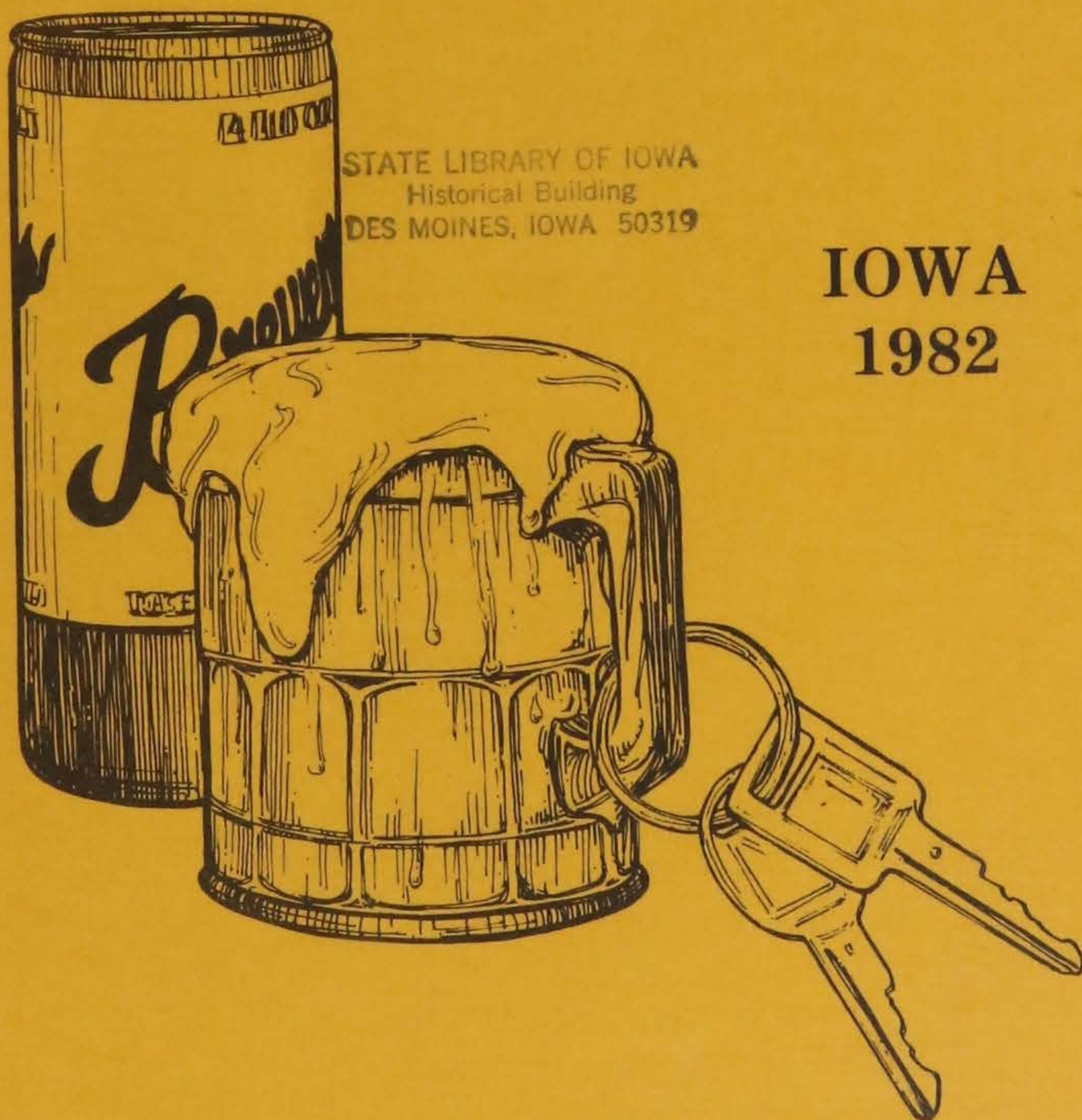


MAR 5 1984

HE
5614.3
.18
I57b
1982

ALCOHOL-RELATED FATAL CRASH STUDY



STATE LIBRARY OF IOWA
Historical Building
DES MOINES, IOWA 50319

IOWA
1982

A DEADLY COMBINATION

ALCOHOL-RELATED FATAL CRASH STUDY
IOWA, 1982

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.



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.

TABLE OF CONTENTS

	Page
SUMMARY	1-2
ALCOHOL-RELATED FATAL CRASH STUDY	
1. Objectives	3
2. Sources of Data	3
3. Number of Alcohol-Related Fatal Crashes and Fatalities	3
4. Drinking Pedestrians	4
5. Fatal Crashes Involving Drinking Drivers by Type of Crash	5
6. Number of Drinking Drivers Tested by Degree of Impairment	6
7. Number of Drinking Drivers Tested by BAC Level	6
8. Drinking Drivers Involved in Fatal Crashes by Age	7
9. Drinking Drivers Involved in Fatal Crashes by Age and by Day of the Week	8
10. Drinking Drivers Involved in Fatal Crashes by Age and Time of Day	9
11. Relationship Between the Age of Drinking Drivers and the Mean Blood Alcohol Concentration in Fatal Crashes	10
12. Alcohol-Related Fatal Crashes and Fatalities by Month	11
13. Violations Committed by Drinking Drivers Involved in Fatal Crashes	12
14. Alcohol-Related Fatal Crashes by Location	13
15. Alcohol-Related Fatal Crashes by County	13
16. Position of Fatalities by Age and Sex	17-18
17. Position of Injured Persons by Age and Sex	19-20
18. Legal History with Drinking Drivers Involved in Fatal Crashes by Age	21

TABLES

		Page
ALCOHOL-RELATED FATAL CRASH STUDY		
Table 1	Distribution of Alcohol-Related Fatal Crashes by Degree of Drinking	3
Table 2	Alcohol-Related Fatalities	4
Table 3	Alcohol-Related Fatal Crashes by Type of Crash	5
Table 4	Number and Percentage of Drinking Drivers/ Pedestrians with Alcohol Test Results	6
Table 5	Drinking Drivers/Pedestrians by BAC Level	6
Table 6	Drinking Drivers and All Drivers Involved in Fatal Motor Vehicle Crashes by Age Group	7
Table 7	Drinking Drivers Involved in Fatal Crashes by Age and by Day of Week	8
Table 8	Drinking Drivers Involved in Fatal Crashes by Age and Time of Day	9
Table 9	Age of Drinking Drivers and Average BAC	10
Table 10	Alcohol-Related Fatal Crashes, Fatalities, and Drinking Drivers By Month	11
Table 11	Violations Committed by Drinking Drivers	12
Table 12	Fatal Crashes by Road Class	13
Table 13	Counties Recording Fatal Alcohol Involvement Above the State Average	14
Table 14	Alcohol-Related Fatal Accidents and Fatalities by County	15-16
Table 15	Fatalities in Alcohol-Related Crashes - By Age, Sex and Position, 1981	17
Table 16	Fatalities in Alcohol-Related Crashes - By Age, Sex and Position, 1982	18
Table 17	Injured Persons in Alcohol-Related Fatal Crashes - By Age, Sex and Position, 1981	19
Table 18	Injured Persons in Alcohol-Related Fatal Crashes - By Age, Sex and Position, 1982	20
Table 19	Legal History	21

SUMMARY FOR 1982

1. Out of a total of 431 fatal traffic crashes in 1982, 162 were alcohol-related. These crashes claimed 188 lives or 39.2 percent of the total traffic fatalities. Data showed that 88.2 percent of the fatalities occurred in the alcohol-related vehicle with 63.8 percent of these fatalities being the known driver of that vehicle. Of the passengers killed in the alcohol-related crashes, 54.8 percent were riding in the outside position in the front seat of the vehicle.
2. In 1982, 139 persons were injured as a result of alcohol-related fatal crashes. There were 97 injured persons (or 69.8 percent of the total) injuries riding in the vehicles that were operated by drinking drivers. Thirty alcohol consuming drivers were included in the 97 injuries. Data showed that 52.7 percent of the total passengers injured were riding in the front seat and 37.4 percent of these were on the outside position of the front seat.
3. Seven pedestrians were killed as a result of alcohol involvement. Two crashes involved drinking pedestrians only, two involved both a drinking driver and a drinking pedestrian, and three pedestrians were killed by drinking drivers. Of the four drinking pedestrians, two had BAC reports and both were females. One was 17 years of age with a BAC of .347 and the other was 69 years of age with a BAC of .154.
4. In 1982, 70.4 percent of the alcohol-related fatal crashes were single motor vehicle crashes. The average BAC level of drivers involved in single crashes (.170) was higher than the average of drivers involved in multiple crashes (.130).
5. Of the 169 drinking drivers/pedestrians, 124 or 73.4 percent had blood alcohol tests. The average BAC of drivers tested was .156 and 76.6 percent of the drivers tested had a BAC of .100 percent or more. Data also showed that 62 persons or 50.0 percent had a BAC of 0.150 or more.
6. Approximately 53.3 percent or 88 drinking drivers involved in fatal traffic crashes were 24 years of age or younger. This shows an increase from 1981 when the percentage of drinking drivers 24 years and younger was 44.8 percent.
7. An analysis of drinking drivers involved in fatal crashes showed that more crashes occurred during the early morning hours (12:00 Midnight - 2:59 A.M.). The exception to this is in the 17 years of age. Crashes by that age driver occurred during the time 9:00 P.M. - 2:59 A.M.
8. The result of the analysis indicated that both the younger and older drivers were involved in considerably more fatal crashes during the weekends starting with Friday.
9. The study also revealed that drivers 19 years of age and under had lower levels of alcohol in their blood than older drivers when involved in fatal crashes. This fact has been consistent in our continuing study of alcohol-related traffic accidents.
10. The month of March ranked highest in the proportion of alcohol-related fatal crashes in 1982.

11. Driving left of center and speeding accounted for 66.1 percent of the violations in multiple vehicle alcohol-related fatal crashes. Approximately 89.2 percent of the violations in single vehicle crashes were speeding and failure to have control of the vehicle.
12. In 1982, 43 counties exceeded the state average of 37.6 percent alcohol-related fatal crashes as shown in Table 13. These counties accounted for 64.2 percent of the total alcohol-related fatal crashes in the state. Twenty-five counties reported no alcohol-related fatal crashes in 1982.
13. About 43.2 percent of the alcohol-related crashes occurred on U.S./State highways, 46.3 percent on county roads, and 8.0 percent on city streets. Only 1.9 percent occurred on interstates.
14. The year of 1982 showed the first decrease in the proportion of alcohol-related fatal crashes since 1979 when it was 42.0 percent.

ALCOHOL-RELATED FATAL CRASH STUDY: IOWA, 1982

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 to aid with planning effective countermeasure programs.

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, 1982

In 1982, 162 or 37.6 percent of the 431 fatal traffic crashes in the state were alcohol-related. These alcohol-related crashes claimed 188 lives and represented 39.2 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 Subtotal	% of Grand Total	#	% of Subtotal	% of Grand Total
Driver Ability Impaired	111	68.5	25.7	129	68.6	26.9
Driver Ability Not Impaired	49	30.2	11.4	57	30.3	11.9
Pedestrian (only) Drinking	2	1.2	0.5	2	1.1	0.4
Subtotal	162	100.0 ^{1/}	37.6	188	100.0	39.2
Total Not Drinking or Unknown	269	-----	62.4	292	-----	60.8
Grand Total	431	-----	100.0	480	-----	100.0

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

4. Drinking Pedestrians: Iowa, 1982

Seven pedestrians were fatally injured as a result of alcohol involvement. They comprised 17.9 percent of the total pedestrians (39) killed in 1982. Four of these fatalities were drinking pedestrians: two crashes in which the pedestrian alone was drinking, and two in which the pedestrian and the driver were both drinking. Three persons were killed where the driver alone was drinking. Table 2 shows the pedestrian fatalities due to alcohol consumption. Of the four drinking pedestrians two had BAC reports of .154 and .347 and were both females, ages 17 and 69. The other two were male, both impaired and ages 23 and 25.

Fatality Group	Category	#	%
Pedestrian Fatalities	Related to Drinking Pedestrians (only)	2	1.1
	Related to Drinking Drivers and Drinking Pedestrians	2	1.1
	Related to Drinking Drivers (only)	3	1.6
Driver & Passenger Fatalities	Related to Drinking Drivers	181	96.3
Total Alcohol-Related Fatalities		188	100.0 ^{1/}

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

5. Fatal Crashes Involving Drinking Drivers By Type Of Crash: Iowa, 1982

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 70.4 percent of the alcohol-related fatal crashes involved single vehicles. This table also shows an average BAC of .170 percent for those operators. The average BAC level in single vehicle accidents was higher than the level of drivers in multiple vehicle crashes.

TABLE 3
ALCOHOL-RELATED FATAL CRASHES BY TYPE OF CRASH:
IOWA, 1982

Type of Crash	Fatal Crashes					Fatalities		
	Number of Crashes	% of Grand Total	% of Subtotal	Number of Drivers With BAC	Mean BAC	Number of Fatalities	% of Grand Total	% of Subtotal
SINGLE MOTOR VEHICLE	114	70.4	100.0	83 ^{3/}	.170	133	70.7	100.0 ^{1/}
Overtaken	33	20.4	28.9	26	.187	34	18.1	25.6
Collided with Fixed Object	72	44.4	63.2	52	.160	90	47.9	67.7
Collided with Drinking Pedestrian	4	2.5	3.5	2 ^{2/}	.250	4	2.1	3.0
Collided with Non-Drinking Pedestrian	3	1.9	2.6	2	.153	3	1.6	2.3
Collided with Bicyclist	1	0.6	0.9	1	.147	1	0.5	0.8
Others	1	0.6	0.9	---	----	1	0.5	0.8
SUBTOTAL MULTIPLE MOTOR VEHICLE	48	29.6	100.0	41	.130	55	29.3	100.0
Collided with Motor Vehicle in Traffic	46	28.4	95.8	39	.129	53	28.2	96.4
Train	2	1.2	4.2	2	.163	2	1.1	3.6
Grand Total SINGLE AND MULTIPLE	162	100.0	-----	124 ^{3/}	.156	188	100.0	-----

^{1/} Percentages do not always total 100.0 due to rounding.
^{2/} Pedestrians (only) had BAC tests.
^{3/} Includes two drinking pedestrians with BAC tests.

6. Number Of Drinking Drivers Tested By Degree Of Impairment: Iowa, 1982

In 1982, there were 165 drinking drivers and four drinking pedestrians. Of these, blood alcohol test results were reported for 122 drivers and two pedestrians. Of the "ability impaired" category (totaling 113), 96 or 85.0 percent had known BACs. Of the "ability not impaired" category, 28 or 50.0 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	
	#	%	#	%	#	%
BAC Reported	124	73.4	96	85.0	28	50.0
BAC Unknown	45	26.6	17	15.0	28	50.0
Total	169 ^{1/}	100.0	113	100.0	56	100.0

^{1/} This includes four drinking pedestrians, four "impaired" and zero "not impaired".

7. Number Of Drinking Drivers Tested By BAC Level: Iowa, 1982

Table 5 shows the frequency of drinking drivers/pedestrians by BAC level. Of the 124 tested, 95 had a BAC of .100 percent or more. A BAC of .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 62 or 50.0 percent had a BAC of .150 or more.

BAC Level	Number of Drinking Drivers/Pedestrians	Percent of Drinking Drivers/ Pedestrians in Each BAC Level
Below .050	9	7.3
.050-.099	20	16.1
.100-.149	33	26.6
.150-.199	24 ^{1/}	19.4
.200-.249	24	19.4
.250-.299	10	8.1
.300-.349	3 ^{1/}	2.4
.350-.399	1 ^{1/}	0.8
.400+	---	-----
Total	124	100.0 ^{2/}

^{1/} Includes one drinking pedestrian.

^{2/} Percentages do not always total 100.0 due to rounding.

3. Drinking Drivers Involved In Fatal Crashes By Age: Iowa, 1982

The age distribution of drinking drivers involved in fatal crashes in 1982 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, 88 or 53.3 percent were 24 years of age or younger. This proportion exceeds the already large proportion of young drivers involved in fatal crashes which is 37.5 percent. When compared with the proportion of young drivers with a valid drivers license (21.9 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, 1982

Age	Drinking Drivers		All Drivers		Number of Licensed Drivers	
	#	%	#	%	#	%
16 & Below	6	3.6	34	5.4	46,122	2.4
17	15	9.1	33	5.2	36,925	1.9
18	7	4.2	27	4.3	44,186	2.3
19	14	8.5	25	4.0	45,754	2.4
20	10	6.1	25	4.0	49,188	2.5
21-24	36	21.8	93	14.7	200,626	10.4
25-34	39	23.6	141	22.3	454,741	23.6
35-44	19	11.5	85	13.4	309,977	16.0
45-54	9	5.5	58	9.2	245,451	12.7
55-64	8	4.8	45	7.1	242,251	12.5
65 & Up	0	-----	52	8.2	257,765	13.3
Driver Unknown	2	1.2	14	2.2	-----	-----
Total	165	100.0 ^{1/}	632	100.0 ^{1/}	1,932,986	100.0

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

NOTE: This table does not include the four drinking pedestrians. We had seven alcohol-related accidents involving pedestrians:

- 2 - pedestrians only drinking
- 2 - drivers and pedestrians both drinking
- 3 - driver only drinking

9. Drinking Drivers Involved In Crashes By Age And By Day Of The Week: Iowa, 1982

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, 1982

Days of The Week	Total		Under 16		16 Years		17 Years		18 Years		19 Years		20 Years		21-24 Years		25-34 Years		34-44 Years		45-64 Years		Driver Unknown	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Monday	13	7.9	1	50.0	-	-----	--	-----	1	14.3	1	7.1	--	-----	3	8.3	3	7.7	2	10.5	2	11.8	-	-----
Tuesday	11	6.7	-	-----	-	-----	--	-----	-	-----	--	-----	--	-----	3	8.3	5	12.8	--	-----	2	11.8	1	50.0
Wednesday	10	6.1	-	-----	-	-----	--	-----	1	14.3	1	7.1	1	10.0	1	2.8	4	10.3	1	5.3	1	5.9	-	-----
Thursday	16	9.7	1	50.0	-	-----	1	6.7	1	14.3	1	7.1	--	-----	3	8.3	6	15.4	3	15.8	--	-----	-	-----
Friday	33	20.0	-	-----	2	50.0	3	20.0	-	-----	4	28.6	3	30.0	4	11.1	8	20.5	3	15.8	6	35.3	-	-----
Saturday	41	24.8	-	-----	2	50.0	4	26.7	2	28.6	2	14.3	3	30.0	9	25.0	8	20.5	6	31.6	5	29.4	-	-----
Sunday	41	24.8	-	-----	-	-----	7	46.7	2	28.6	5	35.7	3	30.0	13	36.1	5	12.8	4	21.1	1	5.9	1	50.0
TOTAL	165	100.0	2	100.0	4	100.0	15	100.0 ^{1/}	7	100.0 ^{1/}	14	100.0 ^{1/}	10	100.0	36	100.0 ^{1/}	39	100.0	19	100.0 ^{1/}	17	100.0 ^{1/}	2	100.0 ^{1/}

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

10. Drinking Drivers Involved In Fatal Crashes By Age And Time Of Day: Iowa, 1982

Table 8 shows the distribution of drinking drivers by time of day and by age groups. The drivers ages of 17 and 19 years were involved in the most fatal alcohol-related crashes and the highest percentage of these occurred during the hours of darkness.

TABLE 8
DRINKING DRIVERS INVOLVED IN FATAL CRASHES BY AGE AND TIME OF DAY:
IOWA, 1982

Time	Total		Under 16		16 Years		17 Years		18 Years		19 Years		20 Years		21-24 Years		25-34 Years		34-44 Years		45-64 Years		Driver Unknown	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
6:00- 8:59 P.M.	23	13.9	-	-----	2	50.0	1	6.7	1	14.3	2	14.3	2	20.0	5	13.9	2	5.1	4	21.1	4	23.5	-	-----
9:00-11:59 P.M.	36	21.8	-	-----	1	25.0	6	40.0	1	14.3	3	21.4	2	20.0	4	11.1	10	25.6	3	15.8	5	29.4	1	50.0
12:00- 2:59 A.M.	52	31.5	1	50.0	1	25.0	5	33.3	3	42.9	5	35.7	2	20.0	13	36.1	13	33.3	6	31.6	2	11.8	1	50.0
3:00- 5:59 A.M.	19	11.5	1	50.0	-	-----	1	6.7	-	-----	4	28.6	1	10.0	7	19.4	4	10.3	1	5.3	-	-----	-	-----
6:00- 8:59 A.M.	4	2.4	-	-----	-	-----	2	13.3	1	14.3	-	-----	-	-----	-	-----	-	-----	-	-----	1	5.9	-	-----
9:00-11:59 A.M.	2	1.2	-	-----	-	-----	-	-----	-	-----	-	-----	1	10.0	1	2.8	-	-----	-	-----	-	-----	-	-----
12:00- 2:59 P.M.	11	6.7	-	-----	-	-----	-	-----	-	-----	-	-----	-	-----	2	5.6	3	7.7	5	26.3	1	5.9	-	-----
3:00- 5:59 P.M.	10	6.1	-	-----	-	-----	-	-----	-	-----	-	-----	1	10.0	1	2.8	4	10.3	-	-----	4	23.5	-	-----
Time Unknown	8	4.8	-	-----	-	-----	-	-----	1	14.3	-	-----	1	10.0	3	8.3	3	7.7	-	-----	-	-----	-	-----
TOTAL	165	100.0 ^{1/}	2	100.0	4	100.0	15	100.0	7	100.0 ^{1/}	14	100.0	10	100.0	36	100.0	39	100.0	19	100.0 ^{1/}	17	100.0	2	100.0

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

11. Relationship Between The Age Of Drinking Drivers And The Mean Blood Alcohol Concentration In Fatal Crashes: Iowa, 1982

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 drivers 20 years of age or older.

Age	Number	Average BAC
19 and younger	30	.113
20	8	.129
21-24	28	.161
25-34	31	.179
35-44	13	.182
45-54	6	.186
55-64	6	.167
65 and up	0	----
Unknown	0	----
All Ages	122	.155

12. Alcohol-Related Fatal Crashes And Fatalities By Month: Iowa, 1982

The variation by month of the year in 1982 is shown in Table 10. The month of March ranked highest in the proportion of alcohol-related fatal crashes and fatalities. However, the month of May had the highest number of alcohol-related fatalities.

TABLE 10
NUMBER AND PERCENTAGE OF ALCOHOL-RELATED FATAL CRASHES,
FATALITIES, AND DRINKING DRIVERS BY MONTH:
IOWA, 1982

Month	Fatal Crashes				Fatalities		
	Drinking Drivers/ Pedes- trians	All Fatal Crashes	Alcohol Related Crashes	% Alcohol Related Crashes	All Fatal- ities	Alcohol Related Fatal- ities	% Alcohol Related Fatal- ities
January	6/0	18	6	33.3	18	6	33.3
February	1/0	17	1	5.9	17	1	5.9
March	15/0	30	15	50.0	38	22	57.9
April	11/0	42	11	26.2	48	14	29.2
May	23/0	49	22	44.9	54	26	48.1
June	9/0	21	9	42.9	22	10	45.5
July	15/1	46	16	34.8	48	17	35.4
August	18/1	48	18	37.5	54	21	38.9
September	20/1	45	21	46.7	53	24	45.3
October	12/0	34	10	29.4	38	14	36.8
November	16/0	42	15	35.7	44	15	34.1
December	19/1	39	18	46.2	46	18	39.1
Total	165/4	431	162	37.6	480	188	39.2

13. Violations Committed By Drinking Drivers Involved In Fatal Crashes:
Iowa, 1982

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 66.1 percent of the violations in multiple vehicle fatal crashes.

Drinking drivers who were speeding and failed to have control caused 89.2 percent of the violations in single vehicle fatal crashes.

TABLE 11
VIOLATIONS COMMITTED BY DRINKING DRIVERS:
IOWA, 1982

Violations	Multiple Vehicle		Single Vehicle	
	#	%	#	%
Drove Left of Center	24	40.7	---	-----
Speeding	15	25.4	56	46.7
Failure to Have Control	4	6.8	51	42.5
Failure to Yield	3	5.1	---	-----
Ran Stop Sign	3	5.1	---	-----
Ran Traffic Signal	1	1.7	---	-----
Ran Railroad Signal	---	-----	2	1.7
Reckless Driving	2	3.4	5	4.2
Wrong Way on a One Way Street	---	-----	---	-----
Improper Passing	1	1.7	---	-----
Improper Turn	---	-----	---	-----
Pedestrian Violation	---	-----	4	3.3
Violation By Other Driver	3	5.1	---	-----
Violations By Other Drinking Driver	---	-----	---	-----
Other	3	5.1	2	1.7
Unknown	---	-----	---	-----
Total	59 ^{1/}	100.0 ^{2/}	120 ^{1/}	100.0 ^{2/}

^{1/} Adds up to more than the total number of crashes as some drivers committed more than one violation.

^{2/} Percentages do not total 100.0 due to rounding.

14. Alcohol-Related Fatal Crashes By Location: Iowa, 1982

An analysis showed that 79.0 percent of the crashes occurred in the rural areas while only 21.0 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	3	1.9
Primary	3	1	6	6	7	4	5	8	6	7	9	8	70	43.2
County	2	-	7	5	13	5	8	7	13	3	5	7	75	46.3
City Streets	1	-	1	--	2	-	3	3	--	--	1	2	13	8.0
Others	-	-	--	--	--	-	--	--	1	--	--	--	1	0.6
Total	6	1	15	11	22	9	16	18	21	10	15	18	162	100.0

The preceding table shows that 43.2 percent of the alcohol-related fatal crashes occurred on U.S./State highways, 46.3 percent on county roads and 8.0 percent on city streets. Only 1.9 percent occurred on interstates, and this was a definite decrease from previous years.

15. Alcohol-Related Fatal Crashes By County: Iowa, 1982

The following 25 counties had no reported alcohol-related fatal crashes in 1982, according to State accident files.

Adams	Emmett	Hardin	Louisa	Palo Alto
Appanoose	Franklin	Henry	Lucas	Taylor
Bremer	Fremont	Humboldt	Monroe	Union
Butler	Greene	Jasper	O'Brien	Van Buren
Chickasaw	Guthrie	Jefferson	Osceola	Winnebago

In 1982, 43 counties exceeded the state average of 37.6 percent alcohol-related fatal crashes as shown in Table 13. These counties accounted for 64.2 percent of the total alcohol-related fatal crashes in the state. The average proportion of alcohol-related fatal crashes in these counties was 63.4 percent.

Counties with their corresponding number and percentage of alcohol-related fatal crashes are shown for the year 1982.

TABLE 13
COUNTIES RECORDING FATAL ALCOHOL INVOLVEMENT ABOVE THE STATE
AVERAGE OF 37.6 PERCENT:
IOWA, 1982

County	Total Crashes	Alcohol-Related Crashes	Percent
Adair	1	1	100.0
Allamakee	4	4	100.0
Audubon	1	1	100.0
Boone	7	3	42.9
Buchanan	5	3	60.0
Calhoun	2	1	50.0
Carroll	4	3	75.0
Cass	3	2	66.7
Cherokee	4	2	50.0
Clay	2	1	50.0
Clayton	5	4	80.0
Clinton	12	8	66.7
Crawford	2	1	50.0
Davis	1	1	100.0
Decatur	2	1	50.0
Dickinson	3	2	66.7
Dubuque	9	5	55.6
Hancock	1	1	100.0
Howard	1	1	100.0
Ida	2	1	50.0
Jackson	6	4	66.7
Johnson	13	6	46.2
Keokuk	2	1	50.0
Kossuth	4	2	50.0
Lyon	4	3	75.0
Madison	2	1	50.0
Mahaska	2	1	50.0
Marion	2	1	50.0
Mills	3	3	100.0
Mitchell	3	2	66.7
Monroe	1	1	100.0
Montgomery	3	3	100.0
Muscatine	6	4	66.7
Page	2	1	50.0
Poweshiek	8	4	50.0
Ringgold	2	1	50.0
Shelby	4	3	75.0
Warren	7	5	71.4
Washington	4	2	50.0
Wayne	2	1	50.0
Webster	7	4	57.1
Winneshiek	5	4	80.0
Worth	1	1	100.0
Total	164	104	63.4

TABLE 14
ALCOHOL-RELATED FATAL CRASHES AND FATALITIES BY COUNTY:
IOWA, 1982

County	Fatal Accidents			Fatalities		
	Total	Alcohol-Related	% Alcohol-Related	Total	Alcohol-Related	% Alcohol-Related
	1982	1982	1982	1982	1982	1982
Adair	1	1	100.0	1	1	100.0
Adams	---	---	-----	---	---	-----
Allamakee	4	4	100.0	5	5	100.0
Appanoose	---	---	-----	---	---	-----
Audubon	1	1	100.0	1	1	100.0
Benton	7	1	14.3	10	1	10.0
Black Hawk	16	3	18.8	16	3	18.8
Boone	7	3	42.9	10	6	60.0
Bremer	2	---	-----	2	---	-----
Buchanan	5	3	60.0	5	3	60.0
Buena Vista	7	2	28.6	9	2	22.2
Butler	1	---	-----	2	---	-----
Calhoun	2	1	50.0	2	1	50.0
Carroll	4	3	75.0	4	3	75.0
Cass	3	2	66.7	3	2	66.7
Cedar	5	1	20.0	5	1	20.0
Cerro Gordo	8	2	25.0	9	2	22.2
Cherokee	4	2	50.0	4	2	50.0
Chickasaw	1	---	-----	1	---	-----
Clarke	5	1	20.0	6	1	16.7
Clay	2	1	50.0	2	1	50.0
Clayton	5	4	80.0	7	6	85.7
Clinton	12	8	66.7	12	8	66.7
Crawford	2	1	50.0	2	1	50.0
Dallas	5	1	20.0	5	1	20.0
Davis	1	1	100.0	2	2	100.0
Decatur	2	1	50.0	7	6	85.7
Delaware	4	1	25.0	4	1	25.0
Des Moines	7	1	14.3	7	1	14.3
Dickinson	3	2	66.7	6	5	83.3
Dubuque	9	5	55.6	9	5	55.6
Emmet	---	---	-----	---	---	-----
Fayette	3	1	33.3	3	1	33.3
Floyd	6	2	33.3	6	2	33.3
Franklin	1	---	-----	1	---	-----
Fremont	1	---	-----	2	---	-----
Greene	1	---	-----	1	---	-----
Grundy	3	1	33.3	3	1	33.3
Guthrie	2	---	-----	2	---	-----
Hamilton	4	1	25.0	5	1	20.0
Hancock	1	1	100.0	1	1	100.0
Hardin	2	---	-----	2	---	-----
Harrison	3	1	33.3	4	1	25.0
Henry	4	---	-----	6	---	-----
Howard	1	1	100.0	1	1	100.0
Humboldt	2	---	-----	2	---	-----
Ida	2	1	50.0	3	2	66.7
Iowa	4	1	25.0	4	1	25.0
Jackson	6	4	66.7	7	5	71.4
Jasper	3	---	-----	3	---	-----
Jefferson	2	---	-----	2	---	-----

Table 14
Continued

County	Fatal Accidents			Fatalities		
	Total	Alcohol-Related	% Alcohol-Related	Total	Alcohol-Related	% Alcohol-Related
	1982	1982	1982	1982	1982	1982
Johnson	13	6	46.2	14	7	50.0
Jones	3	1	33.3	3	1	33.3
Keokuk	2	1	50.0	2	1	50.0
Kossuth	4	2	50.0	4	2	50.0
Lee	8	3	37.5	9	4	44.4
Linn	14	5	35.7	16	7	43.8
Louisa	---	---	-----	---	---	-----
Lucas	1	---	-----	2	---	-----
Lyon	4	3	75.0	4	3	75.0
Madison	2	1	50.0	2	1	50.0
Mahaska	2	1	50.0	3	2	66.7
Marion	2	1	50.0	2	1	50.0
Marshall	8	3	37.5	8	3	37.5
Mills	3	3	100.0	3	3	100.0
Mitchell	3	2	66.7	3	2	66.7
Monona	2	---	-----	2	---	-----
Monroe	1	1	100.0	1	1	100.0
Montgomery	3	3	100.0	3	3	100.0
Muscatine	6	4	66.7	8	6	75.0
O'Brien	2	---	-----	2	---	-----
Osceola	---	---	-----	---	---	-----
Page	2	1	50.0	2	1	50.0
Palo Alto	1	---	-----	1	---	-----
Plymouth	7	1	14.3	7	1	14.3
Pocahontas	3	1	33.3	3	1	33.3
Polk	23	6	26.1	24	6	25.0
Pottawattamie	16	4	25.0	21	4	19.0
Poweshiek	8	4	50.0	8	4	50.0
Ringgold	2	1	50.0	2	1	50.0
Sac	3	1	33.3	3	1	33.3
Scott	15	5	33.3	17	5	29.4
Shelby	4	3	75.0	4	3	75.0
Sioux	5	1	20.0	5	1	20.0
Story	6	1	16.7	7	1	14.3
Tama	4	1	25.0	4	1	25.0
Taylor	1	---	-----	1	---	-----
Union	5	---	-----	5	---	-----
Van Buren	3	---	-----	3	---	-----
Wapello	9	1	11.1	9	1	11.1
Warren	7	5	71.4	7	5	71.4
Washington	4	2	50.0	4	2	50.0
Wayne	2	1	50.0	2	1	50.0
Webster	7	4	57.1	8	5	62.5
Winnebago	---	---	-----	---	---	-----
Winneshiek	5	4	80.0	5	4	80.0
Woodbury	16	3	18.8	17	4	23.5
Worth	1	1	100.0	1	1	100.0
Wright	3	1	33.3	3	1	33.3
TOTAL	431	162	37.6	480	188	39.2

16. Position of Fatalities by Age and Sex: Iowa, 1981-1982.

1981

Fatalities in alcohol-related crashes for 1981 were investigated and listed under the categories of alcohol-related vehicle occupants and non-alcohol-related vehicle occupants. It is interesting to note that 84.4 percent of the fatalities occurred in the alcohol-related vehicle with 71.7 percent of these fatalities being the known driver of that vehicle.

Of the passengers killed in alcohol-related crashes, 56.3 percent were riding in the outside position of the front seat of the vehicle.

TABLE 15
FATALITIES IN ALCOHOL-RELATED CRASHES - BY AGE, SEX AND POSITION
IOWA, 1981

Position	10 Years and Under		11-15 Years		16 Years		17 Years		18 Years		19 Years		20 Years		21-24 Years		25-34 Years		35-44 Years		45-54 Years		55-64 Years		65 and Up		Total		Grand Total	Percentage of all Alcohol-Related Fatalities		
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F				
Occupants of Alcohol-Related Vehicles	Drivers		-	-	-	-	1	-	5	1	13	2	7	2	13	-	24	2	54	3	11	5	6	1	7	2	3	-	144	18	162	58.7
	Passengers		2	-	-	1	1	2	3	-	6	5	3	4	2	2	7	5	10	5	1	2	-	-	2	-	1	-	38	26	64	23.2
	Unknown		-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	2	1	-	1	-	-	-	-	-	-	-	4	3	7	2.5
	Total		2	-	-	1	2	2	8	2	19	7	10	6	16	2	33	8	64	9	13	7	6	1	9	2	4	-	186	47	233	84.4
Occupants of Other Vehicles	Drivers		-	-	-	-	1	-	1	-	-	1	-	-	-	2	1	4	-	-	-	5	-	2	1	1	-	16	3	19	6.9	
	Passengers		1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	1	-	-	2	3	3	6	2.2	
	Total		1	-	-	-	1	-	1	-	-	1	-	-	-	3	1	4	-	-	-	6	1	2	1	1	2	19	6	25	9.1	
Pedestrians		1	-	-	-	-	1	-	-	-	-	-	-	-	3	2	3	-	-	-	1	-	1	-	3	-	13	3	16	5.8		
Bicyclists		-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	0.7		
Grand Total		4	1	1	1	2	3	9	2	21	7	10	7	16	2	39	11	71	9	13	7	13	2	12	3	8	2	219	57	276	100.0	

16. Position of Fatalities by Age and Sex: Iowa, 1981-1982. (Continued)

1982

Fatalities in alcohol-related crashes for 1982 were investigated and listed under the categories of alcohol-related vehicle occupants and non-alcohol-related vehicle occupants. Data showed that 88.2 percent of the fatalities occurred in the alcohol-related vehicle with 63.8 percent of these fatalities being the known driver of that vehicle.

Of the passengers killed in alcohol-related crashes, 54.8 percent were riding in the outside position of the front seat of the vehicle.

TABLE 16
FATALITIES IN ALCOHOL-RELATED CRASHES - BY AGE, SEX AND POSITION
ICWA, 1982

Position	10 Years and Under		11-15 Years		16 Years		17 Years		18 Years		19 Years		20 Years		21-24 Years		25-34 Years		35-44 Years		45-54 Years		55-64 Years		65 and Up		Total		Grand Total	Percentage of all Alcohol-Related Fatalities		
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F				
Occupants of Alcohol-Related Vehicles	Drivers		-	-	-	1	1	2	9	1	3	1	4	2	6	1	25	3	28	3	13	3	6	2	5	1	-	-	100	20	120	63.8
	Passengers		1	1	-	4	1	1	5	2	7	-	2	1	-	2	1	4	2	3	4	1	-	-	-	-	-	-	23	19	42	22.3
	Unknown		-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	2	-	-	-	-	-	-	-	-	-	4	-	4	2.1
	Total		1	1	-	5	2	3	14	3	10	1	7	3	6	3	27	7	32	6	17	4	6	2	5	1	-	-	127	39	166	88.2
Occupants of Other Vehicles	Drivers		-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	2	-	1	1	1	-	-	1	1	1	1	1	1	6.9	
	Passengers		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	1	0.5	
	Total		-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	2	1	1	1	1	-	-	1	1	1	1	10	4	14	7.4
Pedestrians		-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	2	-	1	-	1	-	-	-	-	1	5	2	7	3.7	
Bicyclists		-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	0.5	
Grand Total		1	1	-	5	2	3	14	4	10	1	7	3	7	3	33	7	36	7	19	5	8	2	5	2	1	2	143	45	188	100.0 ^{1/}	

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

17. Position of Injured Persons by Age and Sex: Iowa, 1981-1982.

1981

The alcohol-related fatal crashes of 1981 not only took 276 lives but also caused 197 additional persons to be injured. Three-fourths of these injured persons were riding in vehicles operated by drinking drivers. The remaining injured persons were occupants of other vehicles, pedestrians, or cyclists. Of all those who were vehicle occupants, 58 percent were riding in the front seat.

Out of 236 separate alcohol-related fatal crashes in 1981, 104 crashes (43 percent) included injured persons as well as fatalities.

TABLE 17
INJURED PERSONS IN ALCOHOL-RELATED FATAL CRASHES - BY AGE, SEX AND POSITION
IOWA, 1981

Position	10 Years and Under		11-15 Years		16 Years		17 Years		18 Years		19 Years		20 Years		21-24 Years		25-34 Years		35-44 Years		45-54 Years		55-64 Years		65 and Up		Total		Grand Total	Percentage		
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F				
Occupants of Alcohol-Related Vehicles	Drivers		-	-	1	1	-	1	3	-	4	-	5	-	6	-	10	-	11	3	5	-	-	1	-	-	-	-	45	6	51	25.9
	Passengers		1	2	-	1	3	5	10	4	9	5	8	1	6	-	16	5	8	2	4	2	1	1	1	-	1	1	68	29	97	49.2
	Unknown		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total		1	2	1	2	3	6	13	4	13	5	13	1	12	-	26	5	19	5	9	2	1	2	1	-	1	1	113	35	148	75.1
Occupants of Other Vehicles	Drivers		-	-	-	-	-	-	-	-	-	1	1	-	2	-	4	2	1	2	2	-	2	-	2	-	2	-	14	5	19 ^{1/}	9.6
	Passengers		2	2	1	-	1	-	1	1	1	-	-	2	2	-	-	-	1	2	1	2	1	3	1	3	-	3	12	15	27 ^{1/}	13.7
	Total		2	2	1	-	1	-	1	1	1	-	-	3	3	-	2	-	4	2	2	4	3	2	3	3	2	3	26	20	46 ^{1/}	23.4
Pedestrians		-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	2	-	2	1.0	
Bicyclists		-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	0.5	
Grand Total		3	4	3	2	5	6	14	5	14	5	13	4	15	-	29	5	23	7	11	6	4	4	4	3	3	4	142	55	197 ^{1/}	100.0	

^{1/} Includes one age unknown.

17. Position of Injured Persons by Age and Sex: Iowa, 1981-1982. (Continued)

1982

In 1982, the alcohol-related fatal crashes which killed 188 persons also injured 139. Seventy percent of these injured persons were riding in vehicles operated by drinking drivers. The remaining injured persons were occupants of other vehicles, pedestrians, or cyclists. Of all those who were vehicle occupants, 53 percent were riding in the front seat.

Out of 162 separate alcohol-related fatal crashes in 1982, 73 crashes (45 percent) included injured persons as well as fatalities.

TABLE 18
INJURED PERSONS IN ALCOHOL-RELATED FATAL CRASHES - BY AGE, SEX AND POSITION
IOWA, 1982

Position	10 Years and Under		11-15 Years		16 Years		17 Years		18 Years		19 Years		20 Years		21-24 Years		25-34 Years		35-44 Years		45-54 Years		55-64 Years		65 and Up		Total		Grand Total	Percentage	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F			
Occupants of Alcohol-Related Vehicles	Drivers	-	-	1	-	1	-	5	-	1	-	3	3	2	-	5	1	3	1	1	1	1	-	1	-	-	-	24	6	30	21.6
	Passengers	2	-	3	2	3	-	7	3	4	3	4	3	3	1	9	4	5	2	1	2	3	1	-	2	-	-	44	23	67	48.2
	Unknown	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	2	-	4	2	4	-	12	3	5	3	7	6	5	1	14	5	8	3	2	3	4	1	1	2	-	-	68	29	97	69.8
Occupants of Other Vehicles	Drivers	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	5	-	4	-	2	1	1	-	-	1	3	16	11.5	
	Passengers	4	1	3	1	-	-	-	-	-	1	1	-	-	-	-	2	3	2	1	3	1	-	1	1	-	1	12	26	18.8	
	Total	4	1	3	2	1	-	-	-	1	1	-	-	-	2	2	8	2	5	3	3	1	2	1	-	2	27	15	42	30.2	
Pedestrians	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bicyclists	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Grand Total	6	1	7	4	5	-	12	3	5	3	8	7	5	1	14	7	16	5	7	6	7	2	3	3	-	2	95	44	139	100.0	

18. Legal History with Drinking Drivers Involved in Fatal Crashes
by Age: Iowa, 1970-1982

TABLE 19
LEGAL HISTORY

YEAR	AGE							Grand Total	% of Fatal Crashes that are Alcohol-Related
	16 & Below	17	18	19	20	Total Under 21	21 and Up		
1970	3	3	11	12	15	44	180	224	29.6
1971	-	4	8	10	8	30	208	238	34.3
1972	3	8	8	18	16	53	164	217	29.1
Legal drinking age lowered from 21 to 19 years, July 1, 1972									
1973	1	6	15	19	12	53	182	235	31.8
Legal drinking age lowered from 19 to 18 years, July 1, 1973									
1974	5	7	4	15	13	44	153	197	32.0
1975	7	14	16	20	15	72	167	239	38.2
1976	7	7	21	22	20	77	179	256	36.5
1977	7	5	23	16	13	64	166	230	39.4
Four Year Average 74-77	6.5	8.3	16	18.3	15.3	64.3	166.3		
1978	6	5	26	14	12	63	147	210	35.9
Legal drinking age raised from 18 to 19 years, July 1, 1978									
1979	15	11	18	19	18	81	179	260	42.0
1980	8	9	13	11	28	69	160	229	40.3
1981	4	9	20	17	19	69	172	241	44.6
Three Year Average 79-81	9	9.7	17	15.7	21.7	73	170.3		
1982	6	15	7	14	10	52	113	165	37.6
OWI law with administrative revocation, July 1, 1982									

Barcode Inside