

# THE SAT REPORT

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## Substance Abuse Trends in Tennessee's Appalachian Region (1998-2002)

This report discusses five-year trends (1998-2002) of substance abuse in the Appalachian region of Tennessee. The admission data from publicly funded facilities in this region have been analyzed based on the substance abuse of unduplicated clients for each year.

### Background

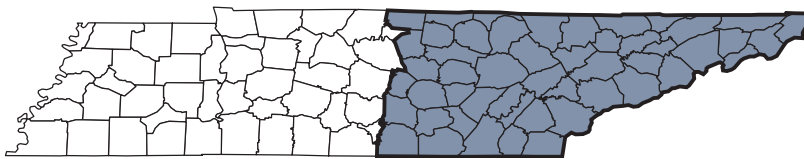
In Tennessee, Appalachia comprises fifty of the ninety-five counties and covers the entire eastern half of the state. Tennessee is bordered by eight states, which has led to an immense network of roads and highways. Traf-

fic over these highways provides a major avenue for drug movement to and through the state [1]. The area's poor economic situation and predominantly rural setting encourages marijuana trade and distribution across county and state lines [2].

Substance abuse in the Appalachian region has been a growing public health concern. Tennessee has been listed as one of five states in the "Marijuana Belt" [2]. The majority of marijuana used in Tennessee is produced in the Appalachia-Cumberland Plateau, located in the central and eastern part of the state. The income from marijuana sales is greater than any other cash crop in the region [3].



Appalachian region across 13 states  
(Appalachian Regional Commission, March 2002)



Appalachian region in Tennessee marked in blue (with county boundaries)

### Highlights

- Alcohol remains the primary substance of choice, followed by cocaine and marijuana.
- Abuse of sedatives/hypnotics and club drugs has been steady over the five-year period.
- Hallucinogens and stimulants/methamphetamine abuse doubled during this period.
- Abuse of opiates such as OxyContin and heroin more than doubled in five years.

Besides marijuana, Appalachia also has a serious problem with the abuse of prescription painkillers, muscle relaxants, and nerve pills [4]. Recently, increased opiate abuse in the region has been reported in the media. OxyContin, known as "hillbilly heroin," [5] has seen a steady rise of abuse. It is frequently crushed into powdered form and snorted or injected. The Tennessee Bureau of Investigation states that abuse of OxyContin is becoming a major issue in Tennessee [1].

Another rising problem in Tennessee is illegal methamphetamine production. The number of producers in the Appalachia-Cumberland Plateau region is on the rise [2]. In fact, meth lab seizures in Tennessee constitute the majority of seizures in the southeastern United States [6].

**Table 1. Five-Year Trends of Substance Abuse  
(Appalachian Region in Tennessee, 1998-2002)**

Substance	1998 N=4257		1999 N=4032		2000 N=4506		2001 N=4735		2002 N=3126	
	n <sup>1</sup>	% <sup>2</sup>	n <sup>1</sup>	% <sup>2</sup>	n <sup>1</sup>	% <sup>2</sup>	n <sup>1</sup>	% <sup>2</sup>	n <sup>1</sup>	% <sup>2</sup>
Alcohol	2999	70.45	2669	66.20	2931	65.05	2893	61.10	1866	59.69
Marijuana/Hashish	1746	41.01	1493	37.03	1181	26.21	1192	25.17	977	31.25
Cocaine	1291	30.33	1132	28.08	1014	22.50	877	18.52	695	22.23
Opiates/Narcotics	356	8.36	350	8.68	412	9.14	613	12.95	596	19.07
Club Drugs	348	8.17	398	9.87	371	8.23	455	9.61	331	10.59
Sedatives/Hypnotics	375	8.81	280	6.94	224	4.97	286	6.04	262	8.38
Stimulants/ Methamphetamines	149	3.50	140	3.47	200	4.44	215	4.54	196	6.27
Inhalants	87	2.04	50	1.24	28	0.62	30	0.63	28	0.90
Hallucinogens	42	0.99	31	0.77	35	0.78	25	0.53	60	1.92

Note: This table is based on unduplicated client data for each year.

<sup>1</sup> Values add up to more than N value because some clients reported using multiple substances.

<sup>2</sup> Percentages add up to more than 100% because some clients reported using multiple substances.

## Substance Abuse Trends in Tennessee's Appalachian Region

Over the five-year period (1998-2002), data were collected on 20,656 unduplicated clients on their various drug abuse patterns.

While clients indicated alcohol as the most commonly abused drug, its use steadily declined during the last five years. In 1998, 70.45% of clients admitted to abusing alcohol, while in 2002 only 59.69% stated they abused alcohol (Table 1).

Marijuana abuse ranked second and declined in prevalence from 41.01% in 1998 to 31.25% in 2002. Rates fell to their lowest level in 2001, when 25.17% of clients reported abuse of this substance.

Cocaine was the third most commonly abused drug by Appalachian clients. In 1998, 30.33% of clients reported abusing cocaine. This figure dropped to 22.23% in 2002. Although both marijuana and cocaine abuse showed a brief decline in 2001, they appear to be on the rise again (Figure 1).

The abuse of opiates, including heroin, morphine, and OxyContin, in-

creased tremendously in the Appalachian region during the last five years, primarily due to the popularity of OxyContin. Only 8.36% of clients reported opiate abuse in 1998. But by 2002, 19.07% of clients admitted to abusing opiates (Figure 2). Sharp increases in abuse occurred between 2000 and 2002, when the percentage of clients abusing opiates jumped 9.93%.

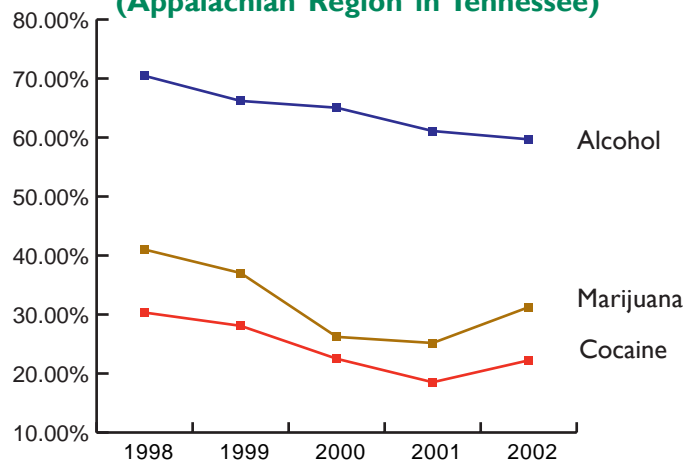
The abuse of club drugs, including Ecstasy, slightly increased in the Appalachian region during the study period. In 1998, 8.17% of clients admitted to abusing these drugs; by 2002,

the percentage of clients abusing club drugs was 10.59%.

While the rates of sedatives/hypnotics (such as barbs, downers, and quaaludes) abuse were essentially the same in 1998 (8.81%) and in 2002 (8.38%), abuse rates fluctuated within this time period, with a low of 4.97% in 2000.

Stimulant abuse (including amphetamines, methamphetamines, and speed) increased significantly in the Appalachian region during the five years. A particularly sharp increase was noted in 2002. In 1998, 3.50% of clients reported abuse. In 2001, this

**Figure 1. Five-Year Trends of Alcohol, Marijuana, and Cocaine Abuse  
(Appalachian Region in Tennessee)**



percentage rose slightly to 4.54%, then jumped to 6.27% in 2002.

Abuse of inhalants (including paint thinner, glue, and laughing gas) among clients declined by half over the five years. In 1998, 2.04% of clients were abusing inhalants. This number dwindled to 0.90% in 2002.

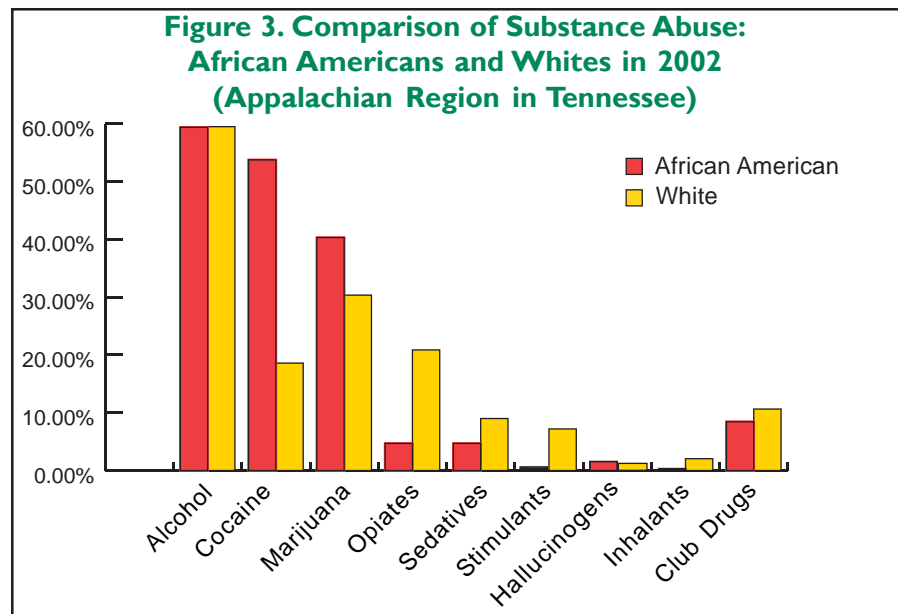
While hallucinogen abuse (including LSD) was very uncommon among Appalachian clients, its abuse nearly doubled during the years of the study. In 1998, 0.99% of clients used hallucinogenic drugs. This percentage decreased to 0.53% in 2001 but nearly quadrupled to 1.92% in 2002.

## Group Trends

There were some compelling trends in substance abuse patterns within various demographic groups and between urban and rural clients.

### MALE VS. FEMALE

In 2002, the male population did not significantly depart from the overall pattern; however, females in the study were more likely to abuse cocaine (25.96% to males' 20.5%) and club drugs (14.49% to males' 8.77%) and less likely to abuse inhalants (0.5% to males' 1.08%). Females' abuse of opiates was fairly steady over the period until 2002, when it nearly doubled



(from 14.94% in 2001 to 23.14% in 2002).

### WHITE VS. AFRICAN AMERICAN

There were some marked differences between White and African American clients. For example, when comparing the White with the African American population in 2002 (Figure 3), the latter was twice as likely to abuse cocaine (53.75% to Whites' 18.59%) and more likely to abuse marijuana (40.31% to Whites' 30.35%). Conversely, African Americans were much less likely to abuse opiates (4.69% to Whites' 20.87%).

In addition, the study indicated that African Americans abuse sedatives (4.69%) almost half as much as Whites (9.00%). Stimulant abuse is also significantly lower (0.31% to Whites' 7.20%). The most revealing of these comparisons is the lesser abuse of opiates and the greater abuse of cocaine among the African American population.

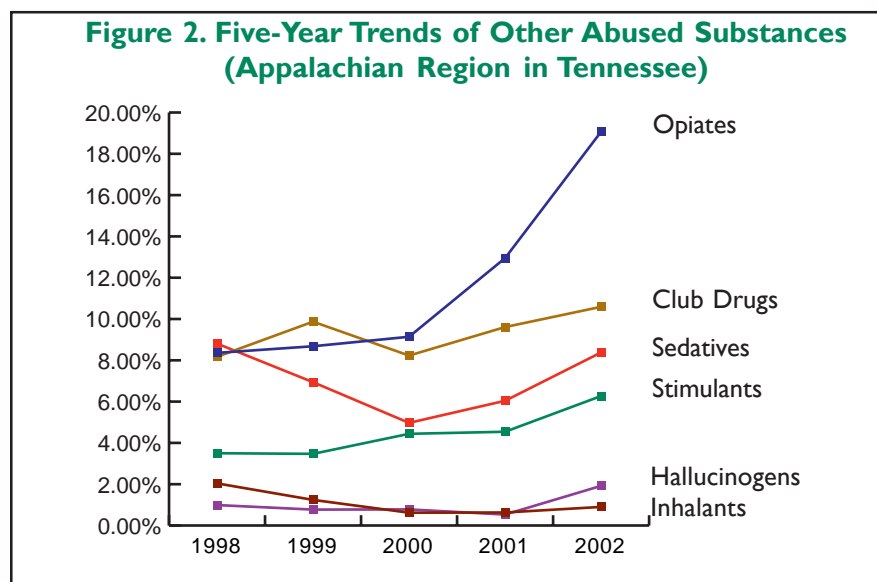
### ADULTS VS. YOUTH

Another trend worth noting is among adults and youth. Based on 2002 data, youth were inclined to abuse alcohol, sedatives, and stimulants less than adults. However, their abuse of marijuana (62.87%) and club drugs (17.07%) far exceeded that of adults (27.47% and 9.81%, respectively; Figure 4).

On the other hand, adults abused cocaine (24.32%) more than youth (4.79%) and abused opiates (21.1%) ten times more than youth (2.10%). Also of note, the abuse of club drugs among youth shot up from 7.70% in 2001 to 17.07% in 2002. Marijuana abuse among youth also increased over that same period, from 49.33% to 62.87%.

### RURAL VS. URBAN

Separating rural clients' responses from those of urban clients in Tenne-



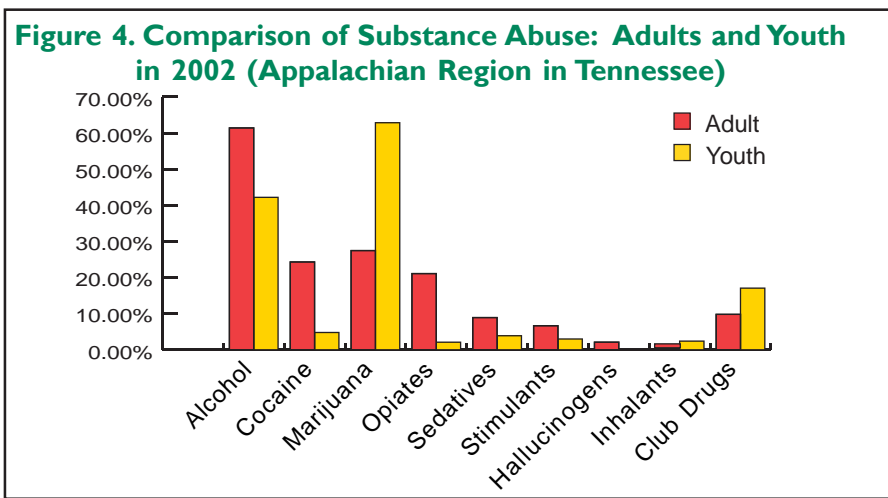
ssee's Appalachian region accentuated the different problem areas.

While opiate abuse rose for both the rural and urban groups, the increase was more significant among the rural population, rising from 9.56% in 1998 to 21.44% in 2002. The rate among urban clients rose from 7.43% in 1998 to 16.83% in 2002.

The abuse of stimulants nearly doubled for both groups; however, rural abuse (8.58%) was still twice as high as urban abuse (4.10%) in 2002.

The final key trend in this subgroup was the significant drop of inhalant abuse within the rural population. In 1998, 2.42% of rural clients abused inhalants, but by 2002, abuse of inhalants dropped to 0.73%, a 70% decline.

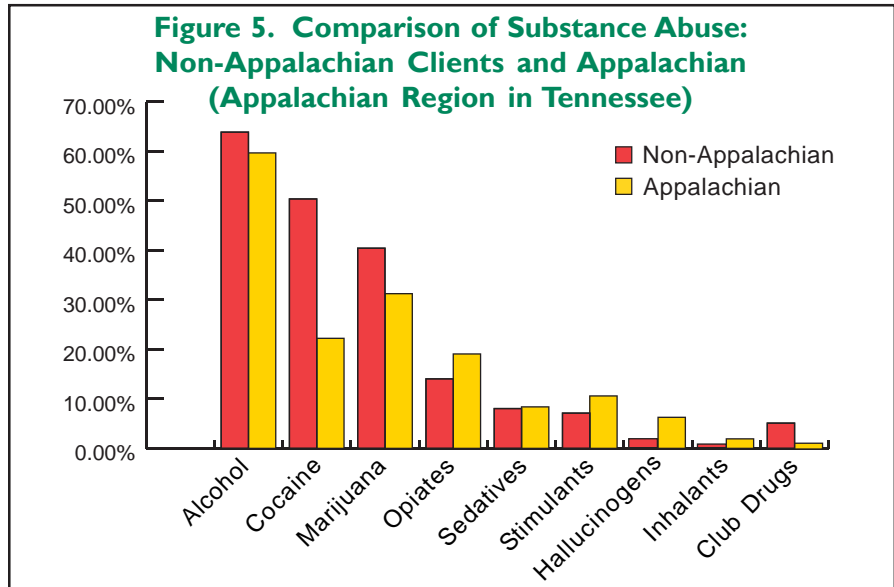
Alcohol, marijuana, and cocaine were the leading substances of choice in Tennessee's Appalachian region. Compared with the non-Appalachian population of Tennessee (Figure 5),



there was a greater abuse of opiates, stimulants, and hallucinogens and a lower abuse of cocaine and marijuana. However, the trends in the abuse of opiates (primarily OxyContin), sedatives, and stimulants (predominantly methamphetamine) in 2001 and 2002 in the Appalachian region were a major cause for concern.

Citations:

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### Group Highlights

- Females were more likely to abuse cocaine and club drugs.
- African Americans were twice as likely to abuse cocaine.
- Whites were four times more likely to abuse opiates.
- Marijuana abuse among youth was nearly three times that of adults.
- Adults abused opiates ten times more than youth.
- Rural clients' abuse of inhalants dropped 70% over the five-year period.

