







## UPPER PENINSULA ROADWAY INJURY EXPERIENCE FOR PERSONS WHO HAD BEEN DRINKING AND/OR USING DRUGS

VEHICLE	SEVERITY	TOTAL	CRASHES INVOLVING DRINKING, NOT DRUGS		CRASHES INVOLVING DRUGS, NOT DRINKING		CRASHES INVOLVING DRINKING AND DRUGS		TOTAL CRASHES INVOLVING DRINKING AND OR DRUGS	
			Operator in Crash	Operator Drinking	Operator in Crash	Operator Drugs	Operator in Crash	Operator Drinking and Drugs	Operator in Crash	Operator Drinking and/or Drugs
 <b>BICYCLISTS</b>	Total	22	1	1	0	0	0	0	1	1
	Killed	1	0	0	0	0	0	0	0	0**
	Injured	15	1	1	0	0	0	0	1	1
 <b>DRIVERS</b>	Total	11,707	370	266	65	47	65	48	500	361
	Killed	22	2	2	4	4	5	5	11	11**
	Injured	1,112	102	83	21	16	21	19	144	118
 <b>MOTORCYCLISTS</b>	Total	128	8	7	0	0	1	1	9	8
	Killed	3	1	1	0	0	0	0	1	1**
	Injured	97	7	6	0	0	1	1	8	7
 <b>ORV/ATV RIDERS</b>	Total	62	10	10	1	1	2	1	13	12
	Killed	2	0	0	1	1	1	1	2	2**
	Injured	45	8	8	0	0	0	0	8	8
 <b>PEDESTRIANS</b>	Total	41	5	5	1	0	1	1	7	6
	Killed	2	0	0	0	0	1	1	1	1**
	Injured	35	5	5	1	0	0	0	6	5
 <b>SNOWMOBILERS</b>	Total	35	2	1	2	2	0	0	4	3
	Killed	6	0	0	2	2	0	0	2	2**
	Injured	14	2	1	0	0	0	0	2	1

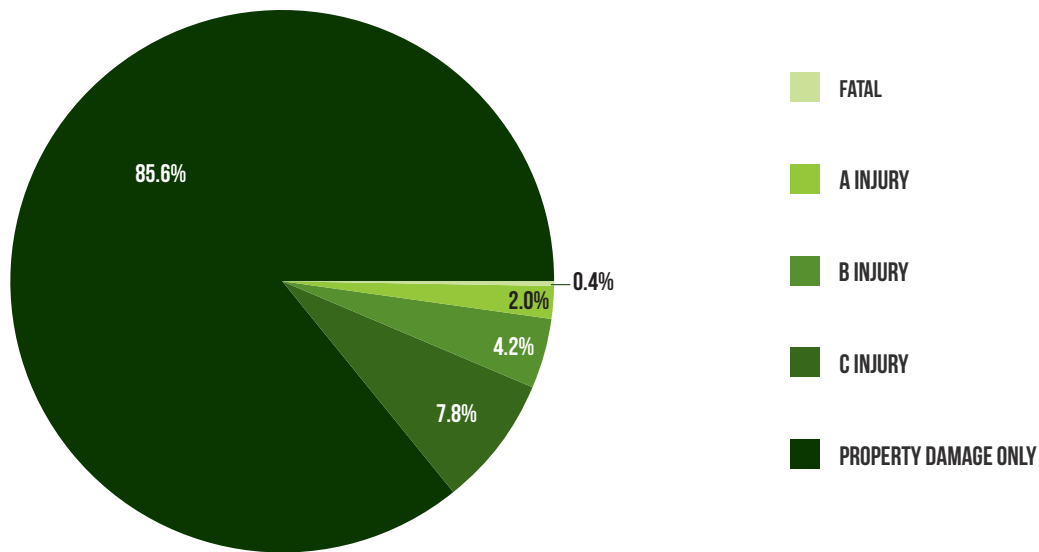
\*\*In the Upper Peninsula, there were no bicyclists, 11 drivers, one motorcyclist, two ORV/ATV riders, one pedestrian, and two snowmobilers who were killed and coded as drinking and/or using drugs by the police officer.

## DRIVER DRINKING AND/OR USING DRUGS AND INJURY SEVERITY IN CRASH BY AGE

AGE OF DRIVER IN CRASH	ALL CRASHES				FATAL				INJURY			
	Drinking Only	Drug Only	Both	Total	Drinking Only	Drug Only	Both	Total	Drinking Only	Drug Only	Both	Total
13 years and under	0	0	0	0	0	0	0	0	0	0	0	0
14 years	0	0	0	0	0	0	0	0	0	0	0	0
15 years	1	0	0	1	0	0	0	0	1	0	0	1
16 years	0	0	1	1	0	0	0	0	0	0	0	0
17 years	1	0	0	1	0	0	0	0	1	0	0	1
18 years	3	1	0	4	0	0	0	0	1	0	0	1
19 years	3	1	1	5	0	0	0	0	2	1	1	4
20 years	11	1	4	16	0	0	0	0	7	1	1	9
21 - 24 years	39	4	9	52	0	0	1	1	16	2	4	22
25 - 34 years	89	19	16	124	0	0	3	3	32	10	9	51
35 - 44 years	34	7	5	46	1	1	1	3	10	1	0	11
45 - 54 years	48	6	6	60	1	2	0	3	24	1	3	28
55 - 64 years	23	7	4	34	0	1	1	2	7	4	1	12
65 - 69 years	4	1	2	7	0	0	0	0	1	0	1	2
70 - 74 years	4	0	0	4	0	0	0	0	1	0	0	1
75 - 79 years	2	0	0	2	0	0	0	0	0	0	0	0
80 - 84 years	3	0	0	3	1	0	0	1	1	0	0	1
85 - 89 years	0	0	0	0	0	0	0	0	0	0	0	0
90 years and over	1	0	0	1	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Total	266	47	48	361	3	4	6	13	104	20	20	144

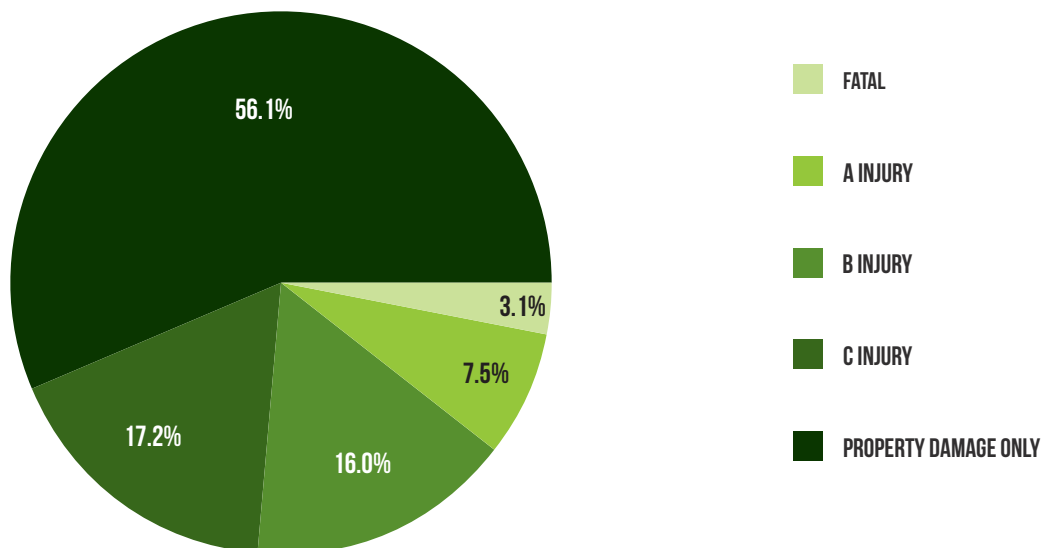
The driver age group 25 to 34 years represents the highest number of drinking and/or drug use in total crashes and injury crashes.

## UPPER PENINSULA ALL CRASHES BY INJURY SEVERITY



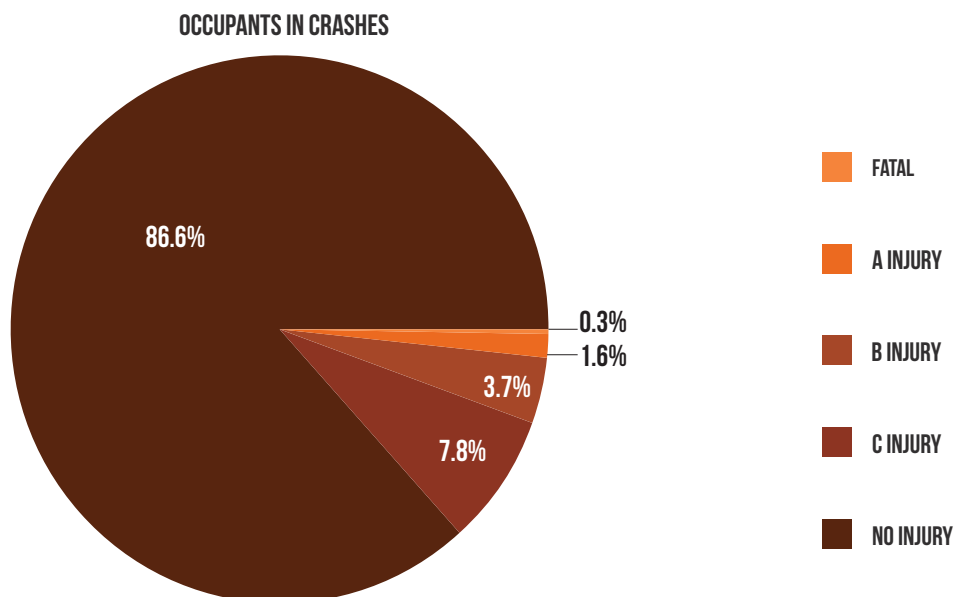
The majority of crashes do not involve injury (85.6%). Possible (C) injury crashes represent about 54% of all injury crashes.

## UPPER PENINSULA HAD-BEEN-DRINKING CRASHES BY INJURY SEVERITY

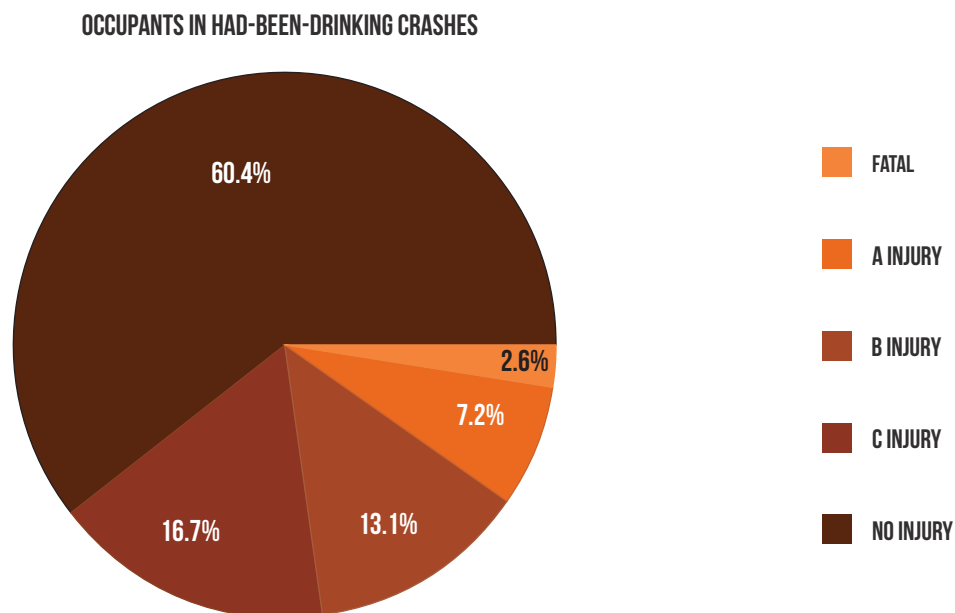


The problem of the drinking driver, pedestrian, and/or bicyclist is seen by comparing the two charts on this page. All injury levels are greater, and a fatality in the crash is nine times more likely, when one of the crash-involved operators is reported as had-been-drinking (HBD).

## UPPER PENINSULA DEATH & INJURY FOR CRASH INVOLVED OCCUPANTS



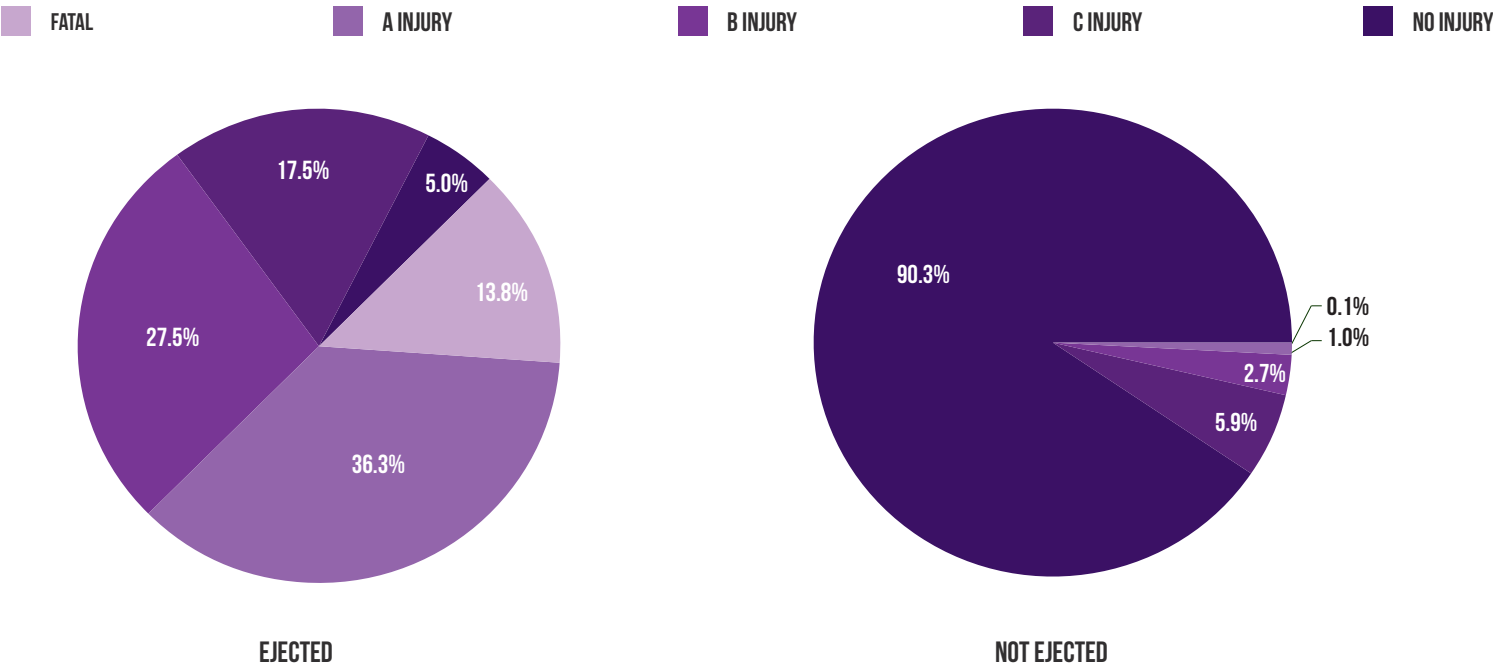
The majority of occupants involved in crashes are not injured (86.6%). About 58% of those who are injured receive only possible (C) injuries.



Crashes involving drinking tend to be more serious than non-drinking crashes. The percentage of fatalities is ten times higher, and the most serious injury level (A) in had-been-drinking crashes is about four and a half times higher than in all crashes.

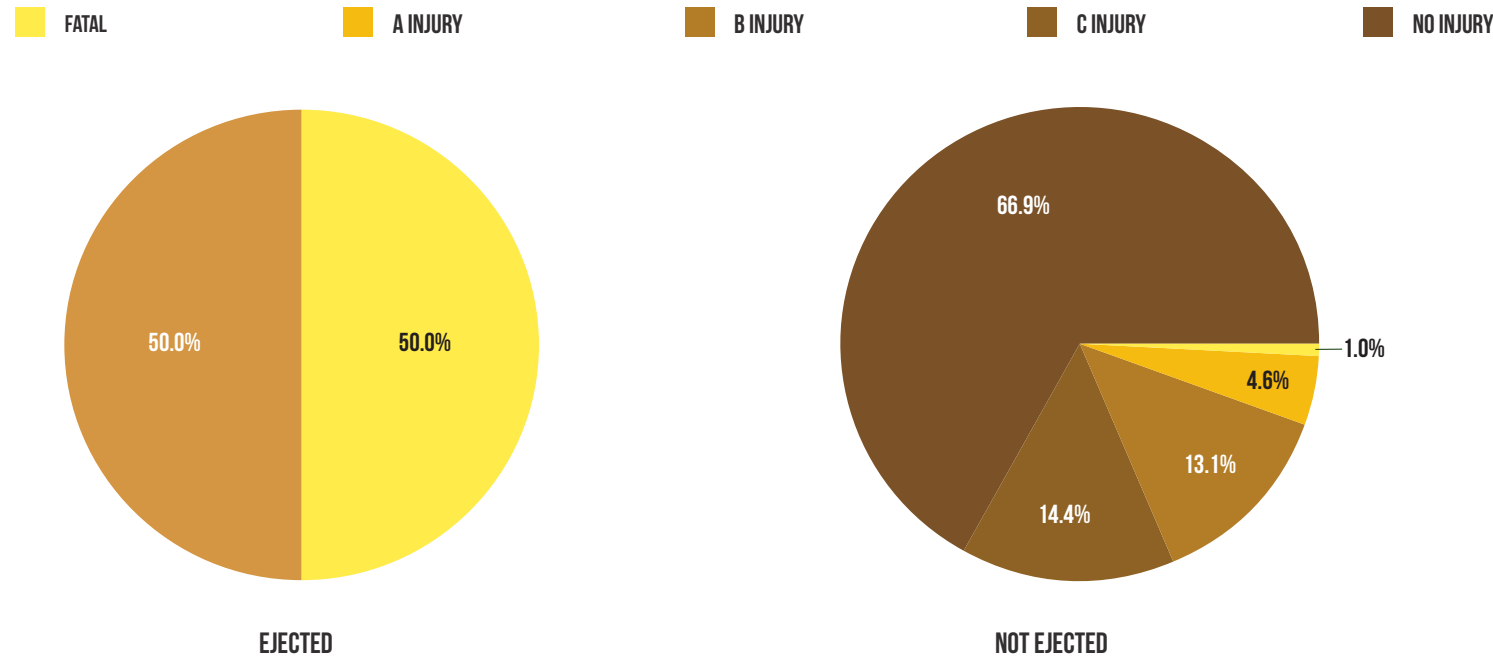
*Note: Occupants include all drivers plus all injured or killed persons in or on a motor vehicle.*

## UPPER PENINSULA ALL DRIVERS INJURY SEVERITY - EJECTED VS. NOT EJECTED



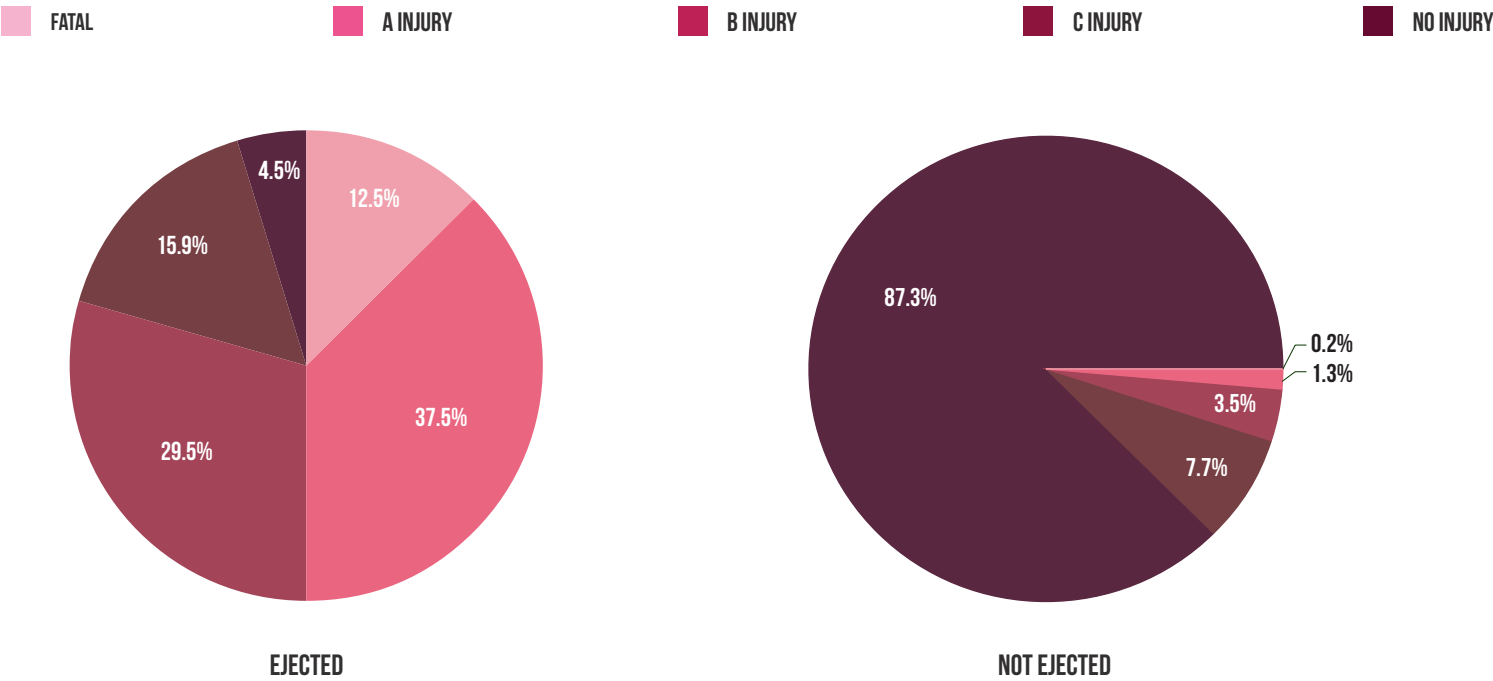
As can be seen in the two charts above, death and injury are much more likely when drivers are ejected from vehicles.

## UPPER PENINSULA HAD-BEEN-DRINKING DRIVERS INJURY SEVERITY - EJECTED VS. NOT EJECTED



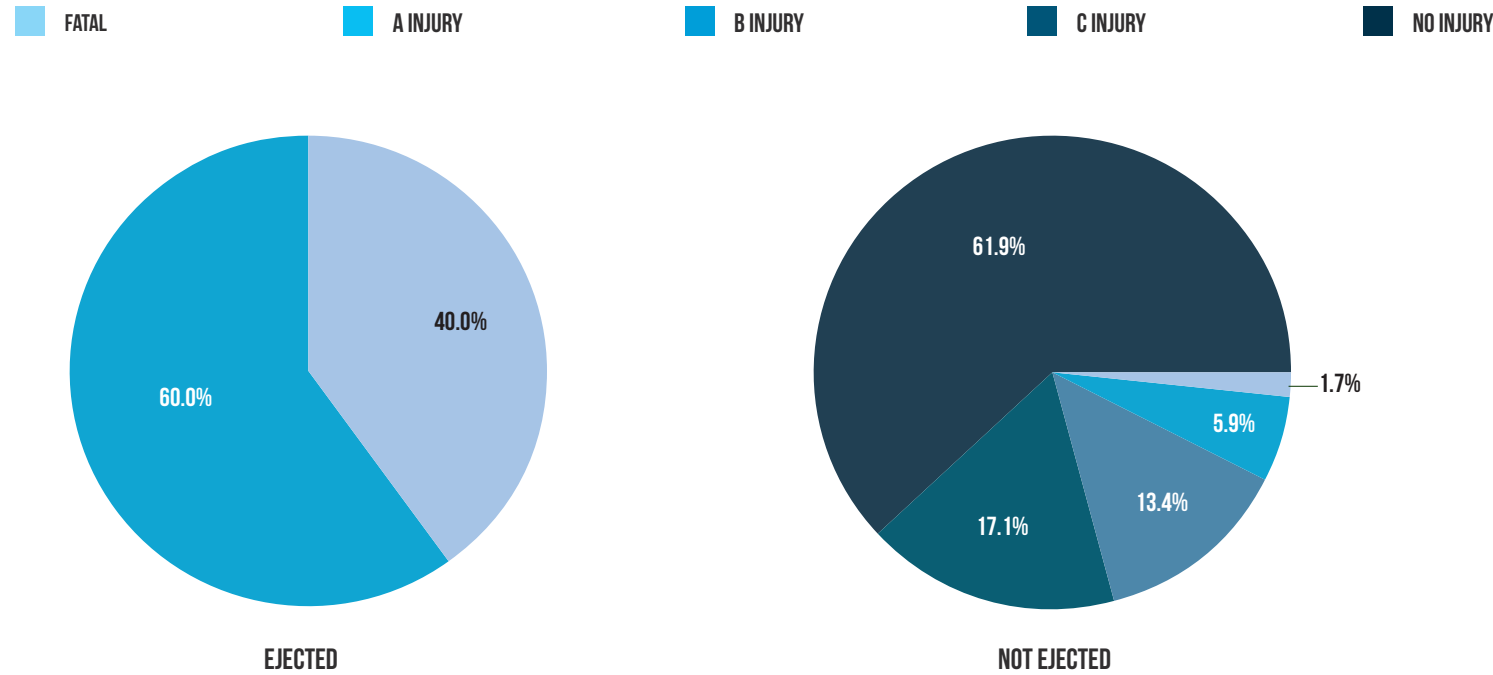
When compared to the charts above, the had-been-drinking charts demonstrate that injury severity is much worse for drivers who had been drinking in both ejected and non-ejected events.

UPPER PENINSULA ALL OCCUPANTS OF CRASHES INJURY SEVERITY - EJECTED VS. NOT EJECTED



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

UPPER PENINSULA OCCUPANTS OF HAD-BEEN-DRINKING CRASHES INJURY SEVERITY - EJECTED VS. NOT EJECTED

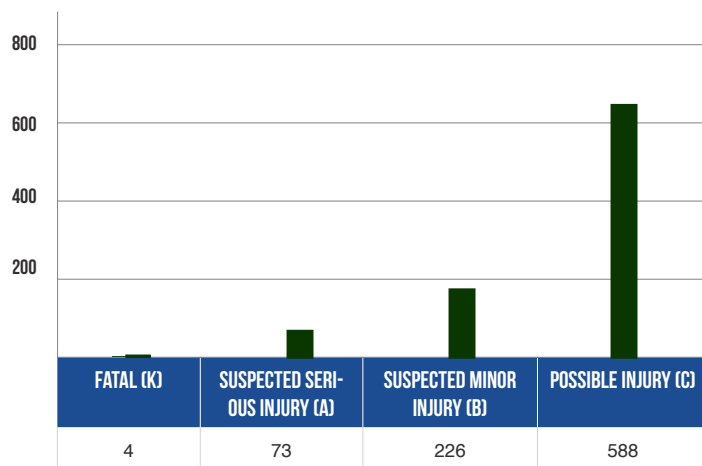


When compared to the charts above, the charts of occupants of had-been-drinking crashes demonstrate that injury severity is much worse for occupants in a crash where drinking is reported in both ejected and non-ejected events.

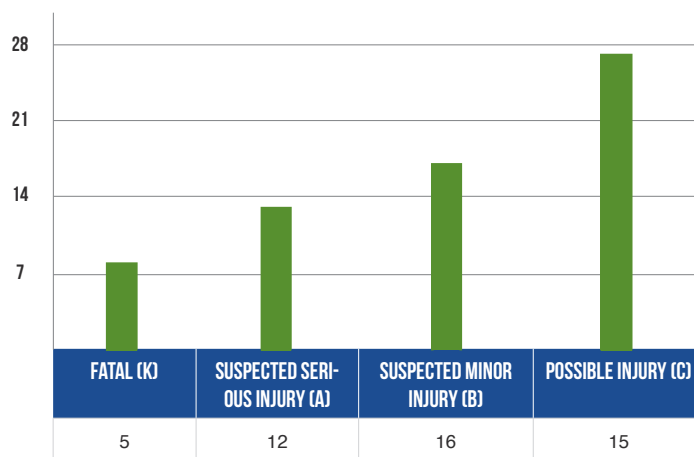
*Note: Occupants include all drivers plus all injured or killed persons in or on a motor vehicle.*

## UPPER PENINSULA INJURY SEVERITY & BELT USE BY DRIVER INJURY

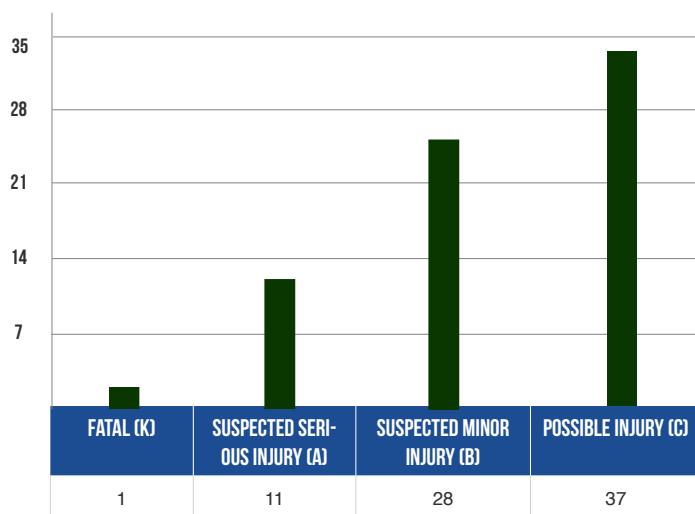
ALL CRASHES-BELTS USED



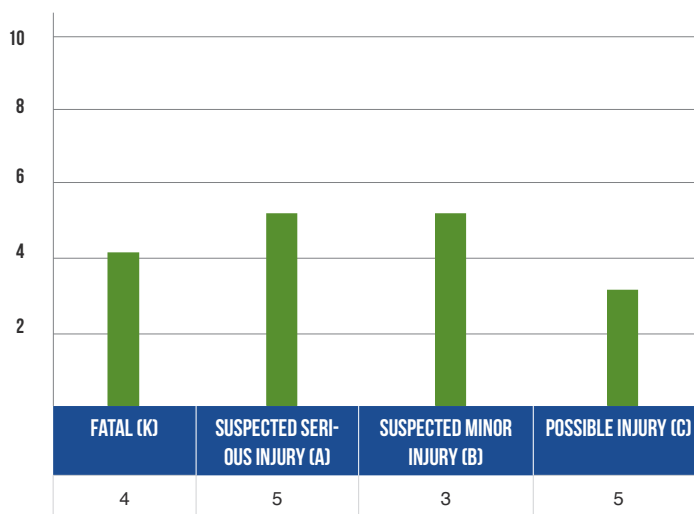
ALL CRASHES-BELTS NOT USED



HAD-BEEN DRINKING CRASHES-BELTS USED



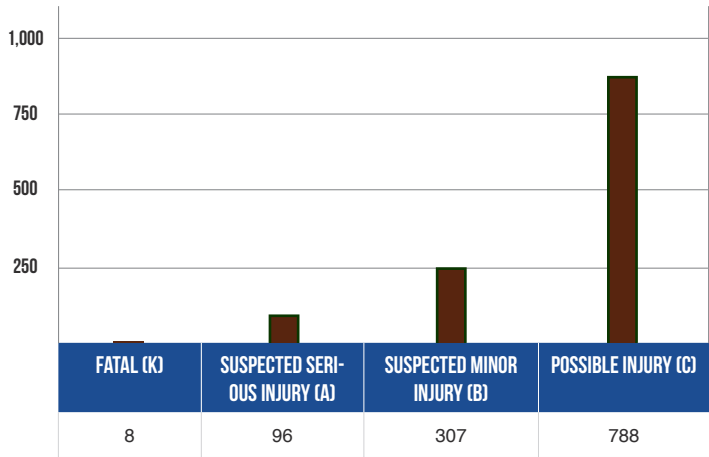
HAD-BEEN DRINKING CRASHES-BELTS NOT USED



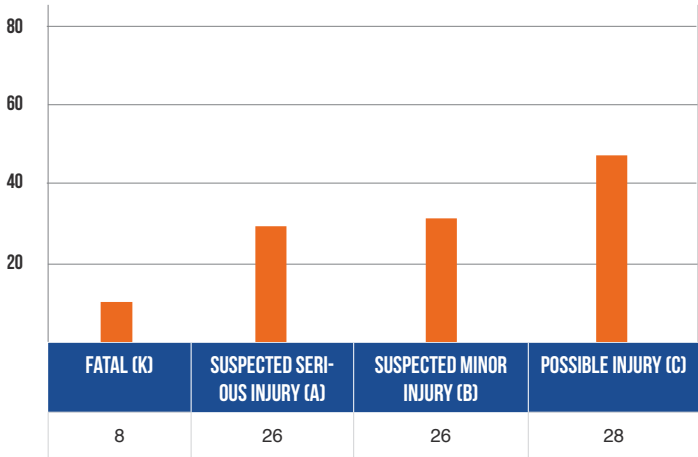
Note: "Belts Used" represents shoulder belts only used, lap belts only used, both lap and shoulder belts used, and restraint failure. "Belts Not Used" represents no belts available and no belts used.

# UPPER PENINSULA INJURY SEVERITY & RESTRAINT USE BY OCCUPANT INJURY

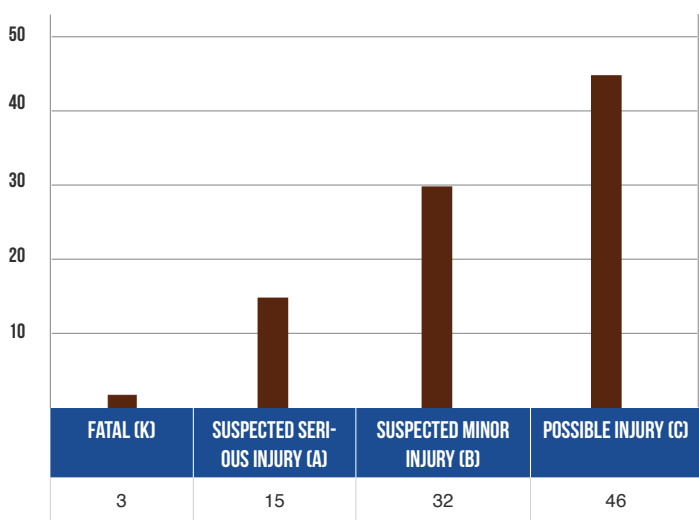
ALL CRASHES-RESTRAINTS USED



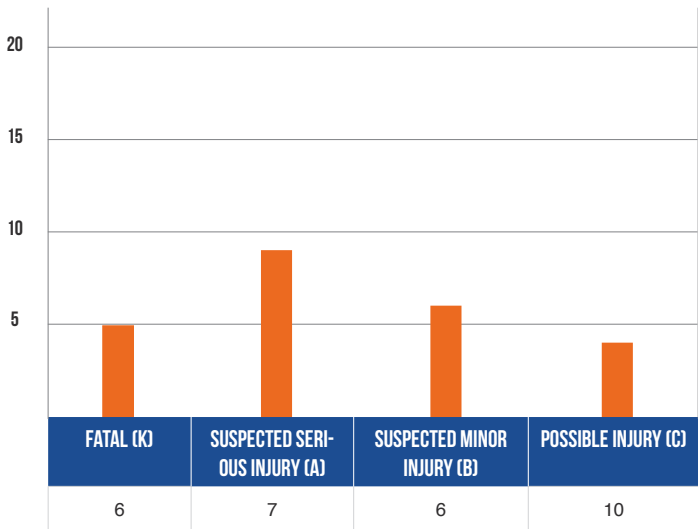
ALL CRASHES-RESTRAINTS NOT USED



HAD-BEEN DRINKING CRASHES-RESTRAINTS USED



HAD-BEEN DRINKING CRASHES-RESTRAINTS NOT USED



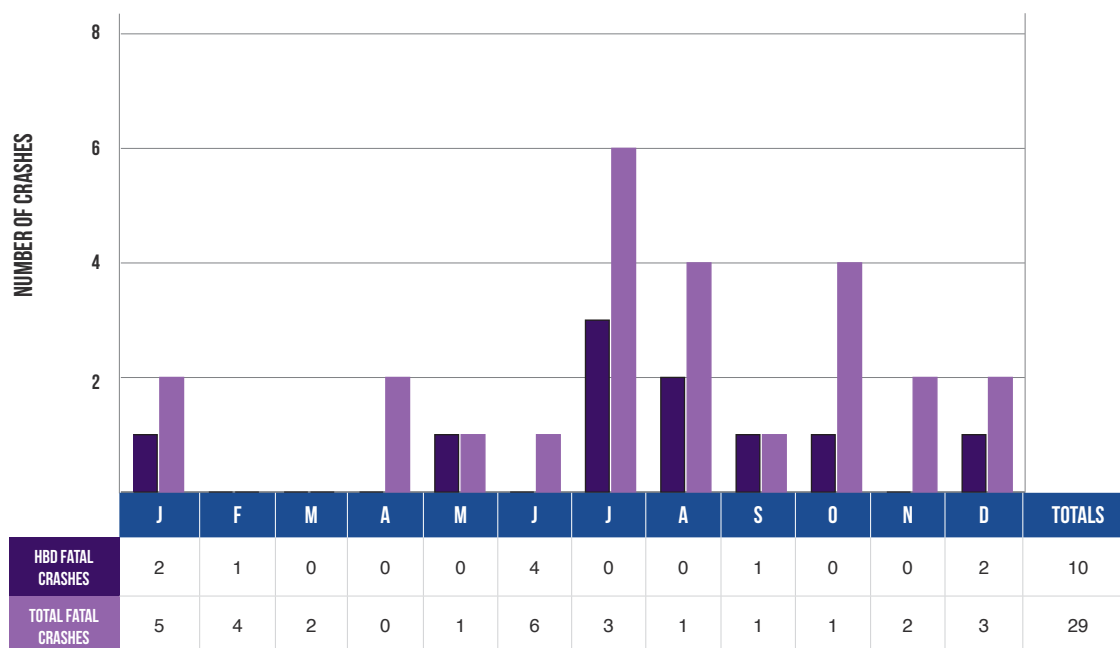
Note: "Restraints Used" represents shoulder belts only used, lap belts only used, both lap and shoulder belts used, child restraints used, and restraint failure. "Restraints Not Used" represents no belts available; no belts used; and child restraint not used, unavailable, or improper use.

Note: Occupants include all drivers plus all injured or killed persons in or on a motor vehicle.

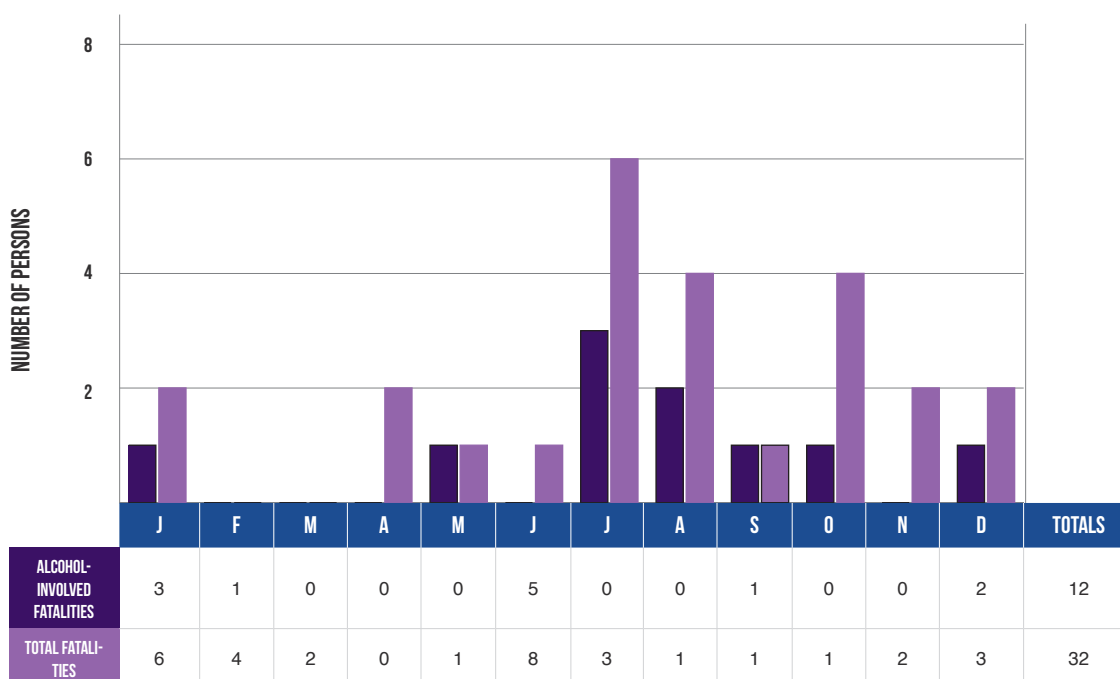


## UPPER PENINSULA ALCOHOL INVOLVEMENT IN FATAL CRASHES

### HAD-BEEN-DRINKING FATAL CRASHES BY MONTH



### ALCOHOL-INVOLVED FATALITIES BY MONTH

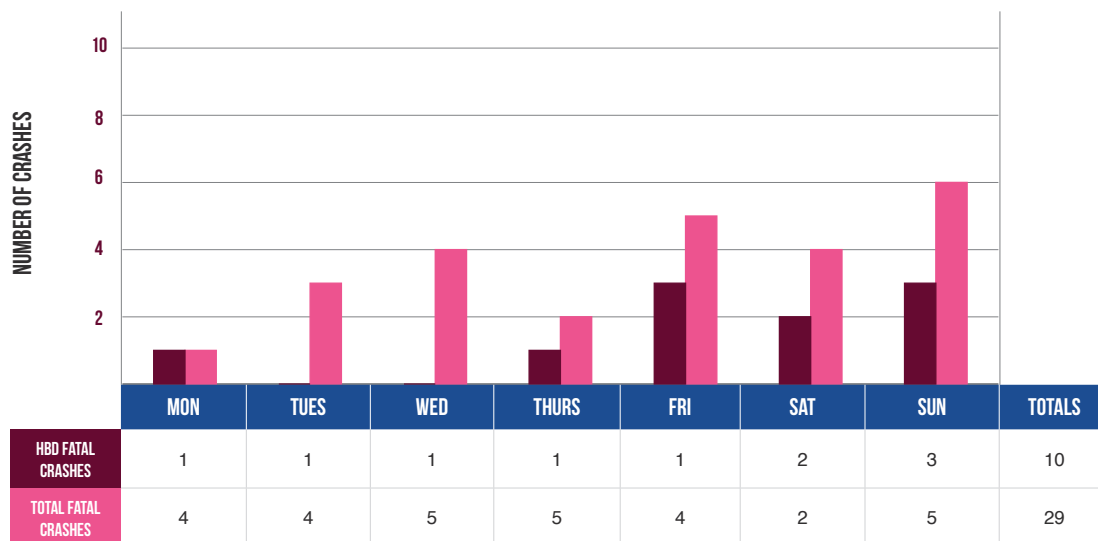


Had-been-drinking fatal crashes were highest in number during the month of June. The number of total fatal crashes (total of non-had-been-drinking and had-been-drinking fatal crashes) also reached highest levels in June.

*Note: An alcohol-involved fatality is any person killed in a had-been-drinking crash.*

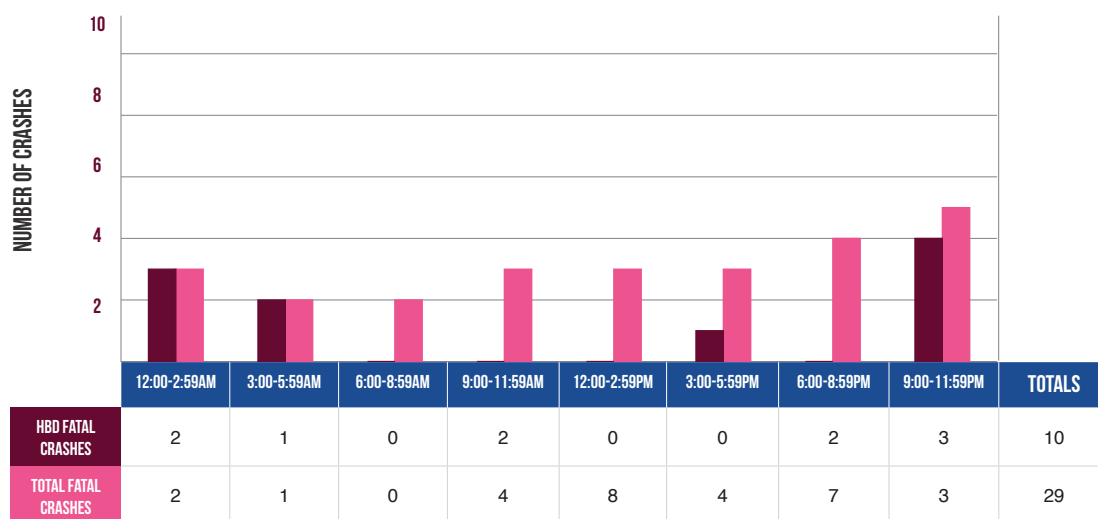
## UPPER PENINSULA ALCOHOL INVOLVEMENT IN FATAL CRASHES (CONTINUED)

### HAD-BEEN-DRINKING FATAL CRASHES BY DAY OF THE WEEK



Wednesday, Thursday, and Sunday had the highest number of fatal crashes, and Sunday had the highest number of drinking-related fatal crashes in 2016.

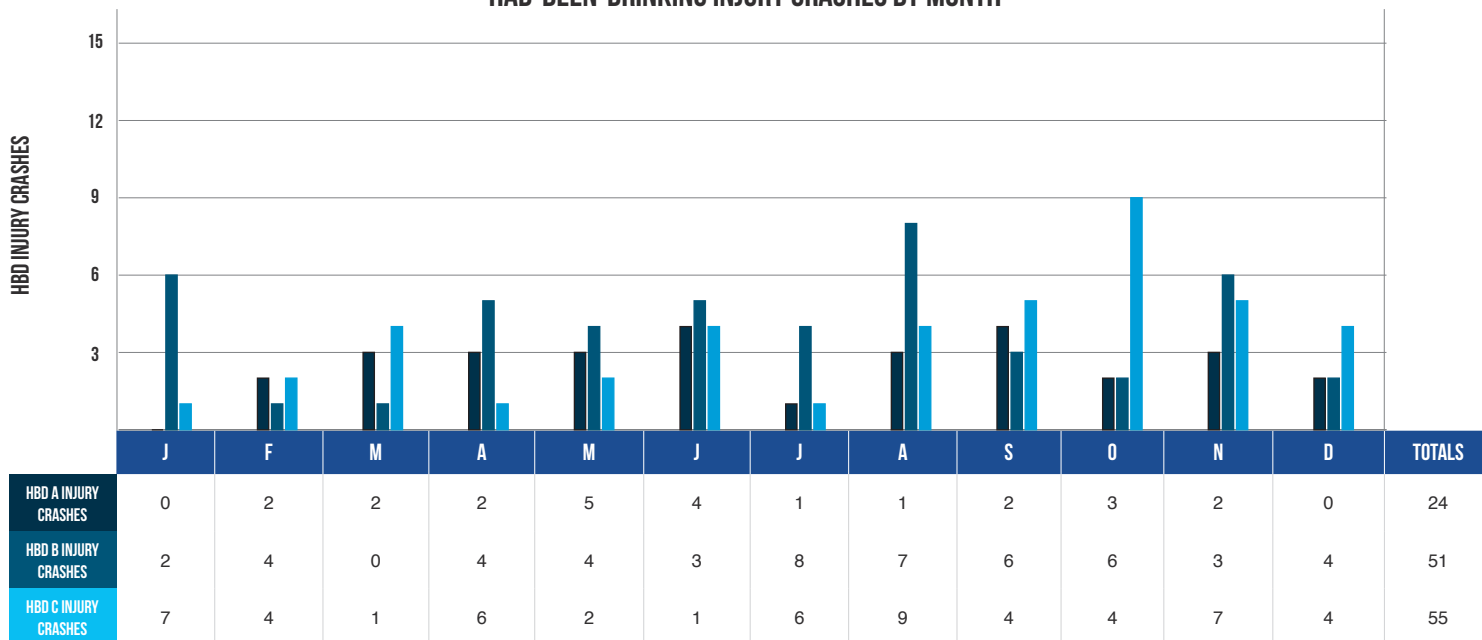
### HAD-BEEN-DRINKING FATAL CRASHES BY TIME OF DAY



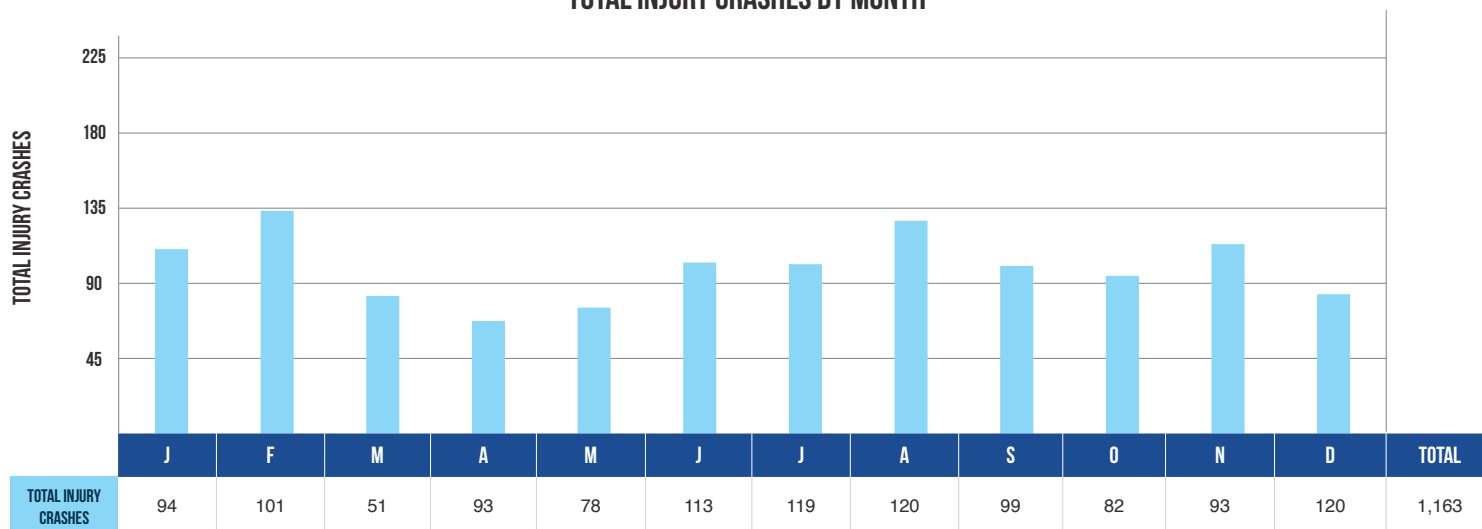
The 9:00 PM to 11:59 PM time period had the highest number of HBD fatal crashes (3), while the 12:00 PM to 2:59 PM time period had the highest number of total fatal crashes (8).

## UPPER PENINSULA ALCOHOL INVOLVEMENT IN INJURY CRASHES

### HAD-BEEN-DRINKING INJURY CRASHES BY MONTH



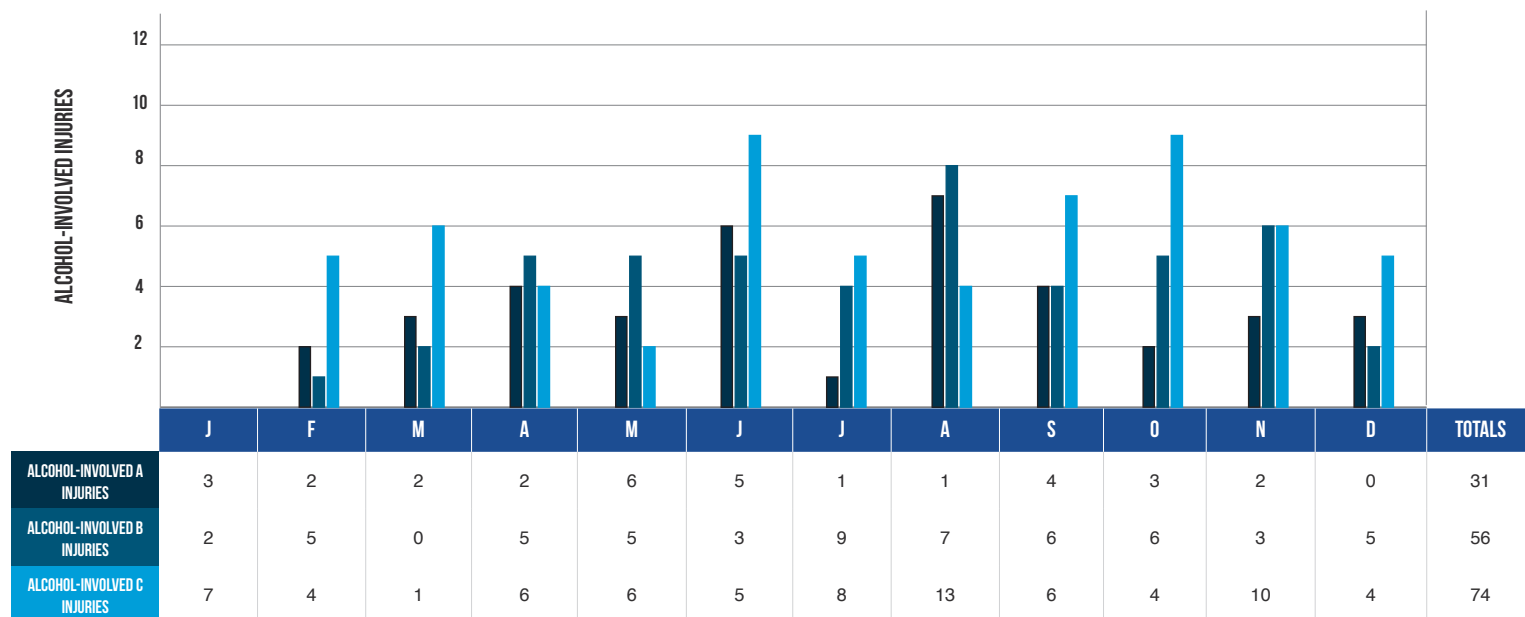
### TOTAL INJURY CRASHES BY MONTH



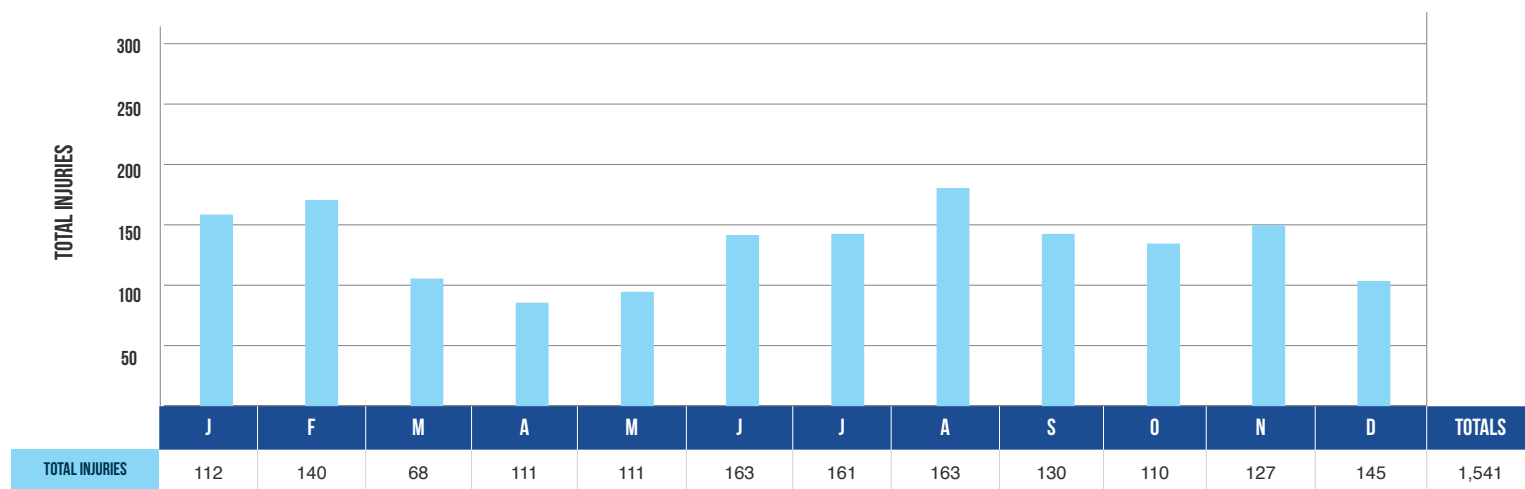
Alcohol involvement in injury crashes is an important indicator of the alcohol impaired driving problem. In 2016, the highest number of had-been-drinking injury crashes occurred in August (17).

## UPPER PENINSULA ALCOHOL INVOLVEMENT IN INJURY CRASHES (CONTINUED)

ALCOHOL-INVOLVED INJURIES BY MONTH



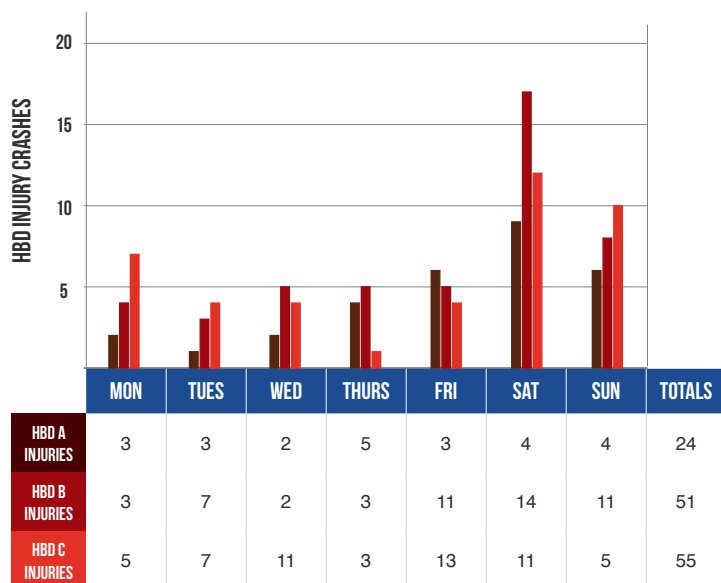
TOTAL INJURIES BY MONTH



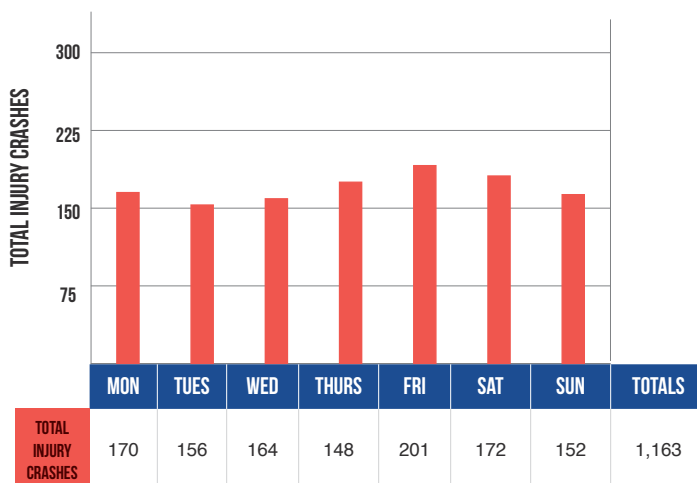
Note: An alcohol-involved injury is any person injured in a had-been-drinking crash.

## UPPER PENINSULA ALCOHOL INVOLVEMENT IN INJURY CRASHES (CONTINUED)

### HAD-BEEN-DRINKING INJURY CRASHES BY DAY OF THE WEEK

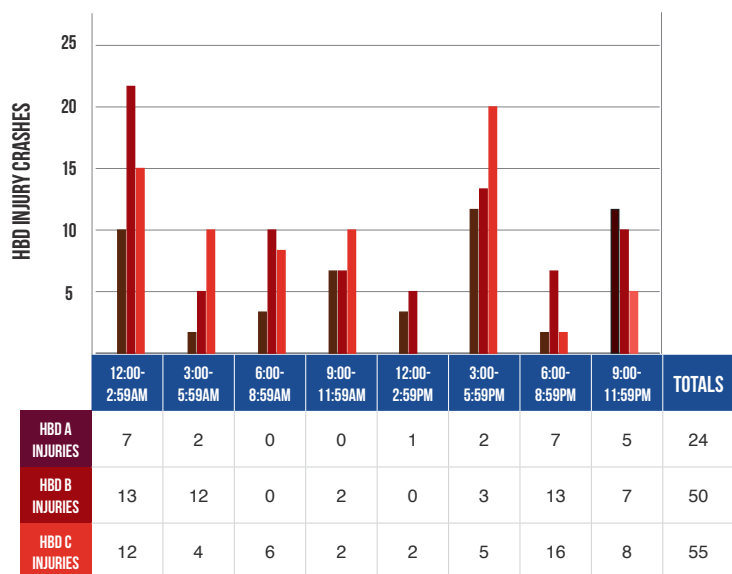


### TOTAL INJURY CRASHES BY DAY OF THE WEEK

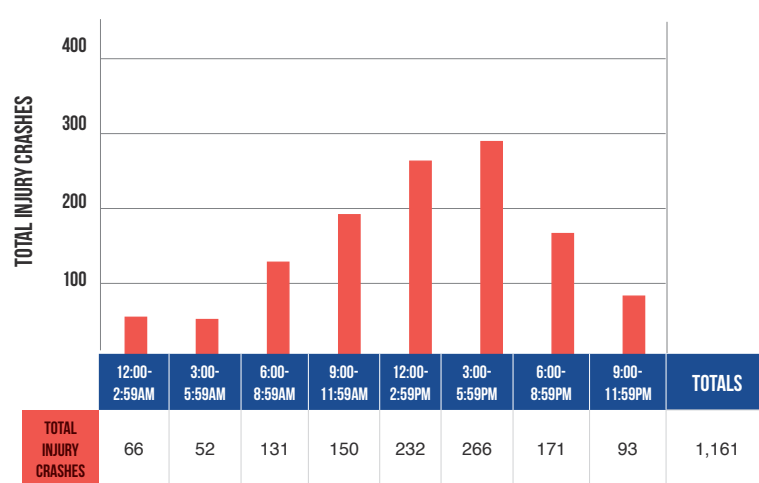


The peak day for all injury crashes is Friday. The highest proportion of had-been-drinking injury crashes to total injury crashes occurred on Saturday (16.9%).

### HAD-BEEN-DRINKING INJURY CRASHES BY TIME OF DAY



### TOTAL INJURY CRASHES BY TIME OF DAY



Total injury crash frequencies peak in the hours between 3:00 PM and 5:59 PM, while had-been-drinking injury crash frequencies peak between 6:00 PM and 8:59 PM. There was one had-been-drinking injury crash and two injury crashes where the time of day was unknown.

## UPPER PENINSULA MALE DRIVERS BY AGE AND INJURY SEVERITY IN CRASH

AGE OF DRIVER IN CRASH	MALE DRIVERS		FATAL		INJURY			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
13 years and under	6	0.1	0	0.0	0	1	3	2
14 years	3	0.0	0	0.0	0	1	0	2
15 years	11	0.2	0	0.0	2	2	2	5
16 years	104	1.6	1	3.4	5	4	9	85
17 years	132	2.0	0	0.0	2	9	14	107
18 years	173	2.7	0	0.0	6	10	21	136
19 years	178	2.7	0	0.0	3	16	17	142
20 years	193	3.0	1	3.4	5	12	27	148
21 - 24 years	597	9.2	1	3.4	13	35	50	498
25 - 34 years	1,073	16.6	2	6.9	34	56	111	870
35 - 44 years	909	14.0	4	13.8	18	39	67	781
45 - 54 years	959	14.8	4	13.8	25	42	91	797
55 - 64 years	1,015	15.7	11	37.9	19	49	76	860
65 - 69 years	425	6.6	0	0.0	8	22	32	363
70 - 74 years	256	3.9	1	3.4	8	7	17	223
75 - 79 years	195	3.0	0	0.0	4	6	18	167
80 - 84 years	140	2.2	4	13.8	2	8	12	114
85 - 89 years	69	1.1	0	0.0	2	4	5	58
90 years and over	23	0.4	0	0.0	0	3	1	19
Unknown	22	0.3	0	0.0	0	0	1	21
Total	6,483	100.0	29	100.0	156	326	574	5,398

The male driver age group 55 to 64 experienced the highest number of fatal crashes. The male driver age group 25 to 34 years experienced the highest number of injury crashes and property damage only crashes.

*\*\*Note: This table excludes 677 drivers of unknown gender.*

## UPPER PENINSULA MALE DRINKING DRIVERS BY AGE AND INJURY SEVERITY IN CRASH

AGE OF DRINKING DRIVER IN CRASH	MALE DRIVERS		FATAL		INJURY			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
13 years and under	0	0.0	0	0.0	0	0	0	0
14 years	0	0.0	0	0.0	0	0	0	0
15 years	0	0.0	0	0.0	0	0	0	0
16 years	1	0.4	0	0.0	0	0	0	1
17 years	1	0.4	0	0.0	0	1	0	0
18 years	1	0.4	0	0.0	1	0	0	0
19 years	4	1.7	0	0.0	1	2	0	1
20 years	8	3.4	0	0.0	0	2	2	4
21 - 24 years	37	15.8	1	16.7	3	7	6	20
25 - 34 years	76	32.5	1	16.7	4	8	20	43
35 - 44 years	29	12.4	1	16.7	1	5	1	21
45 - 54 years	43	18.4	1	16.7	7	8	8	19
55 - 64 years	23	9.8	1	16.7	0	3	4	15
65 - 69 years	4	1.7	0	0.0	0	1	0	3
70 - 74 years	2	0.9	0	0.0	0	0	0	2
75 - 79 years	2	0.9	0	0.0	0	0	0	2
80 - 84 years	3	1.3	1	16.7	0	0	1	1
85 - 89 years	0	0.0	0	0.0	0	0	0	0
90 years and over	0	0.0	0	0.0	0	0	0	0
Unknown	0	0.0	0	0.0	0	0	0	0
Total	234	100.0	6	100.0	17	37	42	132

The male drinking driver age group 25 to 34 years experienced the highest number of injury crashes and property damage only crashes.

*\*\*Note: This table excludes no drivers of unknown gender.*

## UPPER PENINSULA FEMALE DRIVERS BY AGE AND INJURY SEVERITY IN CRASH

AGE OF DRIVER IN CRASH	FEMALE DRIVERS		FATAL		INJURY			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
13 years and under	2	0.0	0	0.0	1	0	1	0
14 years	2	0.0	0	0.0	2	0	0	0
15 years	9	0.2	0	0.0	1	1	1	6
16 years	82	1.8	0	0.0	2	5	14	61
17 years	130	2.9	1	7.7	2	4	19	104
18 years	130	2.9	1	7.7	4	4	10	111
19 years	123	2.7	0	0.0	1	5	14	103
20 years	138	3.0	0	0.0	0	4	15	119
21 - 24 years	416	9.1	2	15.4	5	18	47	344
25 - 34 years	799	17.6	2	15.4	17	40	82	658
35 - 44 years	690	15.2	4	30.8	9	22	72	583
45 - 54 years	703	15.5	1	7.7	15	16	92	579
55 - 64 years	677	14.9	2	15.4	11	24	74	566
65 - 69 years	229	5.0	0	0.0	3	5	22	199
70 - 74 years	160	3.5	0	0.0	3	5	19	133
75 - 79 years	116	2.6	0	0.0	3	4	8	101
80 - 84 years	77	1.7	0	0.0	3	3	8	63
85 - 89 years	32	0.7	0	0.0	0	1	6	25
90 years and over	14	0.3	0	0.0	0	0	2	12
Unknown	18	0.4	0	0.0	0	0	0	18
Total	4,547	100.0	13	100.0	82	161	506	3,785

The female driver age group 35 to 44 years experienced the highest number of fatal crashes. The female driver age group 25 to 34 years experienced the highest number of injury crashes and property damage only crashes.

*\*\*Note: This table excludes 677 drivers of unknown gender.*



## UPPER PENINSULA FEMALE DRINKING DRIVERS BY AGE AND INJURY SEVERITY IN CRASH

AGE OF DRINKING DRIVER IN CRASH	FEMALE DRIVERS		FATAL		INJURY			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
13 years and under	0	0.0	0	0.0	0	0	0	0
14 years	0	0.0	0	0.0	0	0	0	0
15 years	1	1.2	0	0.0	0	1	0	0
16 years	0	0.0	0	0.0	0	0	0	0
17 years	0	0.0	0	0.0	0	0	0	0
18 years	2	2.5	0	0.0	0	0	0	2
19 years	0	0.0	0	0.0	0	0	0	0
20 years	7	8.8	0	0.0	0	1	3	3
21 - 24 years	11	13.8	0	0.0	0	2	2	7
25 - 34 years	29	36.2	2	66.7	3	5	1	18
35 - 44 years	10	12.5	1	33.3	0	1	2	6
45 - 54 years	11	13.8	0	0.0	3	1	0	7
55 - 64 years	4	5.0	0	0.0	0	1	0	3
65 - 69 years	2	2.5	0	0.0	0	1	0	1
70 - 74 years	2	2.5	0	0.0	0	0	1	1
75 - 79 years	0	0.0	0	0.0	0	0	0	0
80 - 84 years	0	0.0	0	0.0	0	0	0	0
85 - 89 years	0	0.0	0	0.0	0	0	0	0
90 years and over	1	1.2	0	0.0	0	0	0	1
Unknown	0	0.0	0	0.0	0	0	0	0
Total	80	100.0	3	100.0	6	13	9	49

The female drinking driver age group 25 to 34 years experienced the highest number of fatal crashes, injury crashes, and property damage only crashes.

*\*\*Note: This table excludes no drivers of unknown gender.*

☐ Same or decrease  
☐ Increase