

HAWAII EPIDEMIOLOGICAL PROFILE FOR SUBSTANCE ABUSE PREVENTION

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For the:

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EXECUTIVE SUMMARY

The *Hawaii Epidemiological Profile for Substance Abuse Prevention* was developed to facilitate the use of data to improve prevention assessment, planning, implementation, and monitoring. It represents, in part, the culmination of the Hawaii SEOW (State Epidemiological Outcomes Workgroup) grant, which lays the foundation for the first step and informs all five steps of the state's SPF SIG (State Prevention Framework State Incentive Grant) initiative.

The profile was developed using both population-based data and information from the Hawaii Drug Information Network (HDIN), which serves as the state's epidemiological work group. The data analysis began with a comprehensive review of data sources that had national and Hawaii or Hawaii-specific alcohol, tobacco, and other drug (ATOD) constructs and indicators. A total of 29 data sources were identified, and 197 data indicators were reviewed. These were screened using five criteria—availability, validity, consistency, periodic collection, and sensitivity—to yield a smaller set of 7 constructs and 46 indicators. Trend data for the nation, each of the 50 states, and the District of Columbia were collected for the years 1990 through 2005 when available. Across substances, ATOD constructs and their related indicators were assessed on the population affected, time trend, and relative comparison with national and other states' prevalence rates. The scores from these assessments were entered into a general formula that yielded a priority score for each construct and indicator. The analysis resulted in a short list of 10 indicators: six for alcohol, three for illicit drugs, and one for tobacco. Six of the ten indicators related to consumption and four to consequences.

HDIN members rated the importance of seven criteria for Hawaii's SPF SIG initiative: prevalence, rate of change, seriousness compared to other states, severity, urgency, readiness for change, and change potential within five years. They also rated various ATOD constructs to provide information where there was little or no objective and quantitative data: urgency, readiness for change, and change potential, as well as information on perceived severity and perceived overall priority. These results were in close agreement with the results from the population-based data analysis.

In addition, the State Advisory Council (SAC) was asked by the State Epidemiological Workgroup (SEW) in January, 2008, to go through a similar rating process to the HDIN to add to the existing sources of information already collected and make an informed decision on the focus area of the SPF SIG.

The findings from the data analyses indicated that the **Hawaii SPF SIG should focus on the reduction and prevention of underage alcohol consumption for youth 12-17 years old.** Reducing consumption, such as increasing the age of initial use of alcohol and reducing the current use of alcohol, should lead to a reduction in negative consequences like antisocial behaviors related to alcohol use.

Within Hawaii, there are geographic, gender, grade, and ethnic differences in the use of alcohol. The latest Hawaii-specific data on youth alcohol-related behaviors were analyzed to provide insights on the needs of various subpopulations in our state and to inform prevention decisions and strategic planning. The analysis focused on youth alcohol consumption, current users, access

and perceptions of availability, and risk and protective factors. In the future, data in the epidemiological profile will be expanded to inform all steps in the State Prevention Framework and to assist Hawaii's counties to develop their SPF SIG strategic plans and develop more targeted and effective prevention strategies.

INTRODUCTION

The *Hawaii Epidemiological Profile for Substance Abuse Prevention* was developed to facilitate the use of data to improve prevention assessment, planning, implementation, and monitoring. This effort was supported by two grants from the Substance Abuse and Mental Health Services Administration (SAMHSA) Center for Substance Abuse Prevention (CSAP). The first grant was awarded to the Alcohol and Drug Abuse Division (ADAD) of the Hawaii Department of Health (DOH) in March 2006 to establish a State Epidemiological Outcomes Workgroup (SEOW) that would collect, analyze, and report substance use incidence and prevalence, as well as related data and National Outcome Measures (NOMs). Hawaii's goal for this initiative was *to develop and implement an effective, efficient, and sustainable mechanism that provides government agencies and communities with timely data on the mental health status and the incidence, prevalence, and sequelae of alcohol, tobacco, and other drug use in our communities to inform decisions on planning, monitoring, and evaluation.*

The second grant—the Strategic Prevention Framework (SPF) State Incentive Grant (SIG)—was awarded in September 2006 to the State of Hawaii *to improve the quality of life of its citizens by preventing and reducing the abuse of and dependence on alcohol and other drugs among people of all ages.* The SPF SIG is a five-year program that will encompass five interconnected and data-infused steps and will have cultural competence and sustainability at its core. These steps are (1) assess problems and set priorities; (2) evaluate and mobilize capacity to address them; (3) inform prevention-planning and funding decisions; (4) guide the selection of appropriate and effective strategies for implementation; and (5) monitor key milestones, evaluate initiatives, and adjust prevention efforts as needed (see Figure 1 below).



Figure 1. SPF SIG Program Model

The present profile is, in part, a culmination of the first SEOW grant, which lays the foundation for the first step and informs all five steps of the subsequent SPF SIG grant. It consists of baseline data on alcohol, tobacco, and other drugs (ATOD) and their related problems in Hawaii and identifies priorities based on epidemiological analyses. Given the vast amount of information, including nearly 200 ATOD data indicators, the present profile (a) summarizes the nature, magnitude, and distribution of substance use and the related consequences for Hawaii and (b) organizes the data in a manner that facilitates data interpretation and application.

The profile was developed by the University of Hawaii Center on the Family (COF) using both population-based data and information from the Hawaii Drug Information Network (HDIN), which serves as the state's epidemiological workgroup for the SEOW and SPF SIG (see Appendix A for HDIN membership). The former was collected primarily from federal and state agencies to enable comparisons at different points in time and place, and among population subgroups. The data and information analyses identified possible focus areas for the SPF SIG initiative that will be presented to the SPF SIG State Advisory Council for final decision making.

The body of Hawaii's epidemiological profile consists of the sections below, while the appendices contain supportive documents and data relating to the information presented in the sections:

- *Background on Hawaii.* Overview on Hawaii's people and ATOD use
- *Analytical Framework and Data Process.* Methodology and criteria applied to a comprehensive list of ATOD data constructs and indicators to identify priority focus areas
- *Assessment of ATOD Consequences and Consumption.* Results of data analyses based on population-based data and information from HDIN and SAC members
- *SPF SIG Recommended Focus Area Within Context of Hawaii.* Identification of the SPF SIG focus area, assessment of the focus area within the Hawaii context, and next steps

BACKGROUND ON HAWAII

HAWAII'S PEOPLE

Admitted into statehood on August 21, 1959, Hawaii is not only the youngest state in the union but also possesses characteristics that set it apart from the other states. It is situated approximately 2,400 miles from the U.S. mainland and is the only state that is completely surrounded by the Pacific Ocean. Hawaii consists of four counties that are located on seven major islands; thus its people are separated by both land and water. The state's geography creates diverse communities, ranging from the highly urbanized and populous city of Honolulu located on the island of Oahu to small, rural communities situated on the "neighbor islands." Table 1 presents Hawaii's population distributed across counties by sex and age groups.

Table 1. Population (in Thousands) of Hawaii and Hawaii's Counties by Sex and Age, 2005

Sex	Total	Age below 12	Age 12-17	Age 18-20	Age 21-29	Age 30-34	Age 35-54	Age 55-64	Age 65 & over
State of Hawaii									
Total	1,275	199	101	55	153	79	367	147	175
Male	636	102	52	30	83	41	183	73	72
Female	639	97	49	25	69	38	185	75	102
Maui County									
Total	140	22	12	5	15	9	44	17	16
Male	70	11	6	3	8	5	22	8	7
Female	70	11	6	2	7	4	22	8	9
Kauai County									
Total	63	10	6	2	6	3	18	8	9
Male	31	5	3	1	4	2	9	4	4
Female	32	5	3	1	3	2	9	4	5
Hawaii County									
Total	167	27	16	8	20	9	47	20	22
Male	84	14	8	4	11	4	23	10	10
Female	84	13	7	4	10	4	24	10	13
City & County of Honolulu									
Total	905	141	68	39	110	58	258	103	127
Male	451	72	35	22	61	30	128	50	52
Female	455	69	33	17	49	28	130	53	75

Sources: NCHS, Bridged-race Vintage 2005 postcensal population estimates for July 1, 2000 - July 1, 2005, by year, county, single-year of age, bridged-race, Hispanic origin, and sex.

Hawaii’s population of approximately 1.3 million people is comprised of a rich blend of races, ethnicities, and cultures—Native Hawaiians, other Pacific Islanders, Caucasians, Japanese, Filipinos, Chinese, other Asians, African Americans, and people of other heritages (see Table 2).

Table 2. Population of Hawaii by Race, 2000

Race	Percent
One race	71.6
White	31.5
Black or African American	0.5
American Indian and Alaska Native	0.4
Asian	26.7
<i>Asian Indian</i>	<i>0.1</i>
<i>Chinese</i>	<i>1.1</i>
<i>Filipino</i>	<i>9.1</i>
<i>Japanese</i>	<i>13.6</i>
<i>Korean</i>	<i>0.6</i>
<i>Vietnamese</i>	<i>0.1</i>
<i>Other Asian</i>	<i>2.2</i>
Native Hawaiian and other Pacific Islander	11.2
<i>Native Hawaiian</i>	<i>9.7</i>
<i>Guamanian or Chamorro</i>	<i>0.1</i>
<i>Samoan</i>	<i>0.3</i>
<i>Other Pacific Islander</i>	<i>1.2</i>
Some other race	1.1
Two or more races	28.4
Race alone or in combination with one or more other races	
White	52.1
Black or African American	1.2
American Indian and Alaska Native	3.3
Asian	47.7
Native Hawaiian and other Pacific Islander	31
Some other race	4.9

Source: U.S. Census Bureau, Census 2000.

SUBSTANCE USE IN HAWAII

This section provides an overview of the alcohol, illicit drug, and tobacco consumption among Hawaii’s people. It presents the prevalence of ATOD use among different ages and the patterns of substance use and dependence. Information is also presented on the perception of risk from substance use.

Table 3 shows the prevalence of current use of alcohol, illicit drugs, and tobacco. Nearly half (48.9%) of the people in Hawaii who are 12 years and over reported using alcohol in the past 30 days. The highest prevalence rate for alcohol use—over 62.0%—is found among people 21 to 34 years old, and the rate gradually drops with age so that for those 65 years and older, the prevalence rate is 33.0%. At the other end of the age continuum, one in every four 9th graders (27.2%) reported monthly alcohol use, and the percentage of users increases to 42.8% among high school seniors.

More students use alcohol than marijuana, the most heavily used illicit drug among young people. Among 9th and 10th graders, approximately 15.0% reported using marijuana monthly, and the percentage increased to 22.4% among 12th graders. Nearly one fifth (19.1%) of those aged 18-25 reported using illicit drugs, predominantly marijuana. Marijuana use is less prevalent among individuals 26 years and older: Overall illicit drug use is only 5.7% among this cohort.

Table 3. Prevalence Rate of Current Substance Use, by Substance Type and Age/Grade, 2004-2005

Age/Grade	Alcohol ^a	Illicit Drugs ^b	Tobacco ^c
12 and Over	48.9	8.0	n.s.
9th Grader	27.2	14.3	14.4
10th Grader	33.4	15.7	16.7
11th Grader	39.5	18.7	12.5
12th Grader	42.8	22.4	22.6
18-20	40.8	19.1 ^d	11.8
21-29	62.8		23.8
30-34	62.1	5.7 ^e	16.0
35-54	55.5		19.5
55-64	47.6		18.1
65-99	33.0		7.2

^a Prevalence of alcohol use in the past 30 days.

^b Prevalence of marijuana use among high school students (9th to 12th grades) and illicit drug use among 12 years and older in the past 30 days.

^c Prevalence of cigarette use in the past 30 days among high school students (9th to 12th grades) and among adults (18 and over).

^d Prevalence rate among people aged 18-25.

^e Prevalence rate among people aged 26 and over.

Table 3 (continued). Prevalence Rate of Current Substance Use, by Substance Type and Age/Grade, 2004-2005

Sources: NSDUH 2003-2004 for alcohol use among persons aged 12 or older, and illicit drug use for persons aged 12 or older, 18-25, and 26 or older; YRBS 2005 for alcohol, marijuana, and cigarette use among 9th to 12th graders; BRFSS 2005 for alcohol and cigarette use among persons aged 18 or older.

The prevalence of cigarette smoking is highest among young adults ages 21-29 at 23.8%, followed by high school seniors at 22.6%. Smoking is least prevalent among adults who are 65 years and over.

By the age of 13, over one fourth (27.3%) of high school students had used alcohol, the same proportion as those who had smoked cigarettes (27.1%), and more than twice those who reported using marijuana (12.5%) (see Table 4). There are gender differences in the early use of alcohol and illicit drugs, with males more likely than females to use these substances before age 13.

Table 4. Percentage of High School Students Who Reported ATOD Use by Age 13, 2005

Gender	Alcohol	Illicit Drugs	Tobacco
Total	27.3	12.5	27.1
Male	29.6	14.6	27.5
Female	24.9	10.1	26.6

Source: YRBS 2005.

Regarding patterns of alcohol use, one in ten teenagers in Hawaii reported binge drinking at least once in the past 30 days (see Table 5). Among young adults ages 18-25, 44.3% reported binge drinking, and 12.1% reported heavy alcohol use (individuals from 21-29 years). Among illicit drugs, inhalants have the highest prevalence of lifetime use (13.0%) among teenagers in Hawaii, followed by cocaine (6.5%), and MDMA or ecstasy (6.1%). About one twentieth (4.8%) of the teenagers in Hawaii smoke cigarettes daily.

Table 5. Patterns of Substance Use, 2004-2005

Substance Use	Age	Percent
Alcohol		
Binge Alcohol Use	12-17	10.9
	18-25	44.3
	26 and over	21.1
Current Heavy Alcohol Use	18-19	7.4
	21-29	12.1
	30-34	10.5
	35-54	5.8
	55-64	7.7
	65 and over	4.8
Illicit Drugs		
Current Marijuana Use	14-18	17.2
Lifetime Inhalant Use	14-18	13.0
Lifetime Cocaine Use	14-18	6.5
Lifetime MDMA Use	14-18	6.1
Lifetime Methamphetamine Use	14-18	4.3
Lifetime Steroid Use	14-18	2.9
Lifetime Heroin Use	14-18	2.5
Lifetime Injection Drug Use	14-18	2.2
Tobacco		
Daily Cigarette Use	14-18	4.8

Sources: NSDUH 2003-2004 for binge alcohol use; BRFSS 2005 for current heavy alcohol use; YRBS 2005 for illicit drugs and tobacco use.

In Hawaii, 7.2 % of our young adults are alcohol dependent, and 5.6% are dependent on illicit drugs (see Table 6). The substance dependence rates among people 12-17 years old, 18-25 years old, and 26 years and older represent a reverse U-shaped curve where rates are lower for the age cohorts at both ends. The rate of reduction in substance dependence after ages 18-25 is greater for illicit drugs (2.5) compared to alcohol (4.7).

Table 6. Percentage of People Dependent on Substances by Age, 2003-2004

Age	Alcohol	Illicit Drugs
12-17	2.9	2.7
18-25	7.2	5.6
26 and over	2.9	1.2

Source: NSDUH 2003-2004.

Smoking one or more packs of cigarettes per day is perceived as having great risk by over two thirds of those 12 years and older (see Table 7). However, only about one third of the same cohort believes smoking marijuana once a month or having five or more drinks of an alcoholic beverage once or twice a week is of great risk. The prevalence of risk perception for alcohol and marijuana for the three age cohorts (ages 12-17, 18-25, and 26 and over) represent a U-shaped curve, whereas the prevalence of risk perception for cigarette smoking tends to progress with age. The increase in risk perception between those who are 18-25 years and those 26 years and over is most noticeable for marijuana, followed by alcohol and cigarettes.

Table 7. Percentage of People Who Perceive “Great Risk” in the Use of ATOD by Age, 2003-2004

Age	Alcohol	Marijuana	Cigarettes
12-17	38.5	32.0	67.5
18-25	30.5	28.8	68.4
26 and over	38.3	41.2	73.1

Source: NSDUH 2003-2004.

ANALYTICAL FRAMEWORK AND DATA PROCESS

Hawaii's epidemiological profile focuses on ATOD-related *consequences* and *consumption* to provide an understanding of the nature and extent of substance use and its related problems in the Fiftieth State. It uses ATOD *constructs* to group and present information and *indicators* to monitor changes over time. The aforementioned terms are defined below:

- *Consequences*: adverse social, health, and safety consequences associated with alcohol, tobacco, or illicit drug use (e.g., deaths from illicit drug use)
- *Consumption*: use and high-risk use of alcohol, tobacco, and illicit drugs (e.g., current use of alcohol by persons aged 12 and older)
- *Constructs*: discrete ATOD-prevention categories (e.g., mortality, early initiation)
- *Indicators*: data measures to assess and quantify constructs (e.g., DUI arrest rate)

HAWAII ANALYTICAL FRAMEWORK

The model in Figure 2 (see next page) depicts the process that was used to identify potential focus areas to be presented to the SPF SIG State Advisory Council for decision making.

Our analysis began with a comprehensive review and screening of ATOD data sources and indicators, which were analyzed to derive a reduced set of indicators for priority assessment and a set of Hawaii-specific indicators for focus area assessment. Seven criteria were applied to determine the priority of the indicators. A smaller set of the highest-priority indicators was selected after considering both population-based data and information from the HDIN. A focus area for the SPF SIG initiative was then identified. Population subgroup analysis was conducted on the focus area using all available data, including the Hawaii-specific data. The process of indicator review, data collection, and methods of analysis are delineated in greater detail below.

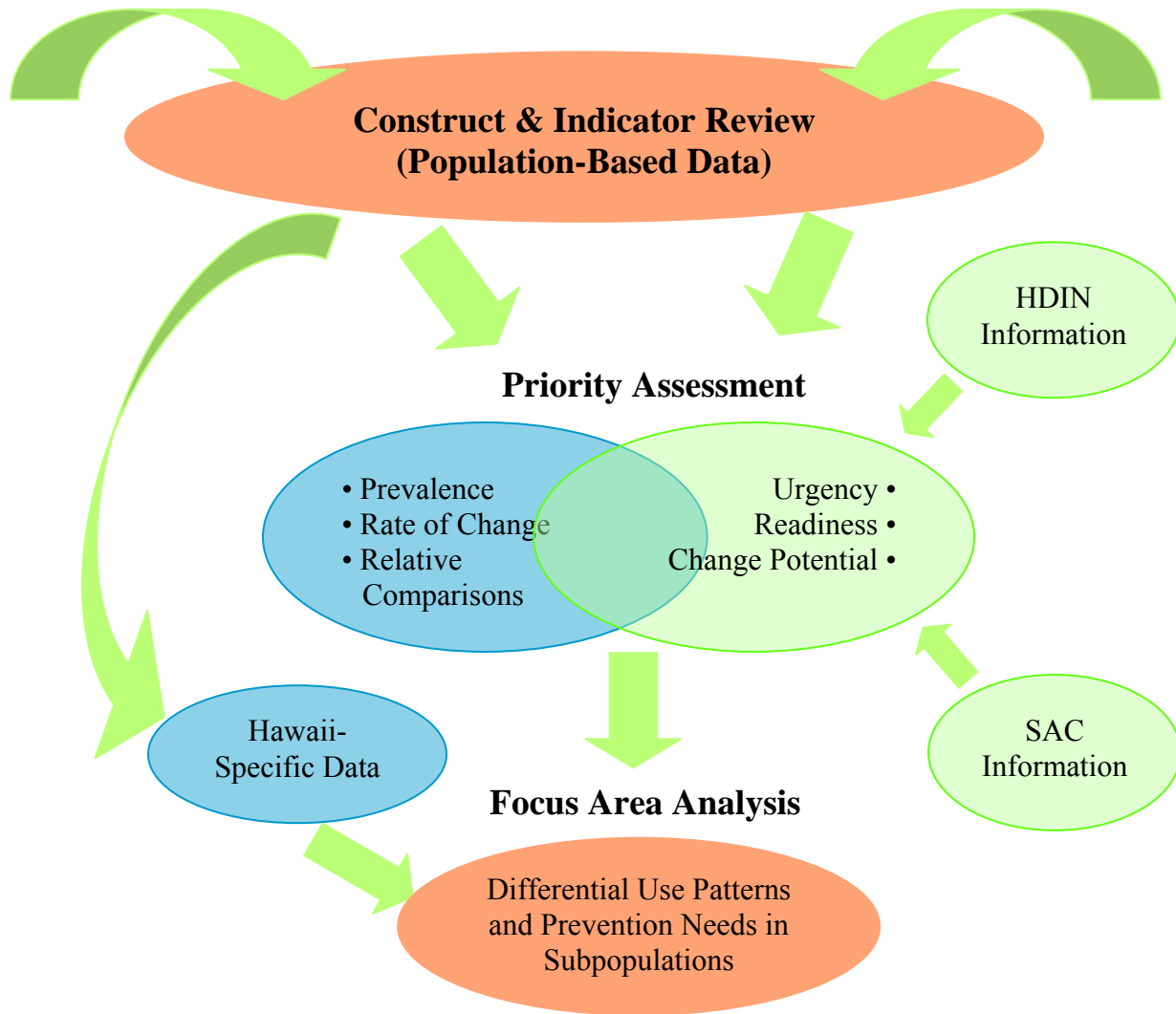


Figure 2. Hawaii Analytical Model

INDICATOR REVIEW AND DATA COLLECTION

Population-Based Data

The first step in the development of the Hawaii Epidemiological Profile consisted of identifying all of the sources that had ATOD-related constructs and indicators with national and Hawaii data or Hawaii-specific data, and collecting a comprehensive list of their relevant constructs and indicators. The constructs and indicators were categorized into two groups—consequences and consumption—within each of the three major substances: alcohol, tobacco, and other drugs. All acronyms and abbreviations used in this profile, including those for the data sets, documents, and agencies from which information was collected, are presented in Appendix B. A total of 29 national and state data sources were identified (see Appendix C), and 197 indicators (see Appendix D) were reviewed for inclusion in the priority assessment and focus area assessment.

The following criteria were used in the review process to determine the indicators to be selected or eliminated for priority assessment.

- *Availability*: data available and accessible at national, state, and, preferably, county-levels
- *Validity*: research-based evidence that the indicator accurately measures the specific construct and yields a true snapshot of the phenomenon at the time of assessment
- *Consistency*: method or means of collecting data relatively unchanged over time
- *Periodic collection*: data available for past three to five years, preferably on an annual or biennial basis
- *Sensitivity*: ability to detect changes over time that might be associated with ATOD use

This screening process yielded a smaller set of 46 indicators (see Appendix E), which were distributed among four *consequences* constructs—mortality (4), crime/public safety (4), antisocial behavior (2), and morbidity (4), and three *consumption* constructs—current use (21), lifetime use (8), and early initiation (3)—as depicted below (Figure 3).

Substance	Alcohol	Drugs	Tobacco
Domain	Consequences		Consumption
Construct (Number of Indicators)	Mortality (4)		Current Use (21)
	Crime/Public Safety (4)		Lifetime Use (8)
	Antisocial Behaviors (2)		Early Initiation (3)
	Morbidity (4)		

Figure 3. ATOD Domains and Constructs for Priority Assessment

For each of the 46 indicators, national and state (i.e., from all 50 states and the District of Columbia) trend data were collected from 1990 through 2005 whenever available. Refer to Appendix F for a list of data sources used and the years of data collected for priority assessment.

For the focus area assessment, Hawaii-specific data were included to augment our assessment beyond the common indicators available nationwide. The screening process placed emphasis on the data’s validity and sensitivity in assessing ATOD use within the context of Hawaii. A total of 66 indicators across various substances—34 for alcohol, 19 for illicit drugs, and 13 for tobacco—and constructs were selected (see Appendix G). Hawaii-specific indicators were also the sole source used for race/ethnic analysis because these were the only data available for each of the major Asian and Pacific Islander (API) subgroups in Hawaii. National indicators combined the various API subgroups into one racial category, which was not appropriate or helpful in deconstructing ATOD consequences and consumption in Hawaii.

Data for the 66 Hawaii-specific indicators were collected, but only those found to be related to the focus area were used in the assessment.

Information From HDIN

Members of the Hawaii Drug Information Network (HDIN) were used as the informants for the assessment.

First, HDIN members were asked to rate the importance of various criteria in assessing ATOD priority for the SPF SIG initiative (see Appendix H for rating form). A 10-point scale (1 = not important; 10 = extremely important) was used to rate seven criteria: prevalence, rate of change, seriousness compared to other states, severity, urgency, readiness for change, and change potential within five years. This was done to determine how individuals from various community agencies and groups regarded the criteria proposed by the COF analysis team for the priority assessment. Twelve HDIN members gave mean ratings ranging from 8.1 to 8.8 for six of the criteria, while seriousness received the lowest rating (6.2), which may indicate that the extent of the problem within the state had a higher importance value to the informants than the comparison

to other states. Most of the informants highly valued tangible outcomes, as their highest rating (8.8) went to change potential within five years. These scores, all of which were closer to the “extremely important” end of the scale, validated the use of the seven criteria in the priority analysis.

Since objective data were unavailable for the assessment of urgency, readiness for change, and change potential within five years, HDIN members were asked to provide their ratings on these criteria for various ATOD constructs. In addition, their subjective ratings on “severity” and the “overall” importance of each ATOD construct were also collected (see Appendix I for rating form). A 10-point scale, with 10 as the highest rating, was used. The information collected filled the data gap and provided validation for the outcome of priority assessment.

ASSESSMENT METHODS

Two levels of assessment were conducted, the first to determine the priority of indicators and second to identify specific problems and population subgroups for the SPF SIG focus area. For the priority assessment, each criterion was applied to the assessment of population-based data and HDIN information.

Priority Assessment

To systematically evaluate the priority of indicators for the SPF SIG initiative, we employed *three criteria* and *two approaches* to process the population-based data.

The criteria, operational definitions, and formula that were used in assessing the population-based data are presented below:

Prevalence: magnitude of the problem as indicated by the total number of cases adjusted for a standardized population (e.g., percentages, incidence rates, prevalence rates).

Since death and crime are rare events, they were given a heavier weight to highlight their serious consequences. At the Hawaii state level, rate was calculated at 100,000 population for mortality-related indicators, at 1,000 population for crime-related indicators, and at 100 population for other indicators.

Formula:

Prevalence = number of cases ÷ total population × weight

where

weight = 100,000 for mortality-related data, 1,000 for crime-related data, and 100 for other data

To keep the range of scale between >0 and ≤5, prevalence was recoded into ***prevalence scores*** as follows:

0.1 to 9.9 = 1, 10.0 to 19.9 = 2, 20.0 to 29.9 = 3, 30.0 to 39.9 = 4, and ≥40.0 = 5

Rate of change: extent a problem is increasing or decreasing between two points in time, which assists in identifying emerging or growing problems.

For the majority of indicators, changes were calculated at a four- to six-year interval with the latest data year as the second time point. Due to differences in data availability, a few indicators were calculated at a two-year interval. When data were only available for one point in time, the rate of change was set to 1, assuming no change. To generate more stable estimates, data at each time point represented a two- or three-year average whenever data allowed. This was done because of the relatively small numbers that were reported due to Hawaii's small population. A rate of change below 1 indicates "problem decreasing" and above 1 indicates "problem increasing."

Formula:

$$\text{Rate of Change} = (T_2 - T_1) \div T_1$$

Relative comparisons: comparison of Hawaii to standard references, including (a) comparison to other states' rates and (b) comparison to national rates.

The seriousness of the problem in Hawaii compared to other states was assessed by Hawaii state's stanine. First, the z-score was calculated for each of the 50 states and D.C., then Hawaii's z-score was converted into stanine (ranges 1 through 9, where 1 denotes $z \leq -1.75$ and 9 denotes $z > 1.75$). To reduce the range of scale, the Hawaii stanine was recoded into three categories: stanines 1 to 3 equal 1 (below average), stanines 4 to 6 equal 2 (average), and stanines 7 to 9 equal 3 (higher than average).

The second measure of seriousness used was the ratio of Hawaii's stanine to the U.S. stanine. This was obtained by first calculating the z-score for the U.S. using the state mean and its standard deviation, then dividing Hawaii's stanine. A ratio below 1 means lower and above 1 means higher than the national rate.

Formula:

$$\text{Relative Comparisons} = \text{recoded Hawaii's stanine} + \text{Hawaii-U.S. ratio}$$

Total score: using the scores derived from the aforementioned formulas, a *general formula* was applied to each indicator to yield a total score:

Formula:

$$\text{Total Score} = \text{prevalence score} \times \text{rate of change} \times \text{relative comparisons}$$

Two approaches were used to identify the group of indicators with the highest priorities. The “top-down” approach screened substance type to select two of the three substances with the highest priority scores for construct-level analysis, and then selected a set of five constructs and their indicators based on the total score of constructs. The “bottom-up” approach selected the top 5 among the 46 indicators to ensure no high-priority areas were inadvertently left out during the screening process in the “top-down” approach. Figure 4 illustrates the two data analysis approaches.

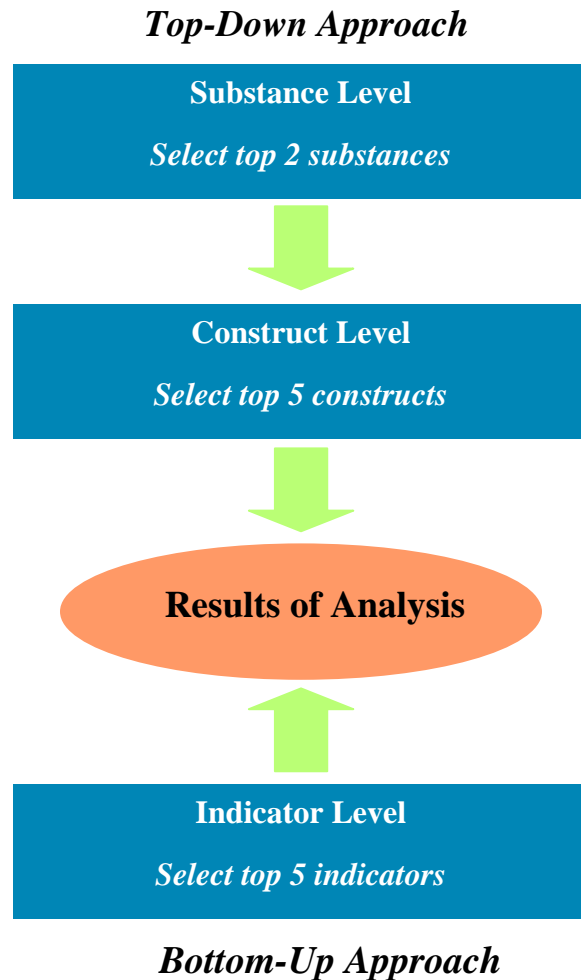


Figure 4. Two Approaches of Data Analysis

For the “top-down” approach, at the first level of analysis—substance type—the 46 indicators were examined to identify a balanced and comparable set of indicators for each of the three substances. This review resulted in the selection of nine indicators: one consequence and two consumption indicators for each of the ATOD substances (see Table 8). The total score for each substance type was calculated by adding together the scores of the three indicators within each substance.

Table 8. Indicators Selected for Substance Type-Level Analysis

Substance	Domain	Construct	Indicator
Alcohol	Consequences	Mortality	Alcohol-Related Death Rate
	Consumption	Age of initial use	Early Initiation of Alcohol Use by High School Students
		Current use	Current Use of Alcohol by Persons Aged 12 and Older
Illicit Drugs	Consequences	Mortality	Deaths From Illicit Drug Use
	Consumption	Age of initial use	Early Initiation of Marijuana Use by High School Students
		Current use	Current Use of Any Illicit Drug by Persons Aged 12 and Older
Tobacco	Consequences	Mortality	Deaths From Lung Cancer
	Consumption	Age of initial use	Early Initiation of Cigarette Use by High School Students
		Current use	Current Cigarette Smoking by Persons Aged 12 and Older

Sources: See Appendix E.

At the second level of analysis—construct—the 46 indicators were reviewed to select indicators that best represented each construct. Two composite indicators were created at the construct-level to summarize (1) alcohol-related deaths (chronic liver disease deaths and alcohol-related vehicle deaths) and (2) alcohol-related arrests (arrests due to DUI, liquor law violations, alcohol-related disorderly conduct, and public drunkenness). A total of 19 indicators were identified, each associated with a construct of a substance, except for the construct “current use” for all substances where two indicators were identified (see Table 9). The total score of a construct equals the total score of its indicator or the average score of the two indicators representing it.

For the “bottom-up” approach, the total score for each of the 46 indicators was calculated and compared.

The indicators scored from both “top-down” and “bottom-up” approaches were then re-examined using the following three criteria: urgency, readiness for change, and change potential. This analysis was conducted using data collected from HDIN members. The indicators that received the highest scores on the aforementioned criteria were selected as the focus area for the SPF SIG initiative.

The section on the Assessment of ATOD Consequences and Consumption presents the results of the priority analysis.

Table 9. Indicators Selected for Construct-Level Analysis

Substance	Domain	Construct	Indicator
Alcohol	Consequences	Antisocial behaviors	Drank on School Property by High School Students in Past 30 Days
		Crime/Public safety	Alcohol-Related Arrest Rate
		Morbidity	Alcohol Abuse or Dependence of Persons Aged 12 and Older
		Mortality	Alcohol-Related Death Rate
	Consumption	Age of initial use	Early Initiation of Alcohol Use by High School Students
		Current use	Current Binge Drinking by Persons Aged 12 and Older Current Heavy Use of Alcohol by Adults Aged 18 and Older
Illicit Drugs	Consequences	Antisocial behaviors	Offered/Sold/Given Illegal Drugs on School Property by High School Students in Past 12 Months
		Crime/Public safety	Drug-Related Arrest Rate
		Morbidity	Drug Abuse or Dependence of Persons Aged 12 and Older
		Mortality	Deaths From Illicit Drug Use
	Consumption	Age of initial use	Early Initiation of Marijuana Use by High School Students
		Current use	Current Use of Marijuana by Persons Aged 12 and Older
			Current Use of Illicit Drugs Other Than Marijuana by Persons Aged 12 and Older
		Lifetime use	Lifetime Use of Marijuana by High School Students
Tobacco	Consequences	Mortality	Deaths From Lung Cancer
	Consumption	Age of initial use	Early Initiation of Cigarette Use by High School Students
		Current use	Current Cigarette Smoking by Persons Aged 12 and Older
			Current Daily Use of Cigarettes Among Adults

Sources: See Appendix E.

Focus Area Assessment

Following the presentation of the results of our priority assessment is the identification of a possible focus area. In order to understand the differential use of substances within our state and to provide insights on the geographic areas and subpopulations that are most in need of prevention services, a detailed analysis was conducted on the selected focus area using the latest Hawaii-specific data with county and subpopulation (e.g., sex, age/grade, and ethnicity) information. To inform prevention decisions and develop strategies that yield the greatest impact, the analysis on the focus area consisted of the following: prevalence rates, consumption patterns of current users, access and perceptions of availability, and risk and protective factors.

See the section on Identification of SPF SIG Focus Area for a presentation of the results of the focus area analysis.

DATA LIMITATIONS AND GAPS

Like every data-based report, there are data limitations and gaps that should be taken into consideration when interpreting and using the information in this profile. One of the limitations relates to Hawaii's small population—approximately 1.3 million people—which has implications for the available data pool. Because of its small size, Hawaii is often left out of national surveys, or when it is included, the number of cases sampled is too small to yield meaningful data, particularly at the county level. As a result, most of the other states generally have a larger and more comprehensive pool of valid and reliable ATOD data to draw upon.

Small numbers also affect the accuracy, stability, and reliability of survey estimates, which has implications for the measurement of the underlying construct over time. We addressed the size problem in two ways: (a) survey data with small numbers (e.g., fewer than 20 cases) were not included in the analyses, and (b) multi-year averages were used to generate more stable estimates.

Generalizations on the findings from surveys based on youth and adult ATOD attitudes and behaviors should always be made with caution. It is possible that the respondents did not answer honestly or might have provided socially desirable responses. Standardized survey procedures, however, account for these possibilities by assurances that the identity of respondents would be kept confidential and by omitting cases where dishonesty was detected or suspected.

There are also areas of importance (e.g., ATOD abuse among pregnant women) for which data is lacking, only anecdotal data exist, or the data available did not meet specified criteria. Such information is, therefore, absent from the analyses and the prioritization of indicators that led to the identification of the Hawaii SPF SIG target area.

ASSESSMENT OF ATOD CONSEQUENCES AND CONSUMPTION

RESULTS OF PRIORITY ANALYSIS USING POPULATION-BASED DATA

This section presents the results of analyses using the “top-down” and “bottom-up” approaches to identify indicators with the highest priority scores based on three criteria: prevalence, rate of change, and relative comparisons. The methods and formulas used in assessing each criterion and the calculation of the total score are described in the section on Analytical Framework and Data Process.

Results From the “Top-Down” Approach

Using the “top-down” approach, the problems associated with ATOD at the *substance-type level* were analyzed first. The goal was to eliminate one substance type and focus further analyses at the construct level on the two substance types with the highest-priority scores. Table 10 presents the results of the substance-level analysis.

Table 10. Results of Substance-Level Analysis

Substance	Domain	Construct	Prevalence Score	Rate of Change	Relative Comparisons	Total Score
Alcohol	Consequences	Mortality	1.0	1.1	2.8	3.0
	Consumption	Age of initial use	1.0	0.8	3.2	2.6
		Current use	5.0	1.0	3.0	15.0
Alcohol Total*			7.0	2.9	9.0	20.6
Illicit Drugs	Consequences	Mortality	1.0	3.6	3.0	10.8
	Consumption	Age of initial use	1.0	0.8	4.4	3.7
		Current use	1.0	0.9	3.0	2.7
Illicit Drugs Total*			3.0	5.3	10.4	17.2
Tobacco	Consequences	Mortality	5.0	0.9	1.6	7.4
	Consumption	Age of initial use	1.0	1.0	3.3	3.3
		Current use	2.0	0.9	1.3	2.3
Tobacco Total*			8.0	2.9	6.1	13.0

* Total score for each substance is the sum of its constructs. Each construct is measured by one indicator at the substance-level analysis. See Table 8 for the list of indicators used.

Sources: See Appendix E.

The total scores, ranked from high to low, were alcohol (20.6), illicit drugs (17.2), and tobacco (13.0). Our assessment indicated that alcohol is the second-most serious problem in Hawaii in terms of size of population affected and the degree of seriousness relative to other states and the overall U.S. Compared to tobacco and other drugs, the current use of alcohol in Hawaii is not only at the highest level it has been in recent years but also showed no signs of decline.

The data analysis indicated illicit drug use affected the smallest group of people in Hawaii, but its degree of seriousness relative to other states and the nation as a whole is higher than the other two substances. The rate of increase in illicit drug deaths was very high in recent years, but it

should be noted that the actual number of deaths involved is very small (nine deaths in the year 2003).

Tobacco had the lowest total score in the substance-level analysis. Although the number of deaths attributed to tobacco is greater than those related to alcohol or illicit drugs, the overall problem of tobacco use is not as serious in Hawaii as it is in most states in the U.S.

Based on the overall results, alcohol and illicit drugs were selected for the *construct-level* analysis. The results of this analysis are presented in Table 11 below.

Table 11. Results of Construct-Level Analysis

Substance	Domain	Construct	Prevalence Score	Rate of Change	Relative Comparisons	Total Score	Rank
Alcohol	Consequences	Antisocial behaviors	1.0	1.1	5.3	6.0	2
		Crime/Public safety	1.0	1.0	1.6	1.6	
		Morbidity	1.0	1.0	3.0	2.9	
		Mortality	1.0	1.1	2.8	3.0	
	Consumption	Age of initial use	1.0	0.8	3.2	2.6	
		Current use*	1.5	1.0	3.9	5.3	3
Illicit Drugs	Consequences	Antisocial behaviors	1.0	0.9	4.6	4.1	4
		Crime/Public safety	1.0	0.9	1.3	1.2	
		Morbidity	1.0	1.0	2.8	2.9	
		Mortality	1.0	3.6	3.0	10.8	1
	Consumption	Age of initial use	1.0	0.8	4.4	3.7	5
		Current use*	1.0	0.9	2.1	1.9	
		Lifetime use	1.0	0.8	2.8	2.2	

* The measure of current use for the construct-level analysis was different from that for the substance-level analysis. See Table 9 for the list of indicators used.

Sources: See Appendix E.

The top five constructs based on total score were mortality due to illicit drug use (10.8), antisocial behaviors relating to alcohol use (6.0), current use of alcohol (5.3), antisocial behaviors relating to illicit drug use (4.1), and age of initial drug use (3.7).

The results of the data analysis showed that illicit drug deaths had the highest-priority score primarily due to the high rate of change, but the size of population affected was small (nine deaths in 2003). On the other hand, early initial drug use and drug-related antisocial behaviors declined in recent years, but remained serious problems relative to other states and the overall U.S.

The current use of alcohol (including heavy drinking and binge drinking) affected the largest number of people in Hawaii. The problem is getting worse, as indicated by the increasing trend in alcohol-related deaths and antisocial behaviors. Some dimensions of the alcohol problem, such as antisocial behaviors, early initial use, and current use, are more serious in Hawaii than in other states.

Results From the “Bottom-Up” Approach

The “bottom-up” approach was then utilized to conduct an analysis at the *indicator level*. Each of the previously screened 46 indicators was assessed using the same criteria: size of population affected, rate of change, and relative seriousness compared to other states and the overall U.S. This analysis was conducted to prevent any significant indicators from being inadvertently screened out in the “top-down” approach. Indicators selected from both approaches were expected to have high degrees of similarities.

The five indicators with the highest total scores were identified and are presented in Table 12. The results of analysis for all 46 indicators are shown in Appendix J.

Table 12. Top Five Indicators From Indicator-Level Analysis

Substance	Indicator	Prevalence Score	Rate of Change	Relative Comparisons	Total Score	Rank
Alcohol	Current Use of Alcohol by Persons Aged 12 and Older	5.0	1.0	3.0	15.0	1
Alcohol	Current Use of Alcohol by Persons Aged 18 and Older	4.0	1.1	3.0	12.9	2
Illicit Drugs	Deaths From Illicit Drug Use	1.0	3.6	3.0	10.8	3
Alcohol	Current Binge Drinking by Adults Aged 18 and Older	2.0	1.2	3.2	7.8	4
Tobacco	Deaths From Lung Cancer	5.0	0.9	1.6	7.4	5

Sources: See Appendix E.

Of the top five indicators, three were related to alcohol and one each was associated with illicit drugs and tobacco. The use of alcohol by teenagers and adults affected the largest number of people in Hawaii, with binge drinking being an especially serious problem compared to other states and the nation as a whole. Deaths from illicit drug use was once again one of the top-ranked indicators. The lung cancer death rate was the only tobacco indicator that had a high score, and this was mainly due to its high prevalence score. However, results from the data analysis indicated that the lung cancer death rate is declining over time and that it is less of a problem in Hawaii than in other states.

Results From the “Top-Down” and “Bottom-Up” Approaches

Both the “top-down” and “bottom-up” approaches identified five indicators with the highest total scores. The 10 indicators were placed on the high priority short list (see Table 13). Six of the ten high priority indicators were alcohol related, three concerned illicit drug use, and two were tobacco related. Six of the ten indicators were associated with consumption, while four were related to consequences. Five indicators focused on the current use of alcohol, of which two were selected from the “top-down” approach. Data for these five indicators came from two different national representative surveys, and both identified alcohol use and binge drinking as problematic in Hawaii. When data for a younger cohort were available, they showed that alcohol use was a problem and prevalent among teenagers. This was supported by the high priority score received for the consequence indicator “drank on school property by high school students.”

In addition to the use of alcohol among high school students, the problem of illicit drug use among these students—early initiation of marijuana use and access to drugs on school property—was also identified as high priority in the analysis. The remaining two indicators on the priority short list concerned mortality rates, one related to illicit drug use and another to tobacco use.

Table 13. Summary of the Population-Based Data Assessment

Substance	Domain	Construct	Indicator	“Top-Down” Rank	“Bottom-Up” Rank
Alcohol	Consumption	Current use	Current Use of Alcohol by Persons Aged 12 and Older		1
			Current Use of Alcohol by Persons Aged 18 and Older		3
			Current Binge Drinking by Persons Aged 12 and Older	3	
			Current Binge Drinking by Adults Aged 18 and Older		4
			Current Heavy Use of Alcohol by Adults Aged 18 and Older	3	
	Consequences	Antisocial behaviors	Drank on School Property by High School Students in Past 30 Days	2	
Illicit Drugs	Consumption	Age of initial use	Early Initiation of Marijuana Use by High School Students	5	
	Consequences	Antisocial behaviors	Offered/Sold/Given Illegal Drugs on School Property by High School Students in Past 12 Months	4	
		Mortality	Deaths From Illicit Drug Use	1	2
Tobacco	Consequences	Mortality	Deaths From Lung Cancer		5

Sources: See Table 11 and Table 12.

To present an overall view of the top ten ATOD indicators in terms of their impact in the State of Hawaii, their prevalence rates and estimated number of people affected are presented in Table 14. As the data in the table indicate, over 520,000 people are current alcohol users in our state, over 160,000 people have drunk five or more drinks on at least one occasion within the past 30 days (i.e., binge drinking), and over 72,000 people are heavy users of alcohol (i.e., more than one drink daily for women; more than two drinks daily for men). Alcohol and illicit drugs are also present in the lives of Hawaii's young people: About 6,000 students are estimated to have used alcohol on school property in the past 30 days; over 22,000 students were offered, sold, or given illegal drugs on school property over a year's period; and over 8,000 students used marijuana before the age of 13. The impact of long-term, chronic cigarette smoking is reflected in lung cancer deaths—508 in the year 2003. In the same year, nine people died from illicit drug use. Appendix K provides the prevalence and estimated number of people affected, with state mean and overall U.S. values which can be used as benchmarks for each of the 46 indicators examined in this profile.

Table 14. Prevalence Rates and Estimated Number of People Affected for the Top Ten Indicators

Construct	Indicator	Year	HI	Estimated Number of People Affected
Alcohol				
Antisocial behaviors	Drank on School Property by High School Students in Past 30 Days	2005	8.8	5,951
Current use	Current Use of Alcohol by Persons Aged 12 and Older	2004	48.9	520,204
Current use	Current Use of Alcohol by Persons Aged 18 and Older	2005	51.4	501,326
Current use	Current Binge Drinking by Persons Aged 12 and Older	2004	22.8	243,117
Current use	Current Binge Drinking by Adults Aged 18 and Older	2005	16.5	160,931
Current use	Current Heavy Use of Alcohol by Adults Aged 18 and Older	2005	7.4	72,175
Illicit Drugs				
Antisocial behaviors	Offered/Sold/Given Illegal Drugs on School Property by High School Students in Past 12 Months	2005	32.7	22,114
Mortality	Deaths From Illicit Drug Use	2003	0.7	9
Age of initial use	Early Initiation of Marijuana Use by High School Students	2005	12.5	8,453
Tobacco				
Mortality	Deaths From Lung Cancer	2003	40.7	508

Sources: Prevalence rates—see Appendix E; population sizes—NCHS, Bridged-race Vintage 2005 postcensal population estimates for July 1, 2000 - July 1, 2005, by year, county, single-year of age, bridged-race, Hispanic origin, and sex.

DATA FROM HDIN MEMBERS

The results of the priority analysis based on population-based data are in close agreement with the information from HDIN members. The summary of members' ratings on severity, urgency, readiness for change, and change potential within five years, and an overall rating on 16 substance constructs, are presented in Table 15 below.

Table 15. Mean Ratings on ATOD Constructs by HDIN Members

Substance	Domain	Construct	Mean Rating				
			Severity	Urgency	Readiness for Change	Change Potential	Overall Rating
Alcohol	Consumption	Age of initial use	7.9	7.8	6.3	6.7	7.0
		Current use	8.2	7.3	6.0	5.5	6.9
	Consequences	Antisocial behaviors	6.1	5.9	6.6	5.9	5.8
		Crime/Public safety	7.2	7.2	6.2	5.9	6.3
		Morbidity	6.4	6.2	5.5	5.2	6.0
		Mortality	6.6	6.7	5.7	4.9	4.6
Alcohol Mean Ratings			7.1	6.8	6.0	5.7	6.1
Illicit Drugs	Consumption	Age of initial use	7.4	7.5	6.1	6.5	6.6
		Current use	7.3	7.3	5.8	6.5	6.5
		Lifetime use	6.0	5.9	5.3	5.5	5.3
	Consequences	Antisocial behaviors	6.9	6.8	6.3	6.4	6.3
		Crime/Public safety	7.2	7.1	6.3	6.0	6.6
		Morbidity	7.1	7.2	6.1	6.1	6.1
		Mortality	6.9	6.5	5.5	5.5	5.5
Illicit Drugs Mean Ratings			7.0	6.9	5.9	6.1	6.1
Tobacco	Consumption	Age of initial use	6.6	6.3	7.1	7.1	5.8
		Current use	6.7	6.1	6.5	6.7	5.8
	Consequences	Mortality	7.4	6.7	6.3	5.7	5.5
Tobacco Mean Ratings			6.9	6.4	6.6	6.5	5.7

The subjective ratings provided by HDIN members on “severity” indicated that age of initial use and current use of alcohol, age of initial drug use, and mortality based on tobacco-related deaths were considered the most extreme, intense, and acute problems in Hawaii. Seven of the ten indicators with the highest-priority scores fell into these constructs.

The highest ratings for urgency or needing immediate action were given to early initial use and current use of alcohol and illicit drugs. When evaluated on readiness for change in terms of funds, services, leadership, and public acknowledgement of problem, HDIN members highly

rated two tobacco-related constructs (age of initial use and current use) and one alcohol-related construct (antisocial behaviors). For change potential in the next five years, the highest ratings were given to age of initial tobacco use, current tobacco use, and age of initial alcohol use.

Although the constructs of tobacco consumption scored high on readiness and potential for change, HDIN members generally did not think these problems were as severe and urgent as other ATOD problems in Hawaii. Among the three substances, tobacco received the lowest mean scores on the overall rating.

HDIN members gave the highest overall scores to age of initial alcohol use and current alcohol use, and thought that these two areas were most severe and most in need of immediate action. They also believed that in the area of early initial use of alcohol, Hawaii is ready and has great potential to improve within the next five years.

DATA FROM SAC MEMBERS

On January 23, 2008, 10 of the 15 State Advisory Council (SAC) members (see Appendix L for membership) were asked by the State Epidemiology Workgroup (SEW) to go through a similar rating process to the HDIN workgroup. This consisted of: (1) rating the importance of selection criteria used for ranking and (2) rating the importance of each substance – domain – construct named in the “Hawaii Epidemiological Profile for Substance Abuse Prevention, Spring 2007” (Epi Profile). The purpose of this was to obtain input from the SAC and add it to the existing sources of information already collected (the data driven section of the Epi Profile and the ratings HDIN workgroup) in order to make an informed decision on the focus area of the SPF SIG.

First, SAC members were asked to rate the importance of various criteria in assessing ATOD priority for the SPF SIG initiative (see Appendix H for rating form). As can be seen in Table 16 below, the SAC deemed all of the selection criteria as important (mean >5 on a 10 point scale) with all but one (seriousness compared to other states) receiving a rating of >7.

Table 16. Mean Criteria Rating by SAC Members

Criteria	SAC Ratings	
	Mean	St. Dev.
Prevalence: <i>total number of cases adjusted for standardized population</i>	7.7	1.42
Rate of change: <i>extent problem is increasing or decreasing over 2 points in time</i>	7.4	1.08
Seriousness compared to other states: <i>comparison to other states' rates</i>	5.5	1.50
Severity: <i>extreme, intense, acute</i>	8.6	0.96
Urgency: <i>need for immediate action</i>	7.6	1.96
Readiness for change: <i>funds, services, leadership, public acknowledgement of problem</i>	7.2	1.72
Change potential: <i>possible to achieve in 5 years</i>	7.4	1.48

Since objective data were unavailable for the assessment of severity, urgency, readiness for change, and change potential within five years, SAC members were asked to provide their ratings on these criteria for various ATOD constructs. In addition, their subjective ratings on the

“overall” importance of each ATOD construct were also collected (see Appendix I for rating form). A 10-point scale, with 10 as the highest rating, was used.

Table 17 reveals that the SAC evaluated all constructs to be important with a relatively narrow range of scores (from 7.2-8.8 on a scale of 1-10). The following constructs for the three substances fell within the top four rankings: alcohol – crime/public safety, current use; illicit drugs – antisocial behaviors, crime/public safety; and tobacco – age of initial use, current use. However, the SEW cautions against over-interpreting these differences.

Table 17. Mean Ratings on ATOD Constructs by SAC Members

Substance	Domain	Construct	Mean Rating				
			Severity	Urgency	Readiness for Change	Change Potential	Overall Rating
Alcohol	Consumption	Age of initial use	7.8	7.7	6.7	7.6	7.6
		Current use	7.9	8.0	6.7	7.9	8.4
	Consequences	Antisocial behaviors	7.2	7.5	6.5	7.9	8.1
		Crime/Public safety	8.0	8.1	7.4	8.0	8.6
		Morbidity	7.5	7.4	6.5	6.8	7.5
		Mortality	8.0	7.9	6.6	7.5	8.0
Alcohol Mean Ratings			7.7	7.8	6.7	7.6	8.0
Illicit Drugs	Consumption	Age of initial use	7.6	7.5	6.8	7.6	7.8
		Current use	7.6	7.7	6.7	7.7	7.8
		Lifetime use	7.8	7.9	6.5	6.9	8.2
	Consequences	Antisocial behaviors	8.5	8.4	7.0	7.7	8.4
		Crime/Public safety	8.2	8.7	7.3	7.8	8.6
		Morbidity	7.4	7.3	6.3	6.4	7.3
		Mortality	7.5	7.4	6.2	6.6	7.2
Illicit Drugs Mean Ratings			7.8	7.8	6.7	7.2	7.9
Tobacco	Consumption	Age of initial use	8.0	8.0	7.5	8.1	8.8
		Current use	7.4	7.3	7.0	7.5	8.4
	Consequences	Mortality	7.5	7.3	7.1	7.4	7.8
Tobacco Mean Ratings			7.6	7.5	7.2	7.7	8.3

Based on the information provided by the SAC, there is no specific construct that can be singled out as the priority, or conversely, that should not receive any attention. This unexpected result neither validates nor rejects the findings of data analyses based on population-based data and information from HDIN. In conclusion, SAC members generally felt that it was important to prevent all substances from being abused.

SPF SIG RECOMMENDED FOCUS AREA WITHIN HAWAII CONTEXT

In general, the results of the analyses of population-based data from national and state sources and information from HDIN and SAC members lead to this recommendation:

Hawaii SPF SIG should focus on the reduction and prevention of underage alcohol consumption for youth 12-17 years old.

Reducing consumption, such as increasing the age of initial use of alcohol and reducing the current use of alcohol, should lead to a reduction in negative consequences, such as antisocial behaviors related to alcohol use.

Understanding the differential alcohol use patterns within our state can provide insights regarding the communities (defined as counties) and subpopulations that are most in need of prevention resources and services. The information below on alcohol consumption, current alcohol users, access to alcohol and perceptions of availability, and risk and protective factors can be used to inform prevention decisions and develop strategies that yield the greatest impact. Because the recommended SPF SIG target area is underage drinking, the following data focus on children and youth.

ALCOHOL CONSUMPTION

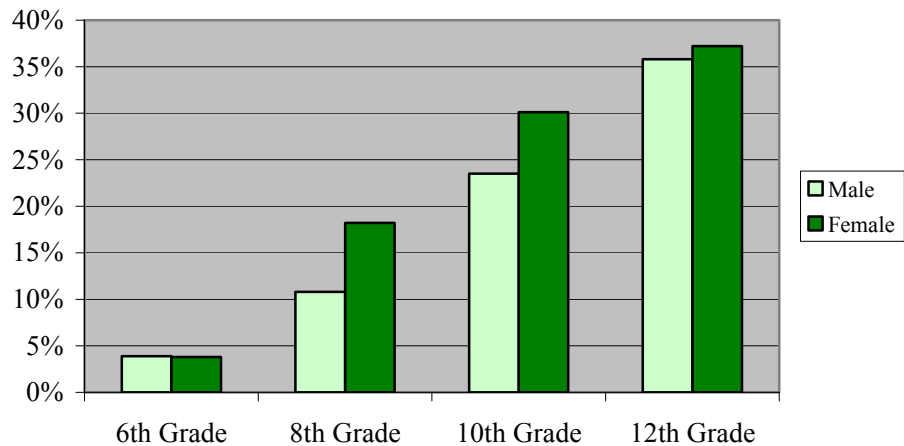
Although it is illegal to use alcohol before 21 years of age in Hawaii, a significant number of young people do so. The latest Hawaii Student Alcohol, Tobacco, and Other Drug Use Study (ATOD 2003), to which approximately 25,000 public and private school students responded, indicated that 20.2% of 6th- to 12th-grade students are alcohol users. It also indicated that alcohol use increases through the school years: 3.9% of 6th-grade students had used alcohol in the past 30 days, and that percentage rose to 14.7% in the 8th grade, 27.1% in the 10th grade, and 36.3% in the 12th grade (Table 16). The rates of increase are greatest from 7th to 8th grade (2.0) and from 6th to 7th grade (1.9).

Table 18. Monthly (30-Day) Use of Alcohol Among Intermediate and High School Students by Grade, Race, and County, 2003

Demographic Characteristics	State %	County %			
		Maui	Kauai	Hawaii	Honolulu
All 6th to 12th Graders	20.2	23.1	19.0	27.9	18.1
Grade					
6th Grade	3.9	4.3	6.6	6.2	3.1
7th Grade	7.4	7.3	7.4	9.0	6.9
8th Grade	14.7	16.3	19.4	17.1	13.2
9th Grade	19.2	21.7	20.9	27.9	16.7
10th Grade	27.1	30.7	25.8	35.7	24.9
11th Grade	32.3	37.8	26.2	44.5	28.8
12th Grade	36.3	42.5	26.2	49.8	33.0
Ethnicity					
Chinese	11.6	18.5	5.3	11.3	11.6
Filipino	17.9	18.4	14.3	24.1	17.3
Japanese	13.7	15.8	16.0	20.1	12.3
Hawaiian	25.6	25.1	22.0	33.6	23.7
White	24.4	26.8	22.6	29.1	21.6
Other	19.0	24.5	25.2	27.7	17.3
Multi-Racial	26.8	28.2	23.1	31.8	25.1

Source: Hawaii State Department of Health. 2003 Student ATOD Survey.

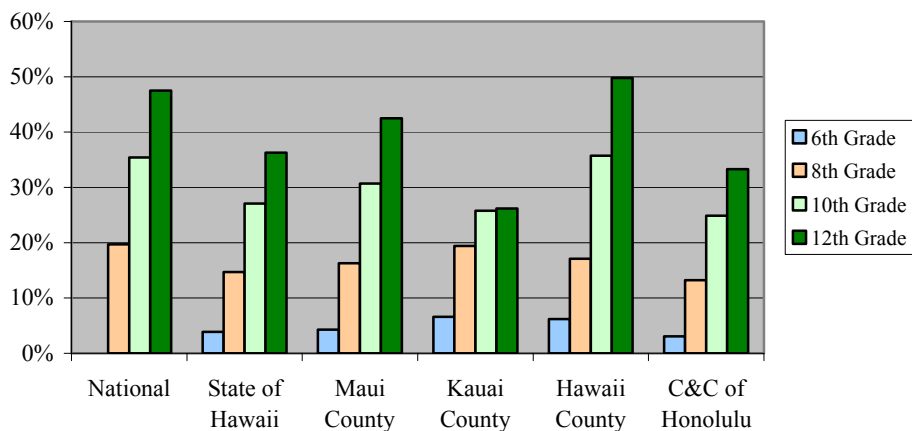
There are geographic, gender, and ethnic differences in the use of alcohol in Hawaii. As Table 16 indicates, the 30-day prevalence rates among students are generally highest in Hawaii County (27.9%), followed by Maui County (23.1%), Kauai County (19.0%), and the City and County of Honolulu (18.1%). Figure 5 shows that gender difference varies by grade. In the 6th and 12th grades, boys and girls reported similar 30-day prevalence rates (3.9% vs. 3.8% and 35.8% vs. 37.2% respectively). The gender gap is greatest among 8th-grade students (10.8 % vs. 18.2%), followed by 10th-grade students (23.5% vs. 30.1%). Note that these are self reports and that there may be gender differences in disclosing use.



Source: Hawaii State Department of Health. 2003 Student ATOD Survey.

Figure 5. Gender Differences by Grade in Monthly (30-Day) Use of Alcohol Among Intermediate and High School Students, 2003

In terms of ethnic differences, students of multi-racial, Hawaiian, and white ethnic backgrounds tend to have higher 30-day prevalence rates than students of other ethnicities. The tendency of the prevalence rate to increase at higher grade levels is found in all counties (see Figure 6). Students of all grades in Hawaii and Maui Counties reported 30-day prevalence rates higher than the state average. However, the prevalence rates of 6th- and 8th-grade students are the highest in Kauai County, where the rates are 1.7 and 1.3 times higher than the state averages respectively. Except those two grades, the highest prevalence rates for other grades are found in Hawaii County.



Source: Hawaii State Department of Health. 2003 Student ATOD Survey.

Figure 6. Monthly (30-Day) Prevalence of Alcohol Use Among Intermediate and High School Students by Grade and County, 2003

As found at the state level, multi-racial, Hawaiian, and white students in all four counties consistently have higher prevalence rates than students of other ethnic categories (Table 16). Compared to the overall state prevalence, students of Asian ancestries (Filipino, Japanese, and Chinese) in each county tend to have lower prevalence rates, except for those of Filipino and Japanese students in Hawaii County, which are higher than or similar to the overall state rate (24.1% and 20.1% versus 20.2%).

Age at Initial Use

When did intermediate and high school students who reported using alcohol in the past 30 days start using alcohol for the first time? Table 17 presents the average age at first alcohol use among current users. At the state level, the average age of first use is 12.2 years. Male students and Hawaiian and multi-racial student users started using alcohol at younger ages (12.1, 11.8, and 11.7 years respectively).

At the county level, current users in Kauai, Hawaii, and Maui Counties began their use at younger ages (11.9, 12.0, and 12.1 years respectively) than student users in Honolulu City and County. In Honolulu there is no gender difference in the age at initial use among student users, but males tended to start earlier than females in the other three counties.

As at the state level, multi-racial and Hawaiian students begin using alcohol earlier than other student users in all four counties. In addition, other early starters include white users in Maui County, those who identified their ethnicity as “other” in Kauai, and those of Filipino and Chinese ancestries in Hawaii County.

Table 19. Mean Age at First Use of Alcohol Among Intermediate and High School Current Users by Sex, Ethnicity, and County, 2003

Demographic Characteristics	State	County			
		Maui	Kauai	Hawaii	Honolulu
All 6th- to 12th-Grade Current Users	12.2	12.1	11.9	12.0	12.3
Sex					
Male	12.1	12.0	11.9	11.9	12.3
Female	12.2	12.2	12.1	12.1	12.3
Ethnicity					
Chinese	12.7	12.6	14.0	11.6	12.7
Filipino	12.3	12.6	12.1	11.8	12.4
Japanese	12.6	12.6	12.2	12.3	12.7
Hawaiian	11.8	11.9	11.3	11.7	11.8
White	12.3	11.8	12.5	12.4	12.4
Other	12.2	12.4	11.7	12.3	12.2
Multi-Racial	11.7	11.9	11.2	11.1	12.0

Source: Hawaii State Department of Health. 2003 Student ATOD Survey.

CURRENT ALCOHOL USERS

What are the main behavioral characteristics of Hawaii's underage alcohol users? As indicated by the 2003 ATOD survey (Table 18), 9.1% of intermediate and high school student users drink on a daily basis, and as many as two thirds of them drink regularly (at least once or twice a month). Almost 40.0% of these students have been drunk or high at school at least once in the past year. The average ages at first drunkenness and starting to drink regularly are 13.5 and 14.1 years respectively. There are no significant gender differences except that higher percentages of male student users than females use alcohol daily and get drunk at school.

Table 20. Use Patterns of Current Users in Intermediate and High School by Sex and County, 2003

Behavior Characteristics	State %	County %			
		Maui	Kauai	Hawaii	Honolulu
All 6th- to 12th-Grade Current Users					
Daily use of any alcohol	9.1	9.8	7.6	10.6	8.5
Drink regularly	66.5	68.4	68.8	72.4	63.8
Been drunk or high at school	39.0	39.9	37.7	44.5	36.7
Mean age at first drunkenness	13.5	13.4	13.3	13.4	13.6
Mean age at starting to drink regularly	14.1	14.1	14.1	14.1	14.2
Male					
Daily use of any alcohol	10.3	11.6	10.7	10.1	9.9
Drink regularly	66.4	68.8	72.8	74.4	62.6
Been drunk or high at school	40.9	40.2	39.3	46.5	39.1
Mean age at first drunkenness	13.5	13.2	13.0	13.2	13.7
Mean age at starting to drink regularly	14.2	14.1	14.1	14.1	14.4
Female					
Daily use of any alcohol	7.9	8.6	5.0	10.5	7.2
Drink regularly	66.7	68.5	64.7	71.5	64.7
Been drunk or high at school	37.2	40.4	35.5	43.3	33.8
Mean age at first drunkenness	13.5	13.5	13.4	13.6	13.5
Mean age at starting to drink regularly	14.1	14.1	14.0	14.0	14.1

Source: Hawaii State Department of Health. 2003 Student ATOD Survey.

The percentages of daily use, drinking regularly, and being drunk or high at school mirror the county differences found in the 30-day prevalence rates. That is, Hawaii County tends to have the highest percentages, followed by Maui County, Kauai County, and lastly Honolulu City and County. On average, student users in Honolulu City and County first got drunk or high and first started drinking regularly at older ages compared to their counterparts in other counties

At the county level, male students were also more likely than female students to report daily use of alcohol, except for Hawaii County. The percentage of daily use is 2.1 times higher for males

than females in Kauai County and 1.4 times higher in Maui County and Honolulu City and County. Kauai's male users are also more likely than females to drink regularly (72.8% vs. 64.7%). Except in Maui County, male users are, as at the state level, 1.1~1.2 times more likely to get drunk or high at school than females.

Alcohol Dependence/Abuse Among Current Users

Among Hawaii students who reported using alcohol in the past 30 days, 18.9% are dependent on alcohol and 4.7% abuse alcohol (Table 19). Female student users are 1.3 times more likely to be dependent on alcohol than males. Alcohol dependence is highest in Maui County (20.9%), followed by Hawaii County (20.8%), Honolulu City and County (18.0%), and Kauai County (17.5%).

As at the state level, the percentages of female student users who reported being dependent on alcohol are higher than the percentages of males in all four counties (1.3~1.4 times higher). With regard to alcohol abuse among current users, there is no gender difference at the state level and in the City and County of Honolulu, and only a slight difference in Hawaii County. However, Kauai's male users and Maui's female users are 1.7 and 1.2 times, respectively, more likely than their counterparts to abuse alcohol.

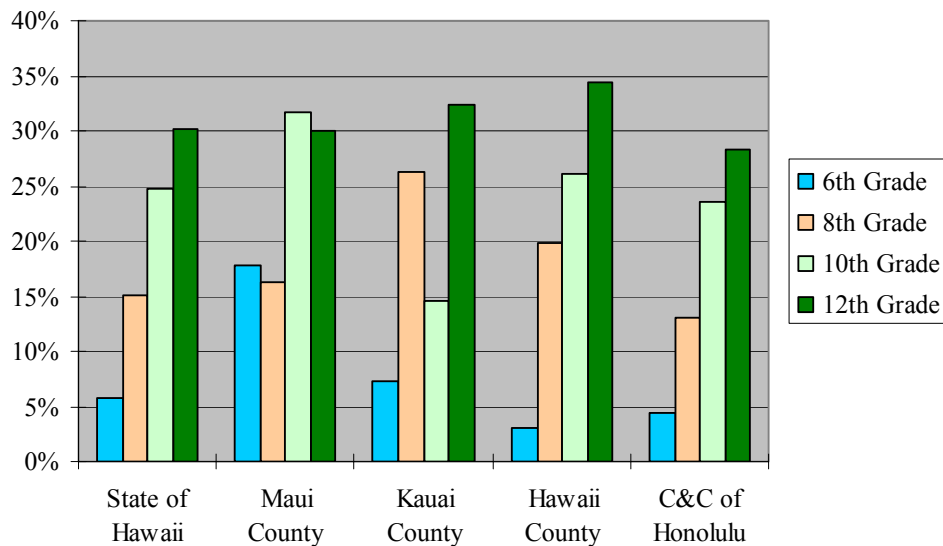
Table 21. Alcohol Dependence/Abuse Among Intermediate and High School Student Users by Sex and County, 2003

Behavior Characteristics	State %	County %			
		Maui	Kauai	Hawaii	Honolulu
All 6th- to 12th-Grade Current Users					
Alcohol dependency	18.9	20.9	17.5	20.8	18.0
Alcohol abuse	4.7	6.8	4.8	6.6	3.6
Alcohol abuse/dependency	23.8	28.1	22.5	27.6	21.8
Male					
Alcohol dependency	16.0	16.9	13.5	17.4	15.3
Alcohol abuse	4.7	5.6	6.8	7.3	3.5
Alcohol abuse/dependency	20.9	22.8	20.3	24.9	18.9
Female					
Alcohol dependency	20.6	24.1	17.6	23.0	19.4
Alcohol abuse	4.6	6.7	4.1	6.6	3.4
Alcohol abuse/dependency	25.5	31.3	22.1	29.8	23.1

Source: Hawaii State Department of Health. 2003 Student ATOD Survey.

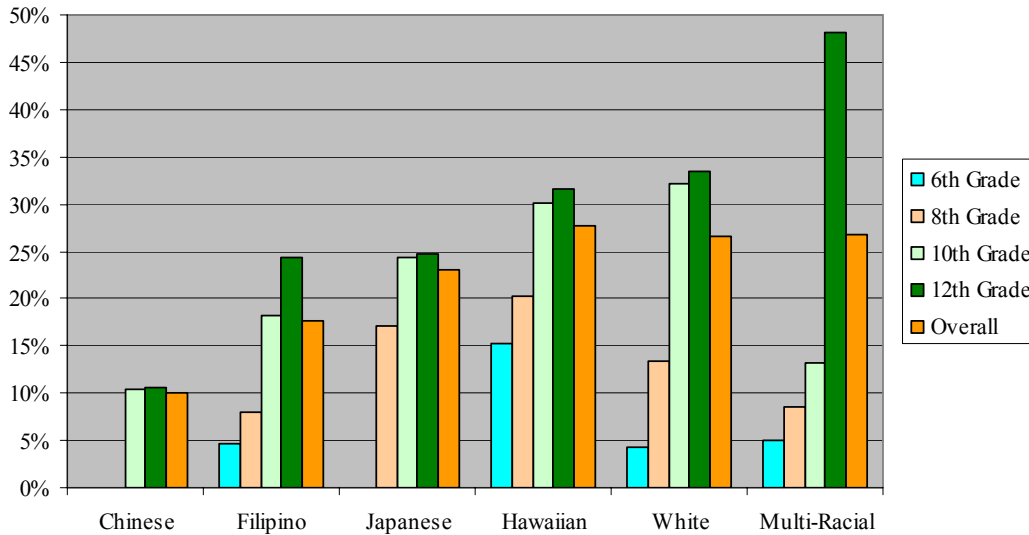
Given that usage prevalence increases with school grade, it is not surprising that alcohol dependence and abuse among current users also increase by grade. As Figure 7 indicates, statewide dependence and abuse more than double from the 6th to 8th grades (5.8% to 15.8%), increase more than 50% from the 8th grade to the 10th grade (24.8%), and rise to 30.2% in the 12th grade for alcohol users. Compared to alcohol users in other grades, high school seniors in Hawaii County, Kauai County and Honolulu City and County and sophomores in Maui County reported the highest levels of dependence/abuse (34.4%, 32.4%, 28.4%, and 31.7% respectively).

The level of alcohol abuse or dependence among current users also varies by ethnicity. The overall percentages of Hawaiian (27.7%), multi-racial (26.8%), and white (26.6%) student users reporting alcohol abuse or dependence are higher in comparison with those of Chinese, Filipino, or Japanese ancestries (10.0%, 17.7% and 23.1% respectively). The percentage for multiracial students in the 12th grade is especially high.



Source: Hawaii State Department of Health. 2003 Student ATOD Survey.

Figure 7. Percentage of Current Alcohol Users Reporting Alcohol Abuse or Dependence by Grade and County, 2003



Source: Hawaii State Department of Health. 2003 Student ATOD Survey.

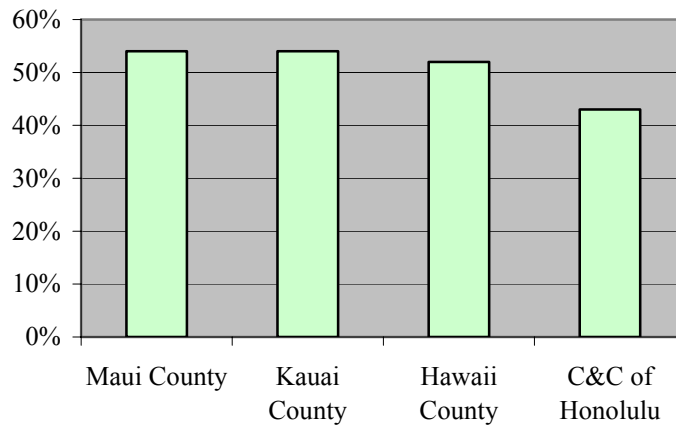
Figure 8. Percentage of Current Alcohol Users Reporting Alcohol Abuse or Dependence by Grade and Ethnicity, 2003

PERCEPTIONS OF AVAILABILITY AND ACCESS TO ALCOHOL

Perceptions of Availability

Children and youth are able to obtain alcoholic beverages from retail establishments, family members, friends, and even strangers. Substantial percentages of students reported it is “very easy” or “fairly easy” to get alcohol, and the percentages increase with age: 6th grade – 19.5%; 8th grade – 47.4%; 10th grade – 72.3%; and 12th grade – 81.7% (2003 ATOD Survey).

Adults are also aware that there are few barriers keeping alcohol away from children and youth. A Center on the Family survey of over 3,500 households in Hawaii indicated that more than 40.0% of adults in the City and County of Honolulu and more than 50.0% of the adults in Hawaii, Kauai, and Maui Counties believe it is “not at all difficult” for children to obtain alcohol (see Figure 9).



Source: Center on the Family, 2005-2006 Household Drug Survey.

Figure 9. Adult Perception That It Is "Not at All Difficult" for Children to Obtain Alcohol, 2005-2006

Access to Alcohol

Although it is against the law to sell alcoholic beverages to underage individuals, sales continue to be made. The 2005 Survey of Retailed Alcohol Sales to Underage Persons in Hawaii indicated that 16.7% of attempts to purchase alcohol by an underage person was successful. More than 40.0% of the sales to underage buyers was made without requesting buyers' identification or age.

Where do young people purchase their alcohol? Table 20 presents student reports relating to their purchases at stores, bars, and restaurants.

Table 22. Student Reports on Sites of Alcohol Purchases by Grade, 2003

Site of Purchase	6th Grade %	8th Grade %	10th Grade %	12th Grade %
A store	0.3	2.2	5.1	10.1
A bar	0.3	2.0	3.9	7.8
A restaurant	0.4	2.4	3.8	6.2

Source: Hawaii State Department of Health. 2003 Student ATOD Survey.

Table 21 shows the percentages of current users who reported being able to purchase alcohol from a store, bar, or restaurant. More than one fifth of Hawaii's student current users (22.8%) are able to purchase alcoholic beverages by themselves. The percentage at the county level is highest in Honolulu City and County (23.3%), followed by Hawaii, Maui, and Kauai Counties (22.2%, 21.3%, and 20.3% respectively). A higher percentage of male users than female users (1.2 times) is able to purchase alcohol at the state level. However, gender differences vary by county. In Hawaii and Kauai Counties, the ratios are as high as 1.5 and 1.4 respectively. On the other hand, similar or the same percentages of users of both sexes reported the ability to purchase alcohol in Honolulu City and County and Maui County.

In keeping with the data in Table 20, the ability of current users to purchase alcohol also progresses by school grade at both the state and the county levels. The rate of increase (2.0) is found to be the greatest from 6th to 7th grade at the state level. The same pattern was found in all counties except for Kauai, where the largest rate of increase is from 11th to 12th grades.

Table 23. Ability to Purchase Alcohol by Current Users in Intermediate and High School by Sex, Grade, and County, 2003

Demographic Characteristics	State %	County %			
		Maui	Kauai	Hawaii	Honolulu
All 6th- to 12th-Grade Current Users	22.8	21.3	20.3	22.2	23.3
Sex					
Male	25.0	21.7	24.8	27.8	24.3
Female	21.1	21.4	17.5	18.4	22.1
Grade					
6th Grade	7.8	11.5	15.4	1.1	8.8
7th Grade	15.2	20.8	18.9	10.9	14.8
8th Grade	18.2	14.0	15.2	19.6	19.6
9th Grade	17.9	15.6	17.3	13.6	19.4
10th Grade	22.5	28.0	20.5	19.4	21.4
11th Grade	23.8	22.7	16.2	27.5	24.1
12th Grade	29.6	21.6	31.8	28.7	30.8

Source: Hawaii State Department of Health. 2003 Student ATOD Survey.

Alcohol is also accessible to many students through family, friends, and people in the community. More than half (50.9%) of all intermediate and high school students have been offered alcohol by someone else (Table 22). Peers are the most frequent source (38.6%), followed by other relatives (24.2%), parents (16.9%), other people (13.4%), and siblings (13.0%). The same pattern holds true for both current users and non-current users, except that the former are two to four times more likely than the latter to have been offered alcohol by the various sources. Students in Hawaii and Maui Counties have a higher probability of being offered alcohol by others, and are more likely to be offered alcohol by parents and siblings in particular.

Table 24. Alcohol Offers Made to Intermediate and High School Students by Current Use Status and County, 2003

Current Use Status	Offered Alcohol by	State %	County %			
			Maui	Kauai	Hawaii	Honolulu
All 6th to 12th Graders	Parents	16.9	18.0	13.6	20.9	16.3
	Siblings	13.0	15.4	13.7	19.6	11.2
	Other relatives	24.2	27.0	24.6	30.1	22.7
	Friends	38.6	42.8	39.3	46.7	36.2
	Other people	13.4	17.0	12.0	17.6	12.1
	Any person	50.9	54.9	51.7	58.8	48.8
Current Users	Parents	39.5	39.5	33.4	41.9	39.5
	Siblings	35.7	37.4	39.8	42.7	32.7
	Other relatives	55.5	57.0	56.6	56.6	55.3
	Friends	85.3	85.5	84.1	87.0	84.9
	Other people	30.3	35.5	28.6	33.2	28.5
	Any person	94.2	93.7	94.3	95.4	94.2
Non-Current Users	Parents	11.1	11.3	8.3	12.6	11.1
	Siblings	7.2	8.8	7.5	10.7	6.3
	Other relatives	16.3	17.9	16.6	19.8	15.5
	Friends	26.8	30.3	28.4	31.2	25.4
	Other people	9.1	11.6	7.8	11.6	8.4
	Any person	39.9	43.3	41.1	44.6	38.6

Source: Hawaii State Department of Health. 2003 Student ATOD Survey.

The data in Table 23 indicate that the percentages of 6th- to 12th-grade students receiving alcohol offers from significant people in their lives increase with each school grade. The largest increase is from 6th to 7th grade (3.1 to 6.0 times). By 10th grade more than half of the students (53.6%) are offered alcohol by their peers, and more than one quarter receive offers from immediate family members by the time they are in grade 12.

Table 25. People Who Have Offered Alcohol to Students by Grade, 2003

Alcohol Offered By	6th Grade %	8th Grade %	10th Grade %	12th Grade %
Parents	4.5	13.6	22.4	26.9
Siblings	1.9	9.0	17.0	25.2
Other relatives	5.4	17.7	32.1	41.8
Friends	3.9	23.6	53.6	72.8

Source: Hawaii State Department of Health. 2003 Student ATOD Survey.

RISK AND PROTECTIVE FACTORS

In addition to targeting the consumption of alcohol by specific subpopulations, including current users, and blocking underage individuals' access to alcohol, prevention services could also be designed to shift the balance from vulnerability to resilience among individuals who have the potential for alcohol abuse and addiction. The children and youth who have successfully avoided abusing alcohol and other substances have done so because the adults in their lives cared enough to assist them in developing personal qualities and supported them in their homes, schools, and communities. Table 24 presents a list of risk and protective factors in four domains: peer-individual, family, school, and community.

Table 26. Risk and Protection in Peer-Individual, Family, School, and Community Domains

Domain	Risk Factors	Protective Factors
Peer-Individual	<ul style="list-style-type: none"> • Early initiation of problem behaviors • Favorable attitudes toward ATOD use • Low perceived ATOD-use risk • Antisocial behaviors • Favorable attitudes toward antisocial behaviors • Friends' ATOD use • Interaction with antisocial peers • Rewards for antisocial involvement • Rebelliousness • Sensation seeking 	<ul style="list-style-type: none"> • Peer disapproval of ATOD use • Belief in the moral order • Education aspirations
Family	<ul style="list-style-type: none"> • Poor family supervision • Lack of parental sanctions for antisocial behaviors • Parental attitudes favorable toward ATOD use • Exposure to family ATOD use • Parental attitudes favorable toward antisocial behavior • Family (sibling) history of antisocial behaviors 	<ul style="list-style-type: none"> • Family attachment • Family opportunities for positive involvement • Family rewards for positive involvement
School	<ul style="list-style-type: none"> • Low school commitment • Poor academic performance 	<ul style="list-style-type: none"> • School opportunities for positive involvement • School rewards for positive involvement
Community	<ul style="list-style-type: none"> • Community disorganization • Transition and mobility • Exposure to community ATOD use • Laws and norms favorable to ATOD use • Perceived availability of drugs and handguns • Ability to purchase alcohol or tobacco 	<ul style="list-style-type: none"> • Community opportunities for positive involvement • Community rewards for positive involvement

Source: Pearson, R. S. (2004). The 2003 Hawaii student alcohol, tobacco, and other drug use study (1987-2003); Hawaii adolescent prevention and treatment needs assessment. Honolulu: Hawaii Department of Health, Alcohol and Drug Abuse Division.

This section presents the risk factors associated with exposure to alcohol use and parental and peer attitudes toward alcohol use and concludes with overall risk and protection for Hawaii's intermediate and high school students.

The exposure to alcohol use among Hawaii's intermediate and high school students can be found in Table 25. Among 6th- to 12th-grade students statewide, 36.8% are exposed to alcohol use at least once a week. Parents rank as the highest source of exposure, followed by other relatives, other people, and friends. Current student users are 2.2 times more likely than non-current users to be exposed to alcohol use. Moreover, current users are more likely than non-current users to be exposed to alcohol use by peers, siblings, and other people in their communities. Geographically, exposure is highest in Hawaii County, followed by Maui and Kauai Counties.

Table 27. Exposure to Alcohol Use Among Intermediate and High School Students by Current Use Status and County, 2003

Exposure to	State %	County %			
		Maui	Kauai	Hawaii	Honolulu
All 6th to 12th Graders					
Parents' use	23.2	25.8	24.0	28.5	21.8
Siblings' use	5.1	5.2	4.5	7.6	4.6
Other relatives' use	15.2	17.1	15.4	18.7	14.1
Friends' use	9.8	11.0	8.9	15.7	8.5
Other people's use	14.5	15.6	14.6	17.8	13.5
Any use	36.8	39.8	38.1	43.9	34.8
Current Users					
Parents' use	37.8	37.8	41.4	41.2	36.7
Siblings' use	14.3	14.5	13.8	17.2	13.4
Other relatives' use	28.2	27.8	29.0	30.0	27.7
Friends' use	33.9	34.3	31.5	40.6	31.9
Other people's use	32.4	32.5	34.4	36.7	30.8
Any use	64.9	65.5	69.9	69.8	62.9
Non-Current Users					
Parents' use	19.6	22.2	20.1	23.7	18.5
Siblings' use	2.7	2.5	2.4	3.8	2.6
Other relatives' use	11.9	13.6	12.1	14.3	11.1
Friends' use	3.6	4.0	3.5	5.9	3.2
Other people's use	9.9	10.5	9.7	10.4	9.6
Any use	29.5	31.9	30.5	33.7	28.5

Source: Hawaii State Department of Health. 2003 Student ATOD Survey.

The perceptions and use of alcohol among children and youth are greatly influenced by their parents, who convey their values and beliefs through their attitudes and behaviors. How do students perceive their parents' stance toward underage drinking? Table 26 presents data on this subject from the ATOD 2003 student survey. At the state level, 85.1% of students believe their parents consider underage drinking to be "very wrong." However, about one quarter of students also reported a lack of parental sanctions relating to alcohol use and 17.9% reported favorable parental attitudes toward ATOD use. There are no significant gender differences concerning these three protective and risk factors. Very significant differences were found between current student users and non-current users: Current users reported favorable parental attitudes and lack of parental sanctions regarding ATOD use that were three and four times higher than the percentages of non-current users. On the other hand, one and a half times more non-current users reported that their parents thought underage drinking was very wrong.

Geographically, permissive parental attitudes and lack of sanctions appear to be more problematic in Hawaii and Maui Counties.

Table 28. Parental Attitudes of Intermediate and High School Students by Current Use Status, Sex, and County, 2003

Parental Attitudes	State %	County %			
		Maui	Kauai	Hawaii	Honolulu
All 6th to 12th Graders					
Parents think it's very wrong to drink	85.1	84.3	85.5	77.6	86.9
Lack of parental sanctions for ATOD use	24.6	28.0	26.6	32.2	22.0
Parental attitudes favorable toward ATOD use	17.9	19.1	17.6	25.9	16.0
Current User					
Parents think it's very wrong to drink	61.9	60.9	67.4	54.5	64.4
Lack of parental sanctions for ATOD use	51.9	56.2	51.9	54.8	49.5
Parental attitudes favorable toward ATOD use	44.3	46.1	40.8	51.7	41.4
Non-Current User					
Parents think it's very wrong to drink	91.2	91.5	90.2	86.7	92.0
Lack of parental sanctions for ATOD use	17.5	19.2	20.0	23.0	15.8
Parental attitudes favorable toward ATOD use	11.1	10.8	11.9	15.6	10.2
Male					
Parents think it's very wrong to drink	85.3	85.2	84.6	77.1	87.2
Lack of parental sanctions for ATOD use	23.9	25.4	25.7	31.0	21.5
Parental attitudes favorable toward ATOD use	17.5	17.2	19.0	25.6	15.5
Female					
Parents think it's very wrong to drink	85.3	83.2	85.6	78.0	87.2
Lack of parental sanctions for ATOD use	24.9	28.9	26.8	33.2	22.0
Parental attitudes favorable toward ATOD use	18.0	20.7	17.7	26.0	15.8

Source: Hawaii State Department of Health. 2003 Student ATOD Survey.

In addition to parents, peers also play an important role in influencing alcohol use among young people. Table 27 shows peers' negative attitudes toward weekend drinking as reported by students in the 2003 ATOD survey. About three fourths of the students (73.9%) reported that their friends had negative attitudes toward weekend drinking, a lower percentage than the parents' unfavorable attitudes. Non-current student users reported a percentage that was two times higher than that of current users. Peers' disapproving attitudes toward weekend drinking declines as grade level increases: There is a drop from 89.0% disapproval among 6th graders to 80.9% among 8th graders, 67.7% among 10th graders, and 57.3% among 12th graders. More female than male students reported a higher percentage of peers who disapproved of weekend drinking. The same pattern holds for all counties except for Maui County, where there is no gender difference.

At both the state and county levels, Hawaiian, white, and multi-racial students' peers tend to be less disapproving of weekend drinking. In contrast, students of Asian ancestries are more likely to have peers disapprove weekend drinking, except for Filipino students in Hawaii County.

Table 29. Peers' Disapproval of Weekend Drinking by Current Use Status, Grade, Sex, and County, 2003

Demographic Characteristics	State %	County %			
		Maui	Kauai	Hawaii	Honolulu
All 6th to 12th Graders	73.9	71.2	76.3	65.7	76.2
Current Use Status					
Current Users	41.4	40.3	45.1	33.6	44.0
Non-Current Users	82.3	80.5	84.0	78.3	83.5
Grade					
6th Grade	89.0	84.8	89.5	86.3	90.5
7th Grade	85.3	82.5	91.4	81.4	86.4
8th Grade	80.9	78.5	75.9	78.8	82.6
9th Grade	75.0	75.0	75.4	65.4	77.4
10th Grade	67.7	66.2	75.7	58.2	69.8
11th Grade	62.8	57.8	69.5	47.8	66.6
12th Grade	57.3	54.1	58.9	48.2	60.5
Sex					
Male	70.6	71.3	72.6	61.5	72.7
Female	77.4	71.3	81.2	68.6	80.2

(Continued)

Table 29 (continued). Peers' Disapproval of Weekend Drinking by Current Use Status, Grade, Sex, and County, 2003

Demographic Characteristics	State %	County %			
		Maui	Kauai	Hawaii	Honolulu
Ethnicity					
Chinese	80.9	77.3	75.5	80.9	81.2
Filipino	76.4	76.9	78.8	66.2	77.9
Japanese	81.1	83.1	78.1	74.1	82.4
Hawaiian	67.3	61.4	73.5	61.8	70.1
White	71.7	68.8	76.8	67.9	73.8
Other	73.9	68.6	71.3	60.4	76.6
Multi-Racial	66.8	68.3	72.9	58.0	69.0

Source: Hawaii State Department of Health. 2003 Student ATOD Survey.

Perceived Risk of Weekend Drinking

For most individuals, the perception of risk governs behavior. That is, there is greater probability of people engaging in activities in which low risk is perceived and avoiding activities that are associated with high risk. These perceptions are shaped to a great extent by parents, peers, and other significant people in young people's lives. Table 28 shows the perceived risks associated with weekend drinking among Hawaii's intermediate and high school students. More than half of the students (55.2%) consider weekend drinking to be a health risk. This belief is lowest in Hawaii County, followed by Maui and Kauai Counties. The perception of risk from weekend drinking is higher among non-current users than current users (60.0% vs. 36.7%) and higher among female students than males (58.7% vs. 52.0%). In general, the level of risk perception declines as school grade advances at both state and county levels. Hawaiian, white, and multi-racial students tend to have lower levels of risk perception at both the state and the county levels. Ethnic groups with lower than state-average risk perceptions include Chinese and "other" ethnicities in Maui County, Japanese and "other" ethnicities in Kauai County, and Filipino, Japanese, and "other" ethnicities in Hawaii County.

Table 30. Perceived Risk of Weekend Drinking by Intermediate and High School Students by Current Use Status, Grade, Sex, Ethnicity, and County, 2003

Demographic Characteristics	State %	County %			
		Maui	Kauai	Hawaii	Honolulu
All 6th to 12th Graders	55.2	51.0	54.3	48.9	57.6
Current Use Status					
Current Users	36.7	35.1	34.5	32.7	38.7
Non-Current Users	60.0	55.8	58.9	55.1	61.9
Grade					
6th Grade	60.5	53.0	55.3	57.3	63.1
7th Grade	60.4	55.2	58.7	55.0	62.9
8th Grade	56.4	51.8	50.9	53.7	58.3
9th Grade	52.9	50.8	53.1	47.3	54.8
10th Grade	51.6	49.6	50.1	44.0	54.4
11th Grade	53.4	48.3	58.8	43.0	56.1
12th Grade	51.6	48.4	53.4	44.1	53.8
Sex					
Male	52.0	46.3	48.8	47.7	54.2
Female	58.7	54.5	61.2	50.1	61.5
Ethnicity					
Chinese	65.7	50.6	77.9	56.7	66.4
Filipino	57.9	55.5	62.4	50.2	59.3
Japanese	60.3	58.8	53.5	52.3	62.3
Hawaiian	52.2	46.8	49.3	52.7	53.8
White	50.0	47.4	49.8	45.0	53.3
Other	55.8	53.7	52.4	47.9	57.4
Multi-Racial	49.9	41.3	51.9	48.7	51.7

Source: Hawaii State Department of Health. 2003 Student ATOD Survey.

Overall Risk and Protective Factors Associated With Alcohol Use

Table 29 summarizes the risk and protective factors among Hawaii’s intermediate and high school students in their various ecological environments—peer-individual, family, school, and community. As the data in the table indicate, risk generally increases with age. By the 6th grade, 24.3% of the students are identified to be at high or moderate risk of developing a substance abuse problem, including alcohol. That percentage grows to 46.7% by the 12th grade. At the same time, the protective factors that keep individuals from substance use and abuse decline from 70.5% among 6th graders to 59.2% among 12th graders. Like other grade-related changes reported earlier, the greatest shift takes place between the 6th and 7th grades.

Table 31. Students With Moderate to High Risk and Protection in Hawaii, 2003

	6th Grade %	8th Grade %	10th Grade %	12th Grade %
Risk				
Moderate (11-17 risk factors)	17.7	22.4	23.5	25.3
High (18-28 risk factors)	6.6	18.0	20.3	21.4
Protection				
Moderate (6-8 protective factors)	40.7	36.9	40.0	39.9
High (9-11 protective factors)	29.8	26.9	23.5	19.3

Source: Hawaii State Department of Health. 2003 Student ATOD Survey.

NEXT STEPS

This profile presents the collection, analyses, interpretation, and application of state- and community-level epidemiological data to promote understanding of the consumption of substances in Hawaii and its consequences. It provides baseline information needed in the first step of the five-steps State Prevention Framework, which consists of (1) assessing problems and setting priorities; (2) evaluating and mobilizing capacity to address them; (3) informing prevention planning and funding decisions; (4) guiding the selection of appropriate and effective strategies for implementation; and (5) monitoring key milestones, evaluating initiatives, and adjusting prevention efforts as needed. The *Hawaii Epidemiological Profile for Substance Abuse Prevention* marks the end of the state’s SEOW grant and the start of a five-year SPF SIG initiative. However, the examination, interpretation, and application of data are essential to all of the steps in the SPF framework, and there will therefore be ongoing data collection and analyses to provide the continuous feedback and updating necessary for informed decision making.

In the months and years ahead, special attention will be paid to profiling local needs through the assessment of county-level data. The present profile presents data on the differential use and effects of alcohol within the context of Hawaii. These data will be expanded to assist Hawaii’s counties to develop their SPF SIG strategic plans and to develop more targeted and effective prevention strategies.

APPENDIX A HAWAII DRUG INFORMATION NETWORK

The Hawaii Drug Information Network (HDIN) served as the State Epidemiological Outcomes Workgroup (SEOW). It was established in 1989 as the Honolulu Community Epidemiology Work Group (CEWG), which was sponsored by the National Institute of Drug Abuse. Its membership is comprised of researchers and experts in substance abuse prevention, interdiction, and treatment who are affiliated with a wide range of agencies representing law enforcement, criminal justice, education, health services, youth and community groups, and other service providers. Rather than creating a new group with overlapping and duplicative functions, the CEWG's mission and membership were expanded to include the SEOW and SPF SIG initiatives. The HDIN is staffed by the Alcohol and Drug Abuse Division's (ADAD) Prevention Program Director and Fellow.

Member Affiliation	Representative
Office of the Lt. Governor	Karl Espaldon
Criminal Justice Agencies	Michael J. Palazzo, Public Safety Correctional Healthcare
ADAD, Department of Health	Keith Yamamoto, Division Chief Virginia Jackson, Program Development Office Chief Wendy Nihoa, SPF SIG Project Coordinator Amos Jarrette, SPF SIG Specialist Alan Yamamoto, Program Specialist Caroline Leyva, CSAP Prevention Fellow
Department of Education	Robert McClelland and Yvette Achong
Department of Health (includes Mental Health and Minority Health)	Noella Kong, Family Health Services Division Dan Galanis, Epidemiologist, Injury Prevention Catherine Sorensen, Women's Health Service
Department of Social Services	Kathy Swink, Child Welfare Service
Office of Youth Services	Dixie Thompson and Kelly Otake
Drug Enforcement Administration	Jennifer Wise and Rochelle Cup Choy, Hawaii High Intensity Drug Trafficking Area (HIDTA)
County Police Departments	
Department of the Attorney General	Paul Perrone, Valerie Mariano, Lydia Seumanu, and Kristell Corpuz
Social Provider Organizations	Cheryl Kameoka, Sean Spriggs, and Amber McClure, Coalition for a Drug Free Hawaii
Social Science Research Organizations	Jeanne Ohta and Pam Lichty, Drug Policy Forum of Hawaii Gabe Naeole, Pacific Resources for Education and Learning
Medical Examiner's Office	Karen Roeller
University of Hawaii	D. William Wood, HDIN Chair, Department of Sociology Deb Goebert, Department of Psychiatry Susan Saka, Curriculum Research & Development Group Sylvia Yuen and Quamrun Nahar, Center on the Family
Other Community Organizations	Claryese Nunokawa and Warren Loo, Hawaii Community Foundation

APPENDIX B
LIST OF ACRONYMS AND ABBREVIATIONS

Acronym/ Abbreviation	Full Name
ADAM	Arrestee Drug Abuse Monitoring Program
ADAD	Alcohol and Drug Abuse Division
AEDS	Alcohol Epidemiological Data System
ATOD	Alcohol, Tobacco, and Other Drug
BRFSS	Behavioral Risk Factor Surveillance System
CDC	Centers for Disease Control and Prevention
CEWG	Community Epidemiology Working Group
COF	Center on the Family
CSAP	Center for Substance Abuse Prevention
DASIS	Drug and Alcohol Services Information System
DAWN	Drug Abuse Warning Network
DEA	Drug Enforcement Administration
DOE	Department of Education
DOH	Department of Health
DUI	Driving Under the Influence
FARS	Fatality Analysis Reporting System
FBI	Federal Bureau of Investigation
HDIN	Hawaii Drug Information Network
HHIC	Hawaii Health Information Corporation
HHS	Hawaii Health Survey
HIDTA	High Intensity Drug Trafficking Area
HYTS	Hawaii Youth Tobacco Survey
ICPSR	The Interuniversity Consortium for Political and Social Research
MADD	Mothers Against Drunk Driving
NCHS	National Center for Health Statistics
NCSA	National Center for Statistics and Analysis
NIAAA	National Institute on Alcohol Abuse and Alcoholism
NIDA	National Institute on Drug Abuse
NIJ	National Institute of Justice
NOM	National Outcome Measure
NSDUH	National Survey on Drug Use and Health
NSSATS	National Survey on Substance Abuse Treatment Services
NTHSA	National Traffic Highway Safety Administration
NVSS	National Vital Statistics System
RADAR Network	Regional Alcohol Drug Awareness Resource Network
SAMHSA	Substance Abuse and Mental Health Services Administration
SEDS	State Epidemiological Data System
SEOW	State Epidemiological Outcomes Workgroup
SIG	State Incentive Grant

Acronym/ Abbreviation	Full Name
SOMMS	State Outcomes Measurement and Management System
SPF	Strategic Prevention Framework
TEDS	Treatment Episode Data Set
UCR	Unified Crime Report
URS	Uniform Reporting System
YRBS	Youth Risk Behavior Survey
YTS	Youth Tobacco Survey

**APPENDIX C
DATA SOURCES REVIEWED**

Data Source	Sponsor Agency
2004 Household Survey of Alcohol and Drug Abuse in Hawaii	Hawaii State Department of Health
2005 Survey of Retail Alcohol Sales to Underage Persons: A Report	Hawaii State Department of Health & MADD Hawaii
ADAD treatment admission data	Hawaii State Department of Health
Alcohol Epidemiologic Data System (AEDS)	National Institute on Alcohol Abuse and Alcoholism (NIAAA)
Arrestee Drug Abuse Monitoring (ADAM) Program	National Institute of Justice (NIJ)
Behavioral Risk Factor Surveillance System (BRFSS)	Centers for Disease Control and Prevention (CDC)
Birth Certificate Data from National Vital Statistics System	National Center for Health Statistics (NCHS)
Census data for population estimates	U.S. Census Bureau
Diagnostic Laboratory Service statistics, Honolulu	Diagnostic Laboratory Service, Honolulu
Drug-related death data from Medical Examiners Office	City and County of Honolulu
Drug-related data from Honolulu Police Department	Honolulu Police Department
DUI in the City and County of Honolulu – Report	Crime Prevention and Justice Assistance Division, Department of the Attorney General
Fatality Analysis Reporting System (FARS)	National Traffic Highway Safety Administration (NTHSA)
Federal drug seizure statistics from Drug Enforcement Administration (DEA) Web page	Drug Enforcement Administration (DEA)
Hawaii Student Alcohol, Tobacco, and Other Drug Use (ATOD) Survey	Hawaii State Department of Health
Hawaii Health Information Corporation (HHIC) online data	Hawaii Health Information Corporation (HHIC)
Hawaii Health Survey	Hawaii State Department of Health
HIDTA Annual Report	Office of National Drug Control Policy (ONDCP)
Household Drug Survey	Center on the Family, University of Hawaii
Illicit Drug Use in Honolulu and the State of Hawaii - Proceedings of the Community Epidemiology Working Group (CEWG), 2006	National Institute on Drug Abuse (NIDA)
National Survey on Drug Use and Health (NSDUH)	Substance Abuse and Mental Health Services Administration (SAMHSA)
National Survey on Substance Abuse	Substance Abuse and Mental Health Services

Data Source	Sponsor Agency
Treatment Services (NSSATS)	Administration (SAMHSA)
National Vital Statistics System (NVSS)	National Center for Health Statistics (NCHS)
Reducing Minors Access to Tobacco in Hawaii – Report on Annual Compliance Inspection and Law Enforcement Operation 2005-2006	Cancer Research of Hawaii/University of Hawaii
The Tax Burden on Tobacco. Historical Compilation, Vol. 37, 2002 (State Excise Tax Data)	Private; data were downloaded from the University of California at San Diego (UCSD) Social Sciences and Humanities Library Web site
Treatment Episode Data Set (TEDS)	Substance Abuse and Mental Health Services Administration (SAMHSA)
Uniform Crime Report (UCR)	Federal Bureau of Investigation (FBI) CPJAD, Department of the Attorney General
Youth Risk Behavior Survey (YRBS)	Centers for Disease Control and Prevention (CDC)
Youth Tobacco Survey (YTS)	Centers for Disease Control and Prevention (CDC)

**APPENDIX D
CONSTRUCTS AND INDICATORS REVIEWED**

Constructs	Indicators
Alcohol Consequences	
Antisocial behaviors	Drank on School Property by High School Students in Past 30 Days
	Been Drunk in School in Past 12 Months by Intermediate and High School Students
Crime/Public safety	Violent Crime Rate
	Annual Number of Violent Crimes
	DUI Arrest Rate
	Annual Number of DUI Arrests
	Arrest Rate for Liquor Law Violation
	Annual Number of Arrests for Liquor Law Violation
	Arrest Rate for Alcohol-Related Disorderly Conduct
	Annual Number of Arrests for Alcohol-Related Disorderly Conduct
	Annual Number of Arrests for Public Drunkenness
	Alcohol-Related Arrest Rate
Annual Number of Alcohol-Related Arrests	
Morbidity	Alcohol Dependence of Persons Aged 12 and Older
	Alcohol Abuse or Dependence of Persons Aged 12 and Older
	Alcohol Abuse or Dependence of Intermediate and High School Students
	Alcohol-Related Admission Rate
	Annual Number of Alcohol-Related Admissions
	Annual Number of Alcohol-Related Admissions to ADAD-Funded Facilities
	Utilization of Treatment Facilities for Alcohol or Drug Problem by Intermediate and High School Students
	Rate of ER Visits Due to Alcohol-Related Problem
	Annual Number of ER Visits Due to Alcohol-Related Problem
	Percent of Live Births With Fetal Alcohol Syndrome
	Annual Number of Live Births With Fetal Alcohol Syndrome
	Rate of Admissions With Alcohol as the Primary Cause
	Annual Number of Admissions With Alcohol as the Primary Cause
Mortality	Chronic Liver Disease Death Rate
	Annual Number of Chronic Liver Disease Deaths
	Suicide Death Rate
	Annual Number of Suicide Deaths
	Alcohol-Related Death Rate
	Homicide Death Rate
	Annual Number of Alcohol-Related Deaths
Annual Number of Homicide Deaths	
Motor vehicle crashes	Alcohol-Related Vehicle Death Rate
	Annual Number of Alcohol-Related Vehicle Deaths

Constructs	Indicators
Alcohol Consequences (continued)	
Motor vehicle crashes (continued)	Percent of Alcohol-Involved Drivers Among All Drivers in Fatal Crashes
	Annual Number of Drivers in Fatal Crashes
	Annual Number of Alcohol-Involved Drivers Among All Drivers in Fatal Crashes
	Percent of Fatal Motor Vehicle Crashes That Are Alcohol Related
	Annual Number of Fatal Crashes Involving Alcohol
Other	Needing But Not Receiving Treatment for Alcohol Use in Past Year
Alcohol Consumption	
Age of initial use	Early Initiation of Alcohol Use by High School Students
	Early Initiation of Alcohol Use by Intermediate and High School Students
	Mean Age at First Use of Any Alcohol by Intermediate and High School Students
	Mean Age for First Drunkenness by Intermediate and High School Students
Current use	Current Use of Alcohol by Persons Aged 12 and Older
	Current Use of Alcohol by High School Students
	Current Use of Alcohol by Persons Aged 18 and Older
	Current Use of Alcohol by Intermediate and High School Students
	Daily Use of Alcohol by Intermediate and High School Students
	Alcohol Use in Past 30 Days Among Persons Aged 12 to 20
	Binge Alcohol Use in Past 30 Days Among Persons Aged 12 to 20
	Current Binge Drinking by Persons Aged 12 and Older
	Current Binge Drinking by Adults Aged 18 and Older
	Current Binge Drinking by High School Students
	Current Heavy Use of Alcohol by Adults Aged 18 and Older
	Percentage of Arrestees Testing Positive for Alcohol
	Current Binge Drinking Among Arrestees
	Current Heavy Drinking Among Arrestees
Lifetime use	Lifetime Use of Alcohol
	Been Drunk in Lifetime
Other	Drinking and Driving Among Adults Aged 18 and Older
	Drinking and Driving Among High School Students
	Drinking and Driving Among Intermediate and High School Students
	Riding in Car With Drinking Driver Among High School Students
	Riding in Car With Drinking Driver Among Intermediate and High School Students
	Total Sales of Ethanol per Year per Capita
	Underage Possession of Alcohol
	Volume/Location Outlet Density in Community
	Vendors Selling Alcohol to Minors

Constructs	Indicators
Alcohol Consumption (continued)	
Other (continued)	Vendors Selling Alcohol Requesting Minor's ID
	Vendors Selling Alcohol Requesting Minor's Age
	Vendors Selling Alcohol Requesting Minor's ID or Age
	Perceived Availability of Alcohol ("Very Easy" or "Fairly Easy" to Get) by Intermediate and High School Students
	Ability to Purchase Alcohol From an Employee at a Store by Intermediate and High School Students
	Ability to Purchase Alcohol From a Bar by Intermediate and High School Students
	Ability to Purchase Alcohol From a Restaurant by Intermediate and High School Students
	Alcohol Offers From Parents for Intermediate and High School Students
	Alcohol Offers From Brother or Sister for Intermediate and High School Students
	Alcohol Offers From Other Relatives for Intermediate and High School Students
	Alcohol Offers From Friends for Intermediate and High School Students
	Alcohol Offers From Strangers for Intermediate and High School Students
	Perceived Risk of "a Lot of Harm" From Weekend Binge Drinking by Intermediate and High School Students
	Exposure to Parents Use of Alcohol by Intermediate and High School Students
	Exposure to Siblings Use of Alcohol by Intermediate and High School Students
	Exposure to Other Relatives Use of Alcohol by Intermediate and High School Students
	Exposure to Friends Use of Alcohol By Intermediate and High School Students
	Exposure to Other People's Use of Alcohol By Intermediate and High School Students
	Exposure to Any Use of Alcohol by Intermediate and High School Students
	Parental Disapproval of Alcohol Use for Intermediate and High School Students
	Friends Disapproval of Alcohol Use for Intermediate and High School Students
Lack of Parental Sanctions for Alcohol Use by Intermediate and High School Students	
Parental Favorable Attitudes Towards Alcohol Use by Intermediate and High School Students	
Adult Perception of Level of Difficulty ("Not at All Difficult") for Children to Obtain Alcohol	
Perceptions of Great Risk of Having Five or More Drinks of an Alcoholic Beverage Once or Twice a Week	

Constructs	Indicators
Drug Consequences	
Antisocial behaviors	Selling Illegal on School Property by Intermediate and High School Students
	Offered/Sold/Given Illegal Drugs on School Property by High School Students in Past 12 Months
	Drug-Related Suspensions/Expulsion Rate From Public Schools
	Annual Number of Drug-Related Suspensions/Expulsions From Public Schools
Crime/Public safety	Property Crime Rate
	Annual Number of Property Crimes
	Drug-Related Arrest Rate
	Annual Number of Drug-Related Arrests
Morbidity	Drug Abuse or Dependence of Persons Aged 12 and Older
	Drug Abuse or Dependence of Intermediate and High School Students
	Drug Dependence of Persons Aged 12 and Older
	Utilization of Treatment Facilities for Drug Problem
	Rate of ER Visits Due to Drug Problem
	Annual Number of ER Visits Due to Drug Problem
	Rate of Admission With Drugs as the Primary Cause
	Annual Number of Admissions With Drugs as the Primary Cause
	Rate of Admissions With Drugs as the Secondary Cause
	Annual Number of Admissions With Drugs as the Secondary Cause
Mortality	Deaths From Illicit Drug Use
	Annual Number of Deaths From Illicit Drug Use
Other	Needing but Not Receiving Treatment for Illicit Drug Use in Past Year
Drug Consumption	
Age of initial use	Early Initiation of Marijuana Use by High School Students
	Early Initiation of Marijuana Use by Intermediate and High School Students
	Early Initiation of Illicit Drugs Other Than Marijuana Use by High School Students
	Early Initiation of Illicit Drugs Other Than Marijuana Use by Intermediate and High School Students
Current use	Current Use of Marijuana by Persons Aged 12 and Older
	Current Use of Marijuana by High School Students
	Current Use of Marijuana by Intermediate and High School Students
	Current Use of Illicit Drugs Other Than Marijuana by Persons Aged 12 and Older
	Current Use of Illicit Drugs Other Than Marijuana by Intermediate and High School Students
	Current Use of Any Illicit Drug, Including Inhalants, by Intermediate and High School Students
	Current Use of Cocaine by High School Students

Constructs	Indicators
Drug Consumption (continued)	
Current use (continued)	Current Use of Cocaine by Intermediate and High School Students
	Current Use of Inhalants by High School Students
	Current Use of Inhalants by Intermediate and High School Students
	Current Use of Ice by High School Students
	Current Use of Ice by Intermediate and High School Students
	Current Use of Any Illicit Drug by Persons Aged 12 and Older
	Arrestees Testing Positive for Crack Cocaine
	Arrestees Testing Positive for Marijuana
	Arrestees Testing Positive for Methamphetamine
First Use	First Use of Marijuana
Lifetime use	Lifetime Use of Any Illicit Drug, Including Inhalants, by Intermediate and High School Students
	Lifetime Use of Any Illicit Drug by Intermediate and High School Students
	Lifetime Use of Marijuana by High School Students
	Lifetime Use of Marijuana by Intermediate and High School Students
	Lifetime Use of Any Drug Other Than Marijuana by High School Students
	Lifetime Use of Any Drug Other Than Marijuana by Intermediate and High School Students
	Lifetime Use of Cocaine by High School Students
	Lifetime Use of Cocaine by Intermediate and High School Students
	Lifetime Use of Inhalants by High School Students
	Lifetime Use of Inhalants by Intermediate and High School Students
	Lifetime Use of Steroids by High School Students
	Lifetime Use of Steroids by Intermediate and High School Students
	Lifetime Use of Methamphetamine by High School Students
	Lifetime Use of Methamphetamine by Intermediate and High School Students
	Lifetime Use of Ecstasy (MDMA) by High School Students
	Lifetime Use of Ecstasy (MDMA) by Intermediate and High School Students
	Lifetime Use of Heroin by High School Students
	Lifetime Use of Heroin or Other Opiates by Intermediate and High School Students
	Lifetime Use of Any Drug via Injection by High School Students
	Lifetime Use of Any Drug via Injection by Intermediate and High School Students
Other	Perceptions of Great Risk of Smoking Marijuana Once a Month

Constructs	Indicators
Tobacco Consequences	
Mortality	Deaths From Lung Cancer
	Annual Number of Deaths From Lung Cancer
	Deaths From COPD and Emphysema
	Annual Number of Deaths From COPD and Emphysema
	Deaths From Cardiovascular Diseases
	Annual Number of Deaths From Cardiovascular Diseases
Tobacco Consumption	
Age of initial use	Early Initiation of Cigarette Use by High School Students
	Early Initiation of Cigarette Use by Intermediate and High School Students
	Early Initiation of Smokeless Tobacco Use by Intermediate and High School Students
Current use	Current Tobacco Use by Persons Aged 12 and Older
	Current Cigarette Smoking by Persons Aged 12 and Older
	Current Use of Cigarettes by High School Students
	Current Cigarette Smoking by Intermediate and High School Students
	Current Use of Cigarettes by Adults Aged 18 and Older
	Current Use of Smokeless Tobacco by High School Students
	Current Use of Smokeless Tobacco by Intermediate and High School Students
	Current Daily Use of Any Tobacco
	Current Daily Use of Cigarettes Among Adults
	Current Daily Use of Cigarettes Among High School Students
	Current Daily Use of Cigarettes Among Intermediate and High School Students
	Current Daily Use of Smokeless Tobacco Among Intermediate and High School Students
	Have Smoked 100 or More Cigarettes in Lifetime and Now Smoke Cigarettes Every Day
Lifetime use	Lifetime Use of Any Tobacco
	Lifetime Cigarette Use by Intermediate and High School Students
	Lifetime Use of Smokeless Tobacco by Intermediate and High School Students
Other	Packs of Cigarettes Taxed per Capita
	Vendors Selling Tobacco to Minors
	Vendors Selling Tobacco Requesting Minor's ID
	Vendors Selling Tobacco Requesting Minor's Age
	Vendors Selling Tobacco Requesting Minor's ID or Age
	Vendors Selling Tobacco Requesting Minor's ID and Age

Constructs	Indicators
Tobacco Consumption (continued)	
Other (continued)	Tobacco Use During Pregnancy
	Perceptions of Great Risk of Smoking One or More Packs of Cigarettes per Day
Other	
Demographics	Total Resident Population
ER visits	Annual Number of ER Visits
Live births	Annual Number of Live Births
Motor vehicle crashes	Annual Number of Fatal Crashes
School suspensions	Annual Number of Suspensions/Expulsions From Public Schools

APPENDIX E
CONSTRUCTS AND INDICATORS USED IN PRIORITY ASSESSMENT

Construct	Indicator	Definition	Data Source
Alcohol Consequences			
Antisocial behaviors	Drank on School Property by High School Students in Past 30 Days	Percent of students in grades 9 through 12 reporting use of at least one drink of alcohol ≥ 1 of the 30 days preceding the survey	YRBS
	Crime/Public safety	DUI Arrest Rate	Number of drivers driving or operating any vehicle or common carrier while drunk or under the influence of intoxicants reported to the police per 1,000 population
	Arrest Rate for Liquor Law Violation	Number of arrests for unlawful manufacture, sale, transporting, furnishing, or possessing intoxicating liquor; maintaining unlawful drinking places; bootlegging; operating a still; furnishing liquor to a minor; and drinking on a train or public conveyance per 1,000 population	UCR
	Arrest Rate for Alcohol-Related Disorderly Conduct	Annual number of arrests due to committing a breach of the peace, including affray; unlawful assembly; disturbing the peace; disturbing meetings; and blasphemy, profanity, and obscene language per 1,000 population.	UCR
Morbidity	Alcohol Dependence of Persons Aged 12 and Older	Percent of persons aged 12 and older meeting DSM-IV criteria for alcohol dependence	NSDUH
	Alcohol Abuse or Dependence of Persons Aged 12 and Older	Percent of persons aged 12 and older meeting DSM-IV criteria for alcohol abuse or dependence	NSDUH
Mortality	Chronic Liver Disease Death Rate	Number of deaths from chronic liver disease per 1,000 population	NVSS
	Alcohol-Related Vehicle Death Rate	Number of vehicle deaths in which at least one driver, pedestrian, or cyclist had been drinking (Blood Alcohol Concentration >0.00) per 1,000 population	FARS

Construct	Indicator	Definition	Data Source
Alcohol Consumption			
Age of initial use	Early Initiation of Alcohol Use by High School Students	Percent of students in grades 9 through 12 reporting first use of alcohol before age 13 (more than just a few sips)	YRBS
Current use	Current Use of Alcohol by Persons Aged 12 and Older	Percent of persons aged 12 and older reporting any use of alcohol within the past 30 days	NSDUH
	Current Use of Alcohol by High School Students	Percent of students in grades 9 through 12 reporting any use of alcohol within the past 30 days	YRBS
	Current Use of Alcohol by Persons Aged 18 and Older	Percent of persons aged 18 and older reporting any use of alcohol within the past 30 days	BRFSS
	Alcohol Use in Past 30 Days Among Persons Aged 12 to 20	Percent of persons aged 12 to 20 reporting any use of alcohol within the past 30 days	NSDUH
	Binge Alcohol Use in Past 30 Days Among Persons Aged 12 to 20	Percent of persons aged 12 to 20 reporting having five or more drinks on at least one occasion within the past 30 days	NSDUH
	Current Binge Drinking by Persons Aged 12 and Older	Percent of persons aged 12 and older reporting having five or more drinks on at least one occasion within the past 30 days	NSDUH
	Current Binge Drinking by Adults Aged 18 and Older	Percent of persons aged 18 and older reporting having five or more drinks on at least one occasion within the past 30 days	BRFSS
	Current Binge Drinking by High School Students	Percent of students in grades 9 through 12 reporting having five or more drinks in a row (i.e., within a couple of hours) on at least one occasion within the past 30 days	YRBS
	Current Heavy Use of Alcohol by Adults Aged 18 and Older	Percent of women aged 18 and older reporting an average daily alcohol consumption of greater than one drink per day or men aged 18 and older reporting an average daily alcohol consumption of greater than two drinks per day.	BRFSS

Construct	Indicator	Definition	Data Source
Drug Consequences			
Antisocial behaviors	Offered/Sold/Given Illegal Drugs on School Property by High School Students in Past 12 Months	Percent of students in grades 9 through 12 reporting being offered/sold/given any illegal drug by anyone in school in past year	YRBS
Crime/Public safety	Drug-Related Arrest Rate	Number of drug-related arrests (drug manufacturing/sale or drug possession) per 1,000 population	UCR
Morbidity	Drug Abuse or Dependence of Persons Aged 12 and Older	Percent of persons aged 12 and older meeting DSM-IV criteria for drug abuse or dependence	NSDUH
	Drug Dependence of Persons Aged 12 and Older	Percent of persons aged 12 and older meeting DSM-IV criteria for drug dependence	NSDUH
Mortality	Deaths From Illicit Drug Use	Number of deaths directly attributable to illicit drug use per 1,000 population	NVSS
Drug Consumption			
Age of initial use	Early Initiation of Marijuana Use by High School Students	Percent of students in grades 9 through 12 reporting first use of marijuana before age 13	YRBS
Current use	Current Use of Marijuana by Persons Aged 12 and Older	Percent of persons aged 12 and older reporting any use of marijuana within the past 30 days	NSDUH
	Current Use of Marijuana by High School Students	Percent of students in grades 9 through 12 reporting any use of marijuana within the past 30 days	YRBS
	Current Use of Illicit Drugs Other Than Marijuana by Persons Aged 12 and Older	Percent of persons aged 12 and older reporting use of any illicit drug other than marijuana, or of an abusable product that may be obtained legally, on one or more days within the past 30 days. Other illicit drugs include cocaine, heroin, and hallucinogens (LSD, PCP, peyote, mescaline, mushrooms, and ecstasy). Abusable legal products include prescription drugs (pain relievers, tranquilizers, stimulants, and sedatives) and inhalants (amyl nitrate, cleaning fluids, gasoline, paint, and glue).	NSDUH
	Current Use of Cocaine by High School Students	Percent of students in grades 9 through 12 reporting any use of cocaine within the past 30 days	YRBS

Construct	Indicator	Definition	Data Source
Drug Consumption (continued)			
Current use (continued)	Current Use of Any Illicit Drug by Persons Aged 12 and Older	Percent of persons aged 12 and older reporting any illicit drug within the past 30 days. Illicit drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used non-medically.	NSDUH
Lifetime use	Lifetime Use of Marijuana by High School Students	Percent of students in grades 9 through 12 reporting ever using marijuana in their lifetime	YRBS
	Lifetime Use of Cocaine by High School Students	Percent of students in grades 9 through 12 reporting ever using cocaine in their lifetime	YRBS
	Lifetime Use of Inhalants by High School Students	Percent of students in grades 9 through 12 reporting ever using inhalants in their lifetime	YRBS
	Lifetime Use of Steroids by High School Students	Percent of students in grades 9 through 12 reporting ever using steroids in their lifetime	YRBS
	Lifetime Use of Methamphetamine by High School Students	Percent of students in grades 9 through 12 reporting ever using methamphetamine in their lifetime	YRBS
	Lifetime Use of Ecstasy (MDMA) by High School Students	Percent of students in grades 9 through 12 reporting ever using ecstasy/MDMA in their lifetime	YRBS
	Lifetime Use of Heroin by High School Students	Percent of students in grades 9 through 12 reporting ever using heroin in their lifetime	YRBS
	Lifetime Use of Any Drug via Injection by High School Students	Percent of students in grades 9 through 12 reporting ever using any drug via injection in their lifetime	YRBS

Construct	Indicator	Definition	Data Source
Tobacco Consequences			
Mortality	Deaths From Lung Cancer	Number of deaths from lung cancer per 1,000 population	NVSS
Tobacco Consumption			
Age of initial use	Early Initiation of Cigarette Use by High School Students	Percent of students in grades 9 through 12 reporting that they smoked a whole cigarette for the first time before age 13	YRBS
Current use	Current Tobacco Use by Persons Aged 12 and Older	Percent of persons aged 12 and older reporting tobacco use on one or more days within the past 30 days. Tobacco products include cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco).	NSDUH
	Current Cigarette Smoking by Persons Aged 12 and Older	Percent of persons aged 12 and older reporting smoking a cigarette on one or more days within the past 30 days	NSDUH
	Current Use of Cigarettes by High School Students	Percent of students in grades 9 through 12 reporting smoking a cigarette on one or more days within the past 30 days	YRBS
	Current Use of Cigarettes by Adults Aged 18 and Older	Percent of persons aged 18 and older reporting smoking 100 or more cigarettes in their lifetime and also now smoking cigarettes either every day or on “some days”	BRFSS
	Current Use of Smokeless Tobacco by High School Students	Percent of students in grades 9 through 12 reporting use of “chewing tobacco, snuff, or dip” on one or more days within the past 30 days	YRBS
	Current Daily Use of Cigarettes Among Adults	Percent of adults aged 18 and older reporting smoking 100 or more cigarettes in their lifetime and also now smoking cigarettes every day	BRFSS
	Current Daily Use of Cigarettes Among High School Students	Percent of students in grades 9 through 12 reporting smoking cigarettes on 20 days or more within the past 30 days	YRBS

APPENDIX F
DATA SOURCES USED AND YEARS OF DATA COLLECTED

Data Source	Data Source Acronym	Sponsor Agency	Data Collected
Indicators for Priority Assessment			
Behavioral Risk Factor Surveillance System	BRFSS	Centers for Disease Control and Prevention (CDC)	1990-2005
Census data for population estimates	CENSUS	U.S. Census Bureau	1990-2005
Fatality Analysis Reporting System	FARS	National Traffic Highway Safety Administration (NHTSA)	1990-2004
National Survey on Drug Use and Health	NSDUH	Substance Abuse and Mental Health Services Administration (SAMHSA)	2002-2004
National Vital Statistics System	NVSS	National Center for Health Statistics (NCHS)	1990-2003
Uniform Crime Report	UCR	Federal Bureau of Investigation (FBI)	1994-2005
Youth Risk Behavior Survey	YRBS	Centers for Disease Control and Prevention (CDC)	1991-2005
Hawaii-Specific Indicators			
2005 Survey of Retail Alcohol Sales to Underage Persons: A Report	STING_ALC	Hawaii State Department of Health & MADD Hawaii	2005
Arrestee Drug Abuse Monitoring Program	ADAM	National Institute of Justice (NIJ)	2003
Hawaii Student Alcohol, Tobacco, and Other Drug Use Survey	ST_ATOD	Hawaii State Department of Health	2003
Household Drug Survey	DRUG_COF	Center on the Family, University of Hawaii	2005-2006
Reducing Minors' Access to Tobacco in Hawaii – Report on Annual Compliance Inspection and Law Enforcement Operation 2005-2006	STING_TBC	Cancer Research of Hawaii/University of Hawaii	2001-2006

**APPENDIX G
HAWAII-SPECIFIC INDICATORS**

Construct	Indicator	Definition	Data Source
Alcohol Consequences			
Anti-social behaviors	Been Drunk in School in Past 12 Months by Intermediate and High School Students	Percent of students in grades 6 through 12 reporting having been drunk or high in school during the past 12 months	ST_ATOD
Morbidity	Alcohol Abuse or Dependence of Intermediate and High School Students	Percent of students in grades 6 through 12 meeting DSM-III-R criteria for alcohol abuse or dependence	ST_ATOD
	Utilization of Treatment Facilities for Alcohol or Drug Problem by Intermediate and High School Students	Percent of students in grades 6 through 12 who received help for an alcohol or other drug use problem from a school program or someplace other than school	ST_ATOD
Alcohol Consumption			
Age of initial use	Early Initiation of Alcohol Use by Intermediate and High School Students	Percent of students in grades 6 through 12 reporting first use of alcohol before age 13 (more than just a few sips)	ST_ATOD
	Mean Age at First Use of Any Alcohol by Intermediate and High School Students	Mean age of drinking any alcohol by students in grades 6 through 12 (more than just a few sips)	ST_ATOD
	Mean Age for First Drunkenness by Intermediate and High School Students	Mean age of being drunk for the first time by students in grade 6 through 12	ST_ATOD
Current Use	Current Use of Alcohol by Intermediate and High School Students	Percent of students in grades 6 through 12 reporting any use of alcohol within the past 30 days	ST_ATOD
	Daily Use of Alcohol by Intermediate and High School Students	Percent of students in grades 6 through 12 reporting using alcohol on 20 or more days in the preceding month	ST_ATOD

Construct	Indicator	Definition	Data Source
Alcohol Consumption (continued)			
Current Use (continued)	Current Heavy Drinking Among Arrestees	Percentage of arrestees reporting heavy drinking (consumption of five or more drinks on the same occasion on five or more days in a month) in past 30 days	ADAM
Other	Vendors Selling Alcohol to Minors	Percent of minors who could successfully purchase alcohol	STING_ALC
	Vendors Selling Alcohol Requesting Minor's ID	Percent of vendors who requested to see minor's ID for alcohol purchase	STING_ALC
	Vendors Selling Alcohol Requesting Minor's Age	Percent of vendors who asked minor's age for alcohol purchase	STING_ALC
	Vendors Selling Alcohol Requesting Minor's ID or Age	Percent of vendors who requested minor's ID or age for alcohol purchase	STING_ALC
	Perceived Availability of Alcohol ("Very Easy" or "Fairly Easy" to Get) by Intermediate and High School Students	Percent of students in grade 6 through 12 saying it is "very easy" or "fairly easy" to get alcohol	ST_ATOD
	Ability to Purchase Alcohol From an Employee at a Store by Intermediate and High School Students	Percent of students in grade 6 through 12 saying they had ever bought alcohol from an employee at a store	ST_ATOD
	Ability to Purchase Alcohol From a Bar by Intermediate and High School Students	Percent of students in grade 6 through 12 saying they had ever bought alcohol from a bar	ST_ATOD
	Ability to Purchase Alcohol From a Restaurant by Intermediate and High School Students	Percent of students in grade 6 through 12 saying they had ever bought alcohol from a restaurant	ST_ATOD

Construct	Indicator	Definition	Data Source
Alcohol Consumption (continued)			
Other (continued)	Alcohol Offers From Parents for Intermediate and High School Students	Percent of students in grade 6 through 12 saying they had ever been offered alcohol by their parents	ST_ATOD
	Alcohol Offers From Brother or Sister for Intermediate and High School Students	Percent of students in grade 6 through 12 saying they had ever been offered alcohol by their brothers or sisters	ST_ATOD
	Alcohol Offers From Other Relatives for Intermediate and High School Students	Percent of students in grade 6 through 12 saying they had ever been offered alcohol by their other relatives	ST_ATOD
	Alcohol Offers From Friends for Intermediate and High School Students	Percent of students in grade 6 through 12 saying they had ever been offered alcohol by their friends	ST_ATOD
	Alcohol Offers From Strangers for Intermediate and High School Students	Percent of students in grade 6 through 12 saying they had ever been offered alcohol by strangers	ST_ATOD
	Perceived Risk of “a Lot of Harm” from Weekend Binge Drinking by Intermediate and High School Students	Percent of students in grade 6 through 12 indicating “a lot of harm” associated with having five or more drinks of alcohol once or twice each weekend	ST_ATOD
	Exposure to Parents’ Use of Alcohol by Intermediate and High School Students	Percent of students in grade 6 through 12 who were around their parents “once a week” or “every day” when they were using alcohol	ST_ATOD
	Exposure to Siblings’ Use of Alcohol by Intermediate and High School Students	Percent of students in grade 6 through 12 who were around their siblings “once a week” or “every day” when they were using alcohol	ST_ATOD
	Exposure to Other Relatives’ Use of Alcohol by Intermediate and High School Students	Percent of students in grade 6 through 12 who were around other relatives “once a week” or “every day” when they were using alcohol	ST_ATOD

Construct	Indicator	Definition	Data Source
Alcohol Consumption (continued)			
Other (continued)	Exposure to Friends' Use of Alcohol by Intermediate and High School Students	Percent of students in grade 6 through 12 who were around their friends "once a week" or "every day" when they were using alcohol	ST_ATOD
	Exposure to Other People's Use of Alcohol by Intermediate and High School Students	Percent of students in grade 6 through 12 who were around other people "once a week" or "every day" when they were using alcohol	ST_ATOD
	Exposure to Any Use of Alcohol by Intermediate and High School Students	Percent of students in grade 6 through 12 who were around at least one person "once a week" or "every day" who was using alcohol	ST_ATOD
	Parental Disapproval of Alcohol Use for Intermediate and High School Students	Percent of students in grade 6 through 12 who indicated their parents would think it was "very wrong" for them to use alcohol regularly	ST_ATOD
	Friends' Disapproval of Alcohol Use for Intermediate and High School Students	Percent of students in grade 6 through 12 who indicated their friends would "disapprove" or "strongly disapprove" of them using five or more alcoholic drinks once or twice every weekend	ST_ATOD
	Lack of Parental Sanctions for Alcohol Use by Intermediate and High School Students	Percent of students in grade 6 through 12 who mentioned lack of parental sanctions for their alcohol use	ST_ATOD
	Parental Favorable Attitudes Towards Alcohol Use by Intermediate and High School Students	Percent of students in grade 6 through 12 who mentioned favorable parental attitudes towards their alcohol use	ST_ATOD
	Adult Perception of Level of Difficulty ("Not at All Difficult") for Children to Obtain Alcohol	Percent of persons aged 18 years and over who perceive that it is "not at all difficult" for children to obtain alcohol	DRUG_COF

Construct	Indicator	Definition	Data Source
Drug Consequences			
Antisocial behaviors	Selling Illegal Drugs on School Property by Intermediate and High School Students	Percent of students in grades 6 through 12 reporting selling drugs in school in past year	ST_ATOD
Morbidity	Drug Abuse or Dependence of Intermediate and High School Students	Percent of students in grades 6 through 12 meeting DSM-III-R criteria for drug abuse or dependence	ST_ATOD
Drug Consumption			
Age of initial use	Early Initiation of Marijuana Use by Intermediate and High School Students	Percent of students in grades 6 through 12 reporting first use of marijuana before age 13	ST_ATOD
Current use	Current Use of Marijuana by Intermediate and High School Students	Percent of students in grades 6 through 12 reporting any use of marijuana on “one or more days” within the past 30 days	ST_ATOD
	Current Use of Any Illicit Drug, Including Inhalants, by Intermediate and High School Students	Percent of students in grades 6 through 12 reporting use of any illicit drug, including inhalants, on “one or more days” during the past 30 days. “Any illicit drug” includes marijuana, inhalants, cocaine, methamphetamine, heroine or other opiates, sedatives or tranquilizers, hallucinogens, steroids, ecstasy/MDMA, GHB, Rohypnol, or ketamine.	ST_ATOD
	Current Use of Cocaine by Intermediate and High School Students	Percent of students in grades 6 through 12 reporting any use of cocaine on “one or more days” within the past 30 days	ST_ATOD
	Current Use of Inhalants by Intermediate and High School Students	Percent of students in grades 6 through 12 reporting that they sniffed glue, breathed the contents of aerosol cans, or inhaled paints or sprays to get high within the past 30 days	ST_ATOD
	Current Use of Ice by Intermediate and High School Students	Percent of students in grades 6 through 12 reporting any use of meth or ice on “one or more days” within the past 30 days	ST_ATOD

Construct	Indicator	Definition	Data Source
Drug Consumption (continued)			
Current use (continued)	Arrestees Testing Positive for Crack Cocaine	Percent of arrestees testing positive for crack cocaine	ADAM
	Arrestees Testing Positive for Marijuana	Percent of arrestees testing positive for marijuana	ADAM
	Arrestees Testing Positive for Methamphetamine	Percent of arrestees testing positive for meth or ice	ADAM
Lifetime use	Lifetime Use of Any Illicit Drug, Including Inhalants, by Intermediate and High School Students	Percent of students in grades 6 through 12 reporting ever using any illicit drug, including inhalants, in their lifetime	ST_ATOD
	Lifetime Use of Marijuana by Intermediate and High School Students	Percent of students in grades 6 through 12 reporting ever using marijuana in their lifetime	ST_ATOD
	Lifetime Use of Cocaine by Intermediate and High School Students	Percent of students in grades 6 through 12 reporting ever using cocaine in their lifetime	ST_ATOD
	Lifetime Use of Inhalants by Intermediate and High School Students	Percent of students in grades 6 through 12 reporting ever using cocaine in their lifetime	ST_ATOD
	Lifetime Use of Steroids by Intermediate and High School Students	Percent of students in grades 6 through 12 reporting ever using steroids in their lifetime	ST_ATOD
	Lifetime Use of Methamphetamine by Intermediate and High School Students	Percent of students in grades 6 through 12 reporting ever using methamphetamine in their lifetime	ST_ATOD
	Lifetime Use of Ecstasy (MDMA) by Intermediate and High School Students	Percent of students in grades 6 through 12 reporting ever using ecstasy (MDMA) in their lifetime	ST_ATOD

Construct	Indicator	Definition	Data Source
Drug Consumption (continued)			
Lifetime use (continued)	Lifetime Use of Heroin or Other Opiates by Intermediate and High School Students	Percent of students in grades 6 through 12 reporting ever using heroin or other opiates in their lifetime	ST_ATOD
Tobacco Consumption			
Age of initial use	Early Initiation of Cigarette Use by Intermediate and High School Students	Percent of students in grades 6 through 12 reporting that they smoked a whole cigarette for the first time before age 13	ST_ATOD
	Early Initiation of Smokeless Tobacco by Intermediate and High School Students	Percent of students in grades 6 through 12 reporting that use of “chewing tobacco, snuff, or dip” for the first time before age 13	ST_ATOD
Current use	Current Cigarette Smoking by Intermediate and High School Students	Percent of persons in grades 6 through 12 reporting smoking a cigarette on one or more days within the past 30 days	ST_ATOD
	Current Use of Smokeless Tobacco by Intermediate and High School Students	Percent of students in grades 6 through 12 reporting use of “chewing tobacco, snuff, or dip” on one or more days within the past 30 days	ST_ATOD
	Current Daily Use of Cigarettes Among Intermediate and High School Students	Percent of students in grades 6 through 12 reporting smoking cigarette on 20 or more days in the preceding 30 days	ST_ATOD
	Current Daily Use of Smokeless Tobacco Among Intermediate and High School Students	Percent of students in grades 6 through 12 reporting use of “chewing tobacco, snuff, or dip” on 20 or more days in the preceding 30 days	ST_ATOD

Construct	Indicator	Definition	Data Source
Tobacco Consumption (continued)			
Lifetime use	Lifetime Cigarette Use by Intermediate and High School Students	Percent of students in grades 6 through 12 reporting ever smoking a cigarette in their lifetime	ST_ATOD
	Lifetime Use of Smokeless Tobacco by Intermediate and High School Students	Percent of students in grades 6 through 12 reporting ever using “chewing tobacco, snuff, or dip” in their lifetime	ST_ATOD
Other	Vendors Selling Tobacco to Minors	Percent of minors who could successfully purchase tobacco	STING_TBC
	Vendors Selling Tobacco Requesting Minor’s ID	Percent of vendors who requested to see minor’s ID for tobacco purchase	STING_TBC
	Vendors Selling Tobacco Requesting Minor’s Age	Percent of vendors who asked minor’s age for tobacco purchase	STING_TBC
	Vendors Selling Tobacco Requesting Minor’s ID or Age	Percent of vendors who requested minor’s ID or age for tobacco purchase	STING_TBC
	Vendors Selling Tobacco Requesting Minor’s ID and Age	Percent of vendors who requested minor’s ID and age for tobacco purchase	STING_TBC

**APPENDIX H
PRIORITY SETTING RATING FORM FOR ATOD CONSTRUCTS**

Please rate the criteria below on their importance in the selection of the ATOD (alcohol, tobacco, and other drug) focus area for the SPF SIG initiative. Enter one number per criteria from the following continuum of scores:

1 2 3 4 5 6 7 8 9 10

 not important extremely important

CRITERIA	RATING
<i>Prevalence: total number of cases adjusted for standardized population</i>	
<i>Rate of change: extent problem is increasing or decreasing over 2 points in time</i>	
<i>Seriousness compared to other states: comparison to other states' rates</i>	
<i>Severity: extreme, intense, acute</i>	
<i>Urgency: need for immediate action</i>	
<i>Readiness for change: funds, services, leadership, public acknowledgement of problem</i>	
<i>Change potential: possible to achieve in 5 years</i>	
OTHER CRITERIA: please enter below	

APPENDIX I RATING FORM FOR SETTING PRIORITY FOR ATOD CONSTRUCTS

Please rate the following constructs from 1 (lowest) to 10 (highest) on their severity, urgency, readiness for change, and potential for change in Hawaii. Also provide an overall rate for each of the constructs.

Substance	Domain	Construct	Severity	Urgency	Readiness for Change	Change Potential in Next 5 Years	Overall	Indicator	
Alcohol	Consequences	Antisocial behavior						Drank on School Property	
		Crime/ Public safety						Alcohol-Related Arrest Rate	
		Morbidity						Alcohol Dependence of Persons 12 & Older in Past Year	
		Mortality						Alcohol Abuse or Dependence of Persons 12 & Older	
	Consumption	Age of initial use							Alcohol-Related Death Rate
		Current use	Early Initiation of Alcohol Use by High School Students						
			Current Use of Alcohol by Persons Aged 12 & Older						
			Current Use of Alcohol by High School Students						
			Current Use of Alcohol by Persons Aged 18 & Older						
			Alcohol Use in Past Month Among Persons Aged 12 to 20						
			Binge Alcohol Use in Past Month Among Persons Aged 12 to 20						
			Current Binge Drinking by Persons 12 & Older						

Substance	Domain	Construct	Severity	Urgency	Readiness for Change	Change Potential in Next 5 Years	Overall	Indicator	
								Current Binge Drinking by Adults Aged 18 & Older	
								Current Binge Drinking by High School Students	
Illicit Drugs	Consequences	Antisocial behavior						Offered/Sold/Given Illegal Drugs on School Property by High School Students	
		Crime/ Public safety						Drug-Related Arrest Rate	
		Morbidity							Drug Abuse or Dependence of Persons 12 & Older
									Drug Dependence of Persons 12 & Older
		Mortality						Deaths From Illicit Drug Use	
	Consumption	Age of initial use						Early Initiation of Marijuana Use by High School Students	
		Current use						Current Use of Marijuana by Persons Aged 12 & Older	
								Current Use of Marijuana by High School Students	
								Current Use of Illicit Drugs Other Than Marijuana by Persons Aged 12 & Older	
								Current Use of Cocaine by High School Students	
								Current Use of Any Illicit Drug by Person Aged 12 & Older	
		Lifetime use						Lifetime Use of Marijuana by High School Students	
						Lifetime Use of Cocaine by High School Students			

Substance	Domain	Construct	Severity	Urgency	Readiness for Change	Change Potential in Next 5 Years	Overall	Indicator
								Lifetime Use of Inhalants by High School Students
								Lifetime Use of Steroids by High School Students
								Lifetime Use of Methamphetamine by High School Students
								Lifetime Use of Ecstasy (MDMA) by High School Students
								Lifetime Use of Heroin by High School Students
								Lifetime Use of Any Drug via Injection by High School Students
Tobacco	Consequences	Mortality						Deaths From Lung Cancer
	Consumption	Age of initial use						Early Initiation of Cigarette Use by High School Students
		Current use						Current Tobacco Use by Persons Aged 12 & Older
								Current Cigarette Smoking by Persons Aged 12 & Older
								Current Use of Cigarettes by High School Students
								Current Use of Cigarettes by Adults Aged 18 & Older
								Current Daily Use of Cigarettes Among High School Students

APPENDIX J
RESULTS OF INDICATOR-LEVEL ANALYSIS

Substance	Indicator	Prevalence Score	Rate of Change	Relative Comparisons	Total Score	Rank
Alcohol	Current Use of Alcohol by Persons Aged 12 and Older	5.0	1.0	3.0	15.0	1
Alcohol	Current Use of Alcohol by Persons Aged 18 and Older	4.0	1.1	3.0	12.9	2
Illicit Drugs	Deaths From Illicit Drug Use	1.0	3.6	3.0	10.8	3
Alcohol	Current Binge Drinking by Adults Aged 18 and Older	2.0	1.2	3.2	7.8	4
Tobacco	Deaths From Lung Cancer	5.0	0.9	1.6	7.4	5
Alcohol	Drank on School Property by High School Students in Past 30 Days	1.0	1.1	5.3	6.0	6
Alcohol	Current Binge Drinking by Persons Aged 12 and Older	2.0	1.0	3.0	5.8	7
Alcohol	Current Heavy Use of Alcohol by Adults Aged 18 and Older	1.0	1.0	4.8	4.8	8
Illicit Drugs	Offered/Sold/Given Illegal Drugs on School Property by High School Students in Past 12 Months	1.0	0.9	4.6	4.1	9
Illicit Drugs	Lifetime Use of Any Drug via Injection by High School Students	1.0	1.4	3.0	4.1	10
Illicit Drugs	Early Initiation of Marijuana Use by High School Students	1.0	0.8	4.4	3.7	11
Illicit Drugs	Lifetime Use of Heroin by High School Students	1.0	1.1	3.0	3.3	12
Tobacco	Early Initiation of Cigarette Use by High School Students	1.0	1.0	3.3	3.3	13
Alcohol	Alcohol-Related Vehicle Death Rate	1.0	1.2	2.8	3.2	14
Alcohol	Alcohol Dependence of Persons Aged 12 and Older	1.0	1.0	3.3	3.1	15
Illicit Drugs	Drug Dependence of Persons Aged 12 and Older	1.0	1.1	2.8	3.0	16
Illicit Drugs	Lifetime Use of Inhalants by High School Students	1.0	1.0	3.0	3.0	17
Alcohol	Alcohol Use in Past 30 Days Among Persons Aged 12 to 20	1.0	1.0	3.0	3.0	18

Substance	Indicator	Prevalence Score	Rate of Change	Relative Comparisons	Total Score	Rank
Alcohol	Binge Alcohol Use in Past 30 Days Among Persons Aged 12 to 20	1.0	1.0	3.0	3.0	19
Illicit Drugs	Lifetime Use of Ecstasy (MDMA) by High School Students	1.0	1.0	3.0	3.0	20
Alcohol	DUI Arrest Rate	1.0	1.0	3.0	3.0	21
Alcohol	Alcohol Abuse or Dependence of Persons Aged 12 and Older	1.0	1.0	3.0	2.9	22
Illicit Drugs	Drug Abuse or Dependence of Persons Aged 12 and Older	1.0	1.0	2.8	2.9	23
Illicit Drugs	Current Use of Marijuana by Persons Aged 12 and Older	1.0	0.9	3.0	2.8	24
Illicit Drugs	Current Use of Any Illicit Drug by Persons Aged 12 and Older	1.0	0.9	3.0	2.7	25
Alcohol	Early Initiation of Alcohol Use by High School Students	1.0	0.8	3.2	2.6	26
Illicit Drugs	Current Use of Cocaine by High School Students	1.0	0.9	2.8	2.5	27
Tobacco	Current Use of Cigarettes by Adults Aged 18 and Older	2.0	0.9	1.4	2.4	28
Tobacco	Current Tobacco Use by Persons Aged 12 and Older	2.0	0.9	1.3	2.3	29
Tobacco	Current Cigarette Smoking by Persons Aged 12 and Older	2.0	0.9	1.3	2.3	30
Illicit Drugs	Lifetime Use of Marijuana by High School Students	1.0	0.8	2.8	2.2	31
Alcohol	Arrest Rate for Alcohol-Related Disorderly Conduct	1.0	1.3	1.6	2.1	32
Illicit Drugs	Current Use of Marijuana by High School Students	1.0	0.7	2.8	1.9	33
Illicit Drugs	Lifetime Use of Steroids by High School Students	1.0	1.2	1.6	1.9	34
Alcohol	Arrest Rate for Liquor Law Violation	1.0	1.0	1.8	1.7	35
Tobacco	Current Use of Smokeless Tobacco by High School Students	1.0	1.0	1.5	1.5	36
Tobacco	Current Daily Use of Cigarettes Among Adults	1.0	0.8	1.6	1.3	37

Substance	Indicator	Prevalence Score	Rate of Change	Relative Comparisons	Total Score	Rank
Illicit Drugs	Lifetime Use of Cocaine by High School Students	1.0	0.8	1.6	1.3	38
Illicit Drugs	Drug-Related Arrest Rate	1.0	0.9	1.3	1.2	39
Alcohol	Chronic Liver Disease Death Rate	1.0	1.0	1.2	1.2	40
Alcohol	Current Use of Alcohol by High School Students	1.0	0.8	1.4	1.1	41
Alcohol	Current Binge Drinking by High School Students	1.0	0.7	1.4	1.0	42
Illicit Drugs	Current Use of Illicit Drugs Other Than Marijuana by Persons Aged 12 and Older	1.0	0.8	1.2	1.0	43
Illicit Drugs	Lifetime Use of Methamphetamine by High School Students	1.0	0.6	1.6	0.9	44
Tobacco	Current Use of Cigarettes by High School Students	1.0	0.6	1.5	0.9	45
Tobacco	Current Daily Use of Cigarettes Among High School Students	1.0	0.4	1.4	0.5	46

**APPENDIX K
DESCRIPTIVE STATISTICS OF 46 INDICATORS
FOR PRIORITY ASSESSMENT**

Construct	Indicator	Year	HI	State Mean	U.S.	Estimated Number of People Affected
Alcohol Consequences						
Antisocial behaviors	Drank on School Property by High School Students in Past 30 Days	2005	8.8	4.8	4.3	5,951
Crime/Public safety	DUI Arrest Rate	2005	3.4	3.9	3.6	4,346
	Arrest Rate for Liquor Law Violation	2005	0.6	2.3	1.6	808
	Arrest Rate for Alcohol-Related Disorderly Conduct	2005	0.5	1.9	1.7	611
Morbidity	Alcohol Abuse or Dependence of Persons Aged 12 and Older	2004	7.4	8.0	7.6	78,590
	Alcohol Dependence of Persons Aged 12 and Older	2004	3.4	3.5	3.3	35,994
Mortality	Chronic Liver Disease Death Rate	2003	4.2	8.8	9.5	52
	Alcohol-Related Vehicle Death Rate	2004	5.2	6.3	5.7	65
Alcohol Consumption						
Age of initial use	Early Initiation of Alcohol Use by High School Students	2005	27.3	24.6	25.6	18,462
Current use	Current Use of Alcohol by Persons Aged 12 and Older	2004	48.9	50.2	50.2	520,204
	Current Use of Alcohol by High School Students	2005	34.8	42.4	43.3	23,534
	Current Use of Alcohol by Persons Aged 18 and Older	2005	51.4	53.2	53.5	501,326
	Current Binge Drinking by Persons Aged 12 and Older	2004	22.8	23.2	22.7	243,117
	Alcohol Use in Past 30 Days Among Persons Aged 12 to 20	2004	26.8	30.1	28.9	41,524
	Binge Alcohol Use in Past 30 Days Among Persons Aged 12 to 20	2004	19.5	20.7	19.4	30,316
	Current Binge Drinking by Adults Aged 18 and Older	2005	16.5	14.3	14.2	160,931
	Current Binge Drinking by High School Students	2005	18.8	26.4	25.5	12,714
	Current Heavy Use of Alcohol by Adults Aged 18 and Older	2005	7.4	4.9	5.1	72,175

Construct	Indicator	Year	HI	State Mean	U.S.	Estimated Number of People Affected
Drug Consequences						
Antisocial behaviors	Offered/Sold/Given Illegal Drugs on School Property by High School Students in Past 12 Months	2005	32.7	25.6	25.4	22,114
Crime/Public safety	Drug-Related Arrest Rate	2005	1.7	4.2	5.1	2,132
Morbidity	Drug Abuse or Dependence of Persons Aged 12 and Older	2004	2.8	3.0	3.0	30,137
	Drug Dependence of Persons Aged 12 and Older	2004	1.8	2.0	1.9	19,594
Mortality	Deaths From Illicit Drug Use	2003	0.7	0.7	0.8	9
Drug Consumption						
Age of initial use	Early Initiation of Marijuana Use by High School Students	2005	12.5	9.2	8.7	8,453
Current use	Current Use of Marijuana by Persons Aged 12 and Older	2004	6.5	6.3	6.1	69,432
	Current Use of Marijuana by High School Students	2005	17.2	19.4	20.2	11,632
	Current Use of Illicit Drugs Other Than Marijuana by Persons Aged 12 and Older	2004	2.8	3.6	3.6	29,924
	Current Use of Cocaine by High School Students	2005	3.0	3.6	3.4	2,029
	Current Use of Any Illicit Drug by Persons Aged 12 and Older	2004	8.0	8.2	8.1	84,766
Lifetime use	Lifetime Use of Marijuana by High School Students	2005	34.6	37.2	38.4	23,399
	Lifetime Use of Cocaine by High School Students	2005	6.5	8.1	7.6	4,396
	Lifetime Use of Inhalants by High School Students	2005	13.0	12.6	12.4	8,792
	Lifetime Use of Steroids by High School Students	2005	2.9	4.1	4.0	1,961
	Lifetime Use of Methamphetamine by High School Students	2005	4.3	6.1	6.2	2,908
	Lifetime Use of Ecstasy (MDMA) by High School Students	2005	6.1	6.2	6.3	4,125
	Lifetime Use of Heroin by High School Students	2005	2.5	2.9	2.4	1,691
	Lifetime Use of Any Drug via Injection by High School Students	2005	2.2	2.5	2.1	1,488

Construct	Indicator	Year	HI	State Mean	U.S.	Estimated Number of People Affected
Tobacco Consequences						
Mortality	Deaths From Lung Cancer	2003	40.7	55.6	54.3	508
Tobacco Consumption						
Age of initial use	Early Initiation of Cigarette Use by High School Students	1999	27.1	26.6	24.7	17,905
Current use	Current Cigarette Smoking by Persons Aged 12 and Older	2004	20.3	26.0	25.2	216,601
	Current Tobacco Use by Persons Aged 12 and Older	2004	22.8	30.7	29.5	242,904
	Current Use of Cigarettes by High School Students	2005	16.4	20.8	23.0	11,091
	Current Use of Cigarettes by Adults Aged 18 and Older	2005	17.0	21.0	20.4	165,808
	Current Use of Smokeless Tobacco by High School Students	1999	2.2	10.4	7.8	1,454
	Current Daily Use of Cigarettes Among Adults	2005	12.1	15.6	14.9	118,016
	Current Daily Use of Cigarettes Among High School Students	2005	4.8	9.2	9.4	3,246

APPENDIX L STATE ADVISORY COUNCIL

The Governor appointed SPF-SIG State Advisory Council (SAC) was created in December of 2006 to guide and ensure the implementation of SPF-SIG initiatives for the State of Hawaii.

Member Affiliation	Representative
Office of the Lt. Governor	James R. Aiona, Jr. Karl Espaldon
Adult Mental Health, DOH	Dr. Kimo Alameda
Center for Substance Abuse Prevention	Allen Ward
City and County of Honolulu	Ernie Martin
Coalition for a Drug Free Hawaii	Cheryl Kameoka
County of Hawaii	Pua Brown
County of Kauai	Theresa Koki
County of Maui	Lori Tsuhako
Department of Education	Dr. Paul Ban
Drug Enforcement Administration	Kevin Pang
Hawaii National Guard	Tamah-Lani Noh
Office of Youth Services	Dixie Thompson
Pacific Resources for Education and Learning	Gabe Nae'ole
Salvation Army, Hawaii Island	Pauline Pavao