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SUMMARY

1. Out of a total of 563 fatal traffic crashes in 1978, 202 were alcohol related. These crashes claimed 236 lives or 36.3 percent of the total traffic fatalities.
2. In 1978, 16 pedestrians were killed as a result of alcohol involvement. Eleven fatal crashes involved 11 drinking pedestrians and five fatal crashes involved drinking drivers that killed five pedestrians. For pedestrians with known BACs, the average of those killed was .170 with a range of .049 to .304.
3. In 1978, 63.4 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 BACs of drivers in multiple vehicle crashes.
4. Of the 221 drinking drivers/pedestrians, 130 or 58.8 percent had blood tests. The average BAC of drivers tested was 0.157 percent and 76.9 percent of the drivers had a BAC of .100 percent or more. Data also showed that 58.5 percent of the drivers tested had a BAC of .150 percent or more which might be symptomatic of the problem drinker.
5. Approximately 56.2 percent of the drinking drivers involved in fatal traffic crashes were 24 years of age or younger. The proportion exceeds the already large proportion of young drivers involved in fatal crashes (42.5 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 higher involvement in fatal crashes. This strongly suggests that younger drivers were more vulnerable to traffic crashes when alcohol was involved.
9. The months of April, January, and October ranked highest in the proportion of alcohol-related fatal crashes in 1978. (Note: These months had the highest proportion but not the most alcohol-related crashes.)
10. Driving left of center and speeding accounted for 62.4 percent of the violations in multivehicle fatal crashes. Approximately 86.7 percent of the violations in single vehicle crashes were speeding and failure to have control of the vehicle.
11. In 1978, 40 counties exceeded the state average of alcohol-related fatal crashes (35.9 percent). These counties accounted for 64.4 percent of the total alcohol-related fatal crashes in the state.
12. About 46.5 percent of the alcohol-related crashes occurred on U.S./State highways, 33.2 percent on county roads, and 17.3 percent on city streets. Only 3.0 percent occurred on interstates.
13. The number of alcohol-related fatal crashes from 1970 through 1977 was fairly stable, but the percentage of reported alcohol-related crashes was increasing. However, in 1978 the percentage did drop from 39.5 percent in 1977 to 35.9 percent in 1978. Supplementary data sources indicate that this change represents a genuine improvement.

ALCOHOL-RELATED FATAL CRASH STUDY: IOWA, 1978

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 counter-measure 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, 1978

In 1978, 202 or 35.9 percent of the 563 fatal traffic crashes in the state were alcohol-related. These alcohol-related crashes claimed 236 lives and represented 36.3 percent of the total killed on Iowa's roads. Table 1 shows the number of drinking drivers according to the degree of drinking.

TABLE 1						
DISTRIBUTION OF ALCOHOL-RELATED FATAL CRASHES BY DEGREE OF DRINKING: IOWA, 1978						
Degree of Drinking	Fatal Crashes			Fatalities		
	#	% of Subgroup	% of Total	#	% of Subgroup	% of Total
Driver Ability Impaired	150	74.3	26.6	175	74.2	26.9
Driver Ability Not Impaired	27	13.4	4.8	32	13.6	4.9
Pedestrian Drinking	11	5.4	2.0	11	4.7	1.7
Drinking Driver, Ability Not Stated	14	6.9	2.5	18	7.6	2.8
Subtotal	202	100.0	35.9	236	100.0¹	36.3
Total Not Drinking or Unknown	361	—	64.1	414	—	63.7
Grand Total	563	—	100.0	650	—	100.0

¹Percentages do not add up to 100.0 percent due to rounding.

4. Drinking Pedestrians

In 1978, 16 pedestrians were fatally injured as a result of alcohol involvement. This comprised 27.1 percent of the total pedestrians killed in 1978. Eleven of these fatalities were drinking pedestrians and the other five pedestrians were killed by drinking drivers. Table 2 shows the pedestrian fatalities attributable to alcohol consumption. Blood tests indicated that the average BAC (blood alcohol concentration) of pedestrians killed was 0.170, with a range of 0.049 to 0.304. The ages of drinking pedestrians spanned from 16 to 78 years, and 73 percent were 35 years of age and under.

TABLE 2
ALCOHOL-RELATED FATALITIES:
IOWA, 1978

Fatality Group	Category	#	%
Pedestrian Fatalities	Related to Drinking Pedestrians	11	4.7
	Related to Nondrinking Pedestrians	5	2.1
Driver & Passenger Fatalities	Related to Drinking Drivers	220	93.2
Total		236	100.0

5. Fatal Crashes Involving Drinking Drivers by Type of Crash: Iowa, 1978

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 63.4 percent of the alcohol-related fatal crashes involved single vehicles. The table also shows an average BAC of 0.175 for the operators of those vehicles. As Table 3 indicates, the BAC level of drivers involved in single vehicle crashes was higher than the BACs of drivers in multiple vehicle crashes.

TABLE 3
ALCOHOL-RELATED FATAL CRASHES BY TYPE OF CRASH:
IOWA, 1978

Type of Crash	Fatal Crashes				Fatalities		
	#	% of Total	% of Subgroup	Mean BAC	#	% of Total	% of Subgroup
Single Motor Vehicle	128	63.4	100.0 ¹	.175	137	58.1	100.0 ¹
Ran Off Road	1	0.5	0.8	.207	1	0.4	0.7
Collided with Fixed Object	54	26.7	42.2	.176	59	25.0	43.1
Collided with Drinking Pedestrian	11	5.4	8.6	.170	11	4.7	8.0
Collided with Nondrinking Pedestrian	5	2.5	3.9	.136	5	2.1	3.6
Collided with Bicyclist	—	—	—	—	—	—	—
Overtaken	49	24.3	38.3	.181	53	22.5	38.7
Others	8	4.0	6.3	.144	8	3.4	5.8
Multiple Motor Vehicle	74	36.6	100.0	.130	99	41.9	100.0
Collided with Motor Vehicle in Traffic	71	35.1	95.9	.130	95	40.2	96.0
Train	3	1.5	4.1	.127	4	1.7	4.0
Total	202	100.0	—	.158	236	100.0	—

¹Totals do not add up to 100.0 percent due to rounding.

6. Number of Drinking Drivers Tested by Degree of Drinking: Iowa, 1978

In 1978, 221 drinking drivers/pedestrians were involved in fatal crashes. Of these, 130 or 58.8 percent were tested to determine the blood alcohol concentration. Of the "ability

impaired" category (totaling 157), 100 or 63.7 percent had known BACs. Table 4 shows the distribution of drinking drivers tested and not tested.

Drinking Drivers and Pedestrians	Total		Ability Impaired		Ability Not Impaired		Impairment Not Stated	
	#	%	#	%	#	%	#	%
Tested	130	58.8	100	63.7	17	51.5	13	41.9
Not Tested	91	41.2	57	36.3	16	48.5	18	58.1
Total	221	100.0	157	100.0	33	100.0	31	100.0

7. Number of Drinking Drivers Tested for Blood Alcohol Concentration: Iowa, 1978

The average blood alcohol concentration of those drivers tested was 0.157 (157 mg. per 100 ml. or 0.157 percent by weight).

Table 5 shows the frequency of drinking drivers/pedestrians by BAC level. Of the 130 tested, 99 had a BAC of 0.100 or more. A BAC of 0.100 and above is prima facie evidence of operating a motor vehicle while under the influence (OMVUI) in the State of Iowa. Data also showed that 74 or 56.9 percent had a BAC of 0.150 or more which might be symptomatic of the problem driver. Figure 1 illustrates the distribution of drinking drivers and pedestrians according to BAC level.

BAC Level	Number of Drinking Drivers	Percent of Drinking Drivers in Each BAC Level
Below .050	11	8.5
.050-.099	20	15.4
.100-.149	25	19.2
.150-.199	37	28.5
.200-.249	23	17.7
.250-.299	12	9.2
.300-.349	1	0.8
.350-.399	1	0.8
.400+	—	—
Total	130	100.0¹

¹Percentages do not add up to 100.0 percent due to rounding.

8. Drinking Drivers Involved in Fatal Crashes by Age: Iowa, 1978

The age distribution of drinking drivers involved in fatal crashes in 1978 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, 48.5 percent were 24 years of age or younger. This proportion exceeds the already large proportion of young drivers involved in fatal crashes which is 42.5 percent. When compared with the proportion of young drivers with a valid driver's license (24.4 percent), the aforementioned age group is even more over-represented. See Section 11 and Figure 2 for additional information.

TABLE 6
DRINKING DRIVERS AND ALL DRIVERS INVOLVED IN
FATAL MOTOR VEHICLE CRASHES BY AGE GROUP:
IOWA, 1978

Age	Drinking Drivers		All Drivers		Nondrinking Drivers		Number of Licensed Drivers (1977)	
	#	%	#	%	#	%	#	%
16 & Below	6	2.9	47	5.4	41	6.3	43,060	2.1
17	5	2.4	26	3.0	21	3.2	55,111	2.7
18	26	12.4	59	6.8	33	5.1	56,213	2.7
19	14	6.7	47	5.4	33	5.1	59,254	2.9
20	12	5.7	43	5.0	31	4.7	56,336	2.7
21-24	55	26.2	145	16.8	90	13.8	230,494	11.2
25-34	56	26.7	181	21.0	125	19.1	477,906	23.3
35-44	16	7.6	95	11.0	79	12.1	297,874	14.5
45-54	9	4.3	77	8.9	68	10.4	270,917	13.2
55-64	7	3.3	70	8.1	63	9.6	250,752	12.2
65 & Up	3	1.4	63	7.3	60	9.2	254,575	12.4
Driver Unknown	1	0.4	10	1.2	9	1.4	—	—
Total	210¹	100.0	863	100.0²	653	100.0	2,052,492	100.0²

¹This does not include the 11 drinking pedestrians.

²Percentages do not add up to 100.0 percent due to rounding.

9. Drinking Drivers Involved in Fatal Crashes by Age and by Day of Week:
Iowa, 1978

Figure 3 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.

10. Drinking Drivers Involved in Fatal Crashes by Age and by Time of Day:
Iowa, 1978

Table 7 and Figure 4 show the recent distribution of drinking drivers by time of day in two groups, 16-24 years of age and older. Both young and old drinking drivers were involved in the greatest numbers of fatal crashes between 12 midnight and 2:59 a.m.

TABLE 7
DRINKING DRIVERS INVOLVED IN FATAL CRASHES BY AGE AND BY TIME:
IOWA, 1978

Time	24 and Younger		25 and Older		Driver Unknown	
	#	%	#	%	#	%
6:00-8:59 p.m.	15	12.2	13	13.4	—	—
9:00-11:59 p.m.	25	20.3	24	24.7	1	100.0
12:00-2:59 a.m.	53	43.1	32	33.0	—	—
3:00-5:59 a.m.	16	13.0	11	11.3	—	—
6:00-8:59 a.m.	2	1.6	1	1.0	—	—
9:00-11:59 a.m.	1	0.8	1	1.0	—	—
12:00-2:59 p.m.	7	5.7	3	3.1	—	—
3:00-5:59 p.m.	3	2.4	12	12.4	—	—
Unknown	1	0.8	—	—	—	—
Total	123	100.0¹	97	100.0¹	1	100.0

¹Percentages do not add up to 100.0 percent due to rounding.

11. Relationship Between the Age of Drinking Drivers and the Mean Blood Alcohol Concentration in Fatal Crashes: Iowa, 1978

The number of drivers and the mean blood alcohol concentration were tabulated according to age groups in Table 8.

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

Figure 2 shows the mean BAC level of drinking drivers by age in relation to the state average of 0.157.

Age	Number	Average BAC
19 & Younger	28	0.125
20-24	36	0.154
25-34	37	0.163
35-44	13	0.183
45-54	8	0.155
55-64	4	0.249
65 & Up	4	0.167
All Ages	130	0.157

12. Alcohol-Related Fatal Crashes and Fatalities by Month: Iowa, 1978

The variation by month of the year in 1978 is shown in Table 9. The months of April, January and October (in that order) ranked highest in the proportion of alcohol-related fatal crashes in 1978. All were above the one year average of 35.9 percent.

Month	Fatal Crashes					Fatalities		
	Drinking Drivers	Alcohol-Related		All Fatal Traffic	% Alcohol Related	Alcohol Related	All Fatalities	% Alcohol Related
		#	%					
January	10	10	5.0	24	41.7	12	29	41.4
February	4	4	2.0	26	15.4	4	29	13.8
March	13	10	5.0	32	31.3	11	33	33.3
April	28	25	12.4	40	62.5	29	45	64.4
May	20	20	9.9	60	33.3	22	72	30.6
June	25	23	11.4	65	35.4	28	77	36.4
July	24	20	9.9	56	35.7	23	61	37.7
August	21	21	10.4	64	32.8	22	73	30.1
September	21	19	9.4	53	35.8	22	59	37.3
October	19	17	8.4	46	37.0	23	55	41.8
November	25	22	10.9	63	34.9	26	76	34.2
December	11	11	5.4	34	32.4	14	41	34.1
Total	221¹	202	100.0²	563	35.9	236	650	36.3

¹Includes the 11 drinking pedestrians.

²Percentages do not add up to 100.0 percent due to rounding.

13. Ranked Violations Committed by Drinking Drivers Involved in Fatal Crashes: Iowa, 1978

Violations frequently committed by drinking drivers were investigated and ranked by type of crash (multiple vehicle fatal crashes). This is indicated in Table 10.

Driving left of center and speeding accounted for 62.4 percent of the violations in multi-vehicle fatal crashes.

Drinking drivers who were speeding and failed to have control of the vehicle caused 86.7 percent of the single vehicle fatal crashes.

Violations	Multiple Vehicle		Single Vehicle	
	#	%	#	%
Drove Left of Center	33	35.5	—	—
Speeding	25	26.9	58	45.3
Failure to Have Control	14	15.1	53	41.4
Failure to Yield	3	3.2	—	—
Ran Stop Sign	3	3.2	1	0.8
Ran Traffic Signal	1	1.1	—	—
Ran Railroad Signal	—	—	3	2.3
Reckless Driving	2	2.2	—	—
Wrong Way on One-Way Street	—	—	—	—
Improper Passing	1	1.1	—	—
Improper Turn	1	1.1	—	—
Pedestrian Violation	1	1.1	10	7.8
Violation by Other Driver	5	5.4	—	—
Other	2	2.2	2	1.6
Unknown	2	2.2	1	0.8
Total	93	100.0¹	128	100.0

¹Percentages do not add up to 100.0 percent due to rounding.

14. Alcohol-Related Fatal Crashes by County: Iowa, 1978

Counties with their corresponding number and percentage of alcohol-related fatal crashes are shown in Table 11.

The following 21 counties had no reported alcohol-related fatal crashes in 1978:

Adair	Clarke	Ida
Adams	Emmet	Lucas
Audubon	Floyd	Osceola
Buena Vista	Greene	Pocahontas
Calhoun	Guthrie	Taylor
Cass	Harrison	Worth
Cedar	Humboldt	Wright

In 1978, 40 counties exceeded the state average of 35.9 percent alcohol-related fatal crashes. These counties accounted for 64.4 percent of the total alcohol-related fatal crashes in the state. The average proportion of alcohol-related fatal crashes in these counties was 57.5 percent.

TABLE 11
ALCOHOL-RELATED FATAL CRASHES AND FATALITIES
BY COUNTY:
IOWA, 1978

County	Fatal Crashes			Fatalities		
	Total	Alcohol Related	% Alcohol Related	Total	Alcohol Related	% Alcohol Related
Adair	6	—	—	7	—	—
Adams	1	—	—	1	—	—
Allamakee	4	2	50.0	5	3	60.0
Appanoose	3	1	33.3	3	1	33.3
Audubon	3	—	—	4	—	—
Benton	6	1	16.7	8	1	12.5
Black Hawk	20	11	55.0	29	15	51.7
Boone	4	3	75.0	6	5	83.3
Bremer	5	2	40.0	5	2	40.0
Buchanan	6	2	33.3	9	2	22.2
Buena Vista	1	—	—	1	—	—
Butler	3	1	33.3	3	1	33.3
Calhoun	3	—	—	4	—	—
Carroll	3	2	66.7	4	3	75.0
Cass	6	—	—	6	—	—
Cedar	3	—	—	3	—	—
Cerro Gordo	6	3	50.0	6	3	50.0
Cherokee	5	1	20.0	6	1	16.7
Chickasaw	7	3	42.9	10	5	50.0
Clarke	—	—	—	—	—	—
Clay	9	4	44.4	9	4	44.4
Clayton	6	2	33.3	6	2	33.3
Clinton	11	5	45.5	11	5	45.4
Crawford	9	5	55.6	11	6	54.5
Dallas	6	1	16.7	6	1	16.7
Davis	5	2	40.0	5	2	40.0
Decatur	4	2	50.0	5	2	40.0
Delaware	4	2	50.0	4	2	50.0
Des Moines	8	2	25.0	8	2	25.0
Dickinson	3	1	33.3	3	1	33.3
Dubuque	15	7	46.7	17	7	41.2
Emmet	1	—	—	1	—	—
Fayette	3	1	33.3	3	1	33.3
Floyd	1	—	—	1	—	—
Franklin	1	1	100.0	2	2	100.0
Fremont	3	1	33.3	3	1	33.3
Greene	2	—	—	3	—	—
Grundy	3	1	33.3	4	1	25.0
Guthrie	1	—	—	1	—	—
Hamilton	7	1	14.3	7	1	14.3
Hancock	3	2	66.7	4	2	50.0
Hardin	3	1	33.3	3	1	—
Harrison	9	—	—	11	—	—
Henry	4	2	50.0	4	2	50.0
Howard	4	2	50.0	5	2	40.0
Humboldt	3	—	—	4	—	—

TABLE 11
ALCOHOL-RELATED FATAL CRASHES AND FATALITIES
BY COUNTY:
IOWA, 1978

County	Fatal Crashes			Fatalities		
	Total	Alcohol Related	% Alcohol Related	Total	Alcohol Related	% Alcohol Related
Ida	3	—	—	7	—	—
Iowa	3	1	33.3	3	1	33.3
Jackson	6	4	66.7	6	4	66.7
Jasper	7	1	14.3	8	2	25.0
Jefferson	2	2	100.0	2	2	100.0
Johnson	14	5	35.7	14	5	35.7
Jones	4	1	25.0	5	1	20.0
Keokuk	5	1	20.0	5	1	20.0
Kossuth	6	1	16.7	7	1	14.3
Lee	12	4	33.3	16	5	31.2
Linn	16	4	25.0	17	4	23.5
Louisa	4	2	50.0	4	2	50.0
Lucas	1	—	—	1	—	—
Lyon	8	2	25.0	8	2	25.0
Madison	5	3	60.0	5	3	50.0
Mahaska	2	1	50.0	3	2	66.7
Marion	6	2	33.3	9	4	44.4
Marshall	6	2	33.3	6	2	33.3
Mills	4	2	50.0	4	2	50.0
Mitchell	3	1	33.3	3	1	33.3
Monona	4	2	50.0	4	2	50.0
Monroe	3	1	33.3	4	1	25.0
Montgomery	4	3	75.0	5	4	80.0
Muscatine	11	7	63.7	13	8	61.5
O'Brien	3	1	33.3	3	1	33.3
Osceola	1	—	—	1	—	—
Page	2	1	50.0	2	1	50.0
Palo Alto	6	2	33.3	7	2	28.6
Plymouth	5	3	60.0	6	4	66.7
Pocahontas	4	—	—	4	—	—
Polk	28	9	28.6	28	9	32.1
Pottawattamie	27	8	29.6	28	8	28.6
Poweshiek	5	1	20.0	5	1	20.0
Ringgold	2	1	50.0	2	1	50.0
Sac	4	3	75.0	4	3	75.0
Scott	21	8	38.1	24	8	33.3
Shelby	4	3	75.0	6	3	50.0
Sioux	8	2	25.0	10	4	40.0
Story	11	4	36.4	13	6	46.2
Tama	3	1	33.3	4	1	25.0
Taylor	1	—	—	1	—	—
Union	1	1	100.0	4	4	100.0
Van Buren	5	1	20.0	8	2	25.0
Wapello	9	4	44.4	10	5	50.0
Warren	10	7	70.0	12	9	75.0
Washington	6	2	33.3	6	2	33.3
Wayne	4	1	25.0	5	2	40.0

TABLE 11
ALCOHOL-RELATED FATAL CRASHES AND FATALITIES
BY COUNTY:
IOWA, 1978

County	Fatal Crashes			Fatalities		
	Total	Alcohol Related	% Alcohol Related	Total	Alcohol Related	% Alcohol Related
Webster	10	1	10.0	11	1	9.1
Winnebago	3	2	66.7	3	2	66.7
Winneshiek	5	2	40.0	6	3	50.0
Woodbury	10	5	50.0	14	6	42.9
Worth	—	—	—	—	—	—
Wright	3	—	—	3	—	—
Total	563	202	35.9	650	236	36.3

15. Alcohol-Related Fatal Crashes by Location: Iowa, 1978

An analysis showed that 79.2 percent of the crashes occurred in the rural areas while only 20.8 percent occurred in the urban areas.

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

TABLE 12														
FATAL CRASHES BY ROAD CLASS:														
IOWA, 1978														
Road Class	Month												Total	
	J	F	M	A	M	J	J	A	S	O	N	D	#	%
Interstate	1	—	1	1	1	—	—	—	—	1	1	—	6	3.0
Primary	5	3	7	9	10	10	7	9	10	10	7	7	94	46.5
County	2	1	—	9	5	7	9	10	6	5	11	2	67	33.2
City Streets	2	—	2	6	4	6	4	2	3	1	3	2	35	17.3
Others	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	10	4	10	25	20	23	20	21	19	17	22	11	202	100.0

The preceding table shows that 46.5 percent of the alcohol-related crashes occurred on U.S./State highways, 33.2 percent on county roads, and 17.3 percent on city streets. Only 3.0 percent occurred on interstates. This information is of importance to enforcement officers.

16. Comparison of 1978 Alcohol-Related Fatal Crashes with Past Years: Iowa, 1978

Table 13 shows the different proportions of alcohol-related fatal crashes from 1970 through 1978.

TABLE 13
ALCOHOL-RELATED FATAL TRAFFIC CRASHES AND FATALITIES:
IOWA, 1970-1978

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
1970-1974	1069	3417	31.3	1305	4112	31.7
1975-1978	886	2366	37.4	1048	2749	38.1

The above table indicates that the proportion of alcohol-related fatal crashes in the 1975-1978 years significantly increased (37.4 percent) when compared to 1970-1974 (31.3 percent). Data indicated that an improved method of reporting alcohol involvement and more BAC tests being performed as a result of Iowa's Alcohol Safety Action Program have resulted in more accurate data from 1975-1978 in certain areas of the state. It is difficult, therefore, to compare the two time periods with respect to a true alcohol-related accident experience.

17. Discussion

The study shows that in 1978, 202 out of 563 fatal crashes or 35.9 percent were alcohol related and claimed 236 lives. Data from 1970 through 1977 showed that the proportion of alcohol-related fatal crashes for the 1975-1977 average appeared to be increased (38.0 percent) when compared to 1970-1974 (31.13 percent average). However, the 1978 proportion was 35.9 percent. This is likely a genuine improvement.

Blood alcohol tests were conducted on 130 drinking drivers/pedestrians or 58.8 percent of the total number of drinking drivers/pedestrians. Approximately 56.2 percent of the drinking drivers/pedestrians were young (24 years or under). This proportion is over-represented when compared with the proportionate number of licensed drivers in this age group which is 24.4 percent. The proportion is higher than the total of young drivers involved in fatal crashes (42.5 percent). Hence, inexperienced drivers were significant in alcohol-related crashes. The data indicate that younger drivers (19 years or under) had lower BACs than their older counterparts, but were much more likely to be involved in crashes when they drank. This finding is similar to that in previous years.

An analysis of data showed that alcohol-related fatal crashes occurred on primary highways (46.5 percent) and on the county roads (33.2 percent).

FIGURE 1
FREQUENCY OF DRINKING DRIVERS INVOLVED IN FATAL CRASHES
BY BAC LEVEL: IOWA, 1978

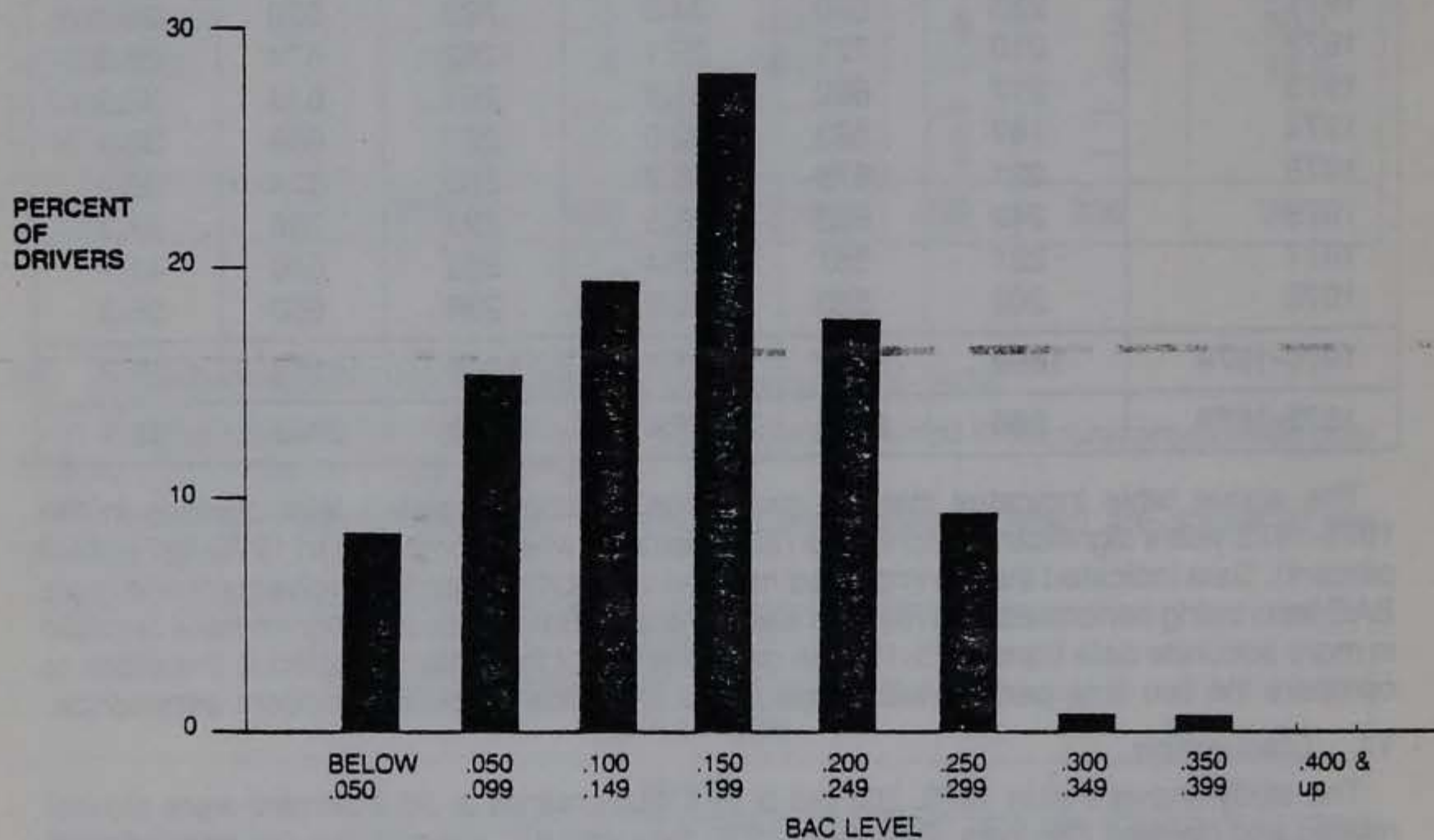


FIGURE 2
AVERAGE BAC LEVEL OF DRINKING DRIVERS INVOLVED IN FATAL
CRASHES BY AGE GROUP: IOWA, 1978

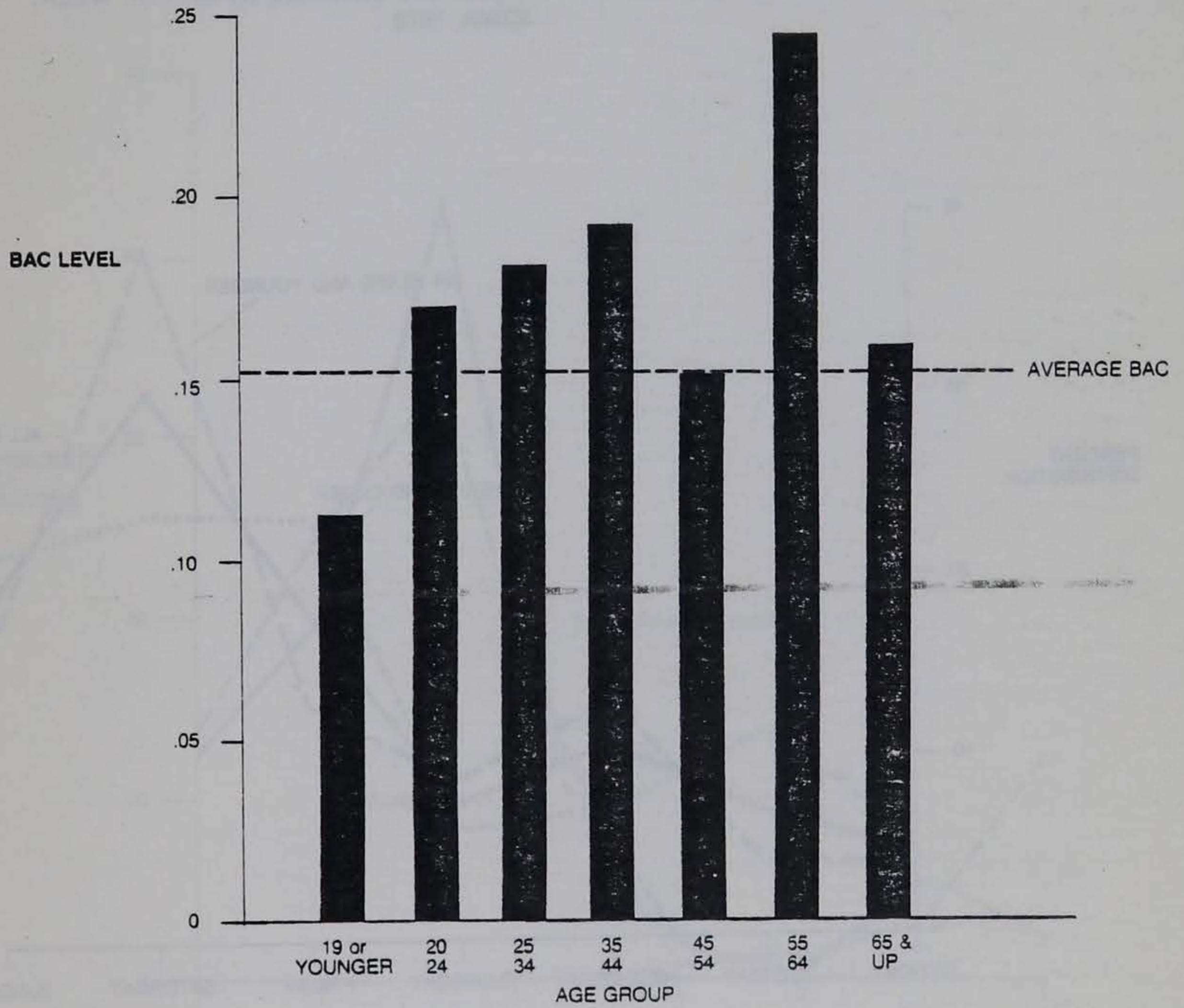


FIGURE 3
 DRINKING DRIVERS INVOLVED IN FATAL CRASHES BY DAY OF WEEK:
 IOWA, 1978

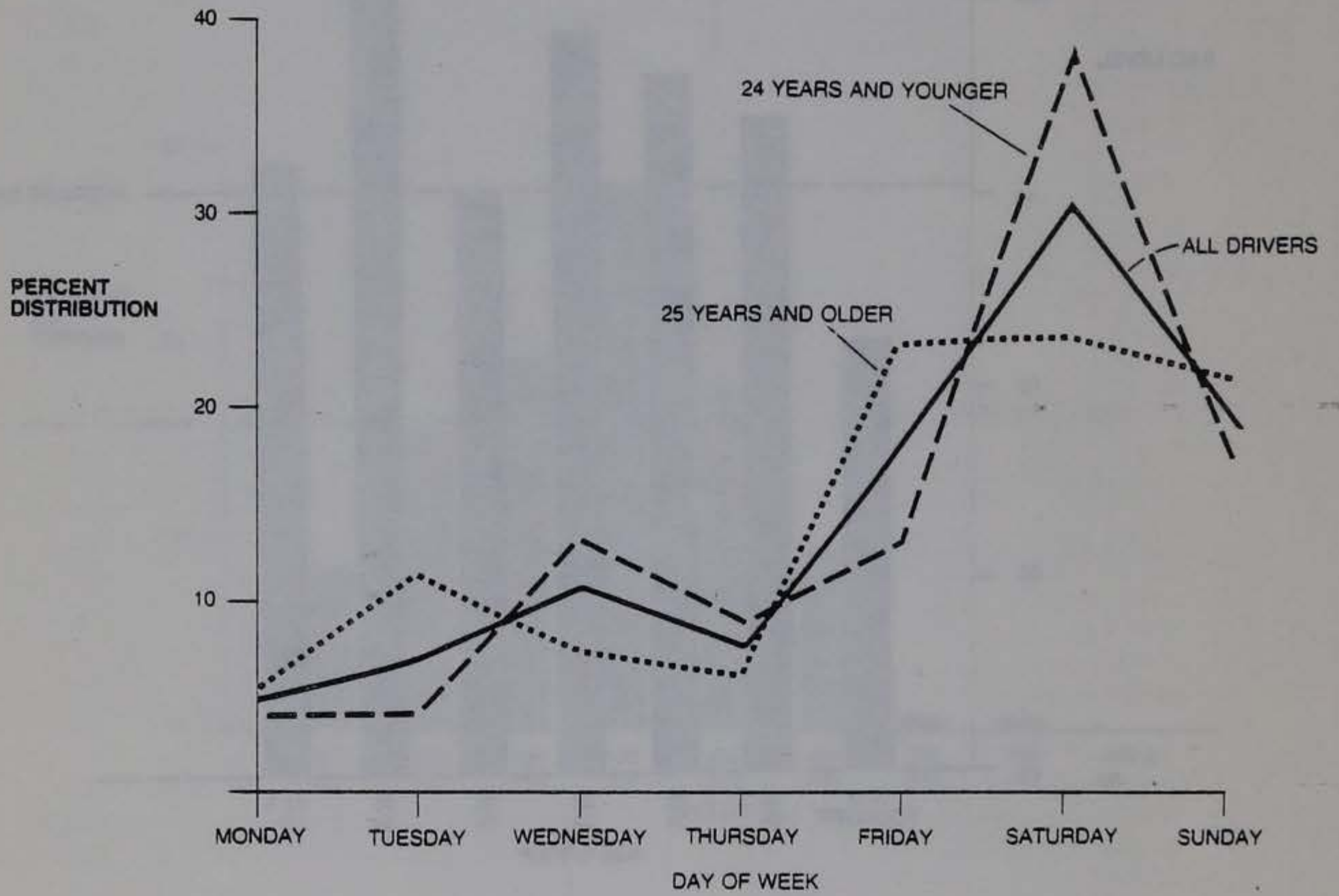
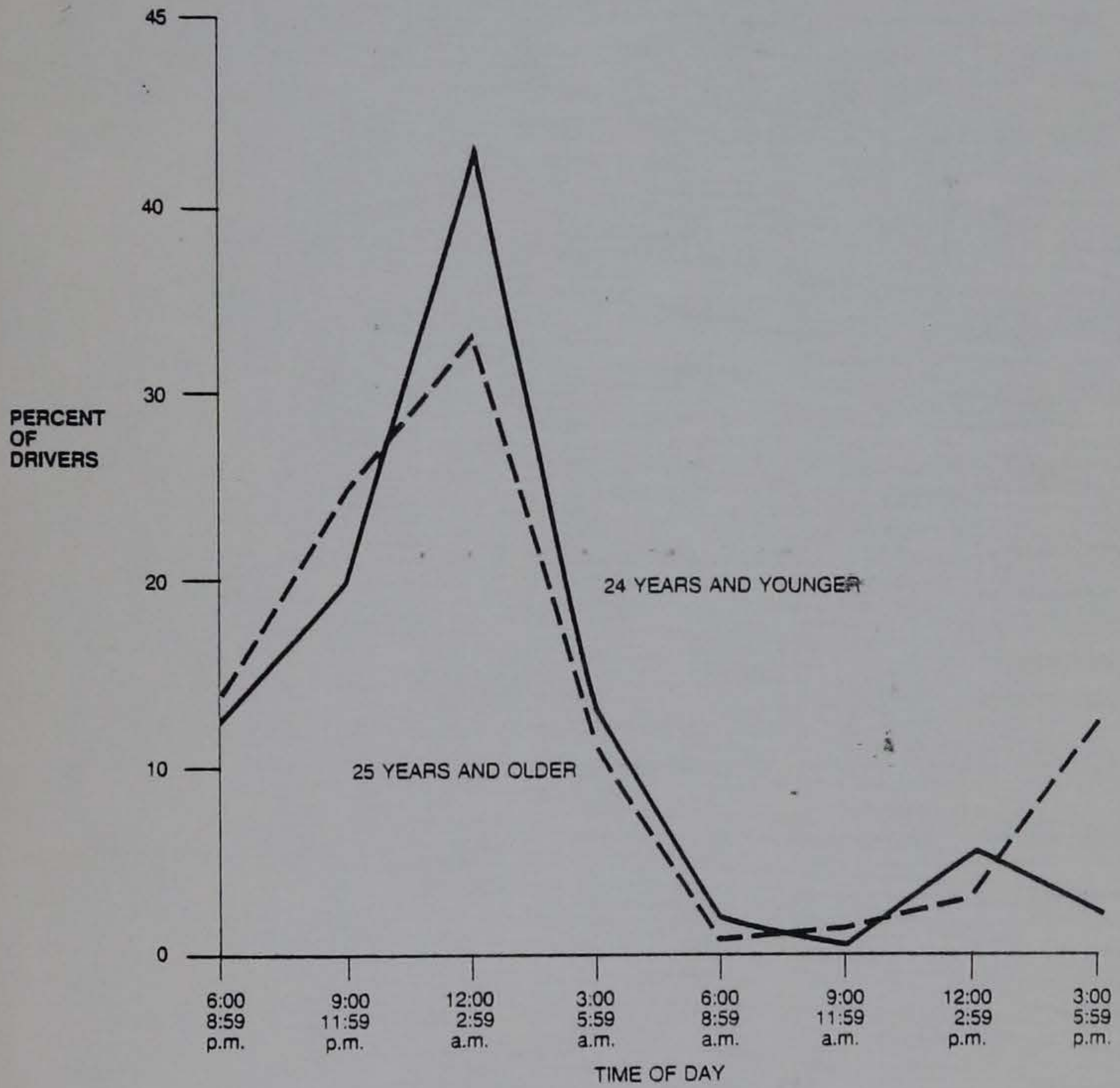


FIGURE 4
 DRINKING DRIVERS INVOLVED IN FATAL CRASHES
 BY TIME OF DAY AND BY AGE GROUP: IOWA, 1978



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