

## VEHICLE TYPE CRASH INVOLVEMENT

Vehicle Types	MOST SEVERE OUTCOME IN CRASH						MOST SEVERE OUTCOME IN VEHICLE			
	Motor Vehicles		Fatal Crash		Injury	PDO	Fatality in Veh		Injury	PDO
	Number	% of Total	Number	% of Total			Number	% of Total		
Passenger Car and Station Wagon	464,616	75.7	1,334	66.8	128,238	335,044	799	73.5	82,350	343,821
Van and Motorhome	40,212	6.5	137	6.9	10,118	29,957	59	5.4	5,301	31,913
Pickup	79,980	13.0	291	14.6	18,813	60,876	127	11.7	10,094	64,569
Small Truck (under 10,000 lbs.)	6,925	1.1	14	0.7	1,725	5,186	4	0.4	851	5,615
Cycle	2,768	0.5	51	2.6	2,194	523	51	4.7	2,149	462
Moped	375	0.1	5	0.3	301	69	4	0.4	290	64
Go Cart	13	0.0	0	0.0	6	7	0	0.0	6	5
Snowmobile	673	0.1	15	0.8	494	164	14	1.3	439	184
Off Road Vehicle	417	0.1	11	0.6	340	66	9	0.8	318	73
Other	1,861	0.3	14	0.7	573	1,274	9	0.8	305	1,324
CDL Truck/Bus (breakdown below)	16,152	2.6	124	6.2	3,616	12,412	11	1.0	954	14,010
<b>Totals</b>	<b>613,992*</b>	<b>100.0</b>	<b>1,996</b>	<b>100.0</b>	<b>166,418</b>	<b>445,578</b>	<b>1,087</b>	<b>100.0</b>	<b>103,057</b>	<b>462,040</b>

\* Includes 47,808 with unknown injury severity for Most Severe Outcome in Vehicle

CDL Truck/Bus Sub-category Types	Motor Vehicles		Fatal Crash		Injury	PDO	Fatality in Veh		Injury	PDO
	Number	% of Total	Number	% of Total			Number	% of Total		
	Uncoded Truck	1,547	9.6	2	0.0	303	1,242	0	0.0	63
Commercial Vehicle: Group A	7,574	46.9	78	0.8	1,679	5,817	6	54.5	394	6,886
Commercial Vehicle: Group B	4,101	25.4	25	0.6	918	3,158	1	9.1	307	3,636
Commercial Vehicle: Group C	532	3.3	1	0.7	118	413	0	0.0	48	463
Other Truck	831	5.1	6	6.2	217	608	3	27.3	53	734
Unknown Truck	1,567	9.7	12	6.2	381	1,174	1	9.1	89	1,221
<b>Totals</b>	<b>16,152*</b>	<b>100.0</b>	<b>124</b>	<b>100.0</b>	<b>3,616</b>	<b>12,412</b>	<b>11</b>	<b>100.0</b>	<b>954</b>	<b>14,010</b>

\* Includes 1,177 with unknown injury severity for Most Severe Outcome in Vehicle

Group "A" is any vehicle that is towing a vehicle or trailer that has a gross vehicle weight rating (GVWR) over 10,000 lbs.

Group "B" is any single vehicle (including buses) with a GVWR of 26,001 lbs. or more. This would include a combination of vehicles with a combined GVWR over 26,000 lbs. when towing a trailer that has a GVWR of 10,000 lbs. or less.

Group "C" is any single vehicle with a GVWR of less than 26,001 lbs. or a combination of vehicles having a combined GVWR under 26,001 lbs. when the vehicle is required to display placards for hazardous material or designed to carry 16 passengers (including driver). Group "C" is also any vehicle carrying 15 or less people (including driver) transporting children to or from school and home on a regular basis for compensation.

## ACTION PRIOR TO CRASH

### MOST SEVERE OUTCOME IN CRASH

DRIVER ACTION	All Drivers		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
Going straight ahead	314,229	51.2	1,472	13,908	24,262	51,769	222,818
Turning left	51,367	8.4	100	2,283	4,446	9,075	35,463
Turning right	18,224	3.0	14	386	875	2,328	14,621
Stopped on roadway	56,246	9.2	33	1,332	3,130	14,367	37,384
In prior crash	1,084	0.2	6	58	90	228	702
Changing lanes	12,971	2.1	41	297	508	1,503	10,622
Backing	15,836	2.6	4	127	244	690	14,771
Slowing/stopping on roadway	40,344	6.6	30	717	1,865	9,280	28,452
Slowing/stopping other	941	0.2	1	30	49	188	673
Starting up on roadway	9,553	1.6	28	303	610	1,976	6,636
Starting up other	467	0.1	4	27	37	70	329
Entering parking	1,123	0.2	2	13	43	92	973
Leaving parking	3,275	0.5	1	61	145	407	2,661
Entering roadway	9,303	1.5	23	340	660	1,450	6,830
Leaving roadway	2,027	0.3	19	224	297	252	1,235
Making U-turn	1,645	0.3	3	89	136	255	1,162
Overtaking or passing	7,177	1.2	41	318	433	931	5,454
Avoiding object	1,912	0.3	2	74	215	236	1,385
Avoiding pedestrian	226	0.0	10	42	39	36	99
Avoiding vehicle (front/back)	4,613	0.8	32	215	405	800	3,161
Avoiding vehicle (angle)	2,204	0.4	9	90	178	361	1,566
Driverless moving	659	0.1	2	14	25	38	580
Parked	27,143	4.4	43	467	978	1,241	24,414
Crossing at intersection	82	0.0	0	7	11	18	46
Crossing not at intersection	36	0.0	1	9	5	7	14
Getting on/off vehicle	21	0.0	1	5	4	3	8
In roadway with traffic	14	0.0	0	2	1	1	10
In roadway against traffic	13	0.0	0	0	1	5	7
Standing/lying in roadway	10	0.0	0	0	2	3	5
Pushing/working on vehicle	16	0.0	0	5	4	3	4
Other working in roadway	5	0.0	0	0	0	0	5
Playing in roadway	3	0.0	0	1	0	0	2
In roadway other reason	10	0.0	0	1	1	2	6
Not in roadway	13	0.0	0	1	4	1	7
Other	617	0.1	5	45	64	111	392
Unknown	30,583	5.0	69	1,066	1,748	4,619	23,081
<b>TOTAL</b>	<b>613,992</b>	<b>100.0</b>	<b>1,996</b>	<b>22,557</b>	<b>41,515</b>	<b>102,346</b>	<b>445,578</b>

## ACTION PRIOR TO CRASH (continued)

### MOTORCYCLIST - INJURY SEVERITY

MOTORCYCLIST ACTION	All Motorcycles		All Motorcyclists		Fatal	Injury			PDO
	Number	% of Total	Number	% of Total		A	B	C	
Going straight ahead	1,807	65.3	2,006	59.3	49	574	731	340	265
Turning left	128	4.6	139	4.2	0	32	43	30	32
Turning right	102	3.7	113	3.3	1	20	41	18	31
Stopped on roadway	100	3.6	106	3.3	0	7	19	26	53
In prior crash	0	0.0	0	0.0	0	0	0	0	0
Changing lanes	58	2.1	62	1.9	0	23	20	13	4
Backing	9	0.3	9	0.3	0	0	2	2	5
Slowing/stopping on roadway	108	3.9	115	3.5	0	16	39	28	28
Slowing/stopping other	5	0.2	5	0.2	0	2	1	2	0
Starting up on roadway	23	0.8	25	0.8	0	6	7	5	7
Starting up other	6	0.2	7	0.2	0	3	2	0	2
Entering parking	1	0.0	1	0.0	0	0	1	0	0
Leaving parking	1	0.0	1	0.0	0	0	0	0	0
Entering roadway	31	1.1	35	1.0	1	9	12	6	6
Leaving roadway	31	1.1	33	1.0	1	16	8	5	2
Making U-turn	9	0.3	10	0.3	0	3	3	1	3
Overtaking or passing	82	3.0	88	2.7	1	27	28	12	15
Avoiding object	22	0.8	24	0.7	0	2	9	5	7
Avoiding pedestrian	3	0.1	3	0.1	0	0	1	0	2
Avoiding vehicle (front/back)	57	2.1	66	1.9	0	9	36	17	4
Avoiding vehicle (angle)	28	1.0	30	0.9	1	4	15	7	3
Driverless moving	0	0.0	0	0.0	0	0	0	0	0
Parked	45	1.6	45	1.5	0	0	0	1	12
Crossing at intersection	2	0.1	2	0.1	0	1	0	1	0
Crossing not at intersection	4	0.1	4	0.1	0	1	1	2	0
Getting on/off vehicle	1	0.0	1	0.0	0	1	0	0	0
In roadway with traffic	0	0.0	0	0.0	0	0	0	0	0
In roadway against traffic	0	0.0	0	0.0	0	0	0	0	0
Standing\lying in roadway	0	0.0	0	0.0	0	0	0	0	0
Pushing/working on vehicle	0	0.0	0	0.0	0	0	0	0	0
Other working in roadway	0	0.0	0	0.0	0	0	0	0	0
Playing in roadway	0	0.0	0	0.0	0	0	0	0	0
In roadway other reason	0	0.0	1	0.0	0	1	0	0	0
Not in roadway	0	0.0	0	0.0	0	0	0	0	0
Other	14	0.5	14	0.5	0	4	7	2	1
Unknown	91	3.3	101	3.0	0	24	28	27	15
<b>TOTAL</b>	<b>2,768</b>	<b>100.0</b>	<b>3,046*</b>	<b>100.0</b>	<b>54</b>	<b>785</b>	<b>1,054</b>	<b>550</b>	<b>497</b>

\* Includes 106 motorcyclists (drivers and passengers) with unknown injury severity

## ACTION PRIOR TO CRASH (continued)

### BICYCLIST - INJURY SEVERITY

BICYCLIST ACTION	All Bicycles		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
Going straight ahead	1,502	57.3	16	215	577	477	190
Turning left	86	3.3	1	22	37	20	4
Turning right	35	1.3	0	5	12	11	6
Stopped on roadway	28	1.1	0	3	11	7	6
In prior crash	1	0.0	1	0	0	0	0
Changing lanes	48	1.8	0	10	19	12	3
Backing	1	0.0	0	0	1	0	0
Slowing/stopping on roadway	5	0.2	0	1	3	0	1
Slowing/stopping other	4	0.2	0	0	2	2	0
Starting up on roadway	18	0.7	0	1	7	5	3
Starting up other	3	0.1	0	1	1	0	1
Entering parking	2	0.1	0	1	1	0	0
Leaving parking	7	0.3	0	1	4	2	0
Entering roadway	257	9.8	4	53	100	65	33
Leaving roadway	7	0.3	0	0	4	3	0
Making U-turn	12	0.5	1	2	4	1	3
Overtaking or passing	8	0.3	0	1	3	3	1
Avoiding object	1	0.0	0	1	0	0	0
Avoiding pedestrian	1	0.0	0	0	0	1	0
Avoiding vehicle (front/back)	16	0.6	0	0	8	5	2
Avoiding vehicle (angle)	11	0.4	0	2	6	1	1
Driverless moving	1	0.0	0	1	0	0	0
Parked	5	0.2	0	0	2	0	1
Crossing at intersection	188	7.2	1	22	60	67	33
Crossing not at intersection	72	2.7	1	11	31	25	2
Getting on/off vehicle	1	0.0	0	0	1	0	0
In roadway with traffic	24	0.9	0	7	6	9	2
In roadway against traffic	19	0.7	2	0	7	5	4
Standing/lying in roadway	1	0.0	0	0	0	1	0
Pushing/working on vehicle	0	0.0	0	0	0	0	0
Other working in roadway	0	0.0	0	0	0	0	0
Playing in roadway	8	0.3	1	2	4	0	0
In roadway other reason	12	0.5	0	4	4	3	1
Not in roadway	8	0.3	0	0	2	3	2
Other	40	1.5	0	1	24	10	5
Unknown	188	7.2	1	23	59	66	25
<b>TOTAL</b>	<b>2,620*</b>	<b>100.0</b>	<b>29</b>	<b>390</b>	<b>1,000</b>	<b>804</b>	<b>329</b>

\* Includes 68 bicyclists with unknown injury severity

## ACTION PRIOR TO CRASH (continued)

### PEDESTRIAN - INJURY SEVERITY

PEDESTRIAN ACTION	All Pedestrians		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
Going straight ahead	100	3.1	4	20	42	24	6
Turning left	14	0.4	1	7	3	2	1
Turning right	1	0.0	0	0	0	1	0
Stopped on roadway	9	0.3	0	3	1	1	4
In prior crash	7	0.2	0	4	1	0	2
Changing lanes	1	0.0	0	0	1	0	0
Backing	0	0.0	0	0	0	0	0
Slowing/stopping on roadway	2	0.1	0	0	0	1	1
Slowing/stopping other	0	0.0	0	0	0	0	0
Starting up on roadway	0	0.0	0	0	0	0	0
Starting up other	0	0.0	0	0	0	0	0
Entering parking	1	0.0	0	0	1	0	0
Leaving parking	0	0.0	0	0	0	0	0
Entering roadway	21	0.6	0	5	7	5	4
Leaving roadway	8	0.2	1	2	3	2	0
Making U-turn	0	0.0	0	0	0	0	0
Overtaking or passing	1	0.0	0	0	1	0	0
Avoiding object	0	0.0	0	0	0	0	0
Avoiding pedestrian	0	0.0	0	0	0	0	0
Avoiding vehicle (front/back)	2	0.1	0	2	0	0	0
Avoiding vehicle (angle)	7	0.2	0	2	1	3	1
Driverless moving	4	0.1	0	0	1	1	2
Parked	39	1.2	0	6	6	6	16
Crossing at intersection	652	19.9	21	178	188	216	32
Crossing not at intersection	949	29.0	54	325	305	223	13
Getting on/off vehicle	52	1.6	1	12	19	17	2
In roadway with traffic	120	3.7	14	35	35	29	2
In roadway against traffic	53	1.6	3	20	13	13	2
Standing/lying in roadway	117	3.6	15	32	32	32	2
Pushing/working on vehicle	49	1.5	3	14	13	18	1
Other working in roadway	27	0.8	0	10	9	6	2
Playing in roadway	83	2.5	0	24	29	22	6
In roadway other reason	166	5.1	7	51	52	47	2
Not in roadway	158	4.8	8	46	47	46	3
Other	82	2.5	0	16	26	34	2
Unknown	550	16.8	39	156	153	130	17
<b>TOTAL</b>	<b>3,275*</b>	<b>100.0</b>	<b>171</b>	<b>970</b>	<b>989</b>	<b>879</b>	<b>123</b>

\* Includes 143 pedestrians with unknown injury severity

## MOST HARMFUL EVENT

### MOST SEVERE OUTCOME IN CRASH

NONCOLLISION	Motor Vehicles		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
Loss of control	5,801	0.9	20	345	525	938	3,973
Cross center/median	1,609	0.3	13	102	139	236	1,119
Ran off road left	1,170	0.2	1	57	98	167	847
Ran off road right	2,227	0.4	4	70	183	378	1,592
Re-enter road	236	0.0	5	8	26	40	157
Overturn	7,399	1.2	111	899	1,520	1,595	3,274
Separation of units	1,989	0.3	3	71	99	285	1,531
Fire/explosion	1,039	0.2	10	29	50	118	832
Immersion	102	0.0	2	8	6	11	75
Jackknife	462	0.1	0	13	16	53	380
Downhill runaway	111	0.0	0	6	8	12	85
Cargo loss/shift	666	0.1	2	11	21	37	595
Individual fell off	613	0.1	19	176	187	76	155
Other noncollision	3,181	0.5	9	135	193	424	2,420
<b>NONCOLLISION Sub-Total</b>	<b>26,605</b>	<b>4.3</b>	<b>199</b>	<b>1,930</b>	<b>3,071</b>	<b>4,370</b>	<b>17,035</b>

### MOST SEVERE OUTCOME IN CRASH

HAD A COLLISION WITH NONFIXED OBJECT	Motor Vehicles		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
Pedestrian	2,925	0.5	147	843	851	718	366
Pedalcycle	2,563	0.4	23	369	936	741	494
Motor vehicle in transport	393,913	64.2	1,139	13,549	26,125	76,096	277,004
Parked motor vehicle	17,249	2.8	24	338	744	1169	14,974
Railway train	170	0.0	13	27	23	27	80
Animal	42,202	6.9	1	51	255	558	41,337
Other nonfixed objects	5,133	0.8	11	125	213	439	4,345
<b>COLLISION NONFIXED Sub-Total</b>	<b>464,155</b>	<b>75.6</b>	<b>1,358</b>	<b>15,302</b>	<b>29,147</b>	<b>79,748</b>	<b>338,600</b>

## MOST HARMFUL EVENT (continued)

### MOST SEVERE OUTCOME IN CRASH

HAD A COLLISION WITH FIXED OBJECT	Motor Vehicles		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
Bridge/pier/abutment	775	0.1	7	66	89	111	502
Bridge parapet end	591	0.1	0	15	17	20	539
Bridge rail	404	0.1	1	22	49	78	254
Guardrail face	2,290	0.4	5	89	160	281	1,755
Guardrail end	450	0.1	3	28	61	76	282
Median barrier	1,926	0.3	3	132	287	393	1,111
Highway traffic sign post	2,384	0.4	2	30	66	133	2,153
Signal post	259	0.0	1	15	12	21	210
Luminaire/light support	580	0.1	3	32	73	75	397
Utility pole	3,802	0.6	33	327	657	646	2,139
Other pole	1,020	0.2	8	48	101	112	751
Culvert	720	0.1	5	69	125	101	420
Curb	1,723	0.3	1	40	84	155	1,443
Ditch	4,870	0.8	15	281	612	735	3,227
Embankment	1,514	0.2	12	143	237	241	881
Fence	1,432	0.2	3	41	86	106	1,196
Mailbox	1,898	0.3	3	21	49	102	1,723
Tree	9,520	1.6	165	1,053	1,568	1,457	5,277
Rail crossing signal	95	0.0	0	1	10	7	77
Building	936	0.2	8	70	130	128	600
Traffic island	65	0.0	1	3	5	3	53
Fire Hydrant	484	0.1	0	24	59	51	350
Impact attenuator	51	0.0	0	9	3	14	25
Other fixed object	2,691	0.4	8	127	262	254	2,040
<b>COLLISION FIXED Sub-Total</b>	<b>40,480</b>	<b>6.6</b>	<b>287</b>	<b>2,686</b>	<b>4,802</b>	<b>5,300</b>	<b>27,405</b>

### MOST SEVERE OUTCOME IN CRASH

	Motor Vehicles		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
Unknown Event	82,752	13.5	152	2,639	4,495	12,928	62,538
<b>TOTAL MOST HARMFUL EVENT</b>	<b>613,992</b>	<b>100.0</b>	<b>1,996</b>	<b>22,557</b>	<b>41,515</b>	<b>102,346</b>	<b>445,578</b>

## VEHICLE DEFECTS IN CRASH INVOLVEMENT

### MOST SEVERE OUTCOME IN CRASH

VEHICLE DEFECTS	Motor Vehicles		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
Brakes	3,634	0.6	7	140	297	687	2,503
Lights/reflectors	741	0.1	6	33	56	115	531
Steering	402	0.1	1	19	52	65	265
Tires/wheels	1,123	0.2	11	66	123	122	801
Windows	298	0.0	2	17	26	68	185
Other	2,031	0.3	7	87	185	253	1,499
Unknown/None	605,763	98.7	1,962	22,195	40,776	101,036	439,794
<b>TOTAL</b>	<b>613,992</b>	<b>100.0</b>	<b>1,996</b>	<b>22,557</b>	<b>41,515</b>	<b>102,346</b>	<b>445,578</b>

## HAZARDOUS ACTION

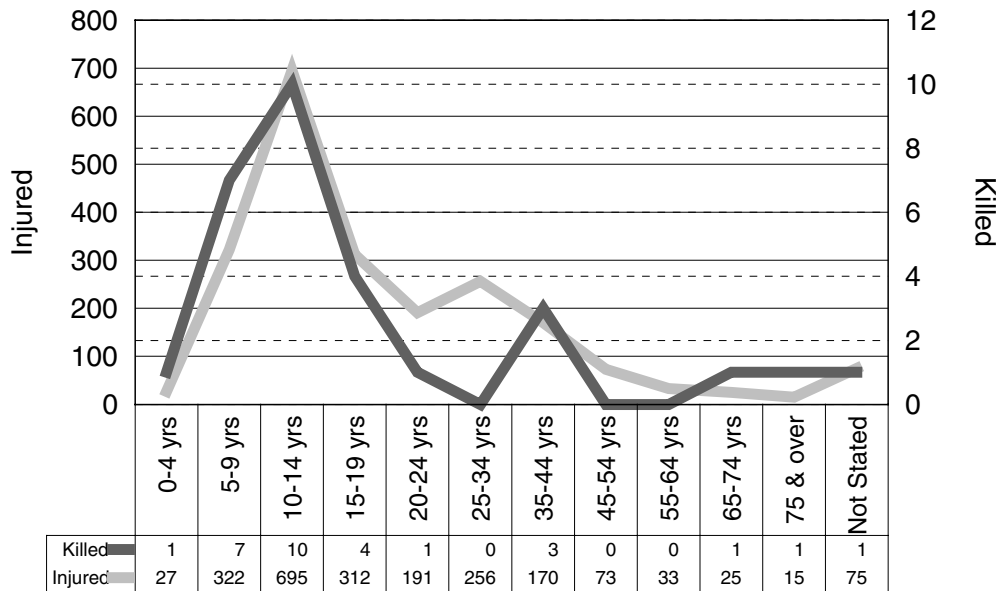
### MOST SEVERE OUTCOME IN CRASH

HAZARDOUS ACTION	All Drivers		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
None	308,618	50.3	789	9,668	18,332	49,397	230,432
Speed too fast	36,566	6.0	313	2,474	4,215	5,790	23,774
Speed too slow	992	0.2	5	52	82	191	662
Failed to yield	57,437	9.4	143	2,574	5,175	10,618	38,927
Disregard traffic control	17,012	2.8	129	1,345	2,125	3,990	9,423
Drove wrong way	636	0.1	14	53	87	104	378
Drove left of center	4,975	0.8	142	567	595	693	2,978
Improper passing	5,278	0.9	12	143	246	563	4,314
Improper lane use	13,683	2.2	18	275	461	1,216	11,713
Improper turn	9,795	1.6	8	324	591	1,305	7,567
Improper/no signal	1,065	0.2	1	27	38	125	874
Improper backing	12,855	2.1	1	55	123	420	12,256
Unable to stop in clear distance	79,308	12.9	65	1,752	4,168	18,766	54,557
Other	32,367	5.3	172	2,024	3,374	4,656	22,141
Unknown	33,405	5.4	184	1,224	1,903	4,512	25,582
<b>TOTAL</b>	<b>613,992</b>	<b>100.0</b>	<b>1,996</b>	<b>22,557</b>	<b>41,515</b>	<b>102,346</b>	<b>445,578</b>



## MICHIGAN BICYCLE CRASHES

### 1993 Bicycle Crash Information



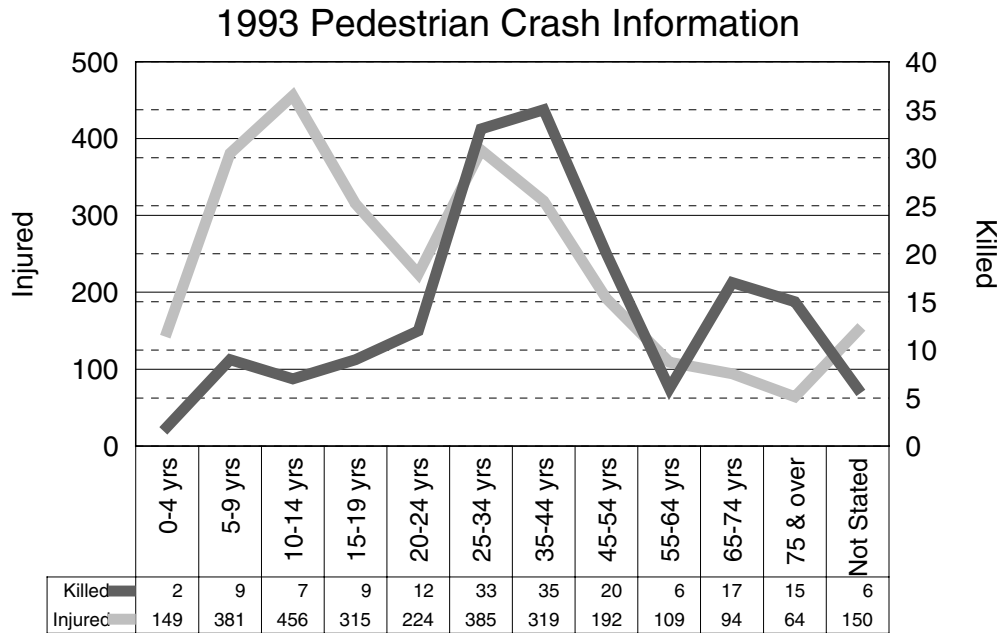
In 1993, there were 29 bicyclists killed and 2,194 injured in 2,620 total reported crashes involving bicyclists and motor vehicles. These numbers represent a 6.5% decrease in fatalities from 1992.

Of the 29 bicyclists killed in 1993, 5 were involved in a Had Been Drinking (HBD) crash and in 0 of these the bicyclist had been drinking. Of the 2,194 bicyclists injured, 111 were involved in a HBD crash and in 74 of these the bicyclist had been drinking. Of the 2,620 total reported crashes involving bicyclists and motor vehicles, 125 involved drinking and in 79 of these the bicyclist had been drinking.

Children under 15 years of age accounted for 18 (62.1%) of the bicycle deaths in 1993.



## MICHIGAN PEDESTRIAN CRASHES



In 1993, there were 171 pedestrians killed and 2,838 injured in 3,275 total reported crashes involving pedestrians and motor vehicles. These numbers represent a 0.6% decrease in fatalities from 1992.

Of the 171 pedestrians killed in 1993, 51 were involved in a Had Been Drinking (HBD) crash and in 26 of these the pedestrian had been drinking. Of the 2,838 pedestrians injured, 347 were involved in a HBD crash and in 246 of these the pedestrian had been drinking. Of the 3,275 total reported crashes involving pedestrians and motor vehicles, 418 involved drinking and in 286 of these the pedestrian had been drinking.

Children under 15 years of age accounted for 18 (10.5%) of the pedestrian deaths in 1993.



# MICHIGAN SNOWMOBILE CRASHES

## Most Harmful Event

### MOST SEVERE OUTCOME IN CRASH

NONCOLLISION	Snowmobiles		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
Loss of control	23	4.2	0	10	7	4	2
Cross center/median	2	0.4	0	0	0	1	1
Ran off road left	3	0.5	0	0	1	2	0
Ran off road right	2	0.4	0	0	0	1	1
Overturn	41	7.4	0	20	10	9	2
Separation of units	1	0.2	0	0	0	0	1
Fire/explosion	2	0.4	0	2	0	0	0
Immersion	4	0.7	0	1	0	0	3
Jackknife	1	0.2	0	0	1	0	0
Downhill runaway	1	0.2	0	1	0	0	0
Cargo loss/shift	2	0.4	0	1	0	1	0
Individual fell off	44	7.9	0	19	14	9	2
Other noncollision	12	2.2	0	2	8	1	1
<b>NONCOLLISION Subtotal</b>	<b>138</b>	<b>24.9</b>	<b>0</b>	<b>56</b>	<b>41</b>	<b>28</b>	<b>13</b>

## HAD A COLLISION WITH NONFIXED OBJECT

Pedestrian	12	2.2	1	8	2	0	1
Motor vehicle in transport	173	31.2	3	53	18	32	67
Parked motor vehicle	16	2.9	0	4	0	1	11
Railway train	1	0.2	0	0	0	0	1
Animal	11	2.0	0	0	2	3	6
Other nonfixed objects	15	2.7	0	6	7	1	1
<b>COLLISION NONFIXED Subtotal</b>	<b>228</b>	<b>41.2</b>	<b>4</b>	<b>71</b>	<b>29</b>	<b>37</b>	<b>87</b>



## MICHIGAN SNOWMOBILE CRASHES (continued)

### Most Harmful Event

#### MOST SEVERE OUTCOME IN CRASH

HAD A COLLISION WITH FIXED OBJECT	Snowmobiles		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
Bridge/pier/abutment	2	0.4	0	0	2	0	0
Guardrail face	1	0.2	0	0	0	0	1
Traffic sign post	1	0.2	0	0	0	0	1
Signal post	1	0.2	0	1	0	0	0
Utility pole	1	0.2	0	1	0	0	0
Other pole	6	1.1	0	3	1	1	1
Culvert	3	0.5	0	0	0	0	3
Ditch	9	1.6	0	5	1	3	0
Embankment	11	2.0	1	4	4	1	1
Fence	7	1.3	1	2	2	1	1
Mailbox	3	0.5	0	2	1	0	0
Tree	97	17.5	6	40	27	12	12
Building	1	0.2	0	0	0	0	1
Traffic island	1	0.2	1	0	0	0	0
Fire hydrant	2	0.4	0	0	0	0	2
Other fixed object	28	5.1	1	13	8	3	3
<b>COLLISION FIXED Subtotal</b>	<b>174</b>	<b>31.4</b>	<b>10</b>	<b>71</b>	<b>46</b>	<b>21</b>	<b>26</b>
Unknown Event	15	2.5	1	9	2	2	1
<b>TOTAL MOST HARMFUL EVENT</b>	<b>555</b>	<b>100.0</b>	<b>15</b>	<b>207</b>	<b>118</b>	<b>88</b>	<b>127</b>

A total of 555 snowmobiles were reported in crashes in Michigan during 1993. Of these crashes, 15 were fatal with 15 people killed.





## MICHIGAN FARM EQUIPMENT CRASHES

A total of 368 crashes involving farm equipment were reported on Michigan roadways during 1993. Of these crashes, 8 were fatal crashes with 6 drivers and 1 passenger of the farm equipment killed.



## MICHIGAN VEHICLE - TRAIN CRASHES

According to Michigan Department of Transportation [5] figures, a total of 133 crashes involving trains were reported in Michigan during 1993. The National Highway Traffic Safety Administration's 1993 Fatal Accident Reporting System [6] reported 14 fatal train crashes in Michigan. 14 persons were killed as a result of those collisions.

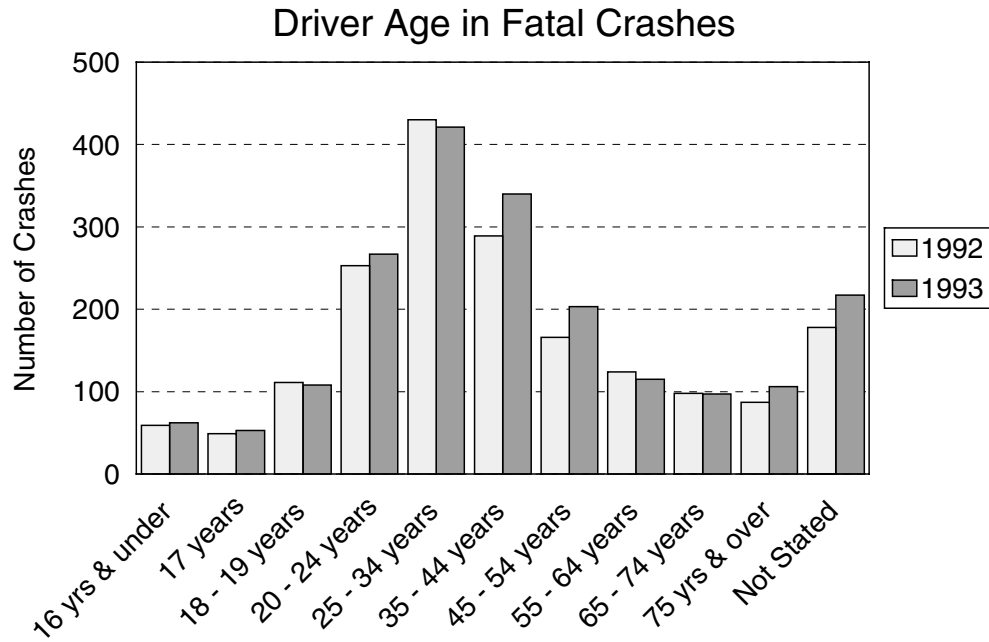
## MOTORCYCLE AND MOTOR SCOOTER DATA

MOTORCYCLE & MOTOR SCOOTER DATA	1992	1993	% Change
Registrations	120,335.0	119,845.0	-0.4
Deaths	48.0	58.0	20.8
Death Rate based on 10,000 cycle registrations	4.0	4.8	20.0
Estimated Mileage based on 3,000 miles per cycle (millions)	361,005.0	359,535.0	-0.4
Death Rate based on deaths per 100 million vehicle miles traveled	13.3	16.1	21.1

## DRIVER AGE

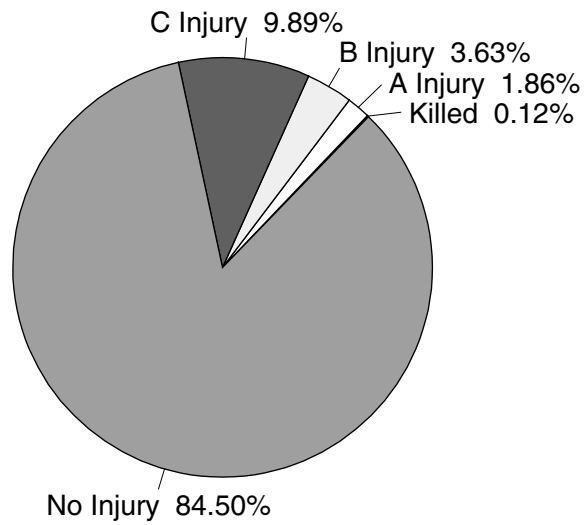
AGE OF DRIVERS IN FATAL CRASHES	1992	1993	% Change	% 1993 Fatal Crash Involvement	Percent Driving Population*
16 years and under	59	62	5.1	3.1	3.0
17 year	49	53	8.2	2.7	1.6
18 - 19 years	111	108	-2.7	5.4	3.4
20 - 24 years	253	267	5.5	13.4	10.6
25 - 34 years	430	421	-2.1	21.2	23.5
35 - 44 years	289	340	17.6	17.1	21.3
45 - 54 years	166	203	22.3	10.2	14.2
55 - 64 years	124	115	-7.3	5.8	9.9
65 - 74 years	98	97	-1.0	4.9	8.1
75 years and over	87	106	21.8	5.3	4.5
Not Stated	178	217	21.9	10.9	---
<b>TOTALS</b>	<b>1,844</b>	<b>1,989</b>	<b>7.9</b>	<b>100.0</b>	<b>100.0</b>

\* Figures courtesy of the Michigan Department of State [7]

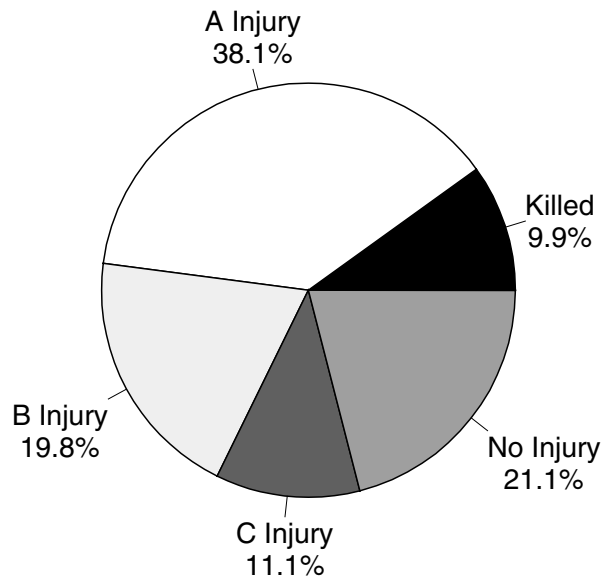


## DRIVER - NOT EJECTED vs. EJECTED

### Driver Injury Severity - Not Ejected



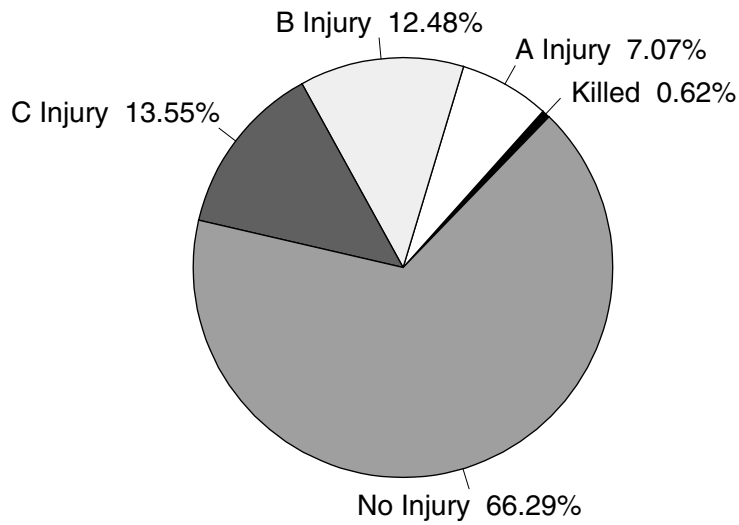
### Driver Injury Severity - Ejected



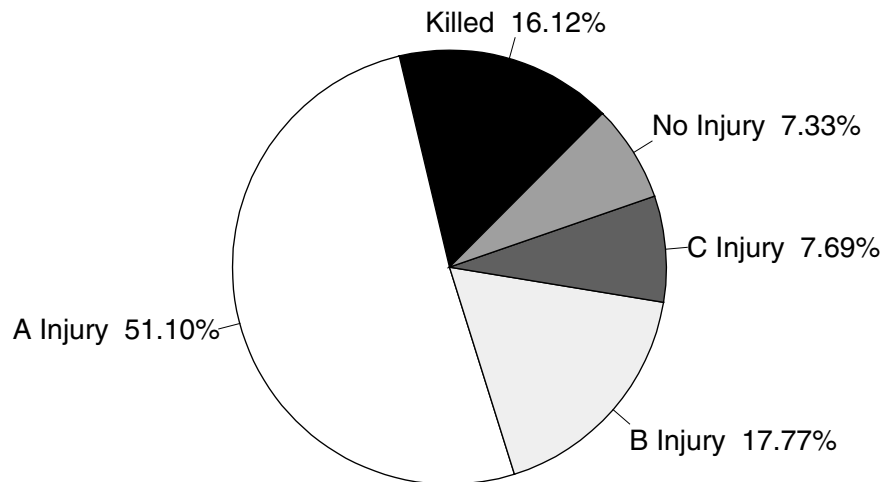
As can be seen in the two charts on this page, death and injury are much more likely when drivers are ejected from their vehicles.

## DRIVER HBD - NOT EJECTED vs. EJECTED

Driver HBD Injury Severity - Not Ejected



Driver HBD Injury Severity - Ejected



When compared to the previous page, these charts demonstrate that the injury severity is much worse for drivers who had been drinking in both ejected, and not ejected events.

## INJURY SEVERITY & RESTRAINT USE FOR CRASH INVOLVED KABC DRIVERS

