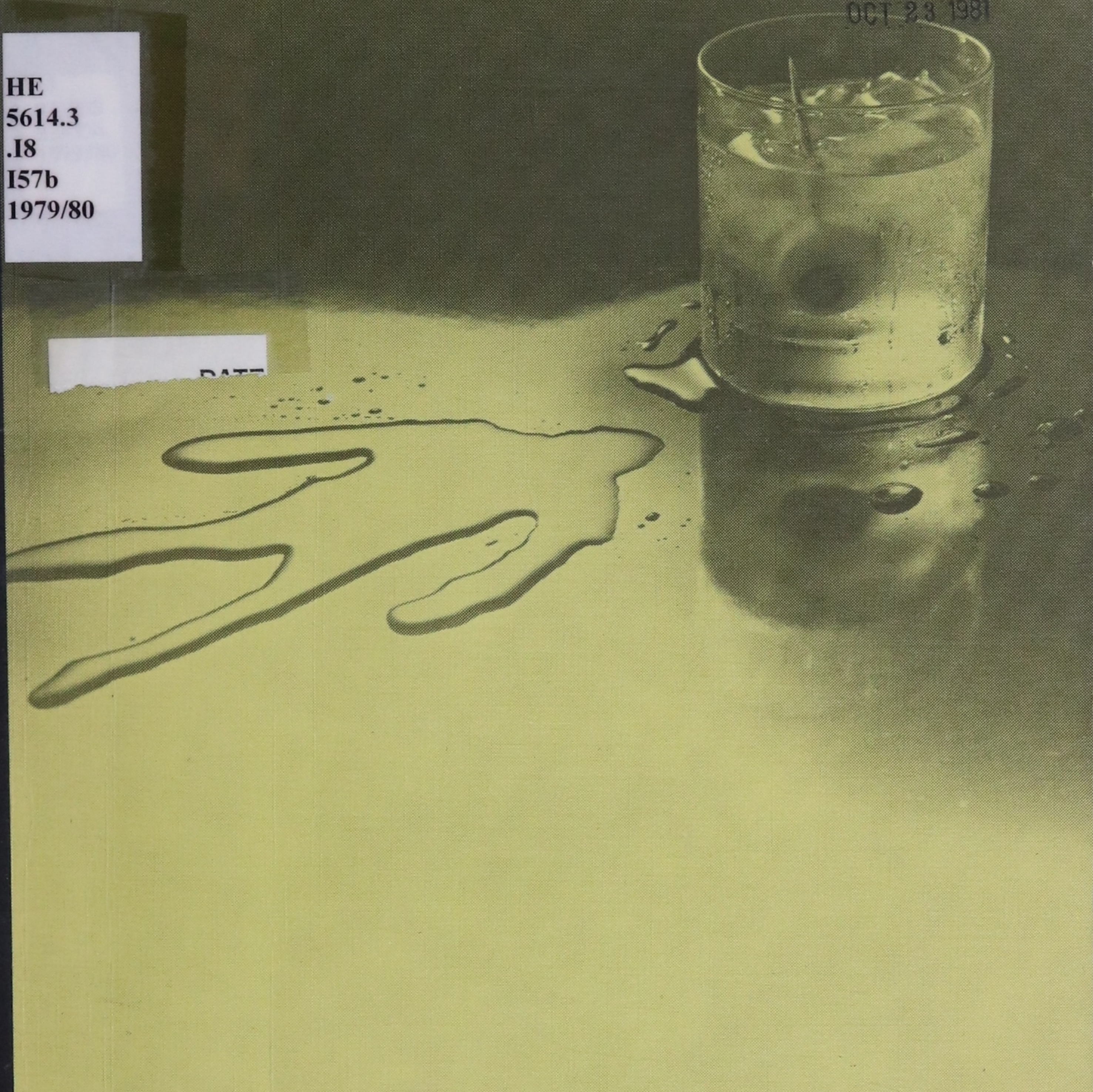


OCT 23 1981

HE
5614.3
.18
I57b
1979/80

DATE



**ALCOHOL-RELATED FATAL CRASH STUDY
IOWA, 1979-1980**

ALCOHOL-RELATED FATAL CRASH STUDY
IOWA, 1979-1980

State of Iowa
Governor's Highway Safety Office
523 East 12th Street
Des Moines, Iowa 50319

Edward J. Stanek II, Ph.D.
Governor's Representative for Highway Safety

Sven L. Sterner
Director
Governor's Highway Safety Office

Joyce L. Emery, Ph.D.
Program Evaluator

Lela M. Clark
Statistical Assistant

The Governor's Highway Safety Office offers this publication to present factual information on highway traffic crashes. The primary purpose of this report is to enable highway safety planners to analyze and identify problem areas.

For a copy of this publication, please phone 515/281-3907.

STATE LIBRARY COMMISSION OF IOWA
Historical Building
DES MOINES, IOWA 50319

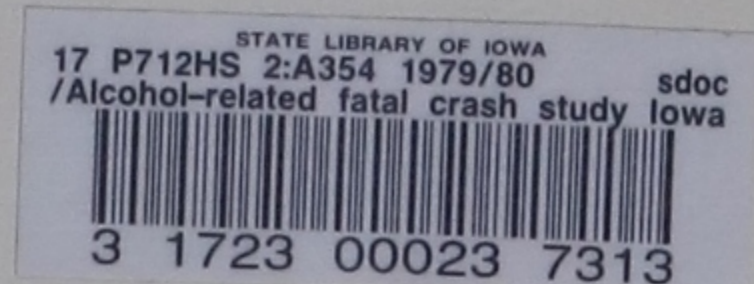


TABLE OF CONTENTS

	1971	1972
SUMMARY	1-2	1-2
1. Drinking Habits	3	3
2. Fatal Crashes Involving Drinking Drivers by Type of Crash	4	4
3. Number of Drinking Drivers Tested by Age Group	5	5
4. Number of Drinking Drivers Tested by Sex	6	6
5. Drinking Drivers Involved in Fatal Crashes by Age	7	7
6. Drinking Drivers Involved in Crashes by Day of the Week	8	8
7. Drinking Drivers Involved in Fatal Crashes by Age and Day of Week	9	9
8. Relationship between the Age of Drinking Drivers and the Mean Blood Alcohol Concentration in Fatal Crashes	10	10
9. Alcohol-Related Fatal Crashes and Fatalities by Month	11	11
10. Violations Committed by Drinking Drivers Involved in Fatal Crashes	12	12
11. Alcohol-Related Fatal Crashes by Location	13	13
12. Alcohol-Related Fatal Crashes by County	14	14
ALCOHOL COUNTERMEASURES IN 1972		
1. Alcohol-Related Fatal Crashes Since 1970	15-25	15-25
2. The Alcohol Safety Action Program	26-31	26-31
3. Legislation Affecting the Alcohol Problem	32-33	32-33

Prepared by the Governor's Highway Safety Office, in cooperation with the U.S. Department of Transportation, National Highway Traffic Safety Administration, and Federal Highway Administration.

The opinions, findings, and conclusions expressed in this publication are those of the authors and not necessarily those of the National Highway Traffic Safety Administration or the Federal Highway Administration.

1. Drinking Habits	3	3
2. Fatal Crashes Involving Drinking Drivers by Type of Crash	4	4
3. Number of Drinking Drivers Tested by Age Group	5	5
4. Number of Drinking Drivers Tested by Sex	6	6
5. Drinking Drivers Involved in Fatal Crashes by Age	7	7
6. Drinking Drivers Involved in Crashes by Day of the Week	8	8
7. Drinking Drivers Involved in Fatal Crashes by Age and Day of Week	9	9
8. Relationship between the Age of Drinking Drivers and the Mean Blood Alcohol Concentration in Fatal Crashes	10	10
9. Alcohol-Related Fatal Crashes and Fatalities by Month	11	11
10. Violations Committed by Drinking Drivers Involved in Fatal Crashes	12	12
11. Alcohol-Related Fatal Crashes by Location	13	13
12. Alcohol-Related Fatal Crashes by County	14	14
ALCOHOL COUNTERMEASURES IN 1972		
1. Alcohol-Related Fatal Crashes Since 1970	15-25	15-25
2. The Alcohol Safety Action Program	26-31	26-31
3. Legislation Affecting the Alcohol Problem	32-33	32-33

TABLE OF CONTENTS

	Page (s)	
	<u>1979</u>	<u>1980</u>
SUMMARY	1-2	15-16
 ALCOHOL-RELATED FATAL CRASH STUDY		
1. Objectives	3	17
2. Sources of Data	3	17
3. Number of Alcohol-Related Fatal Crashes and Fatalities	3	17
4. Drinking Pedestrians	4	18
5. Fatal Crashes Involving Drinking Drivers by Type of Crash	5	19
6. Number of Drinking Drivers Tested by Degree of Impairment	6	20
7. Number of Drinking Drivers Tested by BAC Level	6	20
8. Drinking Drivers Involved in Fatal Crashes by Age	7	21
9. Drinking Drivers Involved in Crashes by Age and by Day of the Week	8	22
10. Drinking Drivers Involved in Fatal Crashes by Age and Time of Day	9	23
11. Relationship Between the Age of Drinking Drivers and the Mean Blood Alcohol Concentration in Fatal Crashes	10	24
12. Alcohol-Related Fatal Crashes and Fatalities by Month	11	25
13. Violations Committed by Drinking Drivers Involved in Fatal Crashes	12	26
14. Alcohol-Related Fatal Crashes by Location	13	27
15. Alcohol-Related Fatal Crashes by County	13	27
 ALCOHOL COUNTERMEASURES IN IOWA		
1. Alcohol-Related Fatal Crashes Since 1970		35-36
2. The Alcohol Safety Action Program		36-38
3. Legislation Affecting the Alcohol Problem		39-40

TABLES

		Page (s)	
		<u>1979</u>	<u>1980</u>
 ALCOHOL-RELATED FATAL CRASH STUDY			
Table 1	Distribution of Alcohol-Related Fatal Crashes by Degree of Drinking	3	17
Table 2	Alcohol-Related Fatalities	4	18
Table 3	Alcohol-Related Fatal Crashes by Type of Crash	5	19
Table 4	Number and Percentage of Drinking Drivers/ Pedestrians with Alcohol Test Results	6	20
Table 5	Drinking Drivers/Pedestrians by BAC Level	6	20
Table 6	Drinking Drivers and all Drivers Involved in Fatal Motor Vehicle Crashes by Age Group	7	21
Table 7	Drinking Drivers Involved in Fatal Crashes by Age and by Day of Week	8	22
Table 8	Drinking Drivers Involved in Fatal Crashes by Age and Time of Day	9	23
Table 9	Age of Drinking Drivers and Average BAC	10	24
Table 10	Number and Percentage of Alcohol-Related Fatal Crashes, Fatalities, and Drinking Drivers By Month	11	25
Table 11	Violations Committed by Drinking Drivers	12	26
Table 12	Fatal Crashes by Road Class	13	27
Table 13	Counties Recording Fatal Alcohol Involvement Above the State Average	14	28
Table 14	Alcohol-Related Fatal Accidents and Fatalities by County	29-32	29-32
 ALCOHOL COUNTERMEASURES IN IOWA			
Table 15	Alcohol-Related Fatal Traffic Crashes and Fatalities		35
Table 16	Fatal Crashes in ASAP Areas: Alcohol-Related Versus Other Crashes		37
Table 17	OMVUI Arrests in ASAP Counties and Statewide		38
Table 18	Young Drinking Drivers Involved in Fatal Crashes		40

SUMMARY FOR 1979

1. Out of a total of 566 fatal traffic crashes in 1979, 238 were alcohol-related. These crashes claimed 285 lives or 43.5 percent of the total traffic fatalities.
2. In 1979, 25 pedestrians were killed as a result of alcohol involvement. Ten fatal crashes involved 10 drinking pedestrians and eleven fatal crashes involved drinking drivers that killed 15 pedestrians. For pedestrians with known blood alcohol content (BAC), the average of those killed was 0.237 percent with a range of 0.179 to 0.291.
3. In 1979, 58.0 percent of the alcohol-related fatal crashes were single motor vehicle crashes. The average BAC level of drivers involved in single crashes was slightly higher than the average of drivers in multiple crashes.
4. Of the 270 drinking drivers/pedestrians, 190 or 70.4 percent had blood alcohol tests. The average BAC of drivers tested was 0.171 percent and 80.5 percent of the drivers had a BAC of 0.100 percent or more. Data also showed that 58.4 percent of the drivers tested had a BAC of 0.150 or more which is symptomatic of the problem drinker.
5. Approximately 56.9 percent of the drinking drivers involved in fatal traffic crashes were 24 years of age or younger. This proportion exceeds the already large proportion of young drivers involved in fatal crashes (41.9 percent).
6. An analysis of drinking drivers involved in fatal crashes showed that more crashes occurred during the early morning hours (12:00 - 2:59 A.M.) for all but the older drivers.
7. The result of the analysis indicated that both the younger and older drivers were involved in considerably more fatal alcohol related crashes during the weekends.
8. The study also revealed that younger drivers had lower levels of alcohol in their blood but high involvement in fatal crashes. This strongly suggests that younger drivers were more vulnerable to traffic crashes when alcohol was involved.
9. The months of March and October ranked highest in the proportion of alcohol-related fatal crashes in 1979 (Note: March had the highest proportion but October had the most alcohol-related crashes).
10. Driving left of center and speeding accounted for 52.0 percent of the violations in multivehicle fatal crashes. Approximately 86.8 percent of the violations in single vehicle crashes were speeding and failure to have control of the vehicle.
11. In 1979, 42 counties exceeded the state average of alcohol-related fatal crashes (42.0 percent). These counties accounted for 71.8 percent of the total alcohol-related fatal crashes in the state.

12. About 45.8 percent of the alcohol-related crashes occurred on U.S./State highways, 34.0 percent on county roads, and 16.0 percent on city streets. Only 3.4 percent occurred on interstates.
13. The number of alcohol-related fatal crashes from 1970 through 1974 was fairly stable, but the percentage of reported alcohol-related crashes has increased from 1975 on. The year 1979 showed the largest percentage increase. However, data indicated that an improved method of reporting alcohol involvement and more BAC tests being performed have resulted in more factual information. It is difficult, therefore, to give a true comparison of alcohol-related crashes during this time period.

ALCOHOL-RELATED FATAL CRASH STUDY:
IOWA, 1979

1. Objectives

This report is a continuing yearly study of alcohol-related fatal traffic crashes in the State of Iowa.

The primary objective is to ascertain and evaluate the number and proportion of statewide alcohol-related fatal crashes. The secondary objectives are to present information on the characteristics of alcohol-related fatal crashes as well as to examine the extent of drinking pedestrian involvement.

In this study, the types of roads where alcohol-related crashes occurred and those counties where the involvement was higher were identified so that effective countermeasure programs could be planned and implemented.

2. Sources Of Data

Data were collected from reports furnished by the Department of Public Safety and by the Department of Transportation. A fatal crash was alcohol-related if the investigating officer reported that the driver or the pedestrian had been drinking. The degree of drinking was classified under the categories referred to in Table 1 and was possibly verified by a blood test. A blood test greater than .000 percent alcohol resulted in the "drinking" classification.

3. Number Of Alcohol-Related Fatal Crashes And Fatalities: Iowa, 1979

In 1979, 238 or 42.0 percent of the 566 fatal traffic crashes in the state were alcohol-related. These alcohol-related crashes claimed 285 lives and represented 43.5 percent of the total killed on Iowa's roads. Table 1 shows the number of drinking drivers according to the degree of drinking.

Degree of Drinking	Fatal Crashes			Fatalities		
	#	% of Sub-Group	% of Total	#	% of Sub-Group	% of Total
Driver Ability Impaired	195	81.9	34.5	240	84.2	36.6
Driver Ability Not Impaired	33	13.9	5.8	35	12.3	5.3
Pedestrian (only) Drinking	5	2.1	0.9	5	1.8	0.8
Drinking Driver Ability Not Stated	5	2.1	0.9	5	1.8	0.8
Subtotal	238	100.0	42.0	285	100.0	43.5
Total Not Drinking or Unknown	328	-----	58.0	370	-----	56.5
Grand Total	566	-----	100.0	655	-----	100.0

4. Drinking Pedestrians: Iowa, 1979

In 1979, 25 pedestrians were fatally injured as a result of an alcohol involvement. This comprised 55.6 percent of the total pedestrians (45) killed in 1979. Ten of these fatalities were drinking pedestrians: five in which the pedestrian alone was drinking and five in which the pedestrian and the driver were both drinking. Fifteen persons were killed in eleven accidents where driver alone was drinking. Table 2 shows the pedestrian fatalities due to alcohol consumption. Of the 10 drinking pedestrians, four had BAC reports ranging from 0.179 to 0.291 percent and averaging 0.237 percent. The ages of drinking pedestrians ranged from 23 to 73 years with 70 percent of the drinking pedestrians aged 40 years and over.

Fatality Group	Category	#	%
Pedestrian Fatalities	Related to Drinking Pedestrians (only)	5	1.8
	Related to Drinking Drivers and Drinking Pedestrians	5	1.8
	Related to Drinking Drivers (only)	15	5.3
Driver & Passenger Fatalities	Related to Drinking Drivers	260	91.2
Total Alcohol-Related Fatalities		285	100.0 ^{1/}

^{1/} Percentages do not add up to 100.0 due to rounding.

5. Fatal Crashes Involving Drinking Drivers By Type Of Crash: Iowa, 1979

The number of alcohol-related fatal crashes by type of crash or number of vehicles involved is shown in Table 3. This table illustrates that 58.0 percent of the alcohol-related fatal crashes involved single vehicles. This table also shows an average BAC of 0.173 percent for the operators of those vehicles. The drivers of multiple vehicle crashes had a slightly lower average BAC of 0.168 percent. The overall average was 0.171.

TABLE 3
ALCOHOL-RELATED FATAL CRASHES BY TYPE OF CRASH:
IOWA, 1979

Type of Crash	Fatal Crashes				Fatalities		
	#	% of Total	% of Subgroup	Mean BAC	#	% of Total	% of Subgroup
SINGLE MOTOR VEHICLE	138	58.0	100.0	.173	151	53.0	100.0 ^{1/}
Overtaken	42	17.6	30.4	.172	46	16.1	30.5
Collided with Fixed Object	73	30.7	52.9	.170	78	27.4	51.7
Collided with Drinking Pedestrian	10	4.2	7.2	.221 ^{1/}	10	3.5	6.6
Collided with Non-Drinking Pedestrian	11	4.6	8.0	.166	15	5.3	9.9
Collided with Bicyclist	1	0.4	0.7	.165	1	0.4	0.7
Others	1	0.4	0.7	.215	1	0.4	0.7
MULTIPLE MOTOR VEHICLE	100	42.0	100.0	.168	134	47.0	100.0
Collided with Motor Vehicle in Traffic	99	41.6	99.0	.168	133	46.7	99.3
Train	1	0.4	1.0	.137	1	0.4	0.7
Total	238	100.0	-----	.171	285	100.0	-----

^{1/} This is the average BAC from 4 drinking pedestrians and 1 drinking driver.

NOTE: Run Off Road is no longer on Iowa's accident report form.

6. Number Of Drinking Drivers Tested By Degree Of Impairment: Iowa, 1979

In 1979, there were 260 drinking drivers and 10 drinking pedestrians. Of these, blood alcohol test results were reported for 186 drivers and 4 pedestrians. Of the "ability impaired" category (totaling 202), 156 or 77.2 percent had known BACs. Of the "ability not impaired" category, 26 or 53.1 percent had test results reported. Table 4 shows the proportion of drinking drivers/pedestrians with alcohol test results.

Drinking Drivers and Pedestrians	TOTAL		Ability Impaired		Ability Not Impaired		Impairment Not Stated	
	#	%	#	%	#	%	#	%
BAC Reported	190	70.4	156	77.2	26	53.1	8	42.1
BAC Unknown	80	29.6	46	22.8	23	46.9	11	57.9
Total	270 ^{1/}	100.0	202	100.0	49	100.0	19	100.0

¹ This includes 10 drinking pedestrians, 7 "impaired" and 3 "not impaired".

7. Number Of Drinking Drivers Tested By BAC Level: Iowa, 1979

Table 5 shows the frequency of drinking drivers/pedestrians by BAC level. Of the 190 tested, 153 had a BAC of 0.100 percent or more. A BAC of 0.100 and above is presumptive evidence of operating a motor vehicle while under the influence (OMVUI) in the State of Iowa. Data also showed that 111 or 58.4 percent had a BAC of 0.150 or more.

BAC Level	Number of Drinking Drivers/Pedestrians	Percent of Drinking Drivers/ Pedestrians in Each BAC Level
Below .050	16	8.4
.050-.099	21	11.1
.100-.149	42	22.1
.150-.199	39 ^{1/}	20.5
.200-.249	39 ^{1/}	20.5
.250-.299	22 ^{2/}	11.6
.300-.349	8	4.2
.350-.399	2	1.1
.400+	1	0.5
Total	190	100.0

^{1/} One Drinking Pedestrian

^{2/} Two Drinking Pedestrians

8. Drinking Drivers Involved In Fatal Crashes By Age: Iowa, 1979

The age distribution of drinking drivers involved in fatal crashes in 1979 was studied to determine the role of age in alcohol-related fatal crashes. Of the total number of drinking drivers as shown in Table 6, 56.9 percent were 24 years of age or younger. This proportion exceeds the already large proportion of young drivers involved in fatal crashes which is 41.9 percent. When compared with the proportion of young drivers with a valid drivers license (23.7 percent) the aforementioned age group is even more over-represented.

TABLE 6
DRINKING DRIVERS AND ALL DRIVERS INVOLVED IN
FATAL MOTOR VEHICLE CRASHES BY AGE GROUP:
IOWA, 1979

Age	Drinking Drivers		All Drivers		Number of Licensed Drivers	
	#	%	#	%	#	%
16 & Below	15	5.8	55	6.3	42,539	2.0
17	11	4.2	38	4.4	51,171	2.4
18	18	6.9	48	5.5	55,869	2.7
19	19	7.3	49	5.6	58,883	2.8
20	18	6.9	42	4.8	58,168	2.8
21-24	67	25.8	133	15.3	230,623	11.0
25-34	59	22.7	201	23.1	498,031	23.8
35-44	27	10.4	103	11.8	308,662	14.7
45-54	12	4.6	71	8.1	271,920	13.0
55-64	9	3.5	64	7.3	256,134	12.2
65 & Up	4	1.5	55	6.3	263,406	12.6
Driver Unknown	1	0.4	13	1.5	-----	-----
Total	260*	100.0	872	100.0	2,095,406	100.0

* This does not include the 10 drinking pedestrians.

9. Drinking Drivers Involved In Crashes By Age And By Day Of The Week:
Iowa, 1979

Table 7 compares the days of the week when drinking drivers were involved in fatal crashes. This information shows that both younger and older drinking drivers were involved in considerably more fatal crashes during the weekends.

TABLE 7
DRINKING DRIVERS INVOLVED IN FATAL CRASHES BY AGE AND BY DAY OF WEEK:
IOWA, 1979

Days of The Week	Total		19 & Younger		20 Years		21-24 Years		25-34 Years		35 Years & Older		Driver Unknown	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Monday	19	7.3	7	11.1	--	-----	5	7.5	3	5.1	4	7.7		
Tuesday	14	5.4	3	4.8	--	-----	2	3.0	4	6.8	5	9.6		
Wednesday	24	9.2	5	7.9	2	11.1	8	11.9	4	6.8	5	9.6		
Thursday	27	10.4	3	4.8	1	5.6	6	9.0	9	15.3	8	15.4		
Friday	50	19.2	6	9.5	4	22.2	16	23.9	16	27.1	8	15.4		
Saturday	74	28.5	18	28.6	8	44.4	17	25.4	15	25.4	15	28.8	1	100.0
Sunday	52	20.0	21	33.3	3	16.7	13	19.4	8	13.6	7	13.5		
TOTAL	260	100.0	63	100.0	18	100.0	67	100.0 ^{1/}	59	100.0 ^{1/}	52	100.0	1	100.0

^{1/} Percentages do not add up to 100.0 due to rounding.

10. Drinking Drivers Involved In Fatal Crashes By Age And Time Of Day:
Iowa, 1979

Table 8 shows the distribution of drinking drivers by time of day and by age groups. The group of drinking drivers under 34 years of age were involved in the greatest number of fatal crashes between 12-midnight and 2:59 A.M.

TABLE 8
DRINKING DRIVERS INVOLVED IN FATAL CRASHES BY AGE AND TIME OF DAY:
IOWA, 1979

Time	20 Years & Younger		21-24 Years		25-34 Years		35 Years & Older		Driver Age Unknown	
	#	%	#	%	#	%	#	%	#	%
6:00- 8:59 P.M.	7	8.6	11	16.4	9	15.3	11	21.2		
9:00-11:59 P.M.	19	23.5	10	14.9	15	25.4	12	23.1	1	100.0
12:00- 2:59 A.M.	34	42.0	29	43.3	24	40.7	11	21.2		
3:00- 5:59 A.M.	10	12.3	8	11.9	4	6.8	4	7.7		
6:00- 8:59 A.M.	3	3.7	2	3.0	1	1.7	1	1.9		
9:00-11:59 P.M.	2	2.5	--	-----	--	-----	--	-----		
12:00- 2:59 P.M.	--	-----	1	1.5	1	1.7	1	1.9		
3:00- 5:59 P.M.	5	6.2	6	9.0	5	8.5	10	19.2		
Time Unknown	1	1.2	--	-----	--	-----	2	3.8		
Total	81	100.0	67	100.0	59	100.0 ^{1/}	52	100.00	1	100.0

^{1/} Percentages do not total 100.0 due to rounding.

11. Relationship Between The Age Of Drinking Drivers And The Mean Blood Alcohol Concentration In Fatal Crashes: Iowa, 1979

The number of drivers and the mean blood alcohol concentration were tabulated according to age groups in Table 9.

It is interesting to note that drinking drivers who were 19 years of age or younger had lower BACs than the older drivers.

Age	Number	Average BAC
19 and younger	43	.132
20	14	.164
21-24	50	.166
25-34	42	.178
35-44	19	.235
45-54	9	.188
55-64	8	.158
65 and up	1	.307
All Ages	186	.169

12. Alcohol-Related Fatal Crashes And Fatalities By Month: Iowa, 1979

The variation by month of the year in 1979 is shown in Table 10. The months of March and October ranked highest in the proportion of alcohol-related fatal crashes in 1979. (NOTE: March had the highest proportion but October had the most alcohol-related crashes.)

TABLE 10
NUMBER AND PERCENTAGE OF ALCOHOL-RELATED FATAL CRASHES,
FATALITIES, AND DRINKING DRIVERS BY MONTH:
IOWA, 1979

Month	Fatal Crashes				Fatalities		
	Drinking Drivers / Pedestrians	All Fatal Crashes	Alcohol Related Crashes	% Alcohol Related Crashes	All Fatalities	Alcohol Related Fatalities	% Alcohol Related Fatalities
January	12/0	29	10	34.5	37	16	43.2
February	11/1	34	8	23.5	42	10	23.8
March	19/1	34	18	52.9	37	20	54.1
April	20/1	39	18	46.2	45	23	51.1
May	27/1	48	24	50.0	53	25	47.2
June	27/1	56	26	46.4	66	30	45.5
July	20/0	48	17	35.4	55	21	38.2
August	18/0	52	17	32.7	61	21	34.4
September	24/1	54	23	42.6	62	28	45.2
October	33/1	62	30	48.4	72	36	50.0
November	22/1	52	20	38.5	61	25	41.0
December	27/2	58	27	46.6	64	30	46.9
Total	260/10	566	238	42.0	655	285	43.5

13. Violations Committed By Drinking Drivers Involved In Fatal Crashes:
Iowa, 1979

Violations frequently committed by drinking drivers were investigated and ranked by type of crash, as indicated in Table 11.

Driving left of center and speeding accounted for 52.0 percent of the violations in multiple vehicle fatal crashes.

Drinking drivers who were speeding and failed to have control caused 86.8 percent of the violations in single vehicle fatal crashes.

TABLE 11
VIOLATIONS COMMITTED BY DRINKING DRIVERS:
IOWA, 1979

Violations	Multiple Vehicle		Single Vehicle	
	#	%	#	%
Drove Left of Center	47	37.0	---	-----
Speeding	19	15.0	71	49.7
Failure to Have Control	13	10.2	53	37.1
Failure to Yield	12	9.4	---	-----
Ran Stop Sign	6	4.7	---	-----
Ran Traffic Signal	1	0.8	---	-----
Ran Railroad Signal	---	-----	1	0.7
Reckless Driving	1	0.8	5	3.5
Wrong Way on a One Way Street	1	0.8	---	-----
Improper Passing	3	2.4	---	-----
Improper Turn	4	3.1	---	-----
Pedestrian Violation	---	-----	10	7.0
Violation By Other Driver	5	3.9	---	-----
Violations By Other Drinking Driver	13	10.2	---	-----
Other	1	0.8	2	1.4
Unknown	1	0.8	1	0.7
Total	127	100.0 ^{1/}	143	100.0 ^{1/}

^{1/} Percentages do not add up to 100.0 due to rounding.

14. Alcohol-Related Fatal Crashes By Location: Iowa, 1979

An analysis showed that 73.5 percent of the crashes occurred in the rural areas while only 26.5 percent occurred in the urban areas.

The types of roadway were also investigated, the results of which are shown in the following table:

ROAD CLASS	MONTH												TOTAL	
	J	F	M	A	M	J	J	A	S	O	N	D	#	%
Interstate	--	1	1	--	1	2	1	1	1	--	--	--	8	3.4
Primary	9	2	10	10	10	10	7	9	9	14	5	14	109	45.8
County	--	4	4	6	8	7	6	5	9	11	10	11	81	34.0
City Streets	1	1	3	2	5	7	3	2	4	3	5	2	38	16.0
Others	--	-	--	--	--	--	--	--	--	2	--	--	2	0.8
Total	10	8	18	18	24	26	17	17	23	30	20	27	238	100.0

The preceding table shows that 45.8 percent of the alcohol-related fatal crashes occurred on U.S./State highways, 34.0 percent on county roads and 16.0 percent on city streets. Only 3.4 percent occurred on interstates. This information is of importance to enforcement officers.

15. Alcohol-Related Fatal Crashes By County: Iowa, 1979

The following 27 counties had no reported alcohol-related fatal crashes in 1979.

Adair	Davis	Kossuth	Pocahontas	Winnebago
Adams	Emmet	Lucas	Sac	Winneshiek
Allamakee	Floyd	Monona	Sioux	Wright
Audubon	Henry	Monroe	Taylor	
Calhoun	Humboldt	Montgomery	Van Buren	
Cedar	Ida	Page	Wayne	

In 1979, 42 counties exceeded the state average of 42.0 percent alcohol-related fatal crashes as shown in Table 13. These counties accounted for 71.8 percent of the total alcohol-related fatal crashes in the state. The average proportion of alcohol-related fatal crashes in these counties was 60.0 percent.

Counties with their corresponding number and percentage of alcohol-related fatal crashes are shown for the years 1979 and 1980 on pages 29-32.

TABLE 13
COUNTIES RECORDING FATAL ALCOHOL INVOLVEMENT ABOVE THE STATE
AVERAGE OF 42.0 PERCENT:
IOWA, 1979

County	Total Crashes	Alcohol-Related Crashes	Percent
Appanoose	2	1	50.0
Black Hawk	25	13	52.0
Bremer	3	2	66.7
Carroll	3	2	66.7
Cerro Gordo	4	2	50.0
Cherokee	4	3	75.0
Clarke	2	1	50.0
Clay	5	3	60.0
Clayton	8	4	50.0
Clinton	13	8	61.5
Crawford	4	2	50.0
Des Moines	6	3	50.0
Dubuque	13	10	77.0
Fayette	4	2	50.0
Fremont	1	1	100.0
Grundy	6	3	50.0
Hancock	6	5	83.3
Hardin	3	2	66.7
Harrison	5	3	60.0
Howard	4	4	100.0
Iowa	2	1	50.0
Jackson	4	2	50.0
Jefferson	3	2	66.7
Johnson	9	5	55.6
Keokuk	7	6	85.7
Lee	12	6	50.0
Linn	20	10	50.0
Louisa	7	3	42.9
Madison	1	1	100.0
Mahaska	6	3	50.0
Mills	2	2	100.0
Mitchell	4	2	50.0
Plymouth	7	3	42.9
Ringgold	1	1	100.0
Scott	27	20	74.0
Shelby	3	2	66.7
Tama	6	3	50.0
Wapello	9	6	66.7
Washington	3	2	66.7
Webster	15	9	60.0
Woodbury	14	7	50.0
Worth	2	1	50.0
Total	285	171	60.0

SUMMARY FOR 1980

1. Out of a total of 541 fatal traffic crashes in 1980, 218 were alcohol-related. These crashes claimed 251 lives or 40.1 percent of the total traffic fatalities.
2. In 1980, 14 pedestrians were killed as a result of alcohol involvement. Five fatal crashes involved five drinking pedestrians (two were drinking pedestrians only, and three involved both drinking pedestrians and drivers). Nine fatal crashes involved drinking drivers that killed nine pedestrians. For pedestrians with known blood alcohol content (BAC), the average of those killed was 0.248 percent with a range of 0.134 to 0.325 percent.
3. In 1980, 61.0 percent of the alcohol-related fatal crashes were single motor vehicle crashes. The average BAC level of drivers involved in single crashes (0.176) was higher than the average of drivers in multiple crashes (0.141).
4. Of the 234 drinking drivers/pedestrians, 181 or 77.4 percent had blood alcohol tests. The average BAC of drivers tested was 0.160 percent and 76.2 percent of the drivers had a BAC of .100 percent or more. Data also showed that 53.6 percent of the drivers tested had a BAC of 0.150 or more which is symptomatic of the problem drinker.
5. Approximately 50.7 percent of the drinking drivers involved in fatal traffic crashes were 24 years of age or younger. This proportion exceeds the already large proportion of young drivers involved in fatal crashes (43.2 percent).
6. An analysis of drinking drivers involved in fatal crashes showed that more crashes occurred during the early morning hours (12:00 - 2:59 A.M.) for both the younger and older drivers.
7. The results of the analysis indicated that both the younger and older drivers were involved in considerably more fatal crashes during the weekends.
8. The study also revealed that younger drivers had lower levels of alcohol in their blood but high involvement in fatal crashes. This suggests that young drivers were more vulnerable to traffic crashes when alcohol was involved.
9. The month of November ranked highest in the proportion of alcohol-related fatal crashes in 1980.
10. Driving left of center and speeding accounted for more than 50.0 percent of the violations in multivehicle fatal crashes. Drinking drivers who were speeding accounted for almost 75.0 percent of the violations in single vehicle crashes.
11. In 1980, 49 counties exceeded the state average of alcohol-related fatal crashes (40.3 percent). These counties accounted for 70.6 percent of the total alcohol-related fatal crashes in the state.

12. About 47.2 percent of the alcohol-related crashes occurred on U.S./State highways, 33.5 percent on county roads, and 17.0 percent on city streets. Only 2.3 percent occurred on interstates.
13. The proportion of alcohol-related fatal crashes has increased in the years 1975-1980 (38.7 percent) when compared to the years 1970-1974 (31.3 percent). However, data indicated that Iowa's Alcohol Safety Action Program has resulted in an improvement in reporting alcohol involvement and an increase in numbers of BAC tests performed. It is difficult, therefore, to compare the time periods with respect to a true alcohol-related accident experience.

ALCOHOL-RELATED FATAL CRASH STUDY:
IOWA, 1980

1. Objectives

This report is a continuing yearly study of alcohol-related fatal traffic crashes in the State of Iowa.

The primary objective is to ascertain and evaluate the number and proportion of statewide alcohol-related fatal crashes. The secondary objectives are to present information on the characteristics of alcohol-related fatal crashes as well as to examine the extent of drinking pedestrian involvement.

In this study, the types of roads where alcohol-related crashes occurred and those counties where the involvement was higher were identified so that effective countermeasure programs could be planned and implemented.

2. Sources Of Data

Data were collected from reports furnished by the Department of Public Safety and by the Department of Transportation. A fatal crash was alcohol-related if the investigating officer reported that the driver or the pedestrian had been drinking. The degree of drinking was classified under the categories referred to in Table 1 and was possibly verified by a blood test. A blood test greater than .000 percent alcohol resulted in the "drinking" classification.

3. Number Of Alcohol-Related Fatal Crashes And Fatalities: Iowa, 1980

In 1980, 218 or 40.3 percent of the 541 fatal traffic crashes in the state were alcohol-related. These alcohol-related crashes claimed 251 lives and represented 40.1 percent of the total killed on Iowa's roads. Table 1 shows the number of drinking drivers according to the degree of drinking.

Degree of Drinking	Fatal Crashes			Fatalities		
	#	% of Sub-Group	% of Total	#	% of Sub-Group	% of Total
Driver Ability Impaired	168	77.1	31.1	195	77.7	31.2
Driver Ability Not Impaired	44	20.2	8.1	49	19.5	7.8
Pedestrian (only) Drinking	2	0.9	0.4	2	0.8	0.3
Drinking Driver Ability Not Stated	4	1.8	0.7	5	2.0	0.8
Subtotal	218	100.0	40.3	251	100.00	40.1
Total Not Drinking or Unknown	323	-----	59.7	375	-----	59.9
Grand Total	541	-----	100.0	626	-----	100.0

4. Drinking Pedestrians: Iowa, 1980

In 1980, 14 pedestrians were fatally injured as a result of an alcohol involvement. This comprised 35.9 percent of the total pedestrians (39) killed in 1980. In two accidents the pedestrian alone was drinking, in three accidents the driver and pedestrian were both drinking, and in the other nine accidents the driver alone was drinking. See Table 2.

Of the five drinking pedestrians, three had BAC results - 0.134, 0.284, and 0.325, giving an average of 0.248 percent. The ages of drinking pedestrians ranged from 19 through 59 years (19, 20, 50, 56, 59) and all were male.

TABLE 2
ALCOHOL-RELATED FATALITIES:
IOWA, 1980

Fatality Group	Category	#	%
Pedestrian Fatalities	Related to Drinking Pedestrians (only)	2	0.8
	Related to Drinking Drivers and Drinking Pedestrians	3	1.2
	Related to Drinking Drivers (only)	9	3.6
Driver & Passenger Fatalities	Related to Drinking Drivers	237	94.4
Total Alcohol-Related Fatalities		251	100.0

5. Fatal Crashes Involving Drinking Drivers By Type Of Crash: Iowa, 1980

The number of alcohol-related fatal crashes by type of crash or number of vehicles involved is shown in Table 3. This table illustrates that 61.0 percent of the alcohol-related fatal crashes involved single vehicles. This table also shows an average BAC of 0.176 percent for the operators of those vehicles. As Table 3 indicates, the BAC level of drivers in single vehicle crashes was higher than the BAC's of drivers in multiple vehicle crashes.

Type of Crash	Fatal Crashes				Fatalities		
	#	% of Total	% of Subgroup	Mean BAC	#	% of Total	% of Subgroup
SINGLE MOTOR VEHICLE	133	61.0	100.0 ^{1/}	.176	138	55.0	100.0
Overtuned	34	15.6	25.6	.162	36	14.3	26.1
Collided with Fixed Object	81	37.2	60.9	.186	84	33.5	60.9
Collided with Drinking Pedestrian	5	2.3	3.8	.248 ^{2/}	5	2.0	3.6
Collided with Non-Drinking Pedestrian	9	4.1	6.8	.098	9	3.6	6.5
Collided with Bicyclist	1	0.5	0.8	-----	1	0.4	0.7
Others	3	1.4	2.3	.222	3	1.2	2.2
MULTIPLE MOTOR VEHICLE	85	39.0	100.0	.141	113	45.0	100.0
Collided with Motor Vehicle in Traffic	80	36.7	94.1	.140	103	41.0	91.2
Train	5	2.3	59.9	.147	10	4.0	8.8
Total	218	100.0	-----	.160	251	100.0	-----

^{1/} Percentage does not total 100.0 due to rounding.

^{2/} BAC average from 3 drinking pedestrians.

181 BAC's reported, 178 drinking drivers and 3 drinking pedestrians.

6. Number Of Drinking Drivers Tested By Degree Of Impairment: Iowa, 1980

In 1980, 234 drinking drivers/pedestrians were involved in fatal crashes. Of these, 181 or 77.4 percent had test results reporting blood alcohol concentration. Of the "ability impaired" category (totaling 176), 150 or 85.2 percent had known BACs. Table 4 shows the proportion of drinking drivers/pedestrians with alcohol test results.

Drinking Drivers and Pedestrians	TOTAL		Ability Impaired		Ability Not Impaired		Impairment Not Stated	
	#	%	#	%	#	%	#	%
BAC Reported	181	77.4	150	85.2	31	55.4	-	-----
BAC Unknown	53	22.6	26	14.8	25	44.6	2	100.0
Total	234 ^{1/}	100.0	176	100.0	56	100.0	2	100.0

^{1/} This includes 5 drinking pedestrians. Three pedestrians have known BACs.

7. Number Of Drinking Drivers Tested By BAC Level: Iowa, 1980

Table 5 shows the frequency of drinking drivers/pedestrians by BAC level. Of the 181 tested, 138 had a BAC of 0.100 or more. A BAC of 0.100 and above is presumptive evidence of operating a motor vehicle while under the influence (OMVUI) in the State of Iowa. Data also showed that 97 or 53.6 percent had a BAC of 0.150 or more which is symptomatic of the problem driver.

BAC Level	Number of Drinking Drivers/Pedestrians	Percent of Drinking Drivers/ Pedestrians in Each BAC Level
Below .050	16	8.8
.050-.099	27	14.9
.100-.149	41 ^{1/}	22.7
.150-.199	39	21.5
.200-.249	38	21.0
.250-.299	13 ^{1/}	7.2
.300-.349	4 ^{1/}	2.2
.350-.399	3	1.7
.400+	---	-----
Total	181	100.0

^{1/} One Drinking Pedestrian

8. Drinking Drivers Involved In Fatal Crashes By Age: Iowa, 1980

The age distribution of drinking drivers involved in fatal crashes in 1980 was studied to determine the role of age in alcohol-related fatal crashes. Of the total number of drinking drivers, as shown in Table 6, 116 or 50.7 percent were 24 years of age or younger. This proportion already exceeds the already large proportion of young drivers involved in fatal crashes which is 43.2 percent. When compared with the proportion of young drivers with a valid drivers license (23.2 percent) the aforementioned age group is even more over-represented.

TABLE 6
DRINKING DRIVERS AND ALL DRIVERS INVOLVED IN
FATAL MOTOR VEHICLE CRASHES BY AGE GROUP:
IOWA, 1980

Age	Drinking Drivers		All Drivers		Number of Licensed Drivers	
	#	%	#	%	#	%
16 & Below	8	3.5	40	5.0	37,178	1.8
17	9	3.9	29	3.6	48,013	2.3
18	13	5.7	48	6.0	53,614	2.6
19	11	4.8	33	4.1	58,128	2.8
20	28	12.2	53	6.6	57,097	2.7
21-24	47	20.5	144	17.9	232,802	11.1
25-34	74	32.3	178	22.1	513,049	24.5
35-44	21	9.2	82	10.2	311,883	14.9
45-54	11	4.8	67	8.3	267,330	12.7
55-64	6	2.6	66	8.2	254,864	12.1
65 & Up	1	0.4	55	6.8	263,869	12.6
Driver Unknown	---	-----	9	1.1	-----	-----
Total	229	100.0 ^{1/}	804	100.0 ^{1/}	2,097,827	100.0 ^{1/}

^{1/} Percentages do not always total 100.0 percent due to rounding.

9. Drinking Drivers Involved In Crashes By Age And By Day Of The Week:
Iowa, 1980

Table 7 compares the days of the week when drinking drivers were involved in fatal crashes. Evidently, both the younger and older drinking drivers were involved in considerably more fatal crashes during the weekends.

Days of The Week	Total		19 & Younger		20 Years		21-24 Years		25-34 Years		35 Years & Older		Driver Unknown	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Monday	16	7.0	1	2.4	1	3.6	5	10.9	4	5.3	5	12.8	--	-----
Tuesday	20	8.7	2	4.9	1	3.6	4	8.7	7	9.3	6	15.4	--	-----
Wednesday	18	7.9	2	4.9	1	3.6	3	6.5	8	10.7	4	10.3	--	-----
Thursday	21	9.2	6	14.6	3	10.7	4	8.7	5	6.7	3	7.7	--	-----
Friday	38	16.6	4	9.8	4	14.3	10	21.7	15	20.0	5	12.8	--	-----
Saturday	61	26.6	13	31.7	9	32.1	8	17.4	23	30.7	8	20.5	--	-----
Sunday	55	24.0	13	31.7	9	32.1	12	26.1	13	17.3	8	20.5	--	-----
TOTAL	229	100.0	41	100.0	28	100.0	46	100.0 ¹	75	100.0 ¹	39	100.0	--	-----

10. Drinking Drivers Involved In Fatal Crashes By Age And Time Of Day:
Iowa, 1980

Table 8 shows the distribution of drinking drivers by time of day and by age groups. Both young and old drinking drivers were involved in more fatal crashes between the hours of 12-midnight and 2:59 A.M.

TABLE 8
DRINKING DRIVERS INVOLVED IN FATAL CRASHES BY AGE AND TIME OF DAY:
IOWA, 1980

Time	20 Years & Younger		21-24 Years		25-34 Years		35 Years & Older		Driver Age Unknown	
	#	%	#	%	#	%	#	%	#	%
6:00- 8:59 P.M.	7	10.1	6	12.8	8	10.8	7	17.9	--	-----
9:00-11:59 P.M.	20	29.0	14	29.8	19	25.7	5	12.8	--	-----
12:00- 2:59 A.M.	24	34.8	20	42.6	21	28.4	15	38.5	--	-----
3:00- 5:59 A.M.	12	17.4	3	6.4	8	10.8	2	5.1	--	-----
6:00- 8:59 A.M.	--	-----	--	-----	5	6.8	1	2.6	--	-----
9:00-11:59 P.M.	1	1.4	--	-----	--	-----	1	2.6	--	-----
12:00- 2:59 P.M.	2	2.9	2	4.3	6	8.1	2	5.1	--	-----
3:00- 5:59 P.M.	3	4.3	2	4.3	7	9.5	5	12.8	--	-----
Time Unknown	--	-----	--	-----	--	-----	1	2.6	--	-----
Total	69	100.0 ^{1/}	47	100.0 ^{1/}	74	100.0 ^{1/}	39	100.00	--	-----

^{1/} Percentages do not total 100.0 due to rounding.

11. Relationship Between The Age Of Drinking Drivers And The Mean Blood Alcohol Concentration In Fatal Crashes: Iowa, 1980

The number of drivers and the mean blood alcohol concentration were tabulated according to age groups in Table 9.

It is interesting to note that drinking drivers who were 19 years of age or younger had lower BACs than their older counterparts.

Age	Number	Average BAC
19 and younger	32	.140
20	22	.170
21-24	37	.152
25-34	57	.155
35-44	18	.178
45-54	7	.228
55-64	4	.186
65 and up	1	.172
All Ages	178	.160

12. Alcohol-Related Fatal Crashes And Fatalities By Month: Iowa, 1980

The variation by month of the year in 1980 is shown in Table 10. The month of November ranked highest in the proportion of alcohol-related fatal crashes in 1980. The months of July and August had the highest number of alcohol-related crashes.

TABLE 10
NUMBER AND PERCENTAGE OF ALCOHOL-RELATED FATAL CRASHES,
FATALITIES, AND DRINKING DRIVERS BY MONTH:
IOWA, 1980

Month	Fatal Crashes				Fatalities		
	Drinking Drivers / Pedestrians	All Fatal Crashes	Alcohol Related Crashes	% Alcohol Related Crashes	All Fatalities	Alcohol Related Fatalities	% Alcohol Related Fatalities
January	18/1	48	19	39.6	56	21	37.5
February	17/0	38	16	42.1	41	16	39.0
March	12/2	36	12	33.3	43	13	30.2
April	14/0	36	13	36.1	40	14	35.0
May	19/0	40	18	45.0	46	23	50.0
June	16/0	46	15	32.6	55	16	29.1
July	26/1	51	25	49.0	55	28	50.9
August	26/0	62	25	40.3	70	25	35.7
September	25/0	58	23	39.7	69	30	43.5
October	18/1	42	17	40.8	47	21	44.7
November	26/0	44	24	54.5	56	31	55.4
December	12/0	40	11	22.5	48	13	27.1
Total	229/5	541	218	40.3	626	251	40.1

13. Violations Committed By Drinking Drivers Involved In Fatal Crashes:
Iowa, 1980

Violations frequently committed by drinking drivers were investigated and ranked by type of crash, as indicated in Table 11.

Driving left of center and speeding accounted for more than 50.0 percent of the violations in multiple vehicle fatal crashes.

Drinking drivers who were speeding accounted for almost 75.0 percent of the violations in single vehicle fatal crashes.

Violations	Multiple Vehicle		Single Vehicle	
	#	%	#	%
Drove Left of Center	40	43.0	---	-----
Speeding	9	9.7	71	52.2
Failure to Have Control	3	3.2	44	32.4
Failure to Yield	3	3.2	---	-----
Ran Stop Sign	7	7.5	---	-----
Ran Traffic Signal	1	1.1	---	-----
Ran Railroad Signal	---	-----	5	3.7
Reckless Driving	6	6.5	9	6.6
Wrong Way on a One Way Street	2	2.2	---	-----
Improper Passing	1	1.1	---	-----
Improper Turn	2	2.2	---	-----
Pedestrian Violation	---	-----	3	2.2
Violation By Other Driver	5	5.4	---	-----
Violations By Other Drinking Driver	11	11.8	---	-----
Other	1	1.1	3	2.2
Unknown	2	2.2	1	0.7
Total	93	100.0 ^{1/}	136	100.0

^{1/} Percentages do not add up to 100.0 due to rounding.

14. Alcohol-Related Fatal Crashes By Location: Iowa, 1980

An analysis showed that 71.6 percent of the alcohol-related crashes occurred in the rural areas while only 28.4 percent occurred in the urban areas.

The types of roadway were also investigated, the results of which are shown in the following table:

ROAD CLASS	MONTH												TOTAL	
	J	F	M	A	M	J	J	A	S	O	N	D	#	%
Interstate	--	1	--	--	--	--	--	1	--	1	2	--	5	2.3
Primary	12	9	4	9	10	8	9	10	9	6	11	6	103	47.2
County	4	5	5	2	8	4	11	8	12	5	8	1	73	33.5
City Streets	3	1	3	2	--	3	5	6	2	5	3	4	37	17.0
Others	--	--	--	--	--	--	--	--	--	--	--	--	---	-----
Total	19	16	12	13	18	15	25	25	23	17	24	11	218	100.0

The preceding table shows that 47.2 percent of the alcohol-related fatal crashes occurred on U.S./State highways, 33.5 percent on county roads and 17.0 percent on city streets. Only 2.3 percent occurred on interstates. This information is of importance to enforcement officers.

15. Alcohol-Related Fatal Crashes By County: Iowa, 1980

The following 24 counties had no reported alcohol-related fatal crashes in 1980.

Adams	Emmet	Iowa	Marion	Van Buren
Appanoose	Grundy	Jackson	Mills	Warren
Benton	Hamilton	Kossuth	Monroe	Worth
Calhoun	Howard	Lyon	Shelby	Wright
Chickasaw	Ida	Madison	Taylor	

In 1980, 49 counties exceeded the state average of 40.3 percent alcohol-related fatal crashes as shown in Table 13. These counties accounted for 70.6 percent of the total alcohol-related fatal crashes in the state. The average proportion of alcohol-related fatal crashes in these counties was 60.4 percent.

Counties with their corresponding number and percentage of alcohol-related fatal crashes are shown for the years 1979 and 1980 on pages 29-32.

TABLE 13
COUNTIES RECORDING FATAL ALCOHOL INVOLVEMENT ABOVE THE STATE
AVERAGE OF 40.3 PERCENT:
IOWA, 1980

County	Total Crashes	Alcohol-Related Crashes	Percent
Boone	7	3	42.9
Bremer	7	3	42.9
Butler	4	2	50.0
Carroll	6	4	66.7
Cerro Gordo	11	6	54.5
Cherokee	4	2	50.0
Clarke	3	2	66.7
Clayton	7	3	42.9
Clinton	10	5	50.0
Dallas	11	5	45.5
Davis	1	1	100.0
Decatur	2	1	50.0
Delaware	2	1	50.0
Dickinson	5	3	60.0
Dubuque	12	9	75.0
Floyd	7	5	71.4
Franklin	5	3	60.0
Fremont	1	1	100.0
Greene	7	3	42.9
Guthrie	3	2	66.7
Hancock	2	1	50.0
Hardin	4	4	100.0
Henry	2	1	50.0
Humboldt	2	1	50.0
Jasper	6	4	66.7
Jefferson	4	2	50.0
Johnson	14	10	71.4
Jones	4	2	50.0
Keokuk	7	3	42.9
Lee	12	6	50.0
Louisa	3	2	66.7
Lucas	4	2	50.0
Mahaska	2	2	100.0
Marshall	11	5	45.5
Mitchell	2	1	50.0
Monona	6	3	50.0
Montgomery	2	1	50.0
O'Brien	1	1	100.0
Osceola	1	1	100.0
Palo Alto	2	1	50.0
Plymouth	5	4	80.0
Ringgold	4	2	50.0
Scott	20	16	80.0
Tama	4	4	100.0
Union	4	3	75.0
Wapello	4	2	50.0
Wayne	3	3	100.0
Winnebago	1	1	100.0
Total	255	154	60.4

Table 14
Continued

County	Fatal Accidents			Fatalities		
	Total	Alcohol-Related		Total	Alcohol-Related	
		1979	1979		1979	1979
Emmet	4	---	---	4	---	---
Fayette	4	2	---	5	3	60.0
Floyd	1	---	5	10	8	---
Franklin	3	1	3	7	3	33.3
Fremont	1	1	1	2	2	100.0
Greene	4	1	3	8	4	25.0
Grundy	6	3	---	5	4	57.1
Guthrie	5	1	2	3	1	16.7
Hamilton	8	3	---	3	---	50.0
Hancock	6	5	1	3	2	83.3
Hardin	3	2	4	5	3	75.0
Harrison	5	3	2	11	2	60.0
Henry	3	---	1	2	1	---
Howard	4	4	---	9	9	100.0
Humboldt	1	---	1	2	1	---
Ida	1	---	---	1	---	---
Iowa	2	1	---	2	---	50.0
Jackson	4	2	---	4	---	50.0
Jasper	10	4	4	11	4	36.4
Jefferson	3	2	2	4	2	66.7
Johnson	9	5	10	17	13	55.6
Jones	7	1	2	4	2	14.3
Keokuk	7	6	3	10	8	80.0
Kossuth	2	---	---	2	---	---
Lee	12	6	6	15	9	60.0
Linn	20	10	6	24	12	50.0
Louisa	7	3	2	7	3	42.9
Lucas	1	---	2	4	2	---
Lyon	6	1	---	3	---	25.0
Madison	1	1	---	1	---	100.0
Mahaska	6	3	2	6	3	50.0
Marion	9	3	---	10	3	33.0

Table 14
Continued

County	Fatal Accidents						Fatalities					
	Total		Alcohol-Related		% Alcohol-Related		Total		Alcohol-Related		% Alcohol-Related	
	1979	1980	1979	1980	1979	1980	1979	1980	1979	1980	1979	1980
Marshall	5	11	2	5	40.0	45.5	6	13	2	5	33.3	38.5
Mills	2	2	2	---	100.0	---	2	3	2	---	100.0	---
Mitchell	4	2	2	1	50.0	50.0	5	3	3	1	60.0	33.3
Monona	1	6	---	3	---	50.0	1	8	---	5	---	62.5
Monroe	3	6	---	---	---	---	3	7	---	---	---	---
Montgomery	1	2	---	1	---	50.0	1	3	---	1	---	33.3
Muscatine	9	11	3	4	33.3	36.4	13	11	4	4	30.8	36.4
O'Brien	4	1	1	1	25.0	100.0	4	3	1	3	25.0	100.0
Osceola	3	1	1	1	33.3	100.0	4	1	1	1	25.0	100.0
Page	5	4	---	1	---	25.0	6	4	---	1	---	25.0
Palo Alto	6	2	1	1	16.7	50.0	7	2	1	1	14.3	50.0
Plymouth	7	5	3	4	42.9	80.0	8	5	3	4	37.5	80.0
Pocahontas	3	6	---	1	---	16.7	3	7	---	1	---	14.3
Polk	41	50	14	18	34.1	36.0	43	57	14	20	32.6	35.1
Pottawattamie	12	11	3	2	25.0	18.2	16	14	3	2	18.8	14.3
Poweshiek	4	4	1	1	25.0	25.0	4	4	1	1	25.0	25.0
Ringgold	1	4	1	2	100.0	50.0	1	4	1	2	100.0	50.0
Sac	---	6	---	1	---	16.7	---	6	---	1	---	16.7
Scott	27	20	20	16	74.1	80.0	31	23	24	19	77.4	82.6
Shelby	3	1	2	---	66.7	---	4	1	3	---	75.0	---
Sioux	6	6	---	1	---	16.7	6	6	---	1	---	16.7
Story	9	3	3	1	33.3	33.3	9	3	3	1	33.3	33.3
Tama	6	4	3	4	50.0	100.0	6	5	3	5	50.0	100.0
Taylor	1	2	---	---	---	---	1	2	---	---	---	---
Union	3	4	1	3	33.3	75.0	3	4	1	3	33.3	75.0
Van Buren	---	---	---	---	---	---	---	---	---	---	---	---
Wapello	9	4	6	2	66.7	50.0	13	4	9	2	69.0	50.0
Warren	7	8	2	---	28.6	---	9	9	2	---	22.2	---
Washington	3	4	2	2	66.7	50.0	3	5	2	2	66.7	40.0
Wayne	2	3	---	3	---	100.0	3	3	---	3	---	100.0
Webster	15	13	9	4	60.0	30.8	16	15	9	5	56.3	33.3

Table 14
Continued

County	Fatal Accidents						Fatalities					
	Total		Alcohol-Related		% Alcohol-Related		Total		Alcohol-Related		% Alcohol-Related	
	1979	1980	1979	1980	1979	1980	1979	1980	1979	1980	1979	1980
Winnebago	3	1	---	1	---	100.0	4	1	---	1	---	100.0
Winneshiek	4	4	---	1	---	25.0	6	4	---	1	---	25.0
Woodbury	14	10	7	4	50.0	40.0	14	10	7	4	50.0	40.0
Worth	2	1	1	---	50.0	---	2	1	1	---	---	---
Wright	2	1	---	---	---	---	2	2	---	---	---	---
TOTAL	566	541	238	218	42.0	40.3	655	626	285	251	43.5	40.1

1. Alcohol-Related Fatal Crashes... During the last decade, alcohol-related fatalities have increased in Iowa's traffic fatalities. This increase is primarily a result of... numerous factors include the increased volume of travel... and the establishment of new highway safety programs by... on such serious problems.

The previous decade began with 1972 when a percentage of 1970 compared to only 67% in 1980, a 77 percent reduction. During the same period the number of licensed drivers increased by 24 percent and vehicle miles of travel expanded 14 percent.

Drinking and driving has long been recognized as a major cause of highway deaths in Iowa. Beginning with the Iowa City Alcohol Safety Action Program (ASAP) demonstration project in 1977, much of the state's federal funding for highway safety has been channeled into alcohol countermeasures. As indicated in Table 15, alcohol-related fatalities statewide have not experienced the dramatic reduction shown by total fatalities. Although individual ASAPs have achieved results, the impact for the state as a whole has been one of containment. The alcohol problem has not increased in magnitude even though liquor consumption, numbers of drivers, and volume of travel have all increased.

ALCOHOL COUNTERMEASURES

IN IOWA

Year	Fatal Crashes			Fatalities		
	Alcohol-Related	Total	% Alcohol-Related	Alcohol-Related	Total	% Alcohol-Related
1970	222	731	30.4	270	812	33.3
1971	233	680	34.3	268	795	33.7
1972	210	723	29.1	250	774	32.3
1973	217	682	31.8	262	779	33.6
1974	187	580	32.4	227	635	35.8
1975	221	578	38.2	254	671	37.9
1976	192	557	34.5	238	633	37.6
1977	221	550	40.0	243	590	41.2
1978	202	557	36.3	210	560	37.5
1979	225	565	39.8	280	674	41.5
1980	218	541	40.3	251	625	40.1

1. Alcohol-Related Fatal Crashes Since 1970.

During the last decade, significant reductions have occurred in Iowa's traffic fatalities. This progress in highway safety is the result of numerous factors including the inception of the 55 MPH speed limit in 1974, the implementation of vehicle standards for passenger cars, and the establishment of new highway safety programs to counteract the most severe problems.

The previous decade began with 912 traffic fatalities in 1970 compared to only 626 in 1980, a 31 percent reduction. During the same period the number of licensed drivers increased by 25 percent and vehicle miles of travel expanded 14 percent.

Drinking and driving has long been recognized as a major cause of highway deaths in Iowa. Beginning with the Sioux City Alcohol Safety Action Program (ASAP) demonstration project in 1972, much of the state's federal funding for highway safety has been channeled into alcohol countermeasures. As indicated in Table 15, alcohol-related fatalities statewide have not experienced the dramatic reduction shown by total fatalities. Although individual ASAPs have achieved results, the impact for the state as a whole has been one of containment. The alcohol problem has not increased in magnitude even though liquor consumption, numbers of drivers, and volume of travel have all increased.

TABLE 15
ALCOHOL-RELATED FATAL TRAFFIC CRASHES AND FATALITIES:
IOWA, 1970-1980

Year	Fatal Crashes			Fatalities		
	Alcohol-Related	Total	% Alcohol-Related	Alcohol-Related	Total	% Alcohol-Related
1970	222	751	29.6	270	912	29.6
1971	233	680	34.3	293	828	35.4
1972	210	721	29.1	252	874	28.8
1973	217	682	31.8	263	813	32.3
1974	187	583	32.0	227	685	33.1
1975	221	578	38.2	256	674	38.0
1976	242	663	36.5	293	785	37.3
1977	221	561	39.4	263	640	41.1
1978	202	563	35.9	236	650	36.3
1979	238	566	42.0	285	655	43.5
1980	218	541	40.3	251	626	40.1

As progress is made in solving the easier highway safety problems and in identifying a larger portion of alcohol-related crashes, the percentage of all crashes involving alcohol rises. It now stands at 40 percent. Some agencies in Iowa that have excellent procedures for determining alcohol involvement actually report a higher proportion.

A drinking driver is one who has a BAC greater than .000 or whose condition has been recorded as "drinking, impaired" or "drinking, not impaired" on the accident report form by the investigating officer. Blood alcohol tests are not mandatory in fatal crashes in Iowa, and the proportion of fatal-crash involved drivers who are tested varies by locality and from year to year. As a result of their participation in ASAP, some agencies now check every driver in accidents where a person was injured or killed. From 1978 to 1979, statewide BAC test results for drivers fatally injured increased from 33 percent to 42 percent of the drivers. Results on file for surviving motor vehicle operators increased from 10 to 14 percent. These trends continued into 1980 but the tabulations are not yet completed.

As a measuring device, "alcohol-related" does not work well, and other surrogate or proxy measures must be used for scientific studies. The number of nighttime fatal crashes is one surrogate measure for alcohol involvement because it tends to rise or fall proportionately to alcohol-involved crashes, and it can be consistently measured from one time or place to another. However, when learning about drinking drivers and the kinds of crashes they have, it is necessary to study those crashes specifically identified as alcohol-related.

The first ALCOHOL-RELATED FATAL CRASH STUDY on record in Iowa was for the years 1970-1971. For those and all subsequent years, much painstaking work was done analyzing the actual accident reports of fatal crashes. In recent years this work was cross-checked against automated data files.

2. The Alcohol Safety Action Program

The Alcohol Safety Action Program (ASAP) integrates several different alcohol countermeasures, including drunk driving enforcement and adjudication, correctional, educational, and treatment programs, and public information campaigns. Areas of Iowa having an ASAP project as of 1980 are listed below with the year each project commenced.

- | | | |
|------------------|--|--|
| Group I - 1975 | Woodbury County | (from 1972-75 Sioux City was a federal demonstration ASAP project which showed a significant reduction in night fatal crashes) |
| | Pottawattamie County | |
| | City of Dubuque | |
| Group II - 1976 | Linn County | |
| | Polk County | |
| Group III - 1977 | Scott County | |
| | 1978 City of Burlington | |
| Group IV - 1979 | Black Hawk County Sheriff (rural only) | |

State traffic records showed an increase in alcohol-related fatal crashes in current ASAP areas from 41 in 1978 to 64 in 1979. One of the factors which could have been responsible for much of the increase was better reporting of alcohol involvement in Scott County's new ASAP program. Nevertheless, six out of the eight ASAP areas experienced some degree of increase. That increase

could have been a coincidence, or it could have been a surge in drinking/driving behavior that the constant level of ASAP enforcement could not completely check. Then, in 1980, alcohol-related fatal crash statistics came down in six of the eight current ASAP areas. The reductions are shown in Table 16. The return to pre-1979 levels of alcohol-related crashes in ASAP areas shows that the problem is being contained, and that 1979 tended to be a random high rather than a trend.

The data are consistent with the position that ASAP continues to be an effective countermeasure in holding alcohol-related crash fatalities in check.

TABLE 16
FATAL CRASHES IN ASAP AREAS:
Alcohol-Related Versus Other Crashes
IOWA, 1979-1980
March 18, 1981

	Alcohol-Related Fatal Crashes		All Other Fatal Crashes		Total Fatal Crashes	
	1979	1980	1979	1980	1979	1980
ASAP Areas						
Woodbury County	7	4	7	6	14	10
Pottawattamie County	3	2	8	9	11	11
Linn County	10	6	10	9	20	15
Polk County	14	18	27	32	41	50
Scott County	20	16	7	4	27	20
Rural Black Hawk County	7	0	3	5	10	5
City of Burlington	2	0	1	1	3	1
City of Dubuque	1	1	1	2	2	3
ASAP TOTAL	64 ↳ -27% ↑	47	64 ↳ +6% ↑	68	128	115
Non-ASAP Areas (remainder of state)	174 ↳ -1% ↑	172	264 ↳ -4% ↑	254	438	426
Statewide Total	238	218	328	323	566	541

Enforcement has long been a focal point of ASAP. Arrests for OMVUI (Operating a Motor Vehicle Under the Influence) increased substantially whenever an ASAP was instituted. Table 17 shows that during the past four years, ASAP officers have made an increasing proportion of Iowa's OMVUI arrests. Counties having one or more enforcement agencies involved with ASAP accounted for over 56 percent of OMVUI arrests in 1980 but only 36 percent of the population. Although these higher arrest rates remove many more drunk drivers from the roads than prior to ASAP, it is vital that all components of ASAP function effectively to bring about a general deterrent to drinking and driving.

TABLE 17
OMVUI ARRESTS IN ASAP COUNTIES AND STATEWIDE:
IOWA, 1977-1980

Area	1977	1978	1979	1980	Population 1980 Census (preliminary)
Black Hawk *	-	-	446	659	137,518
Dubuque	531	541	388	323	93,634
Linn	1,199	1,218	1,443	1,519	169,720
Polk	1,026	1,586	1,515	1,685	302,634
Pottawattamie	681	911	932	705	86,241
Scott **	-	919	989	1,149	159,579
Woodbury	473	640	706	734	100,575
Total	3,910	5,815	5,973	6,774	1,049,901
Statewide	11,466	11,397	11,501	12,055	2,913,387
ASAP Areas as a Percentage of the State Total	34.1	51.0	51.9	56.2	36.0

* Established in 1979.

** Established in 1978.

3. Legislation Affecting the Alcohol Problem

Driving Under the Influence

It is unlawful to operate a motor vehicle on the public highways of Iowa while under the influence of an alcoholic beverage, a narcotic, hypnotic or other drug, or any combination of these substances. If results of a chemical test reveal more than ten-hundredths of one percent (.10%) of alcohol in the blood, the driver will be presumed to be driving under the influence (OMVUI).

Before 1978, the criminal Code of Iowa specified a fine of \$300-\$1,000 and/or imprisonment for a first offense OMVUI, and a fine of \$500-\$1,000 and/or imprisonment for a second offense. In the new Code, no fines are specified for OMVUI - only a two day jail sentence. Provisions in the Code for fines now are the general ones: first offense OMVUI is a serious misdemeanor, the fine for which is not to exceed \$1,000; second offense OMVUI is an aggravated misdemeanor, with the fine not to exceed \$5,000; third offense OMVUI is a felony. Fines of \$300 to \$500 are commonly given to first and second offenders.

License Revocation

The law also provides for a license revocation for OMVUI of 120 days, 240 days, and one year for first, second, and third offenses, respectively. If the court defers judgment for a first offense, a new law effective July 1, 1981 provides that the court shall order the revocation of the defendant's license to operate a motor vehicle for a period not less than 30 days nor more than 90 days. A person losing a license for this reason may be issued a temporary driving permit restricted to travel between home and place of employment and necessary travel while employed.

A New Drinking/Driving Offense

Also effective July 1, 1981 is a new law intended to make the process of convicting drunk drivers simpler. A newly created offense is operating a motor vehicle while having thirteen hundredths or more of one percent by weight of alcohol in the blood, and is separate and distinct from the OMVUI offense. A person shall not be convicted and sentenced for both offenses for the same occurrence. Henceforth, if a legal blood alcohol test of a driver is .130 or more, he may be convicted of an offense without the State having to prove he was under the influence.

Implied Consent

Iowa's implied consent law means that anyone who drives anywhere on Iowa streets or highways automatically gives consent to a blood, breath, saliva or urine test for the alcoholic content of his/her blood. Before requiring such a test, the police officer must have reasonable grounds for believing the person was driving while under the influence and must have arrested the driver for that offense.

If a person under arrest for OMVUI refuses to submit to a chemical test for blood-alcohol content, no test shall be given. However upon such refusal, the State may revoke the license to drive for a period of not less than 120 days nor more than one year. No temporary permits are issued during this revocation.

Legal Drinking Age

Iowa lowered its legal drinking age from 21 to 18 years in 1973. In April of 1978 a study of teenage drinking drivers involved in fatal accidents done by the Governor's Highway Safety Office demonstrated that more 16, 17 and 18 year olds were involved following passage of the law. There were also complaints from high schools that the 18 year old students were supplying younger students with alcoholic beverages, making alcohol abuse harder to control at that level.

On July 1, 1978 the legal drinking age was raised to 19 years. Although an evaluation of the law's impact would be desirable, there is no way to control the many other societal influences upon the drinking behavior of teens. The years 1979 and 1980 did bring reductions in 18 year old involvement, but the effect is too small to demonstrate a statistically significant change for that group, according to the data in Table 18.

TABLE 18
YOUNG DRINKING DRIVERS INVOLVED IN FATAL CRASHES:
IOWA, 1970-1980

Year	Age						Total
	16 & Below	17	18	19	20	21 & Up	
1970	3	3	11	12	15	180	224
1971	-	4	8	10	8	208	238
1972	3	8	8	18	16	164	217
1973 *	1	6	15	19	12	182	235
1974	5	7	4	15	13	153	197
1975	7	14	16	20	15	167	239
1976	7	7	21	22	20	179	256
1977	7	5	23	16	13	166	230
1978 **	6	5	26	14	12	147	210
1979	15	11	18	19	18	179	260
1980	8	9	13	11	28	160	229

* Legal drinking age lowered from 21 to 18 years, July 1, 1973.

** Legal drinking age raised from 18 to 19 years, July 1, 1978.

It should be noted that a law removing a restriction is much more likely to result in a measurable change in the population than one replacing a restriction, particularly one that is difficult to enforce.

Barcode Inside