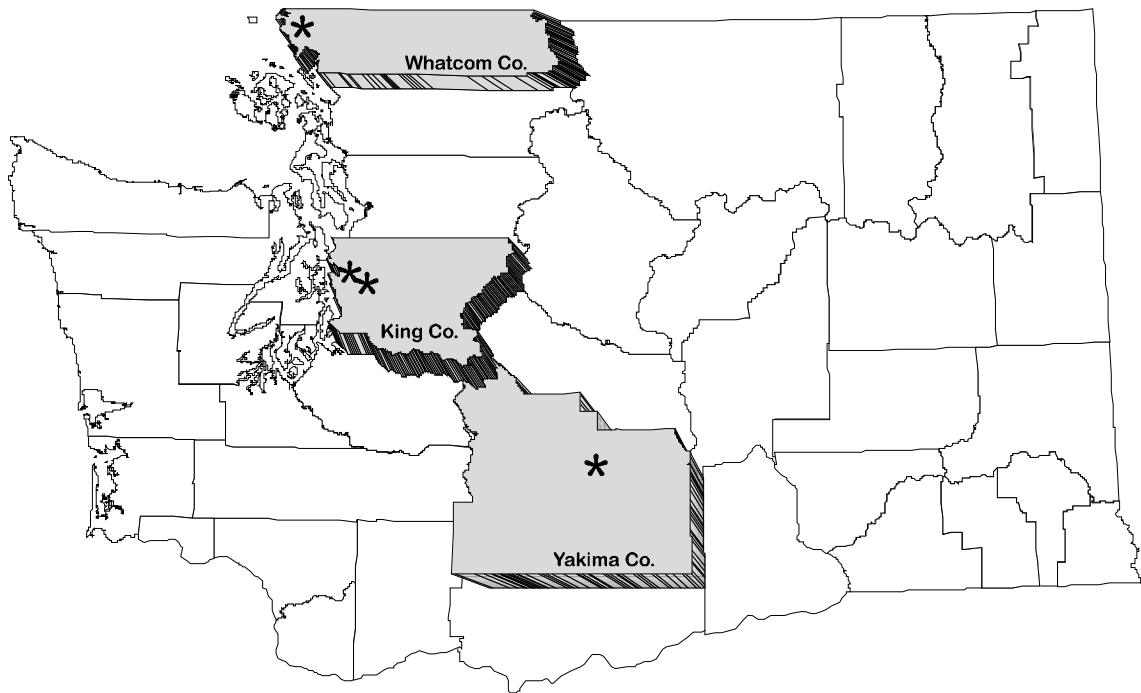


The Arrestee Estimates of Substance Abuse Treatment Need (ARREST) Study



*Results from a survey of substance use, abuse, and need
for treatment among arrestees booked in the:*

King County Jail

Whatcom County Jail

Yakima County Jail

King County Youth Detention Facility

September 1997

Additional copies of this report may be obtained by contacting:

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Department of Social and Health Services
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The report may be ordered by name or by report number.

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ARREST STUDY KEY FINDINGS - ADULTS

The Arrestee Estimates of Substance Abuse Treatment Need, or ARREST Study, obtained various measures of substance use, substance use disorders, and need for treatment among adult and juvenile booked arrestees. Funded by the federal Center for Substance Abuse Treatment and conducted in 1995, the study recorded results of face-to-face interviews with 598 adult arrestees in the King (229), Yakima (265) and Whatcom (104) county jails, and with 168 juvenile arrestees in the King County Youth Detention Facility.

In this report, findings from the ARREST study are compared to findings of the 1993-1994 Washington State Needs Assessment Household Survey (WANAHS). The WANAHS, a telephone survey based on a sample of over 7000 Washington households, provides prevalence rates on many similar measures of substance use and abuse for the general household population of Washington.

Key findings for policy drawn from the data in these studies include:

- ◆ **Rates of use, abuse, dependence and need for treatment for alcohol and other drugs are strikingly elevated among arrestees compared to members of the general population.** For example, the rate of past-30-day use of illicit drugs by adult booked arrestees in the King County Jail (59%) was over 10 times higher than the comparable rate for the King County general population (5%).
- ◆ **Over 95% of adult booked arrestees who reported a history of substance abuse or dependence also report current abuse or dependence.** Although a portion of the general population continues to abuse substances, less than 40% of those reporting past abuse or dependence also report current abuse or dependence.
- ◆ **A very high number of arrestees at all three adult sites are in need of substance abuse treatment—56% in Yakima County, 65% in King County and 79% in Whatcom County.**
- ◆ **Of adult arrestees assessed as needing substance abuse treatment:**
 - ◆ between 28% and 37% also admitted a need for treatment; and
 - ◆ between 12% and 20% stated that they desired and had made some attempt to obtain treatment in the year prior to the interview.
- ◆ **Almost all individuals reporting a desire for treatment also met the formal assessment criteria for needing treatment.** When applying scarce treatment resources, it is apparent from these data that simply asking arrestees if they need treatment and providing it if they say they do is likely to be an effective means of targeting.
- ◆ In the King County Jail alone, the potential exists to reach up to 11 people daily, or 4,092 people per year, who are assessed as needing treatment, recognize that they need treatment, and have made some attempt to seek treatment during the past year.

ARREST STUDY KEY FINDINGS - JUVENILES

The Arrestee Estimates of Substance Abuse Treatment Need, or ARREST Study, obtained various measures of substance use, substance use disorders, and need for treatment among adult and juvenile booked arrestees. Funded by the federal Center for Substance Abuse Treatment and conducted in 1995, the study recorded results of face-to-face interviews with 168 juvenile arrestees in the King County Youth Detention Facility.

Key findings for policy drawn from the data in this study include:

- ◆ **Reported use of alcohol and marijuana is very high. In fact, reported use of marijuana by youth exceeds that of young adult arrestees.** Nearly all juvenile arrestees reported using alcohol or marijuana at some point in their lives - 70% reported use of marijuana in the last 30 days. Only 56% of 18-29 year old adult arrestees in King County reported using marijuana during the past 30 days.
- ◆ **A remarkably high number of juveniles had experience in the preceding 30 days with drugs other than alcohol and marijuana.** Use of hallucinogens was reported by 16%, use of cocaine and stimulants by 5%. Over one-quarter used stimulants (amphetamines, crystal and/or ice) in their lifetime. Lifetime rates of hallucinogen and inhalant use among juvenile arrestees (ages 14-17) were 2.5 times those of 12th graders (generally ages 17 and 18) participating in the 1995 Washington State Survey of Adolescent Health Behaviors. (see footnote 12 for citation)
- ◆ **The rates of lifetime substance abuse or dependence on alcohol and marijuana exceed those of adult arrestees.** Twenty-nine percent of juveniles had a lifetime alcohol use disorder (dependence or abuse) compared to 23% for adult arrestees in King County; 38% of juveniles had a marijuana use disorder, compared with 9% for adults. (Definitions of substance abuse, dependence and use disorder on page 4)
- ◆ **Over half (51%) of the juvenile arrestees were diagnosed with a lifetime substance use disorder.** Given the age and degree of involvement with drugs, the potential for additional drug use and future diagnosis of dependence is enormous.
- ◆ **There appears to be a relationship between the age of first use of both alcohol and marijuana and the likelihood that youth will be abusing or dependent on that substance.** Youth whose first use of alcohol was before age 10 were twice as likely to be diagnosed alcohol dependent as those whose first use occurred at ages 13 or 14. They were nearly four times as likely to be diagnosed with alcohol dependence as those youth whose first use was delayed to between ages 15 and 17. A similar pattern is evident for use of and dependence on marijuana. In both cases, findings were statistically significant.
- ◆ **Only 15% of juveniles diagnosed with a substance use disorder feel they need treatment.** This presents a tremendous opportunity to begin or intensify interventions before substance abuse and dependence escalates.

INTRODUCTION TO ADULT COMPONENT OF ARREST STUDY

Although criminal offenders constitute a relatively small portion of the general population, numerous studies suggest that this group contains significant concentrations of persons with substance abuse problems.¹ Information about drug and alcohol use within the criminal justice population is key in addressing substance abuse within a community and in planning appropriate treatment services. This report describes findings from a 1995 survey of drug and alcohol use among recent arrestees in three Washington counties.

Study Purpose and Objectives

The Arrestee Estimates of Substance Abuse Treatment Need (or ARREST Study) was funded by the federal Center for Substance Abuse Treatment. The ARREST Study had three purposes:

- To create baseline data on levels of drug and alcohol use among those arrested and booked for crimes.
- To compare drug and alcohol use in the study group with use in the general population.
- To assess the type and degree of drug dependency across different jail sites and provide useful information to those corrections facilities.

ARREST Survey Design for Adults

The ARREST study recorded results of face-to-face interviews with 598 adults arrested and held in booking facilities in King, Whatcom and Yakima counties. The interviews sought information on basic demographic characteristics of arrestees, frequency and recency of substance use, and specific behavioral indicators of substance use disorder.

Results of the surveys were recorded by trained interviewers using laptop computers. This technology allowed complex patterns of questions and real-time error checking during the interview. These features, in turn, allowed reliable diagnoses of dependence and abuse of substances to be derived from the interview responses based on DSM-III-R² diagnostic criteria.

For the ARREST study, interviewers made contact with persons who had been arrested and were being held in the booking section of three county jails—King, Whatcom and Yakima. Those who agreed to participate in the study completed a face-to-face interview and were also asked to provide a urine sample for

¹ See, for example, Regier, D.A.; Farmer, M.E.; Locke, B.Z.; Keith, S.H.; Judd, L.L.; Goodwin, K. (1990): Comorbidity of mental disorders with alcohol and other drug abuse. *Journal of the American Medical Association* 264, 2511-2517; also: Steiger, J.C.; Sederstrom, J.D. (1990) Structured residential programs: detention-based chemical dependency treatment for juvenile offenders. Phase I Evaluation Report. Report to the Legislature, Management Services, Department of Social and Health Services.

² DSM-III-R criteria for psychoactive substance abuse and dependence and other mental disorders are detailed in the *Diagnostic and Statistical Manual of Mental Disorders* (Third Edition - Revised, 1987, American Psychiatric Association, Washington, DC

screening. Providing the urine sample was voluntary, as was participation in the survey.

Household Survey Design

ARREST study findings on arrestee rates of substance use, substance use disorder and treatment need are compared in this report to results of the 1993-1994 Washington State Needs Assessment Household Survey (WANAHS)³.

The Household Survey included adult respondents in over 7,000 Washington State households. Interviews were conducted by the Public Opinion Laboratory at the Social and Economic Sciences Research Center, Washington State University. The survey covered disability status, recency and frequency of substance use, DSM-III-R substance abuse and dependence, substance abuse treatment history and treatment need, risk factors associated with problem use (such as family history, attitudes toward use, causes of stress in daily lives, etc.), and DSM-III-R depression, generalized anxiety disorder, mania, and psychosis.

Comparability of the ARREST and Household Surveys

Interview structure

The structure of the ARREST survey and the WANAHS household survey were substantially similar in the questions used to assess substance use, abuse and dependence. In this report, analyses comparing arrestee and household population samples focus on these common elements and questions.

Urine Analysis

The ARREST study alone included respondents providing urine samples, an element that clearly is not practical when conducting a household phone survey. While respondents to the ARREST survey were not required to provide a urine sample, the request may have had some effect on who chose to participate in the study and on the truthfulness—for better or worse—of their responses.

Almost half (45%) of those who agreed to be interviewed for the ARREST study also agreed to submit a urine specimen for analysis. Rates of self-reported use of marijuana and cocaine/crack in the prior 72 hours were significantly lower for those who did not submit a specimen than for those who did⁴. However, self-reported rates for opiates, amphetamines, downers and hallucinogens were similar for both groups; and, thirty day self-reported use rates were similar for both groups across **all** substances including marijuana and cocaine/crack.

³ Information on the WANAHS study is available from the Office of Research and Data Analysis, Department of Social and Health Services, PO Box 45204, Olympia, WA 98504-5204. The County Profiles on Substance Use, Abuse, and Need for Treatment (ORDA, 1995) provide county-level estimates derived from the WANAHS data. The profiles are available from the Division of Alcohol and Substance Abuse, PO Box 45330, Olympia, WA 98504-5330 or by calling (360) 438-8097.

⁴ Statistically significant for marijuana $\chi^2=7.06$, $df=2$, $p=.008$; for cocaine/crack $\chi^2=7.11$, $df=1$, $p=.008$.

Level of Cooperation

The overall cooperation rate for the household survey was 85% (eligible adults actually contacted completing an interview). For the ARREST survey, the overall cooperation rate was 78%. Cooperation among arrestees was significantly higher in Yakima County, where 94% of those contacted participated, as compared to King (69%) and Whatcom (68%) counties.

ARREST study cooperation rates were higher among women (85%) than men (76%) and among Whites (80%), Hispanics (86%) and others (86%) compared to African Americans (63%). Persons arrested for misdemeanors or citations were somewhat more likely to consent to the interview (80%) than those arrested for felonies (73%). Finally, those under 30 years of age were more likely to consent (82%) than those over 30 (75%).⁵

Interview Languages

The WANAHHS household survey included significant efforts to encourage participation, including making interviews available in seven different languages: English, Spanish, Japanese, Korean, Mon-Khmer, Vietnamese, and two Chinese dialects. In contrast, the ARREST study was conducted in English only in the King and Whatcom County jails while a bilingual interviewer offered a Spanish translation in the Yakima County jail.

Measures for Establishing Substance Use Disorders

Both the household survey and the ARREST survey incorporated items and scales from the widely used Diagnostic Interview Schedule (DIS) intended to measure the presence of symptoms of substance dependence.

These items allowed diagnoses of substance use disorders based on standards of the American Psychiatric Association's Diagnostic and Statistical Manual, Third Edition—Revised (DSM-III-R). The specific diagnoses were based on the number, severity and duration of symptoms of dependence.

⁵ Difference in participation by site statistically significant at $\chi^2=68.74$, $df=2$, $p<.0001$; by sex significant at $\chi^2=5.93$, $df=1$, $p=.01$; by race significant at $\chi^2=33.17$, $df=3$, $p<.0001$; by charge significant at $\chi^2=5.28$, $df=1$, $p=.02$; and by age significant at $\chi^2=5.37$, $df=1$, $p=.02$.

Substance Use Disorder Terminology

DSM-III-R Symptoms of Substance Dependence

- | | |
|---|---|
| <ul style="list-style-type: none">• Substance is often taken in larger amounts or over a longer period than the person intended.• Persistent desire or one or more unsuccessful attempts to cut down or control substance use.• Great deal of time spent in activities necessary to get the substance, taking the substance or recovering from its effects.• Frequent intoxication or withdrawal when expected to fulfill major role obligations or when use is physically hazardous.• Characteristic withdrawal symptoms | <ul style="list-style-type: none">• Marked tolerance or markedly diminished effect with continued use of the same amount.• Substance often taken to relieve or avoid withdrawal symptoms.• Important social, occupational or recreational activities given up or reduced because of substance use.• Continued use despite knowledge of having a persistent or recurrent social, psychological or physical problem. |
|---|---|

Based on the self-reported presence of symptoms outlined above, respondents were diagnosed with substance use disorders if they met the following criteria:

Lifetime DSM-III-R Dependence:

A person is diagnosed with a lifetime dependence if:

1. they have *ever* had three or more symptoms of dependence or abuse, and
2. at least two of those symptoms lasted a month or more or occurred repeatedly over a longer period of time.

Lifetime DSM-III-R Abuse:

A person is diagnosed with lifetime abuse if:

1. they do *not* have a lifetime DSM-III-R diagnosis of substance dependence; and
2. they have *ever* continued substance use despite having recurrent social, occupational, psychological or physical problems exacerbated by it or used repeatedly in situations where use is physically hazardous; and
3. at least one symptom lasted a month or more or occurred repeatedly over a longer period of time.

Lifetime Substance Use Disorder:

A person is diagnosed with a lifetime substance use disorder if they meet the criteria for either lifetime DSM-III-R abuse or lifetime DSM-III-R dependence.

Past 18 Month Substance Use Disorder:

A person is diagnosed with a past 18 month substance use disorder if:

1. they have a diagnosis of lifetime dependence or abuse; AND,
2. they have used a substance in the last 18 months; AND,
3. they have experienced a DSM-III-R abuse or dependence symptom in the past 18 months.

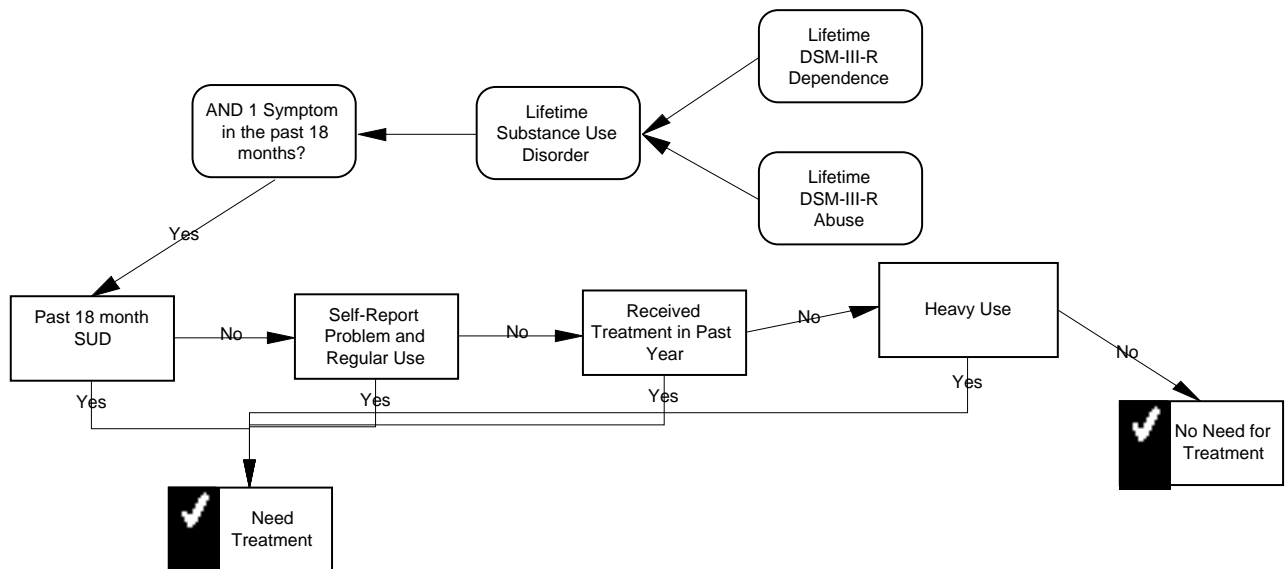
Need for Treatment

Part of the purpose of both the household and ARREST studies was to assess the need for treatment among Washington citizens - in one case in the general population, in the other specifically among persons arrested for crimes.

In the analyses presented here, arrestees were considered in need of treatment if they met any of four conditions in the following order:

1. They had a past 18 month substance use disorder (73% of arrestees needing treatment across the three sites) ; Or
2. They did not have a past 18 month substance use disorder but they self-reported a problem with alcohol and/or drugs at any time in their life, and continued *regular use* of that substance over the past 18 months (6% of arrestees needing treatment);
 - in this context, *regular use* reflects that during the past 18 months, the respondent drank an average of 3 drinks per drinking day at least once per week, or during the past year, they used marijuana at least 50 times or they used any other illicit drug at least 11 times;
3. Or, they had received treatment for substance abuse during the past year (5% of arrestees needing treatment);
4. Or, they exhibited *heavy use* of any substance over the past 18 months, whether or not they self-reported a problem at any point in their life (16% of arrestees needing treatment);
 - in this context, heavy use reflects that during the past 18 months the respondent: drank an average of 4 drinks per drinking day at least 3 to 4 times per week; or they used any illicit drug 50 times or more during the past year.

Determining Need for Treatment: The ARREST Study Logic Model



COMMON FINDINGS ACROSS ADULT ARREST SITES

While King, Yakima and Whatcom County arrestees varied in some respects, in many respects their responses revealed common themes.

Alcohol use is the predominant substance used not only at all three ARREST sites but in all three counties as well. Nearly all adults report using alcohol at some point in their lives and over half continue its use in the 30 days prior to their interviews: Across the counties, alcohol use in the past 30 days was reported by 48% to 58% of households and by 65% to 79% of arrestees. While more adult arrestees than adults in households reported use of alcohol during the past month, the difference is not dramatic—use of alcohol was reported by the majority of both. Nor are differences between sites remarkable.

**Reported Use of Substances in Past 30 Days
Adult Arrestees & Adults in Households by County**

Substance	King County		Yakima County		Whatcom County	
	Arrestee	HH	Arrestee	HH	Arrestee	HH
Alcohol	74.2%	58.1%	65.4%	48.2%	79.2%	54.0%
Marijuana	44.9%	5.3%	23.2%	2.7%	54.2%	3.4%
Stimulants	8.8%	1.0%	8.9%	0.6%	14.4%	0.6%
Cocaine	28.8%	0.8%	15.4%	0.2%	19.9%	0.1%
Opiates	9.6%	n/a	9.2%	n/a	3.8%	n/a
Any Illicit Drug	58.7%	5.4%	36.9%	3.0%	59.8%	3.7%

Reported use of illicit substances, however, is substantially higher among the arrestees than household populations across all sites and substances. Sixty percent of arrestees in Whatcom County, 59% in King, and 37% in Yakima County, reported using illicit drugs during the month. These self-reports were from 11 to 16 times as high as reported by adults in households.

On a lifetime basis, between 2 and 3 times as many arrestees reported using marijuana and stimulants as have members of the general population, and between 4 and 6 times as many reported use of cocaine. When the time-frame is shortened, the contrast between arrestees and the general population increases dramatically. **The most dramatic difference was reported use of cocaine** (in its various forms). From 36 to 200 times as many adult arrestees as adults in households reported using cocaine during the past 30 days. The pattern of increasing disparity with recency in use between arrestees and members of the general population strongly suggests that for the general population, much of their use of illicit drugs constitutes experimentation, while for arrestees the use is a continuing fact of life.

Rates for substance use disorders are similarly elevated for arrestees as compared to members of the general public. Rates of lifetime substance use disorders overall are 3 to 4 times higher among arrestees. Rates of drug use disorders (excludes alcohol disorders) range from 3 to 10 times higher.

Between 11% and 30% of arrestees are dually diagnosed with alcohol and drug abuse disorders.

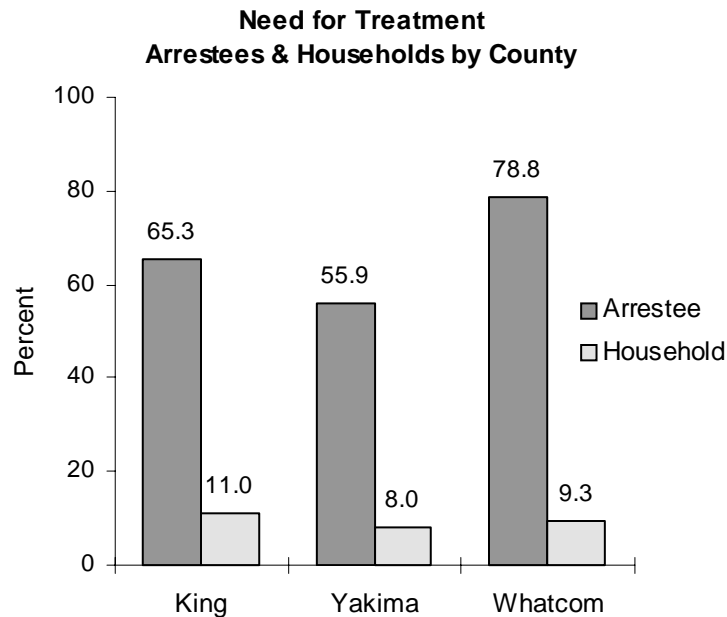
Past 18-Month Substance Use Disorder Adult Arrestees & Households by County

Substance	King County		Yakima County		Whatcom County	
	Arrestee	HH	Arrestee	HH	Arrestee	HH
Alcohol*	20.7%	7.6%	32.1%	5.4%	21.4%	6.1%
Any Illicit Drug**	37.2%	2.0%	25.7%	1.0%	10.2%	1.2%
Alcohol or Drug	46.9%	8.3%	44.0%	5.8%	61.6%	6.6%

* May be in combination with illicit drugs. **May be in combination with alcohol.

Alcohol is the drug most associated with substance use disorders at all three sites, although in King County, cocaine-related disorders are at similar levels. Rates of alcohol use disorders among arrestees range from 24% in King County to 53% in Whatcom County. **Marijuana is significantly more implicated in substance use disorders in Whatcom County than in any other county.**

There are remarkable differences in need for treatment when comparing arrestees and general household populations and when comparing adult arrestees by county. The household survey suggests that, during a one-year period, 8% of the general population in Yakima County needed treatment for alcohol or drug use disorders. The figures are similar in Whatcom County (9%) and King County (11%).



The majority of arrestees, however, were determined to need treatment for substance use disorders. This ranges from a low of 56% in Yakima to nearly

80% in Whatcom County. This suggests that targeting treatment program delivery to inmate populations may help break the cycle of both substance abuse and criminal justice involvement.

Overall, between 63% and 72% of the arrestees assessed as needing treatment deny that they need treatment.

However, in addition to those who were able to obtain some type of treatment during the past year (roughly 35% of those in need at all three sites), between one fifth and one quarter of those in need stated that they desired treatment in the year prior to the interview. Most would have used treatment had it been available, and most of these individuals had made some attempt to seek treatment—although their efforts were frequently fleeting and ineffective.

Finally, only a very few individuals reported a need for treatment that was not confirmed by diagnostic assessment criteria. When applying scarce treatment resources, it is apparent from these data that simply asking arrestees if they need treatment and providing it if they do is likely to be an effective means of targeting.

KING COUNTY ADULT ARRESTEES

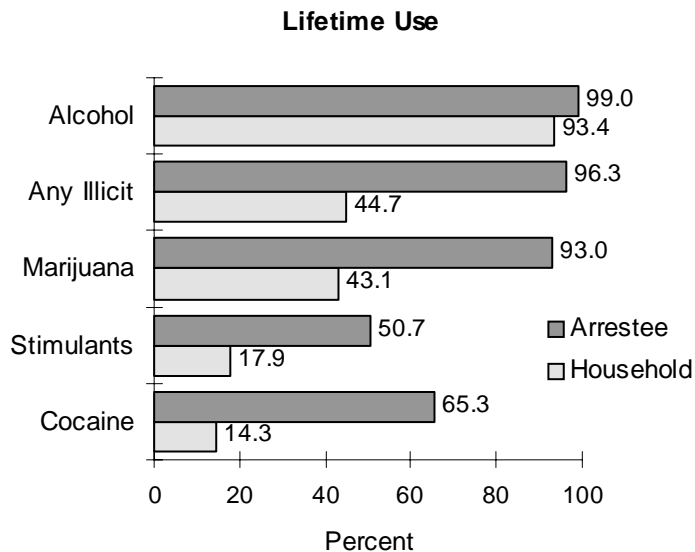
Summary Sample Characteristics

A total of 334 individuals were approached in the King County jail and asked to participate in the ARREST study. Altogether, 69% agreed to participate, yielding a total sample size of 229 individuals. Men and women agreed to participate at comparable rates (70% and 65% respectively). African Americans agreed at a lower rate than any other racial/ethnic group (62% compared to 75% for others). Arrestees under the age of 30 were more likely to participate in the interview than older arrestees (75% and 63% respectively)⁶. See Appendix A for additional sample description and characteristics.

Comparison of Substance Use: Arrestees and Adults in Households

Comparison of substance use by King County arrestees and the general adult household population for King County shows remarkable differences in substance use over three periods:

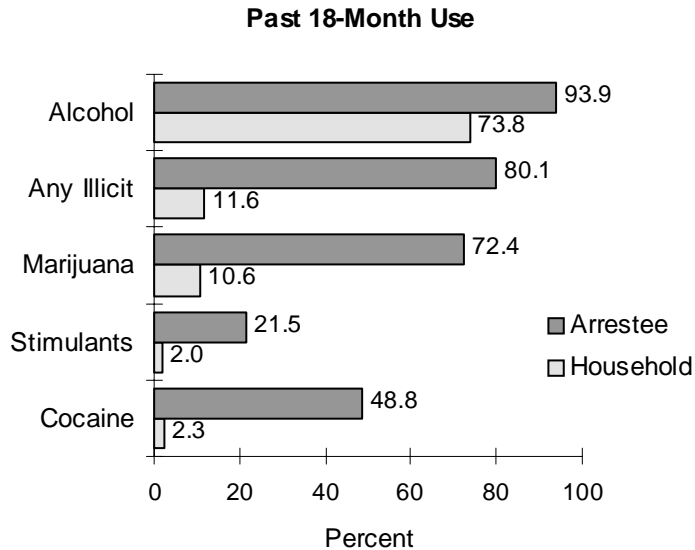
- Lifetime use—i.e. “Have you ever used....?”
- Past 18 months use—i.e. “Have you usedin the past 18 months?”
- Past month use—i.e. “Have you used ... in the past 30 days?”



Lifetime rates of illicit drug use differed markedly between the general population and the arrestee population. Over twice as many adult arrestees reported using marijuana or stimulants (amphetamines, crystal and/or ice) at least once compared to adults in the general population. Cocaine had been

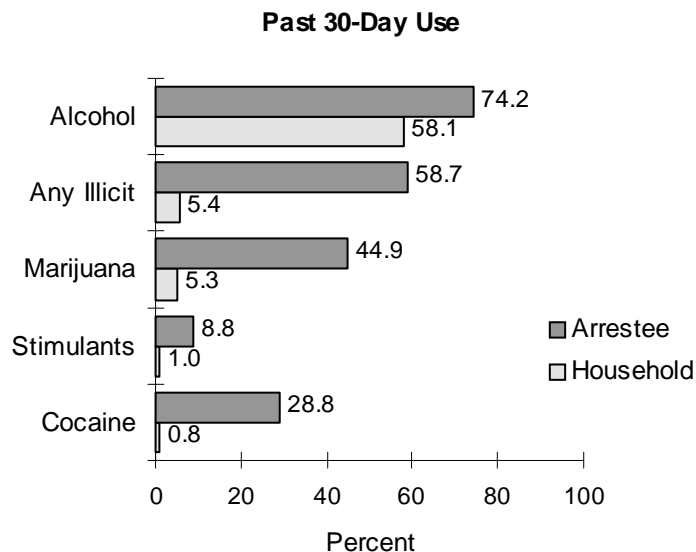
⁶ Differences statistically significant for race at $\chi^2=6.57$, $df=1$, $p<.01$; for age at $\chi^2=4.46$, $df=1$, $p=.03$.

used at least once by more than 4 times as many arrestees as adults in the general household population (65% compared with 14%).



The contrast was even more marked for recent drug use. The vast majority of both arrestees and the general population reported using alcohol within both the past 18 months and the past 30 days. However, the difference in illicit drug use was striking. Reported use of illicit drugs during the last 18 months was over 7 times higher among adult arrestees than among adults in the general population. Use in the last 30 days was almost 11 times higher.

The differences remain quite pronounced when comparing specific substance use during the past 30 days by arrestees and by the general population. Cocaine use was reported 36 times as often by those in jail as by those in the general population. **Overall, adults in jail are much more likely to be using substances than adults in the general population.**



While reported use of drugs and alcohol was lower for the past 30 days than for lifetime, the difference was far smaller for arrestees than for persons in the general household population. This is especially dramatic when comparing reported use of illicit drugs. Nearly all (93%) of those in jail reported using an illicit drug at some point in their lifetime, and 59% had used in the preceding month. Among the general population, only 45% reported lifetime use, and barely 5% reported use of an illicit drug in the preceding month—one-twelfth the rate among arrestees.

Past and Current Use by Arrestees

There was near universal lifetime use of alcohol by arrestees, which varied little by age, sex or race of the individual. Beyond alcohol, 93% had used some illicit substance during their lifetime. Looking at more current behavior—within the past 30 days—use remained high beginning with alcohol (74%) and followed by marijuana (45%), cocaine (29%), opiates (11%) and stimulants (9%). Use of hallucinogens, not shown here, was reported by just over 2% of the arrestees. There are some differences in past 30-day use by sex, age, race and type of charge.

Reported Use of Substances in the Past 30 Days

Substance	Total	Sex		Age			Race			Charge	
		Male	Fem.	18-29	30-39	40+	White	Af.Am	Other	Mis.	Fel.
Alcohol	74.2%	75.0%	70.4%	74.1%	69.7%	83.0%	71.3%	79.7%	74.2%	72.3%	79.2%
Marijuana	44.9%	45.1%	44.3%	56.2%*	35.5%	26.0%	42.6%	50.1%	42.9%	43.7%	48.5%
Stimulants	8.8%	10.0%	3.3%	7.6%	10.4%	9.7%	10.9%	2.7%	16.9%	6.8%	14.3%
Cocaine	28.8%	28.1%	32.0%	23.5%	32.3%	39.3%	27.3%	32.9%	23.8%	22.3%	46.2%*
Opiates	11.0%	10.0%	15.6%	9.3%	10.3%	18.0%	14.1%	6.8%	4.4%	8.0%	19.1%*
Any Illicit	58.7%	58.2%	60.9%	65.3%	49.5%	54.5%	57.4%	61.7%	56.1%	53.6%	72.4%*

* Statistically significant at $p < .05$

Note: Columns do not add to 100% because many arrestees report using more than one substance.

Sex

There were some variations in recent use by sex of the arrestee. Compared to women, a higher percentage of men reported recent use of stimulants. Reported opiate use in the past month, however, appeared higher among women.

Age

Use of marijuana was reported by significantly more younger people (under the age of 40, and even more markedly under the age of 30), while cocaine and opiate use was reported more frequently by those 40 and older.

Race

There are few particularly notable differences by race or ethnic group in recent reported use of substances. Reported use of opiates by Whites was twice that

of African Americans. Reported use of stimulants by Whites was nearly five times that of African Americans, and use by those classed as “Other” was over 7 times that of African Americans.

Charge

More of those charged with felony than misdemeanor offenses reported using substances during the previous 30 days. This applies to each substance shown, although alcohol and marijuana are fairly close. Use of stimulants, cocaine and opiates, however, were reported twice as frequently by those with felony charges. This held true even when persons arrested on drug charges (which were more frequently represented among the felonies) were not included. Differences in reported 30-day use of cocaine and opiates are significant.

Substance Use Disorders

Compared to the general population, substance abuse and chemical dependency are at strikingly high levels among arrestees. Nearly 50% of the arrestees interviewed at the King County jail had a lifetime diagnosis of substance abuse or dependence—either alcohol or drugs. This is three times the estimated rate in the King County population at large. Over 37% had a lifetime diagnosis of drug abuse or dependence—well over 6 times the rate in the general population. Of all arrestees interviewed, 11% had a lifetime diagnosis of *both* drug and alcohol abuse or dependence.

**Lifetime/Past 18-Month Substance Use Disorder
Adult Arrestees & Adults in Households**

Substance	Lifetime SUD		18-Month SUD	
	Arrestee	HH	Arrestee	HH
Alcohol*	22.9%	12.8%	20.7%	7.6%
Any Illicit Drug**	37.6%	5.0%	37.2%	2.0%
Alcohol or Drug	49.1%	15.0%	46.9%	8.3%

* May be in combination with illicit drugs. ** May be in combination with alcohol.

Most King County arrestees with a lifetime substance use disorder are not in recovery. In the general population in King County, 15% of the population is estimated to have a history of substance abuse. Only half of these individuals are estimated to have experienced symptoms of the dependence or abuse within the past 18 months. In the King County jail population, on the other hand, nearly all persons with a substance abuse history report symptoms of dependence within the past 18 months.

In King County, alcohol and cocaine abuse and dependence are almost equally prevalent among adult arrestees. Twenty-three percent of those interviewed had a lifetime substance use disorder for alcohol, 21% a past 18 month substance use disorder for alcohol. Rates of cocaine-related disorders were virtually the same, as 24% of the arrestees had a lifetime substance use disorder for cocaine, and 23% during the past 18 months.

There are striking differences in rates of lifetime use, past 18 month use and past 30 day use between alcohol and cocaine. Yet the prevalence of diagnosed substance use disorders involving cocaine and alcohol are virtually the same. A number of factors may account for this, some related to the characteristics of persons in jail, others to treatment availability, and some to differences in the addictive characteristics of the drugs.

Substance Use and Substance Use Disorder by Type of Substance

Substance	Use of Substance			Substance Use Disorder	
	Lifetime	18-Month	30-Day	Lifetime	18-Month
Alcohol	99.0%	93.9%	74.2%	22.9%	20.7%
Marijuana	93.0%	72.4%	44.9%	9.3%	8.9%
Stimulants	50.7%	21.5%	8.8%	5.8%	5.7%
Cocaine	65.3%	48.8%	28.8%	24.4%	22.9%
Opiates	26.2%	17.9%	11.0%	9.7%	9.7%
Any Illicit Drug	93.3%	80.1%	58.7%	26.2%	26.2%

Poly-drug use disorders—in which lifetime diagnoses of disorders and current symptoms of dependence are present for more than one drug—are prevalent among arrestees. For such multiple disorders—which affect 19% of arrestees, the most frequent combinations (24% overall) involved alcohol and one or more illegal drugs. Cocaine in combination with other drugs accounted for another 22% of poly-drug abuse disorders. It is important to note that these disorders do not merely represent *casual* drug mixing or *occasional* use of more available alternate drugs. In this context, being classed as poly-drug abusing reflects that the arrestee has experienced clear symptoms of dependence—loss of control over use, repeated use despite significant consequences, and persistent patterns of use—in relation to more than one type of drug.

Need For Treatment

Need for treatment, as noted earlier, is defined by four conditions in the following order⁷:

1. a diagnosis of past 18 month substance use disorder; or
2. self-reported problem with alcohol or drugs combined with continued regular use; or
3. having received treatment in the past year; or
4. self-reported “heavy use” of alcohol or drugs during the past 18 months.

⁷ A more complete discussion of the criteria applied to determine need for treatment is available on pages 4 and 5 of this report.

Fully 65% of the King County Jail arrestees were assessed as currently needing treatment. Most of those needing treatment (72%) were diagnosed with a substance use disorder active within the past 18 months.



Demographics

Need for treatment does not vary remarkably between men (67%) and women (60%) arrestees. This is quite striking, since most studies in the general population show lower need for treatment among women than among men.

Need for Treatment – Projected Annually by Sex, Age and Race

Percent and Number	Total	Sex		Age			Race		
		Male n=265	Fem. n=69	18-29 n=126	30-39 n=67	40+ n=36	White n=107	Af.Am n=167	Other n=59
Percent Need	65.3%	66.5%	59.9%	69.0%	59.3%	64.6%	68.2%	64.0%	48.0%
Approximate Number*	38,900	32,400	6,500	21,800	11,000	6,100	24,600	12,000	2,300

* Based on total estimated annual bookings; some of these represent duplicate bookings for the same person during the year.

Though the number of interviews for Hispanics (n=19) is small, Hispanic arrestees appear to have lower assessed need for treatment (27.4%) than Whites, (68.2%) or African Americans (64%). This finding is consistent with Hispanic rates in other sites.

Age of arrestee does not appear to be significantly related to treatment need.

Charge

Based on the charge information available in this data set, there does not appear to be any relationship between the type of charges for which people are arrested and the likelihood that they will need treatment.

Demand for Treatment

Self-Recognition of Treatment Need Among Arrestees

As is the case for individuals in the general population, persons in jail frequently fail to acknowledge their need for treatment. Of those assessed as needing treatment in the King County jail, less than half self-identified as needing treatment. There were no significant differences in denial of treatment need by type of substance, which ranged from 51% of those identified as needing treatment due to drug abuse to 60% of those needing treatment for abuse of alcohol and drugs combined.

However, virtually all who self-identified as needing treatment were also assessed as needing treatment. So long as resources for treatment in correctional facilities continue to be severely limited, those most ready for treatment may well be identified simply by asking arrestees whether they are in need of treatment. Positive responses are apparently overwhelmingly accurate.

Treatment Seeking By Arrestees

Of arrestees assessed as needing treatment in King County, 77% did not receive treatment in the past year. Twenty-eight percent of arrestees with an assessed need for treatment agreed that they needed treatment—reflecting the high level of denial prevalent among addicts. However, of those who acknowledged a need for treatment:

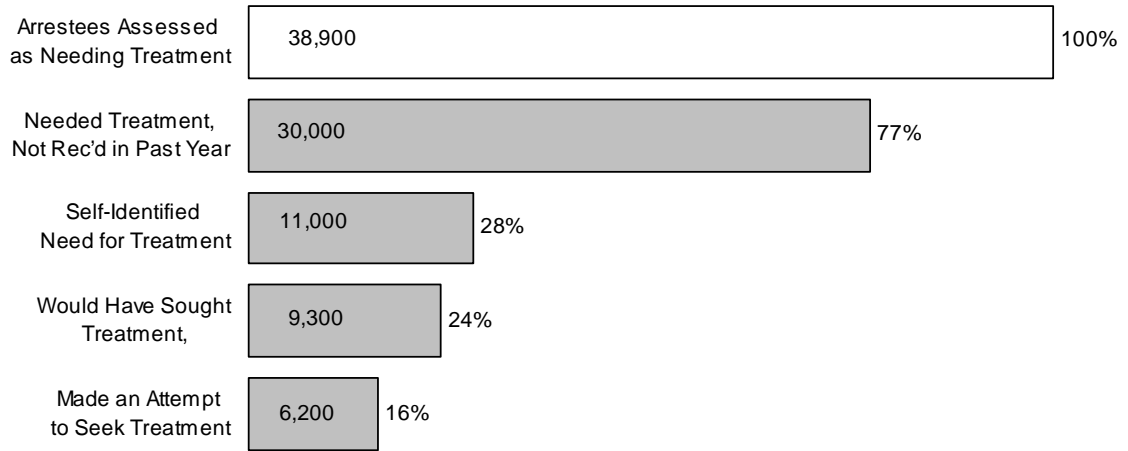
- 81% (or a total of 24% of those in need) stated that they would have sought treatment had it been available; and
- 56% (or a total of 16% of those in need) had actively sought treatment, for example by talking with friends about services, calling a referral line, or calling detox.

Interpolating Demand for Treatment

The King County Jail reports that approximately 66% of their bookings annually consist of unduplicated individuals (persons counted only once no matter how many separate bookings they experience during the calendar year). Applying this proportion:

- Approximately 11,000 bookings, or 7,260 separate individuals who are processed in the King County jail would both be assessed as needing treatment and would agree that they need treatment.
- Of these, an estimated 6,200 bookings involve 4,092 separate individuals who have made an attempt to seek treatment in the past year and have been unsuccessful.
- **The potential exists to reach up to 11 people daily (i.e., 4,092 people per year / 365 days per year = 11.2 people per day) in the King County Jail who are assessed as needing treatment, recognize that they need treatment, and have made some attempt to seek treatment during the past year.**

**Past Year Treatment Seeking by Arrestees Identified as Needing Treatment
(# of bookings and % of those in need of treatment)**



Of the arrestees who stated that they would have sought treatment had it been available to them, nearly four-fifths (77%) reported that they would seek treatment as an alternative to jail. Nearly three-quarters (74%) reported that they would use treatment services in the jail if they were offered even if that did not constitute a deferral of jail. Again, applying these responses to those arrestees who were both assessed as needing treatment and self-identified as needing treatment, between 2,640 and 2,740 individuals annually might take advantage of treatment services as either an alternative to jail or an in-jail opportunity to begin the recovery process.

YAKIMA COUNTY ADULT ARRESTEES

Summary Sample Characteristics

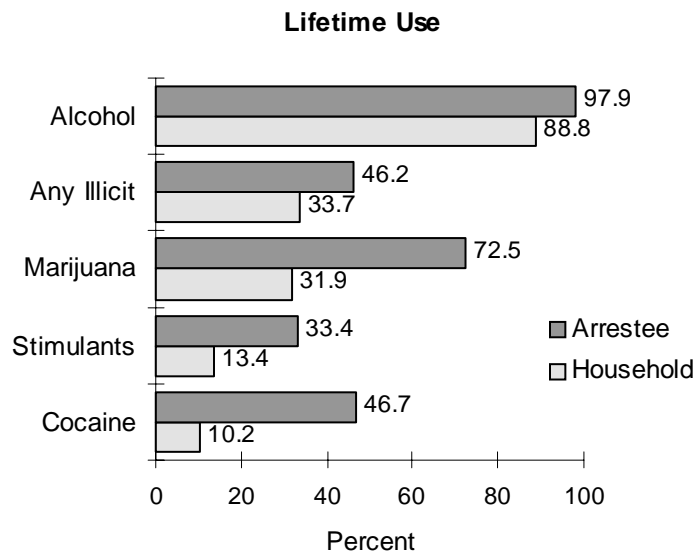
A total of 281 individuals were approached in the Yakima County jail and asked to participate in the ARREST study. Altogether, 94% agreed to participate, yielding a total sample size of 265 individuals. Men and women agreed to participate at comparable rates (92% and 98% respectively). Participation rates were also comparable across racial/ethnic groups and by age group. Yakima County arrestees had the highest rate of participation of the three sites in the ARREST study. See Appendix B for additional sample description and characteristics.

Comparison of Substance Use: Arrestees and Adults in Households

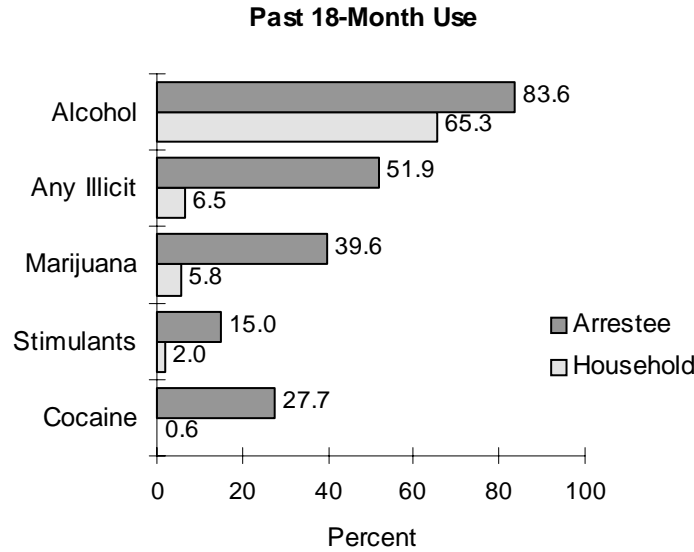
Comparison of substance use by arrestees in Yakima County and the general adult household population for Yakima County shows remarkable differences in substance use over three periods:

- Lifetime use—i.e. “Have you ever used....?”
- Past 18-months use—i.e. “Have you used....in the past 18 months?”
- Past month use—i.e. “Have you used....in the past 30 days?”

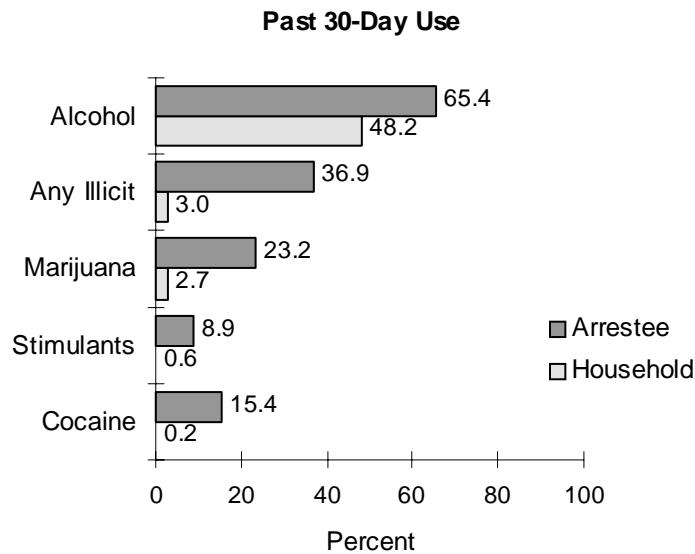
Lifetime rates of illicit drug use differed markedly between the general population and the arrestee population. While nearly everyone had tried alcohol at some point in their life, use of other substances was not comparable. On a lifetime basis, over twice as many adult arrestees compared to adults in the general population reported using marijuana or stimulants (amphetamines, crystal and/or ice). Nearly 5 times as many arrestees reported using cocaine (crack or powder) at least once as had adults in the general population (47% compared with 10%).



Reported use of illicit drugs during the past 18 months differed even more between adult arrestees and the adult household population. Eight times as many arrestees reported use of illicit drugs in the 18 months prior to the interview. Almost 50 times as many people in jail as people out of jail reported using cocaine during this time frame (27.7% compared with 0.6%).



Differences remained pronounced when comparing substance use during the 30 days prior to the interview. Alcohol use was reported most frequently by both groups. Cocaine was reported by almost 80 times more of those in jail than those in general population household. **Overall, adult arrestees were much more likely to be using substances than the general adult population in any time frame.**



While reported use of substances was lower during the past 30 days than for lifetime or 18-month use, the decline was far less for arrestees than for members of households. This is especially dramatic when comparing reported use of illicit drugs. Over three-quarters (76%) of arrestees reported using an illicit drug at least once in their lifetime; 37% reported use of an illicit drug during the preceding month—a decline of about one-half. Comparing lifetime and past 30-day reported use of illicit drugs by adults in households, on the other hand, showed a 90% decline—from 34% to 3%.

Past and Current Use by Arrestees

There was near universal lifetime use of alcohol by arrestees, which varied little by age, sex or race of the individual. Excluding alcohol, 76% had used some illicit substance during their lifetime. Looking at more current behavior—within the past 30 days—use remained high beginning with alcohol (65%) and followed by marijuana (23%), cocaine (15%), opiates (9%) and stimulants (9%). Use of hallucinogens, not shown here, was reported by just over 2% of the arrestees. There are some differences in past 30-day use by sex, age, race and type of charge.

Reported Use of Substances in the Past 30 Days

Substance	Total	Sex		Age			Race			Charge	
		Male	Fem.	18-29	30-39	40+	White	Hisp.	Other	Mis.	Fel.
Alcohol	65.4%	66.3%	60.6%	65.2%	64.1%	70.7%	68.1%	61.7%	68.2%	63.7%	71.6%
Marijuana	23.2%	23.9%	19.6%	26.8%	22.0%	10.5%*	27.4%	15.8%*	32.5%	21.2%	30.3%
Stimulants	8.9%	9.8%	4.4%	15.9%*	1.2%	0.0%*	17.7%*	1.5%	2.0%	7.1%	15.2%
Cocaine	15.4%	13.2%	26.3%*	9.8%	24.9%	12.2%	18.7%	9.1%	23.9%*	13.0%	23.8%*
Opiates	9.2%	7.6%	17.4%*	4.5%	13.2%	18.5%	11.9%	4.6%	14.5%	6.5%	18.5%*
Any Illicit	36.9%	35.1%	46.8%*	35.8%	41.6%	28.1%	50.6%	20.3%*	42.9%*	32.4%	52.9%*

* Statistically significant at $p < .05$.

Note: Columns do not add to 100% because many arrestees report using more than one substance.

Sex

Twice as many men compared to women reported using stimulants during the past 30 days. However, women's reported use of both cocaine and opiates was twice that reported by men—differences that were found to be statistically significant. Slightly more male than female arrestees reported using alcohol and marijuana, but the rates were roughly comparable.

Age

Alcohol use during the past 30 days was reported by a slightly higher percentage of older arrestees. Use of opiates was also reported by more arrestees 40 and older. Conversely, marijuana use was reported by more younger arrestees, especially those under 30. Cocaine use was most often reported by arrestees between the ages of 30 and 39. Recent use of stimulants was reported almost exclusively by arrestees under 30.

Race

Use of all substances was reported most often by Whites and the combined “Other” racial/ethnic group than by Hispanics. The differences are slight in reported use of alcohol, but much more pronounced for other substances. Marijuana, cocaine and opiates were reported by roughly twice as many Whites as Hispanics. Use of stimulants was notably higher for Whites. **Use of illicit drugs was reported by a significantly higher percentage of White and combined “Other” racial/ethnic groups than by Hispanics.**

Charge

People charged with felonies reported past 30-day use of each of the substances shown more frequently than those charged with misdemeanors. The difference is most notable in the case of stimulants, cocaine and opiates. This held true even when persons arrested on drug charges (which were more frequently represented among the felonies) were not included.

Substance Use Disorders

Compared to the general population, rates of substance abuse and chemical dependency are very high among arrestees. Over 44% of the arrestees interviewed at the Yakima County jail were diagnosed with a lifetime substance use disorder for either alcohol or drugs. This is nearly three and one half times the estimated rate in the Yakima County population at large (13%). Eleven percent were diagnosed with a lifetime (illicit) drug use disorder—again three times the rate in the general population. Of all arrestees interviewed, over 14% were determined to be dually drug and alcohol abusing or dependent.

**Lifetime/Past 18-Month Substance Use Disorder
Adult Arrestees & Adults in Households**

Substance	Lifetime SUD		18-Month SUD	
	Arrestee	HH	Arrestee	HH
Alcohol*	33.2%	10.8%	32.1%	5.4%
Any Illicit Drug**	25.8%	3.9%	25.7%	1.0%
Alcohol or Drug	44.4%	12.9%	44.0%	5.8%

* May be in combination with illicit drugs.** May be in combination with alcohol.

In Yakima County, alcohol abuse is by far the most prevalent form of substance abuse. One-third of those interviewed were diagnosed with a lifetime alcohol use disorder, and nearly the same number had an alcohol use disorder within the past 18 months. The rate of lifetime substance use disorder for cocaine, the next most frequently abused drug, was 13%, while rates for past 18 month cocaine use disorders was 12%.

By and large, arrestees in Yakima County have not overcome their substance use disorders. In the general population in Yakima County, barely 11% of the population is estimated to have a lifetime substance use disorder. Only half of these individuals (5.5%) are estimated to have experienced

symptoms of the disorder within the past 18 months. In the Yakima County jail population, on the other hand, 44% of arrestees were diagnosed with a lifetime substance use disorder, and virtually all of these report symptoms of dependence within the past 18 months.

Substance Use and Substance Use Disorder by Type of Substance

Substance	Use of Substance			Substance Use Disorder	
	Lifetime	18-Month	30-Day	Lifetime	18-Month
Alcohol	97.9%	83.6%	65.4%	33.3%	32.2%
Marijuana	72.5%	39.6%	23.2%	6.8%	9.1%
Stimulants	33.4%	15.0%	8.9%	6.1%	4.5%
Cocaine	46.7%	27.7%	15.4%	12.7%	11.9%
Opiates	24.3%	13.6%	9.2%	8.0%	8.0%
Any Illicit Drug	76.2%	51.9%	36.9%	25.8%	25.7%

Poly-drug use disorders—in which a lifetime substance use disorder is diagnosed and symptoms of dependence are currently present for more than one drug—affected 18% of arrestees in Yakima County. The most frequent combinations (32% overall of such disorders) involved alcohol and one or more illegal drugs. Cocaine in combination with alcohol or other drugs accounted for 21% of poly-drug abuse disorders. It is important to note that these disorders do not merely represent casual drug mixing or occasional use of more available alternate drugs. In this context, being classed as poly-drug abusing reflects that the arrestee has experienced clear symptoms of dependence—loss of control over use, repeated use despite significant consequences, and persistent patterns of use—in relation to more than one type of drug.

Need for Treatment

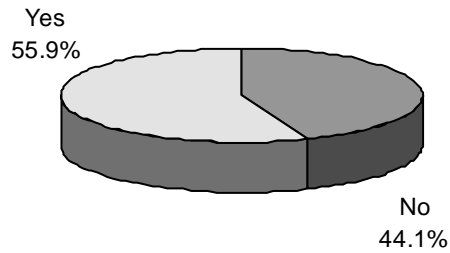
Need for treatment is defined in this study by four conditions in the following order⁸:

1. a diagnosis of current substance use disorder; or
2. self-reported problem with alcohol or drugs combined with continued regular use; or
3. having received treatment in the past year; or
4. evidence of heavy use of alcohol or drugs.

Nearly 56% of the Yakima County Jail arrestees were assessed as currently needing treatment. Most of those needing treatment (79%) were diagnosed with a substance use disorder active within the past 18 months.

⁸ A more complete discussion of the criteria applied to determine need for treatment is available on pages 4 and 5 of this report.

**Need for Treatment
Among Yakima County Arrestees**



Demographics

Need for Treatment – Projected Annually by Sex, Age and Race

Percent and Number	Total	Sex		Age			Race		
		Male n= 165	Fem. n=100	18-29 n=125	30-39 n=103	40+ n=37	White n=114	Hisp n=74	Other n=77
Percent Need	55.9%	56.1%	54.8%	49.8%	61.5%	66.9%	75.2%	34.0%	59.5%
Approximate Number *	6,000	5,100	900	2,900	2,300	800	3,700	1,500	800

* Based on total estimated bookings annually; some of these represent duplicate bookings for the same person during the year.

Need for treatment appears similar for male and female arrestees.

The arrestees most likely to need treatment in Yakima were those over 30 years of age. Half of arrestees under the age of 30 need substance abuse treatment. In contrast, over 61% of those aged 30 to 39 and 67% of those over the age of 40 are in need of treatment.⁹

Hispanic and African American arrestees in Yakima County had significantly lower assessed need for treatment than Whites, Native Americans or persons of “other” racial/ethnic backgrounds.¹⁰ The small sample size for African Americans (11 respondents in Yakima County), limits the extent to which this finding can be generalized, though it is consistent with findings for King County.

Charge

Based on the charge information available in these data, there does not appear to be any relationship between the type of charges for which people are arrested and the likelihood that they will need treatment.

⁹ Statistically significant for age at $\chi^2=6.39$, $df=2$, $p<.05$.

¹⁰ Statistically significant for race/ethnicity at $\chi^2=32.80$, $df=4$, $p<.001$.

Demand for Treatment

Self-Recognition of Treatment Need Among Arrestees

Fifty-six percent of arrestees in Yakima County were determined to need treatment for alcohol or drug abuse. Of the arrestees who were assessed as needing treatment in Yakima County,

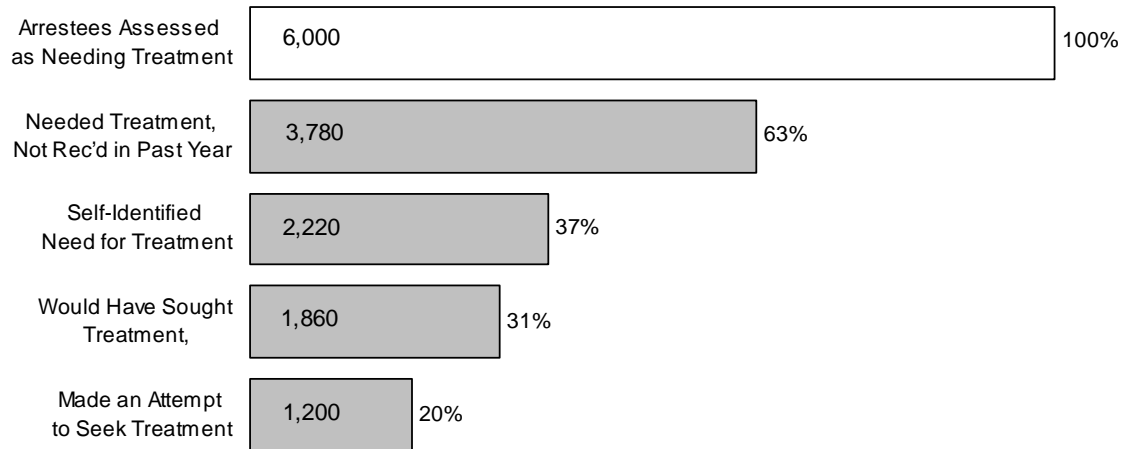
- 37% had received treatment for alcohol or drug abuse during the year prior to the interviews.
- 37% responded that over the past year, they had a need for treatment that was unmet.
- 31% stated that they would have sought treatment had it been available;
- 20% had actively sought treatment. The most frequent means of seeking treatment among Yakima respondents was talking with a friend (14%); or seeking help directly from DSHS, or from police, courts or probation services (a total of 7%).

Interpolating Demand for Treatment

The Yakima County jail reports that approximately 73% of their bookings annually consist of unduplicated individuals (persons counted only once no matter how many separate bookings they experience during the calendar year). Applying this proportion:

- Approximately 3,780 bookings, or 2,760 separate individuals who are processed in the Yakima County Jail would both be assessed as needing treatment and would agree that they need treatment.
- Of these, an estimated 1,200 bookings involve 876 separate individuals who have made an attempt to seek treatment in the past year and have been unsuccessful.
- **The potential exists to reach between 2 to 3 people daily (i.e., 876 people per year / 365 days per year = 2.4 people per day) in the Yakima County Jail** who are *assessed as needing treatment*, *recognize that they need treatment*, and *have made some attempt to seek treatment during the past year*.

**Past Year Treatment Seeking by Arrestees Identified as Needing Treatment
(# of bookings and % of those in need of treatment)**



Nearly all of the arrestees who stated that they would have sought treatment had it been available to them, also reported that they would seek treatment as an alternative to jail. Nearly 90% reported that they would use treatment services in the jail if they were offered—even if that did not constitute a deferral of jail. Again, applying these responses to those arrestees who were both assessed as needing treatment and self-identified as needing treatment, an estimated 1,220 separate individuals annually might take advantage of treatment services as either an alternative to jail or an in-jail opportunity to begin the recovery process.

WHATCOM COUNTY ADULT ARRESTEES

Summary Sample Characteristics

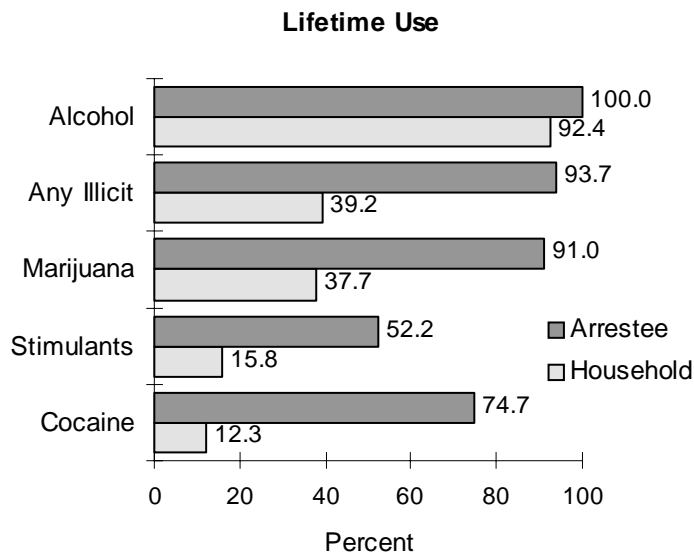
A total of 153 male arrestees were approached in the Whatcom County jail and asked to participate in the ARREST study. Two-thirds (68%) agreed to participate, yielding a total sample size of 104 individuals. Numbers of arrestees who were African American, Native American or of Hispanic descent were small; therefore, only limited conclusions can be made regarding differences in racial or ethnic group substance use and need for treatment. Arrestees under the age of 30 were more likely to participate in the interview than older arrestees (74% and 60% respectively). See Appendix C for additional sample description and characteristics.

Comparison of Substance Use: Arrestees and Adults in Households

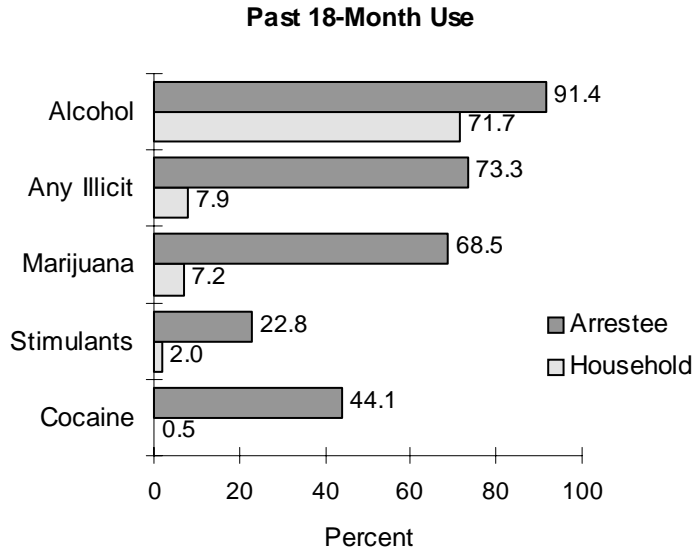
Comparison of substance use by Whatcom County adult arrestees and the general adult household population in Whatcom County shows remarkable differences in substance use over three periods:

- Lifetime use—i.e. “Have you ever used....?”
- Past 18 months use—i.e. “Have you usedin the past 18 months?”
- Past month use—i.e. “Have you used ... in the past 30 days?”

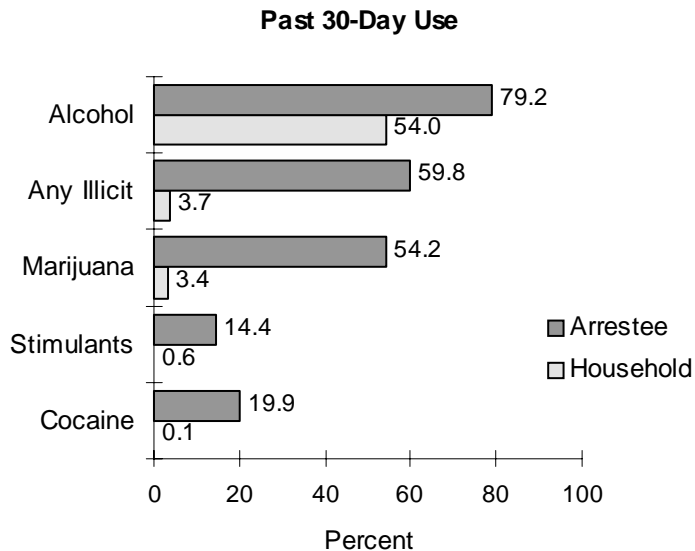
Rates of reported illicit drug use differ markedly between the general population and the arrestee population. Overall, adult arrestees were much more likely to be using substances than adults in the general population. All arrestees and nearly all adults in the household survey had tried alcohol during their lifetime, but lifetime use of illicit drugs was not so similar. Over twice as many adult arrestees as adults in households reported using illicit drugs, including marijuana. Three times as many adult arrestees reported using stimulants (amphetamines, crystal and/or ice) and 6 times as many adult arrestees as adults in households reported using cocaine (75% compared with 12%).



The contrast was even more marked for reported drug use during the past 18 months. Although a majority of both populations had used alcohol during that period, reported use of illicit drugs was 9 times higher among arrestees than among those in households. Close to 90 times as many arrestees reported using cocaine in the preceding 18 months than was reported in the general population.



While reported past 30-day use of drugs and alcohol was lower than reported lifetime use, the decline was far less for arrestees than adults in households. This is especially dramatic when comparing use of illicit drugs. Nearly all (94%) of arrestees reported using an illicit drug at some point in their lifetime. Reported use was still high (60%) during the preceding 30 days. As a comparison, 40% of household adults reported use of an illicit drug during their lifetime, while only 4% reported use during the preceding 30 days.



Past and Current Use by Arrestees

There was universal lifetime use of alcohol by arrestees. Beyond alcohol, 94% of the arrestees in Whatcom County had used some illicit substance during their lifetime. Looking at more current behavior—within the past 30 days—use remained high beginning with alcohol (79%) and followed by marijuana (54%), cocaine (20%), stimulants (14%) and opiates (4%). Use of hallucinogens, not shown here, was reported by just under 5% of the arrestees. Rates of past 30-day use by age, race and type of charge are identified in the chart below.

Reported Use of Substances in the Past 30 Days

Substance	Total	Age			Race		Charge	
		18-29	30-39	40+	White	Other	Mis.	Fel.
Alcohol	79.2%	83.7%	79.3%	58.7%	77.0%	84.5%	78.4%	80.8%
Marijuana	54.2%	62.6%	48.7%	33.1%	54.0%	54.5%	49.6%	62.9%
Stimulants	14.4%	18.4%	8.2%	16.6%	17.6%	7.1%	11.9%	19.2%
Cocaine	19.9%	16.7%	22.6%	26.0%	16.2%	28.4%	16.3%	26.7%
Opiates	3.8%	1.8%	5.2%	8.2%	5.4%	0.0%	1.4%	8.2%
Any Illicit	59.8%	63.9%	56.8%	50.7%	58.1%	63.8%	56.8%	65.6%

Note: columns do not add to 100%, because many arrestees report using more than one substance.

Age

Use of alcohol and marijuana was reported by more younger people (under the age of 40, and even more markedly under the age of 30). Cocaine use rose with age, with more of those over age 30, and slightly more again over age 40, reporting its use.

Race

Reported use of stimulants by Whites was over twice that of combined other racial/ethnic groups. Opiate use was reported only by Whites. Cocaine and alcohol were higher among other groups than Whites.

Charge

More of those charged with felonies reported using substances of all kinds than did those charged with misdemeanor offenses. This held true even when persons arrested on drug charges (which were more frequently represented among the felonies) were not included.

Substance Use Disorders

Compared to the general population, substance abuse and chemical dependency are at strikingly high levels among arrestees. Altogether 65% of Whatcom County arrestees had a lifetime diagnosis of substance use disorder for either alcohol or drugs. This is over four times the estimated 15% in the Whatcom County population at large. Of all arrestees, 30% had a lifetime diagnosis of both alcohol and drug use disorders.

In Whatcom County, alcohol use disorders are far more prevalent than other types of substance use disorders. Fifty-three percent of arrestees had a lifetime diagnosis of alcohol use disorder, and close to the same number—48%—had an alcohol use disorder active in the past 18 months. The next most prevalent drug disorder was associated with marijuana, with 30% assessed with a lifetime marijuana use disorder, and 27% assessed with an 18 month marijuana use disorder. Cocaine was the third most frequently abused drug, with 17% of respondents having a cocaine use disorder active within the past 18 months.

**Lifetime/Past 18-Month Substance Use Disorder
Adult Arrestees & Adults in Households**

Substance	Lifetime SUD		18-Month SUD	
	Arrestee	HH	Arrestee	HH
Alcohol*	22.3%	12.6%	21.4%	6.1%
Any Illicit Drug**	11.2%	4.6%	10.2%	1.2%
Alcohol or Drug	64.4%	15.2%	61.6%	6.6%

* May be in combination with illicit drugs.

** May be in combination with alcohol.

Most Whatcom County arrestees with a lifetime substance use disorder are not in recovery. In the general population in Whatcom County, 15% of the population is estimated to have a lifetime substance use disorder. Fewer than half of these individuals are estimated to have experienced symptoms of dependence within the past 18 months. Among Whatcom County arrestees, on the other hand, nearly all persons with a lifetime substance use disorder (62% of arrestees overall) report symptoms of dependence within the past 18 months.

Substance Use and Substance Use Disorder by Type of Substance

Substance	Use of Substance			Substance Use Disorder	
	Lifetime	18-Month	30-Day	Lifetime	18-Month
Alcohol	100.0%	91.4%	79.2%	52.6%	47.9%
Marijuana	91.0%	68.5%	54.2%	30.1%	27.3%
Stimulants	52.2%	22.8%	14.4%	9.6%	8.6%
Cocaine	74.7%	44.1%	19.9%	18.9%	16.9%
Opiates	31.6%	12.5%	3.8%	3.8%	3.8%
Any Illicit Drug	93.7%	73.3%	59.8%	42.1%	40.2%

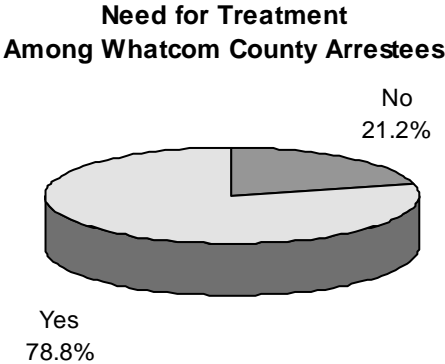
Poly-drug use disorders—in which lifetime diagnoses of substance use disorders and current symptoms of dependence are present for more than one drug—affected nearly one-third (31.8%) of Whatcom County arrestees. Over three-quarters of such combinations included alcohol and one or more other drugs. Overall, alcohol and marijuana use disorders were considerably more frequent than disorders involving other drugs. It is important to note that these disorders do not merely represent casual drug mixing or occasional use of more available alternate drugs. In this context, being classed as poly-drug abusing reflects that the arrestee has experienced clear symptoms of dependence—loss of control over use, repeated use despite significant consequences, and persistent patterns of use.

Need for Treatment

Need for treatment is defined in this study by four conditions in the following order:

- 1. a diagnosis of current substance use disorder; or
- 2. self-reported problem with alcohol or drugs combined with continued *regular* use; or
- 3. having received treatment in the past year; or
- 4. evidence of *heavy* use of alcohol or drugs¹¹.

Nearly 79% of the Whatcom County Jail arrestees interviewed were assessed as needing treatment. This is the highest rate of the three ARREST sites. Most of those needing treatment (78% of those interviewed) were diagnosed with a substance use disorder active within the past 18 months.



¹¹ A more complete discussion of the criteria applied to determine need for treatment is found on pages 4 and 5 of this report.

Demographics

There do not appear to be significant differences in treatment need between age groups or between racial/ethnic groups in this sample.

Need for Treatment—Projected Annually by Sex, Age and Race

Percent and Number	Total	Age			Race	
		18-29 n=54	30-39 n=38	40+ n=12	White n=74	Other n=30
Percent Need	78.8%	78.4%	82.9%	67.3%	81.1%	73.4%
Approximate Number*	4,600	2,400	1,700	500	3,300	1,300

Based on total estimated annual bookings; some of these represent duplicate bookings for the same person during the year.

Charge

Based on the charge information available in this data set, there does not appear to be any relationship between the types of charges for which people are arrested and the likelihood that they will need treatment.

Demand for Treatment

Self-Recognition of Treatment Need Among Arrestees

Seventy-nine percent of arrestees in Whatcom County were determined to need treatment for alcohol or drug abuse. Of the arrestees assessed as needing treatment in Whatcom County:

- 40% had received treatment during the year prior to the interviews.
- 32% of arrestees self-identified that they had needed treatment during the previous 12 months;
- 22% stated that they would have sought treatment had it been available; and
- 12% had actively sought treatment, most frequently by talking with a friend about treatment options, or by calling or visiting a treatment or detox center.

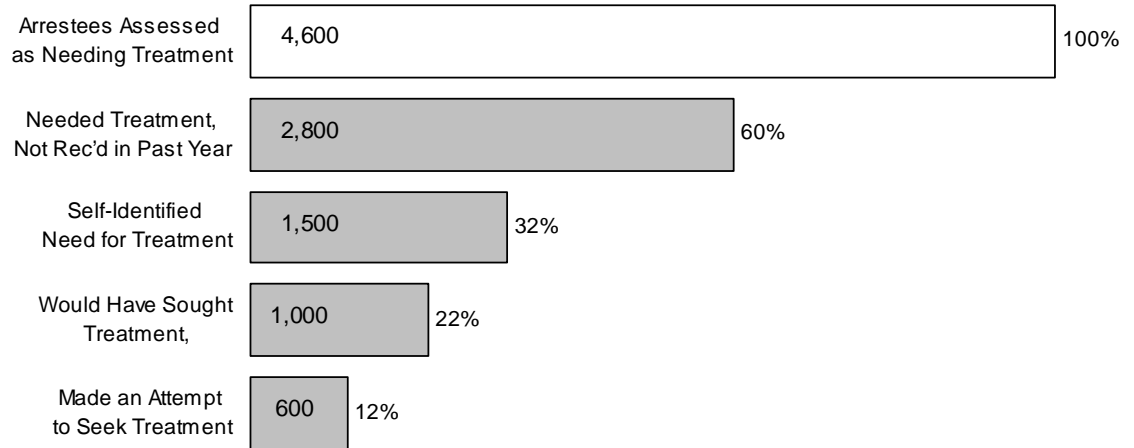
Interpolating Demand for Treatment

The Whatcom County Jail reports that approximately 75% of their bookings annually consist of unduplicated individuals (persons counted only once no matter how many separate bookings they experience during the calendar year). Applying this proportion:

- Approximately 2,800 bookings, or 2,070 separate individuals who are processed in the Whatcom County Jail would be assessed as needing treatment and would agree that they need treatment.
- Of these, an estimated 600 bookings, or 450 separate individuals, have made an attempt to seek treatment in the past year and have been unsuccessful.

- **The potential exists that every day of the year, at least one person (i.e. 450 people per year / 365 days per year = 1.2 people per day) can be reached in the Whatcom County Jail who is assessed as needing treatment, recognizes that they need treatment, and has made some attempt to seek treatment during the past year.**

**Past Year Treatment Seeking by Arrestees Identified as Needing Treatment
(# of bookings and % of those in need of treatment)**



Of the arrestees who stated that they would have sought treatment had it been available to them, nearly all reported that they would seek treatment either as an alternative to jail or as in-jail service even if it did not mean a deferral of jail time.

If these responses are applied to those arrestees who were both assessed as needing treatment and self-identified as needing treatment, up to 750 might take advantage of treatment services as either an alternative to jail or an in-jail opportunity to begin the recovery process.

In Whatcom County, self-reported need for treatment by arrestees had two characteristics:

Virtually all of the individuals who reported a desire for treatment also met the formal assessment criteria for needing treatment. Only 2 individuals reported a need for treatment where none was assessed using the objective criteria in the interview. Asking arrestees whether they need treatment, and simply targeting treatment to those who answer yes, may be a cost effective targeting strategy.

On the other hand, only one-third of those who were assessed as needing treatment recognized that need themselves. This mirrors high rates of denial in many populations.

KING COUNTY JUVENILE ARRESTEES

ARREST Survey Design

The juvenile arrestee survey design and methodology are essentially the same as the adult ARREST survey described in the introduction to this report. There are some differences, however, that should be mentioned. Notably, there was not a comparable interview of juveniles in the general population. Comparison of substance use and substance use disorders is restricted to observations within the juvenile arrestee population. In some cases, it is possible to compare adult arrestee and juvenile arrestee findings, although differences in the circumstances leading to juvenile and adult bookings limits comparison there as well.

The interview instrument used in the juvenile ARREST survey used questions from the Diagnostic Interview Schedule for Children (DISC) developed by David Shaffer, Ph.D. and Prudence Fisher, MS at the New York State Psychiatric Institute. In the survey administered in King County, certain questions were changed, with the concurrence of the DISC developers, in order to reduce the possibility of harm to juveniles interviewed. A more complete discussion of these changes is included in Appendix H of this report.

Other differences in the Juvenile ARREST survey include use of a shorter time frame for one definition of substance use (6-months for juveniles versus 18-months for adults). Lifetime and 30-day time frames are the same as for the adult survey. While most of the substances included in the questionnaire are identical, the juvenile survey also included some more appropriate to youth - inhalants, for example.

Finally, while diagnoses of both substance dependence and substance abuse were calculated based on DMS-III-R criterion, 18-month substance use disorder was not calculated for juveniles, nor was need for treatment further defined. Lifetime substance use disorder (lifetime abuse or lifetime dependence) is the only measure used to determine need for treatment among juveniles.

Summary Sample Characteristics

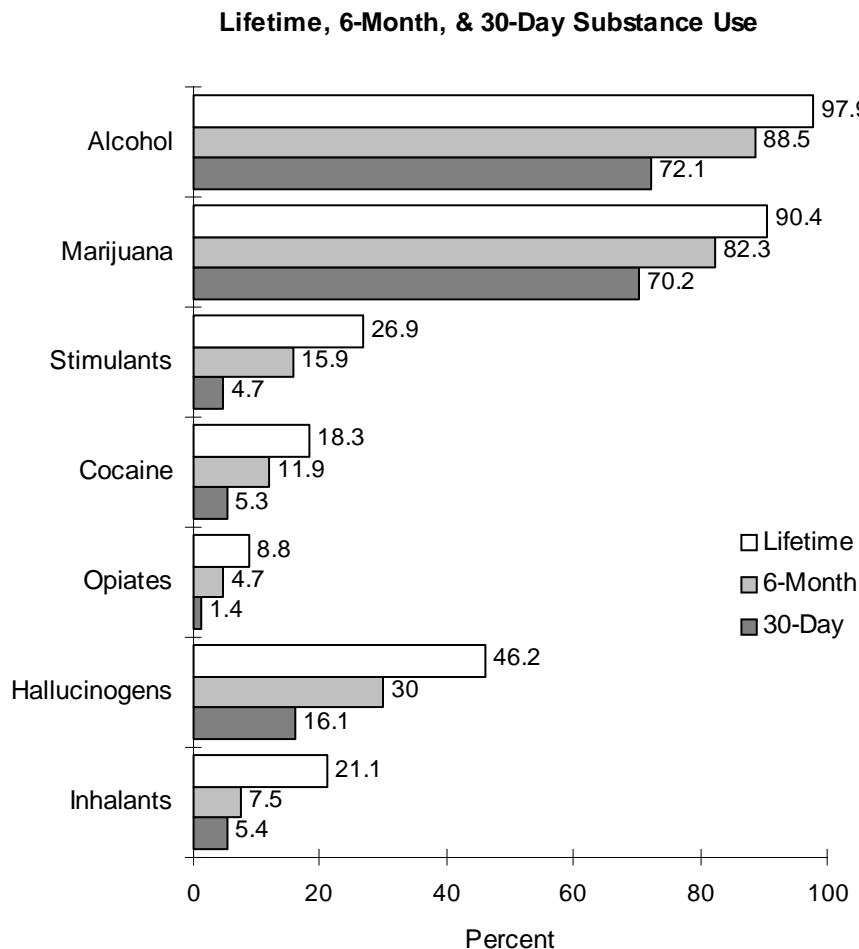
A total of 179 youth aged 14 to 17 were approached in the detention facility operated by the King County Department of Youth Services. Agreement to participate was high at 94%, yielding a total sample of 168 individuals. There was little notable difference in agreement by sex (93% for males and 96% for females). Those 14 to 15 years old were a little more likely to agree (96%) than youth aged 16 to 17 (92%), but differences were slight. See Appendix D for additional sample description and characteristics.

Past and Current Use by Arrestees

A comparison of reported substance use over time by juvenile arrestees in King County shows a rather consistent use of substances over three time frames addressed during the interview.

- Lifetime use - i.e. "Have you ever used....?"
- Past 6-months use - i.e. "Have you used....in the past 6 months?"
- Past month use - i.e. "How many times have you tried....in the past 30 days?"

Nearly everyone reported use of alcohol and marijuana at some point in their lifetime. Close to 90% reported use of alcohol in the past six months, and just over 80% reported use of marijuana. Use of each of these drugs within the past 30 days was also reported by over 70% of those interviewed.



A remarkably high number of juvenile arrestees reported use of illicit drugs other than marijuana. Lifetime use of hallucinogens was reported by nearly half (46%) of the juvenile arrestees; 16% used hallucinogens in the last 30 days. In contrast, under 19% of 12th graders participating in the 1995 Washington

State Survey of Adolescent Health Behaviors¹² reported lifetime use of hallucinogens.

Over one-quarter (27%) used stimulants (amphetamines, crystal and/or ice) in their lifetime; 5% used them in the last month. Reported lifetime use of inhalants was also pronounced among juvenile offenders (21%), as was the use of other drugs. In comparison, only 11% of 12th graders participating in the survey reported use of inhalants. The school survey did not ask about use of stimulants other than inhalants.

Reported use of substances declined when comparing lifetime, 6 months and 30 day intervals. Use of alcohol and marijuana remained high - over three-quarters of juveniles ever trying marijuana had used it in the past 30 days as well. The decline in use of other substances is greater. For example, less than one-fifth of juveniles ever trying stimulants had used it in the past 30 days.

Juveniles arrestees reported past 30-day use of alcohol and marijuana at rates similar to those reported by young adult arrestees. Seventy percent of the juvenile arrestees used marijuana, and 72% used alcohol during the preceding 30 days. The reported use of marijuana exceeded that reported by young adult arrestees in King County – only 56% of those aged 18 to 29 used marijuana in the 30 days preceding arrest. Alcohol use was reported by a similar number of juveniles and young adult offenders (72% and 74% respectively).

Reported use of cocaine and opiates during the past 30 days was substantially lower among juveniles than young adult arrestees (5% compared to 24% for cocaine; 1% compared to 9% for opiates). Use of stimulants was more common in comparison. Just under 5% of the juveniles reported using stimulants compared to 8% of adult arrestees under 30. Juvenile reported use of hallucinogens was twice as high at 16%.

There are some differences in past 30-day use by sex, race and nature of the charge of the juvenile arrestee. Use of marijuana, alcohol and hallucinogens were most frequently reported.

¹² Gabriel, R., Deck, D., Einspruch, E., and Nickel, P. (1995). *Washington State Survey of Adolescent Health Behaviors: Analytic report*. Submitted by RMC Corporation, Portland, Oregon to Washington state's Office of Superintendent of Public Instruction (OSPI), Department of Social and Health Services, and Department of Health. Contact OSPI for the report.

Reported Use of Substances in the Past 30 Days

Substance	Total	Sex		Race			Charge	
		Male	Fem.	White	Af.Am	Other	Mis.	Fel.
Alcohol	72.1%	72.4%	70.8%	69.9%	74.8%	72.9%	69.1%	74.4%
Marijuana	70.2%	72.6%	60.7%	64.1%	76.4%	74.7%	65.5%	74.0%
Stimulants	4.7%	2.5%	13.4%*	8.1%	0.0%	4.8%	4.8%	4.6%
Cocaine	5.3%	4.2%	9.4%	9.2%	0.0%	4.8%	4.5%	5.9%
Opiates	1.4%	0.8%	4.0%	1.1%	0.0%	4.8%	0.6%	2.1%
Hallucinogen	16.1%	17.5%	10.4%	26.7%	0.0%	18.9%	16.6%	15.7%
Inhalants	5.4%	5.5%	5.4%	6.1%	0.0%	14.1%	5.4%	5.4%
Any Illicit	72.1%	73.5%	66.4%	67.2%	76.4%	77.0%	65.5%	77.3%

* Statistically significant at $p < .05$

Sex

Female arrestees more frequently reported use of “hard drugs” (all except alcohol and marijuana) than males. Reported use of stimulants was over 5 times as frequent among females than males. This was the only finding of statistical significance among those data shown above. This is in contrast to adult female arrestees, whose rates of stimulant use were less than half that of males in both sites at which women were interviewed.

Juvenile females also reported use of cocaine (9% compared with 4%) and opiates more frequently than males. This is consistent with use reported by adult females and males in King and Yakima counties.

More males than females reported using marijuana and hallucinogens.

Race

Reported use of substances other than alcohol and marijuana during the previous 30 days is quite different if race of arrestee is considered. African American arrestees reported no experience with stimulants, cocaine, opiates, hallucinogens or inhalants during the month. Reported use of hallucinogens was highest among Whites. However, significant differences by racial or ethnic group in relation to substance use are not supported by the data because of small sample sizes of some groupings.

Charge

For most substances, a slightly higher percentage of those charged with felonies reported using during the past month, than those charged with misdemeanors. Unlike King County adult arrestees, the majority of the charges against juveniles were felonies. Only 27% of the charges against adults were felonies, while 56% of the juveniles were charged with felonies. Drug offenses only accounted for 4% of felony charges.

Substance Use Disorders

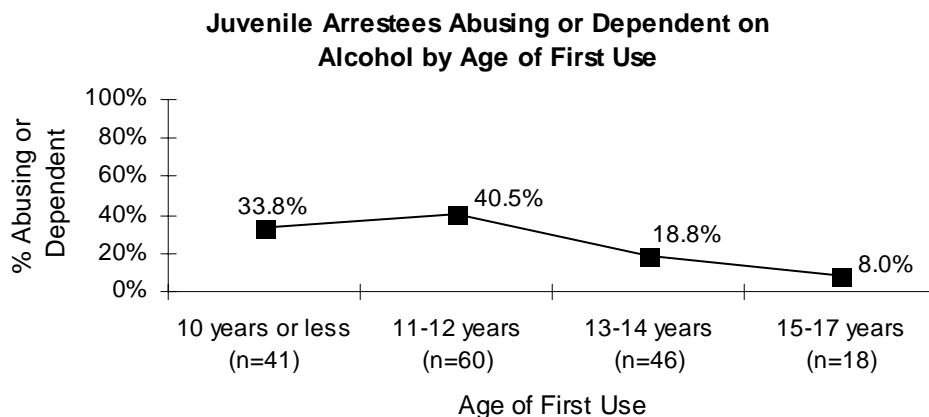
A substance use disorder is present when there is a diagnosis of DSM-III-R dependence or abuse (see page 4 for criteria of substance use disorder). As shown below, alcohol and marijuana use disorders are most prevalent among juvenile arrestees.

Substance Use and Lifetime Substance Use Disorder (SUD) by Type of Substance

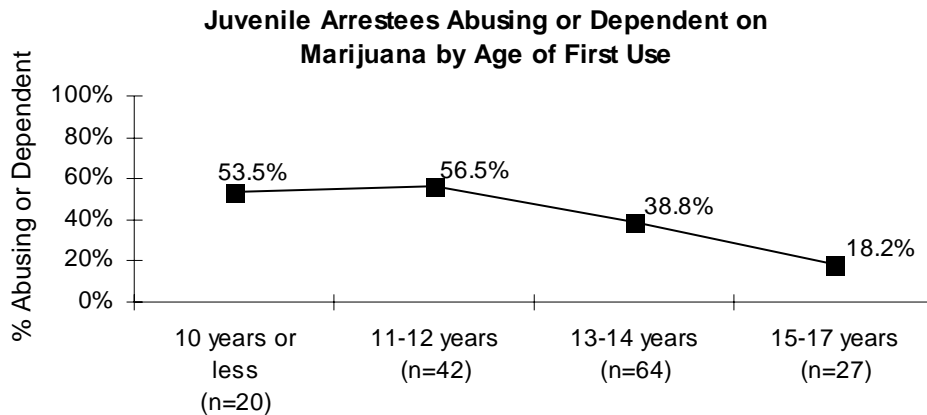
Substance	Use of Substance			Lifetime SUD		
	Lifetime	6-Month	30-Day	Abuse	Depend.	Total
Alcohol	97.9%	88.5%	72.1%	1.4%	27.2%	28.6%
Marijuana	90.4%	82.3%	70.2%	14.1%	24.4%	38.5%
Stimulants	26.9%	15.9%	4.7%	0.9%	2.8%	3.7%
Cocaine	18.3%	11.9%	5.3%	0.5%	3.1%	3.6%
Opiates	8.8%	4.7%	1.4%	0.6%	1.1%	1.7%
Hallucinogens	46.2%	30.0%	16.1%	0.0%	0.0%	0.0%

A total of 27% of juvenile arrestees were found to have a lifetime dependence on alcohol; another 1% were diagnosed with a lifetime abuse of alcohol. The rate for marijuana dependence was much near the same level as dependence on alcohol (24%), with an additional 14% determined to be abusing marijuana - yielding a total of 38% diagnosed with a lifetime marijuana use disorder. The rates of abuse and dependence on alcohol are on a par with the rates of alcohol abuse and dependence in the adult arrestee population, despite the fact that these youth are between the ages of 14 and 17. **The juvenile rate of marijuana abuse and dependence is higher than that of their adult counterparts.**

For both alcohol and marijuana, the younger the reported age of first use of the substance, the more likely the arrestees were to be diagnosed as dependent on that substance. Youth who initiated alcohol use before age 10 were diagnosed as abusing or dependent on alcohol twice as often as youth initiating use between ages 13 and 14, and nearly 4 times as frequently as those whose first use occurred between ages 15 and 17.



A similar relationship is identified for youth using marijuana. Over one-half of youth who report first use of marijuana before age 13 were diagnosed as abusing or dependent on marijuana. When first use is delayed to between the ages of 15 and 17, the percent of youth diagnosed as dependent falls to 18%.



A total of 4% of juvenile arrestees had a lifetime stimulant use disorder. This was close to the adult rate of 6%. Fifty-one percent of the juvenile arrestees were determined to have a lifetime alcohol or drug use disorder. **This is similar to rates for adult arrestees in King County, 49% of whom had a lifetime alcohol or drug use disorder.**

Even when youth are not diagnosed with a substance use disorder, many have experienced at least one symptom of dependence, though not in sufficient duration to be diagnosed a substance use disorder. Twenty percent of juveniles interviewed had experienced at least one symptom of dependence due to hallucinogens, 11% related to stimulants, and 9% related to cocaine.

Given the age of the juveniles interviewed and the extent to which their use of drugs has already affected them, the potential for an early lifetime diagnosis of abuse or dependence on one or more powerful and illegal drugs is enormous.

Poly-drug use disorders - in which symptoms of dependence or abuse were actively present due to more than one drug - affected over 15% of juvenile arrestees. The most frequent combinations involve alcohol-marijuana combinations, or one of these substances with a “hard drug”. It is important to note that these disorders do not merely represent casual drug mixing or occasional use of more available alternate drugs. In this context, being classed as having a poly-drug use disorder reflects that the arrestee has experienced clear symptoms of dependence - loss of control over use, repeated use despite significant consequences, and persistent patterns of use over time.

Need for Treatment

At a minimum, individuals who are diagnosed with a substance use disorder are in need of treatment. Fifty-one percent of juvenile arrestees were determined to

have a lifetime disorder. Because of the age of the juveniles and likely recent involvement with these substances, the lifetime diagnosis may give an indication of a minimum level of need for treatment.

Other factors - heavy use, presence of symptoms of dependence or abuse and regular use, and recent treatment - were not calculated for juveniles. The only indication of need for treatment currently available is the lifetime substance use disorder. That is shown below by sex and race. Also included are rough estimates of the number of juvenile arrestees in King County this represents in a year's time.

Lifetime Substance Use Disorder by Sex and Race

Percent and Number	Total	Sex		Race		
		Male	Fem.	White	Af.Am	Other
Percent	50.8%	51.9%	46.6%	53.3%	41.3%	62.5%
Approximate Number *	750	600	150	400	200	150

* Based on total estimated annual bookings; some of these represent duplicate bookings for the same person during the year.

Lifetime substance use disorders vary somewhat between male (52%) and female (47%) juvenile arrestees. More White arrestees than African Americans would require treatment based on this definition (53% compared with 41%), although other racial or ethnic groupings had a higher substance use disorder diagnosis. All of the Hispanic youth (11 out of 11) were found to have a lifetime substance use disorder. However, the small sample and cell sizes limit the reliability of this finding.

Demand for Treatment

One-quarter of the juvenile arrestees said they had received treatment in the past for drugs or alcohol. More of those who were diagnosed with a lifetime substance use disorder had received treatment than those not diagnosed with a lifetime disorder (36% compared with 13%).

However, there was a very low acknowledgment of current need for treatment. Only 15% of those diagnosed with a substance use disorder said they needed treatment now - 85% of those diagnosed felt they did not need treatment. This suggests an opportunity to target interventions at this youthful population of offenders at the point at which their involvement in "hard drugs" is still limited.

Unanswered Questions

Several questions are raised by this examination of the data from the juvenile ARREST study. The data on use, abuse and dependence by youth of different racial and ethnic backgrounds are complex. They appear to contradict some use and dependence data for youth of specific ethnic groups in the general population. This may be precisely because this is not a general population group - but rather a group of youth who are harmfully involved in crime as well

as drug use. Nevertheless, additional analysis and comparison to general population data is necessary to clarify the picture of need for culturally appropriate treatment. Similar analysis to examine sex differences and age differences within this juvenile group may also be appropriate.

Compared to the number of youth diagnosed as substance abusing or chemically dependent, there are a large number of youth who have experienced one or more symptoms of dependence but who are not diagnosed as dependent. Typically, this occurs either because not enough symptoms are experienced, or because they are not of sufficient duration. Nevertheless, a much larger pool of youth in this population may be in the early stages of developing chemical dependency. Understanding their specific experiences - and particularly the symptoms or symptom clusters which they most readily recognize - has the potential to provide valuable information for planning effective outreach, intervention and treatment approaches.

APPENDICES

Appendix A - Sample Characteristics of King County Adult Arrestees

Actual Sample

Actual Sample King County Adults

Race	Sex		Total
	Male	Female	
White	57	22	79
African American	90	14	104
Native American	14	0	14
Hispanic	18	1	19
Other	5	8	13
Age	Male	Female	Total
18-29	96	30	126
30-39	54	13	67
40+	34	2	36
Total	184	45	229

Weighted Sample

The analysis and discussion presented in this paper used weights to adjust the survey sample to represent the number of adults arrested and booked in King County in terms of size, race and sex in 1994. The weighted sample more closely resembles the overall arrestee population than does the raw survey sample. Those adjustments are reflected in the adjacent table.

Weighted Sample - King County Adult Booked Arrestees, 1994

Race	Sex		Total
	Male	Female	
White	29,832	6,281	36,113
African American	15,050	3,642	18,692
Native American	1,034	-0-	1,034
Hispanic	1,204	261	1,465
Other	1,650	606	2,256
Age	Male	Female	Total
18-29	23,874	7,657	31,531
30-39	15,904	2,612	18,516
40+	8,992	521	9,513
Total	48,770	10,790	59,560

Other Arrestee Characteristics

While the ARREST study focused primarily on substance use, substance use disorders and need for treatment, several questions were included pertaining to income and education, as well as most serious crime with which person was charged at the time of booking. Selected details are presented in the following sections.

Education

Levels of education for arrestees were lower than the average level in the state. Twenty-two percent of the arrestees did not have a high school diploma or GED. As a comparison, only 16% of people in Washington over 25 years old did not have a diploma according to the 1990 U.S. Census.

Income

Just under half of the arrestees (47%) had full-time jobs. Others received income from various sources, including part-time jobs (16%), public assistance (12%), and illegal sources (12%) such as prostitution or drugs. The median monthly income reported from legal sources was \$800.

Thirty percent of the women received welfare/SSI benefits. Only 24% of women had full-time jobs. A slightly higher percentage of women reported money from illegal sources than reported by men (15% compared to 11%).

Charge

Several charges may have been present at the time of booking. Interviewers identified the most serious and disregarded others. Those which appeared most frequently were traffic offenses (not related to DUI and DWI), assault, larceny/theft, and drug possession. Nearly three-quarters of the charges were misdemeanors; the remaining one-quarter were felonies. An exception to this general pattern is 76% of drug offenses were felonies.

Overall, there were 23 different charge categories reflected in the arrests of this King County survey population -- however, most of these charges applied to only a handful of arrestees. For clarity of analysis, charge categories were combined for this report, grouping charges by nature of the crime. Seven categories were selected.

1. **crimes against persons** (assault, homicide, sex offense)
2. **property crimes** (arson, burglary, forgery, fraud, larceny/theft, robbery, stolen vehicle)

3. **violations/flight/escape** (flight, escape, bench warrant, probation and parole violations)

4. **drug offenses** (drug possession, drug sale)

5. **DUI/DWI**

6. **traffic offenses** (excluding DUI/DWI)

7. **other** (commercial sex/prostitution, weapons, family offense, obscenity (e.g. indecent exposure), obstructing police/resisting arrest, public or peace disturbance, mischief, trespassing, reckless endangerment, other)

Most Serious Charge at Booking

Charge Category	Type Charge		Total
	Misdem.	Felony	
Crimes against persons	18.1%	2.8%	20.9%
Property crimes	14.1%	9.8%	24.0%
Violations, flight	3.7%	1.4%	5.1%
Drug offenses	2.4%	7.9%	10.4%
DUI or DWI	5.9%	0.9%	6.8%
Traffic (non DUI)	16.5%	0.0%	16.5%
Other	12.3%	4.0%	16.3%
Total	73.1%	26.9%	100.0%

Appendix B - Sample Characteristics of Yakima County Adult Arrestees

Actual Sample

Actual Sample Yakima County

Race	Sex		Total
	Male	Female	
White	49	65	114
African American	8	3	11
Native American	47	-0-	47
Hispanic	61	13	74
Other	-0-	19	19
Age	Male	Female	Total
18-29	90	35	125
30-39	52	51	103
40+	23	14	37
Total	165	100	265

Weighted Sample

The analysis and discussion presented in this paper used weights to adjust the survey sample to represent the number of adults arrested and booked in Yakima County in terms of size, race and sex in 1994. The weighted sample more closely resembles the overall arrestee population than does the raw survey sample. Those adjustments are reflected in the adjacent table.

Weighted Sample - Yakima County Adult Booked Arrestees, 1994

Race	Sex		Total
	Male	Female	
White	3871	1020	4,891
African American	341	92	433
Native American	647	-0-	647
Hispanic	4,213	324	4537
Other	-0-	320	320
Age	Male	Female	Total
18-29	5,147	629	5,776
30-39	2,908	882	3,790
40+	1,017	245	1,262
Total	9,072	1,756	10,828

Other Arrestee Characteristics

While the ARREST study focused primarily on substance use, substance use disorders and need for treatment, several questions were included pertaining to income and education, as well as most serious crime with which person was charged at the time of booking. Selected details are presented in the following sections.

Education

Levels of education for arrestees were lower than the average level in the state. Nearly half (48%) of the arrestees did not have a high school diploma or GED. As a comparison, only 16% of people in Washington over 25 years old did not have a diploma according to the 1990 U.S. Census.

Income

Just under one-third of the arrestees (32%) had full-time jobs. Others received income from various sources, including part-time jobs (14%), public assistance (15%), and illegal sources (4%) such as prostitution or drugs. The median monthly income reported from legal sources was less than \$400.

Three times as many women as men received welfare/SSI benefits (38% compared with 11%). Only about 16% of women had full-time jobs. A slightly higher percentage of women reported money from illegal sources than reported by men (8% compared with 3%).

Charge

Several charges may have been present at the time of booking. Interviewers identified the most serious and disregarded others. Those which appeared most frequently were traffic offenses (not related to DUI and DWI) and DUI or DWI. The majority (78%) of the charges were misdemeanors; the remaining were felonies.

Overall, there were 24 different charge categories reflected in the arrests of this Yakima County survey population -- however, most of these charges applied to only a handful of arrestees. For clarity of analysis, charge categories were combined for this report, grouping charges by nature of the crime. Seven categories were selected.

1. **crimes against persons** (assault, homicide, manslaughter, sexual assault/rape, sex offense)
2. **property crimes** (burglary, damage/destruction of property, forgery, larceny/theft, robbery, stolen property, stolen vehicle)
3. **violations/flight/escape** (flight, escape, bench warrant, probation and parole violations)
4. **drug offenses** (drug possession, drug sale)
5. **DUI/DWI**
6. **traffic offenses** (excluding DUI/DWI)
7. **other** (commercial sex/prostitution, weapons, family offense, obstructing police/resisting arrest, public or peace disturbance, mischief, trespassing, reckless endangerment, other)

Most Serious Charge at Booking

Charge Category	Type Charge		Total
	Misdem	Felony	
Crimes against persons	5.6%	3.2%	8.8%
Property crimes	11.7%	6.7%	18.4%
Violations, flight	13.7%	3.6%	17.3%
Drug offenses	0.9%	6.1%	7.0%
DUI or DWI	12.7%	0.0%	12.7%
Traffic (non DUI)	15.9%	0.0%	15.9%
Other	17.5%	2.4%	19.9%
Total	77.9%	22.1%	100.0%

Most of the charges in each category, grouped according to this scheme, were misdemeanors. An exception to this general pattern is 87% of drug offenses were felonies.

Appendix C - Sample Characteristics of Whatcom County Adult Arrestees

Actual Sample

Weighted Sample

Actual Sample - Whatcom County

Race	Total
White	74
African American	3
Native American	14
Hispanic	10
Other	3
Age	Total
18-29	54
30-39	38
40+	12
Total	104

Weighted Sample - Whatcom County Adult Booked Arrestees, 1994

Race	Total
White	4,101
African American	234
Native American	879
Hispanic	528
Other	117
Age	Total
18-29	3,059
30-39	2,131
40+	670
Total	5,859

The analysis and discussion presented in this paper used weights to adjust the survey sample to represent the number of adults arrested and booked in Whatcom County in terms of size and race in 1994. The weighted sample more closely resembles the overall arrestee population than does the raw survey sample. Those adjustments are reflected in the adjacent table

Other Arrestee Characteristics

While the ARREST study focused primarily on substance use, substance use disorders and need for treatment, several questions were included pertaining to income and education, as well as most serious crime with which person was charged at the time of booking. Selected details are presented in the following sections.

Education

Levels of education for arrestees were lower than the average level in the state. One-quarter of the arrestees did not have a high school diploma or GED. As a comparison, 16% of all the people in Washington over 25 years old did not have a diploma according to the 1990 U.S. Census.

Income

Just under half of the arrestees(48%) had full-time jobs. Others received income from various sources, including part-time jobs (23%), public assistance (9%), and illegal sources (2%) such as drugs. The median monthly income reported from legal sources was \$950.

Charge

Several charges may have been present at the time of booking. Interviewers identified the most serious and disregarded others. Those which appeared most frequently were violations of parole, probation, or restraining orders and flight, escapes, or bench warrants. Just over two-thirds (68%) of the charges were misdemeanors; the remaining were felonies. Exceptions to this pattern include drug offenses (71% felony) and property crimes (89% felony).

Overall, there were 18 different charge categories reflected in the arrests of this Whatcom County survey population -- however, most of these charges applied to only a handful of arrestees. For clarity of analysis, charge categories were combined for this report, grouping charges by nature of the crime. Seven categories were selected.

1. **crimes against persons** (assault, extortion/threat, sexual assault/rape)
2. **property crimes** (burglary, forgery, fraud, larceny/theft, robbery, stolen property)
3. **violations/flight/escape** (flight, escape, bench warrant, probation and parole violations)
4. **drug offenses** (drug possession, drug sale)
5. **DUI/DWI**
6. **traffic offenses** (excluding DUI/DWI)
7. **other** (family offense, obstructing police/resisting arrest, public or peace disturbance, mischief, trespassing, reckless endangerment, other)

Most Serious Charge at Booking

Charge Category	Type Charge		Total
	Misdem.	Felony	
Crimes against persons	6.9%	6.4%	13.3%
Property crimes	2.3%	11.7%	14.0%
Violations, flight	39.2%	7.7%	46.9%
Drug offenses	2.8%	6.9%	9.7%
DUI or DWI	3.8%	0.0%	3.8%
Traffic (non DUI)	6.7%	0.0%	6.7%
Other	3.7%	1.9%	5.5%
Total	65.4%	34.6%	100.0%

Appendix D - Sample Characteristics of King County Juvenile Arrestees

Actual Sample

Actual Sample - King County Juveniles

Race	Sex		Total
	Male	Female	
White	55	35	90
African American	28	18	46
Hispanic	7	4	11
Other	10	11	21
Age	Male	Female	Total
14-15	42	37	79
16-17	58	31	89
Total	100	68	168

Weighted Sample

The analysis and discussion presented in this paper used weights to adjust the survey sample to represent the number of juveniles arrested and booked in King County in terms of size, race and sex in 1994. The weighted sample more closely resembles the arrestee population which, in 1992 for example, was 3,564 (614 female and 2,950 males). Those adjustments are reflected below.

Weighted Sample - King County Juvenile Booked Arrestees, 1994

Race	Sex		Total
	Male	Female	
White	562	142	704
African American	395	109	504
Hispanic	63	7	70
Other	159	40	199
Age	Male	Female	Total
14-15	485	150	635
16-17	694	148	842
Total	1,179	298	1,477

Other Arrestee Characteristics

While the ARREST study focused primarily on substance use, substance use disorders and need for treatment, several questions were included pertaining to living situations, education and work, as well as the most serious crime with which person was charged at the time of booking. Selected details are presented in the following sections.

Living Situations

Contrary to stereotypes, few of the substance abusing youth interviewed reported that they were homeless, living alone or living in institutions. Most were living in some family situation.

Education

Overall, only 70% of the arrestees were still enrolled in school, despite the fact that virtually all are normally school-aged. Those assessed with no substance use disorder have the highest rates of school enrollment, but not much higher than those with alcohol or drug use disorders. Only those assessed as being dually dependent on alcohol and drugs have significantly lower school enrollment - only 53% remained in school.

The most frequent reason given for not being enrolled in school is having dropped out (16%), followed by expulsion (6%). Dropout rates appear higher for youth who are dually diagnosed with alcohol and drug use disorders. Expulsion rates appear higher for those with alcohol use disorders only.

Work

Twenty-two percent of the arrestees worked, mostly part-time, but some full-time. Another 16% reported that they were unemployed; 16% reported illegal means of support - drug sales, panhandling, shoplifting and theft.

Charge

Several charges may have been present at the time of booking. Interviewers identified the most serious and disregarded others. Those which appeared most frequently were stolen vehicles; assault; larceny/theft; violation of parole, probation, or restraining order; burglary; and robbery. Unlike the adult arrestees, most of the charges (56%) against juveniles were felonies. Presumably lesser offenses were typically handled without detention. All drug offenses and the majority of property crimes were felonies.

For clarity of analysis, charge categories were combined for this report, grouping charges by nature of the crime. Six categories were applicable to the juveniles.

1. **crimes against persons** (assault, extortion/threat, kidnapping, sexual assault/rape, sex offense)
1. **property crimes** (arson, burglary, forgery, fraud, larceny/theft, robbery, stolen property, stolen vehicle)
2. **violations/flight/escape** (flight, escape, bench warrant; probation, parole, restraining order violations)
3. **drug offenses** (drug possession, drug sale)
4. **traffic offenses** (excluding DUI/DWI)
5. **other** (weapons; public or peace disturbance; runaway; other)

Most Serious Charge at Booking

Charge Category	Type Charge		Total
	Misdem.	Felony	
Crimes against persons	10.8%	6.3%	17.1%
Property crimes	8.8%	41.3%	50.1%
Violations, flight	14.2%	0.7%	15.0%
Drug offenses	0.0%	3.1%	3.1%
Traffic (non DUI)	3.9%	0.0%	3.9%
Other	6.2%	4.5%	10.8%
Total	44.0%	56.0%	100.0%

Appendix E - Precision of Survey Estimates

The precision of a survey's estimate of a proportion is generally represented by the *standard error of the estimate* which is typically used to form a "confidence interval" around the obtained estimates. For example, if the survey indicated that half of arrestees were in need of substance abuse treatment, a 95% confidence interval would add/subtract nearly two standard errors to this estimate. If the standard error were 2%, the use of the confidence interval would yield an interpretation something like "we are 95% certain that between 45% and 55% of arrestees need treatment for substance use".

The standard error of the estimated proportion, p , is given by:

$$S_p = \sqrt{\frac{(N-n)}{N} \frac{pq}{n}}$$

where S_p = standard error
 p = sample proportion
 q = (1-p)
 n = size of sample
 N = size of population

The standard error of the estimate is influenced by the size of the sample and its relation to the size of the population (termed the sampling fraction) as well as the actual value of the proportion itself. In general, the larger the sample size n and the more closely it approaches the population size N , the lower will be the standard error of the estimate. At its limit, i.e., when the sample size, n , actually equals the population size, N , the standard error is zero. This reflects the fact that when we have "sampled" the entire population, we are no longer estimating at all - we have the actual population value.

The value of the estimated proportion, p , also influences the size of the standard error. When $p = .5$ (i.e., when 50% of the sample exhibit a certain behavior or characteristic), the standard error is at its maximum. As the proportion moves toward its limits of 0 or 1, the standard error decreases.

Using actual sample size, an estimate of the jail population in the study sites (from the 1992 jail census), and a sample proportion = .50, the following table lists maximum bounds for the 95 percent confidence intervals surrounding estimates for the sub-samples broken down by site, gender, and race/ethnicity. For example, we are 95 percent certain that the true value of an estimate provided for the entire study sample lies within $\pm 4.0\%$ of the reported value. For smaller sub-samples, that level of confidence comes at the cost of precision. For King County arrestees, the 95 percent confidence interval is $\pm 6.5\%$ of the reported value.

Bound on the error of estimation

Using actual sample size and an estimate of the jail population in the study sites (from the 1992 jail census), the following table provides conservative bounds on the error of estimation for percentages reported in the data. The larger the sample, the smaller the error of estimation and the more precise the estimate. For example, the true value of an estimate provided for the entire study sample can be expected to lie within $\pm 4.1\%$ of the reported value. For white females arrestees in Yakima, the bound on the error of estimation is $\pm 12.1\%$.

Bound on the error of estimation

		Total	Males	Females
King	White	11.3%	13.4%	21.8%
	African American	9.8%	10.6%	27.7%
	Native American	27.5%	27.5%	NA
	Hispanic	23.4%	24.1%	NA
	Other	28.8%	49.9%	37.5%
	Total	6.6%	7.4%	15.0%
Whatcom	White	11.6%	11.6%	NA
	African American	70.3%	70.3%	NA
	Native American	27.5%	27.5%	NA
	Hispanic	33.0%	33.0%	NA
	Other	69.8%	69.8%	NA
	Total	9.8%	9.8%	NA
Yakima	White	9.3%	14.3%	12.1%
	African American	31.2%	37.4%	69.5%
	Native American	14.2%	14.2%	NA
	Hispanic	11.6%	12.8%	28.3%
	Other	22.9%	NA	22.9%
	Total	6.1%	7.7%	9.8%
Juveniles	White	9.6%	12.6%	14.4%
	African American	13.8%	17.9%	21.1%
	Other	16.3%	22.8%	20.9%
	Total	7.1%	9.4%	10.4%

Appendix F - Participation and Refusal Sample Characteristics

Note: Unless stated otherwise, all differences cited are statistically significant at the $p < .05$ level.

Participation and Refusal

Of the 767 adults screened, 598 (78.0%) agreed to participate in the study. Participation rates were higher for women (85%) than for men (76%) and for Whites (81%), Hispanics (86%) and others (86%) compared to African-Americans (63%). Those who participated were slightly younger (average age 30.5 years) than those who did not (32.0 years). Persons arrested for misdemeanors or citations were more likely to consent (80%) than those arrested for felonies (73%).

Gender, ethnic composition, and severity of offense varied by site. No women were included among potential participants in Whatcom County, but they comprised 21% of the King County and 36% of the Yakima County pools. In King County, the largest number of arrestees interviewed were African American (50%) and Caucasian (32%). In Whatcom County, most potential participants were Caucasians (67%), while in Yakima County, Hispanics (28%) along with Caucasian (44%) were well represented. The proportion of arrests for felony charges was lower in Yakima than in the other two counties. Participation rates also varied by site. They were comparable in King (69%) and Whatcom (68%) Counties, but substantially higher in Yakima County (94%).

Interviewers

Four individuals conducted the interviews; two in King, one each in Whatcom and Yakima. All interviewers were Caucasian; two were male, two female; and they ranged in age from 23 to 30. Participation rates varied by interviewer's gender: 92% for male interviewers compared to 69% for female interviewers. But because only 4 individuals conducted the interviews, it is not possible to determine whether differences in participation rates occurred because of site differences, interviewer characteristics, or some combination of the two.

Demographic Characteristics and Participation Rates

	Total/ % Participation		King		Whatcom		Yakima	
	N = 767		N = 334		N = 153		N = 281	
	N	% Int	N	% Int	N	% Int	N	% Int
Male	596	76.0*	265	69.8	153	68.0	179	92.2
Female	171	84.8	69	65.2	0		102	98.0
African American	186	63.4*	167	62.3	7	42.9	12	91.7
Caucasian	333	80.5	107	74.8	103	71.8	123	92.7
Hispanic	120	85.8	25	76.0	16	62.5	79	93.7
Other	128	85.9	34	79.4	27	63.0	67	98.5
<30	374	81.6*	170	74.1*	72	75.0	132	94.7
30+	394	74.6	164	63.4	81	61.7	149	94.0
Misdemeanor/citation	537	80.3*	228	71.1	96	70.8	213	94.4
Felony	231	72.7	106	64.2	57	63.2	68	94.1

Participant summary	N	%	N	%	N	%	N	%
Declined interview	169	22.0	104	31.1	49	32.0	16	5.7*
Consented to interview	598	78.0	230	68.9	104	68.0	265	94.3
no UA	330	43.1						
UA	268	34.9						

* Differences are statistically significant at $p < .05$.

Appendix G - Relationship of Urinalysis Consent to Self-Report

Adults: Among the 598 persons who agreed to the interview, 267 (45%) also submitted a specimen for urinalysis. Compared to those who consented to drug testing, those who were not tested reported significantly lower rates of marijuana and cocaine use in the prior 72 hours and lower crack use in the past 30 days. Rates of use for other drugs did not vary by consent to provide a urine sample.

Youth: Among the 168 persons who agreed to the interview, 150 (89%) also submitted a specimen for urinalysis. With the exception of alcohol and tobacco use, where self-reported use was at similar levels for both those who provided a sample for testing and those who did not, those who did not provide a urine sample consistently reported no use of drugs. For those who did provide samples, rates of self-reported use were consistently lower than rates of use as evidenced by positive tests.

Percent of Participants Who Self-reported Recent Substance Use

		Adults			Youth		
	Use in past:	Self Report of Those Tested	Test Results N=267	Self Report of those not tested N = 330	Self Report of Those Tested	Test Results N=150	Self Report of those not tested N=18
Alcohol	72 hours	46.4%	n/a	45.9%	61.3%	n/a	55.6%
	30 days	71.5%		72.2%			
Tobacco	72 hours	62.9%	n/a	64.7%	69.3%	n/a	66.7%
	30 days	68.9%		73.7%			
Marijuana	72 hours	27.7%	24.0%	18.4%*	51.2%	87.8%	0%
	30 days	40.1%		32.9%			
Cocaine	72 hours	10.5%	27.0%	6.0%**	4.9%	7.3%	0%
	30 days	16.1%		13.3%			
Crack	72 hours	9.7%		5.7%			0%
	30 days	16.1%		10.0%*			
Opiates	72 hours	9.0%	9.7%	6.3%	1.3%	4.9%	0%
	30 days	11.2%		7.6%			
Uppers	72 hours	4.5%	4.1%	4.5%	0.7%	4.8%	0%
	30 days	7.9%		8.2%			
Downers	72 hours	2.2%	3.0%	0.6%	2.7%	12.2%	0%
	30 days	4.5%		1.8%			
Hallucinogens	72 hours	0.4%	.04%	0.6%	0.7%	n/a	0%
	30 days	2.2%		3.3%			

*Differences are statistically significant at $p < .05$. ** Difference closely approaches significance at $p < .0516$.

Appendix H - Poly Drug Use Disorders

Poly-drug use disorders were present in all sites.

Drug Combinations	King	Yakima	Whatcom	Juveniles
Alcohol only	9.7%	18.3%	21.4%	11.7%
Alcohol/Opiate	.9%	1.5%		.3%
Alcohol/Cocaine	3.8%	4.5%	4.0%	1.2%
Alcohol/Cocaine/Opiate	2.3%	.6%	.9%	
Alcohol/Uppers		.7%	.9%	
Alcohol/Uppers/Cocaine	.3%	.1%		.3%
Alcohol/Uppers/Opiates			.9%	
Alcohol/Hallucinogens	.9%			1.0%
Alcohol/Hallucinogens/Uppers		.7%		.7%
Alcohol/Inhalants				.3%
Alcohol/Inhalants/Hallucinogens				.1%
Alcohol/Inhalants/Uppers				.7%
Alcohol/Marijuana	1.3%	2.8%	10.0%	8.4%
Alcohol/Marijuana/Hallucinogens			.9%	.7%
Alcohol/Marijuana/Hallucinogens/Uppers			.9%	
Alcohol/Marijuana/Uppers/Cocaine			2.8%	
Alcohol/Marijuana/Uppers		1.5%	.9%	.3%
Alcohol/Marijuana/Cocaine	1.6%	1.3%	4.0%	.7%
Alcohol/Marijuana/Cocaine/Hallucinogens/Downers				.3%
Alcohol/Marijuana/Cocaine/Opiates		.1%		.6%
Marijuana Only	3.7%	2.0%	3.7%	
Marijuana/Cocaine	2.5%	.7%	.9%	
Marijuana/Uppers	.6%	.7%	3.0%	
Marijuana/Uppers/Cocaine	.9%			
Marijuana/Hallucinogens/Uppers/Cocaine	.9%			
Uppers Only	2.6%	.7%	.9%	
Uppers/Opiates	.5%			
Cocaine Only	8.5%	1.9%	3.2%	
Cocaine/Opiates	2.2%	2.6%	.9%	
Opiates Only	3.9%	3.1%	.9%	
No substance use disorder	53.1%	56.0%	38.4%	

Appendix I - The Diagnostic Interview Schedule for Children

The survey instruments used in the ARREST study were developed by the Center for Substance Abuse Research (CESAR) under contract to the Center for Substance Abuse Treatment (CSAT).

A major portion of the interview for juveniles came from the Substance Abuse Module of the Diagnostic Interview Schedule for Children (DISC) developed at the New York State Psychiatric Institute by David Shaffer, Ph.D. and Prudence Fisher, M.S. The Substance Abuse Module addresses DSM-III-R substance use disorders (see footnote 2 on page 1)

During review of the proposed juvenile ARREST study, the Washington State Human Research Review Board (HRRB) expressed concerns that certain questions designed to assess the existence of one of the DSM-III-R symptom criteria for abuse/dependence were constructed in such a way that if somehow overheard, might be misinterpreted to the detriment of the adolescent being interviewed. The questions focused specifically on driving under the influence rather than on dangerous activities in general as in the adult questionnaire. The directness of these questions, and their potential relevance and risk to a juvenile arrested on such a charge, was considered unacceptable to the HRRB.

With the concurrence of CESAR and the DISC developers (Shaffer and Fisher), the questions were changed to reduce the possibility of harm to the juveniles being interviewed. The changes were as follows:

Original Questions

- Did you ever drive a car when you were drinking, or do anything else that might have been dangerous for you or others?
- Did you ever drive a car when you [used/took] [specify drug], or do anything else that might have been dangerous for you or others

Revised Questions

- Have you ever been high from drinking in a situation where it increased your chances of getting hurt - for instance, when driving a car or boat, using knives, machinery, or guns, crossing against traffic, climbing or swimming?
- Have you ever been high on [specify drug] in a situation where it increased your chances of getting hurt - for instance, when driving a car or boat, using knives, machinery, or guns, crossing against traffic, climbing or swimming?