol use is defined by whether a public high school student in Hawai'i had at least one drink in the past 30 days.

Figure 5 indicates that the overall percentage of current alcohol use in Hawai'i (24.5%) remained lower than the national rate of 29.8%. There were no significant differences across years in the overall percentage of students consuming alcohol within the prior 30 days, nor were there differences between males and females for any year.

Figure 6 indicates that current alcohol use percentages were significantly higher for 12th graders compared to 9th and 10th graders across all years. 12th graders also had a significantly higher percentage of current drinkers when compared to 11th graders in 2013, 2015 and 2017.

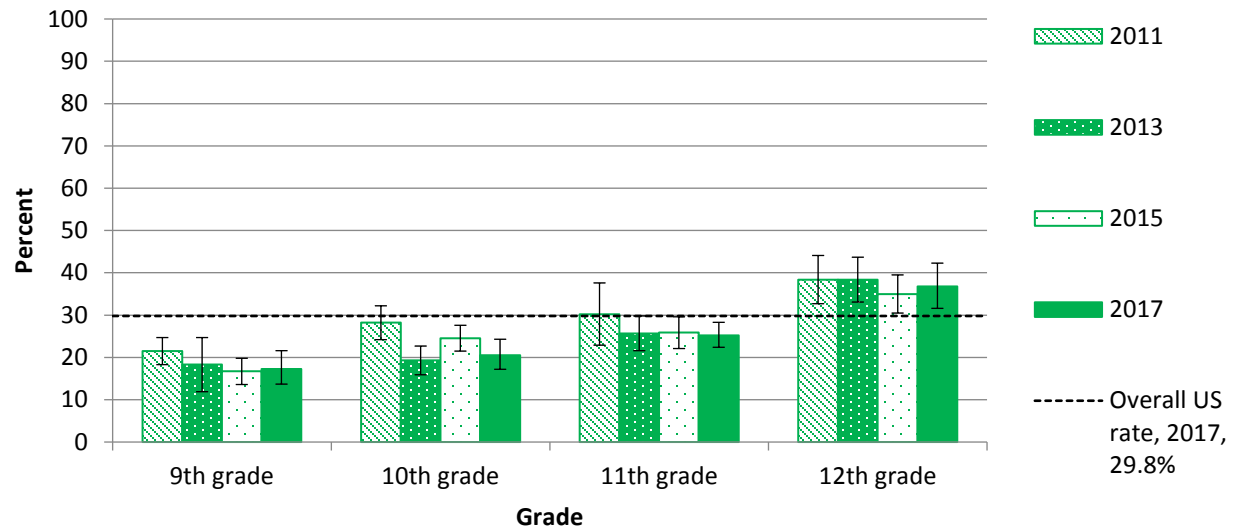
Figure 7 indicates that Filipino, Japanese, and Other Asian students reported lower percentages of current use compared to Native Hawaiian and Caucasian high school students in 2017.

Figure 5. Youth: Current alcohol use among public high school students in Hawai'i, by gender



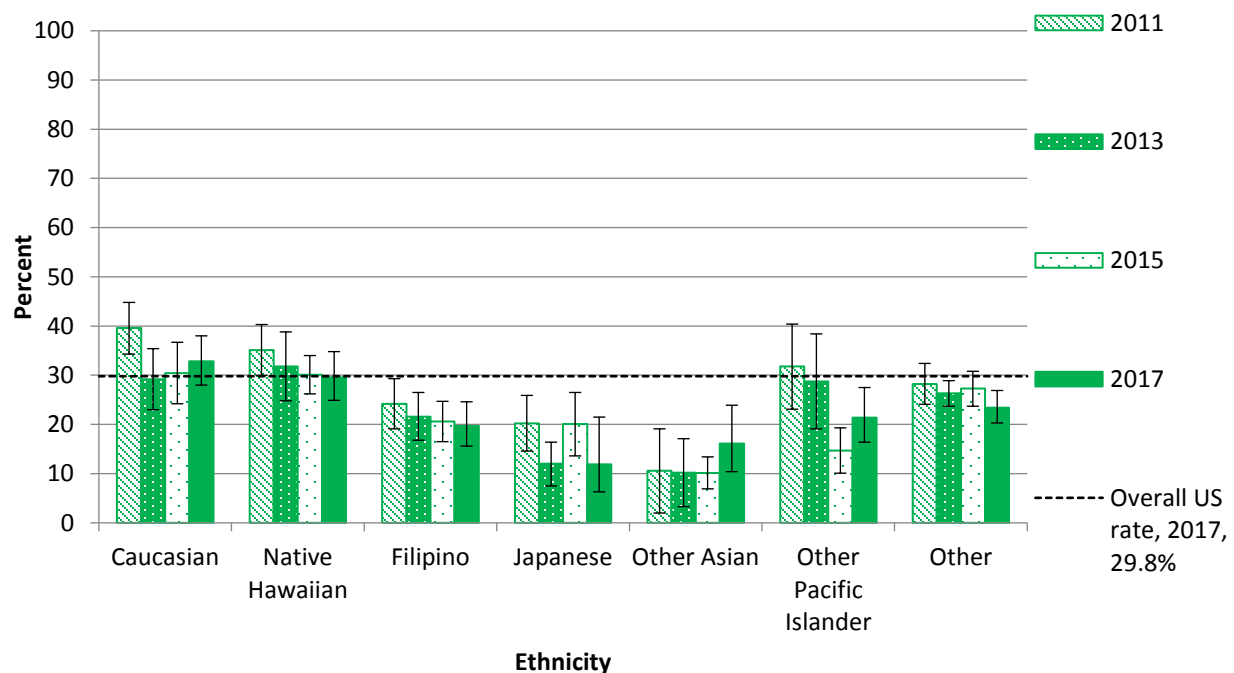
Source: YRBS 2011, 2013, 2015 and 2017 via HHDW IBIS

Figure 6. Youth: Current alcohol use among public high school students in Hawai'i, by grade



Source: YRBS 2011, 2013, 2015 and 2017 via HHDW IBIS

Figure 7. Youth: Current alcohol use among public high school students in Hawai'i, by ethnicity



Source: YRBS 2011, 2013, 2015 and 2017 via HHDW IBIS

Note: Data is reported as unstable for: Other Asian (2011 and 2013)

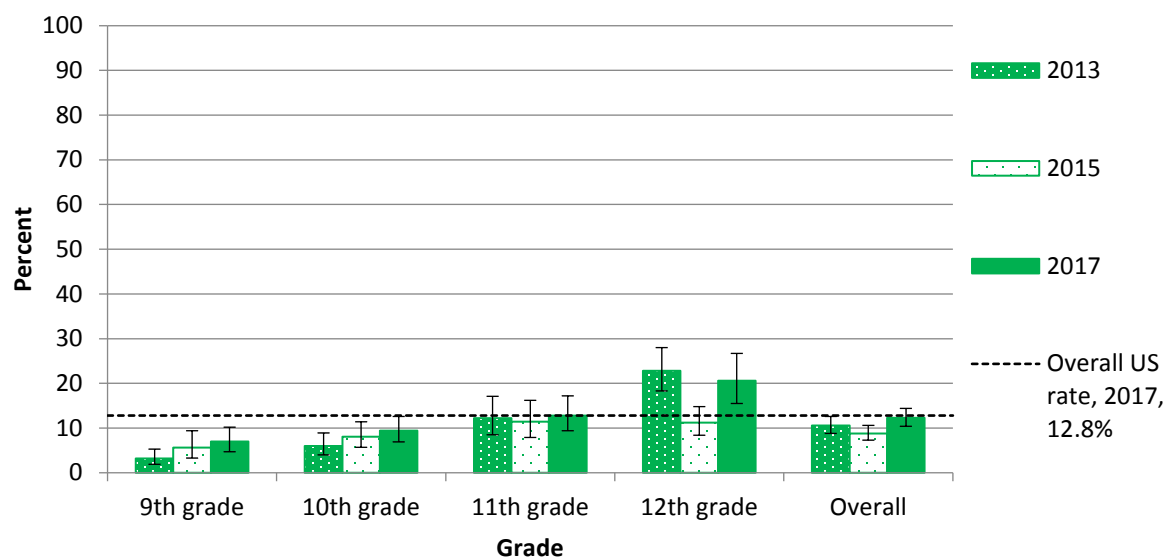
Youth: 30-Day Binge Drinking for Boys by Grade and Ethnicity

Binge drinking for boys is defined by whether a public high school in Hawai‘i had five or more drinks of alcohol in a row within a couple of hours on one occasion at least once in the past 30 days.

Figure 8 indicates that the overall percentage of binge drinking remained stable during the time period sampled. However, Hawai‘i’s overall percentage of 12.3% was not significantly lower than the overall US percentage of 12.8% in 2017. Figure 8 also shows an increase in binge drinking percentages as grade levels progressed. 12th grade boys had a higher percentage than 9th grade boys for all years examined. In 2013, 12th grade boys had significantly higher percentages than all lower grade levels.

Figure 9 indicates that all ethnicities did not significantly change in binge drinking percentages for boys across the years. However, in 2017, Caucasian (16.9%) and Native Hawaiian (15.3%) boys had a significantly higher percentage of binge drinking compared to Filipino (7.7%) boys.

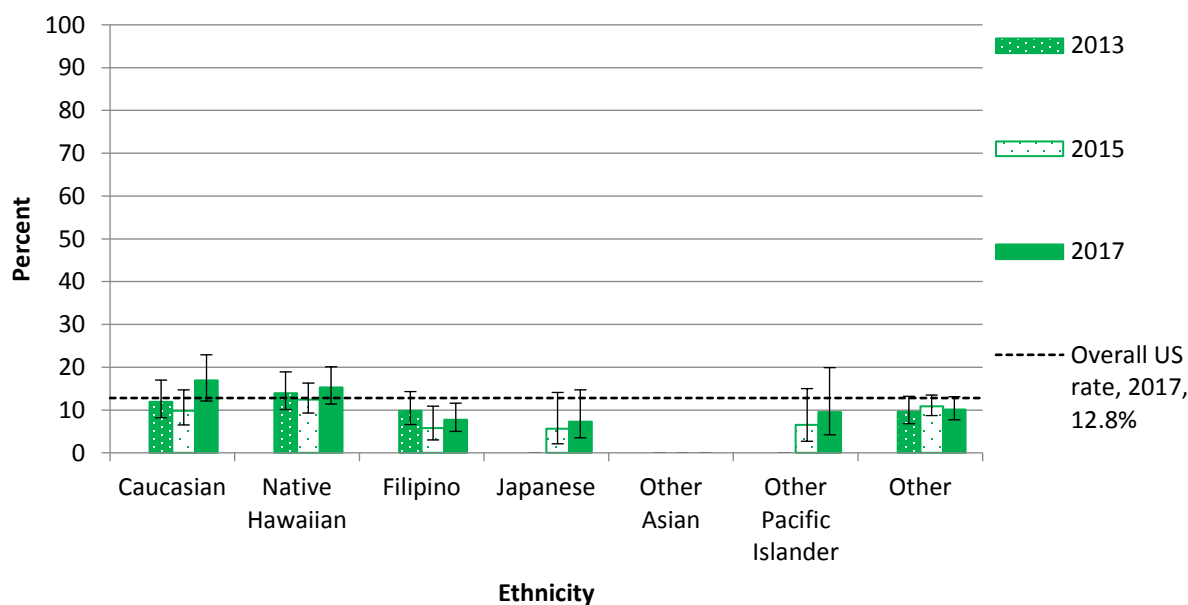
Figure 8. Youth: 30-day binge drinking for boys among public high school students in Hawai'i, by grade



Source: YRBS 2013, 2015 and 2017 via HHDW IBIS

Note: Data unavailable for 2011.

Figure 9. Youth: 30-day binge drinking for boys among public high school students in Hawai'i, by ethnicity



Source: YRBS 2013, 2015 and 2017 via HHDW IBIS

Note: Data unavailable for 2011. Data for Japanese (2013), Other Asian (2013, 2015, and 2017) and Other Pacific Islander (2013) students were unavailable due to small sample size. Data is reported as unstable for: Filipino (2015), Japanese (2015 and 2017), and Other Pacific Islander (2015 and 2017).

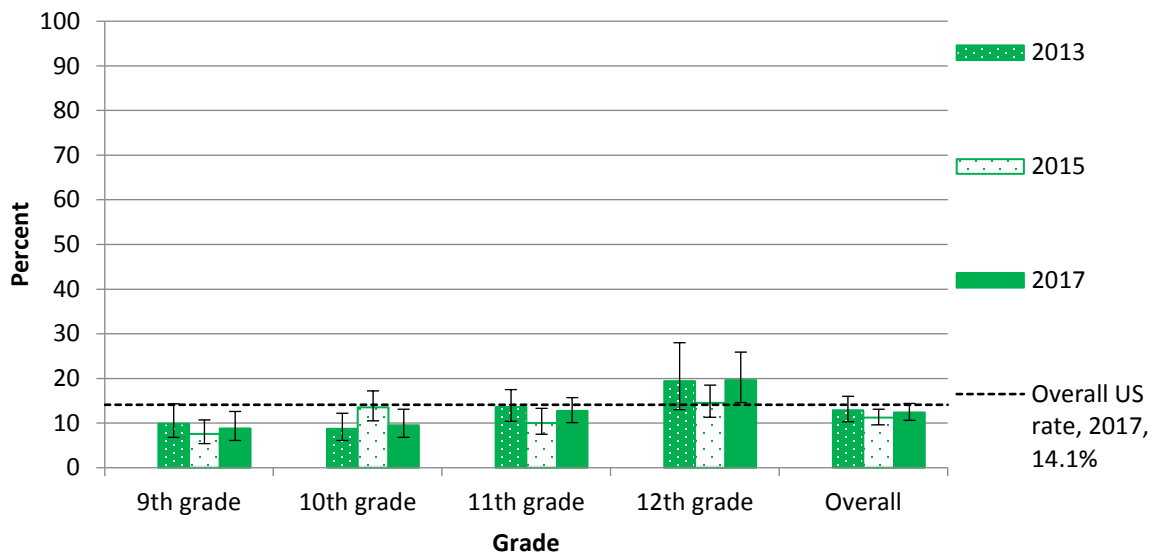
Youth: 30-Day Binge Drinking for Girls by Grade and Ethnicity

Binge drinking for girls is defined by whether a public high school student had four or more drinks of alcohol in a row within a couple of hours on one occasion at least once in the past 30 days.

Figure 10 indicates that overall percentages of binge drinking for girls remained stable during the time period sampled. There was an increase of binge drinking percentages as grade levels progressed. Girls in 12th grade had a significantly higher binge drinking percentage than 9th grade girls in 2015 and 2017.

Figure 11 indicates that all ethnicities did not significantly change in binge drinking percentages for girls across the years. However, Native Hawaiian girls had a significantly higher percentage of binge drinking compared to Filipino girls across all years examined.

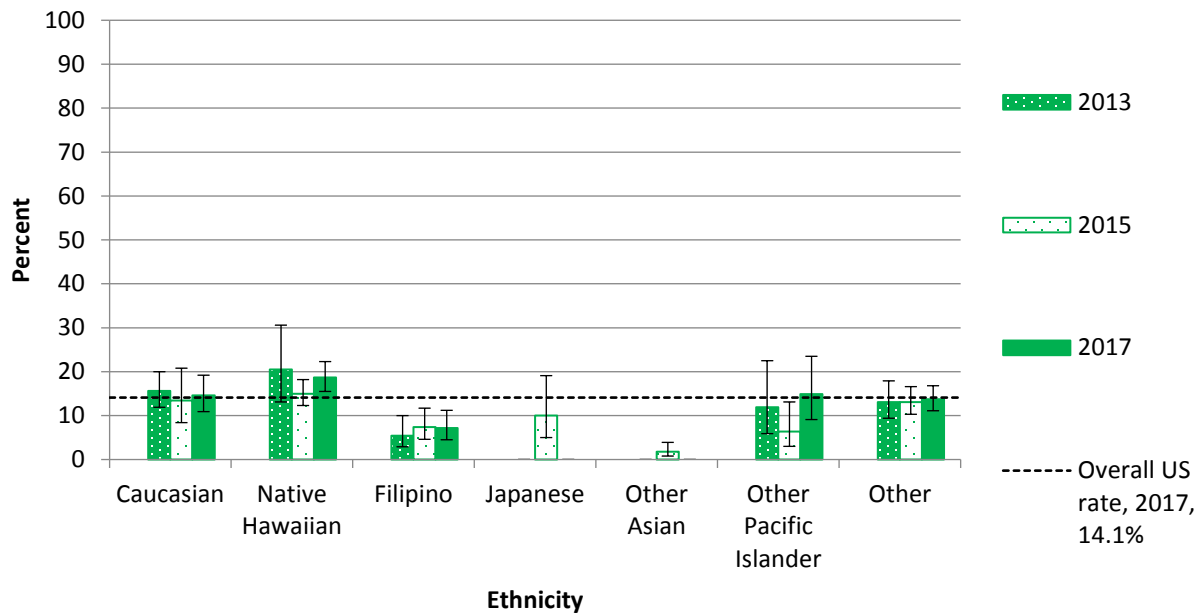
Figure 10. Youth: 30-day binge drinking for girls among public high school students in Hawai'i, by grade



Source: YRBS 2013, 2015 and 2017 via HHDW IBIS

Note: Data unavailable for 2011.

Figure 11. Youth: 30-day binge drinking for girls among public high school students in Hawai'i, by ethnicity



Source: YRBS 2013, 2015 and 2017 via HHDW IBIS

Note: Data unavailable for 2011. Data for Japanese (2013 and 2017) and Other Asian (2013 and 2017) are unavailable due to small sample size. Data is reported at unstable for: Filipino (2013), Japanese (2015), Other Asian (2015) and Other Pacific Islander (2013 and 2015).

Youth: First Drink of Alcohol before Age 13 Years by Gender, Grade, and Ethnicity

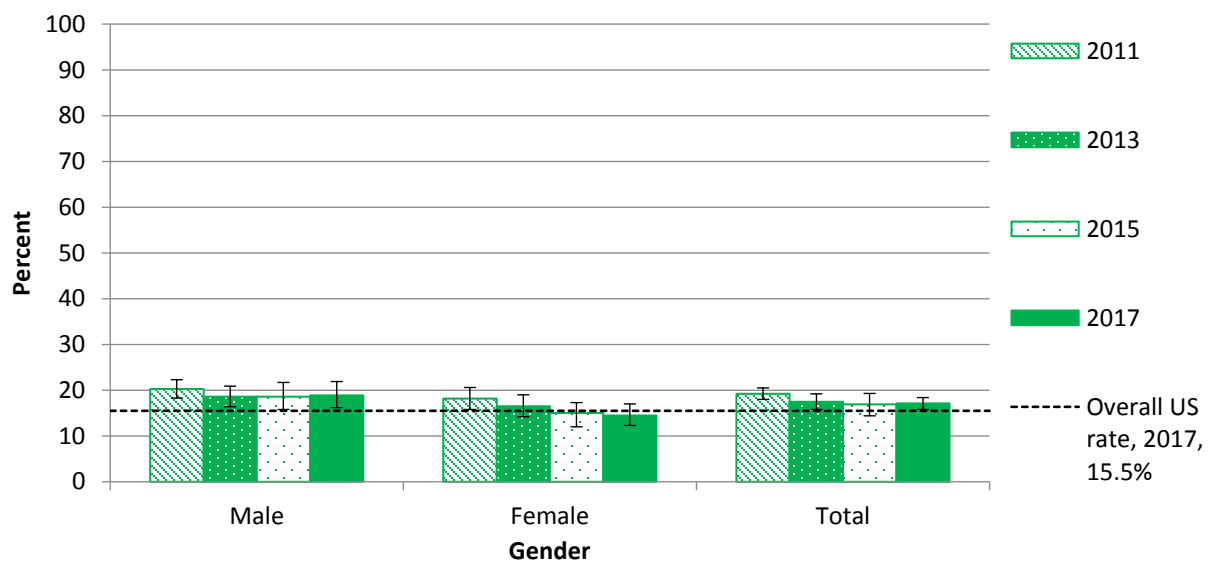
Early alcohol use is defined by whether a public high school student in Hawai‘i consumed their first drink of alcohol, other than a few sips, before the age of 13.

Figure 12 indicates that there were no significant trends in Hawai‘i’s overall percentage across all years examined. However, overall percentages for Hawai‘i was higher than the 2017 national rate of 15.5%. Additionally, there were no differences by gender across years.

Figure 13 indicates that the percentage of 9th graders who reported early alcohol use decreased significantly from 23.6% in 2011 to 15.6% in 2015. Otherwise, there were no other differences between or within grades throughout the years sampled.

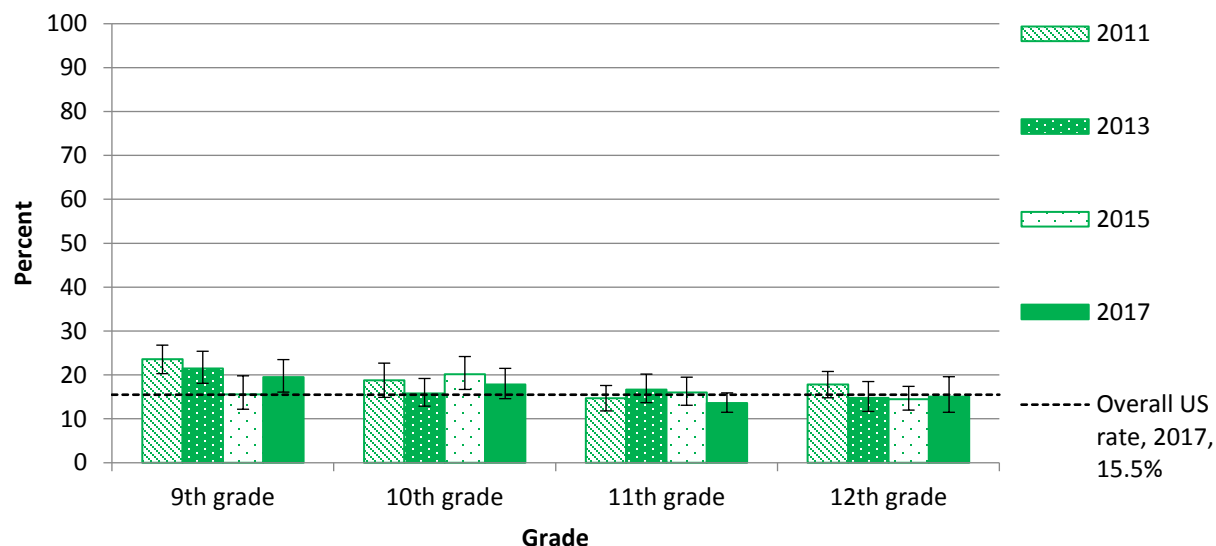
Figure 14 displays no significant differences within ethnic groups across the years examined. In 2015, Native Hawaiians had a significantly higher percentage of early use at 26% than any other ethnic group. In 2017, Native Hawaiian students continued to have higher percentages (21.4%) than Japanese (8.4%), Other Asian (11.5%), and Other Pacific Islander (10.2%) students.

Figure 12. Youth: First drink of alcohol before age 13 years among public high school students in Hawai‘i, by gender



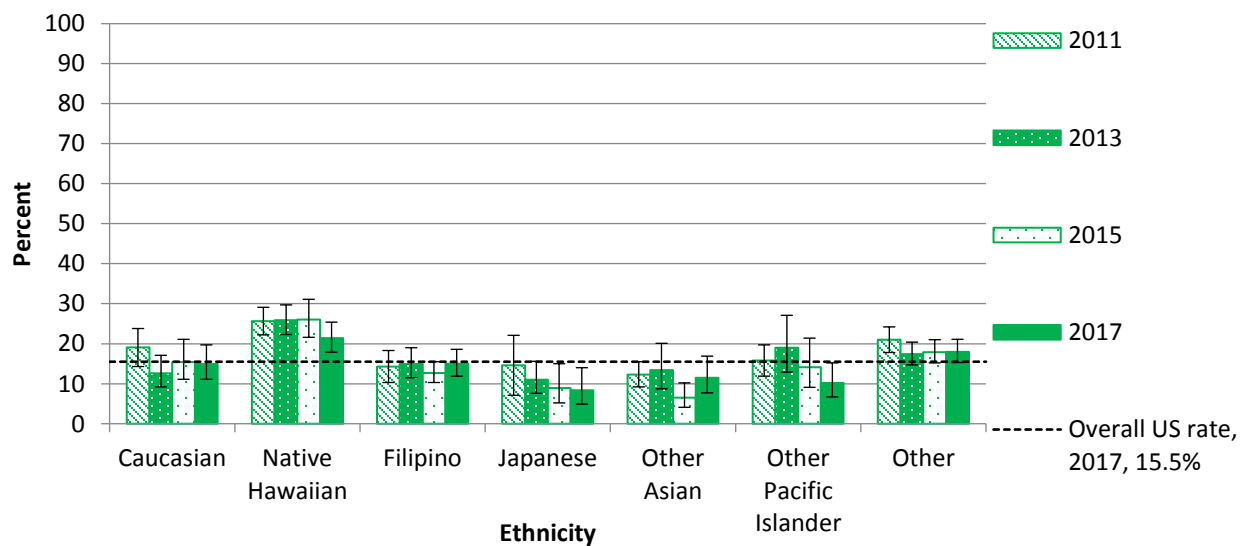
Source: YRBS 2011, 2013, 2015 and 2017 via HHDW IBIS

Figure 13. Youth: First drink of alcohol before age 13 years among public high school students in Hawai'i, by grade



Source: YRBS 2011, 2013, 2015 and 2017 via HHDW IBIS

Figure 14. Youth: First drink of alcohol before age 13 years among public high school students in Hawai'i, by ethnicity



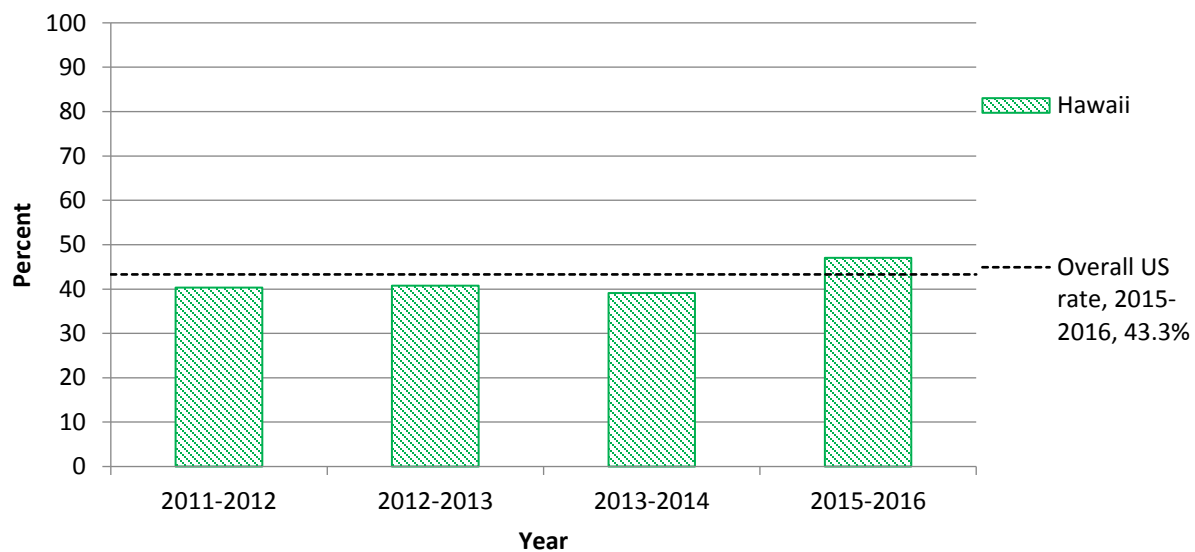
Source: YRBS 2011, 2013, 2015 and 2017 via HHDW IBIS

Youth: Perceived Risk of Harm of Use

Perceived risk of harm from alcohol use is defined by whether youth aged 12-17 in Hawai‘i viewed consuming five or more drinks of an alcoholic beverage once or twice a week as a great risk.

Figure 15 shows no significant differences in perceptions of great risk from drinking five or more alcoholic beverages once or twice a week across years. Moreover, risk perception in Hawai‘i was approximately equivalent to overall U.S. rates of great risk in 2015-2016 (43.3%).

Figure 15. Youth: Perceptions of great risk from five or more drinks of an alcoholic beverage once or twice a week among 12 – 17 year olds, by year



Source: NSDUH 2011-2012, 2012-2013, 2013-2014, and 2015-2016

Note: Data unavailable for 2014-2015. Confidence intervals are not available for this data set.

Youth: Ridden in a Car Driven by Someone who was High or Had Been Using Alcohol or Drugs by Gender, Grade, and Ethnicity

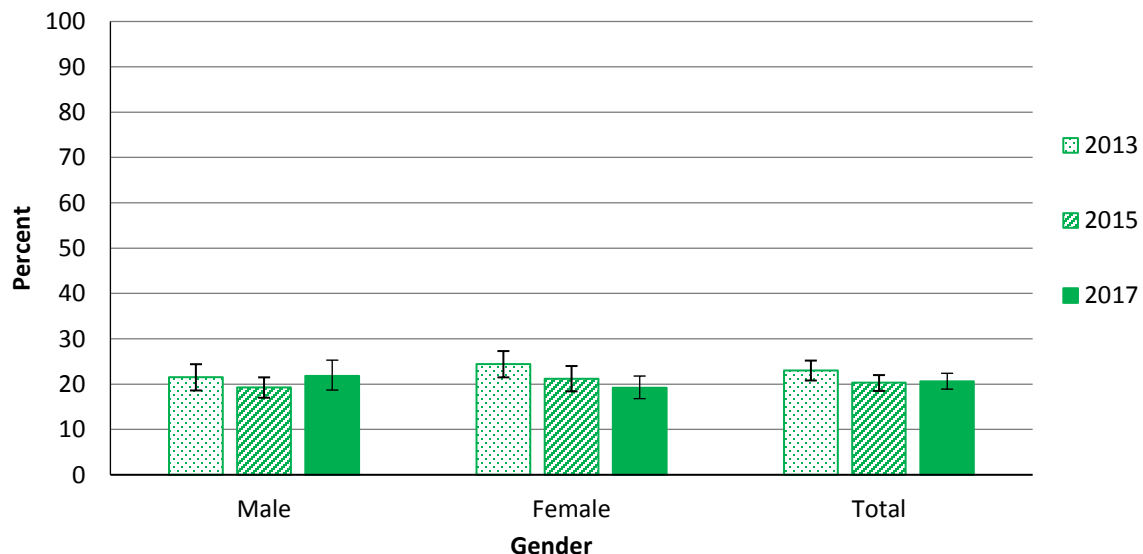
Ridden in a car driven by someone who was high or had been using alcohol or drugs is defined by whether a public high school student in Hawai'i rode in a car or other vehicle driven by someone, including themselves, who had been using alcohol or drugs during the past 30 days.

Figure 16 shows that the overall percentage in Hawai'i remained stable across all years examined and there were no apparent gender differences.

Figure 17 indicates that in 2015, 25.1% of 12th graders reported riding in a car driven by someone, including themselves, who had been using alcohol or drugs, which was significantly greater than the percentage of 9th graders reporting this behavior at 14.5%.

Figure 18 indicates that within ethnic groups, there has been no significant change across the years. However, in 2017, Native Hawaiian students (24.6%) displayed the highest percentage for this indicator when compared to all other ethnicities.

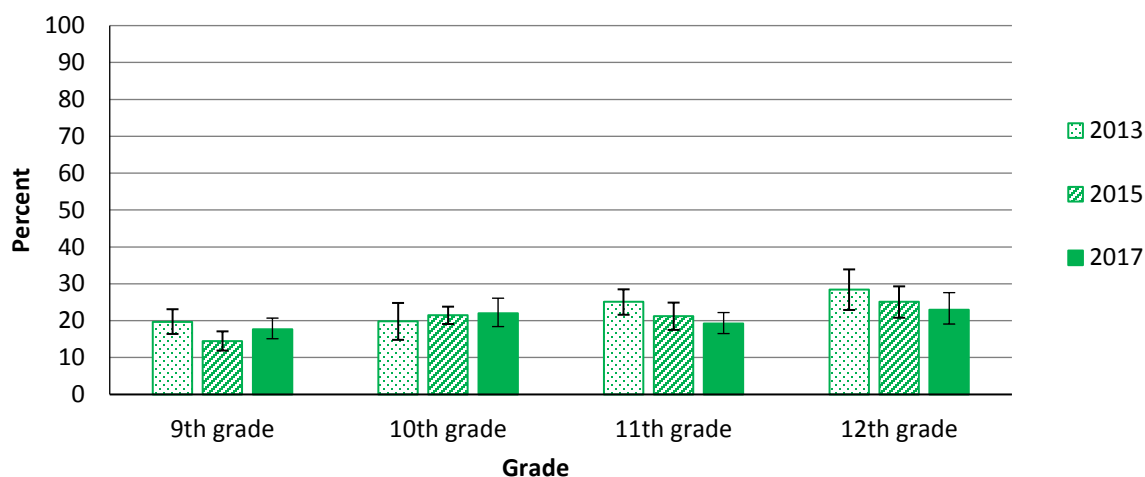
Figure 16. Youth: Ridden in a car driven by someone, including themselves, who was high or had been using alcohol or drugs during the past 30 days among public high school students in Hawai'i, by gender



Source: YRBS 2013, 2015, and 2017 via HHDW IBIS

Note: Data unavailable for 2011. National data is unavailable for this indicator.

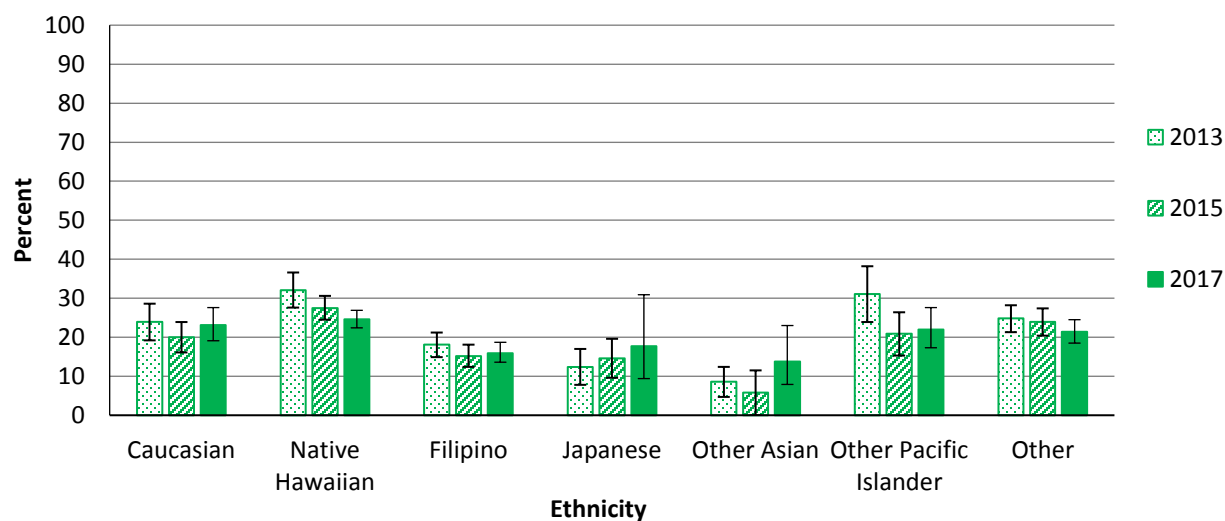
Figure 17. Youth: Ridden in a car driven by someone, including themselves, who was high or had been using alcohol or drugs during the past 30 days among public high school students in Hawai'i, by grade



Source: YRBS 2013, 2015, and 2017 via HHDW IBIS

Note: Data unavailable for 2011. National data is unavailable for this indicator.

Figure 18. Youth: Ridden in a car driven by someone, including themselves, who was high or had been using alcohol or drugs during the past 30 days among public high school students in Hawai'i, by ethnicity



Source: YRBS 2013, 2015, and 2017 via HHDW IBIS

Note: Data unavailable for 2011. National data is unavailable for this indicator. Data is reported unstable for: Other Asian (2015).

ADULT ALCOHOL INDICATORS

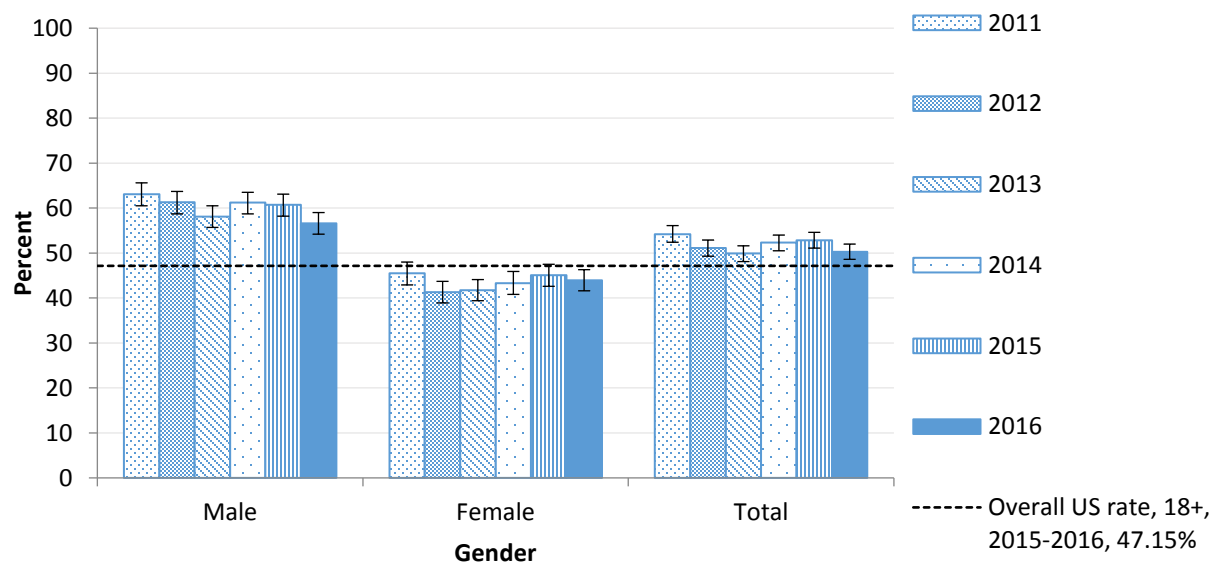
Adult: Current Alcohol Use by Gender and Ethnicity

Current alcohol use is defined by whether an adult aged 18 and older in Hawai‘i has consumed a drink of alcohol in the past 30 days.

Figure 19 indicates that there has been a significant decrease overall in current drinkers when comparing a rate of 54.2% in 2011 to a rate of 50.3% in 2016. The rate of current alcohol users among men was significantly higher than that for women over all years examined.

Figure 20 shows that within ethnicities there has been no significant change across the years. However, in 2016, Caucasian (62.3%) adults had a greater percentage of current drinkers than Native Hawaiian (45.2%), Chinese (36.7%), Filipino (39.9%), Japanese (47.5%), Other Asian (44.3%) and Other Pacific Islander (35.4%) adults.

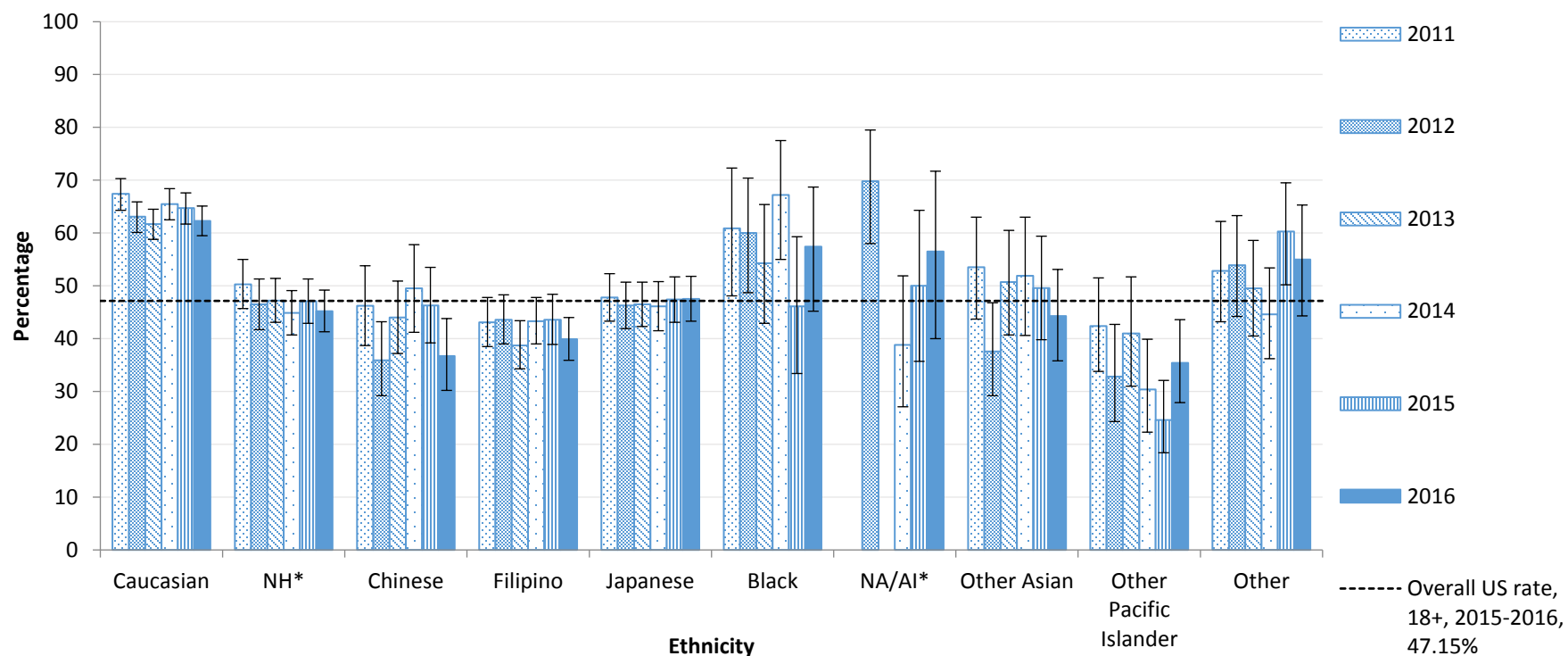
Figure 19. Adult: Age-adjusted rates current alcohol use among adults aged 18 and older in Hawai‘i, by gender



Source: BRFSS 2011, 2012, 2013, 2014, 2015, 2016 via HHDW IBIS

Note: 2017 data was unavailable at the time of this profile. NSDUH dataset was used for national rates of current alcohol because national BRFSS data is unavailable.

Figure 20. Adult: Age-adjusted rates for 30-day alcohol use among adults aged 18 and older in Hawai‘i, by ethnicity



Source: BRFSS 2011, 2012, 2013, 2014, 2015, 2016 via HHDW IBIS

*NH indicates Native Hawaiian; NA/AI indicates Native Alaskan/American Indian

Note: 2017 data was unavailable at the time of this profile. NSDUH dataset was used for national rates of current alcohol because national BRFSS data is unavailable. Data on Native American/American Indian individuals was not available in from 2011-2013 due to small sample sizes.

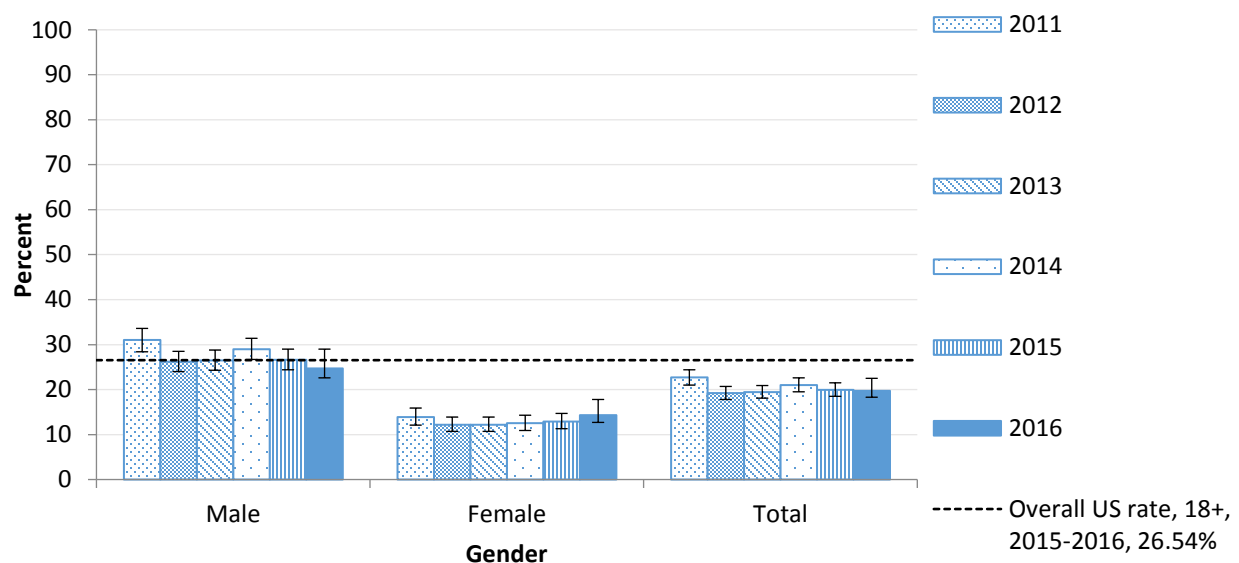
Adult: 30-day Binge Drinking by Gender and Ethnicity

Binge drinking is defined by whether an adult aged 18 and older in Hawai‘i consumed five or more drinks of alcohol in a row within a couple of hours on one occasion for males, and four or more drinks of alcohol in a row within a couple of hours on one occasion for females, during the past 30 days.

Figure 21 indicates that the overall age-adjusted rate of 30-day binge drinking in Hawai‘i had no significant change. Hawai‘i’s overall rate of 19.7% in 2016 was lower than the national rate of 26.54% in 2015-2016. A higher percentage of males reported binge drinking in the previous 30 days compared to females throughout all years examined.

Figure 22 indicates no change within ethnicities across the years. In 2016, a significantly greater percentage of Native Hawaiian reported 30-day binge drinking (25.5%) than did Chinese (8.8%), Filipino (14.8%), Japanese (16.6%), and Other Asian (13.4%) adults.

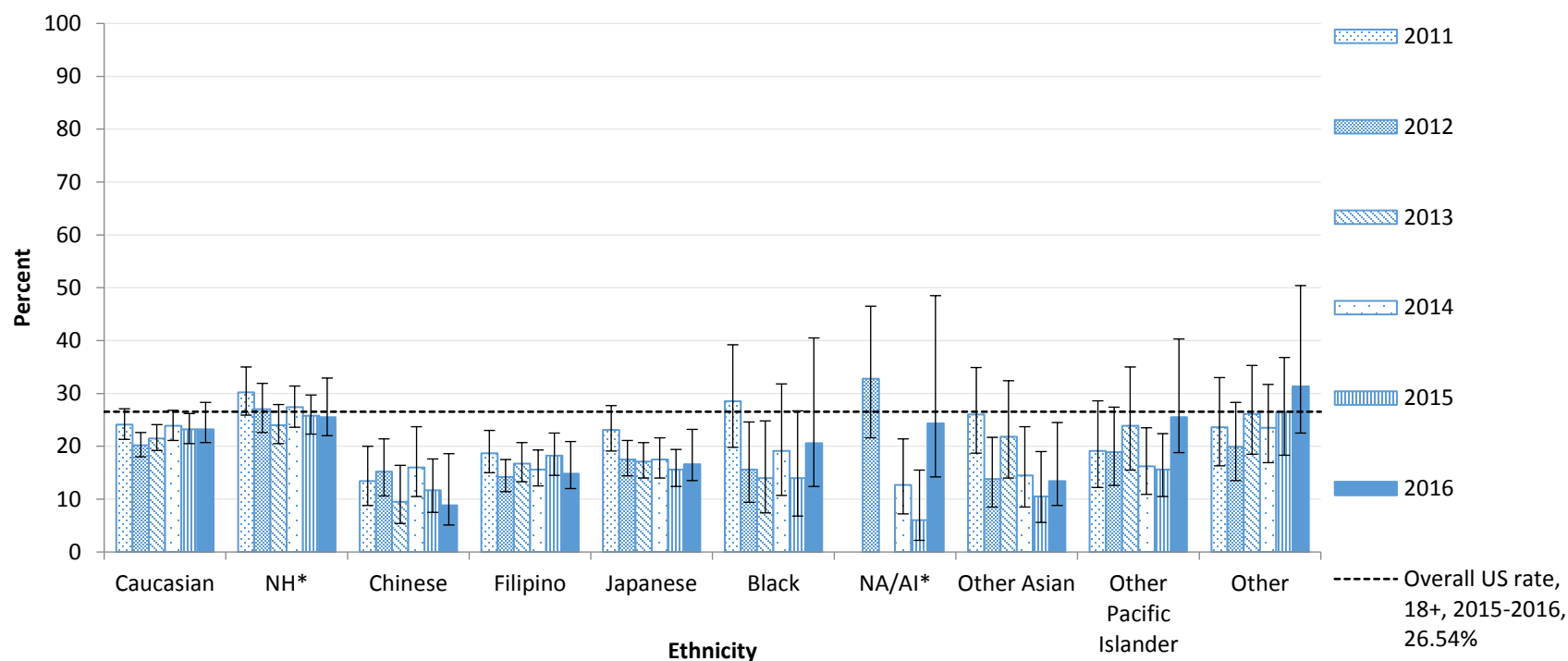
Figure 21. Adult: Age-adjusted rates for 30-day binge drinking among adults aged 18 and older in Hawai‘i, by gender



Source: BRFSS 2011, 2012, 2013, 2014, 2015, 2016 via HHDW IBIS

Note: 2017 data was unavailable at the time of this profile. NSDUH dataset was used for national rates of current alcohol because national BRFSS data is unavailable.

Figure 22. Adult: Age-adjusted rates for 30-day binge drinking among adults aged 18 and older in Hawai‘i, by ethnicity



Source: BRFSS 2011, 2012, 2013, 2014, 2015, 2016 via HHDW IBIS

*NH indicates Native Hawaiian; NA/AI indicates Native Alaskan/American Indian

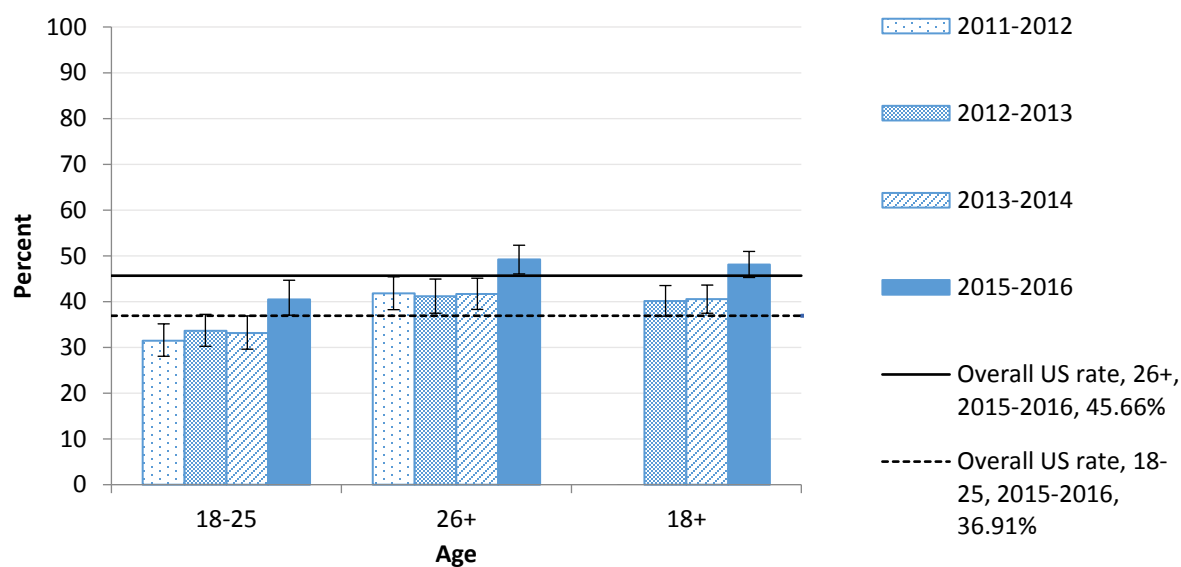
Note: 2017 data was unavailable at the time of this profile. NSDUH dataset was used for national rates of current alcohol because national BRFSS data is unavailable. Data on Black and Other Asian in 2015, and Native American/American Indian in 2011, and 2013-2016 unavailable due to small sample sizes.

Adult: Perceived Risk of Harm of Use by Age Groups

Perceived risk of harm is defined by adults aged 18 and older in Hawai‘i who perceives great risk of harm from consuming five or more drinks of an alcoholic beverage once or twice a week.

Figure 23 shows the perceived risk of harm by age group. There was a significant increase of perceived risk across all age groups in the most recent year studied, 2015-2016, compared to all past years. There was also a significant difference in perceived risk of great harm between age groups. Adults aged 18-25 years old had a lower rate of perceived risk than did adults aged 26 and older for all years examined.

Figure 23. Adult: Perceptions of great risk of harm from five or more drinks of an alcoholic beverage once or twice a week among adults aged 18 and older in Hawai‘i, by age groups



Source: NSDUH 2011-2012, 2012-2013, 2013-2014, and 2015-2016

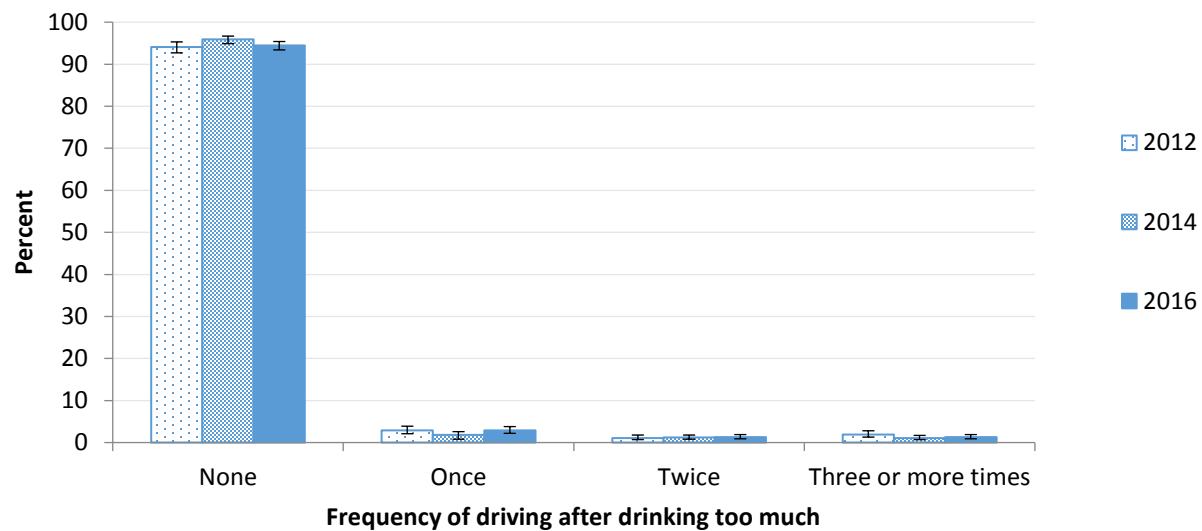
Note: Data unavailable for 2014-2015

Adult: Frequency in the past 30 days of driving after having too much to drink

The frequency of driving after having too much to drink is defined by whether an adult aged 18 and older in Hawai'i has driven none, once, twice, or three or more times after having too much to drink in the past 30 days.

Figure 24 indicates that most adults did not report having driven after drinking too much in the past 30 days (94.5% in 2016, 95.9% in 2014, 94.1% in 2012).

Figure 24. Adult: Frequency in the past 30 days of driving after having too much to drink among adults aged 18 and older in Hawai'i



Source: BRFSS 2012, 2014, 2016 via HHDW IBIS

Note: This question is asked every even year. Age-adjusted rates were unavailable for this indicator. National comparison rate also unavailable.

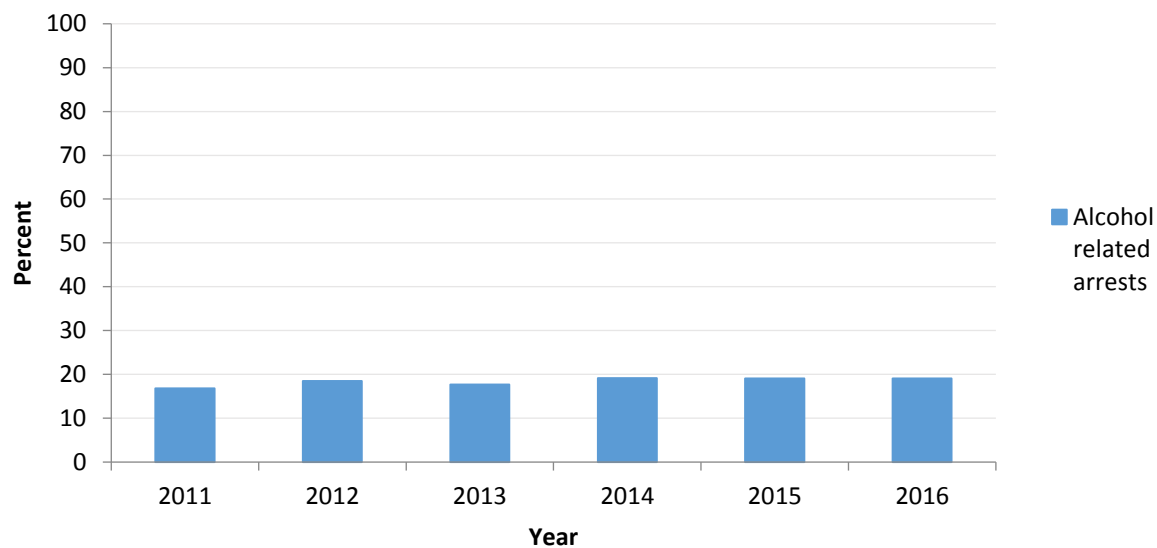
Adult: Alcohol-Related Arrests

Alcohol-related arrests is defined as arrests that were alcohol-related or driving under the influence (DUI) arrests for those 18 years and older in Hawai'i. The rates were reported by each county police department.

Figure 25 shows that the proportion of all alcohol related arrests have remained generally stable between each year. However, there was a slight increase when comparing 16.8% in 2011 to 19.0% in 2016.

Figure 26 shows the percentage of DUI arrests of adults aged 18 and over in Hawai'i that were due to DUIs by county. City and County of Honolulu has seen an increase in DUIs from 13.5% in 2011 to 19.0% in 2016 while Hawaii County had a slight decrease in DUIs from 19.6% in 2011 16.1% in 2016.

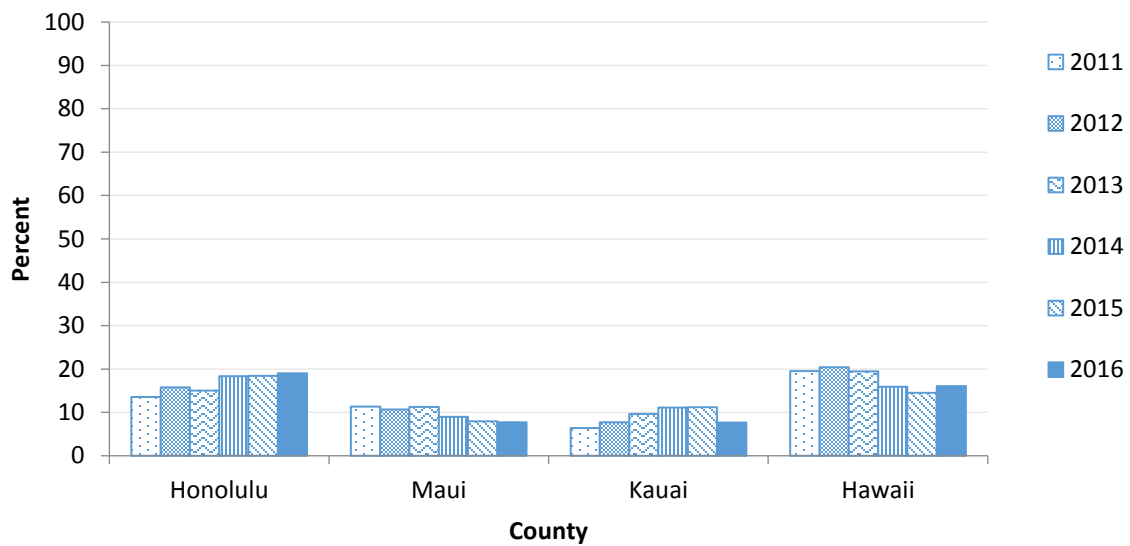
Figure 25. Adult: Percentage of total arrests reported by the county police department that were alcohol related among adults aged 18 and older in Hawai'i



Source: UCR 2011, 2012, 2013, 2014, 2015, 2016

Note: 2017 data was unavailable at the time of this profile. Confidence intervals as well as national rates are unavailable for this indicator.

Figure 26. Adult: Percentage of total arrests reported by the county police department that were for driving under the influence of alcohol or drugs among adults aged 18 and older in Hawai‘i



Source: UCR 2011, 2012, 2013, 2014, 2015, 2016

Note: 2017 data was unavailable at the time of this profile. Confidence intervals as well as national rates are unavailable for this indicator.

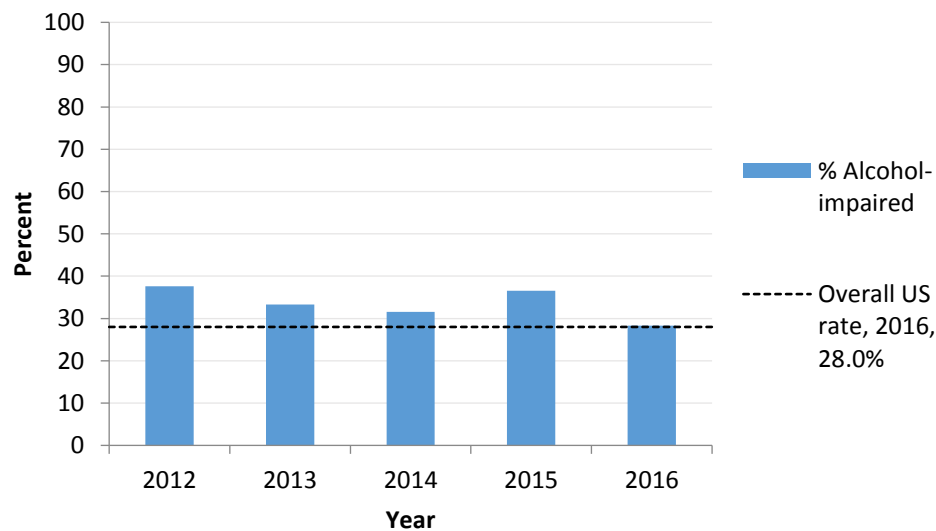
Adult: Alcohol-Related Traffic Fatalities

Alcohol-related fatalities is defined as traffic fatalities due to alcohol use measured by driver blood alcohol concentration (BAC).

Figure 27 shows the proportion of traffic fatalities for all ages in Hawai‘i that were due to alcohol with a $BAC \geq 0.08\%$. The percentage of fatalities in motor vehicle traffic crashes involving $BAC \geq 0.08\%$ decreased from 37.6% in 2012 to 28.3% in 2016. In 2016, the percentage of such traffic fatalities in Hawai‘i was equal to the U.S. percentage of 28.0%.

Figure 28 shows the percentage of fatalities involving varying levels of BAC. There has been a decrease in fatalities amongst drivers with a $BAC \geq 0.08\%$ from 38% in 2012 to 28% in 2016.

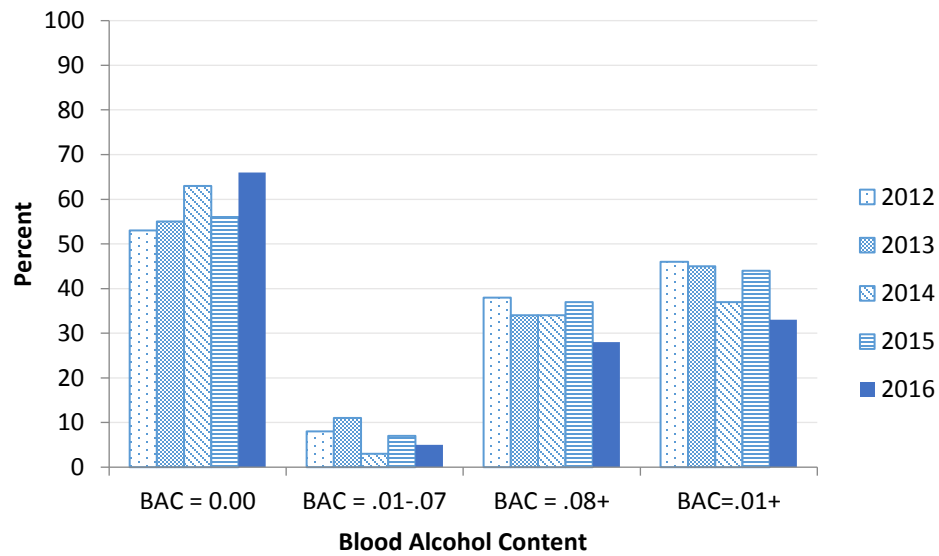
Figure 27. Adult: Fatalities (all ages) in motor vehicle traffic crashes in Hawai‘i involving $BAC \geq 0.08\%$



Source: FARS 2012, 2013, 2014, 2015, 2016

Note: 2017 data was unavailable at the time of this profile. Confidence intervals are unavailable for this indicator.

Figure 28. Adult: Persons killed in crash in Hawai‘i by highest driver BAC (all ages)



Source: FARS 2012, 2013, 2014, 2015, 2016

Note: NHTSA estimates alcohol involvement when alcohol test results are unknown. 2017 data was unavailable at the time of this profile. Confidence intervals are also unavailable for this indicator.

Adult: Drank Alcohol 3 Months before Pregnancy

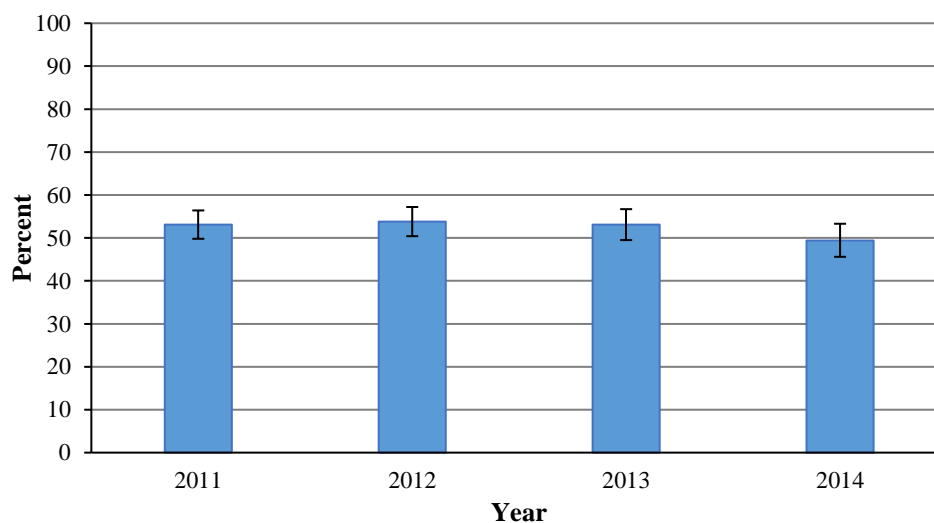
Adults who drank alcohol three months before pregnancy is defined by whether a woman in Hawai‘i drank alcohol at least once during the three months prior to becoming pregnant.

Figure 29 shows that the overall percentage of women who reported using alcohol during the three months immediately preceding their pregnancy did not vary across years.

Figure 30 indicates that from 2011 to 2013, the age group with the smallest prevalence rate for drinking during the three months prior to pregnancy across all years examined was women younger than age 20.

Figure 31 shows that significantly greater percentages of Caucasian women reported drinking during the 3 months prior to pregnancy when compared to Filipino women across all years. In 2014, rates were also higher for Caucasian women (65.2%) than for Native Hawaiian women (49.2%).

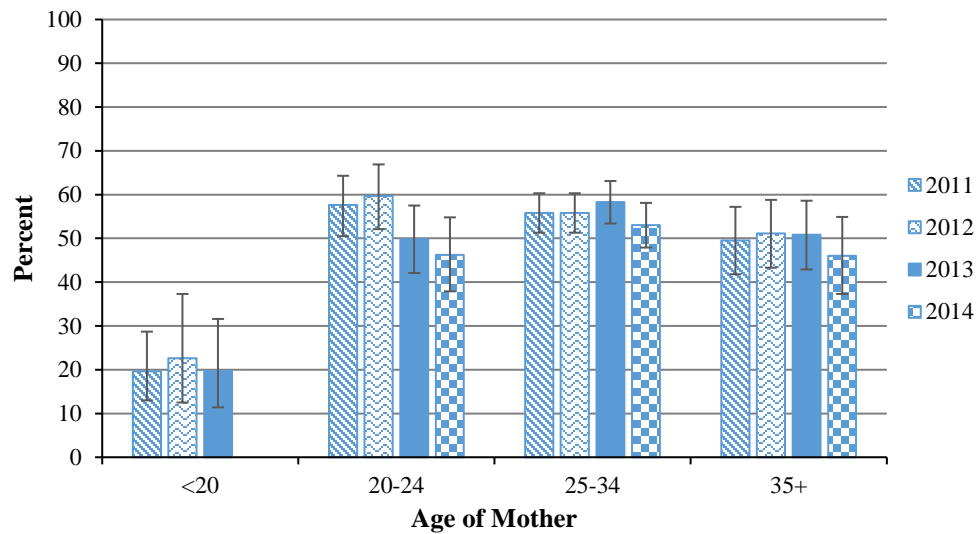
Figure 29. Adult: Alcohol use during the 3 months before pregnancy in Hawai‘i



Source: PRAMS 2011, 2012, 2013, and 2014 via HHDW IBIS

Note: Data unavailable for years after 2014. National rates are unavailable for this indicator.

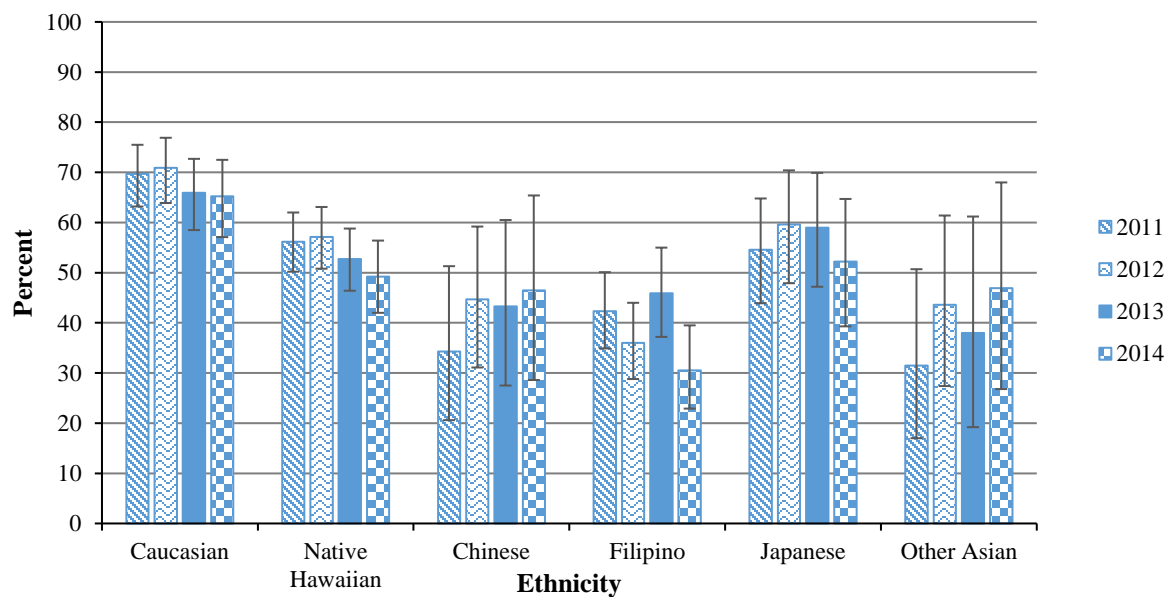
Figure 30. Adult: Alcohol use during the 3 months before pregnancy in Hawai‘i, by age group



Source: PRAMS 2011, 2012, 2013, and 2014 via HHDW IBIS

Note: Data unavailable for years after 2014. National rates are unavailable for this indicator. Data unavailable for 2014 for mothers under the age of 20 because of small sample size.

Figure 31. Adult: Alcohol use during the 3 months before pregnancy in Hawai‘i, by ethnicity



Source: PRAMS 2011, 2012, 2013, and 2014 via HHDW IBIS

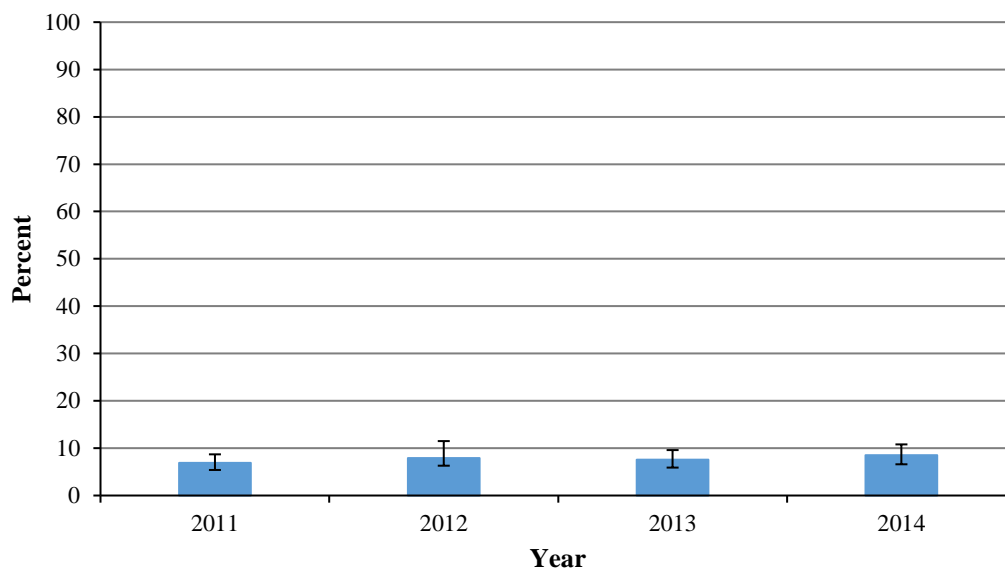
Note: Data unavailable for years after 2014. National rates are unavailable for this indicator.

Adult: Drank Alcohol during the Last 3 Months of Pregnancy

Adults that have drank alcohol during the last three months of pregnancy is defined by whether a woman in Hawai'i consumed four or more drinks on one occasion at least once during the final three months of pregnancy.

The percentage of women who reported drinking alcohol during this portion of pregnancy did not vary meaningfully across years (Figure 32), nor were there significant differences between age groups (Figure 33) or across ethnic groups (Figure 34).

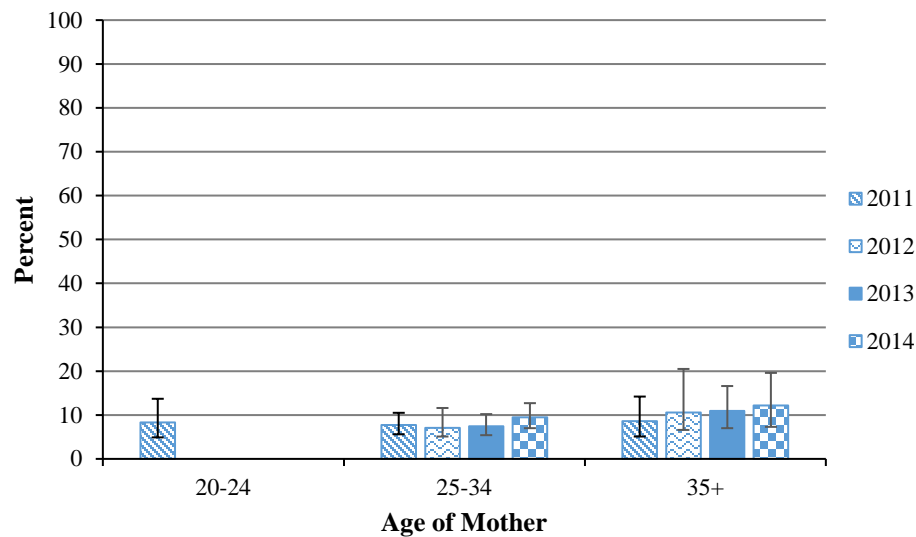
Figure 32. Adult: Alcohol use during the last 3 months of pregnancy in Hawai'i



Source: PRAMS 2011, 2012, 2013, and 2014 via HHDW IBIS

Note: Data unavailable for years after 2014. National rates are unavailable for this indicator.

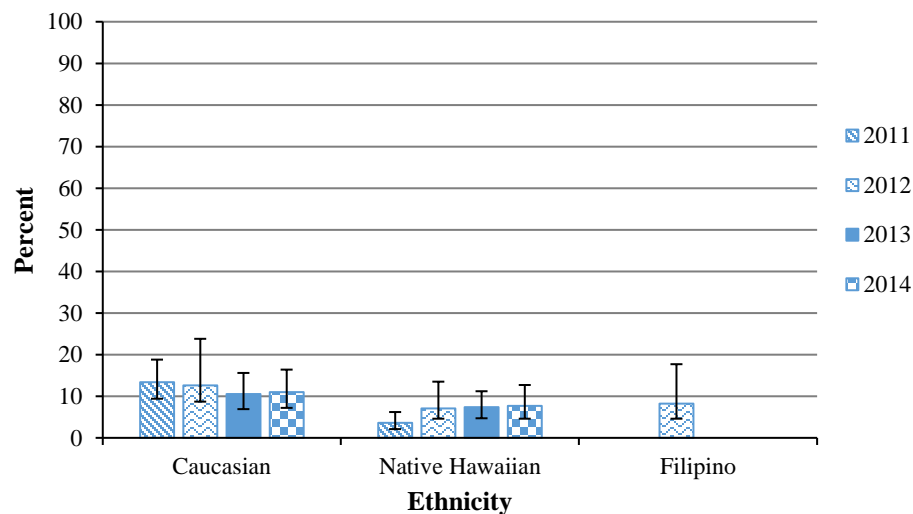
Figure 33. Adult: Alcohol use during the last 3 months of pregnancy in Hawai‘i, by age group



Source: PRAMS 2011, 2012, 2013, and 2014 via HHDW IBIS

Note: Data unavailable for years after 2014. National rates are unavailable for this indicator. Data unavailable for 2012-2014 for mothers under the age of 20 because of small sample size.

Figure 34. Adult: Alcohol use during the last 3 months of pregnancy in Hawai‘i, by ethnicity



Source: PRAMS 2011, 2012, 2013, and 2014 via HHDW IBIS

Note: Data unavailable for years after 2014. National rates are unavailable for this indicator. Sample sizes were only sufficient to report data for Caucasian and Native Hawaiian participants in 2011-2014, and for Filipino participants in 2012.

Adult: Binge Drinking 3 Months before Pregnancy

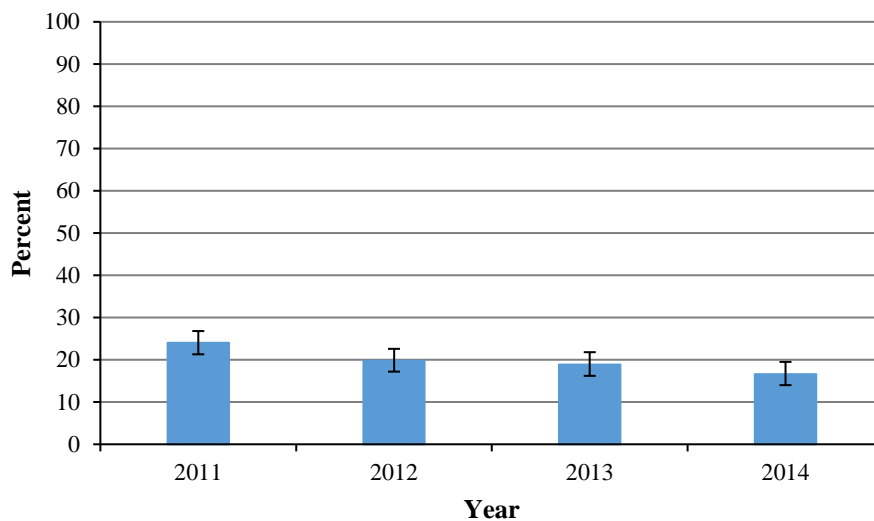
Adult binge drinking three months before pregnancy is defined by whether a woman in Hawai‘i drank four alcoholic drinks or more in a 2-hour time span at least once during the three months before pregnancy.

Figure 35 indicates the percentage of women who reported binge drinking alcohol in the three months leading up to pregnancy decreased significantly from 24% in 2011 to 16.6% in 2014.

Figure 36 indicates the percentage of women in the 25-34 age category who reported binge drinking in the months prior to pregnancy decreased significantly from 25.9% in 2011 to 17.4% in 2014.

Figure 37 shows no changes between years for specific ethnic groups.

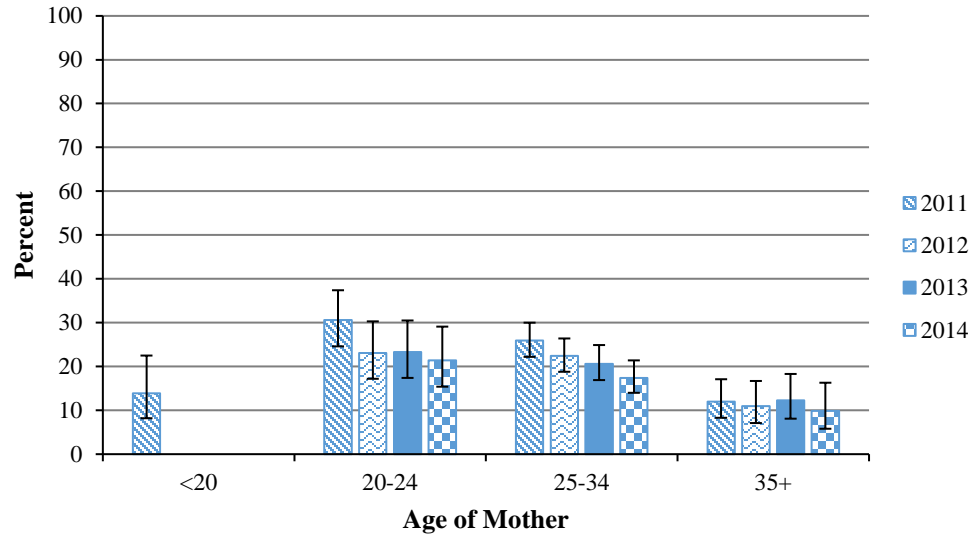
Figure 35. Adult: Binge drinking during the 3 months prior to pregnancy in Hawai‘i



Source: PRAMS 2011, 2012, 2013, and 2014 via HHDW IBIS

Note: Data unavailable for years after 2014. National rates are unavailable for this indicator.

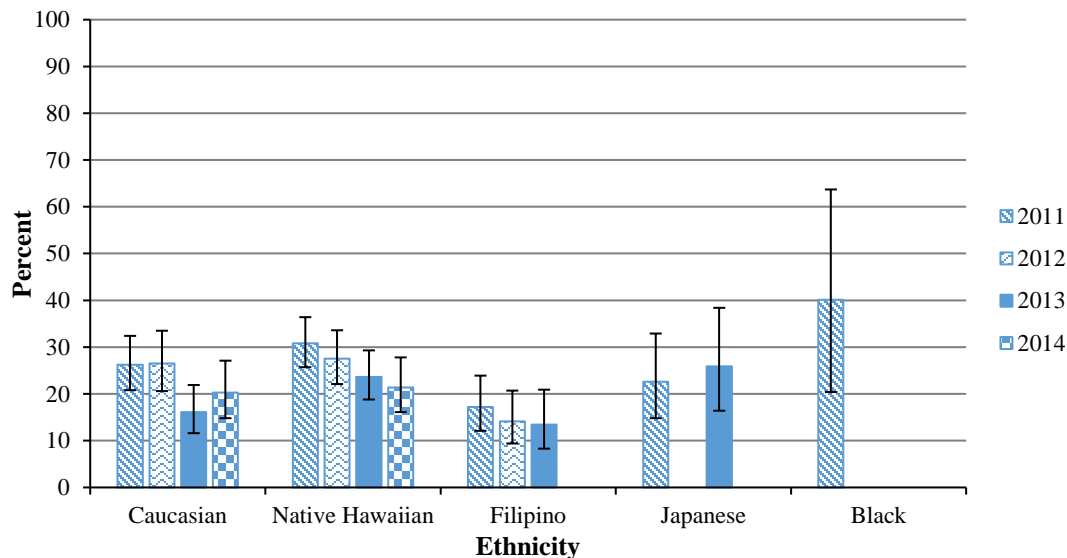
Figure 36. Adult: Binge drinking during the 3 months prior to pregnancy in Hawai‘i, by age group



Source: PRAMS 2011, 2012, 2013, and 2014 via HHDW IBIS

Note: Data unavailable for years after 2014. National rates are unavailable for this indicator. Data unavailable for 2012-2014 for mothers under the age of 20 because of small sample size.

Figure 37. Adult: Binge drinking during the 3 months prior to pregnancy in Hawai‘i, by ethnicity



Source: PRAMS 2011, 2012, 2013, and 2014 via HHDW IBIS

Note: Data unavailable for years after 2014. National rates are unavailable for this indicator. Data unavailable for Filipino mothers in 2014, Japanese mothers in 2012 and 2014, and Black mothers in 2012 – 2014 due to small sample sizes.

Appendix A: Data Tables for Youth Alcohol Indicators

Table A-1. YOUTH: Ever had at least one drink of alcohol by gender, grade, and ethnicity, in 2011, 2013, 2015, and 2017.

		2011			2013			2015			2017		
		%	lower CI	upper CI	%	lower CI	upper CI	%	lower CI	upper CI	%	lower CI	upper CI
State	Total	55.8	52.6	59.1	52.5	49.7	55.3	49.4	46.3	52.4	49	46.1	52
Gender	Female	58.7	54.4	63	54.9	50.4	59.4	51.3	47.5	55.1	52	47.8	56
	Male	53	49.5	56.6	50.2	47.7	52.7	47.2	44	50.3	45.7	42.3	49
Grade	9	46.4	41.6	51.1	41.1	34.9	47.2	32.1	27.8	36.4	38.7	33.2	44.4
	10	54.3	50.9	57.6	49.5	45.7	53.3	50.8	46.1	55.5	47.5	42.4	52.6
	11	57.8	49.4	66.2	53.6	50	57.2	56.6	51.4	61.9	51.3	47.5	55.2
	12	67	62.8	71.2	67.7	61.6	73.8	61	55.9	66.1	61.7	56.3	66.9
Ethnicity	Caucasian	63.2	58	68.4	52.2	47.5	56.9	53.3	45.6	61.1	54.8	49.6	60
	Native Hawaiian	66	62	69.9	61.9	58.2	65.5	59.4	55.6	63.1	54.8	47.8	61.7
	Filipino	52.7	47.8	57.7	51.7	45.8	57.5	45.3	39.2	51.5	46.8	43	50.7
	Japanese	41.6	34.3	49	33.5	27.6	39.4	35.8	30.4	41.2	30	19.1	43.8
	Other Asian	29	25.1	32.8	32	25.4	38.6	28.1	21.8	34.3	39.3	33.4	45.5
	Other Pacific Islander	48.6	40.1	57	57.9	47.1	68.6	44.5	38.3	50.7	41.9	34.9	49.3
	Other	54.5	49.6	59.3	54	49	58.9	52.1	47.8	56.5	50.2	45.9	54.5

Source: Hawai'i Youth Risk Behavior Survey (Hawai'i YRBS) via Hawai'i Health Data Warehouse (HHDW) Indicator Based Information System (IBIS).

Table A-2. YOUTH: 30-day alcohol use by gender, grade, and ethnicity, in 2011, 2013, 2015, and 2017.

		2011			2013			2015			2017		
		%	lower CI	upper CI	%	lower CI	upper CI	%	lower CI	upper CI	%	lower CI	upper CI
State	Total	29.1	25.8	32.3	25.2	21.7	28.6	25.1	23.1	27.2	24.5	20	24.4
Gender	Female	32.3	28	36.5	26	22.1	29.9	26.7	23.9	29.6	26.4	22.4	30.7
	Male	25.8	22.4	29.1	24.1	20.2	28.1	23.2	20.4	26.1	22.1	20	24.4
Grade	9	21.5	18.3	24.7	18.3	11.9	24.7	16.7	13.6	19.8	17.3	13.7	21.6
	10	28.2	24.2	32.2	19.3	15.9	22.7	24.5	21.5	27.6	20.5	17.2	24.3
	11	30.2	22.9	37.6	25.7	21.6	29.8	25.9	22.1	29.6	25.2	22.4	28.3
	12	38.4	32.7	44.1	38.4	33.1	43.7	35	30.5	39.5	36.8	31.6	42.3
Ethnicity	Caucasian	39.6	34.3	44.8	29.2	23	35.4	30.4	24.2	36.7	32.8	28	38
	Native Hawaiian	35.1	30	40.3	31.8	24.8	38.8	30.1	26.2	34	29.6	24.9	34.8
	Filipino	24.2	19.1	29.3	21.6	16.8	26.5	20.6	16.5	24.7	19.7	15.6	24.6
	Japanese	20.2	14.6	25.9	12	7.5	16.4	20.1	13.6	26.5	11.9	6.3	21.5
	Other Asian	10.6	2	19.1	10.2	3.3	17.1	10.1	6.9	13.4	16.1	10.4	23.9
	Other Pacific Islander	31.8	23.1	40.4	28.7	19.1	38.4	14.7	10.1	19.3	21.4	16.4	27.5
	Other	28.2	24.1	32.4	26.3	23.7	28.9	27.3	23.7	30.8	23.4	20.3	26.9

Source: Hawai'i YRBS via HHDW IBIS

Table A-3. YOUTH: 30-day binge drinking for boys and girls by grade, and ethnicity, in 2013, 2015, and 2017.

			2013			2015			2017		
			%	lower CI	upper CI	%	lower CI	upper CI	%	lower CI	upper CI
Boys	State	Total	10.6	8.8	12.6	8.8	7.3	10.6	12.3	10.4	14.4
	Grade	9	3.2	1.9	5.3	5.6	3.3	9.4	7	4.7	10.2
		10	6	4	8.9	8.1	5.7	11.4	9.4	6.9	12.6
		11	12.2	8.5	17.1	11.4	7.9	16.2	12.8	9.4	17.2
		12	22.8	18.3	28	11.2	8.4	14.8	20.6	15.5	26.7
	Ethnicity	Caucasian	11.9	8.2	17	9.8	6.5	14.7	16.9	12.1	22.9
		Native Hawaiian	13.9	10.1	18.9	12.4	9.3	16.3	15.3	11.4	20.1
		Filipino	9.8	6.6	14.3	5.8	3	10.9	7.7	5	11.6
		Japanese	-	-	-	5.6	2.1	14.1	7.3	3.5	14.7
		Other Asian	-	-	-	-	-	-	-	-	-
		Other Pacific Islander	-	-	-	6.5	2.7	15	9.5	4.2	19.9
		Other	9.6	6.8	13.2	10.9	8.7	13.5	10.1	7.7	13.1
Girls	State	Total	12.9	10.3	16	11.2	9.6	13.1	12.4	10.6	14.4
	Grade	9	9.9	6.8	14.3	7.6	5.4	10.7	8.8	6.1	12.6
		10	8.7	6.1	12.2	13.5	10.5	17.2	9.5	6.8	13.1
		11	13.6	10.4	17.5	10	7.5	13.3	12.7	10.1	15.7
		12	19.4	13	28	14.5	11.3	18.5	19.6	14.6	25.9
	Ethnicity	Caucasian	15.6	11.9	20	13.4	8.4	20.8	14.6	10.9	19.2
		Native Hawaiian	20.5	13.1	30.6	15	12.3	18.2	18.7	15.5	22.3
		Filipino	5.4	2.9	10	7.4	4.6	11.7	7.2	4.5	11.2
		Japanese	-	-	-	10	5	19.1	-	-	-
		Other Asian	-	-	-	1.8	0.8	3.9	-	-	-
		Other Pacific Islander	11.9	5.9	22.5	6.4	3	13.1	14.9	9.1	23.5
		Other	13.1	9.4	17.9	13.1	10.3	16.6	13.7	11.1	16.8

Source: Hawai'i YRBS via HHDW IBIS

“-” indicates that data was not available due to small sample sizes

Table A-4. YOUTH: Had a first drink of alcohol before age 13 years by gender, grade, and ethnicity, in 2011, 2013, 2015, and 2017.

		2011			2013			2015			2017		
		%	lower CI	upper CI	%	lower CI	upper CI	%	lower CI	upper CI	%	lower CI	upper CI
State	Total	19.2	18	20.5	17.5	15.8	19.2	16.9	14.4	19.3	17.1	15.8	18.4
Gender	Female	18.2	15.8	20.6	16.5	14	18.9	15	12.8	17.1	14.5	12.3	17
	Male	20.3	18.3	22.3	18.6	16.4	20.9	18.6	15.7	21.5	18.9	16.2	21.9
Grade	9	23.6	20.3	26.8	21.5	17.9	25.1	15.6	11.8	19.4	19.5	16.1	23.5
	10	18.8	14.9	22.7	15.8	12.6	18.9	20.2	16.5	23.9	17.8	14.6	21.5
	11	14.7	11.8	17.6	16.7	13.3	20	16	12.8	19.3	13.6	11.5	15.9
	12	17.8	14.8	20.8	14.8	11.3	18.3	14.5	11.5	17.5	15.1	11.5	19.6
Ethnicity	Caucasian	19.1	14.3	23.8	12.6	8.8	16.5	15.4	10.5	20.4	14.9	11.1	19.7
	Native Hawaiian	25.6	22.2	29.1	25.9	22	29.7	26	21.1	31	21.4	17.9	25.4
	Filipino	14.3	10.3	18.3	14.9	10.8	18.9	12.7	10.1	15.3	15	11.9	18.6
	Japanese	14.6	7.1	22.1	11	6.8	15.1	8.9	3.9	14	8.4	4.9	14
	Other Asian	12.3	9.2	15.5	13.4	7.9	18.9	6.5	3.7	9.3	11.5	7.7	16.9
	Other Pacific Islander	15.8	11.9	19.7	19	11.8	26.2	14.1	7.8	20.5	10.2	6.7	15.2
	Other	21	17.8	24.2	17.4	14.9	19.8	17.9	14.9	21	18	15.3	21.1

Source: Hawai'i YRBS via HHDW IBIS

Table A-5. YOUTH: Perceived risk from five or more drinks of an alcoholic beverage once or twice a week by age group (12-17 years old) in merged blocks of two (2) years (2011-2012, 2012-2013, 2013-2014, and 2015-2015)

	2011-2012			2012-2013			2013-2014			2015-2016		
	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%	Lower CI	Upper CI
Hawaii	40.3	36.7	44.0	40.8	37.1	44.6	39.1	35.4	42.9	47.04	43.17	50.96
Total US	40.2	39.6	40.9	39.4	38.7	39.9	39.1	38.5	39.7	43.3	42.59	44

Source: National Survey on Drug Use and Health (NSDUH)

Table A-6. YOUTH: Ridden in a car driven by someone, including themselves, who was high or had been using alcohol or drugs during the past 30 days by gender, grade, and ethnicity in 2013, 2015, and 2017.

		2013			2015			2017		
		%	Lower CI	Upper CI	%	Lower CI	Upper CI	%	Lower CI	Upper CI
State	Total	23	20.8	25.2	20.3	18.5	22	20.6	18.9	22.4
Gender	Male	21.5	18.6	24.4	19.3	17	21.5	21.8	18.7	25.3
	Female	24.4	21.5	27.3	21.2	18.4	24	19.2	16.8	21.8
Grade	9th grade	19.7	16.4	23.1	14.5	11.9	17.1	17.7	15.1	20.7
	10th grade	19.8	14.8	24.8	21.5	19.1	23.8	22	18.4	26.1
	11th grade	25.1	21.6	28.5	21.2	17.5	24.9	19.2	16.5	22.2
	12th grade	28.4	22.9	33.9	25.1	20.8	29.3	23	19.1	27.6
Ethnicity	Caucasian	23.9	19.2	28.6	20	16.1	23.9	23.1	19.1	27.6
	Native Hawaiian	32.1	27.6	36.6	27.5	24.5	30.6	24.6	22.4	26.9
	Filipino	18.1	14.9	21.2	15.2	12.4	18.1	15.9	13.6	18.7
	Japanese	12.4	7.8	17	14.6	9.6	19.6	17.7	9.4	30.9
	Other Asian	8.6	4.7	12.4	5.8	0	11.5	13.8	7.9	23
	Other Pacific Islander	31.1	23.9	38.2	20.9	15.3	26.4	22	17.3	27.6
	Other	24.8	21.3	28.2	23.9	20.4	27.4	21.4	18.5	24.5

Source: Hawai'i YRBS via HHDW IBIS

Appendix B: Data Tables for Adult Alcohol Indicators

Table B-1. ADULT: 30-day alcohol use by gender and ethnicity in 2011, 2012, 2013, 2014, 2015, and 2016 (age-adjusted rates)

		2011			2012			2013			2014			2015			2016		
		%	lower CI	upper CI	%	lower CI	upper CI	%	lower CI	upper CI	%	lower CI	upper CI	%	lower CI	upper CI	%	lower CI	upper CI
State	Total	54.2	52.4	56.1	51.1	49.3	52.9	49.9	48.1	51.6	52.3	50.5	54.0	52.8	51.1	54.6	50.3	48.6	52.0
Gender	Female	45.5	42.9	48.0	41.3	38.9	43.7	41.7	39.4	44.1	43.3	40.8	45.9	45.1	42.6	47.5	43.9	41.6	46.3
	Male	63.1	60.5	65.6	61.3	58.7	63.7	58.1	55.7	60.5	61.2	58.7	63.5	60.7	58.2	63.1	56.6	54.2	59.0
Ethnicity	Caucasian	67.4	64.3	70.3	63.1	60.1	65.9	61.7	58.8	64.5	65.5	62.5	68.4	64.7	61.7	67.6	62.3	59.5	65.1
	Native Hawaiian	50.3	45.7	55.0	46.5	41.7	51.3	47.2	43.1	51.4	44.9	40.7	49.1	47.1	42.9	51.3	45.2	41.3	49.2
	Chinese	46.2	38.7	53.8	35.9	29.2	43.2	44.0	37.2	50.9	49.5	41.2	57.8	46.3	39.2	53.5	36.7	30.2	43.8
	Filipino	43.1	38.5	47.8	43.6	39.0	48.3	38.7	34.3	43.4	43.3	39.0	47.8	43.6	38.9	48.4	39.9	35.9	44.0
	Japanese	47.8	43.3	52.3	46.3	41.9	50.7	46.5	42.3	50.7	46.1	41.5	50.8	47.4	43.1	51.7	47.5	43.3	51.8
	Black	60.9	48.1	72.3	60.0	48.7	70.4	54.3	42.9	65.4	67.2	55.0	77.5	46.1	33.4	59.3	57.4	45.2	68.7
	Native Alaskan/ American Indian	-	-	-	69.8	58.0	79.5	-	-	-	38.8	27.1	51.9	50.0	35.7	64.3	56.5	40.0	71.7
	Other Asian	53.5	43.7	63.0	37.6	29.2	46.8	50.7	40.7	60.5	51.9	40.6	63.0	49.6	39.8	59.4	44.3	35.8	53.1
	Other Pacific Islander	42.4	33.8	51.5	32.8	24.3	42.7	41.0	31.0	51.7	30.4	22.3	39.9	24.6	18.4	32.1	35.4	27.9	43.6
	Other	52.8	43.2	62.2	53.9	44.2	63.3	49.5	40.5	58.6	44.6	36.2	53.4	60.3	50.2	69.5	55.0	44.3	65.3

Source: Hawai'i Behavioral Risk Factor Surveillance System (Hawai'i BRFSS) via HHDW IBIS

“-“ indicates that data was not available due to small sample sizes

Table B-2. ADULT: 30-day binge drinking by gender and ethnicity in 2011, 2012, 2013, 2014, 2015, and 2016 (age-adjusted rates)

		2011			2012			2013			2014			2015			2016		
		%	lower CI	upper CI	%	lower CI	upper CI	%	lower CI	upper CI	%	lower CI	upper CI	%	lower CI	upper CI	%	lower CI	upper CI
State	Total	22.7	21.0	24.4	19.2	17.8	20.7	19.4	18.1	20.9	21.0	19.5	22.6	19.9	18.5	21.5	19.7	18.3	21.1
Gender	Female	13.9	12.1	15.9	12.2	10.7	13.9	12.2	10.7	13.9	12.5	10.9	14.3	12.9	11.3	14.7	14.3	12.7	16.2
	Male	31.0	28.4	33.6	26.2	24.0	28.5	26.5	24.3	28.8	29.0	26.7	31.4	26.6	24.4	29.0	24.7	22.6	26.9
Ethnicity	Caucasian	24.1	21.3	27.1	20.2	18.0	22.6	21.5	19.2	24.1	23.9	21.1	26.8	23.2	20.5	26.2	23.2	20.7	25.8
	Native Hawaiian	30.2	25.9	35.0	27.0	22.6	31.9	24.0	20.5	27.9	27.4	23.6	31.4	25.8	22.3	29.7	25.5	22.0	29.4
	Chinese	13.4	8.8	20.0	15.2	10.6	21.4	9.5	5.4	16.4	16.0	10.5	23.7	11.7	7.5	17.6	8.8	5.1	14.9
	Filipino	18.7	15.0	23.0	14.2	11.4	17.5	16.7	13.3	20.7	15.6	12.5	19.3	18.2	14.5	22.5	14.8	12.0	18.1
	Japanese	23.1	19.1	27.7	17.5	14.4	21.1	17.1	14.0	20.7	17.5	14.0	21.6	15.6	12.4	19.4	16.6	13.5	20.1
	Black	28.5	19.8	39.2	15.6	9.4	24.6	14.0	7.4	24.8	19.1	10.7	31.8	14.0	6.8	26.7	20.6	12.4	32.3
	Native Alaskan/ American Indian	-	-	-	32.8	21.6	46.5	-	-	-	12.7	7.2	21.4	6.0	2.2	15.5	24.3	14.2	38.4
	Other Asian	26.0	18.7	34.9	13.8	8.5	21.7	21.8	14.0	32.4	14.5	8.5	23.7	10.5	5.6	19.0	13.4	8.8	19.9
	Other Pacific Islander	19.1	12.2	28.6	18.9	12.6	27.4	23.9	15.5	35.0	16.2	10.9	23.5	15.6	10.5	22.4	25.5	18.8	33.6
	Other	23.6	16.3	33.0	19.9	13.5	28.3	26.1	18.5	35.3	23.5	16.9	31.7	26.5	18.3	36.8	31.3	22.5	41.6

Source: Hawai'i BRFSS via HHDW

“-“ indicates that data was not available due to small sample sizes

Table B-3. ADULT: Perceived great risk of harm from 5 or more drinks of an alcoholic beverage once or twice a week by age groups in merged blocks of two (2) years (2011-2012, 2012-2013, and 2013-2014).

	2011-2012			2012-2013			2013-2014			2015-2016			Overall US rate for 2015-2016
Age	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%
Age 18-25	31.5	28.1	35.1	33.6	30.2	37.2	33.1	29.6	36.9	40.5	37.0	44.7	36.9
Age 26+ years	41.8	38.2	45.4	41.2	37.5	44.9	41.7	38.3	45.1	49.2	46.0	52.3	45.7

Source: NSDUH

Table B-4. ADULT: Frequency in the past 30 days of driving after having too much to drink (age 18 and older) in 2012, 2014, and 2016

	2012			2014			2016		
	%	lower CI	upper CI	%	lower CI	upper CI	%	lower CI	upper CI
None	94.1	92.8	95.4	95.9	95	96.8	94.5	93.4	95.4
Once	2.9	2	3.8	1.8	1.3	2.4	2.9	2.2	3.8
Twice	1.1	0.6	1.7	1.2	0.7	1.7	1.3	0.9	1.9
Three times or more	1.9	1.1	2.6	1.1	0.6	1.6	1.3	0.9	1.9

Source: Hawai'i BRFSS via HHDW IBIS

Table B-5. ADULT: Percentage and numbers of total arrests that were for driving under the influence of alcohol or drugs (age 18 and older) from 2011 to 2016

	2011		2012		2013		2014		2015		2016	
	n	% of total arrest	n	% of total arrest	n	% of total arrest	n	% of total arrest	n	% of total arrest	n	% of total arrest
DUI	6429	13.7	7305	15.1	7063	14.7	6707	15.6	6480	15.2	5906	15.3
Total arrests	47074	100	48363	100	48130	100	42887	100	42712	100	38691	100

Source: The Uniform Crime Reporting

DUI = driving under the influence

Table B-6. ADULT: Persons killed in motor vehicle traffic crashes in Hawai'i and highest driver BAC in the crash from 2012 to 2016

	BAC = 0.00		BAC = .01-.07		BAC = .08+		BAC=.01+		Total Killed	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
2012	67	53	11	8	47	38	58	46	125	100
2013	56	55	12	11	34	34	46	45	102	100
2014	60	63	3	3	32	34	35	37	95	100
2015	53	56	6	7	34	37	41	44	93	100
2016	80	66	6	5	34	28	40	33	120	100
Overall US 2016	24851	66	2017	5	10497	28	12514	33	37461	100

Source: Fatality Analysis Reporting System

Table B-7. ADULT: Use of alcohol 3 months before pregnancy, 2011 – 2014.

	2011			2012			2013			2014		
Population	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%	Lower CI	Upper CI
Overall	53.1	49.8	56.4	53.8	50.4	57.2	53.1	49.5	56.7	49.4	45.6	53.3
<20 years old	19.6	13	28.7	22.6	12.5	37.3	19.7	11.4	31.6	n/r	n/r	n/r
20-24 years old	57.6	50.5	64.3	59.7	52.1	66.9	49.8	42.1	57.5	46.2	37.9	54.8
25-34 years old	55.8	51.3	60.3	55.8	51.3	60.3	58.3	53.4	63.1	53	47.9	58.1
35+ years old	49.5	41.8	57.2	51.1	43.3	58.8	50.8	42.9	58.6	46	37.3	54.9
Caucasian	69.7	63.2	75.5	70.9	63.9	76.9	65.9	58.5	72.7	65.2	57.1	72.5
Native Hawaiian	56.2	50.2	62	57.1	50.8	63.1	52.7	46.4	58.8	49.2	42	56.4
Chinese	34.3	20.6	51.3	44.7	31.1	59.2	43.3	27.5	60.5	46.5	28.6	65.4
Filipino	42.3	34.9	50.1	36	28.8	44	45.9	37.2	55	30.5	22.9	39.5
Japanese	54.6	43.9	64.8	59.6	47.9	70.4	59	47.2	69.9	52.2	39.3	64.7
Other	31.5	17	50.7	43.6	27.4	61.4	38	19.2	61.2	46.9	26.8	68

Source: Pregnancy Risk Assessment Monitoring System (PRAMS)

*Data unavailable for 2015 and on.

Table B-8. ADULT: Use of alcohol during last 3 months of pregnancy, 2011 – 2014.

	2011			2012			2013			2014		
Population	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%	Lower CI	Upper CI
Overall	6.9	5.4	8.7	7.9	6.3	9.9	7.6	5.9	9.6	8.5	6.6	10.8
<20 years old	-	-	-	-	-	-	-	-	-	-	-	-
20-24 years old	8.3	4.9	13.7	-	-	-	-	-	-	-	-	-
25-34 years old	7.7	5.6	10.5	7.1	5.1	9.6	7.4	5.4	10.2	9.5	7	12.7
35+ years old	8.6	5.1	14.2	10.6	6.6	16.5	10.9	7	16.6	12.2	7.3	19.6
Caucasian	13.4	9.4	18.8	12.6	8.7	19.9	10.5	6.9	15.6	11	7.2	16.4
Native Hawaiian	3.6	2.1	6.2	7.1	4.6	11	7.4	4.7	11.2	7.7	4.6	12.7
Chinese	-	-	-	-	-	-	-	-	-	-	-	-
Filipino	-	-	-	8.2	4.6	14.1	-	-	-	-	-	-
Japanese	-	-	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-	-

Source: PRAMS

“-“ indicates that the data is not available for the indicated population.

*Data unavailable for 2015 and on.

Table B-9. ADULT: Binge drinking during 3 months before pregnancy, 2011 – 2014.

	2011			2012			2013			2014		
Population	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%	Lower CI	Upper CI	%	Lower CI	Upper CI
Overall	24	21.3	26.8	19.8	17.2	22.6	18.9	16.2	21.8	16.6	14	19.5
<20 years old	13.9	8.2	22.5	-	-	-	-	-	-	-	-	-
20-24 years old	30.6	24.6	37.4	23.1	17.2	30.3	23.3	17.4	30.5	21.4	15.4	29.1
25-34 years old	25.9	22.2	30	22.4	18.8	26.4	20.6	16.9	24.9	17.4	14	21.4
35+ years old	12	8.3	17.1	11	7.1	16.7	12.3	8.1	18.3	9.9	5.8	16.3
Caucasian	26.2	20.8	32.4	26.5	20.6	33.5	16.1	11.6	21.9	20.3	14.8	27.1
Native Hawaiian	30.8	25.7	36.4	27.5	22.1	33.6	23.6	18.8	29.3	21.4	16.1	27.8
Chinese	-	-	-	-	-	-	-	-	-	-	-	-
Filipino	17.2	12.1	23.9	14.1	9.4	20.7	13.4	8.3	20.9	-	-	-
Japanese	22.6	14.8	32.9	-	-	-	25.9	16.4	38.4	-	-	-
Other	40.1	20.4	63.7	-	-	-	-	-	-	-	-	-

Source: PRAMS

“-” indicates that the data is not available for the indicated population.

*Data unavailable for 2015 and on.

Appendix C: Percentage Change Tables from Earliest Year to Latest Year

Table C-1. Youth: Ever had at least one drink of alcohol among public high school students in Hawai'i, by gender

	2011	2017	Percent Change
Male	53	45.7	-13.8
Female	58.7	52	-11.4
Total	55.8	49	-12.2

Table C-2. Youth: Ever had at least one drink of alcohol among public high school students in Hawai'i, by grade

	2011	2017	Percent Change
9th grade	46.4	38.7	-16.6
10th grade	54.3	47.5	-12.5
11th grade	57.8	51.3	-11.2
12th grade	67	61.7	-7.9

Table C-3. Youth: Ever had at least one drink of alcohol among public high school students in Hawai'i, by ethnicity

	2011	2017	Percent Change
Caucasian	63.2	54.8	-13.3
Native Hawaiian	66	54.8	-17.0
Filipino	52.7	46.8	-11.2
Japanese	41.6	30	-27.9
Other Asian	29	39.3	35.5
Other Pacific Islander	48.6	41.9	-13.8
Other	54.5	50.2	-7.9

Table C-4. Youth: Current alcohol use among public high school students in Hawai'i, by gender			
	2011	2017	Percent Change
Male	25.8	22.1	-14.3
Female	32.3	26.4	-18.3
Total	29.1	24.5	-15.8

Table C-5. Youth: Current alcohol use among public high school students in Hawai'i, by grade			
	2011	2017	Percent Change
9th grade	21.5	17.3	-19.5
10th grade	28.2	20.5	-27.3
11th grade	30.2	25.2	-16.6
12th grade	38.4	36.8	-4.2

Table C-6. Youth: Current alcohol use among public high school students in Hawai'i, by ethnicity			
	2011	2017	Percent Change
Caucasian	39.6	32.8	-17.2
Native Hawaiian	35.1	29.6	-15.7
Filipino	24.2	19.7	-18.6
Japanese	20.2	11.9	-41.1
Other Asian	10.6	16.1	51.9
Other Pacific Islander	31.8	21.4	-32.7
Other	28.2	23.4	-17.0

Table C-7. Youth: 30-day binge drinking for boys among public high school students in Hawai'i, by grade

	2013	2017	Percent Change
9th grade	3.2	7	118.8
10th grade	6	9.4	56.7
11th grade	12.2	12.8	4.9
12th grade	22.8	20.6	-9.6
Overall	10.6	12.3	16.0

Table C-8. Youth: 30-day binge drinking for boys among public high school students in Hawai'i, by ethnicity

	2013	2017	Percent Change
Caucasian	11.9	16.9	42.0
Native Hawaiian	13.9	15.3	10.1
Filipino	9.8	7.7	-21.4
Japanese	NA	7.3	NA
Other Asian	NA	NA	NA
Other Pacific Islander	NA	9.5	NA
Other	9.6	10.1	5.2

Table C-9. Youth: 30-day binge drinking for girls among public high school students in Hawai'i, by grade

	2013	2017	Percent Change
9th grade	9.9	8.8	-11.1
10th grade	8.7	9.5	9.2
11th grade	13.6	12.7	-6.6
12th grade	19.4	19.6	1.0
Overall	12.9	12.4	-3.9

Table C-10. Youth: 30-day binge drinking for girls among public high school students in Hawai'i, by ethnicity

	2013	2017	Percent Change
Caucasian	15.6	14.6	-6.4
Native Hawaiian	20.5	18.7	-8.8
Filipino	5.4	7.2	33.3
Japanese	NA	NA	NA
Other Asian	NA	NA	NA
Other Pacific Islander	11.9	14.9	25.2
Other	13.1	13.7	4.6

Table C-11. Youth: First drink of alcohol before age 13 years among public high school students in Hawai'i, by gender

	2011	2017	Percent Change
Male	20.3	18.9	-6.9
Female	18.2	14.5	-20.3
Total	19.2	17.1	-10.9

Table C-12. Youth: First drink of alcohol before age 13 years among public high school students in Hawai'i, by grade

	2011	2017	Percent Change
9th grade	23.6	19.5	-17.4
10th grade	18.8	17.8	-5.3
11th grade	14.7	13.6	-7.5
12th grade	17.8	15.1	-15.2

Table C-13. Youth: First drink of alcohol before age 13 years among public high school students in Hawai'i, by ethnicity

	2011	2017	Percent Change
Caucasian	19.1	14.9	-22.0
Native Hawaiian	25.6	21.4	-16.4
Filipino	14.3	15	4.9
Japanese	14.6	8.4	-42.5
Other Asian	12.3	11.5	-6.5
Other Pacific Islander	15.8	10.2	-35.4
Other	21	18	-14.3

Table C-14. Youth: Perceptions of great risk from five or more drinks of an alcoholic beverage once or twice a week among 12 – 17 year olds, by year

	2011-2012	2015-2016	Percent Change
Hawaii	40.3	47.04	16.7

Table C-15. Youth: Ridden in a car driven by someone, including themselves, who was high or had been using alcohol or drugs during the past 30 days among public high school students in Hawai'i, by gender

	2013	2017	Percent Change
Male	21.5	21.8	1.4
Female	24.4	19.2	-21.3
Total	23	20.6	-10.4

Table C-16. Youth: Ridden in a car driven by someone, including themselves, who was high or had been using alcohol or drugs during the past 30 days among public high school students in Hawai'i, by grade

	2013	2017	Percent Change
9th grade	19.7	17.7	-10.2
10th grade	19.8	22	11.1
11th grade	25.1	19.2	-23.5
12th grade	28.4	23	-19.0

Table C-17. Youth: Ridden in a car driven by someone, including themselves, who was high or had been using alcohol or drugs during the past 30 days among public high school students in Hawai'i, by ethnicity

	2013	2017	Percent Change
Caucasian	23.9	23.1	-3.3
Native Hawaiian	32.1	24.6	-23.4
Filipino	18.1	15.9	-12.2
Japanese	12.4	17.7	42.7
Other Asian	8.6	13.8	60.5
Other Pacific Islander	31.1	22	-29.3
Other	24.8	21.4	-13.7

Table C-18. Adult: Age-adjusted rates current alcohol use among adults aged 18 and older in Hawai'i, by gender

	2011	2016	Percent Change
Male	63.1	56.6	-10.3
Female	45.5	43.9	-3.5
Total	54.2	50.3	-7.2

Table C-19. Adult: Age-adjusted rates for 30-day alcohol use among adults aged 18 and older in Hawai'i, by ethnicity

	2011	2016	Percent Change
Caucasian	67.4	62.3	-7.6
NH*	50.3	45.2	-10.1
Chinese	46.2	36.7	-20.6
Filipino	43.1	39.9	-7.4
Japanese	47.8	47.5	-0.6
Black	60.9	57.4	-5.7
NA/AI*	**	56.5	NA
Other Asian	53.5	44.3	-17.2
Other Pacific Islander	42.4	35.4	-16.5
Other	52.8	55.0	4.2

Table C-20. Adult: Age-adjusted rates for 30-day binge drinking among adults aged 18 and older in Hawai'i, by gender

	2011	2016	Percent Change
Male	31.0	24.7	-20.3
Female	13.9	14.3	2.9
Total	22.7	19.7	-13.2

Table C-21. Adult: Age-adjusted rates for 30-day binge drinking among adults aged 18 and older in Hawai‘i, by ethnicity

	2011	2016	Percent Change
Caucasian	24.1	23.2	-3.7
NH*	30.2	25.5	-15.6
Chinese	13.4	8.8	-34.3
Filipino	18.7	14.8	-20.9
Japanese	23.1	16.6	-28.1
Black	28.5	20.6	-27.7
NA/AI*	**	24.3	NA
Other Asian	26.0	13.4	-48.5
Other Pacific Islander	19.1	25.5	33.5
Other	23.6	31.3	32.6

Table C-22. Adult: Perceptions of great risk of harm from five or more drinks of an alcoholic beverage once or twice a week among adults aged 18 and older in Hawai‘i, by age groups

	2011-2012	2015-2016	Percent Change
Ages 18-25	31.5	40.5	28.6
Ages 26+	41.8	49.2	17.7

Table C-23. Adult: Frequency in the past 30 days of driving after having too much to drink among adults aged 18 and older in Hawai‘i

	2012	2016	Percent Change
None	94.1	94.5	0.4
Once	2.9	2.9	—
Twice	1.1	1.3	18.2
Three or more times	1.9	1.3	-31.6

Table C-24. Adult: Percentage of total arrests reported by the county police department that were alcohol related among adults aged 18 and older in Hawai'i			
	2011	2016	Percent Change
Alcohol related arrests	13.7	19.0	38.7

Table C-25. Adult: Percentage of total arrests reported by the county police department that were for driving under the influence of alcohol or drugs among adults aged 18 and older in Hawai'i			
	2011	2016	Percent Change
Honolulu	13.5	19.0	40.7
Maui	11.3	7.7	-31.9
Kauai	6.4	7.6	18.8
Hawaii	19.6	16.1	-17.9

Table C-26. Adult: Fatalities (all ages) in motor vehicle traffic crashes in Hawai'i involving BAC $\geq 0.08\%$			
	2012	2016	Percent Change
% Alcohol-impaired	37.6	28.3	-24.6

Table C-27. Adult: Persons killed in crash in Hawai'i by highest driver BAC (all ages)			
	2012	2016	Percent Change
BAC = 0.00	53	66	24.5
BAC = .01-.07	8	5	-37.5
BAC = .08+	38	28	-26.3
BAC=.01+	46	33	-28.3
Total Killed	100	100	—

Table C-28. Adult: Alcohol use during the 3 months before pregnancy in Hawai‘i			
	2011	2014	Percent Change
Overall	53.1	49.4	-7.0

Table C-29. Adult: Alcohol use during the 3 months before pregnancy in Hawai‘i, by age group			
	2011	2014	Percent Change
<20 years old	19.6	NA	NA
20-24 years old	57.6	46.2	-19.8
25-34 years old	55.8	53.0	-5.0
35+ years old	49.5	46.0	-7.1

Table C-30. Adult: Alcohol use during the 3 months before pregnancy in Hawai‘i, by ethnicity			
	2011	2014	Percent Change
Caucasian	69.7	65.2	-6.5
Native Hawaiian	56.2	49.2	-12.5
Chinese	34.3	46.5	35.6
Filipino	42.3	30.5	-27.9
Japanese	54.6	52.2	-4.4
Other Asian	31.5	46.9	48.9

Table C-31. Adult: Alcohol use during the last 3 months of pregnancy in Hawai‘i			
	2011	2014	Percent Change
Overall	6.9	8.5	23.2

Table C-32. Adult: Alcohol use during the last 3 months of pregnancy in Hawai‘i, by age group			
	2011	2014	Percent Change
<20 years old	NA	NA	NA
20-24 years old	8.3	NA	NA
25-34 years old	7.7	9.5	23.4
35+ years old	8.6	12.2	41.9

Table C-33. Adult: Alcohol use during the last 3 months of pregnancy in Hawai‘i, by ethnicity			
	2011	2014	Percent Change
Caucasian	13.4	11.0	-17.9
Native Hawaiian	3.6	7.7	113.9
Chinese	NA	NA	NA
Filipino	NA	NA	NA
Japanese	NA	NA	NA
Other Asian	NA	NA	NA

Table C-34. Adult: Binge drinking during the 3 months prior to pregnancy in Hawai‘i			
	2011	2014	Percent Change
Overall	24	16.6	-30.8

Table C-35. Adult: Binge drinking during the 3 months prior to pregnancy in Hawai‘i, by age group			
	2011	2014	Percent Change
<20 years old	13.9	NA	NA
20-24 years old	30.6	21.4	-30.1
25-34 years old	25.9	17.4	-32.8
35+ years old	12	9.9	-17.5

Table C-36. Adult: Binge drinking during the 3 months prior to pregnancy in Hawai'i, by ethnicity			
	2011	2014	Percent Change
Caucasian	26.2	20.3	-22.5
Native Hawaiian	30.8	21.4	-30.5
Chinese	NA	NA	NA
Filipino	17.2	NA	NA
Japanese	22.6	NA	NA
Black	40.1	NA	NA

Appendix D: 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	<p><i>“During the past 30 days, that is, since [DATEFILL], on how many days did you smoke part or all of a cigarette?”</i> [Response option: Write in a number between 0 and 30.]</p> <p>Outcome Reported: Percent who reported having smoked a cigarette during the past 30 days.</p>	NSDUH	CG07	Adult, Youth	<p>State (NSDUH),</p> <p>Community (Community Survey),</p> <p>Program (Program NOMs Instrument)</p>
	<p><i>“During the past 30 days, that is, since [DATEFILL], on how many days did you use [other tobacco products]”</i> [Response option: Write in a number between 0 and 30.]</p> <p>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).</p>	NSDUH	Multiple Items	Adult, Youth	<p>State (NSDUH),</p> <p>Community (Community Survey),</p> <p>Program (Program NOMs Instrument)</p>
	<p><i>“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?”</i> [Response option: Write in a number between 0 and 30.]</p> <p>Outcome Reported: Percent who reported having used alcohol during the past 30 days.</p>	NSDUH	ALCC29a	Underage, Legal Age	<p>State (NSDUH),</p> <p>Community (Community Survey),</p> <p>Program (Program NOMs Instrument)</p>

Measure	Source Item and Measure Calculation	Source of Data	Item Code (If survey based)	Respondent Age Group	Level of Aggregation and Data Source
	<p><i>“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?”</i></p> <p>[Response option: Write in a number between 0 and 30.]</p> <p>Outcome Reported: Percent who reported having used marijuana or hashish during the past 30 days.</p>	NSDUH	MJ06	Adult, Youth	<p>State (NSDUH),</p> <p>Community (Community Survey),</p> <p>Program (Program NOMs Instrument)</p>
	<p><i>“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]?”</i></p> <p>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).</p>	NSDUH	Multiple Items	Adult, Youth	<p>State (NSDUH),</p> <p>Community (Community Survey),</p> <p>Program (Program NOMs Instrument)</p>
Age at First Use	<p><i>“How old were you the first time you smoked part or all of a cigarette?”</i></p> <p>[Response option: Write in age at first use.]</p> <p>Outcome Reported: Average age at first use of cigarettes.</p>	NSDUH	CG04	Adult, Youth	<p>State (NSDUH),</p> <p>Community (Community Survey),</p> <p>Program (Program NOMs Instrument)</p>

Measure	Source Item and Measure Calculation	Source of Data	Item Code (If survey based)	Respondent Age Group	Level of Aggregation and Data Source
	<p><i>“How old were you the first time you used [any other tobacco product] ‡?”</i> [Response option: Write in age at first use.]</p> <p>Outcome Reported: Average age at first use of tobacco products other than cigarettes.</p>	NSDUH	Multiple Items	Adult, Youth	<p>State (NSDUH),</p> <p>Community (Community Survey),</p> <p>Program (Program NOMs Instrument)</p>
	<p><i>“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.”</i> [Response option: Write in age at first use.]</p> <p>Outcome Reported: Average age at first use of alcohol.</p>	NSDUH	AL02	Adult, Youth	<p>State (NSDUH),</p> <p>Community (Community Survey),</p> <p>Program (Program NOMs Instrument)</p>
	<p><i>“How old were you the first time you used marijuana or hashish?”</i> [Response option: Write in age at first use.]</p> <p>Outcome Reported: Average age at first use of marijuana or hashish.</p>	NSDUH	MJ02	Adult, Youth	<p>State (NSDUH),</p> <p>Community (Community Survey),</p> <p>Program (Program NOMs Instrument)</p>
	<p><i>“How old were you the first time you used [other illegal drugs] ‡?”</i> [Response option: Write in age at first use.]</p>	NSDUH	Multiple Items	Adult, Youth	<p>State (NSDUH),</p>

Measure	Source Item and Measure Calculation	Source of Data	Item Code (If survey based)	Respondent Age Group	Level of Aggregation and Data Source
	Outcome Reported: Average age at first use of other illegal drugs.				Community (Community Survey), Program (Program NOMs Instrument)
Perceived Risk of Harm of Use	<i>“How much do people risk harming themselves physically and in other ways when they smoke one or more packs of cigarettes per day?”</i> [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)
	<i>“How much do people risk harming themselves physically and in other ways when they smoke marijuana once or twice a week?”</i> [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)
	<i>“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?”</i> [Response options: No risk, slight risk, moderate risk, great risk, “don’t know”]	NSDUH	RK01k	Underage, Legal Age	State (NSDUH), Community (Community Survey),

Measure	Source Item and Measure Calculation	Source of Data	Item Code (If survey based)	Respondent Age Group	Level of Aggregation and Data Source
	Outcome Reported: Percent reporting moderate or great risk.				Program (Program NOMs Instrument)
Disapproval of Substance Use	<i>“How do you feel about someone your age smoking one or more packs of cigarettes a day?”</i> [Response options: Neither approve nor disapprove, somewhat disapprove, strongly disapprove, don’t know] Outcome Reported: Percent somewhat or strongly disapproving.	NSDUH	YE19a	Youth	State (NSDUH), Community (Community Survey), Program (Program NOMs Instrument)
	<i>“How do you think your close friends would feel about you smoking one or more packs of cigarettes a day?”</i> [Response options: Neither approve nor disapprove, somewhat disapprove, strongly disapprove, don’t know] Outcome Reported: Percent reporting that their friends would somewhat or strongly disapprove.	NSDUH	YE20a	Youth	State (NSDUH), Community (Community Survey), Program (Program NOMs Instrument)
	<i>“How do you feel about someone your age trying marijuana or hashish once or twice?”</i> [Response options: Neither approve nor disapprove, somewhat disapprove, strongly disapprove, don’t know] Outcome Reported: Percent somewhat or strongly disapproving.	NSDUH	YE19b	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
	<p><i>“How do you feel about someone your age using marijuana once a month or more?”</i></p> <p>[Response options: Neither approve nor disapprove, somewhat disapprove, strongly disapprove, don’t know]</p> <p>Outcome Reported: Percent somewhat or strongly disapproving.</p>	NSDUH	YE19b1	Youth	<p>State (NSDUH),</p> <p>Community (Community Survey),</p> <p>Program (Program NOMs Instrument)</p>
	<p><i>“How do you feel about someone your age having one or two drinks of an alcoholic beverage nearly every day?”</i></p> <p>[Response options: Neither approve nor disapprove, somewhat disapprove, strongly disapprove, don’t know]</p> <p>Outcome Reported: Percent somewhat or strongly disapproving.</p>	NSDUH	YE19c	Youth	<p>State (NSDUH),</p> <p>Community (Community Survey),</p> <p>Program (Program NOMs Instrument)</p>
Employment/Education					
Perception of Workplace Policy	<p><i>“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?”</i></p> <p>[Response options: More likely, less likely, would make no difference]</p> <p>Outcome Reported: Percent reporting that they would be more likely to work for an employer conducting random drug and alcohol tests.</p>	NSDUH	QD53	Adult, Youth 15 years or older	<p>State (NSDUH),</p> <p>Community (Community Survey),</p> <p>Program (Program NOMs Instrument)</p>

Measure	Source Item and Measure Calculation	Source of Data	Item Code (If survey based)	Respondent Age Group	Level of Aggregation and Data Source
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)
Crime and Criminal Justice					
Driving While Under the Influence of Alcohol	<i>“During the past 12 months, have you driven a vehicle while you were under the influence of alcohol only?”</i> [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 https://www.ucrdatatool.gov/		Not collected from individuals	State (UCR-FBI) Community (State and/or Local Law Enforcement Agencies)

Measure	Source Item and Measure Calculation				Source of Data	Item Code (If survey based)	Respondent Age Group	Level of Aggregation and Data Source
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, don’t know] 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)
	“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, don’t know] 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	Race	Ethnicity	Gender	MDS, Prevention Database Builder, Program Outcome Data		Not collected from individuals	State (MDS, Prevention Database Builder), Program (Program Outcome Data)
	0-4	• Am. Indian / AK Native	• Not Hispanic / Latino	• Female				
	5-11	• Asian		• Male				
	12-14		• Hispanic /	• Total				
	15-17	• Black / African American	• Latino					
	18-20							
21-24	• Native Hawaiian / Other	• Total						

Measure	Source Item and Measure Calculation				Source of Data	Item Code (If survey based)	Respondent Age Group	Level of Aggregation and Data Source
	25-44 45-64 65+ Total	Pacific Islander • White • More than one race • Unknown • Other • Total						

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	<p><i>“During the past 12 months, have you seen or heard any alcohol or drug prevention messages from sources [outside school], such as posters, pamphlets, radio, or TV?”</i> <i>[Response options: yes, no, don’t know]</i></p> <p>Outcome Reported: Percent reporting having been exposed to prevention message.</p>	NSDUH		YE25 Youth	<p>State (NSDUH),</p> <p>Community (Community Survey),</p> <p>Program (Program NOMs Instrument)</p>

† 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 E: References

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