

# Substance Abuse Consumption and Consequence Patterns in Arizona:

## Differences by Race/Ethnicity, Gender, Age, and Geography

Jeanne Blackburn  
Governor's Office for Children, Youth and Families  
Division for Substance Abuse Policy

Richard Porter  
Arizona Department of Health Services  
Bureau of Public Health Statistics



---

---

---

---

---

---

---

---

## Overview of Presentation

- Consumption Patterns
  - Age at First Use (Initiation)
  - Ever Used (Lifetime)
  - Last 30-Day Use
  - Excessive Use (Binge Drinking)
- Consequence Patterns
  - Hospital Discharges and Emergency Department Visits
  - Alcohol-Related Motor Vehicle Crashes
  - Drug and Alcohol-Related Arrests
  - Methamphetamine Labs
- Substance Abuse Treatment Services
- Data Gaps

---

---

---

---

---

---

---

---

## Consumption Patterns

- Substances
  - Tobacco, Alcohol, Marijuana, Cocaine, Methamphetamine, Other Drugs
- Measures
  - Age at First Use (Initiation)
  - Ever Used (Lifetime)
  - Last 30-Day Use
  - Excessive Use (Binge Drinking)

---

---

---

---

---

---

---

---

**Table 4.19. Average Age of Initiation by Substance Used, Arizona, 2006**

Substance	Age in Years
First Cigarette Use	12.47
First Alcohol Sip (or more)	12.84
First Marijuana Use	13.24
First Use of Methamphetamine	14.11
First Regular Alcohol Use	14.21

Source: Arizona Youth Survey; State Report, 2006, Arizona Criminal Justice Commission.

---

---

---

---

---

---

---

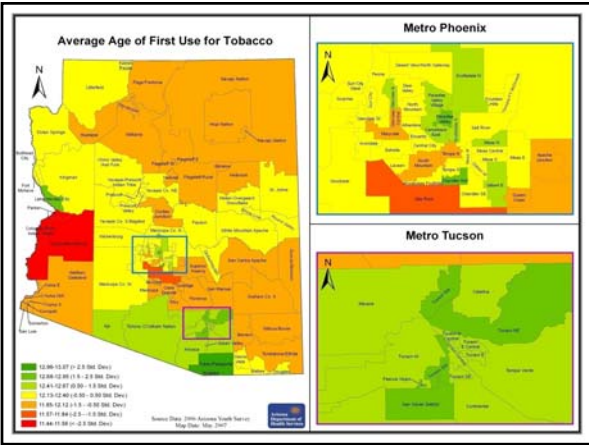
---

---

---

---

---




---

---

---

---

---

---

---

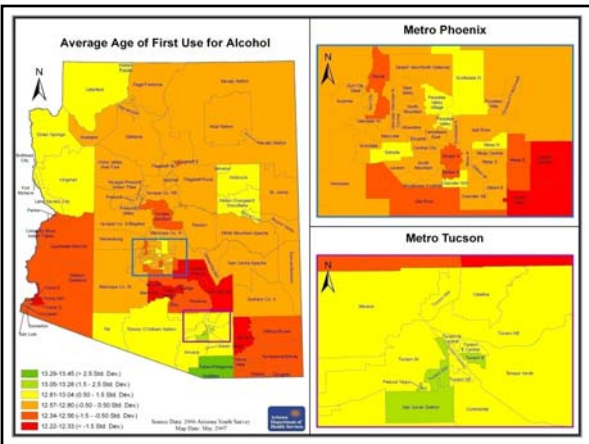
---

---

---

---

---




---

---

---

---

---

---

---

---

---

---

---

---







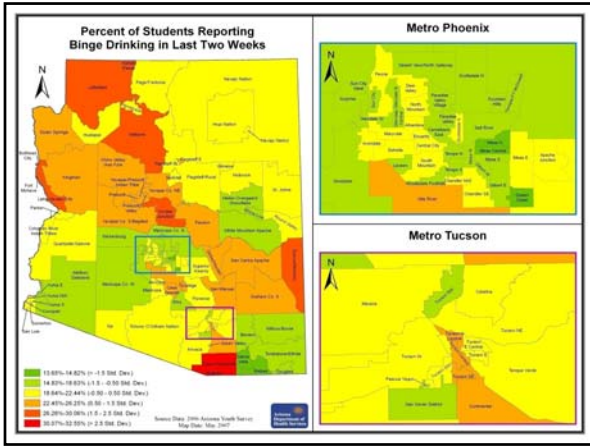
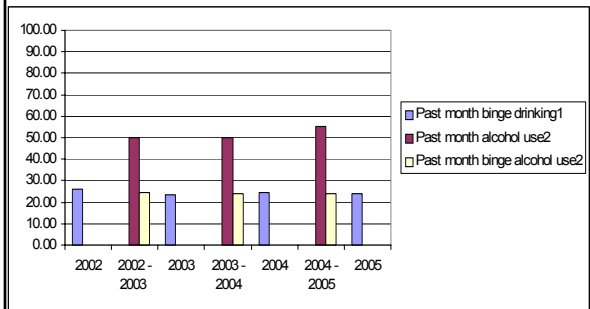
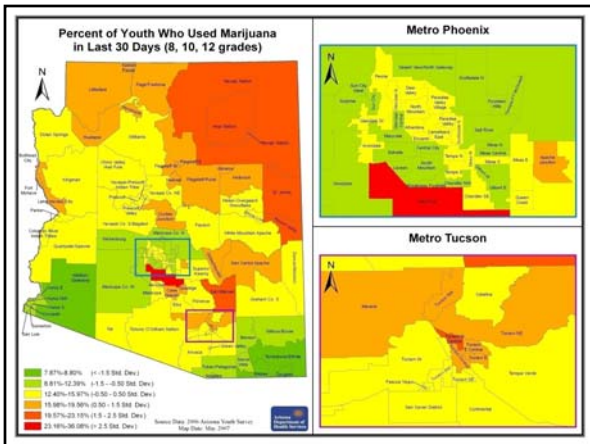


Figure 4.20. Trends in Adult<sup>1</sup> Alcohol Consumption, Percentages, Arizona, 2002 – 2005.



<sup>1</sup>Aged 12 and older.  
<sup>2</sup>National Survey on Drug Use and Health, 2002 – 2005, Substance Abuse Mental Health Services Administration, Department of Health and Human Services.  
<sup>3</sup>State Estimates of Substance Use from the 2003 – 2004 and 2004 – 2005 National Surveys on Drug Use and Health, Substance Abuse and Mental Health Services Administration, Department of Health and Human Services.




---

---

---

---

---

---

---

---

---

---



---

---

---

---

---

---

---

---

---

---



---

---

---

---

---

---

---

---

---

---

**Table 4.24. Percentage of Students Reporting Past 30-day Use of Alcohol, Marijuana or Cocaine, Arizona, 2005**

Substance	%
Alcohol	47.10
Marijuana	20.00
Cocaine, any form	6.10

Source: Youth Risk Behavior Surveillance System, 2005, Centers for Disease Control and Prevention.

---

---

---

---

---

---

---

---

---

---

**Table 4.26. Percentage of Past 30-Day Methamphetamine Use by Grade, 2006**

Grade	%
8 <sup>th</sup> Grade	1.00
10 <sup>th</sup> Grade	1.70
12 <sup>th</sup> Grade	1.40
Total	1.30

Source: Arizona Youth Survey, State Report, 2006, Arizona Criminal Justice Commission.

---

---

---

---

---

---

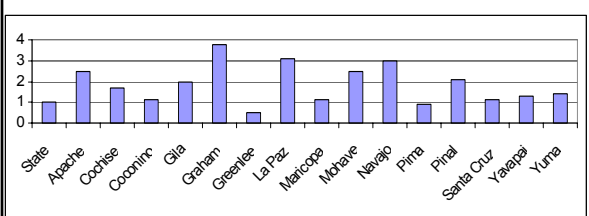
---

---

---

---

**Figure 4.53. Percentages of Students Who Used Methamphetamine During the Past 30 Days, Statewide and by County, Arizona, 2006.**



Note: 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> grade students combined.  
Source: Arizona Youth Survey, County Reports, 2006, Arizona Criminal Justice Commission.

---

---

---

---

---

---

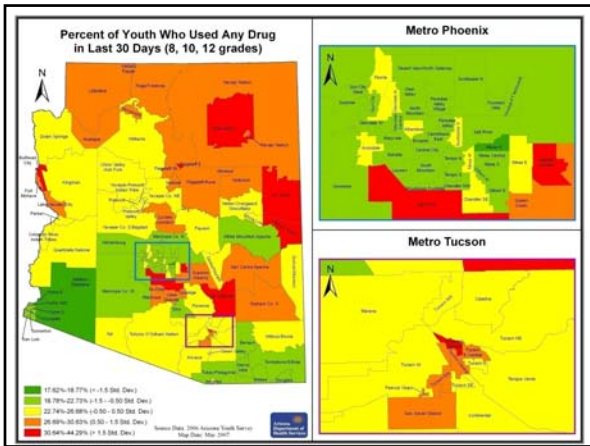
---

---

---

---






---

---

---

---

---

---

---

---

### Consequence Patterns

- Hospital Discharges and Emergency Department Visits
- Alcohol-Related Motor Vehicle Crashes
- Drug and Alcohol-Related Arrests
- Methamphetamine Labs

---

---

---

---

---

---

---

---

**Table 4.111. Hospital Discharges and Emergency Department (ED) Visits by Disorder and Gender, Arizona, 2005**

	Female	Male
Hospital Discharges	N	N
Non-dependent abuse of alcohol <sup>1</sup>	2,482	6,453
Alcohol dependence <sup>2</sup>	3,263	8,461
Alcoholic psychoses <sup>3</sup>	1,172	3,515
Non-dependent abuse of drugs <sup>4</sup>	6,368	8,541
Drug dependence <sup>5</sup>	3,196	3,565
Drug psychoses <sup>6</sup>	1,848	1,882
Drug dependence and drug abuse <sup>7</sup>	3,429	2,894
<b>Total Hospital Discharges</b>	<b>21,578</b>	<b>35,311</b>
ED Visits	N	N
Non-dependent abuse of alcohol <sup>1</sup>	5,667	13,465
Alcohol dependence <sup>2</sup>	1,624	5,493
Alcoholic psychoses <sup>3</sup>	324	1,335
Drug dependence and abuse <sup>7</sup>	7,326	7,276
<b>Total ED Visits</b>	<b>14,941</b>	<b>27,569</b>

Notes: Numbers in bold indicate the gender reporting the highest incidence of hospital discharges and Emergency Department visits.  
<sup>1</sup>All mentions  
<sup>2</sup>First-listed diagnosis  
Source: Arizona Health Status and Vital Statistics, Arizona Department of Health Services.

---

---

---

---

---

---

---

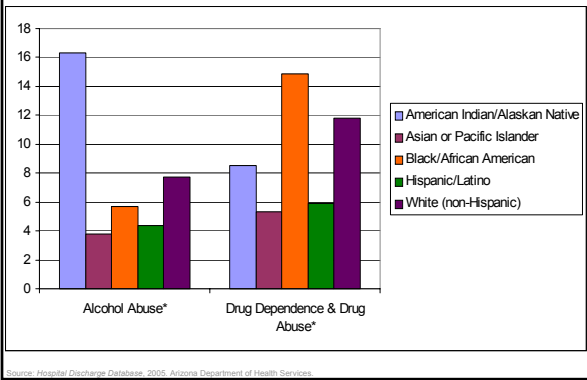
---

**Table 4.116. Hospital Discharges and Rates by First-Listed Diagnosis per 10,000 population by Disorder and Racial/Ethnic Category, Arizona, 2005**

	Alcohol Abuse		Drug Dependence & Drug Abuse		Fetus/Noxious Influences
	N	Rate	N	Rate	N
American Indian/Alaskan Native	475	16.30	248	8.50	131
Asian or Pacific Islander	44	3.80	62	5.30	14
Black/African American	106	5.70	280	14.90	128
Hispanic/Latino	670	4.40	905	5.90	441
White (non-Hispanic)	3,004	7.70	4,646	11.80	734
Other	39	--	65	--	157
Refused	64	--	117	--	52

Note: Numbers in bold indicate the racial/ethnic category with the highest rates of hospital discharges for alcohol abuse and drug dependence/drug abuse. -- indicates that rates cannot be calculated when racial/ethnic category is unknown.  
Source: Hospital Discharge Database, 2005, Arizona Department of Health Services.

**Figure 4.74. Hospital Discharge Rates by First-Listed Diagnosis and Racial/Ethnic Category, Arizona, 2005.**



**Table 4.100. Hospital Discharges by Disorder and County, Arizona, 2005**

	Alcohol Abuse	Drug Dependence/Abuse/ Psychoses	Fetus/Noxious Influences
	N	N	N
Apache	290	66	8
Cochise	415	335	18
Cocconino	539	268	19
Gila	429	238	15
Graham	139	121	8
Greenlee	27	19	--
La Paz	131	63	18
Maricopa	12,039	12,788	1,027
Mohave	822	432	24
Navajo	805	221	33
Prima	5,169	6,264	167
Pinal	1,175	1,093	120
Santa Cruz	133	90	4
Yavapai	661	409	25
Yuma	571	378	26
Unknown	263	237	7

-- No data provided for this county.  
Source: Hospital Discharge Database, 2005, Arizona Department of Health Services.

**Table 4.101. Emergency Department Visits for Drug or Alcohol Abuse/Dependence/Psychosis by County, Arizona, 2005**

	Non-Dependent Abuse of Alcohol <sup>1</sup>	Alcohol Psychoses <sup>1</sup>	Alcohol Dependence <sup>1</sup>	Drug Dependence and Drug Abuse <sup>2</sup>
Apache	266	64	311	72
Cochise	438	30	197	450
Coconino	1,784	137	731	270
Gila	258	15	77	148
Graham	155	15	34	119
Greenlee	19	4	4	8
La Paz	86	6	17	33
Maricopa	8,222	748	2,385	7,949
Mohave	541	80	395	523
Navajo	823	50	219	231
Pima	4,419	326	1,999	3,155
Pinal	889	26	100	512
Santa Cruz	116	11	49	98
Yavapai	762	103	376	518
Yuma	423	41	163	348
Unknown	252	17	80	172

Note: Numbers in bold indicate the type of alcohol or drug abuse/dependence/psychoses most often requiring treatment in an Emergency Department by county.  
<sup>1</sup>All mentions  
<sup>2</sup>First-listed diagnosis  
Source: Hospital Discharge Database, 2005, Arizona Department of Health Services

**Table 4.102. Hospital Discharges and Emergency Department (ED) Visits and Rates per 10,000 Population with Mentions of Drug Abuse and Dependence as First-Listed Diagnosis by County, Arizona, 2005**

	Discharges		ED Visits	
	N	Rate	N	Rate
Apache	27	3.7	72	9.8
Cochise	87	6.6	450	34.1
Coconino	77	5.9	270	20.7
Gila	64	11.9	146	26.8
Graham	27	7.6	119	33.6
Greenlee	7	8.4	9	10.8
La Paz	20	9.4	32	15.1
Maricopa	3,694	10.1	7,949	21.8
Mohave	179	9.5	523	27.8
Navajo	87	7.9	231	21
Pima	1,375	14.4	3,155	32.9
Pinal	268	10.9	512	20.8
Santa Cruz	22	5	98	22.2
Yavapai	183	8.9	518	25.3
Yuma	133	7	346	18.3
Unknown	73	--	172	--

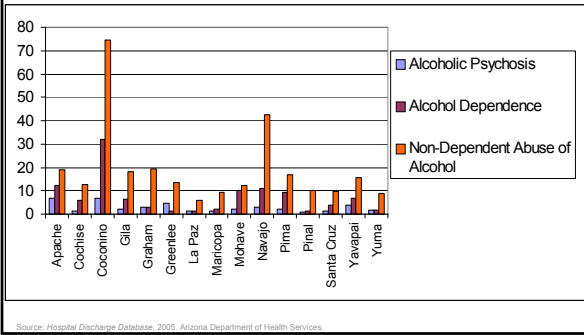
Note: Rates in bold indicate the five counties with the highest rates of hospital discharges and Emergency Department visits for drug abuse and dependence as the first-listed diagnosis.  
-- indicates that rates cannot be calculated when county is unknown.  
Source: Hospital Discharge Database, 2005, Arizona Department of Health Services

**Table 4.103. Emergency Department (ED) Visits and Rates (per 10,000 Population) for Selected Diagnoses Related to Alcohol Abuse and Dependence as First-Listed Diagnosis by County, Arizona, 2005**

	Alcoholic Psychosis		Alcohol Dependence		Non-Dependent Abuse of Alcohol	
	N	Rate	N	Rate	N	Rate
Apache	51	6.90	89	12.10	139	18.80
Cochise	16	1.20	78	5.90	168	12.70
Coconino	88	6.70	419	32.10	973	74.80
Gila	11	2.00	34	6.20	99	18.20
Graham	10	2.80	10	2.80	68	19.20
Greenlee	4	4.80	1	1.20	11	13.30
La Paz	3	1.40	3	1.40	13	6.10
Maricopa	521	1.40	777	2.10	3,311	9.10
Mohave	44	2.30	191	10.20	230	12.20
Navajo	33	3.00	121	11.00	467	42.50
Pima	194	2.00	886	9.30	1,603	16.70
Pinal	18	0.70	27	1.10	253	10.30
Santa Cruz	6	1.40	17	3.90	42	9.50
Yavapai	77	3.80	139	6.80	322	15.70
Yuma	28	1.80	34	1.80	164	8.70
Unknown	12	--	36	--	120	--

Note: Rates in bold indicate the five counties with the highest rates of Emergency  
-- indicates that rates cannot be calculated when county is unknown.  
Source: Hospital Discharge Database, 2005, Arizona Department of Health Services

Figure 4.60. Emergency Department (ED) Visit Rates (per 10,000 Population) for Selected Diagnoses Related to Alcohol Abuse and Dependence as First-Listed Diagnosis by County, Arizona, 2005.



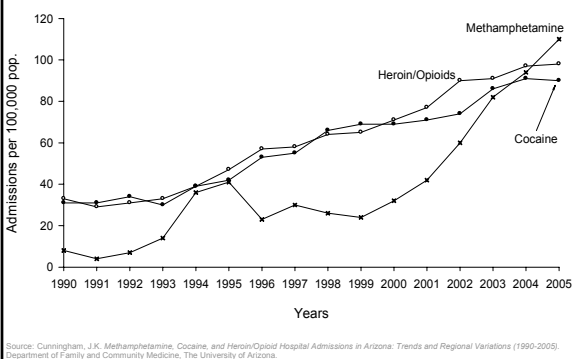
Source: Hospital Discharge Database, 2005, Arizona Department of Health Services.

Table 4.106. Counties with the Highest Rates for Select Problem Indicators

County	Drug Dependence/ Abuse Discharges	Drug Dependence/ Abuse ED Visits	Alcohol Dependence ED Visits	Non-Dependent Abuse of Alcohol ED Visits	Alcoholic Psychosis ED Visits
Apache					
Cochise					
Cocoonino					
Gila					
Graham					
Greenlee					
La Paz					
Maricopa					
Mohave					
Navajo					
Pima					
Pinal					
Santa Cruz					
Yavapai					
Yuma					

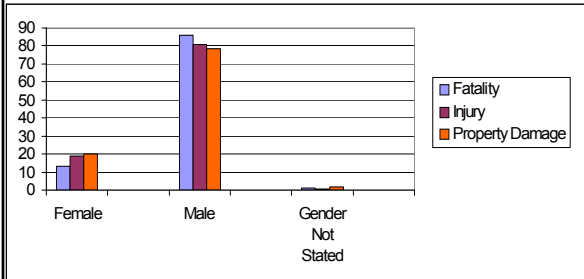
Note: Black cells indicate either highest or 2nd highest rate; gray cells indicate 3rd, 4th, or 5th highest rate.  
Source: Hospital Discharge Database, 2005, Arizona Department of Health Services.

Figure 4.5. Trends in Hospital Admission Rates (per 100,000 Population) for Methamphetamine, Cocaine, and Heroin/Opioid, Arizona (1990-2005).



Source: Cunningham, J.K. Methamphetamine, Cocaine, and Heroin/Opioid Hospital Admissions in Arizona: Trends and Regional Variations (1990-2005). Department of Family and Community Medicine, The University of Arizona.

Figure 4.68. Alcohol-Related Crashes by Type of Accident and Driver Gender, Percentages, Arizona, 2005.



Source: Arizona Motor Vehicle Crash Facts, 2005, Arizona Department of Transportation.

---

---

---

---

---

---

---

---

---

---

Figure 4.69. Youth Arrests by Arrest Offense and Gender, Arizona, 2005.



Source: Crime in Arizona, 2005, Arizona Department of Public Safety.

---

---

---

---

---

---

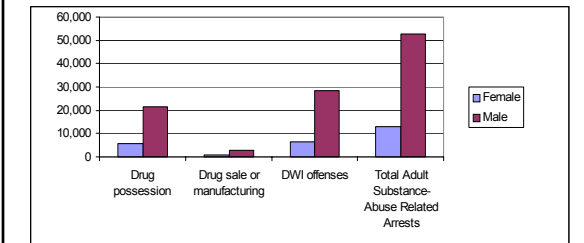
---

---

---

---

Figure 4.70. Adult Arrests by Arrest Offense and Gender, Arizona, 2005.



Source: Crime in Arizona, 2005, Arizona Department of Public Safety.

---

---

---

---

---

---

---

---

---

---

**Table 4.99. Methamphetamine Laboratory Seizures, Statewide and by County, Arizona, 2000 – 2006**

County	2000	2001	2002	2003	2004	2005	2006 <sup>1</sup>	Total
Apache	2	0	0	0	0	0	0	2
Cochise	0	2	2	4	0	0	1	9
Cocconino	2	0	0	0	1	0	0	3
Gila	0	0	0	0	0	1	0	1
Graham	0	0	2	0	0	0	0	2
Greenlee	0	0	0	0	0	0	0	0
La Paz	0	0	0	0	0	0	0	0
Maricopa <sup>1</sup>	284	201	146	85	71	32	2	821
Mohave	6	6	7	10	4	3	0	36
Navajo	0	0	1	0	0	0	0	1
Pima <sup>1</sup>	15	19	12	9	5	10	1	71
Pinal	3	5	1	6	6	0	0	21
Santa Cruz	0	0	0	0	0	0	0	0
Yavapai	5	2	4	0	0	0	0	11
Yuma	2	0	1	1	0	0	0	4
<b>Total</b>	<b>319</b>	<b>235</b>	<b>176</b>	<b>115</b>	<b>87</b>	<b>46</b>	<b>4</b>	<b>982</b>

<sup>1</sup> Information for Maricopa and Pima counties include data obtained from the El Paso Intelligence Center National Clandestine Laboratory Seizure System.  
<sup>2</sup> 2006 data reflects lab seizures to date and is therefore incomplete.  
 Source: Office of National Drug Control Policy, Arizona High Intensity Drug Trafficking Area Intelligence Division, 2006.

## Substance Abuse Treatment

**Table 4.7. Number of Individuals with Substance Abuse Treatment Need with Receipt, Arizona, 2005**

	N
Admissions to substance abuse treatment services for alcohol	5,070
Admissions to substance abuse treatment services for heroin, cocaine, marijuana or other illicit drugs	7,975
<b>Total</b>	<b>13,045</b>

Source: Treatment Episodes Data Set (TEDS), 2006 Unpublished Data, Department of Health Services.

**Table 4.8. Percentage of Individuals with Substance Abuse Treatment Need without Receipt, Arizona, 2005**

Treatment for illicit drug use in the past year	2.67
Treatment for alcohol use in the past year	8.58

Source: National Survey on Drug Use and Health, 2005, Department of Health and Human Services.

**Table 10. Average Units of Service per 1,000 Member Months by Primary Substance at Admission, Fiscal Year 2005, Arizona**

Service	Alcohol Use Combined	Methamphetamine	Cocaine	Heroin	Marijuana
Treatment	1,692.21	1,849.49	1,160.17	877.04	1,939.87
Support	1,008.55	1,147.55	1,918.82	4,899.32	1,063.11
Behavioral Health Day*	308.92	608.43	268.64	111.67	367.50
Rehabilitation	158.63	277.76	104.61	76.02	177.27
Residential	125.59	228.65	380.39	86.57	69.06
Medical	110.00	118.16	418.53	3,950.57	101.64
Pharmacy	59.00	39.49	47.52	45.75	45.19
Crisis Intervention	31.95	19.87	20.54	10.20	14.23
Inpatient	30.56	17.89	15.42	19.43	8.59
<b>All Services</b>	<b>3,525.41</b>	<b>4,307.29</b>	<b>4,334.64</b>	<b>10,076.57</b>	<b>3,786.46</b>

\*The Arizona Department of Health Services defines "Behavioral Health Day" program services as regularly-scheduled, either on an hourly, half-day or full-day basis, and may consist of therapeutic nursing, in-home stabilization, after-school programs, and specialized outpatient substance abuse programs. These programs can be provided to an individual, a group of individuals, and/or to families in a multitude of settings and are grouped into the following three subcategories: Supervised, Therapeutic, and Psychiatric/Medical.  
 Source: Arizona Department of Health Services, Statewide Substance Abuse Utilization Management Report, (2006), Unpublished Data.

**Table 6. Primary Substance Reported Upon Treatment Admission by Gender, Arizona, 2006**

	GENDER				Total
	Male		Female		
	N	Percent	N	Percent	
None	6,534	43.27	3,325	42.17	9,859
Alcohol	3,683	24.39	1,387	17.59	5,070
Cocaine or Crack	895	5.93	452	5.73	1,347
Marijuana or Hashish	1,246	8.25	533	6.76	1,779
Heroin	657	4.35	323	4.10	980
Other Opiates and Synthetics	129	0.85	116	1.47	245
Other Hallucinogens	9	0.06	8	0.10	17
Methamphetamine	1,819	12.05	1,655	20.99	3,474
Other Stimulants	6	0.04	7	0.09	13
Benzodiazepine	24	0.16	26	0.33	50
Other Sedatives or Hypnotics	16	0.11	12	0.15	28
Inhalants	3	0.02	1	0.01	4
Other	17	0.11	21	0.27	38
Unknown	63	0.42	19	0.24	82
<b>Total</b>	<b>15,101</b>	<b>100.00</b>	<b>7,885</b>	<b>100.00</b>	<b>22,986</b>

Note. Primary substance reported upon treatment admission is a self report of the primary substance used during the last 30 days by the client; 'None' indicates that a client reported no substance use in the past 30 days.  
 Note. Total is more than 100 due to rounding.

Source: Treatment Episodes Data Set (TEDS), 2006 Unpublished Data, Department of Health Services.

**Table 4.53. Demographic Characteristics of Clients Participating in Arizona Families F.I.R.S.T. in FY2006**

	N	%
<b>Gender</b>		
Female	2,902	72.30
Male	1,099	27.40
Unknown		
<b>Average Age</b>	30.28	
<b>Race/Ethnicity</b>		
American Indian/Alaska Native	151	3.80
Asian	8	0.20
Black/African American	250	6.30
Caucasian/White	3,331	83.60
Native Hawaiian/Pacific Islander	8	0.20
Multiple Races	32	0.80
Other	203	5.10
<b>Ethnicity</b>		
Hispanic/Latino	1,087	27.50
Not Hispanic/Latino	2,850	72.20
Unknown	9	0.20

Source: Arizona Families F.I.R.S.T. Unpublished Data, Department of Economic Security.

**Table 4.77. Substance Use Reported by Families F.I.R.S.T. Clients 30 Days Prior to Enrollment, Families F.I.R.S.T., Department of Economic Security, Arizona**

	FY2004	Percent	FY2005	Percent
Clients Reporting Use	1,447	--	1,563	--
Alcohol	733	32.0	758	24.5
Cocaine	302	13.2	262	8.5
Marijuana	607	26.5	739	23.9
Heroin/Narcotics*	91	4.0	49	1.6
PCP/Hallucinogens*	64	2.8	54	1.7
Methamphetamine/Stimulants*	912	39.8	922	29.8
Barbiturates/Sedatives*	44	1.9	19	0.6
Inhalants	16	0.7	13	0.4
Other Drugs*	210	9.2	167	5.4

-- indicates non-applicable.  
 Note. Substance use refers to substance(s) used in the 30 days prior to enrollment in the Families F.I.R.S.T. program.  
 Note. Not all clients participating in the Families F.I.R.S.T. program indicated substance use in the 30 days prior to enrollment.  
 Note. Percentages do not equal 100 because participants could report the use of more than one substance.  
 \*The drugs included in these categories changed between FY2004 and FY2005 reporting periods; therefore, values for FY2004 and FY2005 should not be compared.  
 Source: Arizona Families F.I.R.S.T. Program Annual Evaluation Report for 2003-2004 and 2004-2005, Applied Behavioral Health Policy, University of Arizona.

## Data Gaps

- Adult Prevalence Survey
- Proportion of Health or Social Problems Attributable to Substance Abuse (Cost/Benefit Analysis)
- Child Welfare and Substance Abuse
- Tribal Data
- Substance-Specific Data

---

---

---

---

---

---

---

## THANK YOU!

To access the full Substance Abuse Epidemiology Profile or to learn more about the Arizona Substance Abuse Epidemiology Work Group, please visit:

<http://gocyf.az.gov/SAP/>

---

---

---

---

---

---

---