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The Needs of Pregnant and Parenting American Indian Women at Risk for Problem Alcohol or Drug Use

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In recent years, the use of alcohol and other drugs by pregnant and parenting women has been a concern. Evidence suggests that prenatal substance exposure can expose newborns to a higher relative risk of health or developmental problems.[1] There are also concerns about the potential substance abuse-related problems for the health and psychosocial well-being of mothers, children, families, and communities.[2] Despite the fact that education, outreach, assessment, and treatment are known to be crucial in preventing or alleviating problems, relatively little is known about the most appropriate composition of these services for pregnant and parenting substance-involved women. And relatively little is known about the special needs and concerns that substance-involved pregnant and parenting American Indian women may have. Rarely do surveys over-

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sample American Indians so as to provide specific American Indian data.

A series of perinatal substance abuse studies were conducted in California in the 1990s. The Perinatal Substance Exposure prevalence study of toxicology results at childbirth was unable to generate reliable data on substance exposure rates at birth for American Indian newborns due to problems with ethnic identifiers in data collection.[3] The Perinatal Needs Assessment (PNA), in gathering information from substance-involved pregnant women using public services, included few American Indian women.[4]

Yet historical evidence, health indicator data, and special survey and clinical reports all suggest that American Indians, including women, suffer high rates of problems connected with alcohol and drug use.[5] Furthermore, many of the correlated problems found among many groups in both prevalence surveys and needs assessments—for example, limited economic resources, deeply rooted societal racism—also imply a potential for problems and urgent needs among American Indians.

In addition, it should be noted that the situation in California with respect to American Indian substance use-related problems cannot be assumed to be identical to the national picture or to studies from other states. Much of the research to date on the topic has focused on relatively large American Indian reservation-based communities, often in rural states.

With respect to negative health consequences of alcohol and drug use in California, researchers and officials in the field acknowledge significant underreporting of overall American Indian morbidity and mortality rates within the state. Nonetheless, a recent Indian Health Services report to Congress on health needs in California found that "tobacco and alcohol use are having a devastating impact on the health of California Indians and that 40% of deaths were attributable to smoking and nearly that proportion to drinking."[6]

The most recent comparative maternal and child health data for California's American Indians, which appeared in the 1994 state health indicator report, also give reason for concern. American Indian infant mortality was 11.0 per 100,000, compared with 7.9 for all ethnic groups and 7.2 for Anglos; the percentage of low birth weight infants was also higher (6.3 percent) than for all groups (5.8 percent) or for Anglos (5.1 percent); and American Indian women were more likely to lack

early prenatal care (36.5 percent) than were all groups (27.7 percent) or Anglos (16.7 percent).[7]

To complement the data gathered in the PNA from pregnant women of other ethnic groups in California, the Pregnant and Parenting American Indian Study (PAIS) reported in this paper was requested by the Native American Constituency Committee and the Office of Perinatal Substance Abuse of the California Department of Alcohol and Drug Programs. The purpose was to provide information on self-reported needs, problems, and concerns for American Indian women who are pregnant or parenting and at risk for heavy or problem substance use.

METHODS

Persons eligible to participate in the study were women who identified themselves as American Indian or Alaska Natives,[8] fifteen years or older, either pregnant (the pregnant subsample) or mothers of a child twelve years or younger (the parenting subsample). Women were recruited in American Indian community agencies in the San Francisco Bay Area (the urban subsample) and the North Coast (the rural subsample). Six Bay Area agencies and seven North Coast agencies participated. The urban agencies spanned three counties, and the rural sites four counties. The largest number of participants were recruited in clinics, compared to other sites.

All participants gave their written informed consent before the interview began, after an explanation was given of the study by the interviewers. The project was explained as a study of the needs and health of American Indian women who were pregnant or parenting, including but not limited to alcohol and drug issues. The interview was administered orally in person, one-to-one, in a private room, and took between fifteen and sixty minutes. Women were compensated for their time. Information given in the interview and participation were confidential.[9]

PAIS did not use agency records or share information with participating agencies. Interviewers were unconnected with the agencies, and were recruited, selected, and trained to ensure that they were experienced, familiar with American Indian culture and concerns, sensitive to issues related to substance use, and committed to confidentiality procedures.

TABLE 1
Alcohol and Drug Risk Screening Thresholds

	During year prior to discovering pregnancy or during the past year	
	Adults (20 years or older)	Adolescents (15-19 years)
ALCOHOL USE	5+ drinks 2-3 times/month or more often *or* 3-4 drinks 3-4 times/week or more often	5+ drinks 1 time/month or more often *or* 3-4 drinks 1-2 times/week or more often
CAGE[1]	"YES" to any one of four questions	"YES" to any one of four questions
DRUGS USE		
Marijuana	3-7 days/week	3-7 days/week
"Softer"[2] Drugs	5 times or more of any one of these drugs to get high	5 times or more of any one of these drugs to get high
"Harder"[3] Drugs	1 time or more of any of these drugs without a doctor's direction	1 time or more of any of these drugs without a doctor's direction
CAGE[4]	"YES" to any one of four questions	"YES" to any one of four questions

1. The CAGE instrument is a validated and widely used four-question assessment tool that measures possible problem use of alcohol. Specifically, question C asks, "Did you ever feel you ought to *cut* down on your drinking?"; A asks, "Did people *annoy* you by criticizing your drinking?"; G asks, "Did you ever feel *guilty* about your drinking?"; and E asks, "Did you ever have a drink first thing in the morning to steady your nerves or get rid of a hangover (*eyeopener*)?" While affirmative answers to two of the four is the usual clinical cut-off, in PAIS (as in PNA) a single affirmative response was sufficient to screen in to the study sample.
2. "Softer" drugs: diet pills, uppers, tranquilizers, sleeping pills, codeine, psychedelics, Ecstasy, sedatives.
3. "Harder" drugs: cocaine/crack, methamphetamine, heroin, inhalants, PCP, antidepressants, major tranquilizers.
4. CAGE items were adapted for drugs in PAIS, as in PNA, by substituting the word "drugs" for "drinking" for the first three questions, and by altering the fourth question into a two-part question, which asked: "Sometimes people feel bad when a drug wears off. Did that ever happen to you during the past (*if pregnant*: prior to pregnancy) year?"; (*if yes*): "Did you ever take another drug when that happened?" (*If "yes" to the latter of the two-part question, the respondent screens in.*)

While a similar instrument had been successfully used in PNA, it was important to ensure that the questionnaire was appropriate and valuable for American Indian women. Additional questions relevant to specific American Indian cultural and spiritual concerns were developed, with the American Indian Advisory Group providing crucial input and review. Final content for both the pregnant and parenting instruments included demographics; personal and family history; screening; needs assessment; alcohol, tobacco and drug use; HIV risk;[10] and, if applicable, treatment satisfaction. The parenting questionnaire included a children's needs assessment and additional parenting items.

Because any eligible woman recruited at the agency site could volunteer to participate in the study, participants were then screened for risk of heavy or problem substance use.[11] Screening consisted of self-reported use of alcohol and of other drugs during the past year, and self-reported concerns because of substance use during that year (Table 1). For the pregnant women, the past year was defined as the year prior to discovering they were pregnant. In order to "screen in" for a long interview, a woman had to respond affirmatively to any one of several cut-off levels or criteria delineated in Table 1. Women not meeting this "screen" received a short interview.

RESULTS

Sample Demographics

Of 290 women participating, 171 (59 percent) screened in and completed the long interview ("the sample," i.e., those who met the threshold for risk for heavy or problem alcohol or drug use). The remaining 119 (41 percent) completed a short interview. Twelve additional women, not included in the 290, failed to complete the screening or interview and are omitted from this discussion.

Of the 290 women in the overall group, 59 percent reported California tribal identification and the remaining 41 percent out-of-state tribal identification. The five most frequently mentioned tribal identifications include three California tribes (Yurok, n=90; Tolowa, n=27; Hoopa, n=26) and two out-of-state tribes (Sioux or Lakota, n=40; Navajo, n=24). Overall, 92 tribes

are represented, including 35 California tribes and 57 out-of-state tribes.

Looking at demographics in the sample of 171, the sample by design contained equal numbers of rural participants (n=86) and urban ones (n=85), so as to oversample rural women. Most women are long-term residents of their region: 75 percent (n=128) have lived in their county ten years or longer. Most women, 76 percent (n=130), were also born in California, and 23 percent in another state (n=40), with the remaining 1 percent (n=1) born out of the country. One-fifth of the sample, or 34 women, were born on a reservation or in a tribal area. Of the sample, 33 percent (n=56) were pregnant and the remaining 67 percent (n=115) non-pregnant parenting women. More of the rural women (n=36) than urban women (n=20) were pregnant. For both groups combined, 85 percent (n=145) were parenting children. Of women with children under eighteen years of age, 27 percent (n=39) report at least one of their children living with someone else, nearly always the father or another family member.

The median age of all women in the sample is twenty-nine; for the pregnant subsample it is twenty-two, and for the parenting subsample thirty-one. Twenty-six women (16 percent) were under age twenty.

Alcohol and Drug Risk Screening Results

Of the 290 women completing the screening, as previously mentioned, 171 (59 percent) screened in, that is, met the threshold for risk of heavy or problem alcohol or drug use, to receive the long interview (Table 2). A higher proportion of pregnant women (72 percent) than parenting women (54 percent), and a higher proportion of rural women (65 percent) than urban women (54 percent), screened in. More of the small number of adolescents (70 percent) screened in than did the adults (57 percent).

TABLE 2

Alcohol and Drug Risk Screening Rates by Demographic Groups

GROUP	Screened In (N=171)		Screened Out (N=119)		Total (N=290)	% of Each Group that Screened In
	n	%	n	%		
OVERALL SCREENING RATE	171	100	119	100	290	59.0
URBAN VS. RURAL						
Urban	85	49.7	72	60.5	157	54.1
Rural	86	50.3	47	39.5	133	64.7
PREGNANT VS. PARENTING						
Pregnant	56	32.7	22	18.5	78	71.8
Parenting	115	67.3	97	81.5	212	54.2
ADOLESCENT VS. ADULT[1]						
19 or younger	26	15.5	11	9.2	37	70.3
20 or older	142	84.5	108	90.8	250	56.8

1. Three cases with missing age data result in a total *n* of 168 for adults and adolescents.

Concerning screening criteria, most women in the sample screened in for use of or concerns about both alcohol and other drugs: 55 percent (n=95), versus 30 percent (n=51) for alcohol only, and 15 percent (n=25) for other drugs only. A large proportion screened in on the five-plus drink threshold (63 percent), and women were more apt to screen in for their use of "harder" drugs (52 percent) than for their use of "softer" drugs (17 percent), or for marijuana (26 percent). Comparably, most women screened in for both their reported use levels and their concerns, i.e., CAGE (Table 3).

TABLE 3

Alcohol and Drug Risk Criteria Outcomes (N=171)

Total Screening In On:	n	%
Any Alcohol Threshold	146	85.4
Alcohol CAGE	129	75.4
5-plus drink use[1]	107	62.6
3–4 drink use[1]	5	2.9
Any Drug Threshold	120	70.2
Drug CAGE	98	57.3
Marijuana use	44	25.7
"Softer" drug use	29	17.0
"Harder" drug use	88	51.5

1. The 5-plus and 3-4 drink groups are mutually exclusive, since those screening in at the 5-plus level were not queried about their 3-4 drink use. No other screening indicator groups are mutually exclusive.

Alcohol, Drug, and Tobacco Use

During the past year (for pregnant women, during the year prior to pregnancy), over 90 percent of the sample used alcohol at least once. The reported modal drinking frequency was one to two times a week. However, the median number of drinks typically consumed per drinking occasion was 5.75 drinks. To further assess drinking quantity, women were asked if they had ever consumed five or more drinks on one occasion during that twelve-month time period. Over three-fourths of the women responded affirmatively: 79 percent of the pregnant women (n=44) and 78 percent of the parenting women (n=90). For these women, Table 4 presents the frequency of having five or more drinks during the year for the pregnant and parenting subsamples. The majority who reported drinking this amount on at least one occasion in fact did so at least weekly. Specifically, identical proportions of the pregnant and parenting women, 61 percent, reported this pattern (Table 4).

TABLE 4

Frequency of Having 5 or More Drinks in Past Year for Pregnant and Parenting Subsamples

FREQUENCY	Pregnant Women[1]		Parenting Women[2]		TOTAL	
	n	%	n	%	n	%
Daily or near daily	6	14	18	20	24	18
3-4 times per week	6	14	19	21	25	19
1-2 times per week	15	34	18	20	33	25
2-3 times per week	8	18	16	18	24	18
About once a month	5	11	6	7	11	8
Less than once a month	4	9	13	14	17	13
TOTAL	44	100	90	100	134	100

1. (n=56) Pregnant women reported on having 5+ drinks on an occasion in the 12 months prior to pregnancy.
2. (n=115) Parenting women reported on having 5+ drinks on an occasion in the past 12 months.

Women were also queried about drinking amounts in the most recent three-month period. In the past three months, almost 80 percent of the parenting women had five or more drinks on one occasion at least once. Over 40 percent drank this quantity at least weekly. When asked about the past thirty days, the proportion is comparable (44 percent).

Considering drinking during pregnancy by three-month periods, 50 percent of the pregnant women reported any drinking in their first trimester, and only 14 and 15 percents in their second and third trimesters (Table 5). Of those drinking in the first trimester, however, most (25 of 28) did consume five or more drinks on occasion at least once.

More women in the rural region (87 percent) reported having five or more drinks in the past year than did those in the urban region (69 percent). Similarly, for the past three months for the parenting women, more rural (84 percent) than urban (68 percent) women reported this heavier drinking mode. Numbers for the pregnant subsample are too small to compare by region.

TABLE 5

Alcohol Use Prior to and During Pregnancy

	3 Months Prior (N=56)		1st Trimester (N=56)		2nd Trimester (N=41)[1]		3rd Trimester (N=22)[2]	
	n	%	n	%	n	%	n	%
Used Alcohol	48	86	28	50	6	15	3	14
Did Not Use Alcohol	8	14	28	50	35	85	19	86

1. 2nd trimester=all in 2nd or 3rd trimester
2. 3rd trimester=all in 3rd trimester

For other drugs that were ever used, marijuana is the most commonly reported, with three-fourths affirming at least one lifetime use. It is followed by methamphetamine, with 55 percent reporting lifetime use (Table 6). One-third reported trying psychedelics or hallucinogens (excluding sacred use); one-fifth reported using crack cocaine; and just over one-tenth reported using inhalants.

During the past three months (for pregnant women the three months prior to pregnancy), marijuana was again reported as the most commonly used drug, by 51 percent. Again this was followed by methamphetamine, used by over one-third. Use of no other drug was reported by more than 10 percent (Table 6).

Among the non-pregnant parenting subsample, reported use during the past thirty days was common for both marijuana (46 percent) and methamphetamine (28 percent). Among those women using marijuana, frequency of use was fairly regular. For methamphetamine, the largest group reported using monthly or less.

During pregnancy, reported drug use dropped. In the first trimester, use of marijuana (34 percent; n=19) and methamphetamine (18 percent; n=10) were still relatively common. During the second and third trimesters, most women reported abstaining.

Comparing drug use by regions, the rural women reported somewhat more frequent marijuana use than did urban women, as well as more methamphetamine use. More urban

TABLE 6

Past and Current Drug Use
(N=171)

DRUG	Ever Used		Past 3 Months[1]	
	n	%	n	%
Marijuana	128	75	87	51
Methamphetamine	94	55	60	35
Powder Cocaine	80	47	16	9
Psychedelics (e.g., LSD)	57	33	3	2
Stimulants/"Uppers"	39	23	3	2
Pain Killers	36	21	12	7
Crack Cocaine	29	17	9	5
PCP	23	14	1	1
Tranquilizers	22	13	3	2
Inhalants	21	12	1	1
Heroin	19	11	7	4
Miscellaneous	13	8	0	0
Designer Drugs (e.g., Ecstasy)	2	1	0	0

1. For pregnant subsample 3 months prior to discovering pregnancy.

than rural women did report use of other drugs, notably crack cocaine or heroin, although these were small numbers overall. With respect to tobacco use, 39 percent of the respondents (n=66) reported being current smokers (excluding ceremonial use). Unlike other substances, tobacco use was twice as common among urban as among rural women. More adults than adolescents reported smoking. When asked if they would like to quit using tobacco, 73 percent of the smokers said yes. In response to queries, few were confident about their ability to cease, or had sought help to do so.

Alcohol and Drug Problems

Large numbers of participants had experienced personal alcohol- and drug-related problems or negative consequences from their substance use at some point. Sixty-eight percent (n=117) affirmed having experienced an alcohol-related problem in general or, when queried, a specific negative consequence of drinking, for instance, arrest or abuse (Table 7). When asked about drugs, 44 percent (n=76) acknowledged a problem or consequence. For alcohol, the most commonly affirmed of the queried possible negative consequences was "being hurt, beaten or taken advantage of"; for drugs, it was "being unable to control one's use." The women reported more alcohol- than drug-related consequences overall, even more alcohol-related arrests (Table 7).

When asked about ever having problems due to alcohol use by a family member or close friend, 75 percent of participants said yes. When asked the same question about drug use, 54 percent indicated yes. In response to queries, nearly equal numbers reported that a drinking problem had been experienced at some point by a parent (73 percent) as by a spouse or

TABLE 7

Past and Current Drug Use (N=171)

Type of Problem	Numbers Responding "Yes"			
	Because of Alcohol		Because of Drugs	
	n	% of sample	n	% of sample
Have ever had any problems because of my use	85	50	54	32
Couldn't control use	59	35	50	29
Have been arrested	54	32	24	14
Have had a driving accident or DUI	39	23	8	5
Have wound up on the street	22	13	14	8
Have been hurt, beaten, taken advantage of	68	40	31	18
Have felt suicidal or tried to commit suicide	25	15	22	13
Total Listing Any Problem	117	68	76	44

partner (70 percent). For other drugs, the largest group named their partner or husband (52 percent), while fewer (21 percent) reported a parent's problem drug use.

Potential problems related to parenting surfaced for some women when asked if they had ever had contact with the courts concerning their children's living arrangements. Forty-six women noted that they had had contact with family court services, and as a result, 23 had children living elsewhere. More than half of these 23 (n=13) indicated, in response to the query, that this situation was related to a report of her problems with alcohol or drugs. Thirty-eight women acknowledged having had contact with Child Protective Services regarding one of their children, and nearly half of these (n=16) had a child living elsewhere due to this. Again, over half this group of sixteen (n=10) indicated that this situation was due to a report of her substance use.

In response to such problems, 32 percent had sought help for their own alcohol use, and slightly more for someone else's alcohol use (37 percent). Ninety-one women (53 percent) had sought mental health counseling or therapy at some point. About one-fourth had solicited help for their own drug use and a similar percent for someone else's. Twenty-four percent (n=41) had been in formal treatment or in a Twelve Step program (e.g., Alcoholics Anonymous), including seven who were in treatment at the time of the interview.

Despite the reported alcohol- or drug-related problems, nearly all (88 percent; n=150) did not want to be in a treatment program, when asked. In response to a list of possible reasons for this, those most commonly acknowledged were that "they could cut down or quit on their own" and that "they could handle the alcohol and drugs." Nearly all (90 percent; n=154) said they had at some time cut down on their substance use without treatment or Twelve Step participation (90 percent; n=154), and 78 percent (n=134) said they had been able to quit at least once.

Service Needs

This section presents the results for reported potential public sector service needs, including health and prenatal care, economic needs, family support, parenting and children's needs, and needs relevant to the American Indian community. Women were questioned in detail about a range of service needs, using

lists of possible needs, and asked to prioritize those needs. Their responses are presented below, grouped by service type: health, economic, family, and community and other.

Beginning with health care, large majorities felt they needed health insurance (70 percent; n=119) or medical care (67 percent; n=114), and about 40 percent expressed a need for birth control, HIV education or testing, and mental health therapy. All of the 41 pregnant women who were in either their second or third trimesters at the time of the interview had received prenatal care, and all had initiated care before or during the second trimester. Despite the patterns of substance use described previously but indicative of the attitude expressed that they could cut down or quit on their own, only 40 percent noted a need for alcohol or drug treatment.

Regarding economic needs, over three-fourths of the women wanted education programs or vocational training; this was one of the most frequently named needs (Table 8). Nearly as many wanted help paying utilities and other bills and job placement. Over half reported a need for help obtaining housing, transportation assistance, food or household supplies, and clothing or furniture. Just under half expressed a need for assistance qualifying for benefits such as AFDC or food stamps.

TABLE 8

Economic Services Needed (N=171)

ITEM	n	%
Education program/GED services/schools/job training	131	77
Help paying utilities and bills	124	73
Job placement	122	71
Help getting housing	108	63
Transportation assistance	103	60
Help getting food or household supplies	97	57
Help getting clothing or furniture	95	56
Help getting GA/AFDC//MediCal/food stamps	73	43

A large gap exists between the level of educational aspirations and the level of expectations. When asked how much education they would want to get if they could, nearly half the women indicated four years of college. However, when asked what education they expected to receive in the next few years, fewer than one in ten expected to finish college. To date, 60 percent (n=103) had completed high school or gotten a GED, and 21 percent had postsecondary schooling.

More rural women expressed economic service needs than did urban women, including education and training needs (90 percent versus 64 percent); job placement (80 percent versus 62 percent); and help paying bills (77 percent versus 68 percent). Rural women also more frequently needed help with housing (73 percent versus 53 percent); understandably, they more frequently needed transportation assistance (70 percent versus 51 percent).

With respect to family support, large majorities expressed the desire for trustworthy child care (68 percent), respite care or baby sitting, and services for children's problems (60 percent each). Over half also reported a need for parenting skills training and family or relationship counseling.

One of the most frequently named needs was American Indian cultural and community activities (Table 9). Also named by over half the women was spiritual and healing support.

TABLE 9

Community-Related and Other Needs (N=171)

ITEM	n	%
American Indian cultural and community activities	133	78
Legal Assistance	103	60
Spiritual and healing support	101	59
More or better police or other protection for your safety	86	50
Services that deal with disability and access barriers	59	35
Other	15	9

Because it was anticipated that the women would mention many service needs, they were asked to prioritize their two most urgent needs. While the need priorities were diverse, the five top-ranked needs were help with education or job training (26 percent) and housing assistance (22 percent), followed by job placement (18 percent), medical care (16 percent), and American Indian cultural and community activities (13 percent) (Table 10).

The parenting and pregnant subsamples were basically similar in their patterns of affirming overall service needs. However, there were some differences that pertained to their current life circumstances. As might be expected, pregnant women were likelier to affirm medically related needs. Pregnant women far more commonly than parenting women needed health insurance (79 percent versus 65 percent), medical care (71 percent versus 64 percent), and access to birth control (66 percent versus 34 percent).

With respect to economic needs, as might be anticipated, pregnant women were likelier to need housing (71 percent versus 59 percent), and parenting women somewhat likelier to want job placement (73 percent versus 68 percent).

TABLE 10

Priority Service Needed (N=171)

ITEM	n	%
Education/GED/job training	45	26
Housing	37	22
Job placement	31	18
Medical care	27	16
American Indian culture/community activity	23	13
Medical/health insurance	20	12
Parenting skills training	15	9
Help paying utilities, other bills	14	8
Help getting GA/AFDC/Medi-Cal/food stamps	13	8
Counseling for family/relationship problems	13	8

When asked to prioritize service needs, pregnant women prioritized housing (32 percent), education and training (25 percent), medical care (25 percent), parenting training (18 percent), and medical care (16 percent). Parenting women prioritized education and training (27 percent), job placement (19 percent), housing (17 percent), American Indian cultural activity (16 percent), and medical care (11 percent).

Given different configurations of and access to services, it might be anticipated that urban and rural women's needs and priorities would differ. Considering regional differences in needs, health insurance (80 percent versus 59 percent) was more frequently affirmed by rural than by urban women as was medical care (73 percent versus 60 percent). More rural women also expressed economic service needs than did urban women, including help with housing (73 percent versus 53 percent). More rural than urban women also affirmed the need for American Indian cultural activities (88 percent versus 67 percent).

The parenting women with children between three and twelve years of age (n=91) were also asked about their children's needs. The respondent was asked to consider the child in that age range with the most recent birthday as the index child. Ninety-one respondents met the criteria and provided information.[12]

A list of services regarding the index child's potential needs was presented to the mothers, who were asked to indicate which if any they needed or could use. Large numbers responded affirmatively to a large number of services: over 80 percent indicated that they needed computer exposure or training for their child, more or better local parks or playgrounds, American Indian cultural and spiritual activities, and schools more respectful of American Indian ways (Table 11). Furthermore, about three-fourths said they needed learning support for their child, recreational programs, more or better school safety, and more or better community or neighborhood safety.

As was asked of all women for their own needs, the mothers were asked to prioritize the two greatest or most urgent needs for their child. The highest ranked priorities for the children's needs were services for children's learning (24 percent) and American Indian cultural and spiritual activities (20 percent). These priorities correspond to the sample's high prioritization

TABLE 11

Children's Needs Assessment (N=91)[1]

ITEM	n	%
Computer exposure or training	83	89
More or better local parks or playgrounds	81	87
American Indian cultural and spiritual activities	78	84
Schools more respectful of American Indian ways	78	84
Tutoring, special education, or improved school programs	73	78
Recreational or extracurricular programs	73	78
More or better school safety	71	76
More or better community or neighborhood safety, police or other protection	67	72
Counseling for child's problems	60	65
Care for your child's physical or health problems	59	63
Transportation assistance	59	63
Other	4	4

1. 8 missing cases

of education and American Indian cultural activities for their own service needs, discussed earlier.

Interestingly, regional differences in priorities did emerge, with learning services highest-ranked for the urban mothers (23 percent) and parks and playgrounds for the rural mothers (28 percent). The latter finding may be unexpected, given the common assumption of ample rural access to open play space; however, open play space may not fill the need for community parks and playgrounds where parents can more easily supervise their children.

Study Limitations

Several limitations need to be noted regarding the findings. First, PAIS was a needs assessment, based on information from

persons at selected sites who were identified to be at risk for problem substance use. It is not a prevalence study of alcohol and drug use among a population, which would require a scientifically generated random sample representative of the universe of possible subjects. Hence the sample's patterns of substance use and problems are intended to illuminate experiences and needs of a group already defined as high-risk, not to establish rates of risk, use, or problems.

For this reason, the issue of possible underreporting by the women of their substance use levels or problems is not as salient as it would be in a prevalence study. The women screening in to PAIS report substance use at levels which place them at risk for problems, and this study assesses these problems. Whether these levels may actually be even higher than reported, and whether some of the women screening out of the study may also use substances at risky levels, are separate questions.

Furthermore, while the findings are likely to represent pregnant and parenting American Indian women using community agencies, they are not necessarily generalizable to all pregnant and parenting California American Indian women.

Another related limitation of the study is the limited number of regions and sample sizes. Given the available resources, a broader geographic sampling to represent all of California's American Indian community agencies was not feasible. It should be noted that the rural region selected includes more American Indians numerically than any other rural area in the state, although there are other sparsely populated areas with a higher proportion of American Indians in their populations. The choice of the urban region posed more of a dilemma. As might be expected, Los Angeles has the largest number of American Indians of any city in California and contains a large proportion of all American Indians in the state. However, there are a limited number of agencies serving the city's American Indians, and the community is geographically dispersed over an enormous area. Hence the study's advisory group decided that the difficulties of data collection would be formidable. The San Francisco Bay Area, while home to fewer American Indians overall, has relatively more community agencies within a geographically smaller area. The question of concentration of respondents is crucial in meeting target sample sizes in an agency-based study such as this.

DISCUSSION

Given the broad array of service needs and problems explored in this study, there are a number of implications to be gleaned from the findings.

First, the screening rate for risk of heavy or problem substance use of 72 percent for this group of American Indian/Alaska Native women is of concern, especially when compared to the lower screening rate of 39 percent found among comparable agency clients in the previous study by the authors, the Perinatal Needs Assessment.[13] Overall, the study data show frequent, although not daily, use of large quantities of alcohol, or bingeing, with relatively little reported low-level or moderate drinking. This pattern also gives cause for concern. In addition, over half of the sample report recent marijuana use, while over one-third affirm recent methamphetamine use. The finding that somewhat larger proportions of rural versus urban American Indian women are using marijuana and methamphetamines may surprise those who consider use of psychoactives a predominantly urban phenomenon; however, rural providers and community leaders substantiated the findings through anecdotal reports.

One positive finding is the reported decreased use of alcohol and drugs during the course of pregnancy. This confirms similar decreased substance use reported by pregnant women in other national and regional surveys. However, there are still sizable numbers of pregnant women using substances, especially early in pregnancy. Recent surveys of pregnant patients in Indian Health Service-funded clinics in California have found that between 20 percent and 37 percent report prenatal use of alcohol and other drugs, and between 25 percent and 46 percent report tobacco use.[14] If prevention and intervention efforts would focus on the first stages of pregnancy, it is possible that high abstention levels could be achieved earlier. Furthermore, providers could use pregnancy as a window of opportunity in order to build upon women's desires to decrease or cease use by encouraging such patterns to continue after delivery.

The findings on alcohol and other drug problems suggest that the women's heavy use of substances can place them at high risk for experiencing personal problems in certain contexts. One of these contexts is heavy substance use by family members, partners, and friends. The results also suggest that a

sizable minority of parenting women in the study are experiencing legal interventions regarding their children, and that in more than half these cases the women's substance use is an issue. Similarly, a recent study by an American Indian clinic in another rural region of California indicated that one-third of the pregnant or parenting female patients were concerned with their drinking and a fourth with their drug use; half were using substances until discovering pregnancy.[15] Over three-fourths of these patients felt alcohol and drugs were problems in their communities; over half had a parent with an alcohol problem; and about half had a partner with a drinking and/or drug problem. Many respondents were reluctant to attend treatment programs out of fear of losing their children or being forced into a culturally inappropriate setting.

Other important results in the study are those showing relative disinterest in formal substance abuse treatment, the widespread belief in one's ability to cut down on one's own, and the common lack of desire to completely cease use, even among those aware of having serious substance-related problems. Such findings underscore similar results among comparable respondents from other ethnic groups found in the Perinatal Needs Assessment (PNA). For providers wishing to assist individuals with problem substance use, further exploration of the complex experiences and attitudes among American Indian women and their families and communities are warranted.

Overall, the substance-related findings demonstrate that many of the women's alcohol or other drug problems need to be understood within the context of family and community. This is of special importance for American Indians living in ethnically and culturally bound communities, and also of importance for women, who are caregivers to children, family, and friends.

Concerning the service needs assessment, a major, if not unexpected, finding is that when asked to prioritize their needs the overwhelming majority of the women emphasize economic concerns, such as education and vocational training, job placement, housing and transportation assistance, food and income support, and help with health care. This phenomenon of desire for economic, vocational, and educational assistance outweighing perceived needs for treatment was also found in the PNA. It is underscored by findings from two assessments recently conducted in Los Angeles. One survey of American Indian clinic patients found that the most widespread and pri-

oritized needs revolved around economic concerns: e.g., over three-fourths wanted job training and nearly as many were most concerned about money.[16] In another survey of female patients at an American Indian clinic, about half were currently unemployed.[17]

We suggest that there is little evidence that many of the participants in this study trace their present low income specifically to their substance involvement; hence few may feel strong economic incentive to cease or reduce use. It may be that for people who have nearly always had financial problems, as is likely for many of this study's participants, the economic consequences of problem or heavy substance use do not have the same impact as they might for more affluent individuals. We would note that this is not necessarily because low-income individuals are less concerned about economic opportunities and improved finances, but because there are many factors impeding their progress aside from alcohol and drugs.

The emphasis on cultural and spiritual needs reported by our respondents highlights the unique heritage and aspirations of American Indians. This priority has also been found in other surveys of California American Indian community members.[18] It underscores the importance of planning and designing activities that are relevant to and directed by community members. Most deeply, it suggests the links between individuals' and the community's health, well-being, and cultural and spiritual identity, the depth and richness of which researchers have only begun to explore and give voice to.

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NOTES

1. See, for example, Ira J. Chasnoff, et al., "Perinatal Cerebral Infarction and Maternal Cocaine Use," *Journal of Pediatrics* 108 (1986); Suzanne D. Dixon, "Effects of Transplacental Exposure to Cocaine and Methamphetamine on the Neonate," *Western Journal of Medicine*, 150 (1989); Loretta P. Finnegan, "Drug Addiction and Pregnancy: The Newborn," in *Drugs, Alcohol, Pregnancy and Parenting*, ed. Ira J. Chasnoff (Boston: Kluwer Academic, 1987); Saundra Johnson, et al., "Changes in Alcohol, Cigarette, and Recreational Drug Use During Pregnancy: Implications for Intervention," *American Journal of Epidemiology*, 126 (1987); Coryl L. Jones and Richard E. Lopez, "Drug Abuse and Pregnancy," in *New Perspectives on Prenatal Care*, ed., Irwin R. Merkatz, et al. (New York: Elsevier, 1990); J. H. Khalsa and Joseph Gfroerer, "Epidemiology and Health Consequences of Drug Abuse Among Pregnant Women," *Seminars in Perinatology*, 15 (1991); Amy Saxman Oro and Suzanne D. Dixon, "Perinatal Cocaine and Methamphetamine Exposure: Maternal and Neonatal Correlates," *Journal of Pediatrics*, 11 (1987); Ann Streissguth and Robin A. LaDue, "Psychological and Behavioral Effects in Children Prenatally Exposed to Alcohol," *Alcohol Health and Research World*, 10 (1985); Barry Zuckerman, "Drug-Exposed Infants: Understanding the Medical Risk," in *The Future of Children: Drug Exposed Infants*, ed. The Richard E. Behrman, vol. 1 (Los Altos: Center for the Future of Children, The David and Lucile Packard Foundation, Spring 1991), 1.

2. Jerry P. Flanzer, "Alcohol and Family Violence: Then and Now. Who Owns the Problem," in *Aggression, Family Violence and Chemical Dependency*, ed. R.T. Potter-Efron and P. W. Potter-Efron (Washington, DC: Catholic University, 1989); J.M. Murphy, et al., "Substance Abuse and Serious Child Mistreatment: Prevalence, Risk, and Outcome in a Court Sample," *Child Abuse and Neglect* 15 (1991); Beth Glover Reed, "Linkages: Battering, Sexual Assault, Incest, Child Sexual Abuse, Teen Pregnancy, Dropping Out of School and the Drug and Alcohol Connection," in *Alcohol and Drugs Are Women's Issues: Volume One. A Review of Issues*, ed. Paula Roth (Metuchen, NJ: Scarecrow Press, 1991).

3. William A. Vega, et al., "Prevalence and Magnitude of Perinatal Substance Exposures in California," *New England Journal of Medicine* 329 (1993).

4. Dorie Klein and Elaine Zahnd, "Perspectives of Pregnant Substance-Using Women: Findings from the California Perinatal Needs Assessment,"

Journal of Psychoactive Drugs 29:1 (1997): 55-66.

5. Noteworthy is the 1987 survey conducted by the federal Indian Health Service on patients in forty-nine of its nationwide hospitals; Patricia Mail and Saundra Johnson, "Boozing, Sniffing and Toking: An Overview of the Past, Present and Future of Substance Use by American Indians," *Journal of the National Center for American Indian and Alaska Native Mental Health Research*, 5 (1993); also see J. David Kinzie, et al., "Psychiatric Epidemiology of an Indian Village: A 19 Year Replication Study," *Journal of Nervous and Mental Disease*, 180 (1992); Lemyra DeBruyn, Carol Chiago Lujan and Philip A. May, "A Comparative Study of Abused and Neglected American Indian Children in the Southwest," *Social Science and Medicine*, 35 (1992); Philip A. May, et al., "Epidemiology of Fetal Alcohol Syndrome Among American Indians of the Southwest," *Social Biology*, 30 (1983); J. O. Whittaker, "Alcohol and the Standing Rock Sioux Tribe: A Twenty-Year Follow-Up," *Journal of Studies on Alcohol*, 43 (1982).

6. U.S. Department of Health and Human Services, *Report to Congress on the Indian Health Service with Regard to Health Status and Health Care Needs of American Indians in California* (Washington, DC: Indian Health Service, 1991), 4, 59.

7. Sheila Dumbauld, et al., *Analysis of Health Indicators for California's Minority Populations* (Sacramento: California Department of Health Services, 1994).

8. The decision to define the eligible population in this way was made jointly by the researchers and the study's American Indian Advisory Group, which grew out of the Constituency Committee. It was intended to include those identifying primarily as American Indian or Alaska Native regardless of tribal membership or multiethnic ancestry, but to exclude those identifying primarily as Latina of Indian descent.

9. Given the sensitivity of information on drug use, assuring the confidentiality of participants and of data were priorities. In addition to internal project procedures to assure confidentiality, researchers also obtained a federal Certificate of Confidentiality. Other than informed consent signatures, no participant names were recorded.

10. HIV risk items were included at the request of the California Office of AIDS, which cosponsored the study in order to generate self-report data by American Indian women on possible risky behaviors or circumstances. Analysis of these results is forthcoming.

11. Dorie Klein, Elaine Zahnd, and Sue Holtby, "Designing an Agency-Based Drug Problem Needs Assessment," *Contemporary Drug Problems* 22, (1995): 707-31.

12. The mean and median age of the ninety-one index children was seven years, and 59 percent of the index children were male.

13. Dorie Klein and Elaine Zahnd, "Perspectives of Pregnant Substance-Using Women: Findings from the California Perinatal Needs Assessment," *Journal of Psychoactive Drugs* 29:1(1997), 55-66.

14. California Area Indian Health Services Office (CAIHS), *Brief Summary: Prevalence of Alcohol and Drug Use during Pregnancy among American Indians served by Indian Health Programs in California* (Sacramento: Indian Health Service, California Area Office, 1994).

15. R. G. Hussong, et al., "Substance Use among American Indian Women of Child Bearing Age," (Unpublished paper, Chapa-De Indian Health Program, Auburn, CA, 1993).

16. Peggy Saracino Barnett, et al., *Let Our Voices Be Heard: A Community Mental Health Profile of American Indians in Los Angeles, Adjacent and Surrounding Counties* (Long Beach, CA: American Indian Clinic, 1994).

17. American Indian Clinic and California State University at Long Beach, *Preliminary Findings of a Survey of 500 American Indian Women* (Unpublished paper, Long Beach, CA, 1994).

18. American Indian Clinic and California State University at Long Beach, *Preliminary Findings of a Survey of 500 American Indian Women* (Unpublished paper, 1994); Peggy Saracino Barnett, et al., *Let Our Voices Be Heard: A Community Mental Health Profile of American Indians in Los Angeles, Adjacent and Surrounding Counties* (Long Beach, CA: American Indian Clinic, 1994); Institute for Health Policy Studies, *American Indians in California: Health Status and Access to Health Care* (Washington, DC: Indian Health Service, Public Health Service, 1992); Santa Clara County Health Department, *The Santa Clara County American Indian Needs Assessment Project* (San Jose: Bureau of Alcohol and Drug Programs, Prevention Division, 1992).