BOOZING, SNIFFING, AND TOKING: AN OVERVIEW OF THE PAST, PRESENT, AND FUTURE OF SUBSTANCE USE BY AMERICAN INDIANS

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Abstract: This paper provides an overview of Indian peoples, alcohol misuse, and the prevalence of drug and inhalant experience. Early use of alcohol among North American Native peoples may represent early chemical warfare to gain European advantage over an "enemy." The magnitude of the present-day problem of alcohol and substance misuse is described in mortality rates and proportionate use reports. The use of other drugs and substances, such as inhalants, amphetamines, sedatives, and hallucinogens is examined. A brief overview of the history and complex relationships between American Indians and alcohol from the time of initial contact to the present is sketched out before approaches to primary, secondary and tertiary prevention are considered. The issue of potential conflict between tribal statutes and health objectives is noted. Some possible solutions are proposed.

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The Magnitude of the Problem

The survival of Indian[1] people today continues to be challenged by the abusive use of alcohol. The theories about why this is so are legion, ranging from the biological (e.g., Indians are genetically different) to the psychological (e.g., Indians drink because of low self-esteem, anxiety, frustration, boredom, powerlessness, peer pressure, and isolation) to the sociocultural or environmental (e.g., Indians drink as a response to cultural disruption, acculturation, deculturation, governmental paternalism, deprivation, lack of aboriginal exposure to alcohol, persistence of traditional patterns, poverty, or as recreation) (Mail, 1984).

Rarely, if ever, is it observed in the literature on Indian drinking that Indians may drink because they *become* addicted to alcohol, and the addiction demands more alcohol to prevent such sequelae as withdrawal and delirium tremens. Or, perhaps, that they drink because people in the society at large continue to drink, and they are exposed to the same advertisements and inducements as everyone else. Or that failure to learn alternative drinking styles because of prohibition, discrimination, and isolation have permitted intergenerational transmission of a highly distinctive and destructive style of drinking and abuse of other drugs or substances. A 1987 survey of 49 hospitals operated by the Indian Health Service (IHS) found that one out of four Indian/Alaska Native inpatients was hospitalized for an alcohol-related condition (Martin & Helgerson, 1987). The most telling data, however, are the mortality data. All of the top 10 leading causes of death in Indians between the ages of 15 and 44 can be attributed to the direct or indirect effects of alcohol misuse (Mail & Palmer, 1985). Thus, alcohol misuse hastens or underlies death from such conditions as heart disease, unintentional injuries (or "accidents"), cancers, diabetes, pneumonia, homicide, and suicide.

Historically, men of all races appear statistically to have the problem of alcohol and other drug use far more often and in greater numbers than women. Indians have consistently shown greater rates of death due to alcohol abuse than members of all other races. For example, the 1981–1983 death rate for alcoholism and cirrhosis for Indians/Alaska Natives ranged from more than 3 times (Alaska, Bemidji, Nashville, and Navajo areas) to greater than 11 times (Billings area) that of the U.S. all-races rate for 1982 (see Table 1). The good news is that since 1969, the overall rate of death due to alcoholism has been steadily decreasing.

In 1987 the rate of Indian and Alaska Native deaths due to alcoholism was still 4.3 times the rate for U.S. all-races (IHS, 1990, p. 45). And, reviewing the age-specific information, Indians in the 15- to 24-year age group had death rates considerably higher than those of all other popula-

tions. The death rate for Indian males was high for all age groups, with one exception. Indian female rates exceeded those of Indian males in the 15–24 age group (IHS, 1990, p. 46).

Indian death rates due to injuries from motor vehicle crashes are three times greater than that of the U.S. population, and many of these are associated with alcohol intoxication (Berkelman, Herndon, Callaway, Stivers, Howard, Bezjak, & Sikes, 1985; Mail, 1987). The combination of drugs and alcohol undoubtedly contributes to suicides, homicides and violent death, as well as child battering and family disruption. Indian death rates due to acts of violence are more than double the U.S. rate, and Indian deaths due to unintentional injuries in some areas are six times greater than the U.S. rate (see Table 2).

Death rates are easy to measure because death is a very final statistic. But within the Indian communities, the disability, economic and emotional losses, secondary infections, demands on medical and social services, costs for police efforts related to alcohol, and overall cost in human suffering are not well measured. The real impact of alcohol, drug, and other substance misuse has yet to be fully measured.

Lack of Homogeneity

Alcohol-involved mortality among Indians is not homogeneous among tribes or even within any given tribe. A study of four alcohol-related causes of death in Oklahoma found proportionately more Indians died from alcohol-related causes than blacks or whites (Dufour, Bertolucci, & Malin, 1985). Analysis by tribe indicated that the Cheyenne-Arapaho tribe had proportionately far more alcohol-related deaths than the Seminole tribe. The Cherokee tribe had a slightly higher percentage than the Seminole and, thus, was similar to Oklahoma whites and Oklahoma blacks in the percentage of alcohol-related deaths.

Studies of Indian drinking patterns usually show a heavy and often binge-like mode of drinking (Westermeyer & Baker, 1986), which is the type of drinking that tends to lead to alcohol-related morbidity and mortality. In some recent studies, white males surpass Indian males in the use of alcohol. For instance, in a recently reported study of drinking, smoking, and illicit drug use among high school seniors, it is interesting to note that the group with the highest percentage of alcohol use in the last 12 months was not Indians, but whites. In this study, 82% of Indian males were reported to have used alcohol in the last 12 months, while 88.3% of white males reported using. For females, the percentage of drinkers was 81.3% for Indians and 88.6% for whites (Bachman, Wallace, O'Malley, Johnston,

Kurth, & Neighbors, 1991). This supports an earlier finding that more non-Indian high school seniors used alcohol within the last month than Indian seniors (Beauvais, Oetting, Wolf, & Edwards, 1989).

In a paper originally prepared for the Secretary's Task Force on Black and Minority Health, it was noted that "alcohol use varies tremendously from one tribe to the next — some tribes have proportionately fewer drinking adults than the U.S. population as a whole (30% compared to 67%) whereas other tribes have more drinkers (69% to 80%) — with the prevalence of alcohol-related problems also being highly variable" (USDHHS, 1985). Indian youth have higher rates of drug use for all drugs than non-Indian youth, but there is, again, great variation by tribe. This is illustrated by a report of a survey of Montana Indian school children in which it was noted

Table 1 Mortality Rates Due to Alcoholism

Population	Alcoholism and Cirrhosis	Alcoholic Psychosis	Alcohol Dependence Syndrome	Alcoholic Cirrhosis	Other Cirrhosis
U.S., 1982	12.3	0.2	1.3	4.6	9.9
IHS, 1981–1983					
All Areas	52.7	0.0	13.2	25.3	13.4
Aberdeen	89.3	2.2	14.2	51.4	21.4
Alaska	32.7	0.8	9.9	9.8	12.2
Albuquerque	75.0	0.0	30.6	31.6	12.9
Bemidji	39.7	0.0	5.9	13.4	20.4
Billings	136.9	2.8	25.0	84.0	25.1
Nashville	35.0	2.9	3.1	7.4	21.7
Navajo	34.1	0.6	13.4	14.3	5.8
Oklahoma	32.8	0.9	7.6	15.2	9.2
Phoenix	103.6	1.7	32.5	52.4	16.9
Portland	79.0	0.0	14.4	40.5	24.1
Tucson	97.9	0.0	18.3	52.2	27.4

1. IHS Office of Program Statistics, Special Report, 14 November 1985. Annual age-adjusted rates per 100,000 population (1940 standard). A significant proportion of these deaths are alcohol-related. Includes ICD-9 Codes 291, 303, and 571.0–571.9.

2. National Center for Health Statistics data for underlying cause of death.

3. IHS population includes those American Indians and Alaska natives living in countries that are included in the Indian Health Services Areas. Data for California are not shown separately because Indian race on death certificates are underreported. California data are included in the overall IHS rate.

Table 2 Alcohol-Related Mortality

Population	Motor Vehicle Accident	Unintentional Injury	Violence			Drug Abuse	Child Battering	Fires
			Total	Suicide	Homicide			
U.S., 1982	19.3	36.6	20.8	11.6	9.7	NA	NA	2.0
IHS, 1981–1983								
All Areas	63.3	116.5	43.1	18.3	19.1	5.5	0.3	5.6
Aberdeen	103.5	176.7	85.5	30.9	39.8	7.4	0.4	8.8
Albuquerque	31.5	193.8	62.0	19.7	25.8	20.0	0.3	9.9
Bemidji	66.7	105.9	55.2	32.5	16.3	4.3	0.4	0.0
Billings	130.8	224.9	77.7	36.0	37.1	6.0	1.1	14.9
Nashville	42.0	91.0	34.4	9.3	23.1	1.5	1.6	2.7
Navajo	95.9	156.3	36.1	15.6	13.2	5.6	0.0	3.2
Oklahoma	45.0	66.7	19.4	6.6	11.4	2.6	0.1	4.3
Phoenix	67.3	122.4	63.8	26.9	31.5	6.8	0.6	6.6
Portland	62.3	110.9	43.8	20.9	18.1	4.5	0.5	6.9
Tucson	75.9	113.9	97.1	56.7	37.5	8.5	0.7	3.3

1. National Center for Health Statistics data for underlying cause of death. Annual age-adjusted rates per 100,000 population. A significant proportion of these deaths are alcohol-related. Data for California are not shown separately because Indian race on death certificates is underreported there. California data is included in the overall IHS rate.

2. Excluding deaths from addiction.

IHS population = American Indians/Alaska Natives living in counties that are included in the Indian Health Service area.

that adolescents from one tribe accounted for the majority of the reported use of marijuana and alcohol and incidents of gasoline sniffing (Streit & Nicolich, 1977). The implication of these observations is that there is a need to define subpopulations at risk in order to appropriately direct preventive measures or community interventions and determine the equitable allocation of treatment and rehabilitation resources.

Women

Historically, women have had a remarkable record for not abusing, but it is very worrisome to observe how quickly women are catching up. Moreover, the data indicate an increase in women's abuse of alcohol — with all of the irreparable consequences of family disruption and alcohol damage to the unborn of the next generation (May & Hymbaugh, 1982/1983; Dorris, 1989). There are three reports that suggest that alcohol use by Indian women needs to be examined more carefully than it has been. Johnson (1980) noted, after reviewing sex-specific cirrhosis mortality data for 1975 and 1976, that females accounted for nearly half of the cirrhosis deaths among Indians, compared to one third of the deaths for white and black women. This finding is supported by a Minnesota study (Hutchison, 1983) that showed Indian women in that state to have the highest cirrhosis death rate of all groups (black, white, Indian male, and female).

Mulligan (1984), after reviewing medical records for all alcohol-related hospital admissions in calendar year 1982 to the Santa Fe Indian Hospital, noted that when appropriate laboratory values were obtained on patients, a significant number of women were identified as alcohol abusers. An epidemiology of fetal alcohol syndrome in the Southwest revealed that although a minority of women were found to be heavy alcohol users, those women were the ones to give birth to more than one alcohol-damaged baby (May, Hymbaugh, Aase, & Samet, 1983).

Moderate Drinkers, Abstainers, and Spontaneous Remission

Then there is a group of Indians never discussed: the moderate drinkers. Alcohol use may be viewed on a continuum from abstinent to alcoholic. There are Indian individuals who can use alcohol and do not move beyond social drinking to drunkenness. They may be in the minority, but they exist. This makes a lie out of the stereotype of the drunken Indian. Alcohol plus Indian does not automatically equate with drunkenness. Leland (cited in NIAAA, 1978) suggests that the majority of Indians drink responsibly or do not drink at all.

There is another group of Indians that is rarely discussed: those who drink heavily, even alcoholically, and then stop suddenly when they are about 40 years old without severe withdrawal problems or apparent difficulty in maintaining sobriety (Burns, Daily, & Moskowitz, 1974; Medicine, 1982). For many men, this is the time when they assume some of the duties of an elder within the tribe. This "quitting" phenomenon also has been observed among women. The women, usually between the ages 35 and 40, report that they stop because they cannot reprimand their children for drinking unless they set an example themselves (Medicine, 1982).

There is clearly a need for additional research into Indian alcohol use (as contrasted with abuse) in order to better establish coping mechanisms for coexisting with alcohol. Yet this "firewater myth" is so imbedded in our national history that it is very difficult to see beyond it to the reality and the truth. What is the firewater myth? It is the belief entrenched in the collective folk wisdom that Indians are genetically predisposed to pathological responses to alcohol, including intense craving for liquor and uncontrolled behavior when drunk. As early as 1976 (Bennion and Li, 1976), comparisons of metabolism of alcohol between whites and Indians demonstrated no significant differences between the races. Yet the issue remains controversial, and the myth is perpetuated in the border towns adjacent to reservations, as well as on the reservations themselves.

Do Indians Have a "Firewater" Gene?

Behind the "firewater myth" lies the implication that Indians have a "firewater gene." This hypothesized condition has been the impetus for much research that has investigated the possibility of the existence of an extrasensitive vulnerability to alcoholism in various races and ethnic groups. Alcoholism does tend to run in families, and the familial nature of alcoholism has been confirmed by numerous reports in the modern scientific literature (NIAAA, 1990, pp. 43–68).

There are several possible mechanisms. Genes might play a direct role in the development of alcoholism, as in affecting the body's metabolism of alcohol, or they might play a less direct role, influencing a person's temperament or personality in such a way that the person becomes vulnerable to alcoholism. Several pioneering studies of Scandinavian adoptees (Goodwin, Schulsinger, Hermansen, Guze, & Winokur, 1973; Goodwin, Schulsinger, Moller, Hermansen, Winokur, & Guze, 1974) found that children of alcoholics who were adopted by nonalcoholic families and grew up in a nondrinking environment still tended to develop alcoholism as adults in numbers of cases beyond that which could be expected by chance.

Additionally, adoption studies of twins have identified a type of alcoholism in males that is influenced very little by environmental factors (Cloninger, Bohman, & Sigvardson, 1981; Petrakis, 1985; USDHHS, 1987). Thus, evidence has been found of a genetic predisposition of some type. However, ongoing research indicates that the answer is not a simple one. It is clear only that both genetics and environment are involved in the development of alcoholism and alcohol abuse, and the interaction of genetics and environment continues to be a focus of research investigation (NIAAA, 1990).

What are the implications for Indian people from these hypotheses? If there is a gene in families for alcoholism, then individuals at risk for having that gene should be aware of their increased risks for serious consequences if they elect to consume beverages containing alcohol. To prevent the disease, abstinence would be the only recourse. However, Indian communities now feel so overwhelmed by the negative consequences of abusive alcohol use that there is a general call for abstinence among all individuals. If ever realized, this would certainly prevent both addiction resulting from prolonged exposure and alcoholism in those individuals with a genetic susceptibility, but it is perhaps an unrealistic goal.

Although genetic studies are currently under way among Indian populations in both the United States and Canada, there is no firm research yet available that determines whether or not an "alcoholic gene" is present in individuals of Indian descent. Therefore, prevention must address other behaviors, beliefs, and practices already extant within the communities, such as drinking at an early age, rapid consumption, and general community acceptance of drunkenness.

Use of Drugs and Substances Other Than Alcohol

Alcohol misuse is well established as a major problem in Indian communities. Less information has been available about drug misuse, but more problems are being reported. Misuse or outright abuse of substances other than alcohol is responsible for large numbers of premature and preventable deaths, injuries, and illnesses, especially in adolescents and young adults. And substance misuse constitutes a major social and economic burden to individuals, families, employers, and communities.

While alcohol use and misuse are clearly a concern, there is increasing apprehension expressed about the use of other drugs and substances, especially by children and adolescents. Indian youth are much more likely than white youth to begin using marijuana and other drugs at younger ages (Young, 1987; Okwumabua & Duryea, 1987). The period of risk for drug

use initiation among Indian youth is between the ages of 10 and 13, with the onset among some individuals being as early as 5 to 6 years (Okwumabua & Duryea, 1987).

There is anecdotal as well as documented information that Indian individuals are increasingly using more than one substance at the same time, thereby increasing the prevalence of polydrug misuse (Burns, 1991; Cockerham, 1977; Mail, 1987; Okwumabua & Duryea, 1987; Shirt, 1990;[2] Welte & Barnes, 1987). The major concerns focus on inhalant use, use of illicit drugs, inappropriate use of prescription drugs, and the increasing use of tobacco products. The consideration of tobacco use (nicotine ingestion)[3] and prescription drug use is outside the scope of this paper.

In a 12-year study of Indian adolescents in schools around the nation, Beauvais et al. (1989) found that adolescent drug use increased sharply between 1975 and 1981 and that females used drugs at the same rate as males in lifetime prevalence. The overall picture of Indian adolescent drug use other than alcohol appears to be dropping, and even alcohol use is decreasing. There has been an observed decline from 1981 to 1985 and only a slight increase to 1988. A similar pattern is found nationwide. Results of the National High School Senior Survey and the National Household Survey, conducted by the National Institute on Drug Abuse (1992), show similar declines in both illicit drug use and alcohol, indicating that there had been no displacement effect and that young people had not merely substituted alcohol for drugs or vice versa (NIAAA, 1990, pp. 26–28). This may be a reflection of the broad-scale educational and judicial approach to drugs that has been undertaken in the country over the last decade (Beauvais et al., 1989). Bachman and colleagues also reported a decline in use of several illicit drugs in their national high school senior surveys from 1976 through 1989 (Bachman et al., 1991). Table 3 shows the proportion of Indian students reporting use of various substances over 15 years of sampling by various researchers.

Other surveys of Indian drug use indicate that, on the whole, Indian people do not widely abuse some of the more commonly abused drugs in non-Indian communities. Examination of service data (Table 4) related to drug abuse suggests that, in fact, drug problems within Indian communities may be less of a problem than for the U.S. population as a whole. Outpatient visits are low, and hospital discharge rates are considerably below those of the available national rates (Mail, 1990). And the percentage of clients seen in tribal treatment programs who report using substances in the 30 days prior to intake, while initially low (Mail, 1987) (see Table 5), is now increasing. From 1985 to 1989, Burns (1991) reported an increase of 76.2% in the number of intakes to treatment programs where the abuse of a drug other than alcohol was mentioned as a primary problem.

Table 3 Proportion of Native American Students Reporting Use of Various Substances

Substances	Cockerham et al. (1976)[2]	Oetting et al. (1978)[3]	Goldstein et al. (1979)[4]	Barnes et al. (1980)[5]	Bowman et al. (1985)[6]	Beauvais et al. (1985)[7]	Mason et al. (1985)[8]	Bachman et al. (1991)[9]	NIDA[10]	NIDA[10]
								Male/Female	Male/Female	Total
Alcohol		78%		40%	82%	82%		82%/81%	89%/81%	85%
[Beer]	95%					79%				
[Wine]			52%				50%			
[Liquor]			78%				56%	37%/44%		
Marijuana	53%	46%		11%	51%	70%	57%	42%/44%	40%/29%	33%
Inhalants										
Stimulants/ Amphetamines[11]										
Depressants/ Barbituates[12]	20%	10%	22%		20%	7%	9%	7%/6%	5%/4%	4%
Psychedelics/ Hallucinogens[13]	40%	13%	21%		10%	6%	8%	10%/9%	10%/6%	8%
[Peyote]										
Cocaine[14]		8%	13%		24%	6%	6%	14%/16%	14%/9%	12%
Heroin	7%	4%	6%		3%	3%	3%	2%/1%	1%/1%	< 1%
Nicotine[15]										
[Cigarettes]					65%				77%/69%	73%
[Smokeless Tobacco]									26%/3%	14%
Total N	120	2904	276		1,588	1,411	1,040	2,564	N/A	N/A

Table 4 Services for Drug Abuse ICD-9-CM Code 304, 305.1, 305.9

	Outpatient Visits [1]		Annual Hospital Discharges [2]				Annual Hospital Days [2]			
	Number	Rate	Rate	Total	Direct	Contract	Rate	Total	Direct	Contract
U.S.[3]	NA		3.7	85,000	NA	NA	50.2	1,155,000	NA	NA
Services provided or funded by the Indian Health Service (IHS)										
All Areas	1,318	16.6	0.9	69	55	14	5.4	436	344	92
Aberdeen	170	24.8	2.4	15	13	2	26.2	171	144	27
Alaska	354	51.0	1.5	9	8	0	9.6	60	58	2
Albuquerque	87	17.4	0.4	2	1	0	1.2	6	5	1
Bemidji	61	13.3	0.5	2	2	0	1.1	5	3	1
Billings	105	27.0	1.9	7	4	3	6.8	29	6	22
Nashville	41	15.7	1.5	3	2	1	7.3	19	6	12
Navajo	143	9.1	0.5	8	7	0	4.3	76	75	1
Oklahoma	115	6.2	0.7	13	12	1	2.2	42	33	9
Phoenix	113	14.1	0.8	7	3	3	2.9	25	10	14
Portland	117	21.1	0.0	0	0	0	0.0	0	0	0
Tucson	12	8.2	0.6	0	0	0	0.6	0	0	0

1. Direct IHS and tribal workload data for primary care provider visits for 1983 (does not include contract outpatient visits). Rates per 10,000.
2. IHS workload data on first listed diagnosis for 1982 to 1984. Annual average hospital discharge and day rates per 10,000 population are age-adjusted to the U.S. population used in calculating the 1983 National Hospital Discharge rates.
3. National Center for health Statistics, Hospital Discharge Survey, 1983, data on first listed diagnosis.

NA = Not available.

Table 5

Percent of Clients at Treatment Intake Reporting Drug Use by Type of Drug Used 30 Days Prior to Intake for Fiscal Years 1984–1986

Type of Drug	FY 1984	FY 1985	FY 1986
Opiates	1.3	1.8	1.9
Barbituates	1.2	1.2	1.0
Cocaine	0.4	0.5	0.8
Marijuana	11.4	12.5	13.5
Amphetamines	1.0	0.6	1.0
Hallucinogens	0.2	0.4	0.4
Inhalents	0.9	0.6	0.5
Combined drugs, excluding Inhalents	1.6	1.7	2.0
Total N Clients	6818	6809	6933

1. Data derived from the Indian Health Service Alcohol Treatment Guidance System (ATGS) Initial Contact Report, nonduplicated client count for Fiscal Years 1984, 1985, and 1986. Maximum programs reporting were 170. Data courtesy of the IHS Data Center, Albuquerque, New Mexico.

Inhalants are frequently abused by Indian youth (Barnes, 1980; Beauvais, Oetting, & Edwards, 1985; Kaufman, 1973; Wingert, 1982). Abuse of inhalants, first reported in the late 1960s and early 1970s for the general population, now seems to be largely a phenomenon of a few Indian communities in the United States and Canada (unless it is severely underreported so that use is more widespread than the literature would indicate). Early reports of inhalant abuse suggested that pre-teens started sniffing and then "graduated" to the use of alcohol in their middle or late teens (Barnes, 1980; Dyer, 1974). Later reports have focused on the early place of inhalants in the patterns of progression (Okwumabua & Duryea, 1987) and on styles of inhalant use — experimental, recreational, and retreatist (Young, 1987).

Inhalants are among the first drugs used by Indian youth (Young, 1987), as they are among the easiest mind-altering substances to obtain. Gasoline, glue, spray paint, polish remover, and lighter fluid have all been inhaled. The average age of first use for inhalants has been reported to be11.5 years (Young, 1988). In a related study, Beauvais et al. (1985) report a decrease in drug use of all types except inhalants from 1975 through 1983. Although Indian youth seem to try a wide variety of substances, the adult drug of choice continues to be alcohol for the most part.

Marijuana is reported to be frequently used by adolescents and young adults (Strimbu, Schoenfeldt, & Sims, 1973). The lifetime prevalence for marijuana use was more than double that of non-Indian youth in one study that surveyed youth from 14 tribes nationally (Beauvais et al., 1985). In another study, almost half of the youth surveyed had tried marijuana compared to a national usage rate of 25% (Oetting, Beauvais, Velarde, & Goldstein, n.d.). The high school senior survey indicated an annual prevalence of 19.6% for Indian males and 44.0% for females and a 30-day prevalence for males of 27.6%, with females reporting 23.9% (Bachman et al., 1991). It should be noted that marijuana use is highly variable. Before undertaking the planning of any interventions, tribal-specific data should be collected and analyzed.

Heroin use does not appear to be very prevalent among Indian people. The National Institute for Drug Abuse's treatment reporting system indicated that Indian individuals seeking treatment in off-reservation programs was less than 1% of all clients encountered (Hanson, 1985). Indian Health Service-funded alcoholism program intake reports showed less than 2% of clients reporting use of opiates in the 30 days prior to seeking help from the treatment program (Table 5). This low use rate is also corroborated by data collected in a national sample of high school seniors from 1976 to 1989, which indicated that the percent usage by Indian youth was only 1.5% for males and 1% for females (Bachman et al., 1991). A survey of drug use in Montana in 1987 indicated that 5% of students had used heroin (Drynan, 1988).

Cocaine usage was found to be similar for Indians and non-Indians in a national study (Beauvais et al., 1985). Client intake data from all Indian treatment programs reporting for 1984, 1985, and 1986 indicated that less than 1% of admissions indicated use of cocaine, although a national survey reported positive use responses in 13% of an Indian youth sample (Mail, 1987), and the national high school senior survey data from 1976 through 1989 showed that 7.3% of Indian males and 9.2% of Indian females reported having used cocaine within the last 30 days (Bachman et al., 1991). A Montana student survey found that 9% of students reported having used

cocaine (Drynan, 1988). Cocaine use appears to vary considerably by region and may be more of a problem in the future.

Amphetamine use in five major school surveys ranged between 13% to 36%, but the treatment intake data again showed that less than 1% of adult clients reported using amphetamines in addition to alcohol (Table 5). The high school senior survey data reported 8.1% of Indian males and 10.3% of Indian females using stimulants within the last 30 days. This was two to three times the rate for any other ethnic/minority group surveyed (Bachman et al., 1991).

Reports on the use of *sedatives* and *tranquilizers* are extremely rare in the literature, although anecdotal reports from tribal paraprofessionals and health care professionals would suggest that abuse of prescription drugs may be higher than surveys suggest. Use of sedatives and tranquilizers among school-aged children demonstrated a drop between 1975 and 1983 (Beauvais et al., 1985), and the treatment program intake records reported about 1% sedative use rate (Table 5). The national high school senior survey indicated that the annual prevalence for sedative use by Indian males was 8.8% and tranquilizers 6.9%. Indian females reported an annual prevalence of 6.4% for sedatives and 8.7% for tranquilizers. The 30-day prevalence rates were less for Indian males (4.8% and 3.1%) and Indian females (2.6% and 2.2%) (Bachman et al., 1991). More worrisome was treatment intake data indicating use of more than one drug in combination with alcohol. Polydrug use among Indians should be explored in greater depth.

The last group of drugs about which there is information is the *hallucinogens*. Historically, the use of mind-altering substances by Indian people was reserved for ceremonial and curative purposes, and current abuse has been postulated as being related to the disruption of traditional practices (Beauvais et al., 1985). In major surveys of adolescent drug use, *peyote* is not considered to be a hallucinogenic drug (Beauvais et al., 1985), and its use outside of ritual and religion is rare (LaBarre, 1969; Mason, 1985). The national high school senior survey, however, reports an annual prevalence rate for hallucinogenic substance use by Indian males of 10.0%, and a 9.0% prevalence rate for Indian females, with LSD being the primary hallucinogen tried (Bachman et al., 1991). There are also anecdotal reports from health professionals and paraprofessionals about Indian adolescents experimenting with *datura*, a common but toxic weed in the Southwest, and various varieties of hallucinogenic mushrooms that were sampled in season by Pacific Northwest youth. Health professionals should make themselves aware of local, natural hallucinogens with which children and youth may experiment, as those who experiment may wind up in the emergency room, requiring treatment.

Other Concerns

One aspect of drug abuse that is rarely discussed is that of prescription drug abuse, especially among older or chronically ill patients. However, that is a topic beyond the scope of this paper. Suffice it to note that there are individuals who are addicted to prescribed drugs in many Indian communities and that this is a problem for the medical-care and mental-health delivery systems to address. With the aging population and increased longevity, education and monitoring of individuals on prescription drugs will be more important for clinical staff and health outreach workers.

A concern expressed by some health professionals about the adolescent data is that they tend to reflect information collected on those students still in schools and do not report on those individuals who have dropped out of school. Because Indian youth have such high dropout rates, there is concern that there may be a greater use of drugs than school-based surveys show (Beauvais et al., 1989). On the positive side, the Beauvais data indicate that Indian use of cocaine is lower than that reported for non-Indian high school seniors (Beauvais et al., 1989), although the survey information reported by Bachman and colleagues would suggest that cocaine use by Indians is higher than for most other ethnic/minority groups surveyed (Bachman et al., 1991). Clearly, additional data from school and nonschool surveys is needed. Nevertheless, the available data point to places at which prevention education and behavior-change strategies should be directed. Because a significant amount of drug use occurs in Indian 7th graders, programs to prevent or moderate use should be initiated in elementary school (Beauvais et al., 1989) — or earlier.

However, all surveys of drug use among Indian people have shown and continue to show that alcohol is the abused drug of choice. It is legal and easy to obtain, and its results are predictable to the user. The overall picture of adolescent use of drugs other than alcohol and inhalants appears to show decreasing rates, and even alcohol use is decreasing.

History of Indians and Alcohol

Although the American Indian and alcohol have been linked since the first European set foot on this continent, there were, in fact, two tribes in the Southwest that manufactured and used alcoholic beverages before such contact: The Tohono O'Odham[4] made sacred wine (Castetter & Bell, 1937), and the Apachean peoples made a secular cactus beer (Bourke, 1894; Opler, 1941). As the relationship between alcohol and Indian peoples has been viewed and described largely through the eyes of non-Indians, the historic record is incomplete.

It was the European who, to use drug slang, "pushed" alcohol on the Indian. Early historical accounts indicate that the European was very insistent that the Indian drink with him to seal agreements and mark ceremonial occasions. In some accounts, the Indian declined, indicating distaste for liquor. But the European insisted, and the Indian, being polite and tolerant of the strangers who had come to his shores, drank to satisfy his hosts.

The danger, as we all now know, was that alcohol is an addicting substance. Thus, enough polite and ceremonial drinks led to the recognition that the side effects of drinking were pleasurable. Like people everywhere when exposed to substances that leave one feeling good, such as chocolate (which is also mildly addictive), the Indian asked for more.

The Indian had not had any prior experience with sedative effects of alcohol — the euphoria, the giddiness; thus this experience became, in some tribes, highly sought after. For those individuals for whom altered states of consciousness were important, there is anecdotal evidence that rapid consumption of alcohol became an alternative to seeking dreams (Carpenter, 1959). But the effects of liquor also had serious consequences for Indians. The first was that, in not having had prior experience and guidance as to how to act when intoxicated, the drinkers got excited and celebratory and sometimes argumentative. This scared the European providers and was the source of several colonial laws passed prohibiting Indians from drinking (*Laws of the Colonial,* 1832).

The euphoria was recognized as being advantageous to both Indians and Europeans alike, but for different reasons. The European, who quickly recognized that too much imbibing can lead to stupor, saw this as a good time to secure signatures on agreements to which the Indian was not wholly partner. In many respects, liquor was one of the earliest chemical warfare agents used against Indians by Europeans and later fur traders and settlers to disable Native intelligence and begin the feeding frenzy on land that the European saw as his innate destiny to possess — never mind that the land was held to belong to all for the collective good and that it could not be "owned." Indian peoples believed that the land was a common resource for all who needed it. This was a fact that Europeans could neither understand nor accept. The advantage of intoxication to the Indian was that behavior engaged in during the drinking spree was forgiven by the closely knit, sometimes rigid, societies in which Indians lived. Thus, drunken comportment allowed a "time-out" from proscribed behaviors and an outlet for personal and community tension (MacAndrew & Edgerton, 1969).

The history of Indians and alcohol might be classified as Introductory/Experimental, Desperate/Detrimental, and Recreational/Elemental. From alcohol's initial introduction, Indians learned drinking styles from

European trappers and traders who themselves were marginal to refined society (Winkler, 1969). Following the Indians' incarceration on reservations, alcohol was smuggled onto Indian territory for profit and gain and probably, although never overtly stated, as a sedative drug to keep the rebellious folks distracted. Drinking continued out of desperation, boredom, and despair to the detriment of Indian people. Finally, prohibition — which had its beginnings in 1776, was reinforced with the passage of the 18th Amendment to the Constitution in 1919, and was continued specifically for Indian people beyond the amendment's repeal in 1933 — was rescinded in 1953 (Sanchez, 1967). Although prohibition was and is retained by many tribes today in tribal statutes and ordinances, drinking has become such a fact of life that Indian people assume it is an Indian thing to do. Drinking today can be observed in the company of sacred ceremonies and secular activities such as the powwow, the rodeo, and any other public gathering. Only recently has there been growing support for banning alcohol at such events (Marin Institute, 1992).

Drinking today in Indian country is both habit ("we've always done it this way," or "It is Indian to drink") and social acknowledgment ("Come, friend, and drink") (Waddell, 1971). Whether true or not, it is believed that Indians are genetically different and will thus react differently to alcohol (the classic firewater myth addressed earlier in this paper) (Leland, 1976). Drinking is also a result of the addictive properties of alcohol (there are Indian alcoholics, but not every Indian who drinks is alcoholic). And it has become so closely associated with the reservation life-style that it is hard to see alternatives. It has come to be a metaphor of hopelessness, helplessness, defeat, and escape from historic circumstances poorly understood by Indians and whites alike.

What gets little publicity is the incredible cultural survival and the strength of the people who have endured despite all of the battles, reservation incarceration and isolation, and discrimination, which have been so hard to bear. Two hundred years after the beginning of the conquest of the West and the treaty epoch, we still have some reasonably intact cultures and people who are proud of their heritage.

To generalize about Indian drinking would be a great mistake, because American Indians are not a homogeneous group. Just as the subsistence patterns, history, language, and culture of the more than 500 tribes in the United States and Canada vary enormously, so does their experience with substance abuse. Although we cannot generalize about Indian drinking, it is imperative to know the history if a solution is to be found. This is not the same as saying one must posit a cause in order to invoke preventive measures. The history of public health demonstrates that effective programs can be established before actual causes are known. Solutions for

prevention must emerge from people who know and understand the bitter history of alcohol use among Indians since colonial times and from Indian people. Current approaches to treatment must also acknowledge the importance of cultural acceptability and specificity.

The history of the Native peoples of the continent is a fascinating, complex, and profoundly challenging one with which to become acquainted. It teaches a great deal about the very civilized peoples who were here and the ways in which people solve their problems and survive in unique and adverse environments. It also teaches a great deal about prejudice, marginalization, conquest, and dependency. The dependent status of Indian people may explain a great deal about the overt behaviors that we observe and attribute to abusive use of alcohol, neglect of children, and high levels of assault and arrest that are observed in the public record. It is possible that abuse of alcohol and, more recently, other drugs is a response to and a consequence of the defeat and dependency imposed upon native peoples. If this is the case, the implications for intervention may lie outside the medical model of treatment.

What are the Solutions?

Since the first introduction of "spirits" into the New World, Indians and non-Indians alike have sought ways to counter the effects and consequences of alcohol use by individuals and within communities. Strategies have ranged from arrest to prohibition to sale of liquor, with the tribe controlling outlets and hours of sale. A hallmark in recent years has been the enormous expansion of treatment availability, prevention activities, and education directed at communities. The Indian Health Service and Bureau of Indian Affairs began a collaborative approach in 1986 with the passage of the Indian Alcohol and Substance Abuse Prevention and Treatment Act of 1986 (and subsequent amendments in 1988). The Alcohol, Drug Abuse, and Mental Health Administration's Office for Substance Abuse Prevention (OSAP), now known as the Center for Substance Abuse Prevention (CSAP), has funded over 200 Indian prevention programs since 1986.

Several Indian communities have initiated their own approaches to prevention and treatment and have developed culturally appropriate materials that have powerful Indian themes and images. The Health and Education Department of the White Mountain Apache produced a series of excellent slide tape messages on alcohol and inhalants. The Indian Health Service initiated a national fetal alcohol syndrome prevention project that ran from 1983 through 1986 (May & Hymbaugh, 1989). Some communities

have maintained this preventive emphasis even after federal support was withdrawn (Masis & May, 1991).

The Alkali Lake Band in British Columbia cooperated with a filmmaker to produce the moving story of a nearly two-decade-long struggle to overcome drunkenness within its community. Indian peoples in Alberta have been working on the Four Worlds program (Bopp, 1987), a holistic health promotion project development that has been tried by some Indian nations in the United States as well. The Four Worlds project's focus is based on a community development approach to health promotion. This includes such elements as (a) involving key community leaders in decision making; (b) encouraging participation by those individuals whose lives are being targeted for change, thereby creating a community vision; (c) constructing a community organization; and (d) taking action. M. Bopp observes that "the healing of individuals and healing of communities go hand-in-hand and are equivalent to the process of human and community development" (1985, p. 46).

M. Bopp and J. Bopp also note that "the philosophy of the Four Worlds Project is essentially a modern rearticulation of universal principles common to all traditional native cultures. These principles deal with the nature of existence, the nature and purpose of human beings, and the means of preserving and enhancing the well-being of individuals as well as of communities" (Bopp & Bopp, 1983, p. 8).

Using a similar concept, the Community Partnership Program (CPP), supported by OSAP, is a grant program aimed at communities that demonstrate high prevalence of alcohol and other drug use, as evidenced by prevalence rates higher than national averages. CPP support is intended to enable communities to develop partnerships for the purpose of creating and implementing comprehensive prevention programs. CPP is designed to demonstrate the effectiveness of providing long-term, multidisciplinary resources to assist communities in developing communitywide prevention systems. The funds are awarded only to coalitions made up of seven or more organizations from a community. Tribes may apply on their own or as a partner with an adjacent non-Indian community. The ultimate aim is to decrease the factors that place youth at risk for substance abuse and to enhance the factors that protect and bolster the resilience of vulnerable youth (OSAP, 1991).

Approximately 20% of OSAP's high-risk-youth demonstration projects have been awarded to American Indian grantees (Augustson, 1990). Virtually all of these grantees have used their funds, in part, for cultural enhancement activities. Tribes believe strongly that such enhancement is a critical component of prevention. A cultural enhancement is intended to increase youth's knowledge of their culture's history, traditions, and values, thus

have trouble accepting ceremonials as therapeutic. In fact, the alcoholism treatment programs have widely disseminated some traditional practices that are being adopted by communities for whom the practice was not a tradition, such as sweats (Hall, 1985) or the Talking Circle (Stone, 1981).

Cultural approaches to prevention are important, especially to Indian programs. Many treatment program staffs believe that what works for treatment will work as prevention if offered early in life. This is the Indian idea of the "connectedness of life" — the Circle of Life. Indian treatment programs have increasingly included cultural components, such as sweat lodges and sweetgrass ceremonies, and believe these elements to be beneficial to addiction treatment for Indian people (USGAO, 1992; OSAP, 1990). Increasingly, Indian prevention approaches incorporate strong spiritual content in hopes of inculcating traditional values and a respect for sobriety before young people begin experimenting with addicting substances. Prevention, then, is the most commonly pursued goal of federal and tribal alcohol programs.

Health professionals often consider prevention as having three levels of application: primary, secondary, and tertiary. Each of these has distinct attributes and implications for programs, which are addressed in the following pages..

Primary prevention means doing something before there ever is a problem. This means, in Indian communities, starting as early as possible and certainly targeting programs for preschool, Headstart, and elementary schools. An important attribute involves role modeling on the part of federal employees who work in Indian country and with Indian people, as well as by tribal leaders and elected officials. A survey conducted in 1984–1985 of reservation treatment programs found evidence to suggest that specific training on anger management might be an important component of primary prevention (Mail & Palmer, 1985). Traditional ways of handling anger seem to have been lost, and anger is now dysfunctional and often expressed while intoxicated, causing both intentional injuries (i.e., fights) and unintentional injuries (i.e., crashes, suicide attempts).

Since primary prevention focuses on reducing the incidence of alcohol and drug use by new users, most primary prevention programs are directed toward school-age youth. With the increased political support for Indian self-determination, many Indian communities now have a much stronger voice in the management of their schools (Szasz, 1974). However, secondary prevention programs designed to reduce the prevalence of alcohol and drug use among youth may be better located in the community to catch those students who are at risk of dropping out (Linney & Wandersman, 1992). Alternative programs and peer counselor programs appear to be effective in helping adolescents by encouraging behavior change (Tobler,

1986). Therefore, primary prevention programs need to span the gamut from school to community, with appropriate family outreach as indicated.

Primary prevention might involve screening for risk, although some health professionals have raised the question of "Why bother?" and acknowledge that any techniques beyond paper-and-pencil instruments (e.g., genetic screening) could be very controversial. Another very controversial issue is whether or not to rescind prohibition within tribal by-laws and constitutions in those tribes that continue to try to observe and enforce these laws. Eliminating standing laws in tribes where liquor is now sold or used so flagrantly as to render the laws useless might provide an atmosphere that "normalizes" alcohol, acknowledging that liquor is used in the community. And "normalization" would permit new learning without the constraints of "illegality," which prohibition imposes.

Secondary prevention is directed at keeping things that already exist from getting worse. Once Indian youth begin using alcohol, it is too late to prevent its use. Interventions now need to consider providing programs for teen parents in conjunction with schools to help keep kids in school or within the community and working with parents to establish alternative teen activities. In some cases, promoting village self-help programs, such as the one described recently in Alaska (Streissguth, 1990) or the example of the Alkali Lake Band in British Columbia. Clinics and hospitals can institute regular and routine screening of maternal drinking behaviors in order to provide earlier intervention and assistance. One successful program that has been tried to change peer behavior is the Natural Helpers approach, a formal peer-counselor training program developed by the Comprehensive Health Education Foundation of Seattle, Washington.

Implementation of employee assistance programs that involve real referrals and not just punitive terminations is important. This could be helped by revising tribal bylaws so that policies and programs are consistent rather than in conflict. Too many tribal by-laws state that drinking is grounds for termination of employment, rather than that drinking is an illness and should be treated. Mail notes that during her participation from 1983 to 1985 in the Indian Health Service alcoholism program evaluations, she observed many tribes that had by-laws or constitutional statutes on their books prohibiting use of alcohol on the job yet managed major treatment programs. The issue here is that there is one standard promulgated in the statutes and another standard in general community practice. This may contribute to a disrespect for the law. It raises the question as to what the community really believes. What goals and objectives are really desired by the community? Punishment or treatment or both?

These mixed messages can also be observed at Indian cultural events and large pow wows that have received alcohol-industry sponsorship. In 1991 Wilma Mankiller, Principal Chief of the Cherokee Nation, canceled the Coors Brewing Company's $5,000 sponsorship of the Cherokee Nation's annual Labor Day Pow Wow. Supporters of the National Finals Indian Rodeo also canceled industry sponsorship. There is increasing concern in Indian country about corporate sponsorship as marketing by the very industry that makes products that contribute to the unacceptably high death toll of Indian people. Yet the money is hard to turn down. The *Lakota Times*, an Indian newspaper, accepts $14,000 from Miller for full-page ads to promote struggling Indian organizations (Marin Institute, 1992).

Tertiary prevention is prevention at the curative and restorative level. It is designed to prevent an existing and acknowledged problem from getting worse. In addition to providing individual treatment for recovery, there could be developed a community plan for holistic approaches: prevention, early intervention, and adequate treatment, with a strong aftercare component and focus on relapse prevention. OSAP's Community Partnership projects try to include treatment centers in prevention-planning approaches. The Robert Wood Johnson Foundation also encourages strong community involvement in prevention and treatment implementation. The integration of Indian cultural traditions and practices with alcohol treatment approaches has been occurring successfully for over 20 years. The majority of Indian treatment centers hold to a philosophy similar to that espoused by Poundmaker's Lodge in Alberta: "We . . . believe that the disease of alcoholism and other drug addiction is of epidemic proportions in the Indian community and that the Native client will respond most positively to a specialized treatment approach that embodies Indian cultural awareness and the philosophy of Alcoholics Anonymous" (Shirt, Shirt, & Johnson, 1990). Important to changing behavior within the communities would be actions to stop accepting and sanctioning bad behaviors. The community may need to learn confrontational techniques and to overcome generations of the deeply rooted value of nonintervention when intervention would be an appropriate response.

However, it is necessary, we believe, to be discriminating in planning and implementing of community-based programs. Moralistic judgments will not solve the problem. Rational social, medical, and therapeutic approaches will begin to make inroads; consistency in approach is the key. Many communities have a sober nucleus already and are expanding it through a variety of prevention approaches. Researchers Gene Oetting and Fred Beauvais (1989) believe that cultural identification is not a simple matter of acculturation versus nonacculturation or increased acculturational stress but instead includes several different and linked dimensions. Identification

with the Indian culture and identification with white culture are not at opposite ends of a continuum. They are, however, relatively independent of each other, and an Indian adolescent with a high stake in both cultures (e.g., the bicultural youth) may be in the best position to avoid heavy alcohol and/or drug involvement. Several prevention programs for youth are testing this bicultural theory/approach (Oetting & Beauvais, 1989; Schinke, Botvin, Trimble, Orlandi, Gilchrist, & Locklear, 1988).

Programs to intervene must be comprehensive and may not look like white-urban programs because of the breadth of approach, which may include counseling, food banks, educational assistance, family recreation, arts, crafts, oral histories, and other means of preserving the culture. A common element here is the emphasis on the positive. Too many educational approaches focus on the negative consequences, rather than promoting the positive attributes of individual and community accomplishments. Changing attitudes will be a requisite behavior on the part of not only community residents but health care providers and employers of Indian people.

These two conflicting concepts — a treatable illness versus an unacceptable behavior — lie at the heart of the confusion, misunderstanding, and difficulty of approaching alcohol use versus abuse from a rational, reasonable, and medical perspective. If abusive and inappropriate use of alcohol is a problem, then appropriate use needs to replace inappropriate behavior. If too much use leads to addiction, hence alcoholism, then treatment needs to be instituted for the condition. The challenge for communities is to decide ultimately what the issues are and what outcomes are desired by the community. Changing behaviors? Preventing abuse? Treating illness? In order to know what works and what does not, it is essential to incorporate ongoing evaluation as an integral part of any planned intervention. There are several excellent resources available for consultation, such as Dever (1984), Green and Kreuter (1991), or Green and Lewis (1986).

To reach those individuals who are not in school, there needs to be a marked increase of programs directed at the workplace. Despite high unemployment rates, many Indian individuals are employed, either full-time or seasonally. A recent conference (1991) sponsored by the Native American Research and Training Center, University of Arizona, looked at the development of employee assistance programs and drug-free workplace policies for Indian firefighters. Workplace policies will help communities identify what goals they want for their members. Until these matters are clearly addressed once and for all, and there is a consensus reached by those affected and a consistency established in policy, regulation, and treatment protocols, alcohol abuse will continue to plague Indian commu-

nities. It is an antidote to hopelessness. It exacerbates helplessness. But it need not always be thus. There are several hopeful indicators that community self-determination is reaching out to address the complex issues of drug and alcohol use.

The Indian firefighters' conference was among the first to take a clear look at the Indian workplace as an appropriate point at which to address the problem of drug use and consider appropriate interventions. Until now, interventions have been discussed in the context of schools, community, and medical-care delivery. We have largely avoided consideration of the implications for work-site prevention. Tribal leaders have not infrequently commented that it would be easier to address this issue if those agencies serving and working with Indian people would provide more positive role models. Or, as one tribal chairman observed, "If the [federal Indian programs] would sober up their own people, then maybe we would believe it was possible to help our people."

It is relatively well recognized that when one expects a certain behavior, one often elicits that behavior. Overreaction to stereotypes is inappropriate and punitive and may, in fact, reinforce the very behavior that one would like to ameliorate or change. Interventions need to be in concert with the communities. Achievement of change must be the responsibility of all, not just a few. Progress has been made in the past decade. The challenge before us is to continue the successes while addressing the problems and finding collective solutions.

Those who study history have an opportunity not to repeat it. Although alcohol abuse has been a problem for Indian people for the last 200 years, it does not have to continue to be a problem of such magnitude in the next century. Perhaps a reasonable goal is to reduce it to a problem of no greater magnitude than it is for the rest of the nation during the 1990s and, beginning with the year 2000, to reduce rates below that of all other peoples. Goals have been set, including specific objectives for American Indians and Alaska Natives (USDHHS, 1991). A companion guideline that has recommendations that could be adapted to reservation communities is *Healthy Communities 2000: Model Standards* (American Public Health Association, 1991). It may be unreasonable to expect that alcohol and other substance misuse will disappear entirely. There will always be abusers, and there are safe users. But within Indian cultures, there are remarkable strengths and strategies that can be brought to bear to resolve the problem of Indian drinking.

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Notes

1. The terms American Indian, Indian, and Native American are used interchangeably in this paper. These terms refer to descendants of peoples native to North American at the time of the first European contact. Today, Indians in the United States and Canada are members of over 500 distinct tribes, bands, and/or villages. For convenience, the term "Indian" will be used, except when the data also reference Alaska Natives.

2. Poundmaker's Lodge, Edmonton, Alberta, Canada, treats over 800 Native people each year for alcohol and drug addiction. The executive director, Patrick Shirt, reports that multiple drug use and the use of drugs other than alcohol increased significantly since Poundmaker's was established in 1973.

3. It should be noted that no studies yet report nicotine as the addictive component of tobacco and smoking or chewing as the method of ingestion. All studies report cigarettes and/or smokeless tobacco by their use rather than by the drug these products contain. To "level the playing field," one hopes in the future to see discussions of drug use reflect not only the illicit drugs and the legal drug alcohol but also the addition of nicotine as a frequently used and often abused drug.

4. Tohono O'Odham is the native name for that nation of Indian people who used to be identified as the Papago Indians. In the early 1980s, the tribe members passed a resolution establishing that their official name was their own name for themselves: Tohono O'Odham, or "The People of O'Odham." The tribe has its headquarters in Sells, Arizona.