A Summary of Recent Findings
Regarding Substance Abuse in Alaska

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Overview

Since 1994 the State of Alaska, Division of Alcohol and Drug Abuse has been conducting and participating in a significant level of federal and state funded research, with resources provided by the Department of Health and Human Services, Center for Substance Abuse Treatment Agency as well as by the State.

The federally funded research efforts, or needs assessment, have been designed to determine the prevalence, severity and needs for treatment of Alaska's substance abuse problems. This research has been conducted by the Division of Alcoholism and Drug Abuse in close collaboration with the Division of Public Health, Section of Epidemiology. The needs assessment research has assessed the situation State-wide, as well as among demographic and geographic groupings within the State. We have also compared findings from this research with findings from similar research efforts conducted by or about other states. While our needs assessment efforts are still ongoing a key finding has been the limits imposed by many of our current data sources, and while the on-going research includes efforts to address these data source constraints it is important to note that the findings mentioned herein are preliminary in nature. However, our efforts so far have produced results that either (a) appear to be confirmed from several sources or (b) raise questions that point toward further investigation.

Additionally, this report summarizes state funded research conducted by the University of Alaska Anchorage, Institute for Circumpolar Health Studies, on the Alcohol Safety Action Program, as well as a chemical dependency treatment outcome study conducted by New Standards, Inc. on over 1600 Alaskan residential and outpatient clients. The intent of the Alcohol Safety Action Program study was to measure the effectiveness of the program in reducing the number of re-offenses of alcohol related offenders. The outcome study provides information about the State's residential and outpatient clients from their admission to a treatment program to one year following admission.

While we summarize our research efforts of the last 5 years in this publication, researchers and others interested in complete copies of these reports should contact the Division of Alcoholism and Drug Abuse at 1(800)478-2072 or the Division of Public Health's Section of Epidemiology (907)269-8000.

Needs Assessment Data Sources and Research Methods:

Needs assessment information has been compiled from two broad categories of data: interstate data sources that are available regarding all or many states, and intrastate data sources that have been collected solely for Alaska's analytic and program planning purposes. Both categories relied upon data sources presumed to have high face validity. As we have proceeded through our analyses, we have discovered some limits to these assumptions that are inherent to the data; these limits will be noted.

Interstate data sources to date have included:
(i)   the National Drug and Alcohol Treatment Unit Survey (NDATUS) to determine persons in treatment;

(ii)   the National Institute of Alcoholism and Alcohol Abuse (NIAAA) County Alcohol Problem Indicators to determine mortality, using data with specific mentions of alcohol as a cause of death;

(iii)   the Center for Disease Control's Behavioral Risk Factor Survey (BRFSS) and

(iv)   the FBI's Uniform Crime Reporting (UCR) Arrest Statistics for all drug abuse violations and for arrests for driving under the influence of alcohol.

Intrastate substance abuse and dependence research to date has included

(i)   a statewide residential telephone survey of 8,167 households over an approximately four month span of time;

(ii)   a voluntary survey and urinalysis of 658 arrestees from four booking sites in Anchorage, Fairbanks and Bethel, and

(iii)   a review of existing state databases for treatment, mortality and arrest data from 1990-95 regarding alcohol and drug arrests, accident injury and mortality, and treatment.

(iv)   A small area (borough level) estimates of substance abuse prevalence and dependence based on synthetic estimates from the household telephone survey data.

This research summary includes an Interstate Substance Abuse Indicator Chartbook that compares Alaska Statewide data with that of other states, and executive summaries from the four intrastate studies described above.

Please note that due to limits in data availability from the several states the interstate data is several years older than, and different from, much of the intra-state data. It also should be mentioned that our recent in-State studies have used nationally accepted operational definitions for substance dependence or abuse used by other states in similar research efforts. In our interview studies for example, an individual is defined as having a lifetime diagnosis of substance dependence or abuse who has both used and had a symptom as defined by DSM-III-R within the last eighteen months. These particular study respondents have also been considered persons who may have needed treatment within the last year.

Independent reviews of the various studies have found their methods and conclusions sufficient to support the major findings presented in the attached executive summaries. Highlights from the reports can be briefly describes as follows:

I.   Prevalence Findings:

A. Alcohol:

"Need for substance abuse treatment" is defined as being in a state of substance abuse or dependence, and requiring help to stop or reduce substance use, to prevent relapse, or to recover from the effects of abuse. The operational definition of treatment need is a diagnosis of a substance use disorder, either abuse or dependence. According to these definitions, the survey found 12.6 % of residents in need of treatment for dependence upon or abuse of alcohol, with an

additional 1.2% also in need for treatment for drug abuse or dependence. In comparison, the survey finds 0.5% of adults are estimated to be in need for treatment of drug dependence or abuse only.

Data from all other studies support the finding that alcohol is Alaska's problem substance of choice. Interstate comparative data is consistent with these findings. The attached interstate indicator analysis finds that Alaska is among the states with the nation's most severe rates of alcohol problems; with problems of alcohol abuse and dependence and need for treatment far exceeds the problems of dependence, abuse and need for treatment associated with all other drugs. According to this data Alaska experiences the fifth most severe rate of alcohol problems in the nation, based on death, arrest and treatment data. Alaska holds the dubious distinction of being ranked first in deaths with an explicit mention of alcohol, and thirteenth for deaths due to alcoholic cirrhosis. Alaska ranked tenth nationally in DUI arrests, and thirteenth in motor vehicle fatalities with blood alcohol levels greater than .10%. The 1993 BRFSS Alaska survey data used for national comparisons among states found Alaska to rank first nationally in mothers of newborns who admitted to having 3-4 drinks per week; fourth in "binge drinking" (5 or more drinks at least once in the past month); and second in "chronic" drinking (60 or more drinks per month).

While it is to early to determine if there is a trend it is encouraging that more recent BRFSS survey data includes: an estimate that over the 1993-95 time period Alaska adults estimated to be at risk for chronic drinking declined from 5.3% to 2.9% (national median = 2.77%); the percent of Alaska adult males who reported having 60 or more drinks in the month prior to the survey declined from 8.6% to 4.6% over the 1993-95 time period and among adult Alaska females the reported decline was from 1.6% to 1.1%; the per cent of Alaska adults who reported they had been drinking and driving in the month prior to the survey declined over the 1993-95 time period from 2.5% to 1.3%

Our recent telephone survey has produced an estimate of 9.7% of all Alaska adults as having a lifetime alcohol dependency, with another 4.1% identified as alcohol abusers. The need for treatment appears greatest among adults from 25 to 44 years of age. Alcohol and dependency problems appear to be most severe in the BRFSS regions identified as Southeast and Bush Alaska. Alcohol dependency and abuse rates are found to be twice as high among men as among women, and lifetime dependency is estimated as approximately 50% higher among Alaska Natives and Native Americans than among whites.

The substance abuse indicator analysis of five available States data indicators show that while the problems remain extremely severe, overall the alcohol and drug abuse problem in Alaska showed some significant improvement by the mid-1990s compared to the early 1990s. Overall treatment admissions increased, at the same time that mortality rates and injury rates from accidents declined. While difficulties with the data are noted within the full reports, as well as in the attached review of the reports, nonetheless this can be regarded as an indicator of progress in providing treatment identified in the reports as clearly needed.

B. Controlled Drugs:

Alaska, according to interstate indicator data from 1991-93, is among the states with the lowest rates of controlled drug problems (ranked 40th according to the "Drug Problem Index" described in the included Interstate Substance Abuse Chartbook, among the 50 states). This finding is supported through the household telephone survey and the urinalysis results from our arrestee study. Dependence on controlled substances seems most problematic among the two youngest age groups of Alaska adults (18-24 and 25-44 years of age). Among controlled substances marijuana dependence is, by far, the controlled substance most subject to user dependence in Alaska according to the household telephone survey. Marijuana dependence appears to be most pronounced in the roadless areas of the State described as "the Bush" region – one of the four Alaska demographic subdivisions used for studies routinely conducted for the Center for Disease Control and other agencies by the Alaska Section of Epidemiology. (The other regions are described as "Urban", Gulf Coast" and Southeast". However, the substance abuse indicator study found arrest rates for controlled substances to be greatest in the Gulf Coast region. The survey found approximately 2.5% of Bush residents can be described as having a lifetime diagnosis of marijuana dependence or abuse, while Statewide the diagnosis is estimated to apply to 1.1% of the population. (It should be noted that the "lifetime" diagnosis includes anyone who both used a controlled substance and had a symptom as defined by DSM-IIIR diagnostic criteria within the last 18 months prior to the household telephone survey.)

The marijuana problem is most pronounced among the 18-24 year age group (4.2% estimated as dependent, and an additional 1.0% as abusers), and is three times as likely to be found among men (1.7%) than among women (0.5%). Race and ethnicity also appear to impact the diagnosis: Alaska Natives and Native Americans evidenced marijuana dependency (1.9%) at a rate nearly double that of whites (1.0%). These demographic results were generally supported through urinalysis findings of the arrestee study, and through the NDATUS Alaska marijuana treatment data (Alaska ranked 8th in per capita persons receiving marijuana treatment, with 1.3 times more persons being treated than arrested).

Cocaine was identified by the household survey as the second most serious controlled substance subject to abuse and dependence among adult Alaskans. However, the number of individuals so diagnosed is small, with 0.2% receiving a current dependency diagnosis, the largest proportion (0.3%) in the urban part of the State, and with men predominating in this diagnosis by four to one over women. However, in the arrestee study, 18.5% of those volunteering for the study were diagnosed as abusing or dependent upon cocaine, and women were more likely than men to be diagnosed with cocaine dependence or abuse. Among Alaska's arrestees, whites were diagnosed with cocaine dependency at a rate more than twice as great as found among Alaska Natives while the survey data indicated a prevalence among whites only about 50% greater than that found among Alaska Natives. The majority of those identified as dependent were found to be severely dependent.

A caution regarding drug-related disease findings should be noted: Homelessness and the levels of four contagious diseases- HIV-AIDS, TB, hepatitis and syphilis- are associated with drug use. Their levels frequently correlate well with the levels of drug dependency and abuse estimated from survey, treatment and arrest data. This is not the case in Alaska. No HIV-AIDS data is

available from Alaska, but Alaska's TB rates are very high, and hepatitis-B rates are higher than would be expected according to drug-related data. This may result from (a) the inherent constraints imposed by a household telephone survey that will not reach the homeless or those without telephones, or (b) non-drug factors associated with public health or geographic conditions that may account for the contagious disease variance.

The household survey found 0.1% of adult household residents Statewide evidenced a dependency on amphetamines, and 0.1% on hallucinogens, with dependence concentrated among the 18-24 year age group. Among this group 0.6% were diagnosed as dependent upon amphetamines, except for a lower rate in the Bush region, and 0.3% were diagnosed for hallucinogen dependence - except in the Gulf Coast region where the prevalence was indicated to be 0.9%). Although the percentage is small, Native Alaskans showed a prevalence of amphetamine dependency four times greater than among whites.

C. Need For Treatment

Findings from these studies as well as on-going studies are intended to be used for policy planning and program adjustment purposes. Among the key findings revealed through the survey regarding the need for treatment are that while need exceeded 14% among adults in all four BRFSS regions of the State, the estimated need for alcohol and drug treatment are greatest in the Bush and Southeast BRFSS regions. These regions are where in excess of 16% of the adult population is in need of treatment. Again, the greatest need for treatment among adults was found to be for alcohol dependency and abuse. Statewide 12.6% of adults are estimated to be in need of treatment for alcohol dependency or abuse, while only 0.5% are estimated to be in need of treatment for drug dependency; and an additional 1.2% in need of treatment for both alcohol and drug dependency. The need for drug or combined dependency treatment appears to be greatest in the Bush BRFSS regions, in which 1.1% of the adult population is estimated to need treatment for combined or drug dependency or abuse. A diagnosis of marijuana dependence contributed significantly to the formulation of this Bush regional estimate, as the estimated marijuana dependence/abuse rate of 1.3% was more than double that found in any other region of the State.

State funded research conducted by the Institute for Circumpolar Health Studies assisted the Division of Alcoholism and Drug Abuse in measuring the effectiveness of the ASAP program in reducing the number of re-offenses of alcohol/drug related offenders in several sites throughout the state - Juneau, Anchorage, Fairbanks & Mat-Su. A significant finding of the study was that 65-66 percent of the clients referred to the ASAP program on their first DWI did not re-offend during a subsequent 3 year period.

The chemical dependency treatment outcome study, or New Standards report, provides data on 1024 residential patients and 510 outpatients who consented to the follow-up study. The researchers were successful in contacting 42% of the eligible residential patients and 54% of the eligible outpatients one year after admission to treatment. The one-year outcome results provide a psychosocial and clinical profile of the residential and outpatient groups, as well as important job, medical, and legal cost-offsets impacted by treatment.

The attached executive summaries and reviews, along with the accompanying Interstate Substance Abuse Indicator Chartbook, provide a clear, detailed overview of the condition of

substance abuse and the needs for treatment within the State. The cooperation received in the data collection efforts from Alaska's public treatment programs, the Department of Public Safety, and the Department of Corrections were crucial to the accomplishment of these reports, and is greatly appreciated.

EXECUTIVE SUMMARY:

TECHNICAL REPORT

ALASKA ADULT HOUSEHOLD TELEPHONE SURVEY
STATEWIDE and SUBSTATE PLANNING REGIONS

Submitted to:

Alaska Department of Health and Social Services

**Division of Alcohol and Drug Abuse and to the Section of Epidemiology
of the Division of Public Health**

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EXECUTIVE SUMMARY

The resources that have been made available by the Center for Substance Abuse Treatment (CSAT) and the Alaska Department of Health and Social Services, Division of Alcoholism and Drug Abuse (ADA), for conducting the Alaska adult household survey have expanded needs assessment efforts in Alaska during the 1997-1998 time period. The Gallup Organization has been pleased to join ADA in collecting data for a statewide adult household survey, administered by telephone in the state of Alaska, as part of Alaska's family of studies to develop needs assessment capabilities in the area of substance abuse and need for treatment. Substate planning regions in Alaska are the Urban, Gulf Coast, Southeast, and Bush regions.

The purpose of the adult household telephone survey was: To provide information on substance dependence, abuse, prevalence and the extent of unmet need and demand for substance abuse treatment services for adults in Alaska at the state and substate planning region level.

Sample Methodology

For the purpose of sampling, the adult population was stratified into four regions. Sampling was accomplished independently within each region using the truncated Casady-Lepkowski method of telephone sampling. The goal of Gallup's sampling scheme was to estimate treatment needs for adult alcohol and other drug users aged 18 and older. Gallup also oversampled persons in the 18 to 44 age group by substate planning region since this is the age group with relatively higher rates of illicit drug use. Specific efforts were made to estimate treatment needs for alcohol and other drugs among injection drug users and women of childbearing age.

Maximization of Data Quality

Two critical aspects of maximizing data quality for this project were maintaining respondent confidentiality and maintaining quality control over interviewers' work. In order to ensure confidentiality: 1) all Gallup personnel who worked on this project signed a statement promising that they would maintain the confidentiality of all survey data; and 2) no personal identifying information was delivered to ADA with the final adult survey data set. To maintain quality control over interviewers' work, supervisors silently monitored the interviewers' work and checked interviewers' completed work for accuracy and completeness.

Characteristics of the Sample

Demographic data for persons who participated in the study provide the following information about the sample by county:

- 68.3% of the respondents were ages 18-44 with slightly more than half (55.9%) of the respondents found in the 25 to 44 years of age category.

- In all regions over 64% of the respondents were 18-44 years of age. This was due to the oversampling of persons of this age group.

- Females comprised 54.1% of the sample. For all regions, over half of the sample was female.

- More than seven in ten (72.7%) of the sample was white and 21.1% was Native American or Alaskan Native. "Other races" made up 6.2% of the sample.

- Most of the respondents had a high school education or greater (92%).

- 42.3% reported an income of less than $40,000.

SUBSTANTIVE ANALYSIS AND FINDINGS

Diagnosis Estimates for Dependence and Abuse

To determine whether a person should be diagnosed as dependent on or abusing a particular substance, the diagnosis criteria of the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders, 3rd revised edition (DSM-III-R), was used. To make a diagnosis, a respondent is asked a series of nine questions about his or her use of alcohol or a particular drug. A diagnosis of substance dependence requires meeting three of the nine DSM-III-R criteria and having some of the symptoms of disturbance that have persisted for at least one month, or have occurred repeatedly over time. The three criteria for dependence measure: 1) undesired excessive use, including resulting tolerance and withdrawal sickness; 2) problems in the critical realms of a person's life that are a result of excessive use; and 3) failed attempts to control substance use without help.

A diagnosis for substance abuse requires that two criteria are met: 1) continued use despite having recurrent social, occupational, psychological or physical problems exacerbated by it; and 2) recurrent use in situations where it is physically hazardous. Summary Tables 1a-3 present lifetime and current dependence and abuse estimates as well as estimates of lifetime treatment needs. All estimates are based on current (1997) estimates of census data. The weighting of the Alaska household survey data was done in early 1998, and the Claritas 1997 estimates were the most current estimates at the time.

Analysis of the Alaska adult household survey data produced the following lifetime diagnosis estimates for dependence and abuse.

- 9.7% (approximately 41,108) of adult Alaska residents were dependent on alcohol, and another 4.1% (approximately 17,294) were alcohol abusers.

- The proportion of alcohol dependence varied across all regions ranging from 8.5% to 11.9% for the Gulf Coast and Bush regions respectively.

- Alcohol abuse estimates ranged from 3.2% for the Bush region to 4.9% in the Southeast region.

- Diagnosis estimates of alcohol dependence and abuse were twice as high among men compared to women.

- Native Americans and Alaskan Natives had the highest lifetime estimates of alcohol dependence (14.9%) while the estimate for whites was 9.2%.

- The rate of marijuana dependence (1.1%) was about one-tenth of the estimated alcohol dependence (9.7%) Abuse of marijuana was low (0.4% at approximately 1,761 adults).

- Low rates of hallucinogen, cocaine, and amphetamine dependence (0.1%, 0.2%, and 0.1% respectively) were found in Alaska.

- No respondents were diagnosed as dependent on heroin or inhalants.

- Statewide abuse of hallucinogens was 0.1%, while no respondents were diagnosed as abusers of cocaine, heroin, inhalants, or amphetamines.

- Adults under 65 years of age were much more likely than those 65 or older to be dependent on or abusing drugs and alcohol.

Summary Table 1: Lifetime Estimates of Dependence and Abuse of Alcohol and Illicit Substances, Statewide and by Substate Planning Region

		Substate Planning Region			
	Alaska	*Urban*	*Gulf Coast*	*Southeast*	*Bush*
	N=423,997	N=277,071	N=50,796	N=52,538	N=43,592
Percentage diagnosed as	(n=8,167)	(n=2,543)	(n=1,587)	(n=2,017)	(n=2,020)
Dependent on:					
Alcohol	9.7	9.4	8.5	10.5	11.9
Marijuana	1.1	1.0	1.0	1.1	2.5
Hallucinogens	0.1	0.0	0.1	0.1	0.1
Cocaine	0.2	0.3	0.1	0.2	0.1
Heroin	0.0	0.0	0.0	0.0	0.0
Inhalants	0.0	0.0	0.0	0.0	0.0
Amphetamines	0.1	0.1	0.2	0.1	0.0
Abusing:					
Alcohol	4.1	4.1	3.9	4.9	3.2
Marijuana	0.4	0.4	0.5	0.4	0.2
Hallucinogens	0.1	0.1	0.0	0.0	0.0
Cocaine	0.0	0.0	0.0	0.0	0.0
Heroin	0.0	0.0	0.0	0.0	0.0
Inhalants	0.0	0.0	0.0	0.0	0.0
Amphetamines	0.0	0.0	0.0	0.0	0.0

Summary Table 2: Current Estimates of Dependence and Abuse of Alcohol and Illicit Substances, Statewide and by Substate Planning Region

		Substate Planning Region			
	Alaska	*Urban*	*Gulf Coast*	*Southeast*	*Bush*
	N=423,997	N=277,071	N=50,796	N=52,538	N=43,592
Percentage diagnosed as	(n=8,167)	(n=2,543)	(n=1,587)	(n=2,017)	(n=2,020)
Dependent on:					
Alcohol	5.2	5.2	3.5	5.1	6.8
Marijuana	0.4	0.4	0.1	0.3	1.1
Hallucinogens	0.0	0.0	0.0	0.1	0.1
Cocaine	0.1	0.1	0.1	0.1	0.0
Heroin	0.0	0.0	0.0	0.0	0.0
Inhalants	0.0	0.0	0.1	0.0	0.0
Amphetamines	0.1	0.1	0.1	0.1	0.0
Abusing:					
Alcohol	2.1	1.9	1.8	3.5	2.0
Marijuana	0.1	0.1	0.1	0.2	0.1
Hallucinogens	0.0	0.0	0.0	0.0	0.0
Cocaine	0.0	0.0	0.0	0.0	0.0
Heroin	0.0	0.0	0.0	0.0	0.0
Inhalants	0.0	0.0	0.0	0.0	0.0
Amphetamines	0.0	0.0	0.0	0.0	0.0

Treatment Needs Based on Diagnoses

"Need for treatment" is defined as being in a state of substance abuse or dependence and requiring help to stop or cut down on substance use, to prevent relapse, or to recover from the effects of use. The operational definition of treatment need is a diagnosis of a substance use disorder, either abuse or dependence. Indeterminate diagnoses were not included in the definition of the need for treatment. Using the diagnoses for dependence and abuse of substances, the number of persons who need treatment for alcohol only, drugs only, and both alcohol and drugs were determined.

- 12.6% of adults (about 53,268 persons) in Alaska need treatment for alcohol only. Another 1.2% (approximately 5,134 persons) need treatment for both drugs and alcohol. 0.5% (approximately 2,270 persons) need treatment for drugs only.

- The proportion of persons who need alcohol treatment varies across the substate planning regions.

- The estimated need for alcohol treatment was found primarily in the 18-64 year old segment of the population (more than 10%). About half this rate, 5.1%, was reported by the 65 and older age group.

- A pronounced need for alcohol treatment only (48%) as well as both drug and alcohol treatment (14.5%) was found among injection drug users.

Summary Table 3: Lifetime Estimates of Need for Alcohol and Other Drug Treatment, Statewide and by Substate Planning Region

Need for:	Alaska N=423,997 (n=8,167)	Substate Planning Region			
		Urban N=277,071 (n=2,543)	Gulf Coast N=50,796 (n=1,587)	Southeast N=52,538 (n=2,017)	Bush N=43,592 (n=2,020)
Alcohol Treatment Only	12.6	12.3	11.3	14.4	13.5
Drug Treatment Only	0.5	0.4	0.7	0.6	1.1
Both Alcohol and Drug Treatment	1.2	1.2	1.0	1.0	1.6

Unmet Demand for Self-Reported Treatment Needs

For policy planning purposes, the measurement of unmet demand is a key objective of needs assessment. "Unmet demand" is defined as the number of people who need and want treatment, but who have not received it because it was unavailable. Presumably, unmet demand is the prime reason for seeking additional funds, changing allocations of existing funds, and developing new programs that are appropriate for underserved populations. In the adult household survey, respondents were asked if they received treatment in the last year and, if so, what kind they obtained and if they had a desire for more treatment. For those who did not receive treatment in the past year, respondents were asked whether they needed treatment in the past year, whether they would have obtained treatment if it had been available, what type of treatment they would have wanted, and what obstacles, if any, prevented them from receiving treatment.

Among those who received treatment in the past 12 months and desired more treatment...(N=1,093)

The vast majority of Alaska adults who desired more treatment for their substance use problem were found to be aged 25 to 44 (79%). These persons were residents of all regions.

- 50.3% of the persons who desired more treatment for their substance use problem were women. Again, these persons were residents of all regions, with the largest proportions in the Urban and Southeast regions (55.4% and 54.7% respectively).

- Over two-thirds (72.8%) of the persons who desired more treatment were white.

- Among women of childbearing age, 50.3% desired additional treatment. These women were found in all regions except the Gulf Coast.

- Among injection drug users, 21% desired more treatment. These individuals were found in all regions, with the largest proportion (26.9%) in the Urban region.

Among those who desired treatment but did not obtain treatment in the past 12 months...(N=1,622)

- All adults (100%) who desired treatment but had not obtained treatment in the past 12 months were ages 18 to 64. More than three-quarters (79%) of the adults who desired treatment were ages 25 to 44.

- 59.6% of the adults who desired treatment but had not obtained treatment in the past 12 months, were men. This proportion of men was not uniform throughout the state. It ranged from 59.0% in the Urban region to 90.4% in the Bush region.

- More than two-thirds of adults who desired treatment but had not received treatment were white.

- Among those who did not receive treatment in the past 12 months, but desired treatment, the largest proportion were women of childbearing age (40.4%).

- Of the adults who desired treatment, 12.7% were injection drug users, and all of these drug users were in the Urban region.

Obstacles to Treatment

Among those who received treatment in the past 12 months and desired more treatment...(N=1,093)

Adults who received treatment in the past 12 months and who cited obstacles to receiving more treatment were found in all regions. The following obstacles were reported by 25% or more of these respondents on a statewide basis:

- Lack of insurance or other means to pay for treatment

- Specific treatment type was not available

- Program did not have the special services they needed.

Among those who desired treatment but did not receive treatment in the past 12 months...(N=1,622)

Adults who cited obstacles to obtaining treatment in the past 12 months were found in all regions. The following obstacles were reported by 25% or more of these respondents on a statewide basis:

- Lack of insurance or other means to pay for treatment

- Programs put them through too much red tape

- Long distance between them and the nearest treatment facilities

- Treatment facilities were full, and

- Could not get the type of treatment they wanted.

Conclusions

- 9.7% of adult Alaska residents were dependent on alcohol and another 4.1% were diagnosed as alcohol abusers. This translates into approximately 58,402 adult Alaska residents in need of treatment for alcohol.

- Looking at persons who are abusing or dependent on drugs only, 0.5% percent are in need of treatment. This translates into 2,270 persons needing treatment for drugs only.

- Among the defined age groups, the need for alcohol treatment is most pronounced in adults ages 25 - 44 (14.9%).

- 21% of the persons who had received treatment in the past 12 months and desired more treatment were injection drug users.

- The major obstacles to receiving treatment reported by persons who had received treatment in the past 12 months and desired more treatment were: lack of insurance or other means to pay, specific treatment type was not available, and the programs did not have the special services they needed.

- 40.4% of persons who desired treatment but had not received treatment in the past 12 months were women of childbearing age. Slightly more than one in eight (12.7%) were injection drug users.

- Obstacles to receiving treatment cited by those who desired it but had not received any treatment in the past 12 months included: lack of insurance or other means to pay, the programs put them through too much red tape, the nearest treatment facilities were too far away, the treatment programs were full, and respondents could not get the type of treatment they wanted.

- The data show that alcohol treatment needs varied across the four defined substate planning regions in Alaska.

EXECUTIVE SUMMARY:

TECHNICAL REPORT

SUBSTANCE ABUSE INDICATOR STUDY
FOR TREATMENT RESOURCE ALLOCATION

Submitted by:

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Executive Summary

The Alaska Substance Abuse Indicator Study (SAIS) was designed to allow the Alaska Division of Alcohol and Drug Abuse and Division of Public Health (ADA /DPH) to coordinate and compile related data within the state of Alaska on substance abuse; to develop substance abuse indicator models for application to allocate treatment service resources in the state of Alaska; and to understand the context of substance use in the state by looking at the trends of common indicators. In addition, the SAIS was also expected to improve communication linkages between ADA /DPH and those public and private agencies which monitor direct and indirect substance abuse indicators in order to further expand the utility of existing information.

Background

ADA /DPH currently takes into consideration the existing substance abuse indicator data at best marginally when determining substance abuse treatment resource allocation. ADA /DPH attempts to put core substance abuse services in each region. ADA /DPH requires needs assessment data to assess the proportion of the population in need of treatment which is able to receive treatment and the number of persons still in need of treatment in order to guide planning efforts. The division guides its treatment services resource allocation decisions on the basis of the population size, substance abuse prevalence and the need for core services in each region. ADA /DPH sought to address scientifically treatment planning needs, and received funding by the Center for Substance Abuse and Treatment (CSAT) to contract with The Gallup Organization (Gallup) to explore alternative approaches for resource allocation decisions.

The SAIS compared and contrasted three categories of treatment resource allocation models: 1) *population-based model*, 2) *indicator-based model*, and 3) *household survey-based model*.

The population-based model typically considers only the population size of the geographic unit in allocating resources. This approach may consider the variations in local cost index, but would hardly consider the data on local treatment service need.

The household and indicator-based models, in contrast to the population-based model, consider the local treatment need in allocating treatment resources. The household survey-based model considers the locally estimated need for treatment services. Treatment need, as measured in the latest Gallup adult household survey, is defined as those adults who were diagnosed as dependent on alcohol, drugs, or both drugs and alcohol, and those diagnosed as abusing one or more substances, as measured by the Diagnostic Statistical Manual (DSM-III-R) criteria. The main limitation in assessing treatment need with the household survey is that the data are expensive to collect and are not collected routinely by the state.

The indicator-based model offers a promising alternative approach, which is not only less costly but also promotes using the existing data from other state agencies. The indicator-based model The indicator-based model offers a promising alternative approach, which is not only less costly but also promotes using the existing data from other state agencies. uses the secondary data to determine the prevalence of substance abuse at the region level.

Method

The study was implemented from July 1996 to December 1998 in three phases: 1) data collection and coordination, 2) indicator selection and validation, and 3) modeling and resource allocation. Gallup, with assistance from ADA /DPH, collected substance abuse indicator data for the five year period of 1990 to 1994. The data were subjected to modeling efforts in a series of steps:

Step 1: Data on the substance abuse indicators were described as the *rates* (per 100,000 population) to allow for comparisons across the boroughs. The *rates* were calculated by using the region level data on each substance abuse indicator (such as number of arrests, mortality etc.) as the *numerator* and the six year (1990-95) average of Alaska Population or 1995 Alaska Population as the *denominator*.

Step 2: These rates were used to calculate the *severity indices* for each indicator and each region. Severity Indices were expressed on a scale of 0 to 100, where score of 100 fixes the top of the range of substance abuse problem. A region with the highest rate on a given indicator will have 100 as its severity index for that indicator. All other severity indices within a given region are expressed as a percentage of the largest problem.

Step 3: Severity indices were combined to develop a *composite severity index* (CSI) for each region. The CSIs score remains on a scale of 0 to 100 and is derived by taking an average of all severity indices for each region.

Step 4: The CSIs were multiplied with the adult region population to estimate the region's *problem size.* The problem size is an estimate of the substance abuse problem derived by multiplying the CSI with the region's five (1990-94) year population average.

Step 5: *Allocation factors*, in proportion to the region's problem size, were established to guide the treatment resource allocation decisions. The sum of the problem sizes of each region represents the total problem size for the state of Alaska and was used to establish the proportional resource allocation factor for each region in the state of Alaska.

Limits of the Data

The data on arrests and treatment cover the period 1990 to 1994, while the data on accident injuries accident fatalities, and mortality cover the period 1991-1995. In addition to different dates for the indicator data, two of the indicator data sets -- for accident injuries and accident fatalities -- do not include either the race or geographical variables.

The lack of a geographical variable is particularly important when considering the modeling to determine resource allocation. The purpose of resource allocation is to assess what proportion of resources are needed in each of the four regions in Alaska, and thus the lack of the geographical

variable for two of the indicators means that those indicators cannot be used to make those resource allocation estimates.

Trends in Rates of Treatment, Arrests, Mortality, Accident Injuries and Accident Fatalities

A comparison of the five indicators across the five years for which they are available shows that overall the alcohol and drug abuse problem in Alaska showed some significant improvement by the mid-1990s compared to the early 1990s. Overall treatment increased, at the same time that mortality rates and injury rates from accidents declined. There was little change in accident fatality rates, however, which were quite low. Arrests related to alcohol and drug abuse increased slightly across the state as a whole over the five-year period.

Alaska Treatment Resource Allocation Model

Of all the substance abuse indicator data elements included in the Alaska SAIS database, only two were chosen for modeling purposes because complete data grouped by region, race, gender were available. Others (accidents and injuries data) could not be included because of incomplete data sets. The two indicators chosen for modeling were the following:

- Total alcohol and drug related arrests

- Total drug and alcohol related mortality

Gallup's analysis showed that the indicator-based model emerges as a promising approach for allocating treatment resources among boroughs. Gallup developed two indicator-based models, a telephone survey model, and a population model for ADA /DPH to guide its treatment resource allocation decisions. **Model One** includes both the indicators but calculates the rates using the average of 1990-95 populations. **Model Two** considers both the indicators but calculates the rates based on the 1995 Alaska population. **Model Three** is based on the results of the telephone survey, while **Model Four** is based on the size of population. The treatment resource allocation factors, using these models, are shown in Table 1.

Table 1. Treatment Resource Allocation Factors Among the Various Models				
	Urban Region	**Gulf Coast Region**	**Southeast Region**	**Bush Region**
Indicator Model #1	57.6%	13.8%	13.5%	15.1%
Indicator Model #2	58.0%	14.1%	13.4%	14.5%
Telephone Survey Model	63.7%	10.4%	13.9%	12.0%
Population Model	64.4%	11.6%	12.3%	11.7%

Recommendations

Gallup believes that the experience gained by ADA /DPH in designing and implementing the SAIS produced promising results. Gallup's recommendations focus on using the indicator-based model, updating the SAIS database, and meeting methodological challenges.

Using Indicator-Based Model

Gallup believes that ADA /DPH can achieve cost-effectiveness in resource allocation by guiding its decisions with the indicator-based model presented in this report. This approach not only takes into account the size of the population, but also the severity of the substance abuse problem in the region.

Updating the SAIS Database

Gallup encourages ADA /DPH to make arrangements to update the 1990 to 1994 SAIS database from cooperating agencies on an annual basis. In this way, any changes in the statistical relationships within and among social indicators can be determined. This would allow ADA /DPH to provide timely social indicator information to other public and private organizations with an interest in substance abuse prevention, treatment and related activities.

EXECUTIVE SUMMARY:

TECHNICAL REPORT

ALASKA SMALL AREA ESTIMATION STUDY

Submitted to:

Alaska Department of Health and Social Services

**Division of Alcohol and Drug Abuse and to the Section of Epidemiology
of the Division of Public Health**

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December 1998

EXECUTIVE SUMMARY

Introduction

The small area estimation study for the state of Alaska was undertaken as a follow-up task of the statewide Adult Household Survey conducted by the Gallup Organization in 1997-98. The main objective of the small area estimation study was to improve the overall precision of some of the key household study estimates at the 'small area' level. The resources provided by the Center for Substance Abuse Treatment (CSAT) and the Alaska Department of Health and Social Services, Division of Alcoholism and Drug Abuse (ADA) have expanded needs assessment efforts in Alaska during the 1997-1998 time period. The goal of the adult household survey was to provide information on substance dependence, abuse, prevalence and treatment needs for adults in the state of Alaska mainly at the state and the sub-state planning region level. For small areas, however, the traditional direct survey estimators based solely on the household study may have relatively large standard errors because of inadequate sample size at the 'small area' level. The objective of the small area estimation task, therefore, was to improve the precision of such small area estimates by taking advantage of relevant information at the small area level.

Methodology

In the state of Alaska, the boroughs within each sub-state planning region were chosen as 'small area' for the purpose of this small area estimation analysis. Estimates were computed to provide information on dependence, abuse, severity and treatment need for Alcohol, Marijuana and other drugs. Estimates for both lifetime and current diagnosis were derived. The analysis was carried out following the methodology proposed by Chattopadhyay et al. (1996). A detailed description of the estimation method is discussed in Section 2 of this report. Empirical Bayes estimates were computed at the small area (borough) level. In order to evaluate the appropriateness of the small area estimation methodology, Section 3 tables also include both the direct survey estimates (based on adult household survey data) and the small area estimates at the borough level. As expected, the small area estimates were, in general, found to be more precise than the direct survey estimates at the borough level.

Section 3 of this report presents the small area estimates for each borough. The estimates were computed for the following variables: (i) Diagnosis of alcohol dependence, abuse, and severity of alcohol dependence (ii) Diagnosis of marijuana dependence, abuse, and severity of marijuana dependence and (iii) Diagnosis of other drugs dependence, abuse, and severity of other drugs dependence. The 'other drugs' included the following five drugs: Hallucinogen, Cocaine, Heroin/Opiate, Amphetamine and Inhalants. Since very few respondents were diagnosed as dependent or abusers of these drugs particularly at the borough level, these drugs were put together in the 'other drugs' category. Respondents with diagnosis of dependence on any one of the five drugs, for example, were treated as diagnosed for dependence on 'other drugs.' For the severity variable, all respondents with diagnosis of severe dependence (on alcohol, marijuana or other drugs) were treated as being diagnosed for severity. The remaining (no severity, mild severity or moderate severity) were treated as being not diagnosed for severity. Besides the lifetime diagnosis variables mentioned above, small area estimates were also computed for

current diagnosis variables for alcohol, marijuana and other drugs. Using the diagnoses for dependence and abuse of substances, small area estimates of the percentage of adults who need treatment for alcohol only, drugs only, and both alcohol and drugs were also derived at the borough level. The definitions of diagnosis of dependence, abuse or severity according to the DSM-IIIR are available in the adult household study report.

The small area estimation analysis was based on the Alaska adult household survey data and current census data. For details of the methodology, definition of terms and data collection procedures used in the adult household study, please refer to the adult household survey report (1998) submitted by the Gallup Organization. The current estimates of the census data were obtained from the on-line database called CLARITAS if Ithaca, New York.

Major Findings

The small area estimation was carried out using the sample data of the Alaska Adult household Study. The sample size (# of completed interviews) at the borough level varied significantly. The maximum sample size was (1534) in Anchorage whereas the minimum size (49) was in Bristol Bay and Lake and Peninsula. Besides Anchorage, the boroughs with relatively higher sample size were Kenai Peninsula (1062), Juneau (855), Fairbanks Northstar (548), Bethel (483) and Ketchikan Gateway (412). Some other boroughs with relatively smaller sample size were Haines (67), Aleutians East (77) and Aleutians West (99). Use of small area estimation techniques become particularly important for the boroughs with smaller sample size.

As explained in this report, the boroughs were chosen as the 'small areas' for this analysis. It is found that the proposed small area estimates (the empirical bayes estimates) are more reliable (in terms of sampling error or precision) as compared to the direct survey estimators (based on the adult study) at the borough level. The empirical bayes estimates are, therefore, recommended at the borough level particularly for boroughs with smaller sample size.

The following findings are based on data presented in Table1 through Table 15 of Section 3 of this report.

Lifetime Diagnosis of Alcohol Dependence: The estimated percentage of adults with lifetime diagnosis of alcohol dependence varied across boroughs. Based on the empirical bayes estimates, the percentages ranged from 7.75 to 13.78. The top three boroughs were Yukon-Koyukuk (13.78), North Slope (13.78), Bethel (12.94). The bottom three boroughs were Kodiak Island (7.75), Kenai Peninsula (8.47), Matanuska-Susitna (8.96). The sampling error as measured by the square root of mean square error (mse) for the estimates were in the range of 0.75 to 2.76. The margin of error (precision) calculated as 1.96 times the square root of mse is always found to be less than 5 percent.

Lifetime Diagnosis of Alcohol Abuse: The estimated percentage of adults with lifetime diagnosis of alcohol abuse varied across boroughs. Based on the empirical bayes estimates, the percentages ranged from 2.33 to 6.67. The top three boroughs were Aleutians West (6.67), Prince of Wales (5.75)and Juneau (5.18). The bottom three boroughs were Bethel (2.33), Dillingham (2.83) and Wade Hampton (2.86). The sampling error as measured by the square root of mean square error (mse) for the estimates were in the range of 0.52 to 1.54. The maximum

margin of error (precision) calculated as 1.96 times the square root of mse is found to be only about 3 percent.

Lifetime Diagnosis of Marijuana Dependence: The estimated percentage of adults with lifetime diagnosis of marijuana dependence varied across boroughs. Based on the empirical bayes estimates, the percentages ranged from 0.59 to 2.88. The top three boroughs were North Slope (2.88), Wade Hampton (2.81) and Norhwest Arctic (2.70). The bottom three boroughs were Matanuska-Susitna (0.59), Sitka (0.85) and Haines (0.85). The sampling error as measured by the square root of mean square error (mse) for the estimates were in the range of 0.25 to 0.89. The maximum margin of error (precision) calculated as 1.96 times the square root of mse is only about 1.74 percent.

Lifetime Diagnosis of Marijuana Abuse: The estimated percentage of adults with lifetime diagnosis of marijuana abuse did not vary much across boroughs. Based on the empirical bayes estimates, the percentages ranged from 0.13 to 0.59. The top three boroughs were Kodiak Island (0.59), Valdez-Cordova (0.53) and Kenai Peninsula (0.51) where as the bottom three boroughs were Wade Hampton (0.13), Northwest Arctic (0.14) and Bethel (0.14). The sampling error as measured by the square root of mean square error (mse) for the estimates were in the range of 0.05 to 0.23. The maximum margin of error (precision) calculated as 1.96 times the square root of mse is less than .5 percent.

Lifetime Diagnosis of 'Other drugs' dependence and abuse: The estimated percentage of adults with lifetime diagnosis of dependence or abuse on 'other drugs' did not vary much across boroughs. There were very few cases reported in these categories and the maximum percentage estimate for dependence and abuse was only about 0.59 and 0.12 percent respectively. The margin of error (precision) calculated as 1.96 times the square root of mse was also very small (less than 0.5 percent).

Any Current Alcohol Diagnosis: The estimated percentage of adults with any current alcohol diagnosis varied across boroughs. Based on the empirical bayes estimates, the percentages ranged from 5.07 to 10.03. The top three boroughs were Prince of Wales (10.03), Lake and Peninsula (9.90) and Nome (9.54). The bottom three boroughs were Kenai Peninsula (5.07), Valdez-Cordova (5.23) and Kodiak Island (5.52). The sampling error as measured by the square root of mean square error (mse) for the estimates were in the range of 0.66 to 2.15. The maximum margin of error (precision) calculated as 1.96 times the square root of mse is always less than 5 percent.

Any Current Marijuana Diagnosis: The estimated percentage of adults with any current marijuana diagnosis did not vary significantly across boroughs. Based on the empirical bayes estimates, the percentages ranged from 0.24 to 1.40. The sampling error as measured by the square root of mean square error (mse) for the estimates were in the range of 0.10 to 0.47. The maximum margin of error (precision) calculated as 1.96 times the square root of mse is less than 1 percent.

Any Current Other Drug Diagnosis: The estimated percentage of adults with any current 'other Drugs' diagnosis did not vary significantly across boroughs. There were very few cases reported in this category and the percentages ranged from 0.05 to 0.37. The margin of error (precision)

calculated as 1.96 times the square root of mse was also very small (less than 0.5 percent).

Need for Alcohol Treatment only: The estimated percentage of adults needing alcohol treatment only varied across boroughs. Based on the empirical bayes estimates, the percentages ranged from 10.04 to 17.77. The top three boroughs were Prince of Wales (17.77), Aleutians West (16.95) and Ketchikan Gateway (15.59). The bottom three boroughs were Wade Hampton (10.04), Valdez-Cordova (10.95) and Kodiak Island (11.12). The sampling error as measured by the square root of mean square error (mse) for the estimates were in the range of 0.85 to 3.08. The margin of error (precision) calculated as 1.96 times the square root of mse is found to be about 6 percent.

Need for Drug Treatment only: The estimated percentage of adults needing drug treatment only did not vary significantly across boroughs. Based on the empirical bayes estimates, the percentages ranged from 0.34 to 1.30. The sampling error as measured by the square root of mean square error (mse) for the estimates were in the range of 0.10 to 0.56. The margin of error (precision) calculated as 1.96 times the square root of mse is found to be only about 1 percent.

Need for both Alcohol and Drug Treatment: The estimated percentage of adults needing both alcohol and drug treatment did not vary significantly across boroughs. Based on the empirical bayes estimates, the percentages ranged from 0.77 to 2.01. The sampling error as measured by the square root of mean square error (mse) for the estimates were in the range of 0.24 to 0.57. The margin of error (precision) calculated as 1.96 times the square root of mse is found to be only about 1 percent.

In summary, the number of adults diagnosed for dependence or abuse was significantly higher for alcohol as compared to other drugs. Among drugs excluding alcohol, marijuana had the maximum number of diagnosed cases. There were very few cases of diagnosis for other drugs consisting of Hallucinogen, Cocaine, Heroin/Opiate, Amphetamine and Inhalants. The pattern was similar for both lifetime and current diagnosis variables. The number of adults needing treatment was also much higher for alcohol as compared to other drugs.

EXECUTIVE SUMMARY:

TECHNICAL REPORT

ALASKA
SUBSTANCE ABUSE NEED for TREATMENT
Among ARRESTEES (SANTA)

Prepared by
Johnson, Bassin &Shaw

Submitted to:

Alaska Department of Health and Social Services

**Division of Alcohol and Drug Abuse and to the Section of Epidemiology
of the Division of Public Health**

December 4, 1998

EXECUTIVE SUMMARY

The Federal Center for Substance Abuse Treatment (CSAT) provided several State agencies with funding to perform a family of studies to estimate statewide need for substance abuse and dependency treatment. One member of the family of studies is the Substance Abuse Need for Treatment among Arrestees (SANTA). As its name implies, SANTA is designed to provide preliminary estimates of treatment need among arrestees. Arrestees are targeted for special study because substance use and abuse are especially high in this population and because substance use is often associated with the commission of other crimes. The six objectives of the Alaska SANTA study were to: (1) profile arrestees who met DSM-III-R diagnostic criteria for substance abuse or dependence; (2) profile arrestees whose urinalyses were positive for at least 1 of 10 drugs tested; (3) compare results of self-report data and urinalyses; (4) describe the substance abuse treatment histories of arrestees who had positive urinalyses as well as treatment histories of arrestees with DSM-III-R substance abuse/dependence diagnoses; (5) identify factors associated with chemical detection and DSM-III-R diagnoses of substance abuse or dependence; and, (6) compare current SANTA results with previous Drug Use Forecasting (DUF) survey results.

The study participants were 658 adult arrestees from four jails at three sites: Anchorage, Fairbanks, and Yukon/Kuskokwim. Sites were selected for ethnic diversity, degree of urbanicity, high flow rates, and relatively high numbers of female arrestees. Participants were asked to complete a modified DUF interview, which measures DSM-III-R substance abuse and dependence diagnostic criteria, treatment history, and demographics. Participants also were asked to provide a urine sample, which provided chemical evidence of recent ingestion of 10 drugs. Eligibility requirements included arrest within the previous 48 hours, so that urinalysis results would indicate whether the arrestee was under the influence at the time of arrest.

Interviews were conducted by local college students with criminal justice or social science training or other relevant experience. Interviewers were trained by staff from the Center for Substance Abuse Research (CESAR). Urinalysis was conducted by Quest Diagnostics, Inc. Data were analyzed by JBS. More than half of study participants received a substance abuse or dependence diagnosis. Also, more than half tested positive for at least one drug. Alcohol was the substance most frequently associated with an abuse/dependence diagnosis. Cocaine was the illicit drug most frequently associated with a DSM-III-R substance abuse/dependence diagnosis, followed by marijuana. Marijuana was the illicit drug most frequently associated with a positive urine test, followed by cocaine. Males were more likely than females to be diagnosed with marijuana abuse/dependence or test positive for marijuana. Females were more likely than males to be diagnosed with cocaine abuse/dependence or test positive for cocaine. Arrestees who were older were more likely than those who were younger to receive an alcohol or cocaine abuse/dependence diagnosis. Older arrestees were also more likely than younger ones to have a urine test indicating cocaine use. Younger arrestees were more likely than older ones to test positive for marijuana or to be diagnosed as abusing or dependent on marijuana. Alcohol abuse and dependence were more prevalent among Alaskan Natives than other ethnic groups, while Alaskan Natives were less likely than other ethnic groups to be diagnosed with cocaine abuse/dependence.

For marijuana and cocaine there was a higher rate of positive urinalysis than DSM-III-R diagnosis. This indicates that some arrestees who use these drugs either do not currently meet the criteria for an abuse/dependence diagnosis, or that they are not honestly reporting their symptoms. For narcotics and amphetamines, more arrestees were diagnosed with abuse/ dependence than tested positive. Thus, many arrestees who are in need of substance use treatment for narcotics or amphetamine abuse/dependence either had not used their problem substance recently before arrest, or received a false negative urine test.

Urinalysis results and self-reports of last 3 days' use were often discrepant. With the exception of amphetamines, most arrestees who tested positive denied using the corresponding drug. In the case of amphetamines, the same proportion who tested positive reported using them within the last 3 days. Discrepant results may be due to resistance to giving socially undesirable responses, misunderstanding or procedural errors during the interview, or measurement error in the interview or urine tests.

Nearly three-fourths of those who tested positive for drug use had not received treatment within the past year. Over 60 percent of those with positive urinalyses who had not received treatment within the past year also did not perceive that they needed treatment for their substance use, indicating that this population is unlikely to seek or participate in treatment voluntarily. Just over 70 percent of arrestees with DSM-III-R substance abuse/dependence diagnoses did not report that they had received substance abuse treatment during the past year. Just under half of those with diagnoses who had not received treatment also did not perceive that they needed treatment. These findings suggest that efforts to treat this problem should include not only providing adequate treatment slots, but also outreach efforts to encourage participation.

Need for treatment may be predicted by ethnicity, sex, and type of crime committed. Logistic regression results indicate that white arrestees are more likely than others to test positive for drug use. A DSM-III-R diagnosis of illicit drug abuse/dependence was predicted by being white, female, or a felon. A DSM-III-R diagnosis of alcohol abuse/dependence was predicted by being non-white, over 25 years old, or a non-felon. DSM-III-R diagnoses of abuse or dependence on both alcohol and drugs were predicted by being white.

In general, Alaska SANTA study participants were less likely to test positive for drug use than 1996 DUF study participants. This was especially true for cocaine, opiates/narcotics and multiple drugs.

Current results are derived from a convenience sample, and therefore cannot be generalized to Alaska's population of adult arrestees. More precise estimates can be derived from further research on the number of arrestees in the State, and from estimates of need among a random, representative sample of arrestees.

The current preliminary finding that a total of 397 (60.3%) out of 658 arrestees meet criteria for a DSM-III-R diagnosis of substance abuse/dependence suggests that a large proportion, possibly the majority, of arrestees in Alaska may be in need of substance abuse treatment services.

Alaska's Treatment Needs Assessment: Critical Review

of Conducted Studies and Preparation of Information for Systems

Planning

Submitted to:
The Division of Alcoholism and Drug Abuse
State of Alaska, Department of Health and Social Services

By:
The North Charles Research and Planning Group of North Charles, Inc.

March 11, 1999

<u>Introduction</u>

This report provides a summary of the study conducted by the North Charles Research and Planning Group (NCRPG) that produced the appended critical reviews of treatment needs assessment studies conducted for the State of Alaska. The State invested its State Treatment Needs Assessment Project (STNAP) round one support in three studies: 1) a survey of substance abuse treatment needs in the general household population, 2) a survey of recent arrestees that featured a computer-assisted personal interview concerning treatment needs and collected urine specimens to confirm the self-reported use of illicit drugs, and 3) a substance abuse indicator study. The substance abuse indicator study also included the use of a new methodology for distributing survey information compiled for four large geo-political groups of Alaska communities to smaller areas within the major groups. The survey contractors submitted draft final reports for the household survey (The Gallup Organization, Inc.), the Substance Abuse and Need for Treatment among Arrestees (SANTA) study (JBS, Inc.) and a Substance Abuse Indicator Study for Treatment Resource Allocation (Gallup). The contractors also submitted the data sets resulting from completed interviews in the household and arrestee studies along with information describing the process of the studies. The data collected from reporting agencies that were used in the indicator study were provided to NCRPG.

Alaska contracted with NCRPG to help evaluate the work of the contractors and to insure that the studies' methodologies and data are in adequate condition for the comprehensive substantive analyses that NCRPG will perform in round two of Alaska's STNAP. It is very important that these checks be conducted soon after the data collection is completed. If there are problems in the data sets, fixing those problems may be possible if they are discovered immediately. The evaluation of the materials delivered by the contractors will help assure that the contractors were compliant with the conditions of their contracts with Alaska. NCRPG evaluated the quality of the data and the adequacy of the documentation of the data and data collection procedures.

In many other fields, it is commonplace to have an independent expert advise the project sponsor regarding the technical adequacy of the work being completed. NCRPG used its unique background and general technical expertise to evaluate the studies conducted under contract with Gallup and JBS. As the CSAT technical assistance contractor for five years, NCRPG designed the data collection studies conducted by Alaska's contractors. NCRPG also reviewed final reports from many states with similar studies conducted by Gallup and JBS as well as by other state contractors. Frequently, NCRPG advised states about the technical adequacy of the finished product.

<u>Household Survey</u>

NCRPG evaluated the household telephone survey by reviewing analyzing the survey database and the adequacy (e.g., completeness) of the draft final report and the data collection procedures and outcome. The evaluation is included as Appendix A to this final report. The evaluation focused on the major concerns of how the response rate was defined, the components of the response rate including process measures such as the success in converting respondents who initially refused to participate into completed interviews, the sampling design, and procedures for weighting the sample to the population of the state.

NCRPG's overall evaluation of the telephone survey was that the information base accurately describes the current need for substance abuse treatment among people living in Alaskan households. Some of the strengths of the household survey conducted for Alaska include a satisfactory response rate, the use of an effective procedure for allocating more interviews to geographic areas where problems with substances were more prevalent, and estimates of the level of need for treatment that were consistent with estimates from other sources including the NCRPG substance abuse problem index and current levels of met demand for treatment. The information produced by the survey should make an important contribution to further efforts by ADA to improve treatment services.

The review pointed out the need for further processing of the data set that would recode responses now designated as "additional responses" that should be included into existing response categories. A number of interviews identified by the interviewers as of poor quality or self-reported by the respondents to be less than truthful needed to be examined and the results of the survey adjusted for any impact these cases might have on the outcomes. The procedure for weighting survey results to represent the population of Alaska needed to be better defined in the report, but we concluded that the method used fewer than the necessary number of age groups to compute population weights. NCRPG's review yielded several suggestions for improving Gallup's report of survey outcomes including the need to present need estimates based on the actual survey sample as well as after the survey statistics were applied to the state population.

SANTA Study

The evaluation of the SANTA study included topics similar to those used for the evaluation of the household survey, e.g., the quality of the data, and topics that are unique to SANTA studies. The evaluation of the SANTA study is included as Appendix B of this report. Among the concerns unique to SANTA studies that were considered in NCRPG's evaluation was the contractor's success in obtaining biological specimens (urine) for testing, the length of time between arrest and acquisition of a urine sample, the completeness of the report of the SANTA study with respect to documenting differences among sites, across arrest types, by the day and time of the arrests, and the differences between respondents who provided specimens and those who did not.

NCRPG's review of the draft report and inspection of the collected information set indicated that the SANTA study was conducted using procedures that were consistent with the study protocol. The information base resulting from the study seemed to be devoid of major flaws. We did find errors in the data definitions that suggested the need for a careful review of the data dictionary. Despite a high rate of refusal to provide biological samples and a high rate of underreporting of drug use (e.g., 60% of the arrestees who denied using marijuana in the last three days tested positive for the drug and 47% of arrestees who denied using cocaine had traces in their urine) the findings from the SANTA study show rates of recent drug use that are much higher than rates observed in the general population. For example, 58% of the SANTA respondents who submitted a urine sample tested positive for at least one drug.

The practical uses of the SANTA data primarily involve the criminal justice system. Features of the SANTA study design and questionnaire limit the study's ability to add to Alaska's knowledge about the statewide prevalence of current need for treatment. However, the SANTA

study outcomes could be profitably used to alert constituencies of the need to develop policies and strategies that would incorporate substance abuse treatment into the criminal justice system at the point of arrest. Providing treatment instead of or as part of imprisonment has become a major national agenda. The economy of providing treatment rather than incarceration merits further efforts in this area. The SANTA data on treatment need outcomes can be used to demonstrate just how large that economy might be in Alaska

Substance Abuse Indicator Study

The substance abuse indicator study was subjected to a review that focused on the selection of variables used in the estimation model, the documentation of the data, the quality of the data in the database, and the contractor's methods for determining reliability and validity for the estimation model. The review of the substance abuse indicator study is included in this report as Appendix C.

Gallup produced a social indicator model that estimated need for combined alcohol and drug treatment in four geo-political areas of Alaska using alcohol- and drug-related arrests and alcohol- and drug-related deaths. NCRPG concluded that other indicators besides those two could have been used profitably in the study. Using just the four major regions as the unit of analysis instead of the smaller census boroughs reduced the usefulness of the needs estimates for planning. Similarly, Gallup used demographic variables aggregated to the regional level with the result that demographic characteristics have little variance across regions. NCRPG's review of the Gallup study was critical of the lack of separate models for alcohol and drug treatment needs. We also noted that Gallup performed no tests of the validity or reliability of the social indicator model. Our review strongly suggested Gallup should give more attention to its report presentation. The graphs were hard to read and the formatting of tables included a confusing use of line numbers. In many displays, numbers were expressed in tens rather than units, but not labeled as such; no reason was provided for using a non-standard metric. There were many syntactical errors and inconsistencies in the body of the report. The explications of such key points as variable selection procedures and the current allocation criteria should have been clearer than they were.

In addition to the social indicator analysis, Gallup included a smaller study that applied a statistical method for using survey information available from large areas to estimate values in communities whose populations were too small to provide enough observations for reliable information. The discussion of the small area estimation procedure at the contractors conference in January concluded that the procedure, when applied to the unique geography of Alaska and the structure of Alaskan communities, did not produce small area estimates that were consistent with other models and experiential evidence.

The State of Alaska recognized the need for an effective method of projecting treatment need information across both time and communities. The initial effort to produce a social indicator based model was informative, particularly in pointing out the information needs of an effective model and the level of commitment necessary to develop a social indicator system that can be applied year after year. The Alaska STNAP studies funded by CSAT include the development of a permanent Alaska-based social indicator system.

Interstate Analysis

In addition to reviewing the reports of studies conducted in round one of the STNAP program, Alaska asked NCRPG to compare the preliminary results of the studies with similar findings from other states. The household survey review (Appendix A) and the SANTA study review (Appendix B) both include comparisons between Alaska's results and those observed in other states. The comparison among states of surveys of the general household population does help to place Alaska's substance abuse treatment needs in a state-level framework. For example, we found that Alaska had higher substance use rates than Montana and North Dakota, even though the demographic characteristics of the three states are similar in many respects. Marijuana treatment need estimates for Alaska were slightly lower than the estimates for Montana but much higher than the estimates for North Dakota. Comparisons among SANTA surveys do not support meaningful comparisons because the SANTA studies lack comparable methodologies for sampling and data collection. We reported the results of the severity of substance use related problems among arrestees in a number of other states in our SANTA study review (Appendix B) with a caution against over-interpreting differences between Alaska and other states.

The State wanted to know how Alaska compares to other states with regard to deaths, arrests, diseases, and treatment services related to substance abuse. Most of the funds for treatment services in Alaska come from State, rather than federal, sources. By documenting that Alaska's problems are especially severe and that other states may be doing more to combat the problems, planners can advise the legislature that more resources are needed. Alaska felt that the state-level comparative analyses should be done as soon as possible to spark interest in Alaska's STNAP and to open discussions among decision makers about changes in the amount of resources available and how the resources should be allocated. NCRPG included an interstate analysis in this small contract. That analysis, "How Does Alaska Stack Up? An Interstate Substance Abuse Indicator Analysis" is provided as Appendix D of this report.{EDITOR"S NOTE: This document has been replaced by an updated "Interstate Substance Abuse Indicator Chartbook" provided herein}

Contractors Conference

The Division of Alcoholism and Drug Abuse (ADA) accelerated the project schedule in order to be able to take advantage of opportunities in January and February to present information on the progress of the STNAP studies and findings from those studies to other agencies and governing bodies. In November, ADA requested that preliminary reviews of all the round one studies would be presented at a conference with the contractors that would take place on January 7th and 8th in Anchorage. NCRPG agreed adjust its schedule to satisfy ADA 's request.

At the meeting in Anchorage, the contractors presented their preliminary final reports of the studies to representatives of ADA and the Epidemiology Group of the Department of Health and Social Services. The Gallup Organization was present at the meeting to discuss the household survey and the substance abuse indicator study. JBS staff participated by telephone. NCRPG's critical review of the preliminary final reports was represented by Dr. Richard LaBrie. The ensuing discussion provided clear direction to the contractors regarding how the reports needed to be revised to achieve an accurate and complete documentation of the study materials for transfer to ADA .

NCRPG also presented the results of their interstate analysis at this meeting. The demonstration of how Alaska compares to other states on important indicators of need for alcohol and drug treatment, how the contrasts among states can be clearly expressed using models that produce comprehensive indexes of both alcohol and drug treatment need, and how Alaska's treatment system is responding to the need for treatment were very well received. It was agreed at that meeting that NCRPG would make available the raw data used in the interstate analysis to assist ADA in its presentations of the STNAP program.

Summary of Tasks and Deliverables

NCRPG completed all of the tasks defined in the study protocol and submitted all the deliverables itemized in its agreement with ADA . NCRPG expended effort and resources in order to satisfy requests made by ADA . The major adjustments to ADA 's interests and needs were, 1) accelerating the reviews of preliminary reports of round one studies in order to present the reviews at the beginning of January, 2) traveling to Anchorage to attend the two-day contractors meeting, 3) expanding the comparisons of round one studies to results from other states to include a separate interstate model of alcohol and treatment need and met demand for services, and 4) providing the detailed state-level information used in the interstate model to ADA to assist in their presentations.

The following is a brief summary of the study activities organized as list of benchmark events.

Date	Benchmark Event
9/11/98	Contract between Alaska ADA and North Charles signed by both parties.
10/5/98	Conference on study tasks: NCRPG, Clay McDowall, and Loren Jones (by phone)
10/19/98	Monthly report sent to ADA .
11/2/98	Revised tasks, timeline, and deliverables defined.
11/3/98	Monthly report sent to ADA .
11/9/98	Study protocol sent to ADA .
11/10/98	January meeting date set and preliminary agenda defined.
12/1/98	Monthly report sent to ADA .
12/7/98	SANTA preliminary report received by NCRPG and ADA .
12/8/98	SANTA questionnaire and data dictionary received by NCRPG and ADA .
12/10/98	Substance abuse indicator study preliminary report received by NCRPG and ADA .
12/31/98	Final agenda for January meeting.
1/4/99	Draft review of household survey completed and sent to ADA .
1/5/99	Draft review of substance abuse indicator study completed and sent to ADA .

Date	**Benchmark Event**
1/6/99	Draft review of SANTA study completed. Report delivered at January 7th meeting.
1/7/99	First day of meeting in Anchorage. Reviews presented to contractors and discussed.
1/8/99	Second day of meeting in Anchorage. Interstate analysis presented and discussed. Monthly report presented. Planning for round two studies took place.
1/31/99	Monthly report accompanied transfer of interstate data to ADA .
2/26/99	Final reports on all reviewed studies and report of interstate analysis sent to ADA .
3/10/99	Final report sent to ADA .

EXECUTIVE SUMMARY:

ALASKA ALOCHOL SAFETY ACTION PROGRAM
ICHS Efficacy Study Report

Completed for:
The Division of Alcoholism and Drug Abuse
Department of Health and Social Services

Completed by:
Institute for Circumpolar Health Studies
University of Alaska Anchorage

July, 1999

Executive Summary

Alaska's Alcohol Safety Action Program (ASAP) is based on a national model that seeks to reduce the frequency of alcohol-related traffic accidents through early identification of problem-drinkers and the initiation of appropriate interventions to deter alcohol-related drinking behavior.

The Institute for Circumpolar Health Studies assisted the state of Alaska Division of Alcoholism and Drug Abuse to update data which measures the effectiveness of the ASAP program in reducing the number of re-offenses of alcohol-related offenders. It is important to note that 65 to 66 percent of the client population included in this study did not have a recorded re-offence of any kind within three years of the first DWI offense. This report, as directed by the Division of Alcoholism and Drug Abuse Services, is intended to gain further insight into the adjudication and treatment characteristics of the 34 to 35 percent of the cases that did re-offend.

This descriptive study intended to first collect and merge alcohol offender and treatment data from selected ASAP locations throughout Alaska in order to gain an understanding of the arrest, adjudication, intake, and treatment processes across the state. Second, the study evaluated ASAP client characteristics within populated and urban areas and compared the data to the earlier studies of Kelso (1980) and Araji (1994). Third, the study evaluated the data to determine differences across the selected ASAP sites. Fourth, the study assessed and identified significant determinants for becoming a re-offender. Fifth, the length of time for an ASAP client to re-offend and the variables associated with moderating that time was evaluated. Finally, recommendations were provided regarding intake data protocol enhancement, process improvement strategies, and identification of the *high-risk* problem drinker.

The recommendations include:

- *Evaluate and redesign (possibly simplify) intake processes and data collection protocols by specifying common practices and identifying required data fields.*

- Evaluate the issues and characteristics (e.g. socioeconomic, cultural, judicial, treatment environment, etc) that delineate the differences between the four ASAP sites, and modify intervention and treatment processes that are consistent with the community environments.

- Initiate process improvement activities to evaluate and redesign the ASAP client activities and functions that take place during the times from arrest to conviction and conviction to assignment. Include law enforcement, courts, ASAP, and treatment providers in the process improvement and redesign efforts.

- *Establish a* high-risk *ASAP client profile and redesign the identification, adjudication, intake, and treatment processes to target this population and then evaluate the efficacy of the modifications.*

- Develop and refine predicative models that can be used by ASAP staff in the field that will facilitate the identification of *high-risk* clients as early as possible in the arrest, conviction, assignment and treatment process.

EXECUTIVE SUMMARY:

CHEMICAL DEPENDENCY TREATMENT OUTCOME STUDY
(NEW STANDARDS REPORT)

Completed for:
The Division of Alcoholism and Drug Abuse
Department of Health and Social Services

Completed by:
New Standard, Inc.

December, 1998

Executive Summary

Results from a study of Alaska's chemical dependency treatment programs show that the state's efforts are succeeding on several fronts. Follow-up interviews with participants in both inpatient and outpatient treatment programs indicate that, after one year, arrests and hospitalization decreased, while participants' employment rates and work attendance increased.

The Alaska Division of Alcoholism and Drug Abuse commissioned the treatment outcome study to measure the effectiveness of publicly funded residential and outpatient treatment programs. Beginning in February 1994, the study surveyed 1024 residential/step-down patients and 510 outpatients who consented to assessments at admission, discharge, and six and 12 months after admission to treatment. The findings were collected by New Standards Inc., a Minnesota-based authority in studying treatment programs.

The study will provide information to help policymakers design the best treatment and after-care programs for Alaskans.

The outcome study found:

- Of Alaskan patients surveyed, 56 percent of those in outpatient programs abstained from alcohol for one year after treatment, compared to 42 percent of residential patients. Outpatients in the study received an average of 59 hours of care, while patients in residential programs received an average of 39 days of inpatient care.

- The study also found there is a strong association between abstinence rates and post-treatment levels of care and peer support groups like Alcoholics Anonymous. For 75 percent of residential patients, formal aftercare taken for a year resulted in a year of sobriety. Formal aftercare during the first six months appears to have the strongest impact on recovery among outpatients, with 71 to 77 percent reporting sobriety.

- Both residential and outpatient program participants reported substantial decreases in legal problems one year posttreatment. Criminal arrests, traffic arrests and motor vehicle accidents dropped. This yields overall societal benefits as a result of chemical dependency treatment by easing demands on already overburdened legal and insurance systems.

- Documented reductions in hospitalizations and emergency care and outpatient care for chemical dependency program patients support the notion that, following treatment there is a shifting away from costly hospital and emergency room "crisis" or urgent care, toward more timely and appropriate preventive or routine outpatient treatment.

- Employment rates changed dramatically from pretreatment through one year after treatment. Full-time employment increased from 30 percent before treatment to 45 percent at 12 months. Conversely, unemployment rates dropped from 45 percent to 24 percent.

- Both residential and outpatients reported significant reductions in tardiness and missing work. Outpatients in particular reported fewer problems with supervisors and fewer mistakes on the job.

- A significant number of patients surveyed reported sexual and physical abuse; 10 percent of the residential patients and 8 percent of the outpatients indicated incest by a male relative. Twenty-eight percent of the outpatients and 29 percent of the residential patients reported physical abuse prior to age 18.

Interstate Substance Abuse Indicator Chartbook