

Chapter 2

OVERVIEW OF KEY FINDINGS

In the Fall of 2003, the State of Hawaii Department of Health, Alcohol and Drug Abuse Division (ADAD), and Dr. Renee Pearson from the University of Hawaii collaborated in a study designed to assess prevalence and trends in substance use, treatment needs, and risk and protective factors that predict substance use and abuse among Hawaii students in grades 6 through 12. The results presented in this report are based on responses from approximately 30,000 students in 181 public schools, 41 private schools, and 7 charter schools. Data from the previous *Hawaii Student Alcohol and Other Drug Use Studies* (Klinge & Miller, 1997, 1999; Klinge, 2001; Pearson, 2003; Woo, Yen, & Pollard, 1994) are used to assess trend results. Data from the national *2003 Monitoring the Future Study* (Johnston, O'Malley, Bachman, & Schulenberg, 2004) are used to make nationwide comparisons. As in previous years, the current report focuses on students in grades 6, 8, 10, and 12. Results for all grades surveyed are made available in separate profile reports on ADAD's web site.

Important findings from the *2003 Hawaii Student Alcohol, Tobacco, and Other Drug Use Study* are summarized in four sections in this chapter to provide the reader with a quick overview of the key results contained in this report. Section I highlights lifetime prevalence and trend data. Section II addresses monthly and daily prevalence and trend data. Prevalence refers to the percentage of the sample reporting use of a given substance on one or more occasions in the given period. Lifetime prevalence refers to use of a substance at least once in a student's lifetime, monthly prevalence refers to use of a substance at least once in the past 30 days, and daily prevalence refers to use of a substance on 20 or more occasions in the past 30 days. Eleven separate classes of drugs are distinguished for this report: Marijuana, inhalants, cocaine, methamphetamine, heroin or other opiates, tranquilizers or sedatives, hallucinogens, steroids, "club drugs" (ecstasy/MDMA, GHB, Rohypnol, and ketamine), alcohol, and tobacco. Use of any illicit drug includes the use of marijuana, inhalants, cocaine, methamphetamine, heroin or other opiates, tranquilizers or sedatives, hallucinogens, steroids, ecstasy, GHB, Rohypnol, or ketamine. Use of alcohol refers to the use of wine, beer, or hard liquor. Use of tobacco refers to the use of cigarettes or smokeless tobacco. Throughout this report, "substances" refer to alcohol, tobacco, and illicit drugs. Table 1 is provided to show prevalence of and trends in lifetime, monthly, and daily substance use since 1998, and Figures 1 and 2 illustrate trends in lifetime and monthly substance use since 1987.

Section III summarizes adolescent treatment needs in the State of Hawaii. Treatment needs are determined by using the *Diagnostic and Statistical Manual of Mental Disorders, Third Edition, Revised* (DSM-III-R) criteria, which emphasize negative social and interpersonal consequences resulting from using drugs. Treatment needs are assessed for six classes of substances: alcohol, marijuana, stimulants, depressants and downers, hallucinogens, and club drugs. Table 2 provides estimated statewide, county, and district treatment needs for students in grades 6 through 12 for alcohol and drug abuse. Figure 3 illustrates statewide treatment needs in 2003 and Figure 4 illustrates trends in statewide treatment needs.

Section IV summarizes adolescent prevention needs in the State of Hawaii. First, substance use onset, attitudes and beliefs about drugs, and the social environment are discussed. Next, the comprehensive risk and protective factor framework is explained, and key findings related to community profiles are highlighted. Table 3 provides a summary of critical risk and protective factors that should be the focus of prevention efforts in various communities and among different subgroups.

TABLE 1
Trends in Prevalence of Various Substances
for Sixth, Eighth, Tenth, and Twelfth Graders, 1998-2003

(Entries are percentages %)

	Lifetime					30-Day					Daily				
	1998	2000	2002	2003	'02-'03 change	1998	2000	2002	2003	'02-'03 change	1998	2000	2002	2003	'02-'03 change
Any Illicit Drug, Including Inhalants ^a															
6th Grade	13.7	8.3	9.5	7.5	-2.0	6.7	4.2	5.0	3.8	-1.2	1.0	0.5	0.5	0.4	-0.1
8th Grade	26.3	23.3	22.0	19.2	-2.8	14.7	11.8	11.9	10.2	-1.7	3.4	2.0	2.2	1.5	-0.7
10th Grade	42.9	36.9	40.4	35.1	-5.3	23.6	19.0	20.7	16.6	-4.1	5.3	4.0	4.9	3.3	-1.6
12th Grade	50.3	48.4	49.4	46.9	-2.5	24.5	24.7	23.1	19.8	-3.3	5.7	5.1	5.4	4.8	-0.6
Any Illicit Drug, Excluding Inhalants ^b															
6th Grade	6.6	4.2	5.2	4.3	-0.9	3.7	2.4	2.7	2.2	-0.5	0.7	0.4	0.3	0.3	0.0
8th Grade	20.9	18.5	18.2	14.3	-3.9	13.0	10.3	10.5	8.0	-2.5	3.1	1.9	2.1	1.3	-0.8
10th Grade	40.7	35.2	38.6	32.7	-5.9	23.3	18.6	20.0	15.9	-4.1	5.2	4.0	4.8	3.3	-1.5
12th Grade	48.9	47.8	48.5	46.1	-2.4	24.3	24.5	22.9	19.6	-3.3	5.7	5.1	5.4	4.7	-0.7
Marijuana															
6th Grade	4.9	2.4	2.6	1.5	-1.1	2.6	1.3	1.3	1.0	-0.3	0.4	0.2	0.2	0.1	-0.1
8th Grade	19.2	15.9	15.9	12.1	-3.8	11.8	8.9	9.1	6.6	-2.5	2.4	1.5	1.6	1.0	-0.6
10th Grade	39.2	33.2	35.8	30.5	-5.3	22.3	17.2	18.4	14.8	-3.6	4.7	3.4	4.4	3.0	-1.4
12th Grade	47.7	45.8	46.2	44.4	-1.8	23.0	22.7	21.1	18.4	-2.7	5.2	4.6	4.8	4.4	-0.4
Inhalants															
6th Grade	10.1	5.3	5.6	4.2	-1.4	4.5	2.4	2.8	1.9	-0.9	0.5	0.2	0.2	0.1	-0.1
8th Grade	12.5	9.9	9.1	9.0	-0.1	4.8	3.2	3.4	3.6	+0.2	0.7	0.3	0.3	0.3	0.0
10th Grade	10.2	7.0	8.4	7.9	-0.5	2.4	1.5	2.2	2.0	-0.2	0.6	0.1	0.2	0.3	+0.1
12th Grade	8.1	5.7	7.3	8.8	+1.5	1.4	0.8	1.3	1.3	0.0	0.3	0.1	0.2	0.1	-0.1
Cocaine															
6th Grade	2.0	0.4	0.4	0.5	+0.1	1.3	0.4	0.4	0.4	0.0	0.2	0.1	0.0	0.1	+0.1
8th Grade	4.2	2.2	2.1	1.2	-0.9	2.6	1.2	1.3	0.7	-0.6	0.6	0.2	0.1	0.0	-0.1
10th Grade	5.3	3.5	3.1	3.0	-0.1	2.3	1.3	1.2	0.9	-0.3	0.6	0.1	0.2	0.2	0.0
12th Grade	6.0	5.8	4.5	4.5	0.0	1.8	1.5	1.3	1.5	+0.2	0.1	0.2	0.2	0.2	0.0

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TABLE 1 (continued)
Trends in Prevalence of Various Substances
for Sixth, Eighth, Tenth, and Twelfth Graders, 1998-2003

(Entries are percentages %)

	Lifetime					30-Day					Daily				
	1998	2000	2002	2003	'02-'03 change	1998	2000	2002	2003	'02-'03 change	1998	2000	2002	2003	'02-'03 change
Methamphetamine															
6th Grade	1.8	0.5	0.4	0.2	-0.2	1.0	0.3	0.2	0.2	0.0	0.1	0.0	0.1	0.0	-0.1
8th Grade	4.6	2.3	2.0	0.9	-1.1	3.1	1.1	1.2	0.8	-0.4	0.5	0.1	0.1	0.0	-0.1
10th Grade	6.7	4.5	4.2	2.7	-1.5	3.0	1.6	1.8	1.2	-0.6	0.6	0.3	0.2	0.2	0.0
12th Grade	7.7	5.8	5.3	4.2	-1.1	2.3	1.6	1.8	0.8	-1.0	0.4	0.3	0.3	0.1	-0.2
Heroin or Other Opiates															
6th Grade	1.4	0.2	0.3	0.2	-0.1	0.8	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0
8th Grade	2.7	1.2	1.0	0.7	-0.3	1.8	0.8	0.7	0.5	-0.2	0.4	0.1	0.0	0.0	0.0
10th Grade	2.3	1.3	1.3	1.1	-0.2	1.4	0.5	0.7	0.6	-0.1	0.4	0.1	0.1	0.2	+0.1
12th Grade	2.0	1.8	1.4	1.7	+0.3	0.7	0.5	0.4	0.3	-0.1	0.1	0.2	0.1	0.1	0.0
Sedatives/Tranquilizers															
6th Grade	1.6	0.4	0.5	0.6	+0.1	0.7	0.2	0.1	0.3	+0.2	0.2	0.0	0.0	0.0	0.0
8th Grade	3.0	1.8	1.9	1.2	-0.7	2.1	1.0	0.9	0.6	-0.3	0.4	0.1	0.1	0.1	0.0
10th Grade	3.9	3.2	4.5	3.1	-1.4	1.7	1.2	1.7	1.0	-0.7	0.4	0.2	0.2	0.3	+0.1
12th Grade	3.9	3.8	5.8	5.4	-0.4	1.6	1.6	1.8	1.0	-0.8	0.2	0.2	0.2	0.1	-0.1
Hallucinogens															
6th Grade	1.9	0.4	0.4	0.3	-0.1	0.9	0.3	0.2	0.2	0.0	0.1	0.0	0.0	0.0	0.0
8th Grade	4.6	2.9	2.5	1.1	-1.4	2.8	1.4	1.3	0.7	-0.6	0.5	0.2	0.1	0.1	0.0
10th Grade	9.2	6.4	5.6	3.3	-2.3	3.6	2.2	1.8	1.0	-0.8	0.6	0.3	0.1	0.3	+0.2
12th Grade	11.6	9.9	9.1	6.5	-2.6	3.1	2.0	1.7	1.1	-0.6	0.3	0.3	0.2	0.1	-0.1
Steroids															
6th Grade	2.0	1.3	2.0	1.6	-0.4	1.1	0.8	0.9	0.8	-0.1	0.3	0.1	0.1	0.0	-0.1
8th Grade	2.6	2.2	2.1	1.8	-0.3	1.8	1.3	1.3	1.0	-0.3	0.4	0.2	0.2	0.1	-0.1
10th Grade	2.1	1.7	2.6	2.2	-0.4	1.3	1.0	1.2	1.1	-0.1	0.4	0.2	0.2	0.2	0.0
12th Grade	1.6	1.8	2.8	2.4	-0.4	1.0	0.9	1.1	0.8	-0.3	0.3	0.2	0.3	0.1	-0.2

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TABLE 1 (continued)
Trends in Prevalence of Various Substances
for Sixth, Eighth, Tenth, and Twelfth Graders, 1998-2003

(Entries are percentages %)

	Lifetime					30-Day					Daily				
	1998	2000	2002	2003	'02-'03 change	1998	2000	2002	2003	'02-'03 change	1998	2000	2002	2003	'02-'03 change
Ecstasy/MDMA															
6th Grade	1.4	0.1	0.2	0.2	0.0	0.7	0.1	0.1	0.2	+0.1	0.1	0.0	0.0	0.0	0.0
8th Grade	2.9	2.0	3.0	1.1	-1.9	2.0	1.3	1.7	0.9	-0.8	0.5	0.1	0.2	0.0	-0.2
10th Grade	4.1	5.3	7.2	3.5	-3.7	1.9	2.9	2.3	1.1	-1.2	0.5	0.2	0.2	0.3	+0.1
12th Grade	5.3	8.4	10.6	6.4	-4.2	1.7	3.9	2.5	0.8	-1.7	0.2	0.3	0.2	0.0	-0.2
GHB															
6th Grade	—	—	0.1	0.2	+0.1	—	—	0.1	0.3	+0.2	—	—	0.0	0.0	0.0
8th Grade	—	—	1.4	0.6	-0.8	—	—	1.0	0.5	-0.5	—	—	0.1	0.0	-0.1
10th Grade	—	—	2.0	1.1	-0.9	—	—	1.0	0.7	-0.3	—	—	0.2	0.2	0.0
12th Grade	—	—	2.6	1.2	-1.4	—	—	0.8	0.2	-0.6	—	—	0.0	0.0	0.0
Rohypnol															
6th Grade	—	—	0.2	0.1	-0.1	—	—	0.2	0.4	+0.2	—	—	0.1	0.0	-0.1
8th Grade	—	—	0.9	0.5	-0.4	—	—	0.8	0.4	-0.4	—	—	0.1	0.0	-0.1
10th Grade	—	—	1.3	0.8	-0.5	—	—	0.6	0.5	-0.1	—	—	0.1	0.2	+0.1
12th Grade	—	—	0.9	0.8	-0.1	—	—	0.4	0.3	-0.1	—	—	0.1	0.0	-0.1
Ketamine															
6th Grade	—	—	0.2	0.4	+0.2	—	—	0.1	0.4	+0.3	—	—	0.1	0.1	0.0
8th Grade	—	—	0.8	0.8	0.0	—	—	0.7	0.6	-0.1	—	—	0.1	0.1	0.0
10th Grade	—	—	1.4	0.6	-0.8	—	—	0.8	0.5	-0.3	—	—	0.2	0.2	0.0
12th Grade	—	—	1.7	1.3	-0.4	—	—	0.6	0.4	-0.2	—	—	0.1	0.0	-0.1
Alcohol^c															
6th Grade	31.6	24.2	20.0	13.2	-6.8	12.0	9.1	7.8	3.9	-3.9	0.9	0.7	0.5	0.4	-0.1
8th Grade	52.6	49.2	42.5	36.8	-5.7	25.3	22.1	20.4	14.6	-5.8	2.8	1.6	1.8	1.5	-0.3
10th Grade	72.3	67.1	64.7	59.1	-5.6	37.6	32.5	33.9	27.0	-6.9	3.8	2.4	2.5	2.3	-0.2
12th Grade	81.2	77.2	75.4	72.5	-2.9	45.0	43.2	43.0	36.3	-6.7	3.2	3.5	3.3	2.8	-0.5

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TABLE 1 (continued)
Trends in Prevalence of Various Substances
for Sixth, Eighth, Tenth, and Twelfth Graders, 1998-2003

(Entries are percentages %)

	Lifetime					30-Day					Daily				
	1998	2000	2002	2003	'02-'03 change	1998	2000	2002	2003	'02-'03 change	1998	2000	2002	2003	'02-'03 change
Been Drunk															
6th Grade	5.8	2.9	3.3	2.0	-1.3	—	—	—	—	—	—	—	—	—	—
8th Grade	20.4	17.3	17.1	13.4	-3.7	—	—	—	—	—	—	—	—	—	—
10th Grade	40.7	37.5	37.8	33.4	-4.4	—	—	—	—	—	—	—	—	—	—
12th Grade	55.4	53.0	53.5	51.6	-1.9	—	—	—	—	—	—	—	—	—	—
Any Tobacco Use															
6th Grade	22.2	12.7	10.5	7.2	-3.3	8.6	4.0	3.9	2.9	-1.0	0.9	0.4	0.4	0.3	-0.1
8th Grade	44.1	37.2	28.2	23.1	-5.1	19.1	12.5	10.2	9.0	-1.2	4.9	2.3	1.9	1.6	-0.3
10th Grade	58.0	50.5	43.2	36.7	-6.5	24.9	17.1	14.2	11.6	-2.6	10.6	6.2	4.6	3.4	-1.2
12th Grade	63.6	60.0	50.5	46.1	-4.4	29.7	23.4	19.0	17.0	-2.0	14.5	12.1	8.5	7.2	-1.3
Cigarettes															
6th Grade	21.5	12.2	9.9	6.7	-3.2	8.1	3.8	3.6	2.6	-1.0	0.9	0.4	0.3	0.2	-0.1
8th Grade	43.1	36.3	27.6	22.5	-5.1	18.7	12.1	9.7	8.5	-1.2	4.8	2.2	1.8	1.5	-0.3
10th Grade	57.0	49.5	42.1	35.9	-6.2	24.1	16.6	13.5	11.3	-2.2	10.4	6.1	4.5	3.4	-1.1
12th Grade	62.4	58.8	49.4	45.3	-4.1	28.9	22.6	18.1	16.3	-1.8	14.2	11.8	8.2	6.9	-1.3
Smokeless Tobacco															
6th Grade	3.1	1.2	1.3	0.9	-0.4	1.5	0.5	0.6	0.6	0.0	0.1	0.1	0.0	0.1	+0.1
8th Grade	5.9	3.6	3.5	3.0	-0.5	2.9	1.5	1.5	1.4	-0.1	0.7	0.3	0.2	0.1	-0.1
10th Grade	10.2	5.3	5.9	4.4	-1.5	3.0	1.4	1.8	0.9	-0.9	0.7	0.3	0.3	0.1	-0.2
12th Grade	15.9	10.0	8.0	7.5	-0.5	3.1	2.0	2.2	1.6	-0.6	0.5	0.4	0.5	0.4	-0.1

Approximate Weighted Ns for 2003: 6th grade = 16,649; 8th grade = 17,127; 10th grade = 15,921; 12th grade = 12,824.

NOTES: '—' indicates data not available. *Lifetime* use is defined as use at least once in a student's lifetime. *30-Day* use is defined as use at least once in the past 30 days. *Daily* use is defined as use on 20 or more occasions in the past 30 days.

^a *Any Illicit Drug, Including Inhalants* includes the use of marijuana, inhalants, cocaine, methamphetamine, heroin or other opiates, sedatives or tranquilizers, hallucinogens, steroids, ecstasy/MDMA, GHB, Rohypnol, or ketamine. Ecstasy was added to the survey in 1998. GHB, Rohypnol, and ketamine were added in 2002.

^b *Any Illicit Drug, Excluding Inhalants* includes the use of marijuana, cocaine, methamphetamine, heroin or other opiates, sedatives or tranquilizers, hallucinogens, steroids, ecstasy/MDMA, GHB, Rohypnol, or ketamine. Ecstasy was first added to the survey in 1998. GHB, Rohypnol, and ketamine were first added in 2002.

^c Students were asked if they had tried beer or wine – "more than a few sips," or hard liquor.

LIFETIME PREVALENCE AND TRENDS

At the turn of the century, survey results from the *Hawaii Alcohol, Tobacco, and Other Drug Use Study* began to display a more positive picture of adolescent substance use in the State of Hawaii than was seen in prior survey years. The current survey effort showed a continual decline in Hawaii students' choices to try illicit drugs, alcohol, and tobacco (see Figure 1). Lifetime prevalence reports of any illicit drug use (e.g., use of any illicit drug at least once in a person's lifetime), alcohol use, and tobacco use are currently at, or near, record lows.

Illicit drug use steadily increased in Hawaii from 1991 to 1996 at all grade levels. This trend in illicit drug use continued in 1998 for students in the upper grades, but a decrease in prevalence rates was noted in grade 8, and a stabilization pattern was observed in grade 6. In 2000, lifetime prevalence of any illicit drug use dropped at all grade levels. Lifetime prevalence of any illicit drug use continued on a downward trajectory for grade 8. For all other grades, lifetime prevalence of any illicit drug use rose slightly in 2002, but then decreased again across all grade levels in 2003. In grades 6 and 8, prevalence reports of any illicit drug use has reached record lows; in grades 10 and 12, prevalence reports of any illicit drug use are below those reported in 1996, but remain higher than those noted in 1991. In regards to specific drugs, lifetime prevalence reports either decreased or stabilized in 2003 for virtually every illicit drug (see Table 1). The only drug showing clear evidence of an increase in 2003 was inhalant use among 12th graders. Substantial decreases in lifetime prevalence rates occurred for marijuana, methamphetamine, hallucinogens, and ecstasy/MDMA. Nationwide, overall illicit drug use has been declining for several years among 8th-grade students and had been holding steady among older students until 2002; in 2002, there was a significant decline in overall illicit drug use among older students and the trend continued in 2003. In 2003, the most notable decreases nationwide were in marijuana and ecstasy use. The only observed increase nationwide was among 8th-grade students use of inhalants.

Alcohol use by adolescents in Hawaii, as well as nationwide, had remained fairly stable and high over the years. However, decreases in lifetime prevalence reports of alcohol use began to occur in 2000 for Hawaii students and in 2001 for students nationwide. Lifetime prevalence reports of alcohol use have continued to decline over the years in Hawaii, as well as nationwide.

Lifetime prevalence reports of cigarette use among adolescents reached all-time highs in 1996, both in Hawaii and nationwide. Beginning in 1998, lifetime prevalence reports of cigarette use began an encouraging decline in Hawaii and have continued on that course through 2003. Lifetime prevalence reports of cigarette use in 2003 are currently lower than they were in 1987. Although Hawaii substance use trends often reflect nationwide trends, Hawaii lifetime prevalence reports for alcohol, tobacco, and illicit drugs have been and currently are much lower than nationwide reports.

- Lifetime use of **any illicit drug** decreased from 1987 to 1991, steadily increased in 1993 and 1996, continued to increase in 1998 in the upper grades, and finally decreased across all four grade levels in 2000. In 2002, the proportion of students reporting the use of any illicit drug in their lifetimes continued to decline only in grade 8. The downward trajectory picked up again in 2003 across all grade levels. Student reports of any illicit drug use in their lifetimes are now at record lows in grades 6 and 8, and near record lows in grade 10. In 2003, lifetime prevalence reports of any illicit drug use, including inhalants, in grades 6, 8, 10, and 12 are 8%, 19%, 35%, and 47%, respectively.

FIGURE 1
Trends in Lifetime Prevalence of Any Illicit Drug, Alcohol, and Cigarette Use
for Sixth, Eighth, Tenth, and Twelfth Graders, 1987-2003

Figure 1a: Sixth Grade Lifetime Prevalence

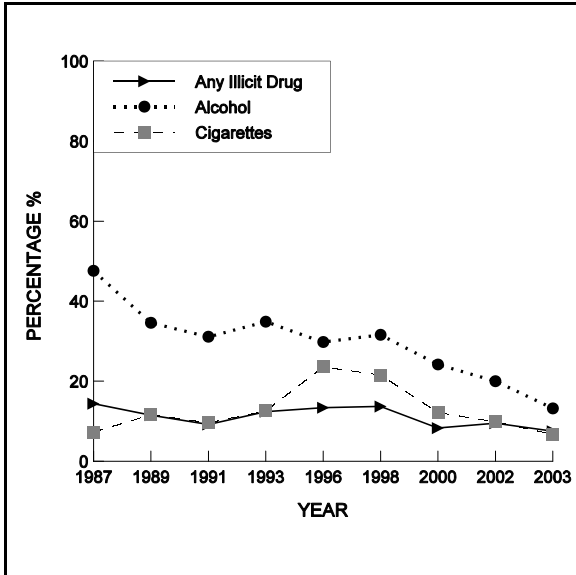


Figure 1b: Eighth Grade Lifetime Prevalence

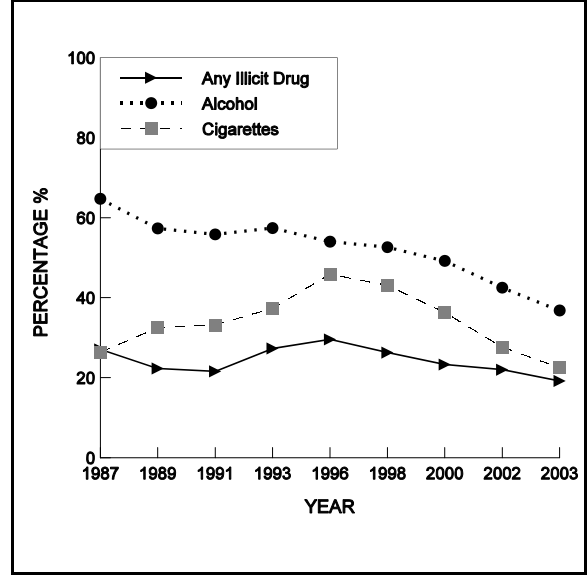


Figure 1c: Tenth Grade Lifetime Prevalence

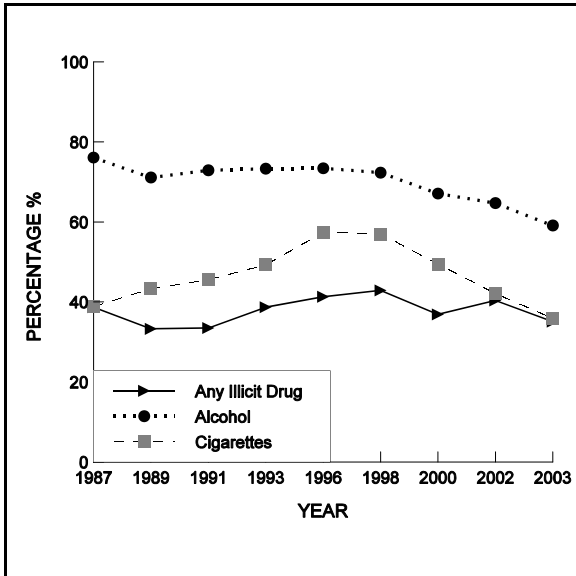
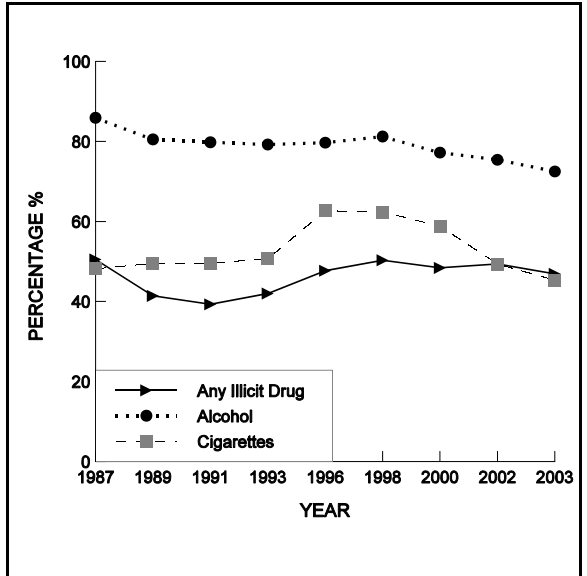


Figure 1d: Twelfth Grade Lifetime Prevalence



NOTES: *Lifetime Prevalence* refers to use of a substance at least once in a student's lifetime. *Any Illicit Drug* refers to the use of marijuana, inhalants, cocaine, methamphetamine, heroin or other opiates, sedatives or tranquilizers, hallucinogens, ecstasy/MDMA, GHB, Rohypnol, ketamine, or steroids at least once in the student's lifetime. Ecstasy was first added to the survey in 1998. GHB, Rohypnol, and ketamine were first added to the survey in 2002.

Chapter 2

- Lifetime prevalence reports of *marijuana* use, the most widely used of the illicit drugs, steadily increased from 1991 to 1998, began to drop in the lower grades in 1998, and declined across all grades in 2000. In 2002, lifetime marijuana prevalence reports held fairly steady for all grades, except the 10th grade, where marijuana use rose 3 percentage points. In 2003, lifetime marijuana prevalence reports dropped in all grades. Nationwide, lifetime marijuana prevalence reports are also down in 2003. Hawaii prevalence reports for marijuana use in grades 8, 10, and 12 (12%, 31%, and 44%, respectively) are lower than nationwide reports in the same grades (18%, 36%, and 46%).
- *Inhalants* are the most popular drugs for 6th graders, with 4% of these students reporting that they have tried inhalants to get high at some point in their lifetimes. Prevalence rates for inhalant use decreased sharply from 1998 to 2000 in all grades. In 2002, inhalant use remained steady in grade 6, dropped modestly in grade 8, and increased in grades 10 and 12. In 2003, inhalant use increased again in grade 12, but decreased slightly or stabilized in other grades. Nationwide, inhalant use rose slightly in grade 8, but continued to decline in grades 10 and 12. Hawaii lifetime prevalence reports in 2003 for inhalant use in grades 8, 10, and 12 (9%, 8%, and 9%, respectively) remain much lower than nationwide reports in the same grades (16%, 13%, and 11%).
- Over the years, *hallucinogens* have been the second most popular illicit drug among older students. In 2002, ecstasy started to become more popular than hallucinogens; lifetime prevalence reports for use of hallucinogens are currently very similar to lifetime prevalence reports for use of ecstasy. Similar to many of the other illicit drugs, lifetime prevalence reports of hallucinogens started on a downward trajectory in 1998 in some of the grades. In 2003, the decline in hallucinogen use continues with substantial decreases noted in grades 8, 10, and 12. Nationwide, lifetime prevalence reports of hallucinogens in 2003 are below those for 2001 in all three grades surveyed. Hawaii lifetime prevalence reports of hallucinogens for grades 8, 10, and 12 (1%, 3%, and 7%, respectively) are below nationwide reports in the same grades (4%, 7%, and 11%).
- Reported use of *ecstasy/MDMA* had been on the rise from 1998 to 2002, but finally dropped in 2003 in grades 8, 10, and 12. Nationwide, lifetime prevalence reports of ecstasy use started on a downward trajectory in 2002 and continued on that course in 2003 in grades 8 (3%), 10 (5%), and 12 (8%).
- Lifetime prevalence reports for *methamphetamine* use have been showing a significant decline over the last few years in grades 8, 10, and 12. In 2003, lifetime prevalence reports of methamphetamine use in grades 8, 10, and 12 are down to 1%, 3%, and 4%, which are much lower than 1989 rates of 6%, 10%, and 12%. Nationwide, lifetime prevalence reports of methamphetamine use have been gradually declining over the years in grades 8, 10, and 12. Hawaii reports for having tried methamphetamine are currently at least 2 percentage points lower than nationwide prevalence reports in all grades surveyed.

- Lifetime prevalence reports for the use of *cocaine* and *heroin or other opiates* had been declining, but over the last few years have started to stabilize. In 2003, cocaine prevalence reports in Hawaii are down in grade 8 from 2% to 1%, but are unchanged in all other grades. Lifetime prevalence rates for cocaine use by Hawaii students in grades 8, 10, and 12 are currently 1%, 3%, and 5%. Almost twice as many students nationwide, compared to those in Hawaii, have tried cocaine. Nationwide, 4% of 8th graders, 5% of 10th graders, and 8% of 12th graders reported having tried cocaine at least once. Lifetime prevalence for heroin or other opiates by Hawaii students in grades 8, 10, and 12 are 1%, 1%, and 2%. Similar to Hawaii reports, nationwide reports for heroin use are less than 2% across all grades surveyed.
- One of the few increases in illicit drug use reported in 2002 was for use of *sedatives or tranquilizers*, which had been declining in recent years. In 2003, lifetime prevalence reports for sedatives and tranquilizers remained unchanged in grades 6 and 12 but decreased by 1 percentage points in grades 8 and 10. Current prevalence reports in grades 8, 10, and 12 are 1%, 3%, and 5%, respectively. Nationwide, prevalence rates for this drug classification had been gradually increasing over the years; significant decreases in the upper grades finally occurred in 2003.
- *Steroid* use in Hawaii has been decreasing over the years and has remained lower than nationwide reports. In 2003, steroid use remains low and relatively unchanged. Nationwide, steroid use has been at historically high levels, but began to stabilize in 2002. Hawaii lifetime prevalence rates for steroid use among students in grades 8, 10, and 12 (2% across all grades) remain lower than nationwide reports by students in the same grades (3%, 3%, and 4%).
- Lifetime prevalence for *alcohol* use remained relatively unchanged from 1989 to 1998 for students in the upper grades. A substantial decrease occurred in 2000 across all grades and has continued through 2003. In 2003, lifetime prevalence reports of any alcohol use in grades 6, 8, 10, and 12 are 13%, 37%, 59%, and 73%, down from 2002 reports of 20%, 43%, 65%, and 75%. Nationwide lifetime prevalence reports of alcohol use have also been on a downward trajectory, but remain slightly higher than Hawaii prevalence reports.
- Reports of *drunkenness* are down in 2003, with 2% of 6th graders, 13% of 8th graders, 33% of 10th graders, and 52% of 12th graders in Hawaii reporting that they have been drunk at least once in their lifetimes. Nationwide reports of drunkenness have all been declining across all grades but remain higher than Hawaii reports.
- *Cigarette* use among adolescents was at an all-time high in 1996, both in Hawaii and nationwide. An encouraging decline in cigarette use started in 1998 and has continued on that course over the years. In 2003, 7% of 6th graders, 23% of 8th graders, 36% of 10th graders, and 45% of 12th graders reported trying cigarettes. Lifetime cigarette prevalence reports in 2003 have reached record lows. The continued decrease in prevalence reports of cigarette use corresponds to national trends and, like most substances, Hawaii cigarette prevalence reports remain lower than nationwide reports.

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- **Smokeless tobacco** has been tried by only 1% of 6th graders, 3% of 8th graders, 4% of 10th graders, and 8% of 12th graders, which is substantially less than nationwide reports in grades 8 (11%), 10 (15%), and 12 (17%).

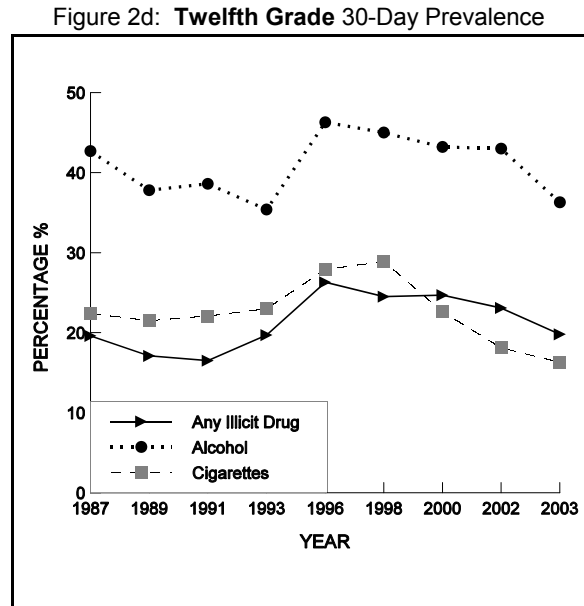
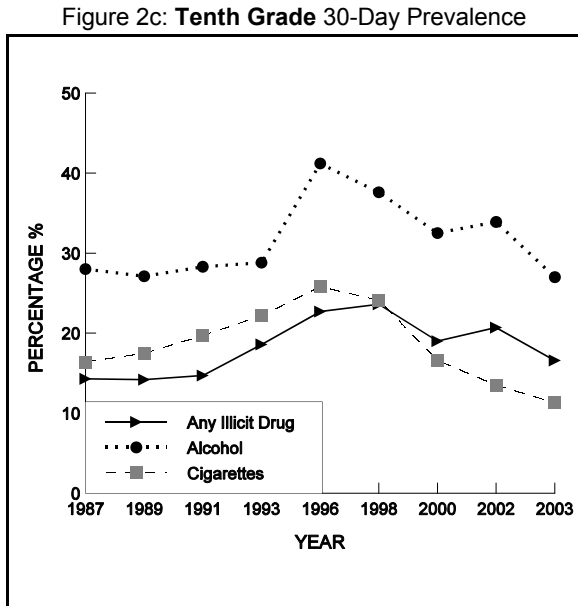
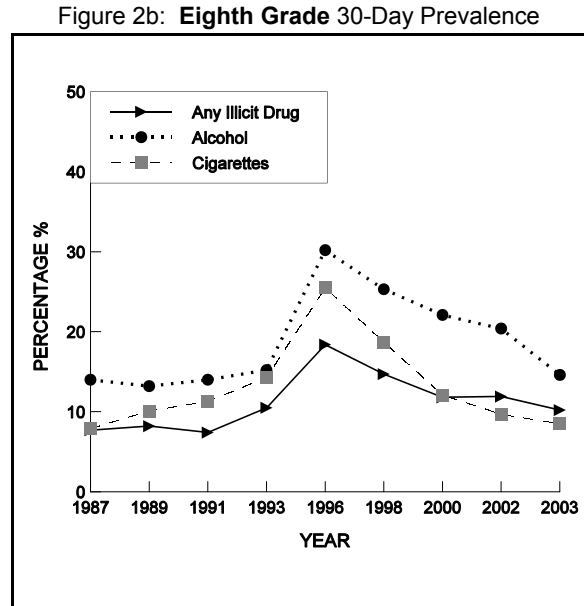
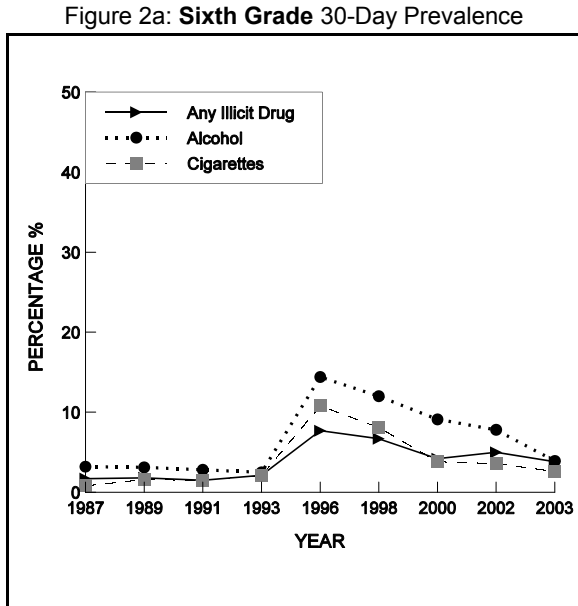
MONTHLY AND DAILY PREVALENCE AND TRENDS

From 1993 to 1996, monthly prevalence reports in Hawaii increased substantially for most illicit drugs, across all grades (see Figure 2). This rise halted in 1998, with decreases in monthly prevalence reports beginning in 2000 and continuing in 2003 for most illicit drugs, offsetting the large increase in 1996. In 2003, monthly prevalence reports of any illicit drug use are down across all grades. The decrease in 2003 is primarily a result of substantial decreases in monthly marijuana and ecstasy prevalence reports in grades 8, 10, and 12, and decreases in monthly inhalant prevalence reports in grade 6. In the upper grades, modest decreases also occurred in monthly methamphetamine, sedatives or tranquilizer, and hallucinogen use. Monthly prevalence reports for cocaine, heroin or other opiates, and steroids remained fairly stable across most grades. Monthly prevalence reports of alcohol and cigarette use started on a downward trajectory in 1998 and continues on that course in 2003. Nationwide, monthly prevalence reports for various illicit drugs and alcohol remained fairly stable in 2003, with the exception of decreases noted for hallucinogen use by 12th graders and ecstasy use by 8th, 10th, and 12th graders; nationwide monthly cigarette use declined only in the upper grades.

Most substances are not used on a daily basis by Hawaii students except for marijuana, alcohol, and cigarettes. In 2003, daily illicit drug prevalence rates remained stable in grade 6, and decreased slightly in other grades primary as the result of a decline in daily marijuana prevalence rates. Daily alcohol prevalence rates have been on a very gradual decline over the years in all grades. Daily cigarette prevalence rates decreased substantially in 2000, and have continued on that course, with substantial decreases noted in the upper grades. Nationwide, daily alcohol use has remained relatively stable, but daily cigarette use has continued to drop over the years.

- Monthly use of **any illicit drug** increased drastically for all grade levels in 1996 and began to drop back down by 2000. In 2003, monthly prevalence reports for any illicit drug use dropped across all grades in Hawaii and are currently at 4% in grade 6, 10% in grade 8, 17% in grade 10, and 20% in grade 12. Monthly prevalence rates for any illicit drug use are lower in Hawaii than nationwide. Nationwide, monthly prevalence rates for any illicit drug use in grades 8, 10, and 12 are 12%, 21%, and 25%, respectively. Daily use of any illicit drug are currently at all time lows in Hawaii in grades 6, 8, 10, and 12 (0.4%, 1.5%, 3.3%, and 4.8%).
- Table 1 shows that reports of monthly illicit drug use have changed the most for marijuana and ecstasy. Reports of monthly methamphetamine, sedatives or tranquilizers, and hallucinogens decreased by 1 percentage point in the upper grades. All other reports of monthly illicit drug use have remained relatively unchanged. Table 1 also shows reports of any daily illicit drug use have dropped slightly as a result of a decline in daily marijuana use; daily use of other illicit drugs remain stable and virtually non-existent in the student population.

FIGURE 2
Trends in Monthly (30-Day) Prevalence of Any Illicit Drug, Alcohol, and Cigarette Use
for Sixth, Eighth, Tenth, and Twelfth Graders, 1987-2003



NOTES: *Monthly (30-Day) Prevalence* refers to use of a substance at least once in the past 30 days. *Any Illicit Drug* refers to the use of marijuana, inhalants, cocaine, methamphetamine, heroin or other opiates, sedatives or tranquilizers, hallucinogens, ecstasy/MDMA, GHB, Rohypnol, ketamine, or steroids at least once in the past 30 days. Ecstasy was first added to the survey in 1998. GHB, Rohypnol, and ketamine were first added to the survey in 2002.

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- The percentages of 8th, 10th and 12th graders in Hawaii who reported using *marijuana* in the past 30 days decreased by at least 3 percentage points from 2002 to 2003. In 2003, 1% of 6th graders, 7% of 8th graders, 15% of 10th graders, and 18% of 12th graders reported using marijuana in the past 30 days. Daily marijuana use started to drop in 1998 and continued to drop across all grades in 2000, but rose slightly in grade 10 in 2002. In 2003, reports of daily marijuana use among Hawaii students in grades 8, 10, and 12 are at record lows at 1%, 3%, and 4%, respectively. Nationwide, daily marijuana prevalence rates remain stable and are 1%, 4%, and 6% in grades 8, 10, and 12, respectively.
- Hawaii reports of monthly *ecstasy* use started to drop in 2002 in grade 12, but remained fairly stable in other grades. In 2003, decreases in monthly ecstasy use occurred in grades 8, 10 and 12 – each decrease representing a near 50% decrease in prevalence reports. Monthly ecstasy prevalence reports were 2% in grades 8 and 10, and 3% in grade 12 back in 2002. In 2003, monthly ecstasy prevalence reports dropped to 1% in grades 8, 10, and 12. Monthly ecstasy prevalence reports also dropped nationwide in all grades surveyed and are currently at 1%.
- Monthly *alcohol* prevalence reports peaked in 1996 and started on a downward trajectory in 1998. Although 2002 witnessed a slight increase in monthly alcohol reports among 10th graders, in 2003, monthly alcohol prevalence reports headed back down for all grades surveyed. Reports of monthly alcohol use in 2003 are substantially lower than 1996 reports. Monthly prevalence reports of alcohol use in grades 6, 8, 10, and 12 are currently 4%, 15%, 27%, and 36%. Nationwide, monthly prevalence reports of alcohol use in grades 8, 10, and 12 are 20%, 35%, and 48%. Thus, monthly alcohol prevalence reports in Hawaii are lower than nationwide reports.
- Monthly *cigarette* use reached its peak in 1996 in grades 6, 8, and 10, but has been dramatically dropping ever since. Among 12th graders, monthly cigarette use peaked in 1998, and has been declining ever since. Nearly half as many 12th graders reported monthly cigarette use in 2003 (16%), compared to 1998 (29%). In 2003, only 3% of 6th graders, 9% of 8th graders, 11% of 10th graders, and 16% of 12th graders indicated that they smoked cigarettes in the past month. Nationwide, monthly cigarette prevalence reports have also been on the decline, but remain higher than those reported in Hawaii.
- Hawaii reports of *daily alcohol* and *daily cigarette* use are lower in 2003 than in all previous survey years. Daily alcohol use rates in Hawaii have gradually decreased over the years. Back in 1996, daily alcohol prevalence reports in grades 6, 8, 10, and 12 were 1%, 3%, 4%, and 5%. In 2003, daily alcohol prevalence reports for the same grades are 0%, 2%, 2%, and 3%. Daily cigarette use rates have declined more dramatically over the years. Back in 1996, daily cigarette prevalence reports in grades 6, 8, 10, and 12 were 1%, 7%, 11%, and 14%; compared to 2003 reports of 0%, 2%, 3%, and 7%. Nationwide reports of daily alcohol use remain stable and are fairly similar to those noted in Hawaii. Nationwide reports of daily cigarette use have been declining, but are currently twice as high as those noted in Hawaii.

TABLE 2

Summary of Statewide Treatment Needs for Students in Grades 6 Through 12, by County, District, and School Type: Estimated Number and Percentage of Students Needing Treatment for Alcohol and Drug Abuse, 2003

COUNTY/DISTRICT INFORMATION	Alcohol Abuse <i>Only</i> Treatment Needs		Drug Abuse <i>Only</i> Treatment Needs		<i>Both</i> Alcohol and Drug Abuse Treatment Needs		ANY SUBSTANCE ABUSE TREATMENT NEEDS		<i>Any</i> Alcohol Abuse Treatment Needs		<i>Any</i> Drug Abuse Treatment Needs		
	Total N	%	n	%	n	%	n	%	n	%	n	%	n
City & County of Honolulu	61,096	2.0%	1,203	1.8%	1,073	2.4%	1,493	6.2%	3,759	4.4%	2,670	4.1%	2,486
Honolulu District	16,542	1.7%	289	1.4%	238	2.3%	378	5.5%	902	4.0%	661	3.6%	600
Central District	16,046	1.8%	291	2.0%	324	1.9%	309	5.7%	922	3.7%	595	3.8%	614
Leeward District	19,921	2.0%	399	1.7%	347	2.3%	467	6.1%	1,208	4.3%	858	3.9%	783
Windward District	8,587	2.6%	224	1.9%	164	4.0%	339	8.5%	727	6.5%	556	5.7%	489
Hawaii County/District	12,734	3.5%	450	2.2%	275	4.7%	602	10.4%	1,330	8.2%	1,040	6.6%	846
Kauai County/District	5,632	1.6%	88	1.9%	104	3.5%	199	7.0%	392	5.1%	286	5.2%	294
Maui County/District	10,976	3.0%	326	2.7%	301	3.8%	419	9.5%	1,044	6.8%	746	6.3%	693
All Public Schools	90,438	2.3%	2,067	1.9%	1,753	3.0%	2,713	7.2%	6,525	5.2%	4,742	4.8%	4,319
Private/Charter Schools	22,871	1.9%	433	0.9%	208	2.9%	660	5.7%	1,301	4.8%	1,088	3.7%	845
TOTAL STATEWIDE	113,309	2.2%	2,500	1.7%	1,961	3.0%	3,373	6.9%	7,826	5.1%	5,830	4.6%	5,164

NOTES: A substance abuse/dependency diagnosis is calculated based on the student's response to items that correspond with the DSM-III-R criteria, which assess a variety of negative consequences related to substance use. Students responded to abuse and dependency questions for each of the following substances: alcohol, marijuana, stimulants (cocaine, methamphetamine, speed), depressants or downers (sedatives, heroin), hallucinogens, and club drugs (ecstasy, GHB, Rohypnol, ketamine). *Substance abuse* is indicated by at least one of the following: (1) continued use of the substance despite knowledge of having a persistent or recurrent problem(s) at school, home, work or with friends because of the substance, or (2) substance use in situations in which use is physically hazardous (e.g., drinking or using drugs when involved in activities that could have increased the student's chance of getting hurt). For the student to be classified as abusing a substance, at least one of the two abuse symptoms must have occurred more than once in a single month or several times within the last year. In addition, the student must not meet the criteria for dependency on that substance. *Substance dependency* is the most severe diagnosis. Substance dependency is indicated by the student's response to nine different diagnostic criteria for dependency (e.g., marked tolerance, withdrawal symptoms, use of substances to relieve/avoid withdrawal symptoms, persistent desire or effort to stop use, using more than intended, neglect of activities, great deal of time spent using or obtaining the substance, inability to fulfill roles, drinking or using substances despite having problems). A student is considered dependent on the substance if he/she marked "yes" to at least three DSM-III-R symptoms and if he/she indicated that at least two of the symptoms occurred several times. The abuse estimates above include students who *either* abuse or are dependent on a particular substance. Only public school students are included in the county and district estimates.

TREATMENT NEEDS

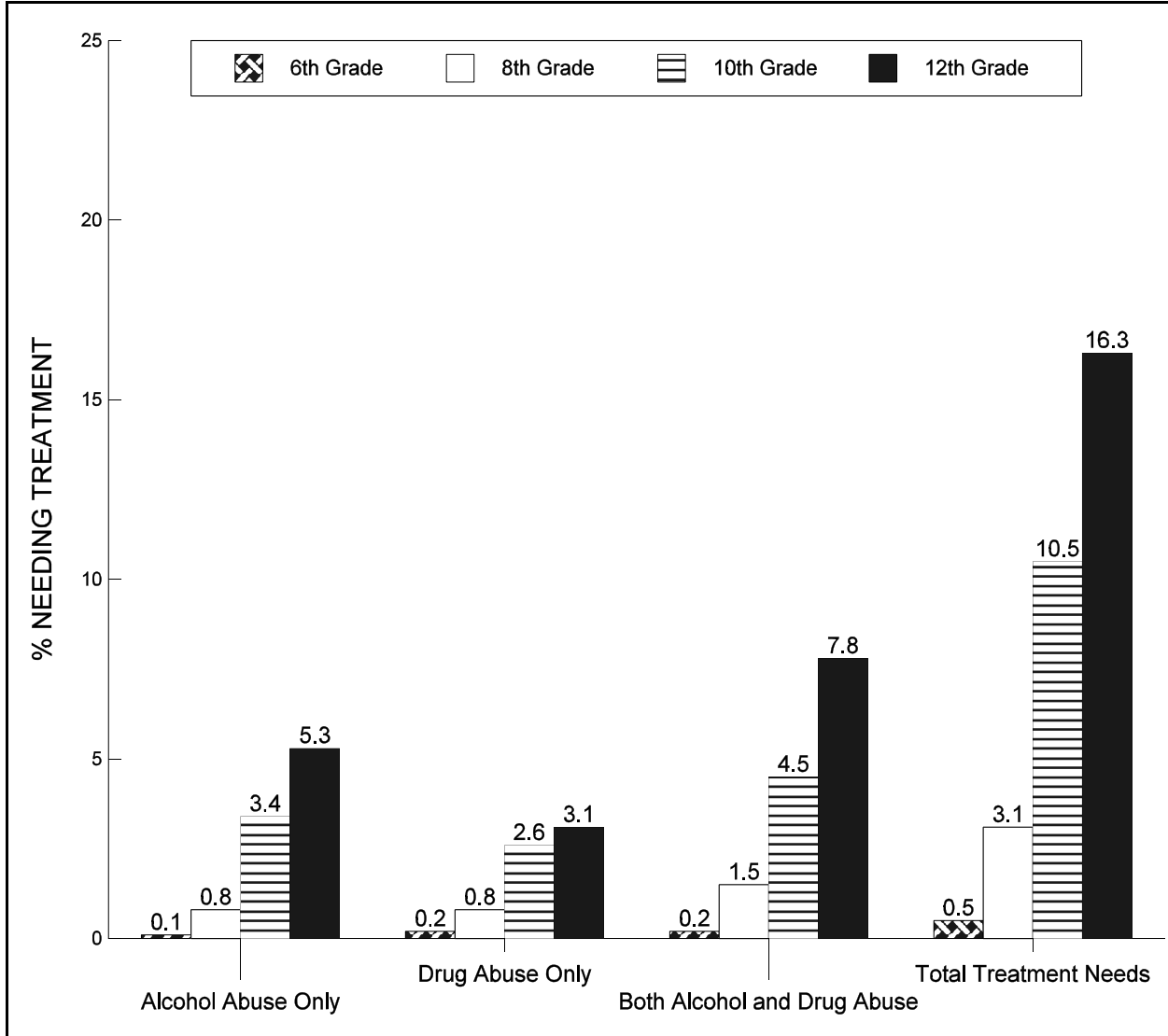
Beginning in 1996, adolescent treatment needs in the State of Hawaii have been assessed in the survey by applying the DSM-III-R criteria for substance abuse, which emphasize negative social and interpersonal consequences resulting from using alcohol and illicit drugs. The present study used the DSM-III-R criteria to determine adolescent treatment needs for alcohol, marijuana, stimulants (cocaine, methamphetamine, or speed), depressants (downers, sedatives, or heroin), hallucinogens, and club drugs (ecstasy, GHB, Rohypnol, or ketamine). Two types of diagnoses are distinguished by the DSM-III-R criteria: dependence and abuse. Dependence is the most severe diagnosis and includes physiological symptoms, such as tolerance and withdrawal, and behavioral symptoms, such as impaired control over the use of a substance. Abuse is a residual category for those who do not meet the criteria of dependence but who use substances in dangerous situations or who use substances despite having problems related to their substance use. Because of the high likelihood that substance abuse by adolescents will turn into a dependency problem, students are considered needing treatment, or at least screening for treatment, if they meet either a dependence or abuse diagnosis for any of the six substance classifications.

Table 2 shows that 6,525 public school students in grades 6 through 12 (7%) are estimated to need treatment for alcohol and/or drug abuse. Statewide treatment needs for the combined public, private, and charter school population in grades 6 through 12 are estimated to be 7,826 (7%), which is less than estimated statewide treatment needs in 2002 (11%), 2000 (13%), 1998 (16%), and 1996 (10%). As in previous years, treatment needs are highest in Hawaii and Maui Counties (10% each) and lowest in the City & County of Honolulu (6%) and Kauai County (7%). The City & County of Honolulu, however, has a much larger number of students with treatment needs ($n = 3,759$) than Hawaii ($n = 1,330$), Kauai ($n = 392$), or Maui Counties ($n = 1,044$). At the district level, Windward District exceeds other districts on Oahu in regards to the proportion of students needing treatment (9%); all other districts on Oahu have 6% of their students needing treatment. Although the State of Hawaii has effective residential, outpatient, and school-based treatment programs for adolescents, the majority of the students diagnosed with a substance abuse problem from the current study have failed to utilize a treatment program. However, the proportion of students reporting that they have utilized a treatment facility has nearly doubled since 2002. In 2003, 23% of the 6th graders, 25% of the 8th graders, 18% of the 10th graders, and 15% of the 12th graders who met the criteria for having an alcohol or drug abuse problem reported that they have received help from a treatment program.

- Using the DSM-III-R criteria, estimated statewide treatment needs for public school students in grades 6 through 12 are as follows: 2,067 students (2%) for alcohol abuse only; 1,753 students (2%) for drug abuse only; 2,713 students (3%) for both alcohol and drug abuse; and 6,525 students (7%) for any substance abuse. Adding private school students to the statewide treatment needs estimates brings the total number of students needing treatment for any substance abuse to 7,826, or 7% of the total student population. Thus, approximately 1 out of 14 students in grades 6 through 12 is estimated to need treatment for alcohol and/or drug abuse.
- In 2003, 1% of 6th graders, 3% of 8th graders, 11% of 10th graders, and 16% of 12th graders met the criteria of needing substance abuse treatment. As seen in Figure 3, approximately half of the students who need treatment require help for *both* alcohol and drug abuse rather than for either of these alone.

FIGURE 3
Statewide Treatment Needs for Alcohol and Drug Abuse:
Percentage of Students Diagnosed as Abusers of or Dependent on Alcohol and/or Drugs
Based on the DSM-III-R Criteria, by Grade, 2003

(Entries are percentages %)



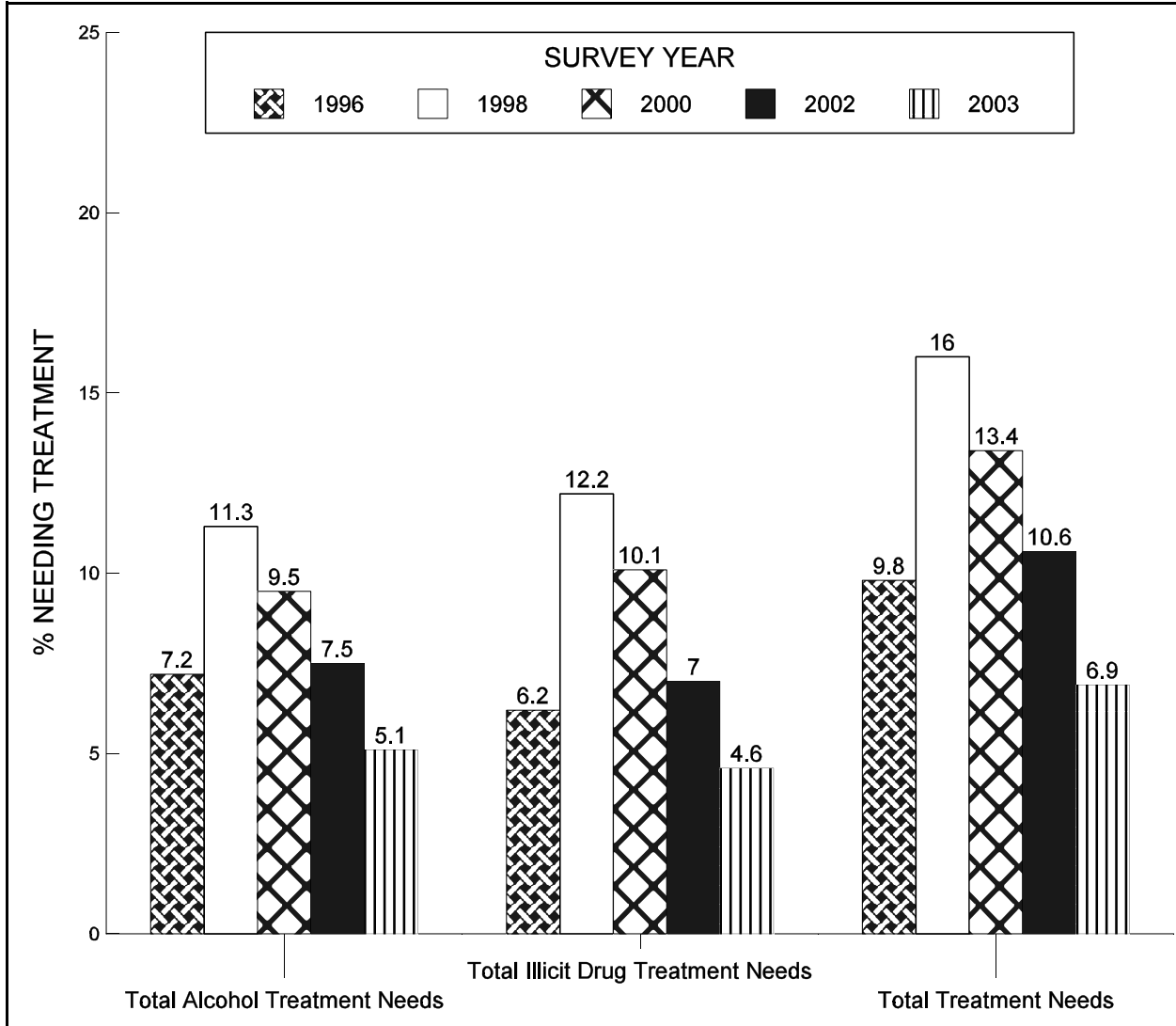
NOTES: *Alcohol Abuse Only* includes students classified as dependent on or abusers of alcohol according to the DSM-III-R criteria, but who are not dependent on or abusers of illicit drugs. *Drug Abuse Only* includes students classified as dependent on or abusers of at least one illicit drug according to the DSM-III-R criteria, but who are not dependent on or abusers of alcohol. Illicit drug dependency/abuse is assessed for marijuana, stimulants, depressants, “club drugs” (ecstasy/MDMA, GHB, Rohypnol, ketamine), and hallucinogens. *Both Alcohol and Drug Abuse* includes students classified as dependent on or abusers of both alcohol and illicit drugs. *Total Treatment Needs* includes students who are classified as dependent on or abusers of alcohol, illicit drugs, or both according to the DSM-III-R criteria.

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- Total alcohol treatment needs in grades 8, 10, and 12 are 2%, 8%, and 13%, respectively. Total illicit drug treatment needs are only slightly lower than alcohol treatment needs in the upper grades and are largely a function of marijuana abuse. The percentages of students needing treatment for marijuana abuse in grades 8, 10, and 12 are 2%, 6%, and 10%, respectively. Treatment needs for other illicit drugs are 1% or less in all grades (see Chapter 6).
- Hawaii and Maui Counties have the largest proportion of students in grades 6 through 12 estimated to need treatment (10% each), followed by Kauai County (7%) and the City & County of Honolulu (6%). The City & County of Honolulu, however, has a much larger *number* of students in grades 6 through 12 estimated to need treatment ($n = 3,759$) than Hawaii ($n = 1,330$), Maui ($n = 1,044$), or Kauai Counties ($n = 392$). At the district level, Windward District exceeds other districts on Oahu in regards to treatment needs (9%); all other districts on Oahu have treatment needs estimated at 6% (see Table 2).
- Statewide treatment needs for alcohol and/or drug abuse increased drastically from 1996 to 1998 but dropped in 2000 and continued to drop in 2002 and 2003 (see Figure 4). Total estimated treatment needs for students in grades 6 through 12 were 10% in 1996, 16% in 1998, 13% in 2000, and 10% in 2002. Statewide treatment needs in grades 6 through 12 are currently at 7%.
- Treatment needs dropped across all counties in 2003, bringing county-level treatment needs below treatment needs reported in 1996. Kauai County witnessed the greatest decrease in treatment need estimates in 2003. Treatment need estimates in Kauai County were 11% in 1996, jumped to 17% in 1998, decreased only slightly in 2000 (16%), and then dropped substantially in both 2002 (13%) and 2003 (7%). Treatment need estimates in Hawaii County followed a similar pattern going from 14% in 1996, up to 21% in 2000, down slightly in 2002 (20%), and then dropping significantly in both 2002 (14%) and 2003 (10%). Maui County also followed this pattern going from 13% in 1996, up to 18% in 1998, and then down to 17% in 2000, 14% in 2002, and 10% in 2003. Treatment need estimates in the City & County of Honolulu were only 8% in 1996, nearly doubled in 1998 (15%), and then dropped in 2000 (12%), 2002 (9%), and 2003 (6%).
- Over the years, certain subgroups of the population have consistently had higher treatment needs than other subgroups. Consistent with previous years, females in grades 8 and 10 had slightly higher treatment needs than males in grades 8 and 10. Treatment needs have been higher among males than females in grade 12. In 2003, 12th-grade females surpassed 12th-grade males in regards to total treatment needs. Native Hawaiian and White students have consistently had higher treatment needs than Japanese, Filipino, and Chinese students. This trend continues in 2003, although decreases in treatment needs were most substantial among Native Hawaiian and White students.
- In 2003, 23% of the 6th graders, 25% of the 8th graders, 18% of the 10th graders, and 15% of the 12th graders who met the criteria for having an alcohol or drug abuse problem reported they received help from a treatment program. These percentages are approximately twice as high as those reported in 2002.

FIGURE 4
Trends in Statewide Treatment Needs:
Percentage of Students in Grades 6 Through 12 Diagnosed as Needing Treatment
for Alcohol and/or Drug Abuse Based on the DSM-III-R Criteria, 1996-2003

(Entries are percentages %)



NOTES: Statewide estimates provided in the graphs are for public and private schools students in grades 6 through 12 who need treatment for substance abuse based on the DSM-III-R screening criteria. *Total Alcohol Treatment Needs* includes students who need treatment for dependency on or abuse of alcohol. *Total Illicit Drug Treatment Needs* includes students who need treatment for dependency on or abuse of one or more illicit drug (marijuana, stimulants, depressants, hallucinogens, or club drugs). *Total Treatment Needs* for any substance abuse includes students who are dependent on or abusers of alcohol, illicit drugs, or both alcohol and illicit drugs, according to the DSM-III-R criteria. Some students who need treatment for alcohol abuse also need treatment for illicit drug abuse. Thus, the percentages for total alcohol treatment needs and total illicit drug treatment needs will not add up to the percentages reflecting total treatment needs.

PREVENTION NEEDS

For decades, student surveys have addressed core predictor variables such as age of onset, adolescent attitudes and beliefs about substances, societal influences, and demographic background of the students. Recent attention, however, has turned to the role of risk and protective factors in the domains of community, family, school, and peer-individual to explain substance use initiation and continuation, and to help communities prioritize prevention efforts. The risk and protective factor framework addresses measurable risk factors, which are precursors for drug and alcohol problems, and measurable protective factors, which “moderate or buffer” the impact of risk factors by improving coping, adaptation, and competence. This section of the chapter overviews factors related to substance use that are discussed in Chapters 7 through 10, and addresses the risk and protective framework addressed in Chapter 11.

- Across all grade levels, incidence of alcohol use is higher, and onset is earlier, than for all other substances. **Age of onset for alcohol and tobacco** use correlates with the use of every illicit drug surveyed, the total number of different drugs tried, amount of marijuana use, and substance abuse. Alcohol is the only substance having a high initiation rate clearly beginning by 9 years old or younger (on average, 10% reported having tried alcohol by 9 years of age). The only other substance that has onset clearly beginning by 9 years old or younger is cigarettes. The majority of students who reported using cigarettes indicated that use began at age 9 or earlier. Onset of drunkenness varies by grade level reporting: The majority of 8th graders reported they were first drunk at age 12; the majority of 10th graders reported they were first drunk at age 14; and the majority of 12th graders reported they were first drunk at age 16. The recommended age of alcohol and tobacco education, based on retrospective reports, is by age 9, with education efforts continually reinforced in years that follow.
- **Onset of illicit drugs** occurs as early as 9 years of age, but most typically between the ages of 13 and 16. The use of marijuana, however, is begun by 9 or 10 years of age, with, on average, 8% of the students reporting use of marijuana by the time they were 12 years old and 15% of the upper grade students reporting use by the time they were 13 years old. Approximately one third of the students reported they had used marijuana by the time they were 15 years old. Retrospective reports of other illicit drug use indicate usage does not typically begin before age 13. However, by age 15, approximately 3% of the 10th and 12th graders reported having tried an illicit drug other than marijuana.
- The majority of students, in all grades, view the occasional use of illicit drugs, weekend binge drinking, and daily cigarette smoking as causing a lot of harm to the user. **Beliefs about harmfulness** associated with various illicit drugs increased in 2003 in the lower grades, but tapered off or dropped slightly in the upper grades for several of the illicit drugs. The exceptions were for marijuana and ecstasy risk perceptions where increases were noted across all grade levels in 2003. The proportion of students indicating a lot of harm associated with alcohol and cigarettes was climbing consistently over the years for all grades, but started to decline in 2000. In 2003, risk perceptions for alcohol and cigarettes are up in the lower grades, but have continued to decrease slightly or stabilize in the upper grades. Hawaii has a greater proportion of students associating harm with various substances than nationwide.

- In 2003, *perceived availability* of illicit drugs decreased for each of the illicit drugs among students in grades 8 and 10; and dropped for marijuana, hallucinogens, and ecstasy in grade 12. In grade 6, perceived availability for all illicit drugs, except marijuana, remained relatively stable; marijuana availability perceptions are currently down in grade 6. Perceived availability of alcohol and cigarettes has been basically declining over the years and dropped substantially across all grades in 2003. Students in Hawaii see alcohol, tobacco, and illicit drugs as less obtainable than students nationwide.
- In 1997, the State of Hawaii initiated several tobacco “stings” in an effort to decrease merchant sales of cigarettes to minors. In March of 2000, a series of alcohol “stings” were initiated. The efforts have been paying off, with the reported ability to *purchase alcohol and tobacco* decreasing drastically from 1996 to 2000 and continuing on a gradual decline over the years in most of the grades. In 2003, ability to purchase alcohol stabilized at 1% and 4% in grades 6 and 8, but decreased to 8% and 15% in grades 10 and 12. Ability to purchase tobacco stabilized at 1% in grade 6, but decreased to 3%, 7%, and 13% in grades 8, 10, and 12. The percentages of students reporting that they are able to buy alcohol or tobacco in 2003 are equivalent to record lows in the lower grades, but are below record lows in the upper grades.
- *Exposure to substance use* by community, family, and friends is one of the best predictors of alcohol, tobacco, and other drug use (see Chapter 11). More than one third of the 8th graders and more than half of the 10th and 12th graders are frequently exposed (once a week or more) to at least one individual who uses *tobacco*. The primary source of tobacco exposure is parents for students in the lower grades; the primary source of tobacco exposure is other people in the students’ environment for students in the upper grades. Slightly fewer students are frequently exposed to *alcohol* use than tobacco use. The primary source of alcohol exposure is from parents for students in all grades. In 2003, the percentages of students frequently exposed to tobacco declined. The percentages of students frequently exposed to alcohol, however, decreased only slightly in grade 6 and 10, remained stable in grade 8, and increased in grade 12. Frequent exposure to *illicit drugs* is reported by 10% of 8th graders, 16% of 10th graders, and 19% of 12th graders and is typically a result of exposure by close friends and other people in the students’ environment. Students in grade 6 are not frequently exposed to illicit drug use by their friends, but 3% of the 6th graders reported being frequently exposed to illicit drug use by parents, relatives, and other people in their environment. The percentage of 6th graders exposed to illicit drugs has remained stable over the last few years; students in other grades experienced a decline in illicit drug exposure in 2003.
- One of the variables most likely to protect an adolescent from substance use is *peer disapproval perceptions*. The vast majority of students believe that their friends would not condone the use of illicit drugs, with disapproval ratings for illicit drugs, other than marijuana, around 90% for all grade levels. The occasional use of marijuana, on the other hand, is nearly as accepted as weekend binge drinking and slightly more accepted than smoking one or more packs of cigarettes a day in the upper grades. Less than 10% of the students in all grades reported that their friends would think it was “cool” if they engaged in weekend binge drinking, regular cigarette use, or occasional drug use.

Chapter 2

- Incidence of substance use has been consistently higher among certain subgroups. Students from different *ethnic backgrounds* exhibit different patterns of alcohol, tobacco, and other drug use. Native Hawaiian and White students report the highest substance use; Chinese students report the lowest. *Sex differences* are most notable in the upper grades. Over the years, lifetime prevalence reports for illicit drug use in the upper grades have been higher among males than females, and lifetime prevalence reports for alcohol and cigarette use have been highest among females. In 2003, lifetime alcohol and cigarette prevalence reports remain highest among females; illicit drug use, however, is no longer consistently higher among males than females in the upper grades.
- Twenty-four risk factors and ten protective factors that are characteristic of the community, family, school environments, and the students and their peer groups are used in the current study to create *risk and protective factor community profiles*. Risk factors predict increased likelihood of drug use, delinquency, and violent behaviors, whereas protective factors exert a positive influence or buffer the negative influence of risk, thus reducing the likelihood that adolescents will engage in problem behaviors. Chapter 10 discusses prevalence of antisocial behaviors (ASBs) other than substance use. Chapter 11 builds a variety of community profiles to help guide prevention efforts directed at reducing substance use and ASBs.
- *Annual Antisocial Behavior (ASB) prevalence rates* are 15% or less for all ASBs, except for reports of being drunk or high at school. Nearly 1 out of 5 students in grades 10 (17%) and 12 (19%) reported that they were drunk or high at school at least once in the past year, and 11% of the seniors reported having engaged in this behavior three or more times in the past year. Nearly one tenth of the seniors (9%) reported having sold illegal drugs in the past year and nearly one tenth of the students in all grades reported having attacked someone with the intent of seriously hurting them. Very few students (4% or less) reported carrying a handgun, taking a handgun to school, or attempting to steal a vehicle. Annual prevalence rates for having at least one best friend who has engaged in various ASBs are four times as high as self-reported engagement of ASBs. In grades 10 and 12, over one third of the students reported having a best friend who has sold illegal drugs.
- Scholars over the years have argued that substance use and ASBs are a function of the accumulation of multiple risk factors and multiple protective factors. The greater the number of risk factors to which an individual is exposed, the greater likelihood that he or she will use or abuse substances. The greater the number of protective factors to which an individual is exposed, the greater the likelihood that he or she will abstain from substance use. Examining the *risk and protective factor indexes* is an important starting point for determining which communities are in greatest need of prevention services. Using these risk and protective factor indexes, Chapter 11 highlights that the following communities or subgroups are in greatest need of prevention services: Hawaii, Maui, and Windward Districts; and Native Hawaiian and White students. Examining individual risk and protective factors illustrates that each community and subgroup has unique prevention needs (see Chapter 11).

- Understanding *which risk and protective factors to address* in various communities involves examining which risk factors are above the statewide percentages and which protective factors are below the statewide percentages. The comparison to the statewide percentages provides information in determining the relative importance of each risk or protective factor level for the specific subgroup. Prevention efforts should move toward reversing or reducing elevated risk factors or enhancing low protective factors. The community profiles developed in Chapter 11 illustrate where prevention efforts should be prioritized in various communities. Table 3 summarizes the county, sex, and ethnicity profiles addressed in Chapter 11. Table 3 also identifies problematic risk factors (i.e., risk factors above statewide percentages) and problematic protective factors (i.e., protective factors below statewide percentages) in 2000, 2002, and 2003. Prevention efforts need to focus on factors that remain or have become problematic in 2003.

CONCLUSION

The results of the *2003 Hawaii Student Alcohol, Tobacco, and Other Drug Use Study* show substance use is on the decline, but continues to be a significant problem affecting the youth of Hawaii. By the time students become seniors nearly half have tried an illicit drug (47%) or cigarettes (45%), and nearly three quarters (73%) have tried alcohol. At least 1 out of 20 seniors has tried an illicit drug other than marijuana. In the middle schools, over one third of the 8th graders have tried alcohol (37%), nearly one fourth have tried cigarettes (23%), and at least one tenth have tried marijuana (12%). Although the current report illustrates that substance use is clearly on the decline in Hawaii, we are nowhere near the point of being able to stop the war on drugs. Many of the illicit drugs have been on the decline for a number of years in Hawaii, only to be replaced in popularity at various points in time by new drugs. For instance, while other illicit drugs declined in 2000 and 2002, reports of ecstasy use continued to rise until 2003. In 2003, prevalence reports for ecstasy finally dropped, along with marijuana, methamphetamine, and hallucinogens. Most other illicit drugs decreased slightly or remained unchanged. Alcohol remains the most prevalent substance, but alcohol prevalence rates in 2003 have reached record lows. Prevalence reports for cigarette use started on a downward trajectory in 1998 and have continued on that course through 2003. Hawaii typically follows nationwide trends and 2003 is no exception. Prevalence rates in Hawaii for alcohol, tobacco, and illicit drugs, however, continued to be lower than nationwide prevalence rates.

The estimated number of adolescents needing treatment in the State of Hawaii has also been declining. Total estimated treatment needs for students in grades 6 through 12 statewide were 16% in 1998, dropped to 13% in 2000, 11% in 2002, and down to 7% in 2003. Treatment needs continue to be the highest among students in Hawaii and Maui Counties, where 10% are estimated to need treatment in 2003. This report highlights that prevention needs are unique to each community and each subgroup. Prevention efforts directed at key risk and protective factors have been shown to have a significant impact on adolescent substance use. Reduction of alcohol and tobacco sales to minors following state-initiated alcohol and tobacco “stings” is a key example of prevention efforts working. Not only have sales to minors dropped since these stings were initiated, but alcohol and tobacco use rates among adolescents declined as well. In sum, declining substance use rates and declining treatment needs can continue in the State of Hawaii as long as prevention efforts are directed at reducing elevated risk factors and promoting protective factors.

TABLE 3
Trends in Problematic Risk and Protective Factors by County, Sex, and Ethnicity:
Identification of High Risk Factors and Low Protective Factors in 2000, 2002, and 2003

('00, '02, '03, and all indicate year in which risk/protective factor was problematic)

Risk/Protective Factors	County (Public & Private)				Sex		Ethnic Background				
	C & C of Honolulu	Hawaii County	Kauai County	Maui County	Male	Female	Chinese	Filipino	Japanese	Hawaiian	White
Community Domain: Risk Factors											
Community Disorganization	all	'02	'03		all			all		all	
Transition & Mobility	all	'00, '03		'00		all				all	all
Exposure to Community ATOD Use		all	'00, '02	all		all				all	all
Laws and Norms Favorable to ATOD Use		all	all	all	all					all	all
Perceived Availability of Drugs and Handguns		all	'00, '02	'02, '03	all					'02, '03	all
Ability to Purchase Alcohol or Tobacco	'02	all		'03	all					all	all
Community Domain: Protective Factors											
Community Opportunities for Positive Involvement	all				all		all	all			
Community Rewards for Positive Involvement	'00, '02	'03		'03	'02, '03		all	all	'00		'02, '03
Family Domain: Risk Factors											
Poor Family Supervision		all	all	all	all		all	all			
Lack of Parental Sanctions for ASBs		all	all	all	'00, '02	'03		'00		all	all
Parental Attitudes Favorable Toward ATOD Use		all	'00, '02	all	'00, '02	'03				all	all
Exposure to Family ATOD Use		all	'00, '02	all		all				all	all
Parental Attitudes Favorable Toward ASB		all	'00, '03	all	all					all	all
Family (Sibling) History of ASB		all	all	all		all				all	all
Family Domain: Protective Factors											
Family Attachment	all	'03				all	all	all			
Family Opportunities for Prosocial Involvement	all	'03	'02		all		all	all	all		
Family Rewards for Prosocial Involvement	all	'03			all		all	all	'00		

(Table continued on next page)

TABLE 3 (continued)
Trends in Problematic Risk and Protective Factors by County, Sex, and Ethnicity:
Identification of High Risk Factors and Low Protective Factors in 2000, 2002, and 2003

('00, '02, '03, and *all* indicate year in which risk/protective factor was problematic)

Risk/Protective Factors	County (Public & Private)				Sex		Ethnic Background				
	C & C of Honolulu	Hawaii County	Kauai County	Maui County	Male	Female	Chinese	Filipino	Japanese	Hawaiian	White
School Domain: Risk Factors											
Low School Commitment		'00, '02	'00, '02	all	all				all	'00, '02	all
Poor Academic Performance	all	'03	'02		all			'00, '02		all	
School Domain: Protective Factors											
School Opportunities for Positive Involvement		all	all	all	all		'03		all		all
School Rewards for Positive Involvement	'03		'02	'00, '02	all		'02, '03		all		all
Peer-Individual Domain: Risk Factors											
Early Initiation of Problem Behaviors		all	'00, '02	all	all					all	all
Favorable Attitudes Toward ATOD Use		all	'00, '02	all	'00	'02, '03				all	all
Low Perceived Risk of ATOD Use		all	'00, '02	all	all					all	all
Antisocial Behaviors (ASBs)		all	'00, '02	all	all					all	'00, '02
Favorable Attitudes Toward ASB		all	'00, '02	all	all					'02	all
Friends' ATOD Use		all	all	all		all		'02		all	all
Interaction with Antisocial Peers		all	'02	all	all					all	'00, '02
Rewards for Antisocial Involvement		all	'00, '02	all	all					all	all
Rebelliousness		all	'00	'02	all					all	all
Sensation Seeking		all	'00, '02	all	all					all	all
Peer-Individual Domain: Protective Factors											
Peer Disapproval of ATOD Use & ASB		all	'00, '02	all	all					all	all
Belief in the Moral Order		all	'00, '02	all	all					all	all
Educational Aspirations		all	all	all	all			all		all	

NOTES: Dates ('00=2000; '02=2002; '03=2003; all=all three years) indicate risk factors that are higher than or equal to statewide percentages, and protective factors that are lower than or equal to statewide percentages in that particular year. Prevention efforts need to focus on factors that remain or have become problematic in 2003.