

2004

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Alcohol

INJURY EXPERIENCE FOR PERSONS WHO HAD BEEN DRINKING AND/OR USING DRUGS

Revised October 25, 2005

Alcohol and/or drug use affects the judgment and behavior of persons in addition to motor vehicle drivers. Consider the experience of impaired bicyclists, pedestrians, motorcyclists, snowmobilers, and ORV/ATV riders when looking at crash statistics. Alcohol and drugs should not be used by anyone intending to navigate a roadway.

BICYCLIST	Total	In Crash				Bicyclist			
		Drinking	Drug	Both	Total	Drinking	Drug	Both	Total
Killed	21	6	1	2	9	3	0	2	5
Injured	1,796	85	8	2	95	68	3	2	73
In Crashes	2,246	99	9	4	112	76	3	4	83

PEDESTRIAN	Total	In Crash				Pedestrian			
		Drinking	Drug	Both	Total	Drinking	Drug	Both	Total
Killed	140	38	10	11	59	32	8	8	48
Injured	2,403	206	12	8	226	113	5	2	120
In Crashes	2,864	261	22	20	303	150	13	10	173

MOTORCYCLIST	Total	In Crash				Motorcyclist			
		Drinking	Drug	Both	Total	Drinking	Drug	Both	Total
Killed	79	25	5	3	33	22	4	3	29
Injured	2,679	238	8	10	256	194	4	8	206
In Crashes	3,725	317	15	13	345	258	10	11	279

SNOWMOBILER	Total	In Crash				Snowmobiler			
		Drinking	Drug	Both	Total	Drinking	Drug	Both	Total
Killed	14	4	0	0	4	4	0	0	4
Injured	224	37	0	2	39	35	0	1	36
In Crashes	415	60	0	3	63	51	0	2	53

ORV/ATV RIDER	Total	In Crash				ORV/ATV Rider			
		Drinking	Drug	Both	Total	Drinking	Drug	Both	Total
Killed	12	5	0	1	6	5	0	1	6
Injured	238	36	0	1	37	35	0	1	36
In Crashes	320	44	0	2	46	43	0	2	45

DRIVER	Total	In Crash				Driver			
		Drinking	Drug	Both	Total	Drinking	Drug	Both	Total
Killed	714	182	37	41	260	171	34	37	242
Injured	71,108	5,462	383	322	6,167	4,078	262	242	4,582
In Crashes	635,913	20,947	1,278	1,027	23,252	13,864	743	649	15,256



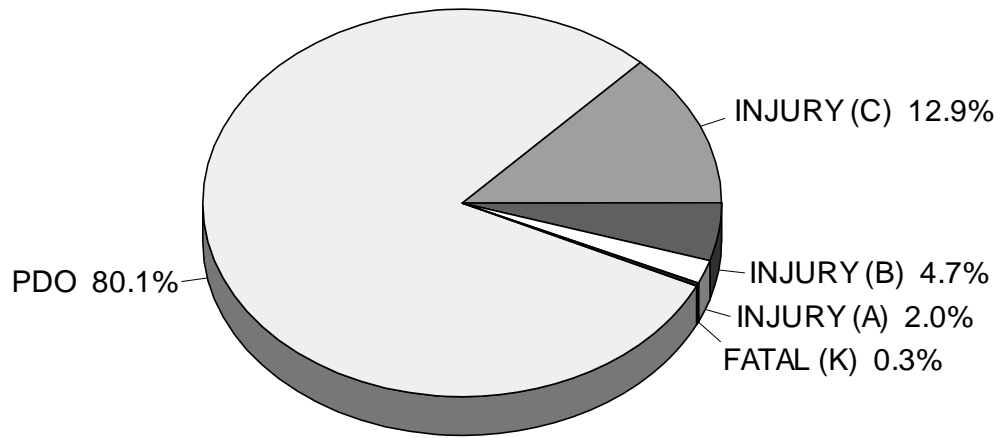
NOTE: These crashes involve a motor vehicle in transport on a public trafficway (in Michigan) and result in injury, death, or at least \$1,000 in property damage.

DRIVER DRINKING AND/OR USING DRUGS AND INJURY SEVERITY IN CRASH

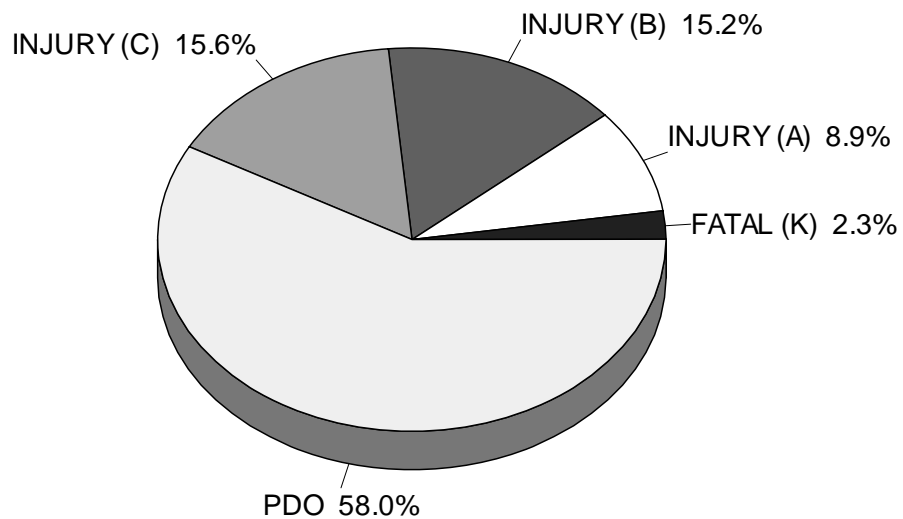
MOST SEVERE OUTCOME IN CRASH

AGE OF DRIVER IN CRASH	Driver				Fatal				Injury			
	HBD	Drug	Both	Total	HBD	Drug	Both	Total	HBD	Drug	Both	Total
13 years & under	13	0	0	13	0	0	0	0	7	0	0	7
14 years	5	0	0	5	0	0	0	0	3	0	0	3
15 years	14	0	4	18	0	0	1	1	8	0	2	10
16 years	92	10	8	110	1	0	0	1	42	4	2	48
17 years	192	30	13	235	2	0	2	4	79	15	4	98
18 years	394	37	20	451	6	4	1	11	153	22	7	182
19 years	461	24	23	508	5	0	2	7	172	8	13	193
20 years	468	25	18	511	8	0	0	8	198	12	5	215
21 - 24 years	2,578	77	86	2,741	47	6	10	63	953	27	38	1,018
25 - 34 years	3,477	160	168	3,805	73	10	11	94	1,364	67	84	1,515
35 - 44 years	3,009	187	156	3,352	69	13	6	88	1,207	88	64	1,359
45 - 54 years	2,007	144	97	2,248	34	9	11	54	817	76	49	942
55 - 64 years	683	32	30	745	11	3	0	14	276	14	11	301
65 - 69 years	150	7	6	163	5	0	0	5	54	5	1	60
70 - 74 years	87	4	4	95	6	0	0	6	27	2	0	29
75 - 79 years	47	1	6	54	1	0	1	2	19	1	1	21
80 - 84 years	20	0	1	21	3	0	0	3	11	0	1	12
85 - 89 years	8	0	0	8	0	0	0	0	2	0	0	2
90 years & over	1	0	0	1	0	0	0	0	1	0	0	1
Unknown	158	5	9	172	0	0	0	0	39	0	3	42
Total	13,864	743	649	15,256	271	45	45	361	5,432	341	285	6,058

ALL CRASHES BY INJURY SEVERITY



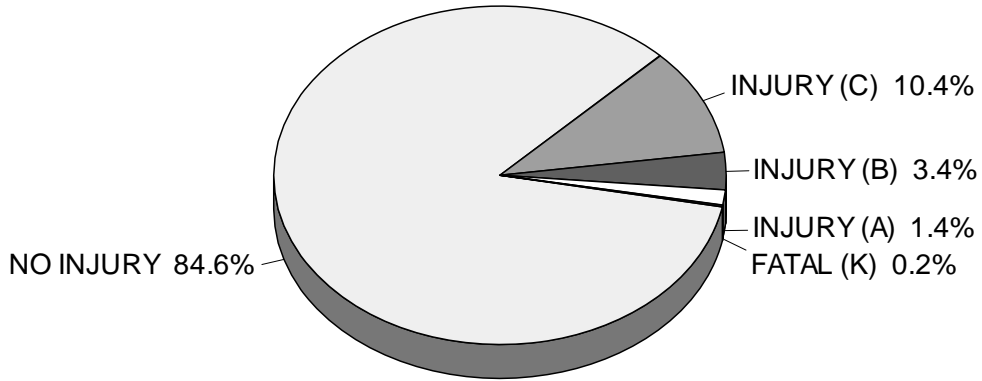
HBD CRASHES BY INJURY SEVERITY



The problem of the drinking driver, pedestrian, and/or cyclist is seen when one compares the two charts on this page. All injury levels are greater, and a fatality in the crash is almost **eight times** more likely when one of the crash-involved operators is reported as had been drinking.

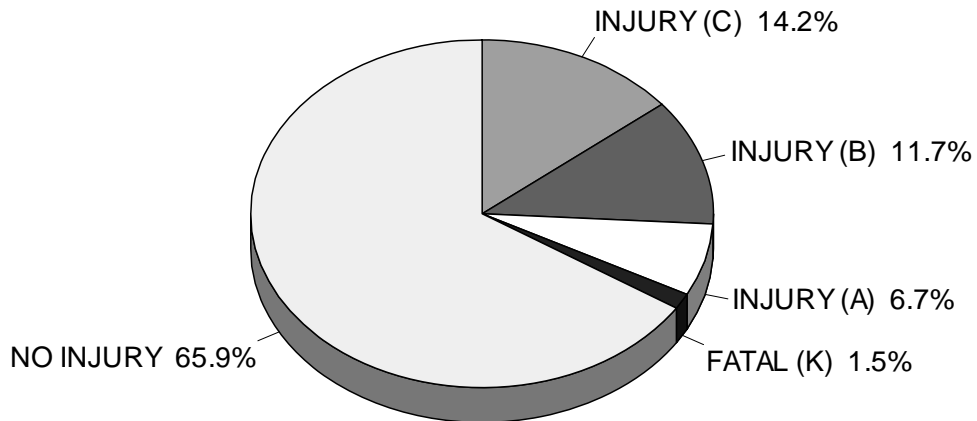
DEATH & INJURY PER CRASH INVOLVED OCCUPANT

Occupants in Crashes



The majority of occupants involved in crashes are not injured (84.6%). Two thirds of those who are injured receive only minor (C) injuries. Increased use of occupant restraints and airbags can reduce the number of killed and injured even further.

Occupants in HBD Crashes

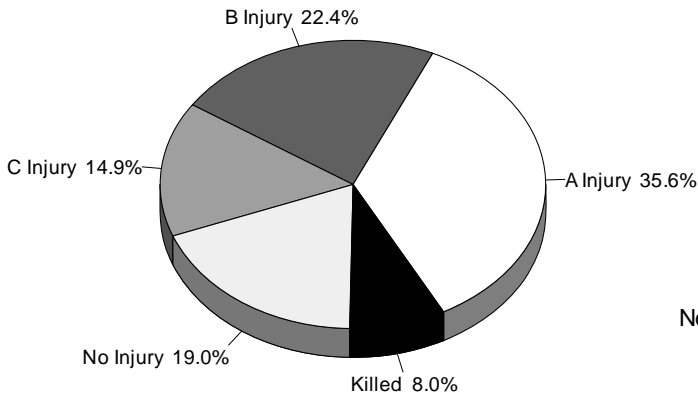


Crashes involving drinking tend to be more serious than nondrinking crashes. The percentage of fatalities is seven and one-half times higher than in all crashes and the most serious injury level (A) is almost five times higher.

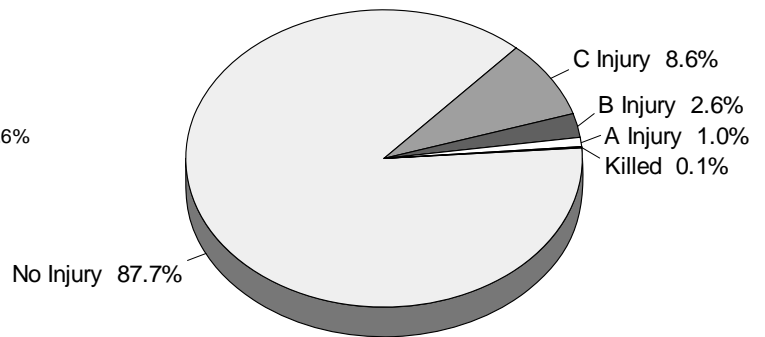
ALL DRIVERS and HBD DRIVERS INJURY SEVERITY - EJECTED vs. NOT EJECTED

As can be seen in the two charts below, death and injury are much more likely when *drivers* are ejected from their vehicles.

Ejected

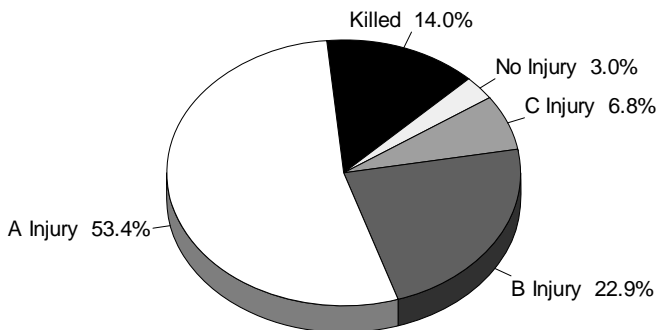


Not Ejected

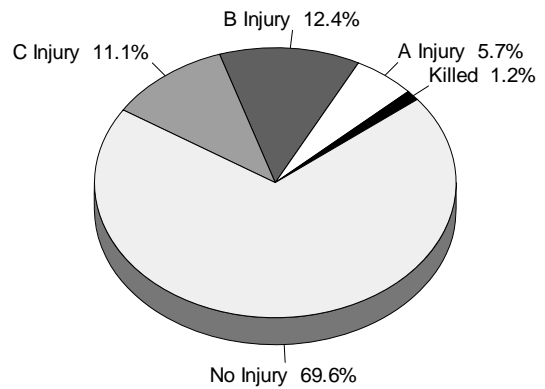


When compared to the charts above, the charts below demonstrate that the injury severity is much worse for drivers who had been drinking in both ejected and nonejected events.

HBD Ejected

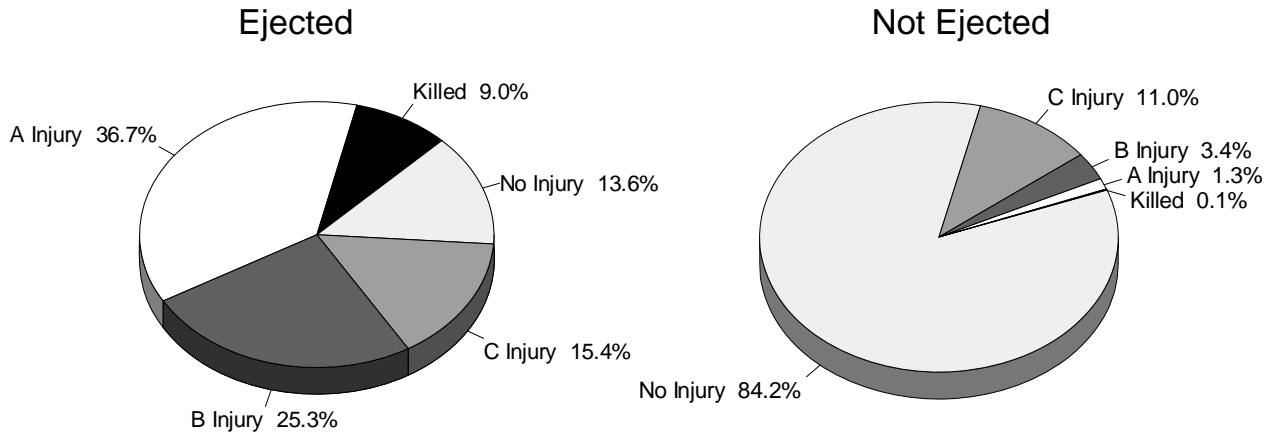


HBD Not Ejected

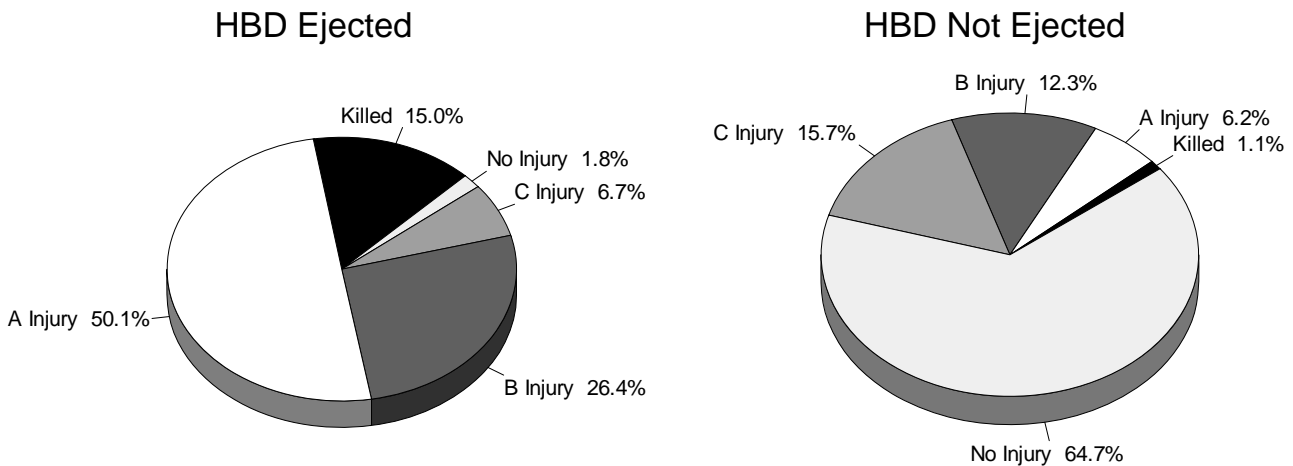


ALL OCCUPANTS and OCCUPANTS of HBD CRASHES INJURY SEVERITY - EJECTED vs. NOT EJECTED

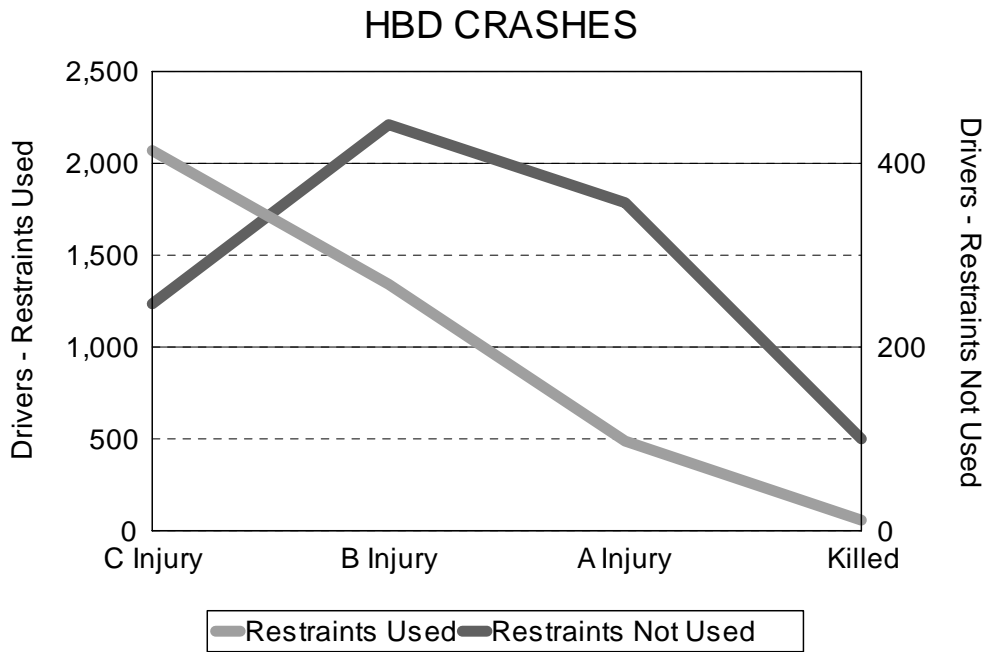
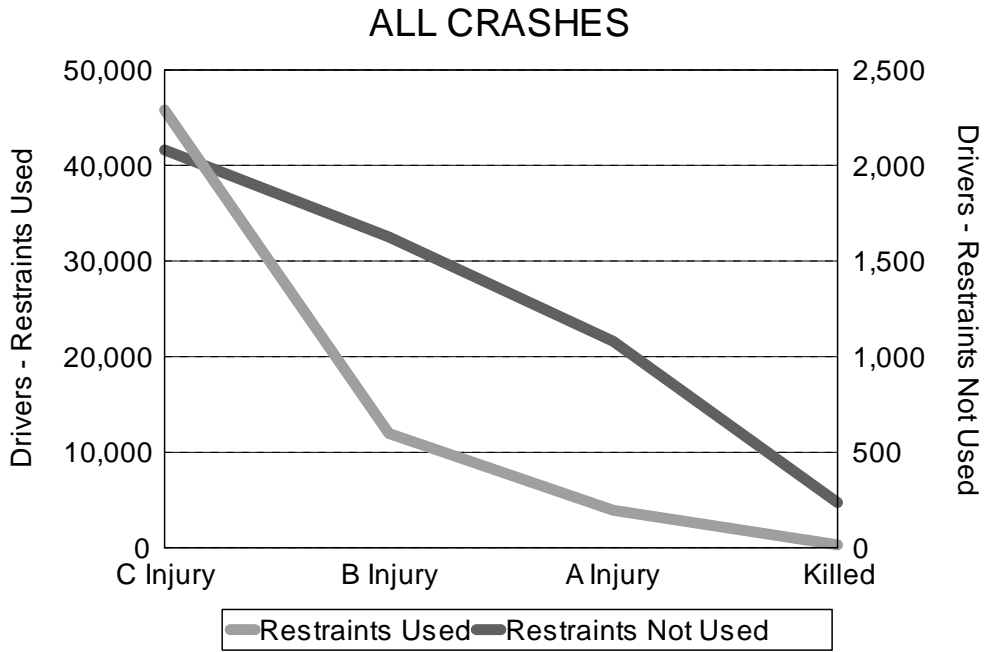
As can be seen in the two charts below, death and injury are much more likely when *occupants* are ejected from their vehicles.



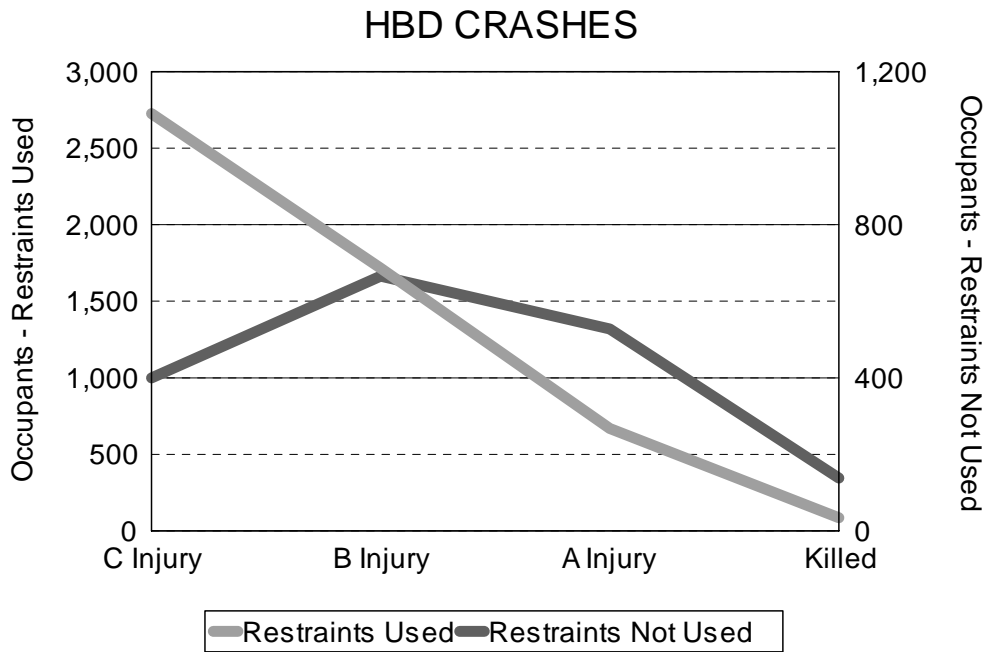
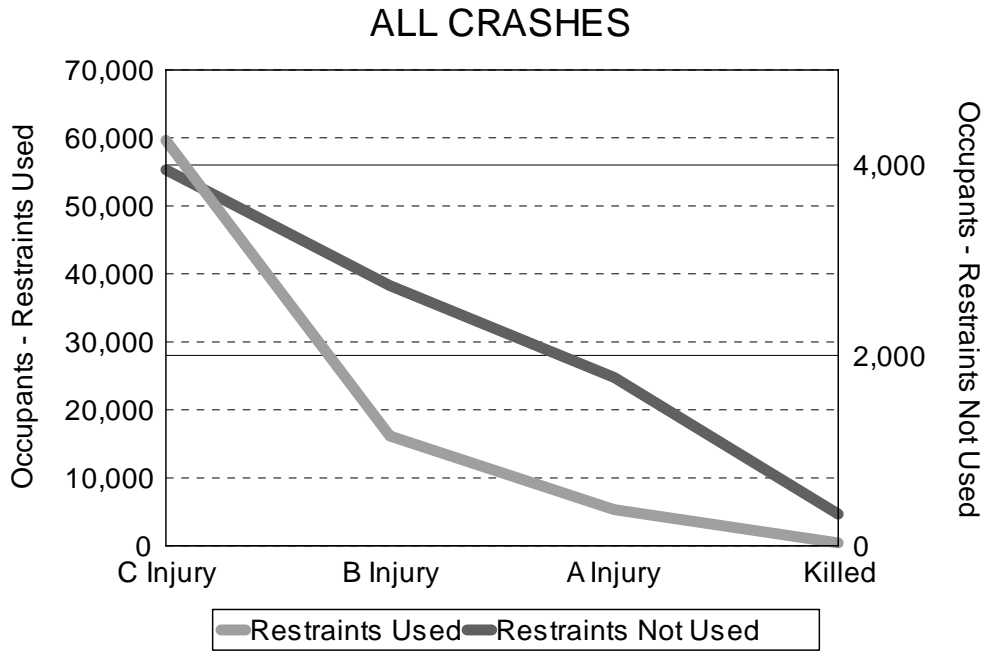
When compared to the charts above, the charts below demonstrate that the injury severity is much worse for occupants in a crash where drinking is reported in both ejected and nonejected events.



INJURY SEVERITY & RESTRAINT USE FOR CRASH INVOLVED KABC DRIVERS



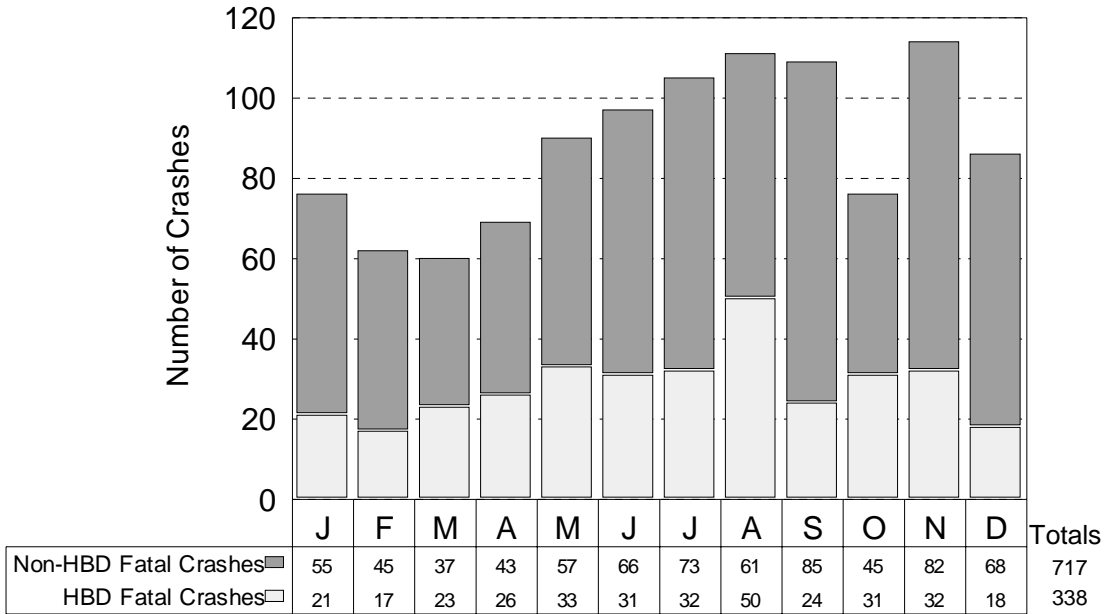
INJURY SEVERITY & RESTRAINT USE FOR CRASH INVOLVED KABC OCCUPANTS



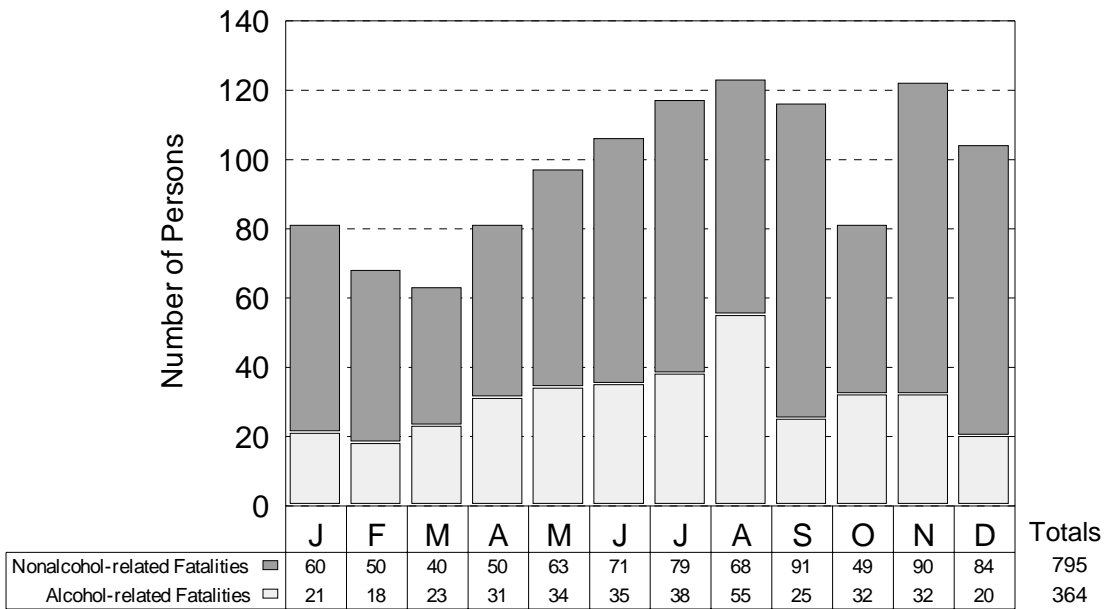
ALCOHOL INVOLVEMENT IN FATAL CRASHES

Fatal crashes (total of non-HBD and HBD fatal crashes) were lowest during February and March. The number of fatal crashes reached highest levels in August and November. The number of HBD fatal crashes follows the overall trend, with the highest number of HBD fatal crashes in August.

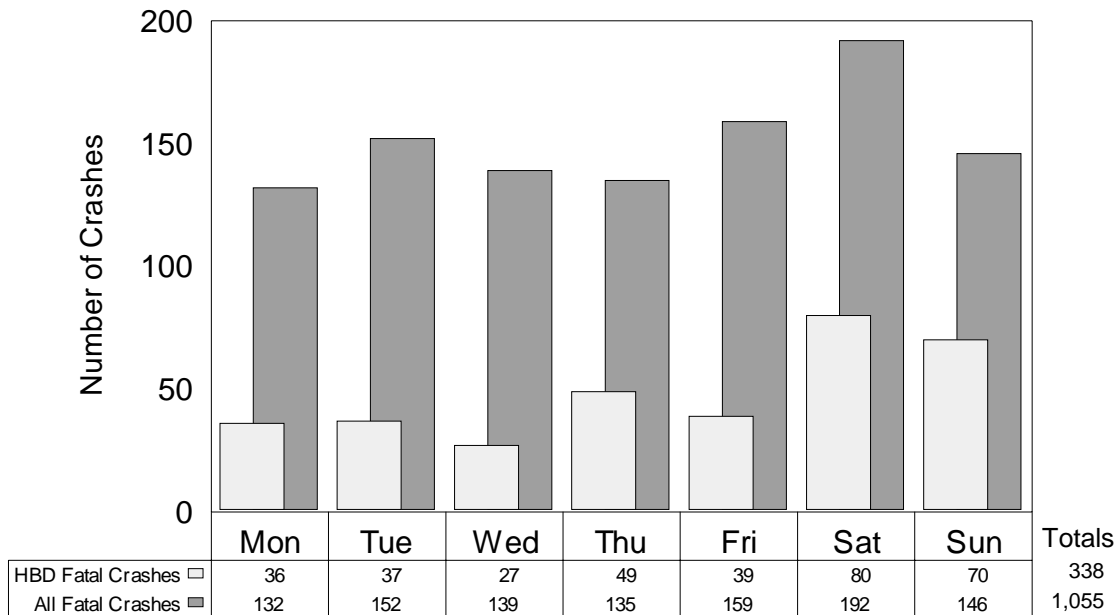
HBD Fatal Crashes by Month



Alcohol-related Fatalities by Month

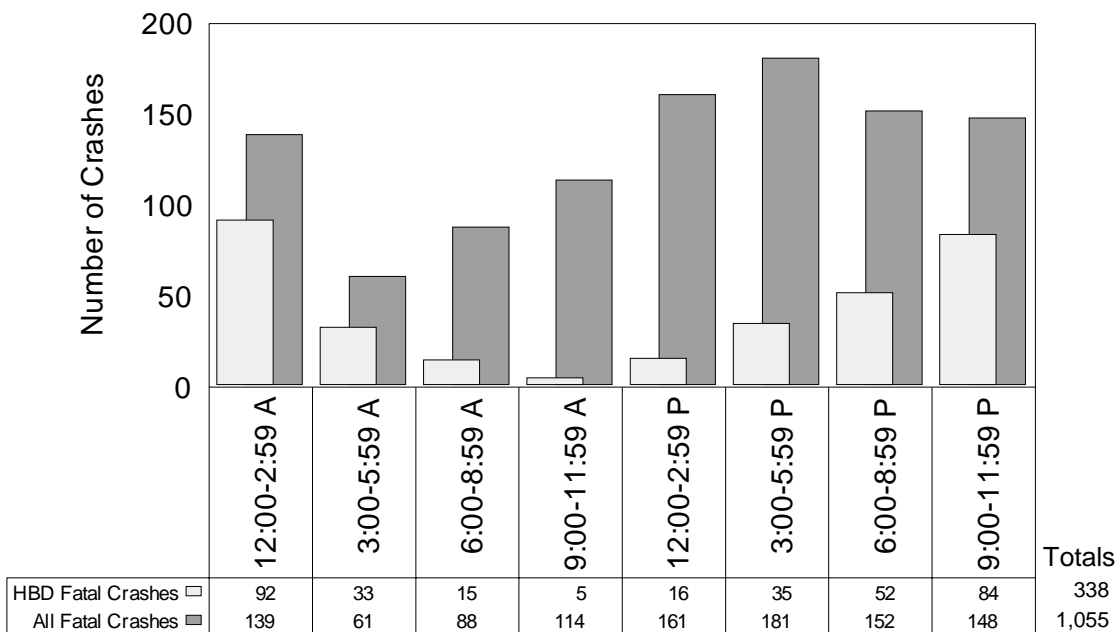


HBD Fatal Crashes by Day of Week



Friday and Saturday had the most fatal crashes in 2004. Saturday and Sunday had the highest proportions of drinking-related fatal crashes. 47.9 percent of the fatal crashes on Sunday involved drinking, while only 19.4 percent of fatal crashes on Wednesday involved drinking.

HBD Fatal Crashes by Time of Day



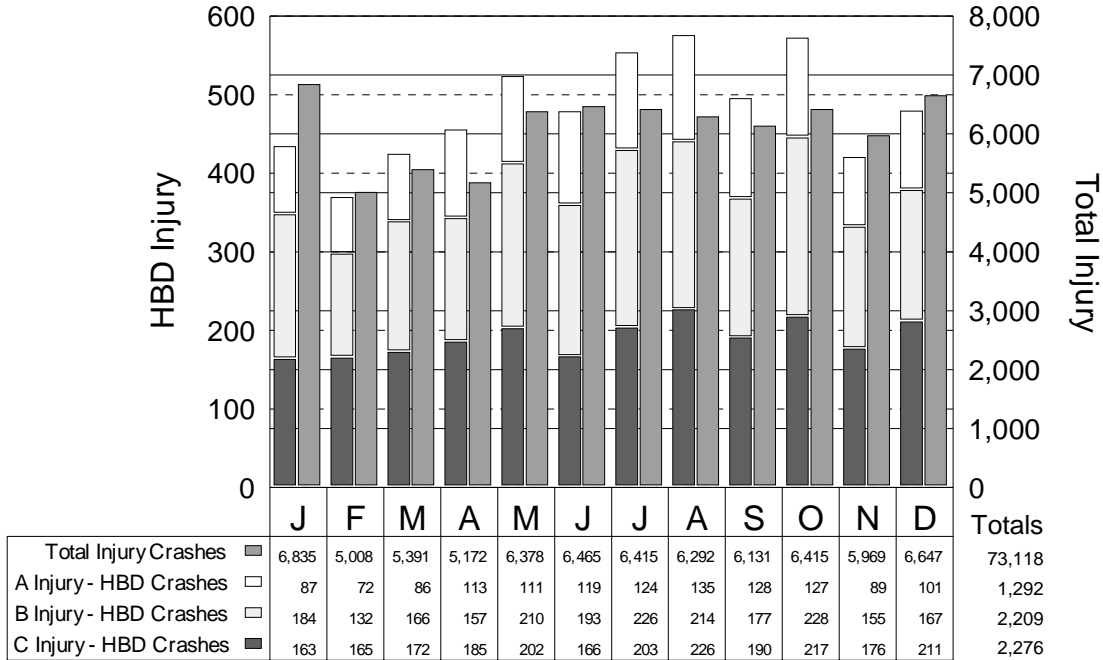
Not surprisingly, the 9:00 to 11:59 PM and midnight to 2:59 AM time periods had the highest rate of drinking involvement (56.8% and 66.2%), while the late morning hours had the lowest (4.4%).

There were 11 fatal crashes where the time of day was unknown. Of these 11 fatal crashes, 6 were HBD.

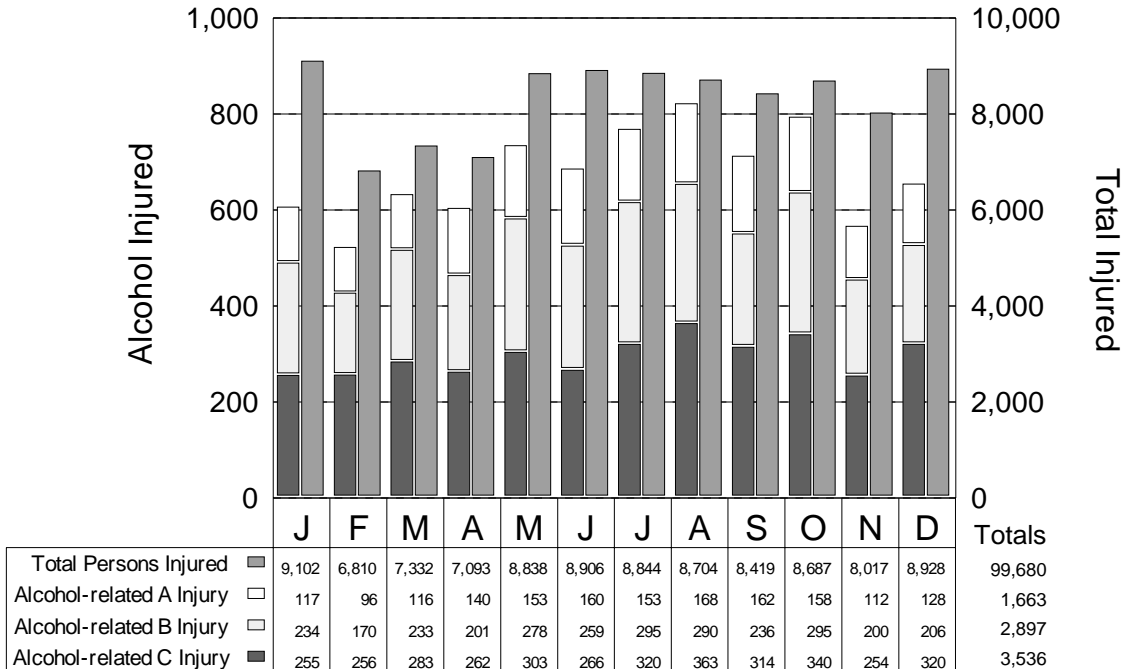
ALCOHOL INVOLVEMENT IN INJURY CRASHES

Alcohol involvement in injury crashes is an important indicator of the alcohol impaired driving problem. In 2004, the highest number of HBD injury crashes occurred in August with 575. The highest proportion of HBD injury crashes occurred in August with 9.1 percent of the injury crashes in that month involving alcohol.

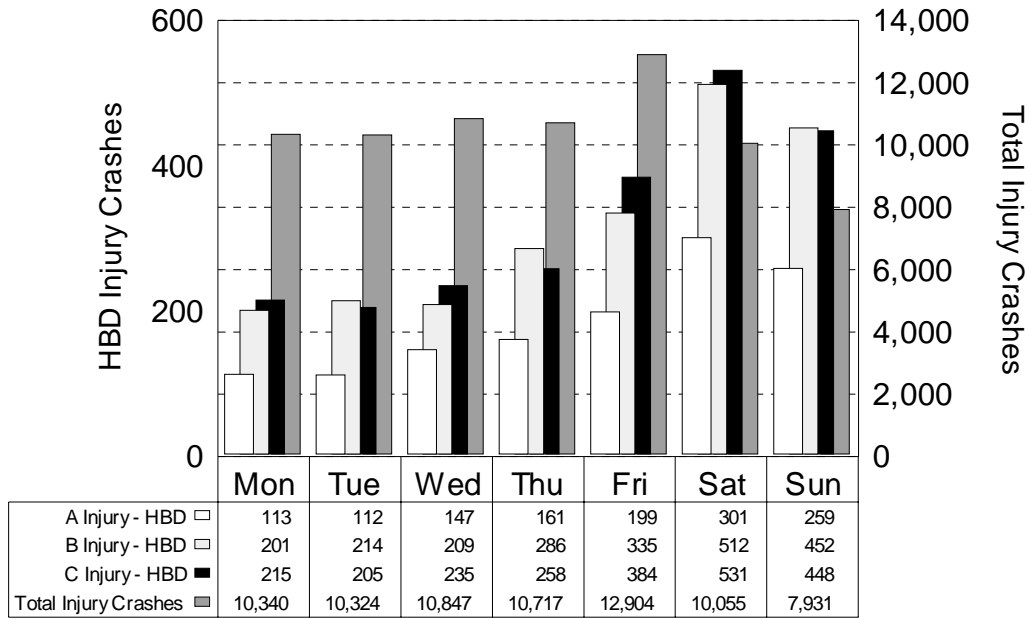
HBD Injury Crashes by Month



Alcohol-related Injuries by Month

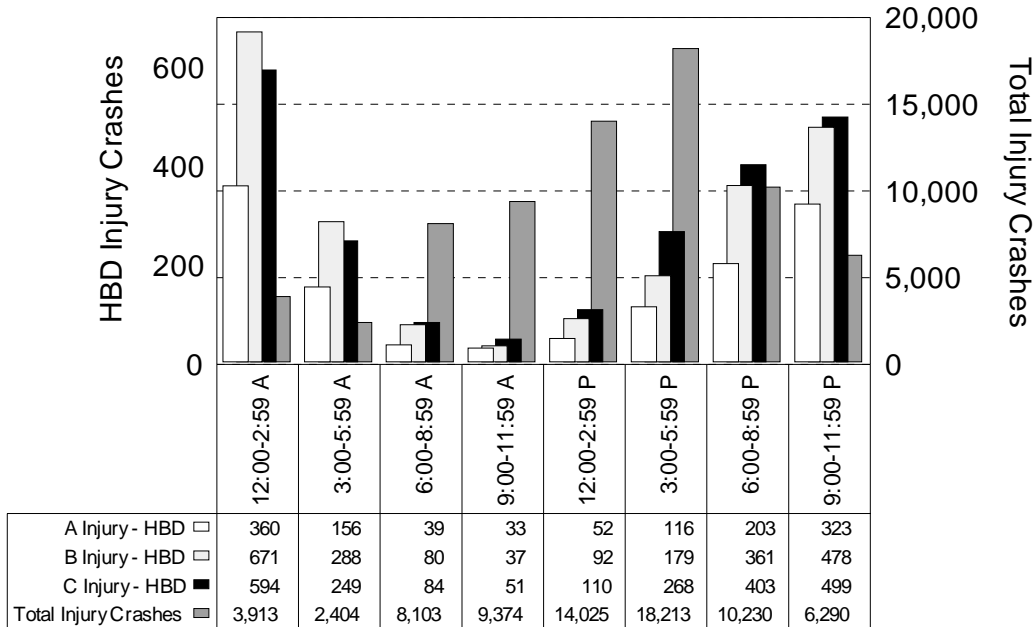


HBD Injury Crashes by Day of Week



HBD injury crashes follow the same basic trends as total crashes through the work week, but the weekend sees a dramatic increase in the proportion of HBD injury crashes to total injury crashes.

HBD Injury Crashes by Time of Day



Total injury crash frequencies peak in the hours between 3:00 PM and 5:59 PM, while HBD injury crash frequencies peak between 12:00 AM and 2:59 AM (a particularly hazardous travel period).

REPORTED AGE OF DRINKING DRIVERS INVOLVED IN CRASHES

COUNTY	All Ages	0-15 Years	16-20 Years	21-24 Years	25-34 Years	35-44 Years	45-54 Years	55-64 Years	65-74 Years	75 Yrs & Over	DOB Unk
Alcona	42	0	3	4	9	9	10	7	0	0	0
Alger	16	0	1	2	4	0	6	1	1	1	0
Allegan	198	0	20	41	45	52	25	10	3	0	2
Alpena	46	0	8	8	10	11	6	3	0	0	0
Antrim	36	0	3	4	7	17	4	0	1	0	0
Arenac	38	0	4	7	6	11	7	2	1	0	0
Baraga	16	0	1	4	7	1	2	0	1	0	0
Barry	114	0	20	11	30	30	17	4	0	0	2
Bay	217	1	30	41	52	44	31	14	1	1	2
Benzie	28	0	4	7	3	6	4	1	1	1	1
Berrien	216	2	22	40	45	55	32	12	4	3	1
Branch	59	0	8	15	12	13	5	3	3	0	0
Calhoun	214	2	31	44	53	48	25	4	1	2	4
Cass	104	1	8	22	31	21	15	4	2	0	0
Charlevoix	31	0	4	8	8	7	2	2	0	0	0
Cheboygan	56	0	7	9	12	12	10	4	1	1	0
Chippewa	75	0	8	13	19	17	10	6	2	0	0
Clare	45	0	5	8	9	12	6	2	2	1	0
Clinton	82	1	17	20	19	8	14	3	0	0	0
Crawford	37	1	4	6	8	10	8	0	0	0	0
Delta	57	1	6	9	17	14	8	2	0	0	0
Dickinson	34	0	10	5	3	6	6	3	0	1	0
Eaton	132	0	9	28	33	36	13	6	3	1	3
Emmet	66	0	9	13	10	13	15	2	3	1	0
Genesee	702	0	50	116	187	172	98	44	11	7	17
Gladwin	43	2	3	6	7	13	6	3	2	1	0
Gogebic	23	0	4	6	3	6	2	0	2	0	0
Grand Traverse	132	0	21	23	30	31	21	3	2	0	1
Gratiot	55	0	6	7	16	13	7	4	1	0	1
Hillsdale	76	1	7	17	17	22	8	4	0	0	0
Houghton	65	0	12	19	14	9	7	1	3	0	0
Huron	41	1	7	9	10	9	5	0	0	0	0
Ingham	385	0	55	87	117	49	48	20	4	0	5
Ionia	105	1	19	24	26	18	9	5	0	1	2
Iosco	51	0	4	13	14	8	10	1	1	0	0
Iron	27	0	3	3	6	7	4	4	0	0	0
Isabella	104	0	22	24	27	14	10	5	0	0	2
Jackson	253	1	27	48	69	46	40	16	2	1	3
Kalamazoo	408	0	43	109	98	92	39	18	4	2	3
Kalkaska	40	1	4	6	10	9	7	2	1	0	0
Kent	1,051	2	116	243	307	199	116	32	10	4	22
Keweenaw	8	0	2	1	2	0	1	1	1	0	0
Lake	27	0	3	2	8	5	3	3	3	0	0
Lapeer	137	1	19	32	26	27	21	5	4	1	1
Leelanau	46	0	7	6	15	4	12	2	0	0	0

REPORTED AGE OF DRINKING DRIVERS INVOLVED IN CRASHES (continued)

COUNTY	All Ages	0-15 Years	16-20 Years	21-24 Years	25-34 Years	35-44 Years	45-54 Years	55-64 Years	65-74 Years	75 Yrs & Over	DOB Unk
Lenawee	120	0	13	25	34	25	19	2	0	1	1
Livingston	294	1	40	58	58	67	54	7	4	0	5
Luce	10	0	2	1	0	3	2	2	0	0	0
Mackinac	22	0	2	6	7	0	6	1	0	0	0
Macomb	1,069	0	125	176	236	271	171	50	25	6	9
Manistee	32	0	2	5	10	3	2	4	6	0	0
Marquette	103	0	21	25	20	15	10	9	2	0	1
Mason	43	0	9	8	14	6	4	2	0	0	0
Mecosta	76	0	14	19	13	13	9	6	1	0	1
Menominee	60	0	7	10	13	13	12	4	1	0	0
Midland	72	0	10	14	18	18	4	7	1	0	0
Missaukee	29	0	4	8	7	7	1	1	0	0	1
Monroe	264	1	34	32	57	75	39	17	4	1	4
Montcalm	99	1	21	20	19	15	16	4	1	1	1
Montmorency	17	0	4	1	8	1	1	1	0	1	0
Muskegon	240	1	28	34	60	62	44	4	3	1	3
Newaygo	109	2	8	16	29	26	15	7	2	2	2
Oakland	1,493	2	158	240	395	321	243	76	34	15	9
Oceana	57	0	7	8	18	10	8	3	2	1	0
Ogemaw	52	0	8	9	8	16	9	0	2	0	0
Ontonagon	21	0	2	4	5	5	3	1	1	0	0
Osceola	41	0	3	5	11	11	8	3	0	0	0
Oscoda	21	0	1	4	9	1	4	1	1	0	0
Otsego	45	0	6	8	11	8	9	2	1	0	0
Ottawa	337	0	49	80	82	65	44	11	1	1	4
Presque Isle	24	1	1	4	8	3	4	3	0	0	0
Roscommon	79	0	4	18	22	15	13	3	3	1	0
Saginaw	293	0	37	55	72	65	36	21	5	2	0
St. Clair	270	0	37	55	51	68	44	13	1	0	1
St. Joseph	106	0	14	24	20	21	20	4	2	0	1
Sanilac	55	0	6	10	13	11	8	2	4	0	1
Schoolcraft	11	0	2	3	4	2	0	0	0	0	0
Shiawassee	110	0	15	26	27	26	10	3	1	1	1
Tuscola	99	0	5	24	20	23	15	6	5	0	1
Van Buren	144	0	21	27	34	30	20	4	2	0	6
Washtenaw	449	1	65	87	112	86	68	17	8	2	3
Wayne	2,353	7	221	334	651	530	370	140	43	17	40
Wexford	56	0	7	11	8	22	4	4	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0
Total	14,513	36	1,689	2,664	3,645	3,165	2,104	713	247	83	167



MALE DRIVERS BY AGE & INJURY SEVERITY IN CRASH

MOST SEVERE OUTCOME IN CRASH

AGE OF DRIVER IN CRASH	Male Drivers		Fatal		Injury			PDO
	Number	% of Total	Number	% of Fatal	A	B	C	
13 years and under	317	0.1	1	0.1	28	40	55	193
14 years	174	0.1	1	0.1	17	22	28	106
15 years	571	0.2	8	0.7	29	68	72	394
16 years	8,045	2.4	18	1.5	175	480	1,199	6,173
17 years	9,969	3.0	29	2.5	193	584	1,450	7,713
18 years	11,425	3.4	38	3.2	237	694	1,681	8,775
19 years	10,673	3.2	43	3.7	259	614	1,537	8,220
20 years	9,573	2.9	25	2.1	228	595	1,318	7,407
21 - 24 years	33,112	9.9	125	10.6	801	1,865	4,515	25,806
25 - 34 years	64,585	19.4	223	19.0	1,433	3,222	8,883	50,824
35 - 44 years	63,342	19.0	239	20.3	1,315	3,080	8,698	50,010
45 - 54 years	54,447	16.3	191	16.2	1,220	2,472	7,456	43,108
55 - 64 years	31,604	9.5	100	8.5	654	1,438	4,630	24,782
65 - 69 years	8,594	2.6	38	3.2	171	420	1,200	6,765
70 - 74 years	6,407	1.9	27	2.3	141	300	886	5,053
75 - 79 years	5,308	1.6	24	2.0	127	298	825	4,034
80 - 84 years	3,295	1.0	26	2.2	93	219	504	2,453
85 - 89 years	1,381	0.4	15	1.3	41	75	226	1,024
90 years and over	370	0.1	4	0.3	5	36	51	274
Unknown	10,414	3.1	1	0.1	131	288	1,355	8,639
Total	333,606	100.0	1,176	100.0	7,298	16,810	46,569	261,753

NOTE: The tables on this page and page 109 exclude 51,230 drivers of unknown gender.

The crash involvement for male drivers is down 1.6 percent from 2003.

The fatal crash involvement for male drivers is down 5.5 percent from 2003.



MALE DRINKING DRIVERS BY AGE & INJURY SEVERITY IN CRASH

MOST SEVERE OUTCOME IN CRASH

AGE OF DRINKING DRIVER IN CRASH	Male Drivers		Fatal		Injury			PDO
	Number	% of Total	Number	% of Fatal	A	B	C	
13 years and under	10	0.1	0	0.0	2	1	1	6
14 years	4	0.0	0	0.0	0	0	3	1
15 years	13	0.1	0	0.0	2	4	1	6
16 years	67	0.6	1	0.4	5	12	10	39
17 years	142	1.3	3	1.1	15	23	13	88
18 years	320	2.9	7	2.6	20	57	45	191
19 years	377	3.4	6	2.2	32	63	43	233
20 years	389	3.5	7	2.6	26	69	56	231
21 - 24 years	2,124	19.0	50	18.4	177	324	277	1,296
25 - 34 years	2,851	25.5	72	26.5	264	432	422	1,661
35 - 44 years	2,302	20.6	62	22.8	207	348	387	1,298
45 - 54 years	1,632	14.6	41	15.1	164	230	265	932
55 - 64 years	589	5.3	10	3.7	52	80	117	330
65 - 69 years	131	1.2	5	1.8	14	10	21	81
70 - 74 years	79	0.7	5	1.8	6	6	11	51
75 - 79 years	36	0.3	1	0.4	4	9	6	16
80 - 84 years	19	0.2	2	0.7	3	4	4	6
85 - 89 years	6	0.1	0	0.0	0	1	0	5
90 years and over	1	0.0	0	0.0	0	0	1	0
Unknown	87	0.8	0	0.0	2	6	14	65
Total	11,179	100.0	272	100.0	995	1,679	1,697	6,536

NOTE: The tables on this page and page 110 exclude 92 drinking drivers of unknown gender.



FEMALE DRIVERS BY AGE & INJURY SEVERITY IN CRASH

AGE OF DRIVER IN CRASH	MOST SEVERE OUTCOME IN CRASH							PDO
	Female Drivers		Fatal		Injury			
	Number	% of Total	Number	% of Fatal	A	B	C	
13 years and under	204	0.1	2	0.4	9	22	35	136
14 years	121	0.0	1	0.2	7	12	20	81
15 years	489	0.2	2	0.4	15	33	77	362
16 years	6,946	2.8	11	2.3	141	480	1,181	5,133
17 years	8,546	3.4	21	4.4	161	544	1,461	6,359
18 years	8,823	3.5	11	2.3	172	490	1,540	6,610
19 years	8,364	3.3	12	2.5	134	468	1,423	6,327
20 years	7,664	3.1	19	4.0	136	404	1,254	5,851
21 - 24 years	26,673	10.6	43	9.1	447	1,335	4,556	20,292
25 - 34 years	49,584	19.7	74	15.6	802	2,247	8,594	37,867
35 - 44 years	49,074	19.5	95	20.0	901	2,056	8,454	37,568
45 - 54 years	40,149	16.0	68	14.3	666	1,569	6,922	30,924
55 - 64 years	21,683	8.6	49	10.3	400	887	3,778	16,569
65 - 69 years	5,487	2.2	12	2.5	94	237	894	4,250
70 - 74 years	4,437	1.8	16	3.4	104	223	791	3,303
75 - 79 years	3,893	1.6	14	2.9	95	167	607	3,010
80 - 84 years	2,517	1.0	11	2.3	75	141	406	1,884
85 - 89 years	1,089	0.4	10	2.1	34	58	198	789
90 years and over	249	0.1	4	0.8	4	17	50	174
Unknown	5,085	2.0	0	0.0	30	104	653	4,298
Total	251,077	100.0	475	100.0	4,427	11,494	42,894	191,787

The crash involvement for female drivers is down 0.6 percent from 2003.

The fatal crash involvement for female drivers is up 17.8 percent from 2003.



FEMALE DRINKING DRIVERS BY AGE & INJURY SEVERITY IN CRASH

MOST SEVERE OUTCOME IN CRASH

AGE OF DRINKING DRIVER IN CRASH	Female Drivers		Fatal		Injury			PDO
	Number	% of Total	Number	% of Fatal	A	B	C	
13 years and under	3	0.1	0	0.0	0	2	1	0
14 years	1	0.0	0	0.0	0	0	0	1
15 years	5	0.2	1	2.3	1	2	0	1
16 years	33	1.0	0	0.0	5	8	4	16
17 years	63	1.9	1	2.3	7	13	12	30
18 years	93	2.9	0	0.0	9	14	15	55
19 years	106	3.3	1	2.3	12	18	16	59
20 years	97	3.0	1	2.3	12	16	24	44
21 - 24 years	537	16.6	7	15.9	40	80	92	318
25 - 34 years	785	24.2	12	27.3	73	124	129	447
35 - 44 years	854	26.3	13	29.5	63	108	153	517
45 - 54 years	468	14.4	4	9.1	40	69	98	257
55 - 64 years	122	3.8	1	2.3	7	17	14	83
65 - 69 years	25	0.8	0	0.0	2	3	5	15
70 - 74 years	12	0.4	1	2.3	2	1	1	7
75 - 79 years	16	0.5	1	2.3	0	1	0	14
80 - 84 years	2	0.1	1	2.3	0	0	1	0
85 - 89 years	2	0.1	0	0.0	0	1	0	1
90 years and over	0	0.0	0	0.0	0	0	0	0
Unknown	18	0.6	0	0.0	1	3	4	10
Total	3,242	100.0	44	100.0	274	480	569	1,875

FATAL CRASHES AND FATALITIES WITH DRINKING INVOLVEMENT BY COUNTY

COUNTY	CRASHES			PERSONS		
	All Fatal Crashes	HBD Fatal Crashes	Percent HBD	Total Fatalities	HBD Fatalities	Percent HBD
Alcona	3	2	66.7	3	2	66.7
Alger	1	0	0.0	1	0	0.0
Allegan	19	2	10.5	22	4	18.2
Alpena	2	1	50.0	3	2	66.7
Antrim	3	0	0.0	3	0	0.0
Arenac	9	5	55.6	9	5	55.6
Baraga	1	1	100.0	2	2	100.0
Barry	11	3	27.3	15	3	20.0
Bay	10	5	50.0	11	5	45.5
Benzie	3	0	0.0	3	0	0.0
Berrien	17	7	41.2	19	7	36.8
Branch	8	4	50.0	9	4	44.4
Calhoun	12	4	33.3	13	4	30.8
Cass	15	3	20.0	15	3	20.0
Charlevoix	0	0	0.0	0	0	0.0
Cheboygan	6	3	50.0	6	3	50.0
Chippewa	3	1	33.3	3	1	33.3
Clare	7	3	42.9	10	3	30.0
Clinton	12	3	25.0	12	3	25.0
Crawford	1	0	0.0	1	0	0.0
Delta	4	1	25.0	4	1	25.0
Dickinson	2	1	50.0	2	1	50.0
Eaton	13	1	7.7	14	1	7.1
Emmet	2	0	0.0	2	0	0.0
Genesee	47	17	36.2	50	18	36.0
Gladwin	3	0	0.0	4	0	0.0
Gogebic	6	3	50.0	7	4	57.1
Grand Traverse	9	2	22.2	13	2	15.4
Gratiot	4	1	25.0	4	1	25.0
Hillsdale	8	3	37.5	8	3	37.5
Houghton	3	1	33.3	5	1	20.0
Huron	3	1	33.3	5	3	60.0
Ingham	23	8	34.8	24	9	37.5
Ionia	10	1	10.0	10	1	10.0
Iosco	4	2	50.0	4	2	50.0
Iron	0	0	0.0	0	0	0.0
Isabella	11	4	36.4	11	4	36.4
Jackson	21	5	23.8	22	6	27.3
Kalamazoo	24	9	37.5	25	10	40.0
Kalkaska	8	2	25.0	11	2	18.2
Kent	58	15	25.9	60	15	25.0
Keweenaw	1	0	0.0	1	0	0.0
Lake	5	1	20.0	5	1	20.0
Lapeer	12	5	41.7	16	8	50.0

**FATAL CRASHES AND FATALITIES
WITH DRINKING INVOLVEMENT
BY COUNTY (continued)**

COUNTY	CRASHES			PERSONS		
	All Fatal Crashes	HBD Fatal Crashes	Percent HBD	Total Fatalities	HBD Fatalities	Percent HBD
Leelanau	3	1	33.3	3	1	33.3
Lenawee	10	1	10.0	11	1	9.1
Livingston	27	13	48.1	30	14	46.7
Luce	1	0	0.0	1	0	0.0
Mackinac	6	1	16.7	7	1	14.3
Macomb	52	22	42.3	53	22	41.5
Manistee	1	1	100.0	1	1	100.0
Marquette	6	3	50.0	7	4	57.1
Mason	6	3	50.0	6	3	50.0
Mecosta	5	2	40.0	5	2	40.0
Menominee	3	1	33.3	3	1	33.3
Midland	11	3	27.3	11	3	27.3
Missaukee	4	1	25.0	6	1	16.7
Monroe	26	10	38.5	28	11	39.3
Montcalm	12	2	16.7	13	2	15.4
Montmorency	3	2	66.7	4	2	50.0
Muskegon	16	5	31.3	18	5	27.8
Newaygo	10	4	40.0	13	4	30.8
Oakland	71	20	28.2	75	21	28.0
Oceana	5	3	60.0	6	3	50.0
Ogemaw	3	1	33.3	4	1	25.0
Ontonagon	2	1	50.0	3	2	66.7
Osceola	3	0	0.0	3	0	0.0
Oscoda	2	1	50.0	2	1	50.0
Otsego	7	1	14.3	8	1	12.5
Ottawa	19	4	21.1	22	4	18.2
Presque Isle	1	0	0.0	1	0	0.0
Roscommon	2	0	0.0	2	0	0.0
Saginaw	25	9	36.0	29	11	37.9
St. Clair	19	7	36.8	21	7	33.3
St. Joseph	13	5	38.5	16	7	43.8
Sanilac	4	2	50.0	4	2	50.0
Schoolcraft	5	0	0.0	7	0	0.0
Shiawassee	13	2	15.4	16	2	12.5
Tuscola	9	3	33.3	10	3	30.0
Van Buren	14	5	35.7	16	6	37.5
Washtenaw	26	9	34.6	29	10	34.5
Wayne	175	57	32.6	186	58	31.2
Wexford	11	3	27.3	12	3	25.0
Total	1,055	338	32.0	1,159	364	31.4

MOST SEVERE OUTCOME IN HBD CRASHES BY COUNTY

Note: While the Michigan *Traffic Crash Report* (UD-10) requests officers to report Bodily Alcohol Content (BAC) of all persons tested for alcohol after a traffic crash, only the BAC testing of deceased motor vehicle drivers and deceased railroad train engineers is required by law. Consequently, alcohol involvement in nonfatal crashes is frequently unreported, and is therefore generally believed to be higher than indicated in this table.

MOST SEVERE OUTCOME IN HBD CRASH

COUNTY	All HBD Crashes	Fatal	Injury			PDO
			A	B	C	
Alcona	42	2	8	10	7	15
Alger	16	0	3	2	2	9
Allegan	200	2	28	36	29	105
Alpena	45	1	3	8	5	28
Antrim	37	0	4	13	4	16
Arenac	38	5	6	6	1	20
Baraga	16	1	3	3	2	7
Barry	115	3	16	21	14	61
Bay	214	5	15	32	29	133
Benzie	28	0	7	3	4	14
Berrien	216	7	24	25	33	127
Branch	59	4	4	16	5	30
Calhoun	216	4	18	29	27	138
Cass	103	3	20	21	11	48
Charlevoix	31	0	5	6	3	17
Cheboygan	55	3	7	11	8	26
Chippewa	75	1	9	15	7	43
Clare	45	3	4	9	5	24
Clinton	82	3	9	13	15	42
Crawford	37	0	6	13	5	13
Delta	56	1	9	11	9	26
Dickinson	34	1	4	10	3	16
Eaton	130	1	12	24	26	67
Emmet	66	0	6	8	18	34
Genesee	708	17	40	126	143	382
Gladwin	42	0	1	6	4	31
Gogebic	23	3	3	2	1	14
Grand Traverse	138	2	8	24	18	86
Gratiot	56	1	5	17	8	25
Hillsdale	76	3	9	12	15	37
Houghton	65	1	4	8	10	42
Huron	42	1	10	7	5	19
Ingham	387	8	26	48	57	248
Ionia	106	1	21	17	8	59
Iosco	51	2	4	12	8	25
Iron	27	0	5	4	4	14
Isabella	103	4	13	17	10	59
Jackson	255	5	26	40	34	150
Kalamazoo	410	9	38	54	63	246
Kalkaska	38	2	6	11	5	14
Kent	1,055	15	59	134	168	679
Keweenaw	8	0	1	2	2	3

MOST SEVERE OUTCOME IN HBD CRASHES BY COUNTY (continued)

MOST SEVERE OUTCOME IN HBD CRASH

COUNTY	All HBD Crashes	Fatal	Injury			PDO
			A	B	C	
Lake	27	1	0	5	4	17
Lapeer	135	5	16	21	16	77
Leelanau	45	1	5	6	8	25
Lenawee	121	1	9	21	24	66
Livingston	293	13	33	43	50	154
Luce	10	0	2	4	0	4
Mackinac	22	1	4	7	0	10
Macomb	1,081	22	75	137	181	666
Manistee	33	1	5	5	4	18
Marquette	104	3	9	17	14	61
Mason	44	3	8	11	4	18
Mecosta	77	2	8	13	10	44
Menominee	60	1	6	12	10	31
Midland	73	3	9	12	13	36
Missaukee	28	1	2	5	2	18
Monroe	261	10	17	50	33	151
Montcalm	99	2	12	18	15	52
Montmorency	17	2	0	4	2	9
Muskegon	242	5	44	40	29	124
Newaygo	107	4	8	12	13	70
Oakland	1,493	20	103	204	265	901
Oceana	56	3	10	6	6	31
Ogemaw	51	1	10	13	3	24
Ontonagon	21	1	6	1	2	11
Osceola	40	0	5	9	3	23
Oscoda	20	1	3	2	1	13
Otsego	43	1	8	5	5	24
Ottawa	339	4	30	45	58	202
Presque Isle	24	0	5	5	4	10
Roscommon	79	0	4	14	5	56
Saginaw	294	9	31	49	45	160
St. Clair	271	7	23	50	37	154
St. Joseph	106	5	12	12	17	60
Sanilac	55	2	3	7	8	35
Schoolcraft	11	0	0	1	1	9
Shiawassee	113	2	9	14	6	82
Tuscola	99	3	12	17	12	55
Van Buren	144	5	17	23	21	78
Washtenaw	448	9	30	78	71	260
Wayne	2,360	57	186	307	438	1,372
Wexford	55	3	4	18	1	29
Unknown	0	0	0	0	0	0
Total	14,547	338	1,292	2,209	2,276	8,432

COUNTY RANKING BY HBD FATAL CRASH RATE per 1,000 Michigan Residents

COUNTY	2004 Population Estimate	All Crashes	Fatal Crashes	HBD Crashes	HBD Fatal Crashes	HBD Fatal Crash Rate per 1,000 people	Rank
Arenac	17,321	974	9	38	5	0.2887	1
Montmorency	10,498	382	3	17	2	0.1905	2
Gogebic	17,029	438	6	23	3	0.1762	3
Alcona	11,646	671	3	42	2	0.1717	4
Ontonagon	7,538	457	2	21	1	0.1327	5
Kalkaska	17,204	746	8	38	2	0.1163	6
Baraga	8,728	418	1	16	1	0.1146	7
Cheboygan	27,289	1,225	6	55	3	0.1099	8
Oscoda	9,348	358	2	20	1	0.1070	9
Oceana	28,415	1,200	5	56	3	0.1056	10
Mason	29,074	1,594	6	44	3	0.1032	11
Wexford	31,494	1,723	11	55	3	0.0953	12
Clare	31,838	1,427	7	45	3	0.0942	13
Mackinac	11,383	826	6	22	1	0.0879	14
Branch	46,444	2,153	8	59	4	0.0861	15
Lake	11,881	471	5	27	1	0.0842	16
Newaygo	49,892	1,976	10	107	4	0.0802	17
St. Joseph	62,964	2,423	13	106	5	0.0794	18
Iosco	26,873	1,048	4	51	2	0.0744	19
Livingston	177,538	6,178	27	293	13	0.0732	20
Monroe	152,552	4,662	26	261	10	0.0656	21
Missaukee	15,286	631	4	28	1	0.0654	22
Van Buren	78,541	2,818	14	144	5	0.0637	23
Hillsdale	47,470	2,128	8	76	3	0.0632	24
Isabella	64,481	3,215	11	103	4	0.0620	25
Cass	51,761	1,990	15	103	3	0.0580	26
Lapeer	92,510	3,676	12	135	5	0.0540	27
Tuscola	58,646	2,129	9	99	3	0.0512	28
Barry	59,371	2,448	11	115	3	0.0505	29
Mecosta	42,394	2,416	5	77	2	0.0472	30
Marquette	64,874	2,510	6	104	3	0.0462	31
Bay	109,480	3,481	10	214	5	0.0457	32
Ogemaw	21,919	1,070	3	51	1	0.0456	33
Leelanau	22,163	672	3	45	1	0.0451	34
Sanilac	44,828	1,902	4	55	2	0.0446	35
Clinton	68,800	2,846	12	82	3	0.0436	36
Saginaw	209,062	7,320	25	294	9	0.0430	37
Berrien	163,125	5,568	17	216	7	0.0429	38
St. Clair	170,916	5,221	19	271	7	0.0410	39
Otsego	24,513	1,113	7	43	1	0.0408	40
Manistee	25,090	982	1	33	1	0.0399	41
Menominee	25,174	1,557	3	60	1	0.0397	42
Genesee	443,947	14,492	47	708	17	0.0383	43
Kalamazoo	240,724	10,061	24	410	9	0.0374	44
Dickinson	27,345	1,253	2	34	1	0.0366	45

**COUNTY RANKING BY HBD FATAL CRASH RATE
per 1,000 Michigan Residents (continued)**

COUNTY	2004 Population Estimate	All Crashes	Fatal Crashes	HBD Crashes	HBD Fatal Crashes	HBD Fatal Crash Rate per 1,000 people	Rank
Midland	84,615	2,766	11	73	3	0.0355	46
Alpena	30,739	1,023	2	45	1	0.0325	47
Montcalm	63,627	3,202	12	99	2	0.0314	48
Jackson	162,973	6,653	21	255	5	0.0307	49
Calhoun	139,067	6,517	12	216	4	0.0288	50
Muskegon	174,401	5,748	16	242	5	0.0287	51
Huron	34,948	1,970	3	42	1	0.0286	52
Ingham	280,073	11,192	23	387	8	0.0286	52
Wayne	2,016,202	67,762	175	2,360	57	0.0283	54
Houghton	35,568	1,249	3	65	1	0.0281	55
Shiawassee	73,125	2,892	13	113	2	0.0274	56
Macomb	822,660	25,193	52	1,081	22	0.0267	57
Washtenaw	339,191	12,125	26	448	9	0.0265	58
Delta	38,380	2,190	4	56	1	0.0261	59
Chippewa	38,791	1,449	3	75	1	0.0258	60
Kent	593,898	24,397	58	1,055	15	0.0253	61
Grand Traverse	82,752	3,830	9	138	2	0.0242	62
Gratiot	42,396	1,912	4	56	1	0.0236	63
Allegan	112,477	3,826	19	200	2	0.0178	64
Oakland	1,213,339	43,759	71	1,493	20	0.0165	65
Ottawa	252,351	8,300	19	339	4	0.0159	66
Ionia	64,378	2,889	10	106	1	0.0155	67
Lenawee	101,768	3,211	10	121	1	0.0098	68
Eaton	107,056	4,612	13	130	1	0.0093	69
Alger	9,760	446	1	16	0	0.0000	70
Antrim	24,500	1,029	3	37	0	0.0000	70
Benzie	17,466	589	3	28	0	0.0000	70
Charlevoix	26,665	1,228	0	31	0	0.0000	70
Crawford	14,870	729	1	37	0	0.0000	70
Emmet	33,277	1,743	2	66	0	0.0000	70
Gladwin	27,172	968	3	42	0	0.0000	70
Iron	12,587	792	0	27	0	0.0000	70
Keweenaw	2,204	96	1	8	0	0.0000	70
Luce	6,850	254	1	10	0	0.0000	70
Osceola	23,842	1,304	3	40	0	0.0000	70
Presque Isle	14,306	640	1	24	0	0.0000	70
Roscommon	26,103	1,115	2	79	0	0.0000	70
Schoolcraft	8,874	579	5	11	0	0.0000	70
Total	10,112,620	373,028	1,055	14,547	338	0.03342	

REPORTED STATEWIDE ALCOHOL INVOLVED TRAFFIC CRASHES BY COUNTY IN MICHIGAN

COUNTY	All	Fatal	Injury	Property Damage	Inter- state	US Route	State Route	Local Street	Persons Killed	Persons Injured
Alcona	42	2	25	15	0	3	6	33	2	30
Alger	16	0	7	9	0	2	6	8	0	10
Allegan	200	2	93	105	10	17	20	153	4	126
Alpena	45	1	16	28	0	5	9	31	2	22
Antrim	37	0	21	16	0	5	4	28	0	25
Arenac	38	5	13	20	3	8	2	25	5	25
Baraga	16	1	8	7	0	5	1	10	2	18
Barry	115	3	51	61	0	0	26	89	3	70
Bay	214	5	76	133	14	5	40	155	5	108
Benzie	28	0	14	14	0	6	5	17	0	17
Berrien	216	7	82	127	29	22	22	143	7	123
Branch	59	4	25	30	2	7	7	43	4	39
Calhoun	216	4	74	138	38	0	45	133	4	95
Cass	103	3	52	48	0	7	23	73	3	67
Charlevoix	31	0	14	17	0	2	5	24	0	20
Cheboygan	55	3	26	26	3	4	8	40	3	37
Chippewa	75	1	31	43	10	0	18	47	1	33
Clare	45	3	18	24	0	8	4	33	3	31
Clinton	82	3	37	42	5	9	8	60	3	55
Crawford	37	0	24	13	3	1	11	22	0	29
Delta	56	1	29	26	0	13	6	37	1	50
Dickinson	34	1	17	16	0	6	7	21	1	22
Eaton	130	1	62	67	20	0	36	74	1	81
Emmet	66	0	32	34	1	18	3	44	0	44
Genesee	708	17	309	382	76	20	87	525	18	454
Gladwin	42	0	11	31	0	0	10	32	0	14
Gogebic	23	3	6	14	0	7	1	15	4	8
Grand Traverse	138	2	50	86	0	23	16	99	2	67
Gratiot	56	1	30	25	0	10	9	37	1	43
Hillsdale	76	3	36	37	0	11	7	58	3	49
Houghton	65	1	22	42	0	12	12	41	1	31
Huron	42	1	22	19	0	0	17	25	3	38
Ingham	387	8	131	248	55	12	79	241	9	190
Ionia	106	1	46	59	10	0	13	83	1	65
Iosco	51	2	24	25	0	12	4	35	2	35
Iron	27	0	13	14	0	3	3	21	0	16
Isabella	103	4	40	59	0	15	8	80	4	65
Jackson	255	5	100	150	29	11	19	196	6	133
Kalamazoo	410	9	155	246	51	21	60	278	10	215
Kalkaska	38	2	22	14	0	3	6	29	2	34
Kent	1,055	15	361	679	110	80	156	709	15	463
Keweenaw	8	0	5	3	0	4	1	3	0	6
Lake	27	1	9	17	0	2	5	20	1	11
Lapeer	135	5	53	77	4	0	28	103	8	78
Leelanau	45	1	19	25	0	0	15	30	1	33
Lenawee	121	1	54	66	0	18	21	82	1	65

REPORTED STATEWIDE ALCOHOL INVOLVED TRAFFIC CRASHES BY COUNTY IN MICHIGAN (continued)

COUNTY	All	Fatal	Injury	Property Damage	Inter- state	US Route	State Route	Local Street	Persons Killed	Persons Injured
Livingston	293	13	126	154	47	19	18	209	14	171
Luce	10	0	6	4	0	0	2	8	0	7
Mackinac	22	1	11	10	8	1	3	10	1	14
Macomb	1,081	22	393	666	115	0	241	725	22	542
Manistee	33	1	14	18	0	6	3	24	1	20
Marquette	104	3	40	61	0	17	12	75	4	51
Mason	44	3	23	18	0	12	3	29	3	39
Mecosta	77	2	31	44	0	5	25	47	2	40
Menominee	60	1	28	31	0	18	5	37	1	44
Midland	73	3	34	36	0	4	6	63	3	59
Missaukee	28	1	9	18	0	0	9	19	1	13
Monroe	261	10	100	151	27	44	17	173	11	128
Montcalm	99	2	45	52	0	2	25	72	2	76
Montmorency	17	2	6	9	0	0	2	15	2	10
Muskegon	242	5	113	124	1	36	30	175	5	178
Newaygo	107	4	33	70	0	0	24	83	4	39
Oakland	1,493	20	572	901	256	57	228	952	21	781
Oceana	56	3	22	31	0	6	7	43	3	34
Ogemaw	51	1	26	24	3	0	7	41	1	36
Ontonagon	21	1	9	11	0	1	13	7	2	13
Osceola	40	0	17	23	0	13	5	22	0	24
Oscoda	20	1	6	13	0	0	8	12	1	8
Otsego	43	1	18	24	5	0	6	32	1	23
Ottawa	339	4	133	202	30	38	23	248	4	174
Presque Isle	24	0	14	10	0	4	2	18	0	20
Roscommon	79	0	23	56	8	4	21	46	0	28
Saginaw	294	9	125	160	23	0	66	205	11	180
St. Clair	271	7	110	154	35	0	35	201	7	162
St. Joseph	106	5	41	60	0	18	19	69	7	55
Sanilac	55	2	18	35	0	0	13	42	2	30
Schoolcraft	11	0	2	9	0	1	1	9	0	3
Shiawassee	113	2	29	82	11	0	18	84	2	35
Tuscola	99	3	41	55	0	0	19	80	3	55
Van Buren	144	5	61	78	16	0	20	108	6	91
Washtenaw	448	9	179	260	60	62	25	301	10	240
Wayne	2,360	57	931	1,372	392	119	329	1,520	58	1,349
Wexford	55	3	23	29	0	8	15	32	3	34
Unknown	0	0	0	0	0	0	0	0	0	0
Total	14,547	338	5,777	8,432	1,510	912	2,204	9,921	364	8,096