

ALASKA LEGISLATURE SPECIAL COMMITTEE / SUBJECT FILE 8672

1423 SCOMM 52: JOINT SPEC. COMMITTEE ON LOCAL OPTION LAWS 1985-86

alcohol-related" offenses accounted for more than 50% of the annual total arrests for Part II offenses. Thus, on a statewide basis, arrests for criminal offenses defined by alcohol-involvement and, those conventionally considered as "100% alcohol-related," comprised at least 39% of all arrests for all offenses in the state. Three of the six conventional alcohol-related arrest categories are defined in terms of the abusive consumption of alcohol--DWI, violations of liquor laws and, drunkenness; arrests for these three offenses alone comprise about 25% of all arrests on a statewide basis. These figures exclude all those arrests for other categories that were indeed alcohol-related, but the arrest classification does not so define it, for example--violent and property crimes, and misdemeanor assaults, shoplifting, joyriding, etc. Thus, the percentage figure of at least 39% as the percentage of all arrests which are alcohol-related must be considered to be a very low estimate.

These figures are descriptive of arrest patterns for all enforcement jurisdictions within the state. The following section examines these arrest patterns in terms of characteristically different socio-geographic settings within the state.

Geographical Distribution of Alcohol-Related Arrests

The enforcement information for Part II type criminal offenses has been categorized according to similar socio-geographic settings within the state. Three types of settings were developed to distinguish among: "urban settings"--densely populated areas and environs; "rural-cities"--relatively populated areas, transportation and government sub-centers, and environs that consist of areas of low population density; and,

"rural areas"--outlying rural and bush areas of low population density. Table VI-4 presents this typology and the law enforcement jurisdictions assigned to each region for comparative analysis of the data.

TABLE VI - 4
CATEGORIZATION OF LAW ENFORCEMENT JURISDICTIONS ACCORDING TO
SIMILAR SOCIO-GEOGRAPHIC SETTINGS, ALASKA, 1973-1975

Settings	Law Enforcement Jurisdictions	Characteristics
Urban Centers	Anchorage/Spennard, Fairbanks, Juneau, Ketchikan, and AST Detachment "C" (surroundings of Anchorage)	Densely populated metropolitan areas, with densely, or relatively densely populated environs.
Rural Cities	Cordova, Ft. Yukon, Homer, Hoonah, Valdez, Kenai, Petersburg, Palmer, Sitka, Wrangell	Densely, or relatively densely populated city areas, but sharply demarcated by surrounding areas of extremely low population density.
Rural Areas	Alaska State Trooper Detachments B, D, E, F, G, H, I, J.	Outlying rural areas of extremely low population density.

Note: Cities and towns not included in above groupings failed to provide comparative information or allow information to be collected. Information was collected from multiple sources including direct request from local law enforcement agencies.

As presented in Table VI-3, the overall statewide distribution of arrests for Part I and Part II type offenses has been rather stable over the three year period from 1973 to 1975. Part I type offenses account for about 23% of all arrests, and Part II type offenses constitute about 77% of all arrests. Similarly, the overall statewide distribution of "100% alcohol-related" arrests has also been relatively stable--about 39% of all arrests.

Examination of the same enforcement data according to the different socio-geographic settings shows some variation in the proportional distribution of arrests for Part I and Part II type offenses, according to setting. The information, in Table VI-5, shows primarily that rural-city settings differ somewhat from the urban and rural settings in that a slightly greater percentage of all arrests are for Part II type offenses.

TABLE VI -5
PERCENTAGE OF TOTAL ARRESTS FOR PART I
AND PART II TYPE OFFENSES ACCORDING TO
SOCIO-GEOGRAPHIC SETTING, ALASKA, 1973-1975

	Percentage of Total Arrests			
	Urban	Rural/City	Rural	Statewide
Part I Offenses				
1973	22%	22%	20%	22%
1974	23%	17%	23%	23%
1975	24%	18%	22%	23%
Average (three years)	23%	18%	22%	23%
Part II Offenses				
1973	78%	78%	80%	78%
1974	77%	83%	77%	77%
1975	76%	82%	78%	77%
Average (three years)	77%	82%	78%	77%

Source: Percentages computed from actual arrest figures.
See reference tables at end of this part.

For the purpose of comparison, arrests for each criminal offense classification were averaged for each of the three years, according to designated socio-geographic settings. Thus, the average number of annual arrests for all offense classifications and for each of the selected "100% alcohol-related" offenses for each setting is

presented in Table VI-6. The relative impact of the alcohol-related arrests seems to be greatest in the rural-city setting. Collectively, the total average number of all alcohol-related arrests in rural-city settings constitutes about 48% of arrests for all offenses. In the urban and rural settings, alcohol-related arrests account for 39% and 34% of all arrests. Comparatively, the impact of alcohol-related arrests on law enforcement seems to be least in the rural areas.

TABLE VI-6
PERCENTAGE OF AVERAGE ANNUAL ARRESTS FOR *100% ALCOHOL-RELATED OFFENSES
ACCORDING TO SOCIO-GEOGRAPHIC SETTINGS DURING
1973 TO 1975, ALASKA

	Urban		Rural-City		Rural		Statewide	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total Arrests ^a								
All Offenses	12,617	100%	1,910	100%	3,418	100%	17,945	100%
Section *100% Alcohol-related Arrests:								
DWI	1,619	13%	286	15%	606	18%	2,510	14%
Disorderly conduct	1,113	9%	145	8%	97	3%	1,354	8%
Liquor laws	757	6%	251	13%	206	6%	1,214	7%
Other assaults	774	6%	81	4%	206	6%	1,061	6%
Drunkenness	678	5%	137	7%	62	2%	877	5%
Vagrancy	75	*	14	*	1	*	39	*
All 100% alcohol-related arrests	4,967	39%	914	48%	1,177	34%	7,055	39%

a. Arrest figures represent the average number of annual arrests during the three-year period from 1973-1975. See reference tables at end of this Part.

* less than one percent

The above notion of relative impact of alcohol-related arrests on law enforcement is, of course, based on the ratio of alcohol-related arrests to the number of total arrests for all offenses. It does not describe impact of alcohol-related arrests in terms of the volume of total number of arrests. It is obvious, from the figures in Table VI-6, that the greatest volume of arrests is in the urban settings and that the smallest volume of arrests is in the rural-city settings. In terms of total number of average arrests, for the reporting jurisdictions during the period from 1973 to 1975, about 70% of arrests for all offenses took place in urban settings; the rural settings accounted for 19% of all arrests and the rural-city settings accounted for the remaining 11%. However, as can be seen in Table VI-7, the rural-city settings still accounted for a disproportionately greater number of alcohol-related arrests, compared to the relative volume of total arrests for all offense classifications in each of the three socio-geographic settings.

TABLE VI-7
PERCENTAGE DISTRIBUTION OF AVERAGE ANNUAL ARRESTS
AND ALCOHOL-RELATED ARRESTS BY SOCIO-GEOGRAPHIC
SETTINGS, ALASKA, 1973-1975

Socio- geographic Settings	Total Arrests	Percent of Total	Total alcohol-related Arrests	Percent of total alcohol- related Arrests
Urban	12,617	70%	4,967	70%
Rural-city	1,910	11%	914	13%
Rural	3,418	19%	1,177	17%
Statewide	17,945	100%	7,055	100%

Source: Average number of arrests computed from actual number of arrests during 1973, 1974 and 1975. See reference tables at end of this Part.

In summary, if viewed from the statewide perspective of average annual arrests, rural-city areas account for about 11% of all arrests but 13% of all alcohol-related arrests. If viewed from the perspective of volume of arrests within each setting, arrests for alcohol-related offenses constitute a disproportionately greater number of total arrests, 48%, compared to urban and rural settings, 39% and 34%.

Examination of the selected alcohol-related arrest categories according to each offense classification in Table VI-6, in relation to the total number of arrests for all offenses for each socio-geographic setting shows that arrests for DWI constitute the largest single category of alcohol-related arrests for each and all settings. Arrests for driving-while-intoxicated range from 13% to 18% of all arrests, among the three socio-geographical settings, and comprise 14% of arrests for all offenses statewide. It should be further noted that of all the FBI classifications of arrest, the category of DWI represents the largest single category of arrests, not just the largest single category of alcohol-related arrests.

The greatest variation in the percentage distribution of arrests for each of the alcohol-related offenses, according to socio-geographic setting, is for violations of liquor laws in rural-city settings. There is a disproportionately greater number of arrests for liquor law violations in the rural-city settings, 13% of total arrests compared to 6% of the total arrests in the urban and rural settings. The proportion of arrests for drunkenness is also somewhat higher in the rural-city settings than in the urban and rural settings.

In summary, the greatest impact of alcohol-related crime on law enforcement would seem to be in the rural-city settings of the state. In these areas, 48% of all arrests are for offenses considered to be "100% alcohol-related". Three of these six offenses are defined in terms of the abusive consumption of alcohol--DUI, liquor law violations and drunkenness; these three offenses alone account for 35% of all arrests in the rural-city settings. Comparatively, these types of arrests account for about 25% of all arrests within the urban and rural settings. Further, in terms of the total number of all arrests statewide, rural-city settings account for a larger proportion of alcohol-related arrests in relation to the volume of arrests for all offenses.

Law Enforcement, Alcohol-Related Arrests and Sex

Review of all arrests for all offenses in the state in 1975, as presented in Table VI-8, indicates that about 82% of all persons arrested were males and 18% were females. This same proportion applies to the distribution of persons arrested for Part I and Part II type offenses--82% of those arrested were males, 18% were females.

TABLE VI - 8
PERCENTAGE DISTRIBUTION OF TOTAL
ARRESTS FOR ALL OFFENSES AND
PART I AND PART II TYPE OFFENSES
BY SEX, ALASKA, 1975.

Arrest Category	Males	Females	Total
Part I Offenses	82%	18%	100%
Part II Offenses	82%	18%	100%
Total All Offenses	82%	18%	100%

Source: Calculations based on data provided
in Alaska Criminal Justice Plan, 1977, Volume 1,
p. 46. Prepared by Criminal Justice Planning Agency.

Analysis of all males arrested shows that about 23% of the male arrests was for Part I type offenses and 77% was for Part II type offenses. This compares to a similar distribution of 25% and 75% for Part I and Part II type offenses, for females, as shown in Table VI-9.

TABLE VI-9
PERCENTAGE DISTRIBUTION OF MALE
AND FEMALE ARRESTS FOR ALL
OFFENSES AND PART I AND PART II
TYPE OFFENSES, ALASKA, 1975

Sex	Part I Offenses	Part II Offenses	All Offenses
Males	23%	77%	100%
Females	25%	75%	100%
Both	23%	77%	100%

Source: Based on data provided in
Alaska Criminal Justice Plan, 1977, Volume 1,
p. 46, Prepared by Criminal Justice Planning Agency.

The percentage of alcohol-related arrests that were males is 85%, which is only slightly higher than the percentage of male arrests for all categories of offenses. This same percentage distribution of alcohol-related arrests by sex applies to each of the individual alcohol-related offenses except for liquor law violations and vagrancy offenses, for which the percentage of arrests which are female is higher. See Table VI-10 below.

TABLE VI-10
PERCENTAGE DISTRIBUTION OF ALCOHOL-RELATED
ARRESTS BY SEX AND CRIMINAL OFFENSES,
ALASKA, 1975

	Males	Females	Both
DWI	89%	11%	100%
Disorderly conduct	62%	18%	100%
Liquor laws	77%	23%	100%
Other assaults	87%	13%	100%
Drunkenness	88%	12%	100%
Vagrancy	75%	25%	100%
All Alcohol-Related Arrests	85%	15%	100%

Source: Based on data provided in
Alaska Criminal Justice Plan, 1977, Volume 1,
p. 46. Prepared by Criminal Justice Planning Agency.

The percentage distribution of arrests for each alcohol-related offense within each sex category is presented in Table VI-11. It can be seen that arrests for DWI constitute the largest category of male arrests--43% of all male alcohol-related arrests were for DWI. The remainder of arrests are approximately divided among the offenses of disorderly conduct, liquor law violations and assaults, ranging from 15-19%. The pattern of female alcohol-related arrests shows a somewhat more even distribution of arrests for the categories of DWI, disorderly conduct and liquor law violations--31%, 24% and 26%. Although arrests for DWI still constitute the greatest concentration of arrests, as for males, it is not so pronounced. This analytic perspective also

shows the differential impact of female alcohol-related arrests for the offense category of liquor law violations--20% of all female alcohol-related arrests.

TABLE VI-11
PERCENTAGE DISTRIBUTION OF MALE AND
FEMALE ALCOHOL-RELATED ARRESTS BY
CATEGORY OF OFFENSE, ALASKA, 1975

Alcohol-related Offenses	Males	Females	Both
DWI	43%	31%	41%
Disorderly conduct	19%	24%	20%
Liquor laws	15%	26%	17%
Other assaults	19%	16%	18%
Drunkenness	4%	3%	4%
Vagrancy	*	*	*
All Alcohol-related Arrests	100%	100%	100%

* Less than one percent

Source: Based on data provided in
Alaska Criminal Justice Plan, 1977, Volume 1,
p. 46. Prepared by Criminal Justice Planning Agency

In summary, the basic distribution of alcohol-related arrests by sex shows a slightly greater percentage of males arrested than is characteristic of arrests for all offenses. The distribution of arrests for each alcohol-related offense shows a major concentration of male arrests for the offense of driving-while-intoxicated, whereas female alcohol-related arrests are more evenly distributed across the offenses of DWI, liquor violations and disorderly conduct. One of the other distinguishing characteristics of female alcohol-related arrests is

the relatively greater percentage of arrests for liquor law violations, compared to male alcohol-related arrest patterns.

Law Enforcement, Alcohol-Related Arrests and Age

The distribution of all arrests for Part I and Part II type offenses by age shows marked differences for juveniles (under 18) and adults (over 18). During 1975, about 70% of all persons arrested for all offenses were adults and 30% were juveniles. However as can be seen in Table VI-12, 53% of all arrests for Part I type offenses were juveniles. Thus, although 70% of all persons arrested are adults, more than half of all arrests for Part I offenses are juveniles and more than three-fourths of arrests for Part II offenses are adults.

TABLE VI-12
PERCENTAGE OF ARRESTS FOR ALL OFFENSES AND
PART I AND PART II OFFENSES FOR
JUVENILES AND ADULTS
ALASKA, 1975

	Part I Offenses	Part II Offenses	All Offenses
Juveniles (under 18)	53%	22%	30%
Adults (over 18)	47%	78%	70%
Both	100%	100%	100%

Source: Based on data provided in
Criminal Justice Plan, 1977, Volume 1,
p. 45. Prepared by Criminal Justice Planning Agency.

From the perspective of adult and juvenile arrests, as provided in Table VI-13, the preponderance of adult arrests for Part II type offenses can be seen again. Of all adults arrested only 15% are arrested for Part I type offenses and 85% of all adults are arrested for Part II type offenses. The pattern for juvenile arrests is very different. The distribution of juvenile arrests between Part I and Part II type offenses is much more even, about 43% and 57%.

TABLE VI-13
PERCENTAGE OF JUVENILE AND ADULT
ARRESTS FOR ALL OFFENSES AND
PART I AND PART II
OFFENSES, ALASKA
1975

	Juvenile Arrests	Adult Arrests	All Arrests
Part I Offenses	43%	15%	23%
Part II Offenses	<u>57%</u>	<u>85%</u>	<u>77%</u>
All Offenses	100%	100%	100%

Source: Based on data provided in Criminal Justice Plan, 1977, Volume 1, p. 45 Prepared by the Criminal Justice Planning Agency.

The distribution of juvenile and adult arrests for the designated alcohol-related offenses is presented in Table VI-14. This distribution is similar to the pattern for arrests for Part II type offenses. Of all arrests for all of the alcohol-related offenses, 87% were adults compared to 13% which were juvenile. Review of each of the alcohol-related offenses indicate that the percentage of adult arrests equalled or exceeded 95% for four of the designated offenses.

However, for the offenses of liquor law violations and other assaults, the percentage of juvenile arrests exceed adult arrests--52% for liquor law violations and 64% for other assaults.

TABLE VI - 14
PERCENTAGE OF ALCOHOL-RELATED ARRESTS BY
OFFENSE FOR JUVENILES AND ADULTS, ALASKA
1975

	Juveniles	Adults	Both
DWI	2%	98%	100%
Disorderly conduct	5%	95%	100%
Liquor laws	52%	48%	100%
Other assaults	64%	36%	100%
Drunkenness	2%	98%	100%
Vagrancy	4%	96%	100%
All alcohol-related arrests	13%	87%	100%

Source: Based on data provided in
Criminal Justice Plan, 1977, Volume I, p. 45.
Prepared by the Criminal Justice Planning Agency.

The distribution of the percentage of all juvenile and all adult arrests that are alcohol-related is presented in Table VI-15. Arrests for all alcohol-related offenses comprised about 39% of the total number of arrests in 1975. But review of juvenile and adult arrests separately shows that about 16% of all juvenile arrests were alcohol-related compared to about 47% of all the adult arrests.

TABLE VI - 15
PERCENTAGE OF TOTAL JUVENILE AND ADULT
ARRESTS BY EACH AND ALL ALCOHOL-RELATED
OFFENSES, ALASKA, 1975

	Juveniles	Adults	Both
DWI	1%	22%	14%
Disorderly conduct	1%	10%	8%
Liquor laws	11%	4%	7%
Other assaults	3%	9%	6%
Drunkenness	*	2%	5%
Vagrancy	*	*	*
All alcohol-related arrests	16%	47%	39%

* less than one percent

Source: Based on data provided in
Criminal Justice Plan, 1977, Volume I, p. 45.
Prepared by the Criminal Justice Planning Agency.

For adults, the offense category of DWI accounted for 22% of all the arrests (or 46% of all adult arrests for alcohol-related offenses). For juveniles, arrests for liquor law violations accounted for 11% of all juvenile arrests, and 3% of all juvenile arrests were for other assaults (These two categories account for 85% of all juvenile arrests for alcohol-related offenses).

Sample Survey: Alcohol-Related Arrests

The records maintained for persons arrested for any offense do not systematically include information regarding whether or not the person's behavior or self-report indicated the consumption of alcohol during, or prior to, the commission of the offense, or drunken or intoxicated behavior.

In an attempt to obtain more accurate and clear information regarding the relationship between alcohol-involvement and arrest, the Criminal Justice Planning Agency and the State Office on Alcoholism jointly conducted an enforcement study. Law enforcement officers were asked to make a notation at the time of each arrest indicating that: the arrested person had been drinking; the arrested person had not been drinking; or, no determination could be made.

During this one month sample study, conducted in May of 1976, three law enforcement jurisdictions provided information complete enough to be able to make some determination about the number of alcohol-related arrests for any and all offenses. The information has several limitations. The information pertains only to the jurisdictions reporting and applies only to the one month during which the information was collected. It does not allow for consideration of seasonal variations in arrest patterns or rates.

Nevertheless, in spite of these limitations, the information is provided below in Table VI-16, for each of the reporting jurisdictions. In the municipality of Anchorage, during the month of May, 1976, 49% of all arrests were determined to be alcohol-related, whereas for adults, 58% of arrests for all offenses were alcohol-related.

In the other urban reporting area, the results were very similar. Forty-eight percent of all arrests were alcohol-related. For adults and juveniles, the alcohol-related percentage of arrests was 59% and 16%.

TABLE VI-16
SAMPLE SURVEY: ALCOHOL-RELATED ARRESTS
IN THREE LAW ENFORCEMENT JURISDICTIONS,
ALASKA, MAY, 1976

	All Arrests	Alcohol- Related Arrests	Percent Alcohol- Related
Anchorage:			
Adults	419	244	58%
Juveniles	90	9	10%
Both	509	253	49%
Fairbanks			
Adults	155	92	59%
Juveniles	57	9	16%
Both	212	101	48%
Alaska State Trooper Detachment I: *			
Adults	123	99	80%
Juveniles	27	10	37%
Both	150	109	73%
All Adults	697	435	62%
All Juveniles	174	28	16%
Adults & Juveniles	871	463	53%

* AST Detachment I is an area of jurisdiction that surrounds the city of Fairbanks.

The Alaska State Trooper Detachment I represents a jurisdiction that would be classified a rural setting. It is the area that surrounds the city of Fairbanks. In this rural jurisdiction the percentage of alcohol-related arrests was considerably higher than in the urban areas. About 73% of all arrests were alcohol-related. For adults, 80% of all arrests for all offenses were alcohol-related and for juveniles, the figure was 37%.

These figures, of course, cannot be generalized to the entire state. But even though they represent a somewhat scattered sampling, the results do demonstrate the conservative nature of the estimate of alcohol-related arrests presented in the preceding sections. The information also serves to reinforce the urban-rural, and adult-juvenile differences described earlier, for the designated alcohol-related offenses.

C. ALCOHOL-RELATED CASES AND PROSECUTION,
ADJUDICATION AND CORRECTIONS

The nature of the records system for the disposition of court cases precludes definitive analysis of the nature and extent of the alcohol-related caseload for the judicial system. However, the impact of the nature and extent of alcohol-related arrests on the judicial and corrections components of the criminal justice system is clear. Although an in-depth analysis cannot be attempted at this time, a few remarks are provided to at least set some rough estimates of the scope of the impact of alcohol-related criminal cases.

Alcohol-Related Cases and
the Judicial System

The indicators provided to consider the scope of alcohol-related impact on the judicial system are the relative proportion of alcohol-related misdemeanor case filings and convictions. With respect to misdemeanor cases filed with the district courts within the state, in 1975, if the same categories of offenses that were used to define alcohol-related cases for the law enforcement analysis were applied to the judicial system, then somewhere between 48% and 75% of the misdemeanor cases filed

were alcohol-related.¹⁶ More specifically, at least 48% of the cases may be classified as alcohol-related on the basis of their conventional association with alcohol. These cases include charges for driving-while-intoxicated (or OMVI), liquor law violations, reckless driving, negligent driving, and leaving the scene of an accident. The other 27% of the misdemeanor filings that may be alcohol-related are those cases very often associated with alcohol-abuse-assault, malicious destruction, carrying a concealed weapon, and nuisance violations such as loitering, indecent exposure and disorderly conduct. If only the nuisance type violations were added to the minimum estimate of 48%, excluding filings for the more violent type of misdemeanors, then the revised estimate would be 62% of all misdemeanor filings (15,450)¹⁷ as alcohol-related in 1975. For the purpose of this section, the estimate of 62%, with a range from 48% to 75%, is sufficient.

Judicial convictions for alcohol-related cases ranged from 42% to 78% of all convictions during 1975.¹⁸ The estimate of 42% of all convictions (about 9,042)¹⁹ as alcohol-related refers only to those cases defined by alcohol involvement or excess--driving-while-intoxicated, liquor law violations, etc. The addition of the cases typically regarded as alcohol-related would bring the estimate to about 68% of all convictions as alcohol-related, with a range from 42% to 78%.

Alcohol-Related Cases and Corrections

Following law enforcement arrest and judicial conviction, the corrections system represents the next level of contact between alcohol-related crimes and the criminal justice system. Clearly, the impact is

not nearly as great for the corrections component, as dismissed charges and suspended sentences substantially reduce the number of persons who enter the corrections system. Nonetheless, the numbers and types of cases that eventually do become part of the corrections system represent another indicator of the impact of alcohol-related crime on the criminal justice system.

Perhaps the most important overall effect on the Alaska corrections system, with respect to alcohol-related crime, has been one of the consequences of passage of the state's Uniform Alcoholism and Intoxication Treatment Act, in 1972. By decriminalizing drunk-in-public offenses, this single piece of legislation has had a dramatic effect in eliminating the incarceration of many cases and thus lowering the number of alcohol-related cases serving sentences of more than ten days. From 1971 to 1975, the number of releases for jail sentences of ten days or longer for alcohol-related offenses decreased by 72%. During 1975, the only year for which statistics are available, more than 59% of all served sentences of fewer than ten days were for alcohol-related offenses.

Another indicator of systematic impact is the recidivism rate for offenders whose original incarceration was for alcohol-related offenses.²⁰ As shown by the results of a recidivism study conducted by the Criminal Justice Planning Agency, the second highest rate of recidivism, 43% among persons released in 1971 and 1972, occurred for alcohol-related offenders.²¹

D. SUMMARY

In spite of the attention given by the media and the public to the relationship between alcohol consumption and violent crimes, inspection of the current arrest data indicates clearly that the greatest impact on Alaska's criminal justice system derives primarily from Part II type, misdemeanor offenses. The public's concern about alcohol and violent crime is in part justified. Alaska's rate for serious crimes against persons (homicide, rape and aggravated assault) is higher than the national average and reasonable estimates indicate that 64% of homicides, 34% of rapes, and 41% of aggravated assaults are related to alcohol. Nevertheless, these three crimes, and robbery, account for only 4% of all arrests in Alaska. Although these crimes are of concern to the public precisely because they are serious and violent, it is that 77% of lesser, non-violent, misdemeanor crimes which has the greatest impact on the criminal justice system in Alaska. (The remaining 19% are Part I, serious, property crimes.) In terms of numbers of arrests, alcohol-related misdemeanor offenses have a much greater effect on the criminal justice system.

During the three years from 1973 to 1975, the Part II type, misdemeanor offenses considered to be "100% alcohol-related"--driving while intoxicated, disorderly conduct, liquor law violations, non-aggravated assaults, drunkenness, and vagrancy--accounted for 39% of all adult and juvenile arrests in the state. This figure should be considered as a conservative estimate since many individual arrests for other offenses

which involve alcohol could not be considered due to the present reporting systems. Thus, while alcohol plays a significant role in the serious crimes against persons, its main impact occurs at the misdemeanor level.

A consideration of the different socio-geographic settings showed that although the greatest volume of arrests for alcohol-related offenses is in the urban settings, where most of the people live, the greatest impact is in the rural-city settings. In these settings, a somewhat greater percentage of all arrests are for Part II type offenses. More significantly, however, nearly half, 48%, of all arrests were for alcohol-related offenses, compared to 39% in urban settings, and 34% in rural settings.

If attention is focused on adult arrests in the state, which comprise about 70% of all arrests for all offenses, then at least 47% of adult arrests should be considered to be alcohol-related. This group of adults accounts for 87% of all arrests for alcohol-related offenses, and is primarily composed of males--85%. Most of the adult arrests for alcohol-related offenses were for driving while intoxicated for both men and women. Females, however, showed a pattern of alcohol-related arrests more evenly divided among DWI, disorderly conduct and liquor law violations, whereas male alcohol-related arrests were very definitely concentrated on the DWI offense.

For juvenile arrests for alcohol-related offenses, about two-thirds were for liquor law violations. Liquor law violations and assaults together accounted for 85% of all juvenile arrests for alcohol-related offenses.

Although there is not enough data to adequately address the impact of alcohol-related arrests on the court and corrections components of the criminal justice system, it appears that misdemeanors would again be emphasized. Forty-eight to 75% of all misdemeanor cases filed with the district court were for alcohol-related offenses in 1975. Also, 42% to 78% of all misdemeanor convictions were for alcohol-related offenses.

During the period from 1971 to 1975, the number of releases for jail sentences of ten days or longer for alcohol-related offense decreased by 72%. Also, during 1975, more than 50% of all served sentences fewer than ten days were for alcohol-related offenses. In addition, the recidivism rate for alcohol-involved offenders was demonstrated to be about 43%.

A great deal of additional study is clearly in order for better understanding the impact of alcohol-related crime on the criminal justice system, particularly in the areas of Part I, felony offense, and civil court actions. On the basis of the information that is at hand, however, the nature and extent of the impact of alcohol-related crime on the criminal justice system in Alaska would have to be considered as quite significant and dramatic.

REFERENCE TABLE
TABLE VI-17

TOTAL ARRESTS FOR SELECTED OFFENSES FOR EACH
SOCIO-GEOGRAPHIC SETTING IN ALASKA, 1973.

	Urban ^a	Rural-City ^b	Rural ^c	Totals
Total Arrests	10,831	1,188	3,124	15,143
Part I Total	2,435	267	640	3,342
Violent Crime Subtotal	357	43	106	506
Homicide	19	0	10	29
Rape	26	5	10	41
Aggravated Assault	222	36	80	338
Property Crime Subtotal	2,078	224	534	2,836
Part II Total	8,396	921	2,484	11,801
Other Assaults	608	42	138	788
Sex Offenses	51	6	32	89
Liquor Laws	518	113	231	862
Drunkenness	563	149	97	809
Disorderly Conduct	1,084	99	87	1,267
Vagrancy	46	15	0	61
DWI	1,468	169	633	2,267

^a Includes Anchorage, Spenard, Fairbanks, Juneau, Ketchikan, and AST Detachment "C".

^b Includes Cordova, Haines, Homer, Hoonah, Palmer, Sitka, Valdez, Petersburg, and Wrangell. 1973 data for Ft. Yukon and Kenai were not available.

^c Includes AST Detachments B, D, E, F, G, H, I, and J.

Source: Based on compilation of data provided on FBI Unified Crime Reports obtained from each jurisdiction by special request for this study.

REFERENCE TABLE
TABLE VI-18

TOTAL ARRESTS FOR SELECTED OFFENSES FOR EACH
SOCIO-GEOGRAPHIC SETTING IN ALASKA, 1974.

	Urban ^a	Rural-City ^b	Rural ^c	Totals
Total Arrests	12,523	2,054	3,389	17,966
Part I Total	2,934	339	776	404
Violent Crime Subtotal	433	93	137	673
Homicide	29	2	18	49
Rape	37	8	11	56
Aggravated Assault	292	79	98	469
Property Crime Subtotal	2,491	246	639	3,376
Part II Total	9,589	1,715	2,613	13,917
Other Assaults	765	44	201	1,010
Sex Offenses	92	12	17	121
Liquor Laws	606	229	198	1,033
Drunkenness	1,228	239	78	1,545
Disorderly Conduct	1,079	146	103	1,328
Vagrancy	14	2	1	17
DWI	1,243	308	556	2,017

^aIncludes Anchorage, Spenard, Fairbanks, Juneau, Ketchikan, and AST Detachment "C".

^bIncludes Cordova, Haines, Homer, Hoonah, Palmer, Sitka, Valdez, Petersburg, and Wrangell.

^cIncludes AST Detachments B, D, E, F, G, H, I, and J.

Source: Based on compilation of data provided on FBI Unified Crime Reports obtained from each jurisdiction by special request for this study.

REFERENCE TABLE
TABLE VI-19

TOTAL ARRESTS FOR SELECTED OFFENSES FOR EACH
SOCIO-GEOGRAPHIC SETTING IN ALASKA, 1975.

	Urban ^a	Rural-City ^b	Rural ^c	Totals
Total Arrests	14,496	2,489	3,740	20,725
Part I Total	3,446	446	825	4,717
Violent Crime Subtotal	490	104	172	766
Homicide	22	2	20	44
Rape	39	11	17	67
Aggravated Assault	298	81	125	504
Property Crime Subtotal	2,956	342	653	3,951
Part II Total	11,050	2,043	2,915	16,008
Other Assaults	950	156	278	1,384
Sex Offenses	109	7	21	137
Liquor Laws	1,147	411	188	1,746
Drunkenness	244	24	10	278
Disorderly Conduct	1,175	190	102	1,467
Vagrancy	15	25	0	40
DWI	2,147	381	629	3,157

^aIncludes Anchorage, Spenard, Fairbanks, Juneau, Ketchikan, and AST Detachment "C".

^bIncludes Cordova, Haines, Homer, Hoonah, Palmer, Sitka, Valdez, Petersburg, and Wrangell.

^cIncludes AST Detachments B, D, E, F, G, H, I, and J.

Source: Based on compilation of data provided on FBI Unified Crime Reports obtained from each jurisdiction by special request for this study.

FOOTNOTES

1. Summaries of the Transcripts of Public Hearings conducted by the Criminal Justice Planning Agency. Prepared by the State Criminal Justice Planning Agency.
2. Criminal Justice Plan, 1977. Volume I. pp.69. Prepared by the State Criminal Justice Planning Agency.
3. *ibid.*
4. *ibid.*
5. The Economic Cost of Alcohol Abuse and Alcoholism, 1971. Prepared for the National Institute on Alcohol Abuse and Alcoholism by Policy Analysis, Inc. Boston, Mass. pp. 122.
6. *ibid.*
7. *ibid.*
8. Alaska Criminal Justice Plan, 1976. Volume II. Prepared by the State Criminal Justice Planning Agency. pp.36.
9. The Economic Cost of Alcoholism and Alcohol Abuse, *op.cit.*
10. *ibid.*
11. Alaska Criminal Justice Plan, 1976, *op.cit.*, pp.40.
12. The Economic Cost of Alcohol Abuse and Alcoholism, 1971,*op.cit.*, pp.125
13. *ibid.*
14. Alaska Criminal Justice Plan, 1976, *op.cit.*, pp.47.
15. *ibid.* pp.43.
16. Alaska Court System, 1975 Annual Report, pp.77-122.
17. *ibid.*
18. *ibid.*
19. *ibid.*
20. Recidivism in Alaska, 1971-1975. Report prepared by the Division of Corrections, Department of Health and Social Services. 1976
21. *ibid.*

PART VII. ALCOHOL AND TRAFFIC SAFETY

A. INTRODUCTION

Highway or traffic accidents do not seem to be totally random events. At least for large population groups, the total number of accidents is statistically predictable. Examination of traffic crashes, particularly fatal crashes, over the recent years has resulted in the identification of certain recurring patterns and common factors. Within this area of interest, causes of accidents tend to be classified in one of three broad categories--the highway, the vehicle and the driver. Each of these general categories has multiple components. However, about 80% of all traffic accidents are caused by the driver, rather than malfunction of the vehicle or poorly designed or maintained roads. Within this major category, driver impairment as a result of the consumption of beverage alcohol has been identified as a factor very frequently associated with fatal and injury crashes as well as property damage crashes.

It is known that alcohol impairs a driver's capability and thus actual driving performance; consequently, the probability of being involved in an accident is greatly increased. In addition, the probability of being responsible for the accident also increases dramatically.

Thus, the subpopulation of motorists who drive while impaired by alcohol, or drive while legally drunk, have become a primary target group--a group of immediate concern and direct action in attempts to reduce the number of accidents and resulting human and economic losses.

Attempts to reduce motor vehicle crashes in general, and alcohol-related fatalities in particular, have involved the investigation of a number of general factors. The relationship between motor vehicle crashes and alcohol consumption in Alaska is described and discussed in terms of several of these factors in the following sections: first, the relationship between alcohol consumption and physical and mental impairment; second, the nature and trends of different types of motor vehicle crashes; third, the nature and trends of alcohol-involvement in motor vehicle crashes; and fourth, characteristics of drunk drivers in Alaska, and legal consequences.

Each of the categories is described and discussed in terms of current available information for Alaska and compared where possible with corresponding nationally reported findings.

B. ALCOHOL AND IMPAIRMENT

Investigation of alcohol involvement in highway accidents is based on a determination of the actual amount of alcohol in the body. The amount of alcohol in the body is referred to as blood alcohol concentration (BAC). Blood alcohol concentration is measured by means of a variety of chemical tests typically using samples of either blood, breath or urine. The most common method for expressing the concentration of alcohol in the blood is based on the number of grams of alcohol per 100 milliliters of blood. A BAC of .10% really means 100 milligrams of alcohol per 100 milliliters of blood.

There are several different ranges of BAC concentration that have become distinguished as indicative of different levels of impairment, based on medical and scientific investigation. A BAC up to about .04% indicates a level of impairment that is generally not considered serious.

From .05% to .09% BAC, ability and judgment are impaired, and the impairment can be observed in most people. In the range from .10% to .14%, ability and judgment are notably impaired in everyone. BAC's above .15% indicate very serious impairment. In most instances, a BAC of .50% or .60% is fatal. These ranges along with brief statements of explanation are presented in Table VII-1.

TABLE VII-1
BLOOD ALCOHOL CONCENTRATION AND PREDICTABLE KINDS OF IMPAIRMENT

BAC	Impairment
.00-.04%	Impairment--Not Serious Absence of overt effects; mild alteration of feelings, slight intensification of existing moods.
.05-.09%	Ability and Judgment Impaired Feelings of warmth, relaxation, mild sedation; exaggeration of emotion and behavior; impairment of fine motor skills; increase in reaction time. Visual and hearing acuity reduced; slight speech impairment; minor disturbance of balance; increased difficulty in performing motor skills, feelings of elation or depression.
.10-.14%	Ability and Judgment Notably Impaired in Everyone Difficulty in performing many gross motor skills; uncoordinated behavior; definite impairment of mental faculties, memory and judgment.
.15%+	Ability and Judgment Seriously Impaired in Everyone Exhibition of major impairment of all physical and mental functions; irresponsible behavior; general feeling of euphoria; difficulty in standing, walking, talking, distorted perception and judgment. If the BAC reaches .50% a coma develops and by .60% death can result.

Source: Adapted from Manual for Judicial Seminar in Alcohol and Highway Safety, C-9, Indiana University Institute for Research in Public Safety.

Alcohol is absorbed very quickly into the blood stream. As an illustration of how these different BAC's might be achieved, the following example is given. A 160 lb. drinker (assuming normal good health) drinking one ounce of 86 proof alcohol per drink, would need to

consume about four drinks in two hours to reach .05% BAC, about six and one-half drinks in two hours to reach .10%, and about nine drinks in two hours to attain a BAC of .15%.

BAC and Probability of Crash Involvement

In addition to describing the nature and levels of impairment associated with different blood alcohol concentrations, research has estimated the probability of involvement in an accident associated with different BAC levels. The following range of estimated probabilities has gained general acceptance over the last few years.* In the BAC range from .05% to .10%, the relative probability of being involved in a crash begins to increase considerably, such that the chances of a crash are seven times greater by the time the level of .10% BAC is reached. Beyond this point, the relative hazard of a crash increases appreciably. At the BAC level of .15%, the chances of a crash are 25 times more likely. At .18% BAC (the average BAC level for DWI arrests in Alaska, see following section) the chances of a crash are sixty times more likely. By .20% the probability of crash involvement is 100 times more likely.

In general, the chances of a more serious accident, compared to the run of the mill fender-bender, increases at a faster rate above the .08% BAC level. This level--.08% blood alcohol concentration or higher--is really considered to be incompatible with safe driving. The probabilities presented here refer to the probability of responsibility for the crash, not just involvement in one.

Although the predictable levels of impairment and probabilities of

*For more complete review of information, see Chapter VI, Alcohol and Health, NIAAA, June, 1974.

crash involvement associated with specific BAC ranges are generally accepted within the scientific and medical community, there is less acceptance and agreement among different legislative and judicial jurisdictions regarding legal interpretations of this information. However, in many American jurisdictions, including Alaska, a BAC of .10% is the legal standard for defining or presuming impairment or intoxication.

C. MOTOR VEHICLE CRASHES--ALASKA

An overall view of the number and rates of motor vehicle crashes for the state of Alaska, from 1971 to 1975 is presented in Table VII-2. The total number of all motor vehicle crashes increased from 13,655 in 1971 to 22,522 in 1975, a 65% increase. During the same period the number of vehicle miles driven in the state increased by 74%, from 1,469 million miles to 2,560 million miles, and the number of licensed drivers increased by 39%, from 160 thousand to 222.5 thousand. During this same period the overall population of the state increased by about 102,000, which represents an overall increase of about 33%.

Each of the types of motor vehicle crashes and fatalities are also expressed in terms of rates--number per 100 million vehicle miles and per 1000 licensed drivers in order to provide a more realistic perspective. As can be seen on the basis of vehicle miles, the rate of total accidents actually declined somewhat, from 929 to 881 crashes per 100 million miles, a decrease of about 5%. However, in terms of licensed drivers, there was a 19% increase in the rate for all types of crashes. It would seem that, on the average, licensed drivers covered disproportionately more miles in 1975 compared to 1971, but were involved in more accidents.

TABLE VII-2
MOTOR-VEHICLE CRASHES, ALASKA, 1971-1975

	1971			1972			1973			1974			1975		
	H	Per 10 ⁸ V-M	Per 10 ³ Lic'd Dr. ^b	H	Per 10 ⁸ V-M	Per 10 ³ Lic'd Dr.	H	Per 10 ⁸ V-M	Per 10 ³ Lic'd Dr.	H	Per 10 ⁸ V-M	Per 10 ³ Lic'd Dr.	H	Per 10 ⁸ V-M	Per 10 ³ Lic'd Dr.
Motor Vehicle Crashes	13,655	929	85.3	15,085	988	91.4	15,671	959	84.1	18,619	888	96.5	22,544	851	101.3
Fatal Crashes	57	3.88	.356	54	3.53	.327	70	4.29	.376	74	3.53	.353	105	4.10	.47
Persons Killed	65	4.42	.406	61	3.99	.369	79	4.85	.425	89	4.24	.461	119	4.64	.53
Personal Injury Crashes	1,975	134	12.3	2,009	131	15.4	2,117	130	11.4	2,332	111	12.1	2,819	110	12.7
Persons Injured	2,826	192	17.6	2,957	193	17.9	2,916	179	15.7	3,280	156	17.0	3,997	156	17.2
Property Damage	11,623	791	72.6	13,022	853	78.9	13,434	825	72.3	16,213	773	84.0	19,525	763	87.5
Annual Vehicle Miles (millions)	1,469			1,526			1,628			2,095			2,560		
Annual Licensed Drivers (thousands)	160.0			165.0			185.7			192.9			222.5		

^aVehicle Road miles expressed per 100 million miles

^bLicensed drivers expressed per 1000 licensed drivers

Inspection of all the information for each type of accident in Table VII-2 shows that the overall increase in total accidents was accounted for mainly by the increase in property damage accidents and fatal crashes. Particularly important are the numbers and rates for fatal crashes and fatalities. Except for the year of 1972, both the number of fatal crashes and fatalities have increased steadily. However, the rates of occurrence have vacillated over the years. Nonetheless, given the data available for the last five years, the net effect has been a gradual increase of about 32% in both fatal crashes and persons killed in terms of rate per licensed drivers (40 compared to 50 fatalities per 100,000 licensed drivers).

This trend is notably different from the national trend. The motor vehicle fatality rate for the nation has decreased steadily

since 1925.* A graphic comparison of the fatality rate for the U.S. and for Alaska is presented in Figure VII-1. The generally increasing fatality rate, in terms of both vehicle miles driven and number of licensed drivers, can be seen more clearly in contrast to the generally decreasing fatality rate for the nation.

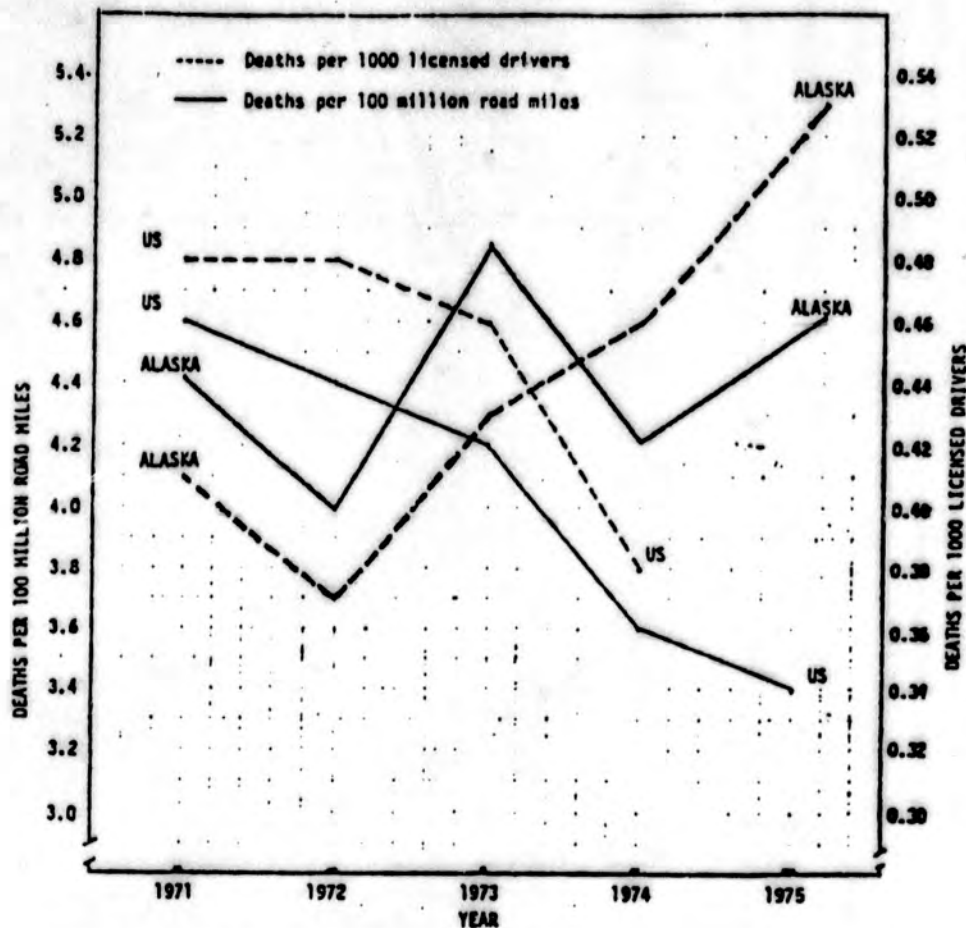


FIGURE VII-1 Fatality rates, U.S. and Alaska, 1971-1975

Sources: U.S. information--Accident Facts, 1975 edition, National Safety Council.
Alaska information--Computed from raw data obtained from the Department of Highways and the Department of Public Safety.

D. MOTOR VEHICLE CRASHES AND ALCOHOL INVOLVEMENT--ALASKA

An overview of the available data for the number of different types of motor vehicle crashes and the known extent of alcohol involvement,

*Accident Facts, 1975 Edition, National Safety Council.

for the years 1971 to 1975, is presented in Table VII-3. For the last five years the extent of alcohol involvement in fatal crashes shows considerable fluctuation. Independent of the number of fatal crashes, the percentage of fatalities that were known to involve alcohol ranged from 24% to 46%; an average for the last five years would be about 38%.

TABLE VII-3
MOTOR VEHICLE CRASHES AND ALCOHOL INVOLVEMENT^a
ALASKA, 1971-1975

Crash Data	1971		1972		1973 ^c		1974		1975	
	Total	% A-R ^b	Total	% A-R	Total	% A-R	Total	% A-R	Total	% A-R
Motor Vehicle Crashes	13,655		15,085		15,621		18,619		22,544	
Fatal Crashes	57	46%	54	20%	68	37%	74	23%	105	45%
Persons Killed	65	46%	61	28%	76	33%	89	25%	119	46%
Single-Vehicle Fatalities					47	31%	54	24%	56	33%
Multi-Vehicle Fatalities					29	38%	35	26%	63	61%
Pedestrian Fatalities ^d					7	29%	17	26%	19	37%
Personal Injury Crashes	1,975		2,009		2,117		2,332		2,819	
Property Damage Crashes	11,623		13,022		13,434		16,213		19,525	

^aInformation missing from Table is not available from existing records.

^bPercent of Total that is alcohol-related.

^cNumber of total crashes and persons killed not the same as in Table VII-2. Files for two crashes, (three crashes) were missing.

^dNumber of pedestrian fatalities also included within single- and multiple-vehicle totals.

Source: Data compiled from multiple files of Division of Research and Planning, Department of Public Safety.

The upper range of the extent of alcohol involvement for Alaska overlaps with the range of alcohol involvement in nationally reported findings. These findings show that from 40% to 55% of all fatalities are alcohol-related.* Alaska's lower average of alcohol involvement, and the extreme fluctuation shown in Table VII-3 for the last five years, may result from the difficulties of collecting data in Alaska.

*Alcohol and Health, Chapter VI, NIAAA.

Because the nature, time, and place of the accident all affect the ability to measure blood alcohol concentration at the time of the accident, the figures for accidents in remote areas may underrepresent the actual extent of alcohol involvement. In contrast, reported findings for the Municipality of Anchorage in 1976 showed that 16 of 20 fatalities--80%--were alcohol-related. Even if one accepts available statewide information, almost one-half of the motor vehicle fatalities in 1975, and one-fourth to one-half from 1971 to 1975, involved alcohol. Any improvement in collection and reporting procedures could only increase that figure.

Single and Multiple Vehicle Fatalities

Examination of the extent of alcohol involvement in single and multiple vehicle fatalities again shows fluctuation for the three year period for which data are available. For each of the years however, a greater percentage of multiple vehicle fatalities, compared to single vehicle fatalities, involved alcohol. This trend is distinguished from nationally reported findings which show a greater extent of alcohol involvement for single vehicle fatalities compared to multiple vehicle fatalities and, also, a much higher extent of alcohol involvement than is the case for Alaska. Over the three years shown for Alaska, from 24% to 33% of all single vehicle fatalities were alcohol-related compared to a range of 26% to 61% of all the fatalities for multiple vehicle fatalities. Nationally reported findings show that from 55% to 65% of all single vehicle fatalities are alcohol-related compared to 25% to 50% for multiple vehicle fatalities.*

*Alcohol and Health, Chapter VI.

Daytime and Nighttime Fatalities

The time of day of an accident is another factor for consideration. For the purpose of this analysis, fatalities will be reviewed by time of occurrence during the nighttime or daytime. Nighttime is defined as the period from 8 PM to 8 AM. The number of fatalities, expressed in terms of number per 1000 licensed drivers, for 1973 to 1975, is provided in Table VII-4.

TABLE VII-4
DAYTIME AND NIGHTTIME FATALITIES AND ALCOHOL INVOLVEMENT, ALASKA, 1973-1975*

	1973		1974		1975	
	Total	A/R	Total	A/R	Total	A/R
All	.422	.140	.459	.114	.535	.247
Night	.224	.108	.258	.098	.297	.171
Day	.198	.032	.201	.016	.238	.076
Night/ Day	1.131	3.28	1.284	6.13	1.248	2.25

*Fatalities expressed as number per 1000 licensed drivers (see Table VII-2).

The ratio of nighttime to daytime fatalities for all fatalities shows less variation over the three year period than the ratio for alcohol-related fatalities. However, the ratio of nighttime to daytime alcohol-related fatalities is consistently much larger than the night/day ratio for all fatalities. This is to say that alcohol-related fatalities occur to a much greater extent in the evening hours than the daytime hours, and that the difference is much greater than the difference in the time of occurrence for all fatalities. For all fatalities, the ratio was a little more than one fatality at night for each daytime fatality. But for alcohol-related fatalities, the ratio ranged from more than two, to more than six nighttime alcohol-related fatalities for each daytime alcohol-related fatality. The hours of nighttime and daytime used here cover the same hours of driving that are generally considered to be the time for recreational driving compared to the daytime hours that cover commercial driving and the to- and from-work

traffic.

Pedestrian Fatalities

When viewed as a separate category, pedestrian fatalities as a result of either single or multiple vehicle crashes ranged in extent of alcohol involvement from 26% to 37% for the three year period. Nationally reported findings show that about 25% of all motor vehicle pedestrian fatalities were alcohol-related in 1974.*

E. MOTOR VEHICLE DRIVERS

The great bulk of the driving population is comprised of persons who have had few if any reportable crashes or traffic convictions for serious traffic offenses. In addition, random samples of drivers have shown that 80% to 90% register no measurable blood alcohol concentration. About 5% to 10% of the drivers have low BAC's, under .05%. Another 3% to 10% measure in the range of .05% to .09%. About 3% to 5% have a BAC greater than .10%, with about 1% higher than .15% BAC.**

This general picture contrasts very sharply with the BAC characteristics of persons involved in accidents, particularly fatal accidents. Nationally reported information states that from 40% to 55% of all fatally injured drivers had a blood alcohol concentration that exceeded .10%. Similarly about 10% to 25% of drivers in serious injury crashes had BAC's that exceeded .10%, and about 5% to 10% of the drivers in general run-of-the-mill fender-benders had BAC's in the range above .10%. In addition, about 25% of pedestrian fatalities involved pedestrians with BAC's above .10%.

*Alcohol and Health, Chapter VI, 1974.

**Ibid.

The information regarding BAC levels and accident involvement seems to be alarmingly consistent across many different cities and state, including Alaska. Although there are many differences in measurement and reporting procedures, the evidence is quite clear that drivers with high BAC levels constitute an extremely high proportion of the group of persons involved in fatal and serious injury crashes.

Drunk Drivers

The only information about the BAC levels of Alaskan drivers comes from the recorded findings of the measurement of blood alcohol concentration at the time of an accident or arrest for driving while intoxicated (DWI; or OMVI--operating a motor vehicle while intoxicated) from a variety of jurisdictions around the state. This information, of course, characterizes only a subpopulation of drivers in the state. The information regarding alcohol involvement and fatalities concerned only those drivers in fatal accidents. No other random or systematic sampling of drivers has been done in the state to determine the distribution of BAC levels among the population of drivers not involved in an accident or not arrested for DWI. Nonetheless, the relationship between high BAC levels and the increased probability of being involved in an accident is quite clear, and focusing on the subpopulation of drivers arrested and convicted for DWI is very useful since this group is defined by its BAC level. In the state of Alaska, presumption of intoxication is legally based on a blood alcohol concentration of .10% or above. (Under the law, other evidence is required to substantiate the BAC finding and the arresting officer must have had probable cause to stop the driver in the first place--usually driving behavior indicative of impairment.)

DWI Arrests and BAC Statistics

The vast majority of drivers arrested for DWI have BAC levels in the extremely high range. Nationally reported findings show that about two-thirds of the DWI drivers have BAC's above .185%. This contrasts sharply with nationally reported findings of BAC levels of randomly selected drivers that show less than 1% of the drivers not involved in an accident or a DWI arrest have that high a BAC level.*

The number of persons arrested for DWI in Alaska and the distribution of BAC's from 1973 to 1975 is presented in Table VII-5. The number of arrests for DWI for each of the years is significantly above nationally reported averages. In 1974, the national average was 9.1 arrests per 1000 licensed drivers, an increase of 75% compared to 1969.** This figure contrasts with rates of arrest in Alaska in 1973, 1974, and 1975 of--12.6, 11.6 and 14.9 per 1000 licensed drivers.

TABLE VII-5
BAC STATISTICS AT TIME OF ARREST FOR ALL ENFORCEMENT JURISDICTIONS, ALASKA, 1973-1975

LOCAL ARREST/BAC STATISTICS	1973	1974	1975
Arrests For Drinking Driving	2337	2244	3330
BACs Obtained (Total)	1849	1880	2410
Refusals	168	178	291
Negative	20	35	50
.01 to .04	31	26	43
.05 to .09	66	64	117
.10 to .14	280	376	497
.15 to .19	622	682	805
.20 to .24	556	502	601
.25 +	274	195	297
Average BAC Obtained	.187 %	.176 %	.177 %

Based on data from AS: Detachments B, C, D, G, H, I; and Anchorage, Spenard, Fairbanks, Ketchikan, Kodiak, and Sitka Police Departments.

*Alcohol and Health, Chapter IV, 1974.

**The National Highway Safety Needs Study, U.S. Department of Transportation, April, 1976.

The range and distribution of BAC levels obtained at the time of arrest is similar to national findings, but the average BAC level for Alaska during the years shown is somewhat lower than the national average. The average BAC's in Alaska for each of the three years shown was .187%, .176%, and .177%; this compares to a national average BAC of about .20%.

Review of the distribution of BAC's in Table VII-5 shows the greatest number of DWI's to be in the upper range of the distribution. In fact, during 1975, over 92% of the DWI's registered a BAC level above .10%, the legal lower limit for presumption of intoxication in Alaska, a limit indicative of notable impairment in everyone (see Table VII-1). Further calculation shows that more than 71% of the persons arrested for DWI registered a BAC at or above .15%--indicative of very seriously impaired judgment and ability. (A 160 lb. person would need to consume nine drinks of one ounce 86 proof liquor each, within two hours to reach .15%BAC). This distribution of BAC's is considerably different from the BAC distribution for all drivers which shows that 80%-90% register no measurable BAC.

Generally in most jurisdictions, arrests for DWI made by the Alaska State Troopers (AST) are outside of the municipal boundary. The number of arrests and overall distribution of BAC's for Alaska State Troopers and for municipal police departments (PD) are presented in Table VII-6. Comparison of the distribution of BAC's for all AST detachments and all municipal police departments shows very little difference. The average BAC level for the AST arrests is very slightly higher for each of the years but the differences would be insignificant.

It should be noted however, in Table VII-6, that the total number of DWI arrests by the Alaska State Troopers increased quite dramatically in the three year period shown. Total AST arrests for DWI increased by 56%, total municipal police department arrests increased by about 35%.

No accurate information is available, but general consensus indicates that most of the population gain, and gain in licensed drivers, occurred in the city areas, compared to the outlying areas.

TABLE VII-6

BAC STATISTICS AT TIME OF ARREST BY ALL REPORTING ALASKA STATE TROOPER (AST) DETACHMENTS AND CITY POLICE DEPARTMENTS (PD), ALASKA, 1973-1975

LOCAL ARREST BAC/STATISTICS	1973		1974		1975	
	AST	PD	AST	PD	AST	PD
Arrests For Drinking Driving	875	1462	732	1512	1361	1969
BACs Obtained (Total)	995	1554	1015	865	1360	1050
Refusals	98	70	114	64	167	124
..... Negative	5	15	14	21	11	39
..... .01 to .04	11	20	13	13	18	25
..... .05 to .09	32	34	40	24	61	56
..... .10 to .14	159	121	222	154	298	199
..... .15 to .19	342	280	347	335	466	339
..... .20 to .24	296	260	275	227	358	243
..... .25 + ...	150	124	104	91	148	149
Average BAC Obtained	.188%	.184%	.176%	.175%	.177%	.176%

Based on data from AST Detachments B, C, D, G, H, I; and Anchorage, Spenard, Fairbanks, Ketchikan, Kodiak, and Sitka Police Departments.

A further breakdown on DWI arrests and average BAC level is provided by location--by each AST detachment and each municipal location, in Table VII-7. (See state map showing detachment boundaries--at end of this Part, Figure VII-2.) Review of the magnitude and changes in BAC's for each year for each location shows only the slight downward trend that was evident in the presentation of overall statewide findings. However, review of the magnitude and changes in the number of DWI arrests for each jurisdiction shows the location of the changes. Most notable is AST Detachment C, a metropolitan jurisdiction, around the city of Anchorage, which showed a change in number of DWI arrests from 242 in 1973 to 710 in 1975, an increase of about 193%. During that same period, the municipal area of Anchorage/Spenard, located within Detachment C showed only a modest change, an increase

of about 1%. Similarly, Detachment E showed a substantial increase of 98% in number of DWI arrests from 1973 to 1975, as did the major municipal areas within that detachment, Juneau and Sitka; Ketchikan, also located within that detachment showed a slight decrease. Detachment I, in the Fairbanks area, showed a decrease in total number of DWI arrests that was about equal to the increase for the Fairbanks Police Department, during the three years shown.

TABLE VII-7
AVERAGE BAC LEVELS AND NUMBER OF DWI ARRESTS
BY AST DETACHMENTS AND CITY POLICE DEPARTMENTS AND STATEWIDE
ALASKA, 1973-1975

AST Detachments City Police Department	1973		1974		1975	
	DWI Arrests	Ave BAC	DWI Arrests	Ave BAC	DWI Arrests	Ave BAC
B	98	.184	138	.171	194	.171
Ketchikan	120	.167	76	.170	107	.184
Juneau	53	.181	101	.171	189	.173
Sitka	37	.175	73	.178	61	.182
C	242	.196	176	.180	710	.175
Anchorage/Spennard	863	.187	710	.175	873	.174
D	16	.183	7	.209	43	.178
E	18	-	19	-	13	-
Kodiak	67	.188	136	.164	151	.166
F	8	-	6	-	5	-
G	13	.180	16	.184	35	.188
H	10	.213	24	.210	82	.196
I	470	.182	346	.170	282	.180
Fairbanks	190	.188	180	.180	268	.182
J	0	.000	0	.000	2	-
Ave. BAC AST Detachments	875	.188	732	.176	1361	.177
City Police Departments	1462	.184	1312	.175	1969	.176
Ave. BAC State.	2337	.187	2244	.176	3330	.177

Based on FBI UCR reports, and breathalyzer logs provided by the Alaska State Troopers and indicated City Police Departments.

*See map at end of this Part for detachment boundaries, Figure VII-2.

The increase in the total number of arrests for the entire state was about 42% in absolute numbers; in terms of arrests per 1000 licensed drivers,

the increase was about 18% from 1973 to 1975. Arrests by the Alaska State Troopers increased by about 56%, while arrests by municipal police departments increased 35%. In total, the respective increases in arrests by each enforcement category contributed approximately equal proportions to the overall increase, but the DWI enforcement activity of the Alaska State Troopers showed a proportionally greater increase than the level of activity of the municipal departments.

Personal Characteristics--DWI Drivers

The demonstrated relationship between the high BAC levels and involvement in crashes, particularly fatal crashes, has resulted in the investigation of the personal characteristics of drivers arrested and convicted for DWI. Such investigation has the purpose of identifying factors or characteristics that can be used to develop and implement effective countermeasure programs to reduce not only the incidence of drunk driving, but the incidence of motor vehicle crashes as well.

A number of factors are considered in investigating the personal characteristics of DWI drivers. They generally concern the typical demographic variables of age, sex, race, etc., as well as driving history and drinking-and-driving patterns, and patterns of alcohol use. Limited data concerning some of these factors are available for Alaska and will be reviewed in this section. No data exists regarding drinking-and-driving patterns, and patterns of alcohol use for DWI drivers in this state. Such information is obtained mainly by means of specially designed research investigations. The information that will be reviewed in this section is data recombined in the categories of interest, based on data regularly collected for a variety of other purposes.

Demographic Characteristics. Limited information regarding the age, sex, and race of DWI's is available from the arrest records and driver license files. However, none of the information is systematically assembled. The information used is compiled from information recorded for a variety of purposes and summarized for varying time intervals (as opposed to review of individual case files). No information is available regarding such characteristics as marital status, occupation, or income.

Information obtained from summarized arrest data shows that most--98%--of the persons arrested for DWI during the three year interval from 1973 to 1975 were over 18 years of age. This figure did not vary more than 1% during the three year time period. Most of the arrested drivers were also males, a range of 88% to 91% for the three years. Further, most of the DWI's were non-Native, a range of 84% to 86%. This information is provided in Table VII-8, which also provides a division of information for arrests by the Alaska State Troopers and the various municipal police departments.

TABLE VII-8
AGE, SEX, AND RACE OF DRIVERS ARRESTED FOR DWI, ALASKA, 1973-1975

	AST ^a	1973 MPD ^b	State	AST	1974 MPD	State	AST	1975 MPD	State
Age									
<18	2%	1%	1%	1%	2%	2%	3%	2%	2%
>18	98%	99%	99%	99%	98%	98%	97%	98%	98%
Sex									
Male	93%	90%	91%	90%	92%	91%	90%	88%	88%
Female	7%	10%	9%	10%	8%	9%	10%	12%	12%
Race									
Native	7%	19%	14%	10%	19%	16%	9%	19%	14%
Non-Native	93%	81%	86%	90%	81%	84%	91%	81%	86%

^aAST--Alaska State Troopers

^bMPD--Municipal Police Departments (grouped together)

Additional information regarding demographic characteristics of DWI's was obtained from summarization of portions of driver license files. This information is presented along with available information concerning the driving history of drivers convicted for DWI during 1975, in Table VII-9. An attempt was made to summarize the information according to drivers who had one, two, or three or more convictions during the year, and by location of the court of conviction grouped in geographical areas corresponding to Alaska State Trooper Detachments.* The information presented represents the best that could be done at this time given the nature of the data, its accessibility, and available resources.

DWI convictions grouped by age groups show that about 99% were for persons 18 years or older. Almost two-thirds (64%) of the convictions involved drivers between the ages of 18 and 39. Another one-third were above the age of 40. Most of these convicted DWI's--88%--were males.

Given this limited demographic information from arrest and court records, DWI's in Alaska can be characterized as non-Native males between 18 and 39 years of age. This very brief profile corresponds with similar aspects of nationally reported characteristics of DWI drivers which show the typical drunken driver to be a male, between 25 and 35 years of age, who is single, separated or divorced, has a high school education and drives an older car (He also displays overly aggressive drinking habits and is a heavy drinker who often prefers beer to other alcoholic beverages).**

Driving History. Available information from the licensed driver files shows that 2,510 licensed drivers accounted for 2,618 DWI convictions during 1975. (Court records show a total of 2,668 convictions for DWI, see next

*See Table VII-11 at end of this Part for listing of court locations by AST Detachments.

**"The Drunken Driver: A Profile", Transportation Research News, May-June, 1976.

TABLE VII-9

OMVI DRIVER PROFILE--1975 OMVI CONVICTIONS, NUMBER OF DRIVERS, TOTAL PRIOR OMVI AND OTHER MAJOR TRAFFIC VIOLATIONS, TOTAL PRIOR ACCIDENT INVOLVEMENT AND SEX AND AGE DISTRIBUTION OF DRIVERS--DISTRICT AND MAGISTRATE COURTS--GROUPED BY ALASKA STATE TROOPER DETACHMENT REGIONS AND STATEWIDE ALASKA*

Detachment	1st, 2nd, 3rd Conviction in 1975	Number of Drivers 1975	Total Prior 1975 OMVI Convictions	Total Other Major Violations	Total Number Accident Involvements	Sex		Age									
						Female		Male		17		18-39		40-59		60	
						N	%	N	%	N	%	N	%	N	%	N	%
B	3	0	0	0	0	0	0	0		0		0		0		0	
	2	15	5	30	7	0	14	0		0		10		4		1	
	1	436	67	414	231	47	377	9		0		305		109		15	
	Total	451	72	444	238	48	391	89	0	0	315	69	113	25	15	6	
C	3	2	1	0	4	0	2	0		0		1		1		0	
	2	50	17	58	63	8	43	0		0		32		19		1	
	1	1,134	229	1,147	825	148	984	3		3		727		377		46	
	Total	1,186	247	1,205	892	156	1,027	87	3	<1	760	62	397	33	47	4	
D	3	1	0	2	2	0	1	0		0		0		1		0	
	2	7	3	11	13	0	7	0		0		5		7		1	
	1	173	39	110	87	20	144	0		0		89		69		5	
	Total	181	42	123	102	20	152	88	0	0	94	54	77	41	5	5	
E	3	0	0	0	0	0	0	0		0		0		0		0	
	2	3	1	4	4	0	3	0		0		1		2		0	
	1	132	28	99	62	14	115	1		1		89		39		1	
	Total	135	29	103	66	14	118	89	1	<1	90	67	41	31	1	1	
F	3	0	0	0	0	0	0	0		0		0		0		0	
	2	1	0	0	1	0	1	0		0		1		0		0	
	1	16	1	4	1	0	16	0		0		13		3		0	
	Total	17	1	4	2	0	17	100	0	0	14	82	3	18	3	0	
G	3	1	0	0	1	0	1	0		0		1		0		0	
	2	3	0	5	6	0	4	0		0		2		0		0	
	1	66	13	71	45	3	59	0		0		42		18		4	
	Total	70	13	76	52	3	64	96	0	0	45	67	18	27	4	6	
H	3	1	0	0	0	0	1	0		0		0		1		0	
	2	3	4	5	5	0	4	0		0		3		1		0	
	1	116	26	104	72	9	100	0		0		57		47		6	
	Total	120	30	109	77	9	105	92	0	0	60	52	49	43	6	5	
I	3	1	0	2	0	0	1	0		0		0		1		0	
	2	20	2	28	12	0	14	0		0		8		5		1	
	1	434	58	416	217	45	380	2		2		277		132		15	
	Total	455	60	446	229	45	395	90	2	<1	285	64	133	31	17	4	
J	3	0	0	0	0	0	0	0		0		0		0		0	
	2	0	0	0	0	0	0	0		0		0		0		0	
	1	3	1	1	0	0	3	0		0		2		1		0	
	Total	3	1	1	0	0	3	100	0	0	2	67	1	33	0	0	
State Total	3	6	1	4	7	0	6	0		0		2		4		0	
	2	102	32	141	111	8	90	0		0		62		32		4	
	1	2,510	462	2,366	1,540	287	2,175	6		6		1,601		755		95	
	Total	2,618	495	2,511	1,658	295	2,271	88	6	<1%	1,665	64%	831	32%	103	4%	

*All information derived from drivers license files maintained by Division of Research and Planning, Department of Public Safety.

section, Table VII-10. The small difference is probably accounted for by the lag time for reporting and recording information.) This means also that 108 drivers received two or more convictions during the same year--actually 102 had two convictions, and six had three convictions during the one year of 1975 (about 4% of the total).

Review of prior driving records shows that about 19% of the drivers had one or more convictions for DWI's prior to 1975. Further, these drivers collectively accounted for 2,511 major traffic violations (reckless driving, speeding, etc.), and were involved in 1,658 accidents, within and prior to 1975.

In brief summary overview to this point: During 1975, 15 of 1000 licensed drivers were arrested for DWI; 12 out of 1000 were convicted.* Out of this subpopulation of convicted drunk drivers and in terms of computed averages, it can be said that 2 of 10 had one or more prior DWI convictions; 18 of 20 had one or more prior major traffic violations, and, 13 of 20 had one or more accidents.

A quick review of drivers with one or more DWI convictions in the same year shows that this group of 108 accounted for 144 major traffic violations (an average of 1.4 each) and 111 accidents (an average of 1.1 each).

A similar review of each of the AST detachment regions (groups of court locations) in Table VII-9 shows no major departures from the statewide averages just presented.

The limited array of characteristics of driving history for convicted DWI drivers in Alaska corresponds with nationally reported information. In general, convicted DWI drivers as a subpopulation of all licensed drivers account for a disproportionate share of other DWI convictions,

*These arrests and convictions are not comparable within the same time period due to the time period from arrest to final court action.

major traffic violations and accident involvement, compared to a random sample of licensed drivers. National information also shows that about sixty percent of convicted DWI's had already experienced two or more license suspensions or revocations.* Similar information is not yet available for Alaska. The contrast in the driving history of DWI's as a group with the population of all drivers is quite remarkable.

Drinking Patterns. Very little information has been reported regarding the drinking patterns of DWI drivers from any location in the nation. Such information is also unavailable in Alaska.

Court Actions and Criminal Sentencing Patterns

A DWI driver is identified as such by the criminal justice system. Detection, apprehension, prosecution and court action are all required for legal identification. The action of the court becomes a matter of interest from the highway safety perspective given the demonstrated relationship between motor vehicle drivers with high BAC's and accident involvement. For general information, statistics regarding DWI court actions and criminal sentencing patterns are presented by groupings of court locations corresponding to AST detachment regions, and also summarized for overall statewide averages.

Table VII-10 shows that all courts in the state accounted for a total of 2,975 DWI dispositions. There were 2,668 convictions within the total number of dispositions for a conviction rate of 89% (convictions divided by dispositions times 100). Of this number, 2,086, or 78% received some sort of sentence by the court. The average jail sentence was fourteen days with ten days suspended. Similarly, 2,480, or 93% of those convicted,

*Alcohol and Health, Chapter VI, 1974.

were fined an average of \$316, with an average of \$92 suspended. A total number of 1,929, or 72% of those convicted received both a sentence and a fine while about eight percent received either a suspended imposition of sentence or no sentence or fine at all. Additional information about driver's license action (limitation, suspension, revocation) by the court was not available. Similarly no information was available regarding imposition of any other court sanctions or referrals or periods of probation, etc.

TABLE VII-10
DWI COURT ACTIONS AND SENTENCING PATTERNS BY COURT LOCATIONS GROUPED BY AST DETACHMENTS AND STATEWIDE, ALASKA, 1975

	ALASKA STATE TROOPER DETACHMENTS										STATE TOTAL
	D	C	D	E	F	G	H	I	J	AVERAGE	
Total DWI Dispositions	505	1464	204	145	37	31	64	517	8	2975	
Total Convictions	471	1287	192	133	31	29	62	459	4	2668	
Conviction Rate	93	87	94	91	83	93	97	89	50	89	
Sentencing Patterns											
Number Sentenced	254	1136	164	120	14	17	43	335	3	2086	
Average Sentence	10	16	16	6	23	9	12	14	5	14	
Average Sentence Suspended	7	12	14	6	14	8	7	11	4	10	
Number Fined	457	1163	101	120	26	28	61	432	4	2480	
Average Fine	240	349	292	187	225	401	358	352	312	316	
Average Fine Suspended	62	82	45	16	41	202	130	156	237	92	
Number Sentenced and Fined	241	1027	155	116	11	17	43	316	3	1929	
Number - Suspended Imposition of Sentences	6	21	1	26	2	0	14	15	0	85	
Number - No Sentence or Fine	6	52	4	3	3	1	4	25	0	98	

Court actions include all courts--magistrate, municipal, district and federal--for 65 court reporting locations.

Source: Basic information provided by Alaska Court System, Technical Operations Office.

The variations in court actions and sentencing patterns can be seen by comparison of each of the regions. Utilization of the various traditional legal sanctions, and combinations of them, as well as other sentencing alternatives, and their effectiveness in dealing with convicted DWI's, is a matter of focused research and experimentation in various jurisdictions throughout the nation at this time. Such information for Alaska

is presently incomplete and insufficient for any further analysis of the differential effects of various court actions on the DWI population. It is interesting to note, however, that court locations within three AST detachment regions accounted for approximately 83% of all DWI dispositions and convictions for the state.

F. SUMMARY

In Alaska, as elsewhere, most people killed after drinking and driving have a very high blood alcohol concentration. During 1975, 46% of the motor vehicle fatalities involved alcohol. Most drivers convicted for DWI have very high BAC's. The average BAC for DWI drivers in the state is almost twice the statutory legal limit of impairment. Even this level of .10% blood alcohol concentration is too high for safe driving when one considers the scientific and medical evidence of the extent of impaired judgment and ability indicated by the various ranges of blood alcohol concentration. Additional research information clearly demonstrates the increasing probability of involvement in any kind of crash with increasing BAC levels, as well as the increasing likelihood of responsibility for the crash with increasing BAC's. The probability for crash involvement begins to increase appreciably above .08% BAC. The presumptive limit for intoxication for conviction for OMVI is .10% BAC. The average BAC of arrested DWI drivers in 1975 was .18%. Ninety-two percent of all DWI arrests recorded BAC's above .10%.

The great majority of drivers have generally clear driving records, a very low rate of previous crash involvements, and account for very few of the crashes and traffic convictions. The great majority--80%-90%--also registers no measurable BAC; about 3%-5% show BAC levels above .10%. This contrasts very sharply with both the

subpopulations of drivers involved in crashes and drivers convicted of DWI. The average BAC level of these drivers is almost twice that of the limit of legal impairment. They account for an extremely disproportionate number of prior DWI convictions, as well as other serious and minor traffic violations and involvement in accidents. Given the array of information available about these drivers, it is logical and valid to conclude that the great majority were indeed drunk, independent of one's precise definition of the term. While the conclusion seems obvious, the information available also allows the inference that a very high proportion of these drivers also qualify for the label of "problem-drinker" or "alcoholic drinker". In fact, a number of detailed studies have shown this to be the case. One study shows that approximately 80% of the population of convicted drivers were problem-drinker-drivers.* As such, these problem-drinker-drivers are valid clients for alcoholism treatment and rehabilitation as well as for the judicial-correctional system. This group of people is generally well known to the courts, accounting as they do for so many traffic violations and accidents. They tend to be younger, between 18 and 39 years old, non-Native and male. The general trends of increasing consumption in Alaska, along with increasing numbers of licensed drivers, roadways, and vehicle miles driven, can be expected to continue. Given the nature of the increases--a younger population, more drivers, less driving experience, increasing consumption, and increased recreational, nighttime driving, the extent of alcohol involvement in crashes will probably increase.

*Sandler, I., et al., "Drinking Characteristics of DWI's Screened as Problem Drinkers," Alcohol Health and Research World, Fall, 1975, pp. 19-23.

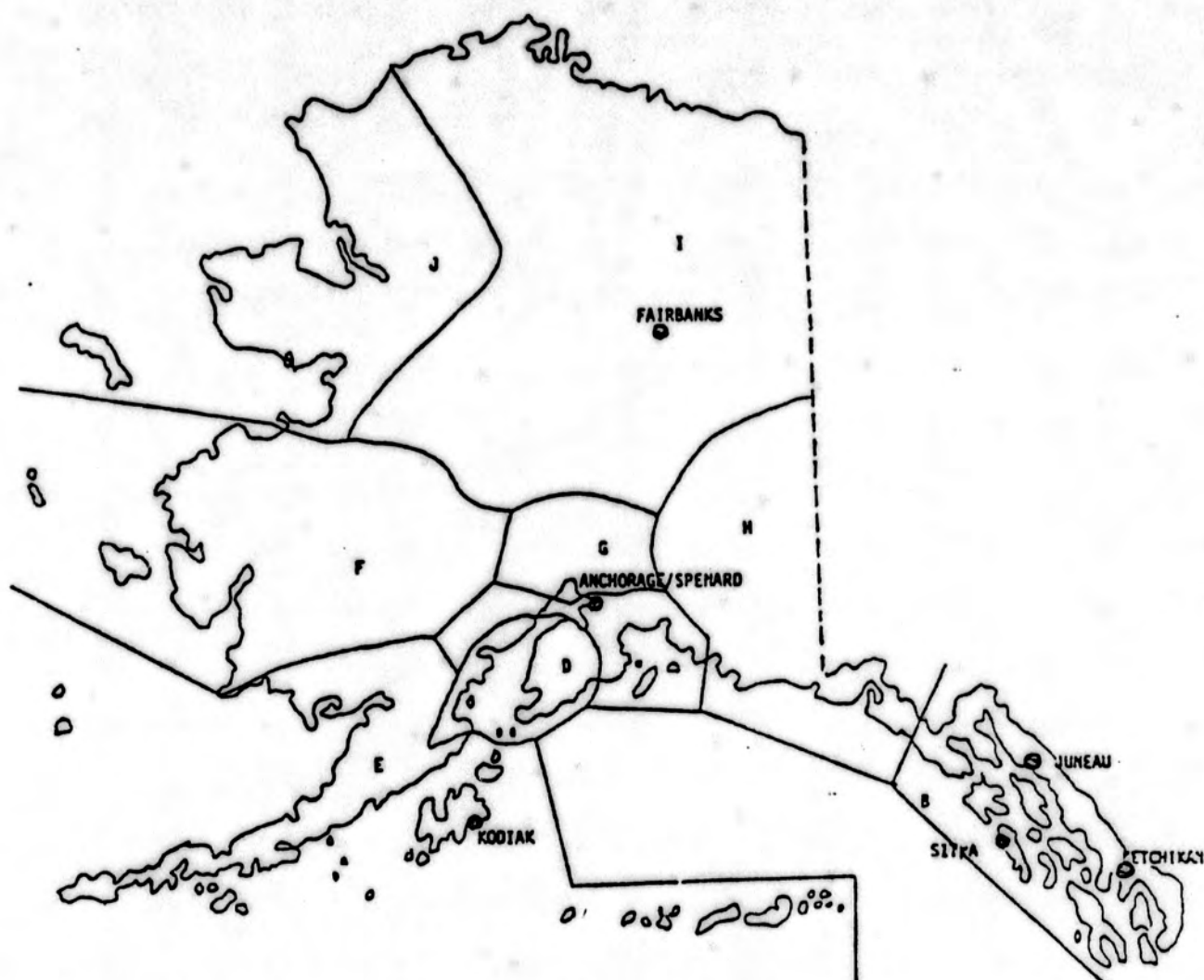


FIGURE VII-2 Alaska State Trooper Detachment Boundaries, 1975

TABLE VII-11

LOCATIONS OF ALL COURT TYPES GROUPED
BY STATE TROOPER DETACHMENT REGIONS

1975

KEY

ADDITIONAL INFORMATION

- * Police Department
- ** AST Detachment Post
- *** AST Detachment Headquarters
- [] Not a Court Location

<u>B Detachment</u>	<u>E Detachment</u>	<u>H Detachment</u>
*Ketchikan**	*Kodiak***	Glennallen***
*Juneau***	Sand Point**	*Cordova**
*Haines**	*Dillingham**	Tok**
Craig**	Naknek (King Salmon)**	*Valdez**
*Petersburg**	Unalaska	[Ernestine**]
Yakutat**	St. Paul Island	[Nelchina**]
*Hoonah	Cold Bay	[Paxon**]
Kake		[Northway**]
Angoon		[Eagle**]
*Sitka		
*Skagway		
*Wrangell		
	<u>F Detachment</u>	<u>I Detachment</u>
<u>C Detachment</u>	*Bethel***	*Fairbanks***
*Anchorage**	St. Mary's**	*Barrow**
	McGrath	Cantwell (Healy)**
	Hooper Bay	Delta Junction**
	Mekoryuk	*Ft. Yukon**
	Tununak	Galena**
	Aniak	Nenana**
	Mountain Village	*North Pole
	Emmonak	Tanana
	Nunapitchuk (Kasigluk)	Rampart
		Manley Hot Springs
<u>D Detachment</u>		Mulato
*Seward**	<u>G Detachment</u>	Weinwright
*Kenai***	*Palmer***	[Deadhorse (Fairbanks)**]
*Homer**	[Big Lake**]	[Livengood**]
*Seldovia	[Nancy Lake**]	
[Cooper Landing**]	[Talkeetna**]	<u>J Detachment</u>
[Moose Pass**]	[Wasilla**]	*Nome***
[Ninilchik**]		*Kotzebue**
[*Soldotna]		Savoonga**
		Unalakleet**
		Wales
		Pt. Hope
		Selawik
		Kiana
		Noorvik
		Gambell
		Buckland
		Teller

PART VIII OTHER SOCIAL INDICATORS OF ALCOHOLISM AND ALCOHOL ABUSE

A. INTRODUCTION

Each of the preceding Parts of this Volume has provided a description and analysis of a cluster of indicators of the impact of alcoholism and alcohol abuse on social systems of Alaska. Each of the areas also provides an alternative configuration of a set of social problems associated with alcoholism and alcohol abuse in the state.

There are a number of other indicators of the impact of excessive drinking that need to be mentioned, that provide yet other perspectives of the social impact, and further develop the reported range of the pervasiveness of alcoholism and alcohol abuse. Such cases are reported in inpatient service utilization, outpatient service utilization and in utilization of social services. Because of the variety of types of services considered, such alcohol-related encounters will be presented in this Part according to commonality of service category.

Such alcohol-related encounters, even if complete and exhaustive of all relevant units of service, would not be indicative of the magnitude of alcoholism and alcohol abuse in the overall population. Only a small portion of the presenting problems necessary for service delivery for alcoholism or alcohol abuse become documented in the health care setting. Additionally, indicators which are based on utilization of services assume equal access of the entire population to the entire range of services. This

is particularly not the case in Alaska. However, the reporting of such alcohol-related events do approximate at least the minimum impact on the existing service delivery systems and thus function as useful indicators, in combination with others, with which to amplify the description of the nature and extent of alcoholism and alcohol abuse in the population.

B. ADDITIONAL SOCIAL INDICATORS

General Hospital and Specialty Hospital Admissions

In the area of health care and medical services, one indicator of the impact of alcoholism and alcohol abuse is the number of inpatient admissions or discharge diagnoses involving alcoholism or alcohol abuse. Information was collected by a special survey for this project regarding the number of patients admitted to hospitals throughout the state with a primary or secondary diagnosis of alcohol disorder. It is recognized that this procedure has several drawbacks. The recording of cause for hospital admission or discharge is a subjective process. Typically alcohol-related admissions are compounded by other morbidities, any one of which may contribute to the patient's entry into the acute care treatment setting. Financial barriers (not all third-party payors reimburse for alcoholism inpatient care) and social stigmas associated with hospitalization for alcoholism, often preclude listing the disease as the first or second cause of hospitalization. Thus, providers are under considerable pressure to either intentionally or unintentionally mask the occasions for recording alcoholism as a cause of hospitalization, affecting the

overall frequency with which it is reported as a discharge cause in inpatient statistics. For this study, however, the primary purpose was to collect routinely recorded information that was readily accessible and could be regularly monitored over time.

Information was requested from private community hospitals, public health service hospitals (Alaska Area Native Health Service: AANHS), the state operated Alaska Psychiatric Institute (API), and military hospitals. Table VIII-1 shows the combined number of recorded alcoholic admissions for each type of hospital for each of the years from 1973-1975. It should be noted that this survey of private hospitals was conducted by mail and telephone; eleven of 18 hospitals responded, accounting for 70% of the total hospital beds. During 1975, the combined total for all alcoholic admissions for all types of hospitals numbered 2,460, an increase of about 11% over 1974. This discharge category represented about 9% of the total reporting private hospital discharges for that year. The decrease in admissions for API reflects the termination of the activities of the alcoholism ward (Alcohol Re-Education Unit) during that reporting period.

It should be emphasized again that the presented information can only be said to reflect the minimum utilization of inpatient services for alcohol-related causes. It should also be noted that significant differences from institution to institution in rank order of hospitalization cause (as a part of overall hospitalization statistics) may be as much a function of institution funding source or hospital policy as it is a function of actual patient condition. For instance, in federally funded hospitals (AANHS and Elmendorf) where cause and reimbursement are unrelated,

alcohol misuse is ranked #3 and #1 respectively as cause of hospitalization (by frequency of discharge diagnosis).

TABLE VIII 1
TOTAL HOSPITAL ADMISSIONS REPORTED
FOR ALCOHOLIC DISORDERS FOR MILITARY, PRIVATE,
PUBLIC HEALTH SERVICE AND PSYCHIATRIC HOSPITALS
ALASKA, 1973-75

	1973		1974		1975	
	Total	Alcohol Related	Total	Alcohol Related	Total	Alcohol Related
Military	7,143	142	6,138	128	5,874	117
Private Hospitals	17,192	971	18,457	1,436	19,333	1,766
PHS/AAMHS Hospitals	10,614	476	10,035	471	8,927	414
API	875	340	682	186	852	163
TOTAL	35,824	1,929	35,312	2,221	34,986	2,460

Sources: Private Hospitals. Information compiled by special survey of all state hospitals for this report. Survey was conducted in cooperation with the Alaska Hospital Association, which approved the concept, and assisted in the design of the survey instrument. The survey was conducted by mail; replies were received from 11 of 18 hospitals, accounting for 70% of the beds.

PHS/AAMHS Hospitals. Information was obtained from regular reporting systems managed and maintained by the Office of Systems Development, Area Office, Anchorage.

Alaska Psychiatric Institute. Information obtained by special request for this report from Division of Mental Health, Department of Health and Social Services.

Military Hospitals. Information obtained from Elmendorf AFB for 1974 and 1975. Total admissions for 1973 obtained from AMA Guide.

Note: Information presented for each designated year includes overlapping calendar year and fiscal year reporting periods.

In spite of all the constraints, the data regarding alcoholic admissions for the hospitals surveyed (70% of state beds) showed a 28% increase from 1973 to 1975, even though there had been a small decline in all admissions (about 2%). Furthermore, private hospitals, which account for 55% of all admissions, accounted for 72% of all admissions for alcoholic disorders.

Outpatient Care--Hospital Encounters

Outpatient care is one of the "least measurable" units of service delivery in the health field due to the variety of types and settings of providers, non-standardized or non-existent reporting systems, and lack of a systematic pattern of delivery. Most hospitals have some outpatient services. A common outpatient service that hospitals have is the emergency room and is of relevance to this study for the measurement of alcohol-related encounters, particularly for incidence of accidental trauma. In Alaska, where the death rate due to accidents is extremely high, it would seem that outpatient visits and particularly visits for treatment due to accidents, would be an important indicator to monitor. Unfortunately, most private hospitals in Alaska do not keep appropriate emergency room, or other outpatient service, records necessary to develop indicators on the extent of alcohol-related encounters in these settings. The major exception to this are the hospitals supported by the Alaska Area Native Health Service which record both outpatient visits and emergency room visits to alcohol misuse. This information is presented in Table VIII-2. During FY 76, total ambulatory patient visits that were attributable to alcohol misuse for all AANHS hospitals in the state numbered 3,365, a slight 3% and 4% increase over FY 75 and FY 74. The total number of outpatient visits for all accidents that were reported to be alcohol-related was 2,122 which was a 2% increase over FY 75 but a 12% decrease compared to FY 74.

Altogether, outpatient visits for alcohol misuse totaled 5,487 during FY 1976, for all AANHS hospitals.

TABLE VIII-2
ALCOHOL-RELATED OUTPATIENT VISITS
ALASKA AREA NATIVE HEALTH SERVICE HOSPITALS
1973-1975

	FY 1974	FY 1975	FY 1976
APC Total visits attributed to alcohol misuse	3,230	3,329	3,365
Alcohol-related accident visits	<u>2,415</u>	<u>2,067</u>	<u>2,122</u>
TOTAL VISITS	5,645	5,396	5,487

Source: Office of Systems Development, AANHS, Area Office, Anchorage, Alaska.

Admissions to Alcoholism and Drug Abuse Programs

Part of the range of services for treatment and rehabilitation of persons who abuse, or are addicted to, alcohol and other drugs includes a number of local community programs that exist mainly apart from the more traditional health and medical care facilities. The number of people admitted to these local community programs would also provide a measure of the impact of alcoholism and alcohol abuse. The adequacy of this measure is again limited by lack of reporting as well as non-presentation of clients for delivery of services due to unwillingness, unawareness or physical inaccessibility. Thus, such a measure provides an indication of the impact on such resources, not the magnitude of the disease or problem.

In 1975 local alcoholism programs in the state numbered about 25; there were about eleven drug abuse programs in the state. Admissions to drug abuse programs are included in this category because alcohol is generally considered to be frequently used in conjunction with the primary use of other drugs. In addition, 29% of the admissions of drug abuse programs in 1975 reported alcohol as the primary drug of use. (See reference Table VIII-3) The number of admissions for alcoholism and other drug abuse programs in Alaska, for fiscal years 75 and 76 are presented in Table VIII-3. It can be seen that 3,573 admissions were made into alcoholism programs during FY 1976, an increase of 44% over the previous year. There were a total of 365 admissions to drug abuse programs in FY 76, a 30% decrease compared to the previous year. In combination, there were 3,938 admissions into alcoholism and drug abuse programs during fiscal 1976 which is about a 32% increase over the previous year.

TABLE VIII-3
ADMISSIONS TO LOCAL ALCOHOLISM AND DRUG ABUSE PROGRAMS
ALASKA, FY 1975 & 1976

	FY 1975	FY 1976
Local Community Alcoholism Programs Admissions	2,474	3,573
Local Community Drug Abuse Programs Admissions	524	365
TOTAL ADMISSIONS	2,998	3,938

Sources: Alcoholism Program Admissions from Monthly Program Activity Reports. State Office of Alcoholism.

Drug Abuse Program Admissions from Annual Publication, Statistics of Alaska's Drug Abuse Treatment Program, FY 75, FY 76, State Office of Drug Abuse

Mental Health and Social Services
and Child Abuse and Neglect

Another general category of source of alcohol-related client admission or intake information is the area of mental health and social service programs and agencies. Cases of child abuse and neglect are included in this category for convenience of presentation. It is recognized that there is a distinction between client encounter information, presented so far, and cases of child abuse. Nevertheless, both provide quantifiable measures of alcohol-related impact and serve as indicators of such.

Available recorded information is presented below in Table VIII-4. It covers the activities of the AANHS Mental Health and Social Services, State Community Mental Health Centers, State Public Health Nurse Activities, and cases of child abuse reported to the state. (General feeling and limited research show a high correlation between alcohol intoxication and child abuse and neglect). Unfortunately, the present nature of the recording, collection and reporting activities for most of the appropriate programs and agencies preclude ready compilation of desired information. The information that is available is presented in the table. It can be seen that during FY 1976, the total patients discharged with diagnosis of alcohol and or drug abuse misuse numbered 454 for the AANHS Social and Mental Health services and 98 for the Community Mental Health Centers. There were an estimated number of 1,751 patient encounters with Public Health Nurses for alcoholism and

alcohol abuse. In addition, there were 2,422 cases of child abuse reported during approximately the same period.

TABLE 1981-4
ALCOHOL-RELATED MENTAL HEALTH SOCIAL SERVICES
AND CHILD ABUSE CASES
ALASKA, 1973-1975

	FY 74	FY 75	FY 76
AAHMS-Social & Mental Health Service: Total patients with discharge diagnosis of alcohol and drug misuse. ^a	538	477	454
Community Mental Health Centers: Total patients with discharge diagnosis of alcohol disorder or drug abuse ^b		109	98
State Public Health Nurse--Patient Encounters ^c		1,751	1,751 [*]
Child Abuse and Neglect Cases of child abuse and neglect reported to the state--total cases ^d	684	863	2,422 ^{**}

Sources:

^aAAHMS-Social and Mental Health Services from AAHS Division of Social and Mental Health Services, Area Office, Anchorage.

^bCommunity Mental Health Centers client discharges from Division of Mental Health, Department of Health & Social Services.

^cAlaska Division of Public Health, Nursing Section. As reported in Alaska Mental Health Needs Assessment, Vol. 5, Division of Mental Health and Developmental Disabilities, Department of Health and Social Services.

^dChild abuse cases from Division of Family and Childrens Services, Department of Health and Social Services.

^{*} Estimate based on FY 1975 information.

^{**}The dramatic increase in number of cases is due to changes in the reporting system.

Note: Fiscal year designations include overlapping reporting periods for fiscal and calendar years.

Client Characteristics

Despite limited client admissions data, it is still informative to review and describe the personal characteristics of the alcoholic client population. Only very basic, minimal information is available and not even from all programs, thus only a partial profile of client characteristics can be presented. The following statements can be made:

- almost two-thirds of the client admissions to local alcoholism treatment programs during 1975 were Natives,
- 61% of the client population of State Office of Alcoholism funded local programs were designated as Native. For State funded drug abuse programs, 50% of the patient population was non-white, 19% were Natives.
- three-fourths of all admissions were males -- 76% of the SOA local programs and 64% of the local drug abuse programs.
- three-fourths of all admissions were unemployed -- 75% (based on two programs reporting to NIAAA).
- most clients were not married -- 80% were either single, separated or divorced (based again on two programs).
- the median age was in the low thirties.

These characteristics of clients admitted to local alcoholism treatment programs contrast somewhat with the client characteristics of CMHC admissions, which had similar sex and age characteristics but most, 64%, were non-Native. This same distinction holds true for the inpatient population of client admissions for API--similar age and sex characteristics, but 63% non-Native.

No personal characteristics of the alcoholic admissions in private hospitals were collected, but the greatest proportion can be expected

to be non-Native. The information available from the AANHS hospitals for both inpatient and outpatient admissions apply to Natives.

A discussion of the similarities and differences of the personal background characteristics of the groups of persons involved in the clusters of alcohol-related events presented in the preceding parts of this Volume and client admissions for alcoholism treatment services, as well as for other alcohol-related health and social services is really impossible at this time, without additional data that would allow appropriate analysis. However, the limited but perhaps misleading information on hand indicates interesting disparities between the characteristics of the theoretical subpopulations at risk, and the subpopulations involved in various alcohol-related encounters with service delivery systems.

C. SUMMARY

The main purpose of this Part was to bring together a number of social indicators of the impact of alcoholism and alcohol abuse not already considered in preceding Parts. The general category of indicators concerned selected measures of health and social service delivery system units that may be attributed to alcoholism or alcohol abuse. These indicators were confined to the general area of physical and mental health, and social services. Each of the indicators presents a bit of additional information about other components of the various configurations of the impact of alcoholism and alcohol abuse in Alaskan society.

All the indicators presented in this brief Part are summarized in Table VIII-5 below. A simple arithmetic summation of the various alcohol-related admissions/encounters shows a total number of 16,610 during 1975.

TABLE VIII-5
SUMMARY OF ALCOHOL-RELATED ENCOUNTERS
FOR SELECTED MEDICAL, HEALTH, AND
SOCIAL SERVICES, ALASKA, 1973-1975

	1973	1974	1975
Hospital Admissions	1,929	2,221	2,460
APC Hospital Visits	5,645	5,396	5,487
Community Alcohol and Drug Program Admissions	--	2,998	3,938
Mental Health and Social Service Encounters	--	3,200	4,725
Total Alcohol-Related Encounters for Medical, Health, and Social Services	--	13,815	16,610

The magnitude of the social impact evidenced by the presentation of these indicators must be considered as severely understated. Not only are many areas of concern missing (eg. private and military hospital ambulatory patient care visits, accident visits, etc.), but the nature of the available recorded data represents minimum accounts of the real number of admissions rather than any sort of exaggeration (eg. alcoholic admissions to hospitals do not include missed diagnoses). The information is not representative of the nature and extent of need for services but rather, reflects present utilization.

PART IX. SUMMARY DISCUSSION AND CONCLUSION

A. INTRODUCTION

The intent of this Volume was to focus attention on the known, measurable indicators of the adverse impact of alcoholism and alcohol abuse on Alaska's social system in general, and on selected subsystems-- health and social services, criminal justice, traffic safety, and alcohol consumers. For certain levels of discourse, the terms alcoholism and alcohol abuse are sufficient, but for social problem solving, a more refined specification of problems is required. The specification of such indicators thus provides a profile of alcohol-related problems that can be used to monitor changes over periods of time, or to compare population or sub-population groups, or to evaluate specific programs designed to reduce or prevent a designated problem.

In the preceding Parts of this Volume, detailed investigations were made of various indicators of the impact of alcoholism and alcohol abuse. This last Part provides a summary overview of the major findings contained in each of the Parts, and additional discussion and elaboration where appropriate.

B. SUMMARY DISCUSSION

Etiology of Alcoholism

There is little understanding about the underlying causes of alcoholism or alcohol abuse. Because the addiction syndrome takes so

long to become established in a person, its developmental antecedents are particularly obscure and difficult to isolate. But a number of theories have been advanced to attempt to explain alcohol dependency in an individual (presented in Part III). But no one theory suffices for all known manifestations and/or syndromes of alcoholism, alcohol abuse, alcohol dependence, alcohol addiction, etc. The crucial determinants in the developmental process are still unknown, and the very nature of the addictive process remains largely a matter of conjecture. The presentation of various theories regarding the etiology of alcoholism provides a general background for the consideration of the information in the rest of the Volume.

Estimated Prevalence of Problem Drinkers

Although it is impossible to explain the causes of alcoholism and alcohol abuse, the social impact is not so elusive. Various procedures have been developed to estimate the prevalence of alcoholics or alcohol abusers in a population group, that are based on a variety of measures that reflect some of the consequences of alcoholism and alcohol abuse.

The prevalence of alcoholism in a population group is a general, large scale, indirect indicator of the number of alcoholics or problem drinkers in that population. Independent of the specifics of the estimation procedure involved, the final count is generally considered to enumerate a subpopulation group loosely characterized by behaviors defined as problematic because of their relation to the consumption of alcohol.

Review and application of several estimation procedures for prevalence of alcoholism found each and all of the procedures deficient in some respects for a theoretically close estimation of prevalence in Alaska. Most of the deficiencies had to do with the interaction between the unique population characteristics of Alaska and the estimation procedures. Most of the procedures are useful primarily for population groups larger than the population of Alaska. This is to say that because of the relatively small size of Alaska's population, for the use of such procedures, the elements used in the computation procedures fluctuate in erratic ways that result in the distortion of their intended outcomes. Furthermore, such general characteristics of the population as the recent rapid rate of growth, the cultural diversity, the high proportion of relatively younger persons, and the extreme fluctuations in the economic and employment situation, obtain to produce a less than stable population group amenable to these estimation procedures. Nevertheless, it was concluded that there were approximately 30,000 problem drinkers in Alaska in 1975. This was based on the strength of the correspondence of the findings of the three major methods--Jellinek, Marden and Ledermann, and the fact that each method uses independent sources of data. This number must be considered an underestimate because of the interplay of the factors mentioned above.

One of these three methods, the Marden method, provides for a more refined specification of target groups within the total population of drinkers with problems. This procedure estimated about 31,700 drinkers

with problems in the State of Alaska in 1975. About 15,630 were employed civilian males, and 4,530 were unemployed civilian males. There were about 5,800 civilian females (employed and unemployed) and about 5,740 military men and women (about 26 women). Of course, as with most estimation procedures more credibility must be given to the total number, than to any of the subdivisions.

Generally, the distribution of drinkers with problems was fairly evenly distributed over the occupational and analytic categories employed for estimation. A summary of the distribution of the estimated drinkers with problems in Alaska is provided in Table IX-1.

TABLE IX-1
PREVALENCE OF DRINKERS WITH PROBLEMS BY OCCUPATIONAL GROUP
ALASKA, 1975

Occupational/Analytic Group	N	Z
Women	5,970	19
Unemployed males	4,506	14
Craftsmen & kindred	4,436	14
Managers, Administrators	2,473	8
Professional, technical	2,089	7
Laborers	1,559	5
Operatives	1,520	5
Service workers	1,183	4
All others (clerical, sales, transport operators)	2,315	7
Military personnel	5,747	18
	31,709	100%

Source: Compiled from information in Figures II-1 to II-9,
Part II, this Volume.

It can be seen from this table that there was a noticeable disproportionate number of drinkers with problems in the groups analytically defined as "women", "military", "unemployed males", and "craftsmen and kindred workers". Collectively, these groups account for 65% of the estimated number of drinkers with problems, as defined by this procedure.

Some further explanation of this distribution is necessary however. The Marden procedure does not distinguish occupational categories for women. This group contains all employed women for all occupational categories, as well as unemployed women. Similarly, military personnel were treated collectively in this estimation, independent of the various occupational classifications they might occupy. These considerations leave the groups of unemployed males and males in the occupational category of craftsmen and kindred workers as showing a clear, relatively greater prevalence of problem drinkers, compared to the other occupational categories. In overall terms, however, civilian employed males (all categories) constitutes a full 50% of all estimated drinkers with problems and 78% of all civilian male drinkers with problems.

Re-examination of the distribution of drinkers with problems for selected age groups and employment status shows some interesting though not unexpected findings. This distribution is shown in Table XI-2.

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Re-examination of the distribution of drinkers with problems for selected age groups and employment status shows some interesting though not unexpected findings. This distribution is shown in Table XI-2.

TABLE IX-2

DISTRIBUTION OF DRINKERS WITH PROBLEMS BY SELECTED AGE AND EMPLOYMENT CATEGORIES, ALASKA, 1975

Categories	Percent of Total	Age - Percent of Row Total					Total
		20-29	30-39	40-49	50-59	60-69	
Males-civilian employed	49	36	26	21	16	2	101
Males - civilian unemployed	14	44	18	18	11	8	99
Military(males)	18	81	15	3	1	1	101
Males-all	(82)	46	24	17	10	3	100
Females -employed and unemployed	18	16	47	31	6	1	101
Total	100	32	31	23	11	3	100

Source: Computations based on information in Figures II-1 to II-9, Part II, this Volume.

The estimated number of drinkers with problems among employed males is greatest for the 20 to 29 age group, accounting for 36% of the estimated total for that group. However, 83% of that number is spread over the age group from 20-49 years of age. The prevalence of drinkers with problems among unemployed males is definitely greatest within the 20-29 age group, 44% of the total in that group. Similarly, but to a much greater degree, the greatest, and almost entire proportion

of estimated problem drinkers in the military group is concentrated in the 20-29 age group, (81%).

An overall comparison of the distribution of drinkers with problems for all males with that for all females shows definite differences. The greatest concentration of female problem drinkers is in the 30-39 age group, which is older than their male counterparts. The greatest concentration for females is in two age categories--30-39 (47%) and 40-49 (31%) for a total of 78%. For all males the greatest percentage is concentrated in the age groups of 20-29 (46%) and 30-39(24%) for a total of 70%.

Estimated Problem Drinkers: Group Characteristics

Drinkers with problems in Alaska are primarily males, 82%, compared to 18% females; drinkers with problems comprise about 15% of the drinking age population; they number approximately 31,000 (Marden Procedure).

Civilian, employed males make up half of the estimated number of drinkers with problems in Alaska (during 1975);and 78% of all civilian male problem drinkers are employed. They are distributed fairly evenly over all age groups and occupational categories. There are however, minor concentrations within the occupational category of craftsmen, and the age group of 20-29.

Males in the military comprise 18% of the total population of estimated drinkers with problems. Over 80% are in the 20-29 age category.

Unemployed males comprise about 14% of the estimated population of drinkers with problems. About 44% of their numbers are concentrated in the 20-29 age group.

Females comprise about 18% of the total number of estimated drinkers with problems in the state. Of these numbers, 78% are in the age groups of 30-39(47%) and 40-49(31%).

Estimated Problem Drinkers: Summary Remarks

The distribution of drinkers with problems in Alaska shows that males who are employed, particularly craftsmen and kindred workers, primarily in the age group of 20-29 years old, constitute the largest categorical target group.

It is clear that public inebriates do not constitute the greatest proportion of the population of problem drinkers; but unemployed male drinkers with problems are much younger than might have been expected.

Males in the military, aged 20-29, constitute a disproportionate share of the population of drinkers with problems, relative to their total numbers.

Females, unemployed and employed, aged 30-49, constitute a clearly identifiable target group.

It is clear that the application of these various methods for estimating the prevalence of problem drinkers in the Alaskan population can have important roles as program planning and development tools--for the identification of target populations at risk, the monitoring of changes, and the projection of future estimates.

Consumption of Beverage Alcohol

Additional indicators that reflect the impact of alcoholism and alcohol abuse, and provide valuable program planning and development information are also necessary. One of the most important indicators, and also easy to obtain (on a statewide basis) is the average annual consumption of beverage alcohol.

The per capita apparent consumption of alcoholic beverages in Alaska is high, viewed from various perspectives. As is true nationally and internationally, overall per capita consumption of beverage alcohol in Alaska has also steadily increased. The average level of per capita consumption for Alaska however, is relatively high by international comparison, and significantly higher than averages for the nation, national regions, and other states. Further, Alaska's increasing overall per capita consumption has been marked by a gradual shift away from consumption of distilled spirits towards lighter alcoholic beverages, but the shift is very slight. Alaska is distinguished from most other countries, the nation, most national regions, and states, by its continued and definitive preference for distilled spirits over beer and wine. Perhaps most important, however--and independent of its overall level of consumption or its specific beverage preference--is Alaska's dramatic and alarming rate of increase in annual per capita consumption.

Recent epidemiological research indicates that an increasing rate of average annual consumption indicates an increasing prevalence of alcoholism--a fact that makes Alaska's rapid rate of increasing consumption all the more disturbing.

When compared to national consumption figures, the recent increases in Alaska's level of apparent consumption appear even more drastic. Alaska's level of annual consumption of absolute alcohol in 1958 was 27% greater than the national level--2.52 compared to 1.98 gallons of absolute alcohol per person in the drinking age population. By 1975, Alaska's rate of per capita annual consumption was 57% greater than the nation's--4.54 compared to 2.90 gallons of absolute alcohol per person. In other words, while average annual consumption for the nation had increased by 46% from 1958 to 1975, for Alaska it had increased by 80%. (See Figure IV-2).

In short, the apparent consumption of absolute alcohol in Alaska since statehood is characterized by three facts. First, the quantity of absolute alcohol consumed annually by Alaskans has been, and still is, relatively high by both international and national standards. Second, the apparent consumption of absolute alcohol in Alaska has increased steadily since statehood--a trend consistent with international and national patterns. Finally, and most importantly, the rate of increasing annual consumption is alarmingly greater for Alaskans than the rate of increase for the national average--almost twice the rate of increase.

Consumption of Beverage Alcohol and Prevalence of Alcoholism

The relationship between the rate of consumption of beverage alcohol and the rate of alcoholism in a population has been a topic of increasing research investigation. One major position states that the overall level of consumption of beverage alcohol in a population determines both

the prevalence of alcoholism and the extent and nature of alcohol-related organic pathologies.

According to this formulation, as the rate of average annual consumption increases, so does the rate of excessive drinkers; and so, too, does the rate of alcohol-related mortality.

Given the fact, then, that consumption levels in Alaska have increased substantially since statehood, it follows that death in the state due to cirrhosis of the liver and alcoholism should show a similarly proportional increase, if this theoretical formulation holds true. The dramatic increases in Alaska's annual average consumption of absolute alcohol since 1958 have indeed been matched very closely by equally significant increases in the death rate due to cirrhosis of the liver, and alcoholism (See Figures IV-4 and 5).

It is evident that the relationship between increasing annual consumption and chronic excessive use, along with increasing annual rates of alcohol-related mortality, is particularly well demonstrated in Alaska.

That Alaska can be classified as a high consuming population goes without question. Excessive drinking of beverage alcohol appears to approach normative drinking patterns, rather than representing deviant behavior. In populations with a relatively high rate of average annual consumption, alcoholism is more likely the result of social practices, whereas in low consuming populations, it is more likely the result of individual psychopathology or sociopathology. Given the relationship between excessive consumption and moderate consumption, attention must be focused on factors that affect rates of consumption in a population, in

order to reduce the prevalence of alcoholism.

Factors Affecting Consumption of Beverage Alcohol

A number of factors that affect consumption--the number and type of retail outlets for beverage alcohol, closing hours, and taxation of beverage alcohol, are also government measures for the regulation and control of the sale and consumption of beverage alcohol in Alaska. Available information regarding these factors indicates that consumer accessibility is greater in Alaska, and that government control measures are considerably more relaxed than in other states.

Compared to national averages, there are twice as many retail liquor outlets per 1000 persons in Alaska. In addition, there are fewer prohibited hours of sale in Alaska than in most other states. Further, the relative price of beverage alcohol in Alaska has actually decreased by 40% in the period from 1970 to 1975.

Taxation

Taxes affect the consumer price of alcoholic beverages, and there are strong indications that the price of alcohol relative to personal disposable income is closely related to overall consumption and the prevalence of alcoholism.

In Alaska, the Consumer Price Index (CPI) for alcoholic beverages in Alaska increased by .3% (three-tenths of one percent) in the period from 1970-1975. The CPI for all items increased 41.2% during the same time period. Average disposable income increased by 92%, while real disposable income (average disposal income adjusted for CPI changes)

increased 35.7%. In effect, the consumer price of all commodities from 1970-1975 increased by more than 40%, while the price of beverage alcohol increased by only .3%--which means that, in relation to all other commodities, the price of alcohol decreased by more than 40%.

According to the Distilled Spirits Council, 50% to 75% of the price of alcohol is comprised of taxes--federal and state; thus, if taxes do not change, the price of alcohol obviously does not behave like other noncontrolled commodities in the free market. In Alaska the excise tax on beverage alcohol has not changed since 1961.

It would seem that, particularly applied to Alaska, the relationship between increasing annual average consumption and decreasing relative price of beverage alcohol is quite clear. Along with the relatively greater accessibility, the decreasing price helps explain the dramatic increases in consumption that were noted for Alaska.

As the overall level of average annual consumption is allowed to increase, so does the prevalence of chronic excessive use and thus, the prevalence of hazardous consumers and alcohol-related pathologies.

Alcohol-Related Mortality

It has already been demonstrated that increasing average annual consumption is associated with increasing rates of death due to cirrhosis of the liver and alcoholism. Although it is impossible to conclusively link alcohol to a precise portion of mortality for other causes of death, national and international studies have established that heavy drinkers

have a mortality rate that is two to four times higher than those who are not. Given the rates of mortality in Alaska for causes of death known to be frequently related to excessive drinking, and the relatively high level of consumption, alcohol involvement in the deaths of Alaskans is probably quite high.

With respect to such "risk populations" in general, specific-cause mortality data show that two subpopulations in Alaska are characterized by especially high mortality: (1) the young, as mentioned above, and (2) the state's Native population, whose overall rate of death in Alaska is more than twice that of non-Natives (1974).

The regional distribution of fatalities in Alaska (in 1974) indicated that overall death rates were highest in the less populous regions of the state, but that overall mortality was concentrated in the Southeastern Region. The pattern of mortality distribution also shows that Native death rates were greatest in the Northern Region (least densely populated region in the state), while the highest non-Native rate of mortality occurred in the Southeastern Region.

In the aggregate, these trends and apportionments of mortality in Alaska suggest a confluence with other, known characteristics of the effects and consequences of excessive alcohol consumption in the state.

Alcohol-Related Arrests

Hazardous consumption of beverage alcohol by individual consumers also contributes to excessive or increased impact on society in general,

and on its subsystems. The impact of alcohol-related crime on the criminal justice system is particularly evident in Alaska.

The greatest impact on the criminal justice system of alcohol-related crimes derives primarily from the commission of misdemeanor type offenses. A large percentage of violent crime is considered to be alcohol-related: homicide-64%; rape-34%; and, aggravated assault-41%. But arrests for all violent crimes, and robbery, only account for about four percent of the total number of arrests for all offenses in the state. On the other hand, arrests for alcohol-related misdemeanors account for about 39% of the total number of arrests for all offenses, for both adult and juvenile arrests for all offenses. If juvenile and adult arrests are separated, then 47% of all adult arrests are for alcohol-related misdemeanor offenses. This group of adults is primarily male (85%) and accounts for 87% of all arrests for alcohol-related offenses.

A consideration of the different socio-geographic settings showed that although the greatest volume of arrests for alcohol-related offenses is in the urban settings, where most of the people live, the greatest relative impact is in the rural-city settings. In these settings, a somewhat greater percentage of all arrests are for Part II type offenses. More significantly, however, nearly half, 48%, of all arrests were for alcohol-related offenses, compared to 39% in urban settings, and 34% in rural settings.

Most of the adult arrests for alcohol-related offenses were for driving while intoxicated, for both men and women. Females, however,