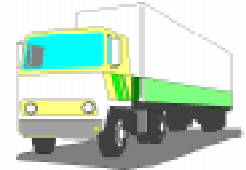




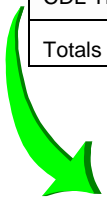
## VEHICLE TYPE CRASH INVOLVEMENT



### MOST SEVERE OUTCOME IN CRASH

### MOST SEVERE OUTCOME IN VEHICLE

Vehicle Types	Motor Vehicles		Fatal Crash		Injury	PDO	Fatality in Veh		Injury	No Injury
	Number	% of Total	Number	% of Total			Number	% of Total		
Passenger Car and Station Wagon	515,608	69.7	1348	63.4	129,405	384,855	821	73.2	83,775	431,012
Van and Motorhome	56,281	7.6	153	7.2	13,588	42,540	62	5.5	7,403	48,816
Pickup	105,040	14.2	329	15.5	22,414	82,297	129	11.5	11,721	93,190
Small Truck (under 10,000 lbs.)	12,035	1.6	26	1.2	2,642	9,367	11	1.0	1,381	10,643
Cycle	2,465	0.3	63	3.0	1,828	574	59	5.3	1,801	605
Moped	246	0.0	3	0.1	174	69	3	0.3	166	77
Go Cart	16	0.0	1	0.0	10	5	1	0.1	8	7
Snowmobile	476	0.1	16	0.8	306	154	15	1.3	273	188
Off Road Vehicle	177	0.0	5	0.2	129	43	5	0.4	116	56
Other	1,878	0.3	12	0.6	409	1,457	5	0.4	152	1,721
Uncoded	24,634	3.3	23	1.1	2,841	21,770	5	0.4	705	23,924
CDL Truck/Bus (breakdown below)	20,682	2.8	147	6.9	4,294	16,241	5	0.4	1,048	19,629
<b>Totals</b>	<b>739,538</b>	<b>100.0</b>	<b>2,126</b>	<b>100.0</b>	<b>178,040</b>	<b>559,372</b>	<b>1,121</b>	<b>100.0</b>	<b>108,549</b>	<b>629,868</b>



### CDL Truck/Bus Sub-category Types

Sub-category Types	Motor Vehicles		Fatal Crash		Injury	PDO	Fatality in Veh		Injury	No Injury
	Number	% of Total	Number	% of Total			Number	% of Total		
Uncoded Truck	2,804	13.6	14	9.5	525	2,265	1	20.0	112	2,691
Commercial Vehicle: Group A	9,856	47.7	93	63.3	2,074	7,689	3	60.0	425	9,428
Commercial Vehicle: Group B	4,501	21.8	23	15.6	969	3509	1	20.0	315	4,185
Commercial Vehicle: Group C	577	2.8	4	2.7	140	433	0	0.0	55	522
Other Truck	1,149	5.6	6	4.1	258	885	0	0.0	62	1,087
Unknown Truck	1,795	8.7	7	4.8	328	1,460	0	0.0	79	1,716
<b>Totals</b>	<b>20,682</b>	<b>100.0</b>	<b>147</b>	<b>100.0</b>	<b>4,294</b>	<b>16,241</b>	<b>5</b>	<b>100.0</b>	<b>1,048</b>	<b>19,629</b>

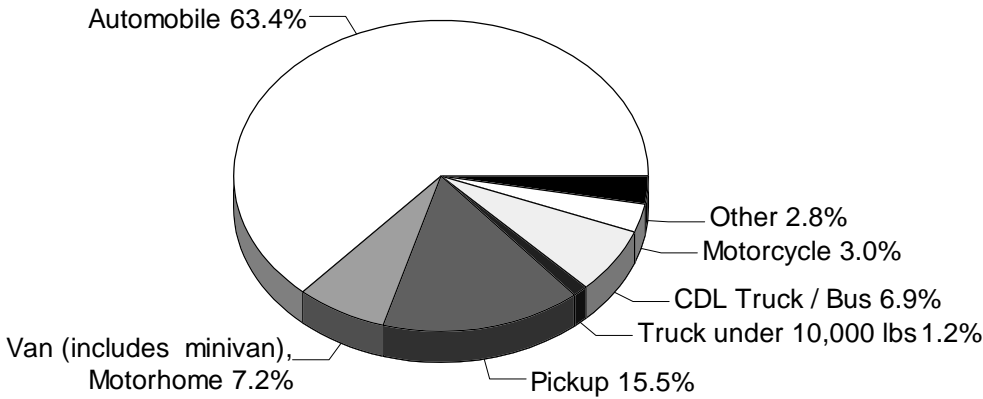
Group "A" is any vehicle that is towing a vehicle or trailer that has a gross vehicle weight rating (GVWR) over 10,000 lbs.

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.

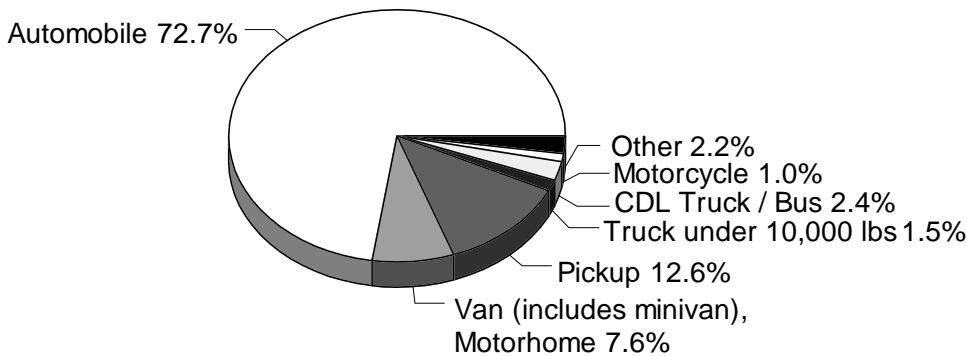
## VEHICLE TYPES IN CRASHES BY CRASH SEVERITY

### FATAL



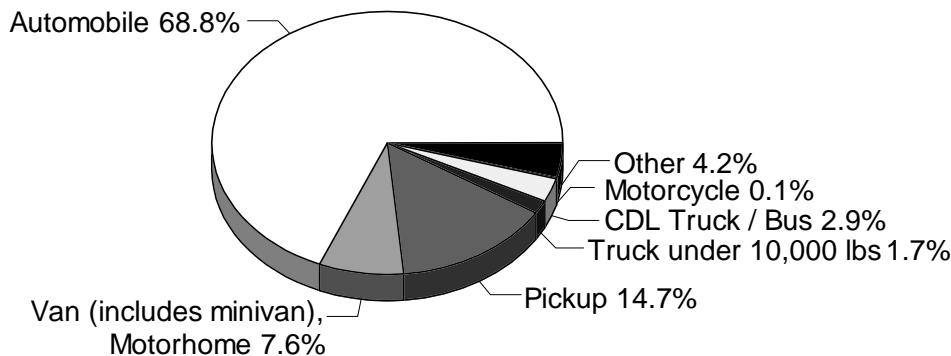
The top chart shows that 4 out of 5 vehicles involved in fatal crashes are automobiles or pickups. Van, Motorhome, the vehicle type that includes the popular minivan, has a fatal crash involvement of 7.2 percent.

### INJURY



As with fatal crashes, Injury and PDO crashes are represented primarily by cars and pickups. One should also note the decline in proportional representation for motorcycles and heavy trucks compared to their levels in fatal crashes.

### PROPERTY DAMAGE ONLY



## ACTION PRIOR TO CRASH

### MOST SEVERE OUTCOME IN CRASH

DRIVER ACTION	All Vehicles		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
Going straight ahead	374,254	50.6	1,550	12,360	24,460	57,231	278,653
Turning left	56,455	7.6	102	1,960	4,396	9,832	40,165
Turning right	20,764	2.8	6	329	822	2,414	17,193
Stopped on roadway	72,102	9.7	58	1,265	3,409	17,154	50,216
In prior crash	1,235	0.2	5	48	71	255	856
Changing lanes	17,143	2.3	36	259	628	1,737	14,483
Backing	18,707	2.5	7	80	254	748	17,618
Slowing/stopping on roadway	61,071	8.3	51	794	2,287	12,922	45,017
Slowing/stopping other	873	0.1	2	12	52	142	665
Starting up on roadway	13,218	1.8	39	360	823	2,320	9,676
Starting up other	456	0.1	2	25	31	69	329
Entering parking	1,033	0.1	1	14	36	87	895
Leaving parking	3,106	0.4	1	48	107	363	2,587
Entering roadway	11,308	1.5	28	300	689	1,723	8,568
Leaving roadway	1,562	0.2	21	97	173	186	1,085
Making U-turn	1,878	0.3	5	69	120	298	1,386
Overtaking or passing	6,716	0.9	29	238	361	774	5,314
Avoiding object	2,044	0.3	7	93	161	304	1,479
Avoiding pedestrian	198	0.0	3	31	25	31	108
Avoiding vehicle (front/back)	6,243	0.8	34	219	463	1,109	4,418
Avoiding vehicle (angle)	2,724	0.4	18	87	200	443	1,976
Driverless moving	628	0.1	2	19	19	44	544
Parked	31,702	4.3	52	460	908	1,460	28,822
Crossing at intersection	86	0.0	0	7	9	25	45
Crossing not at intersection	65	0.0	1	11	14	18	21
Getting on/off vehicle	14	0.0	0	3	2	3	6
In roadway with traffic	17	0.0	0	1	1	4	11
In roadway against traffic	13	0.0	0	0	1	4	8
Standing or lying in roadway	9	0.0	0	0	2	2	5
Pushing/working on vehicle	11	0.0	0	3	0	3	5
Other working in roadway	5	0.0	0	1	0	1	3
Playing in roadway	6	0.0	0	1	0	2	3
In roadway other reason	21	0.0	0	1	5	2	13
Not in roadway	14	0.0	0	1	4	5	4
Other	636	0.1	6	34	46	85	465
Unknown	33,221	4.5	60	726	1,465	4,240	26,730
<b>TOTAL</b>	<b>739,538</b>	<b>100.0</b>	<b>2,126</b>	<b>19,956</b>	<b>42,044</b>	<b>116,040</b>	<b>559,372</b>

## ACTION PRIOR TO CRASH (continued)

### MOTORCYCLIST – INJURY SEVERITY

MOTORCYCLIST ACTION	All Motorcycles		All Motorcyclists		Fatal	Injury			No Injury
	Number	% of Total	Number	% of Total		A	B	C	
Going straight ahead	1,587	64.4	1,842	65.0	48	471	605	384	291
Turning left	132	5.4	149	5.3	0	30	46	38	30
Turning right	89	3.6	101	3.6	0	14	33	23	30
Stopped on roadway	90	3.7	95	3.4	1	8	10	18	58
In prior crash	0	0.0	0	0.0	0	0	0	0	0
Changing lanes	39	1.6	45	1.6	0	9	18	6	8
Backing	7	0.3	10	0.4	0	0	5	3	2
Slowing/stopping on roadway	113	4.6	123	4.3	3	22	26	33	39
Slowing/stopping other	1	0.0	2	0.1	0	0	0	2	0
Starting up on roadway	29	1.2	33	1.2	0	4	11	7	11
Starting up other	5	0.2	5	0.2	0	2	0	0	1
Entering parking	1	0.0	1	0.0	0	0	0	1	0
Leaving parking	4	0.2	4	0.1	0	0	1	0	3
Entering roadway	23	0.9	34	1.2	0	7	8	6	10
Leaving roadway	11	0.4	11	0.4	2	0	3	3	2
Making U-turn	10	0.4	12	0.4	1	3	3	2	2
Overtaking or passing	60	2.4	64	2.3	4	15	11	16	13
Avoiding object	24	1.0	26	0.9	0	4	5	6	10
Avoiding pedestrian	0	0.0	0	0.0	0	0	0	0	0
Avoiding vehicle (front/back)	62	2.5	66	2.3	1	7	23	16	19
Avoiding vehicle (angle)	37	1.5	41	1.4	1	5	17	12	5
Driverless moving	2	0.1	2	0.1	0	1	0	0	0
Parked	30	1.2	30	1.1	0	0	0	0	8
Crossing at intersection	1	0.0	6	0.2	0	2	1	3	0
Crossing not at intersection	0	0.0	4	0.1	0	1	1	1	1
Getting on/off vehicle	0	0.0	0	0.0	0	0	0	0	0
In roadway with traffic	0	0.0	1	0.0	0	0	0	1	0
In roadway against traffic	1	0.0	6	0.2	0	0	2	3	1
Standing or lying in roadway	0	0.0	0	0.0	0	0	0	0	0
Pushing/working on vehicle	0	0.0	1	0.0	0	0	0	0	1
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	0	0.0	0	0	0	0	0
Not in roadway	0	0.0	0	0.0	0	0	0	0	0
Other	6	0.2	7	0.2	1	0	5	1	0
Unknown	101	4.1	114	4.0	1	22	36	21	21
<b>TOTAL</b>	<b>2,465</b>	<b>100.0</b>	<b>2,835*</b>	<b>100.0</b>	<b>63</b>	<b>627</b>	<b>870</b>	<b>606</b>	<b>566</b>

\* Includes 103 motorcyclists (drivers and passengers) with unknown injury severity

## ACTION PRIOR TO CRASH (continued)

### BICYCLIST - INJURY SEVERITY

BICYCLIST ACTION	All Bicycles		Fatal	Injury			No Injury
	Number	% of Total		A	B	C	
Going straight ahead	1,579	53.9	15	173	554	541	228
Turning left	88	3.0	0	17	34	25	7
Turning right	41	1.4	0	7	10	14	9
Stopped on roadway	23	0.8	1	1	9	7	4
In prior crash	1	0.0	0	0	1	0	0
Changing lanes	36	1.2	0	4	12	13	7
Backing	4	0.1	0	0	2	1	1
Slowing/stopping on roadway	5	0.2	0	1	1	1	2
Slowing/stopping other	8	0.3	0	1	2	5	0
Starting up on roadway	22	0.8	0	2	6	8	6
Starting up other	2	0.1	0	0	0	1	1
Entering parking	3	0.1	0	0	2	0	0
Leaving parking	7	0.2	0	2	3	1	1
Entering roadway	204	7.0	5	40	71	66	17
Leaving roadway	4	0.1	0	0	3	1	0
Making U-turn	9	0.3	1	1	2	3	2
Overtaking or passing	4	0.1	0	1	2	0	0
Avoiding object	2	0.1	0	0	0	1	1
Avoiding pedestrian	0	0.0	0	0	0	0	0
Avoiding vehicle (front/back)	9	0.3	1	1	2	3	2
Avoiding vehicle (angle)	10	0.3	1	3	2	3	1
Driverless moving	2	0.1	0	2	0	0	0
Parked	3	0.1	0	0	1	0	1
Crossing at intersection	340	11.6	0	36	112	128	55
Crossing not at intersection	149	5.1	2	27	65	37	15
Getting on/off vehicle	1	0.0	0	0	1	0	0
In roadway with traffic	32	1.1	0	3	15	12	2
In roadway against traffic	50	1.7	2	10	15	16	6
Standing or 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	1	0.0	0	1	0	0	0
Playing in roadway	13	0.4	0	2	5	6	0
In roadway other reason	22	0.8	0	4	8	8	1
Not in roadway	26	0.9	0	2	7	9	6
Other	70	2.4	1	4	30	17	12
Unknown	158	5.4	0	15	64	38	19
<b>TOTAL</b>	<b>2,929*</b>	<b>100.0</b>	<b>29</b>	<b>360</b>	<b>1,041</b>	<b>966</b>	<b>406</b>

\* Includes 127 bicyclists with unknown injury severity

## ACTION PRIOR TO CRASH (continued)

### PEDESTRIAN - INJURY SEVERITY

PEDESTRIAN ACTION	All Pedestrians		Fatal	Injury			No Injury
	Number	% of Total		A	B	C	
Going straight ahead	170	4.5	3	34	41	60	22
Turning left	31	0.8	2	8	5	11	5
Turning right	12	0.3	1	3	2	3	2
Stopped on roadway	13	0.3	0	4	6	2	0
In prior crash	9	0.2	2	1	3	2	0
Changing lanes	0	0.0	0	0	0	0	0
Backing	1	0.0	0	0	1	0	0
Slowing/stopping on roadway	2	0.1	0	1	0	0	1
Slowing/stopping other	2	0.1	0	0	0	2	0
Starting up on roadway	1	0.0	0	1	0	0	0
Starting up other	0	0.0	0	0	0	0	0
Entering parking	0	0.0	0	0	0	0	0
Leaving parking	3	0.1	0	0	1	2	0
Entering roadway	31	0.8	1	6	13	5	2
Leaving roadway	4	0.1	0	3	1	0	0
Making U-turn	1	0.0	0	0	0	1	0
Overtaking or passing	3	0.1	0	0	1	1	1
Avoiding object	1	0.0	0	0	1	0	0
Avoiding pedestrian	1	0.0	0	0	1	0	0
Avoiding vehicle (front/back)	4	0.1	0	2	2	0	0
Avoiding vehicle (angle)	0	0.0	0	0	0	0	0
Driverless moving	2	0.1	0	1	0	0	1
Parked	17	0.5	0	4	1	2	7
Crossing at intersection	819	21.8	14	173	236	321	42
Crossing not at intersection	1,135	30.3	72	299	387	286	38
Getting on/off vehicle	72	1.9	1	20	18	28	2
In roadway with traffic	182	4.9	19	39	52	49	15
In roadway against traffic	57	1.5	4	10	17	14	10
Standing or lying in roadway	150	4.0	13	43	42	38	9
Pushing/working on vehicle	47	1.3	3	15	9	16	3
Other working in roadway	42	1.1	1	5	6	27	3
Playing in roadway	91	2.4	3	24	26	33	1
In roadway other reason	194	5.2	7	44	64	66	9
Not in roadway	186	5.0	10	53	53	65	3
Other	124	3.3	1	26	42	45	6
Unknown	342	9.1	10	87	88	94	19
<b>TOTAL</b>	<b>3,749*</b>	<b>100.0</b>	<b>167</b>	<b>906</b>	<b>1,119</b>	<b>1,173</b>	<b>201</b>

\* Includes 183 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	6,481	0.9	6	202	446	1,052	4,775
Cross center/median	1,260	0.2	1	52	85	152	970
Ran off road left	1,070	0.1	0	30	75	143	822
Ran off road right	1,574	0.2	3	50	106	249	1,166
Re-enter road	232	0.0	1	15	16	47	153
Overturn	9,080	1.2	109	854	1,674	2,007	4,436
Separation of units	3,196	0.4	6	74	171	586	2,359
Fire/explosion	989	0.1	7	23	33	96	830
Immersion	126	0.0	4	9	14	17	82
Jackknife	434	0.1	2	4	11	42	375
Downhill runaway	91	0.0	0	3	5	13	70
Cargo loss/shift	795	0.1	0	5	10	37	743
Individual fell off	431	0.1	13	118	152	72	76
Other noncollision	2,171	0.3	1	60	124	233	1,753
NONCOLLISION Subtotal	27,930	3.8	153	1,499	2,922	4,746	18,610

### MOST SEVERE OUTCOME IN CRASH

HAD A COLLISION WITH NONFIXED OBJECT	Motor Vehicles		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
Pedestrian	3,019	0.4	160	754	894	897	314
Pedalcycle	2,658	0.4	29	308	888	863	570
Motor vehicle in transport	500,835	67.7	1,389	12,989	28,408	90,970	367,079
Parked motor vehicle	21,493	2.9	20	274	537	1,004	19,658
Railway train	184	0.0	9	29	18	16	112
Animal	61,417	8.3	4	88	414	891	60,020
Other nonfixed objects	6,281	0.8	7	95	183	432	5,564
COLLISION NONFIXED Subtotal	595,887	80.6	1,618	14,537	31,342	95,073	453,317

## 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	802	0.1	15	38	74	129	546
Bridge parapet end	499	0.1	1	6	29	42	421
Bridge rail	556	0.1	1	18	49	95	393
Guardrail face	3,202	0.4	7	84	213	409	2,489
Guardrail end	502	0.1	3	37	82	67	313
Median barrier	3,090	0.4	6	115	358	724	1,887
Highway traffic sign post	2,704	0.4	1	19	58	130	2,496
Signal post	327	0.0	0	10	13	20	284
Luminaire/light support	682	0.1	3	38	76	80	485
Utility pole	3,932	0.5	28	225	562	652	2,465
Other pole	1,229	0.2	4	50	64	126	985
Culvert	748	0.1	9	56	110	108	465
Curb	2,040	0.3	3	46	90	186	1,715
Ditch	7,539	1.0	25	304	755	1,138	5,317
Embankment	2,023	0.3	9	104	251	324	1,335
Fence	1,649	0.2	1	27	56	119	1,446
Mailbox	2,401	0.3	1	15	50	103	2,232
Tree	10,758	1.5	159	964	1,586	1,665	6,384
Rail crossing signal	125	0.0	0	3	6	5	111
Building	1,059	0.1	11	69	128	157	694
Traffic island	68	0.0	0	1	6	4	57
Fire hydrant	610	0.1	2	11	47	72	478
Impact attenuator	55	0.0	0	4	12	10	29
Other fixed object	3,713	0.5	12	131	280	363	2,927
<b>COLLISION FIXED Subtotal</b>	<b>50,313</b>	<b>6.8</b>	<b>301</b>	<b>2,375</b>	<b>4,955</b>	<b>6,728</b>	<b>35,954</b>

### MOST SEVERE OUTCOME IN CRASH

	Motor Vehicles		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
Unknown Event	65,408	8.8	54	1,545	2,825	9,493	51,491
<b>TOTAL MOST HARMFUL EVENT</b>	<b>739,538</b>	<b>100.0</b>	<b>2,126</b>	<b>19,956</b>	<b>42,044</b>	<b>116,040</b>	<b>559,372</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	2,050	0.3	2	62	139	401	1,446
Lights/reflectors	464	0.1	0	22	26	58	358
Steering	252	0.0	0	5	24	45	178
Tires/wheels	785	0.1	6	36	75	113	555
Windows	155	0.0	0	9	12	29	105
Other	1,410	0.2	2	58	78	167	1,105
Unknown/None	734,422	99.3	2,116	19,764	41,690	115,227	555,625
<b>TOTAL</b>	<b>739,538</b>	<b>100.0</b>	<b>2,126</b>	<b>19,956</b>	<b>42,044</b>	<b>116,040</b>	<b>559,372</b>

## DRIVER HAZARDOUS ACTION

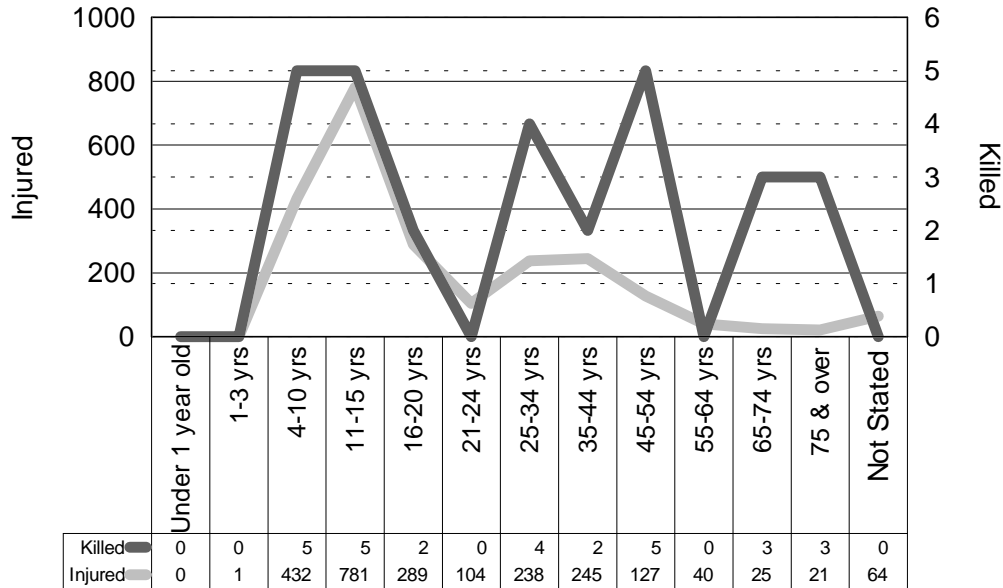
### MOST SEVERE OUTCOME IN CRASH

HAZARDOUS ACTION	All Vehicles		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
None	373,266	50.5	882	8,861	18,858	56,222	288,443
Speed too fast	43,671	5.9	305	2,199	4,186	7,021	29,960
Speed too slow	1,250	0.2	8	31	76	263	872
Failed to yield	66,252	9.0	192	2,396	5,483	12,103	46,078
Disregard traffic control	17,314	2.3	129	1,120	2,039	4,014	10,012
Drove wrong way	595	0.1	12	35	49	92	407
Drove left of center	4,646	0.6	109	413	536	641	2,947
Improper passing	5,536	0.7	16	110	224	566	4,620
Improper lane use	16,210	2.2	22	201	483	1,424	14,080
Improper turn	9,891	1.3	5	218	456	1,262	7,950
Improper/no signal	1,062	0.1	0	12	52	106	892
Improper backing	14,072	1.9	2	27	118	423	13,502
Unable to stop in assured clear distance	96,401	13.0	67	1,499	4,148	21,107	69,580
Other	38,751	5.2	197	1,723	3,382	5,299	28,150
Unknown	50,621	6.8	180	1,111	1,954	5,497	41,879
<b>TOTAL</b>	<b>739,538</b>	<b>100.0</b>	<b>2,126</b>	<b>19,956</b>	<b>42,044</b>	<b>116,040</b>	<b>559,372</b>



## MICHIGAN BICYCLE CRASHES

### 1997 Bicycle Crash Information



In 1997, there were 2,929 bicyclists involved in motor vehicles crashes, with 29 bicyclists killed and 2,367 injured. The number of bicyclists killed represents a 9.4 percent decrease from 1996.

Children under 16 years of age accounted for 10 (34.5%) of the bicycle deaths in 1997.

### BICYCLE HELMET USE AND INJURY SEVERITY

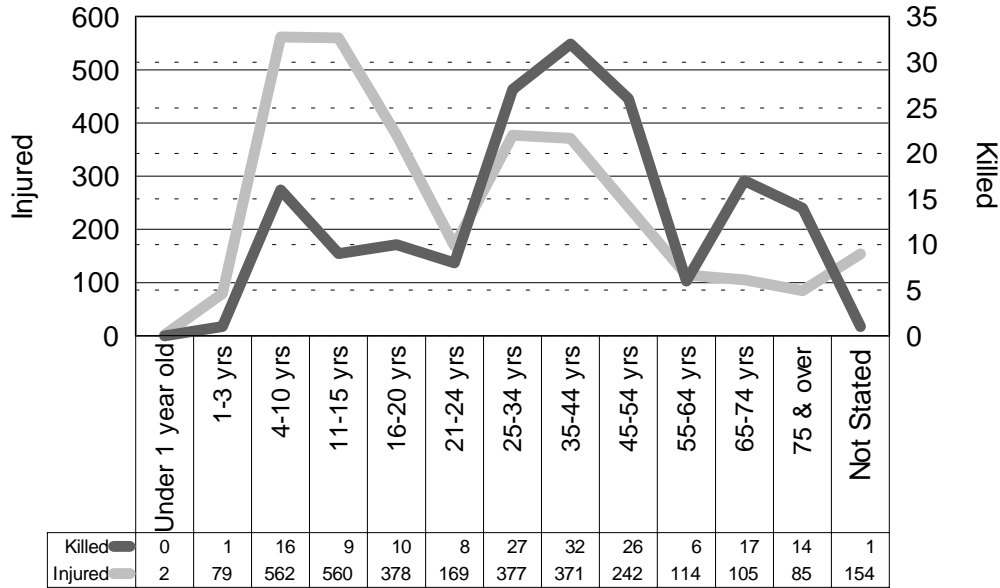
HELMET USE	Fatality	Injury			No Injury
		A	B	C	
Worn	4	16	47	31	15
Not Worn	14	130	340	300	102
Unknown	11	214	654	635	289
<b>TOTALS</b>	<b>29</b>	<b>360</b>	<b>1,041</b>	<b>966</b>	<b>406</b>

The National Center for Statistics and Analysis of the National Highway Traffic Safety Administration cites a study by the Centers for Disease Control [12] in giving us the following information: "Bicycle helmets are 85 to 88 percent effective in mitigating head and brain injuries, making the use of helmets the **single most effective countermeasure** available to reduce head injuries and fatalities resulting from bicycle crashes."



# MICHIGAN PEDESTRIAN CRASHES

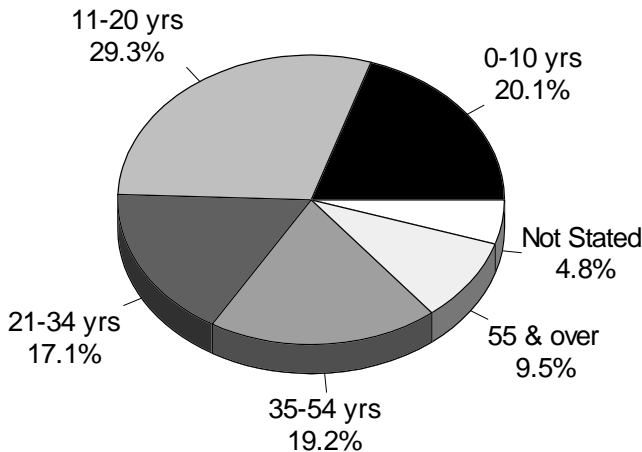
## 1997 Pedestrian Crash Information



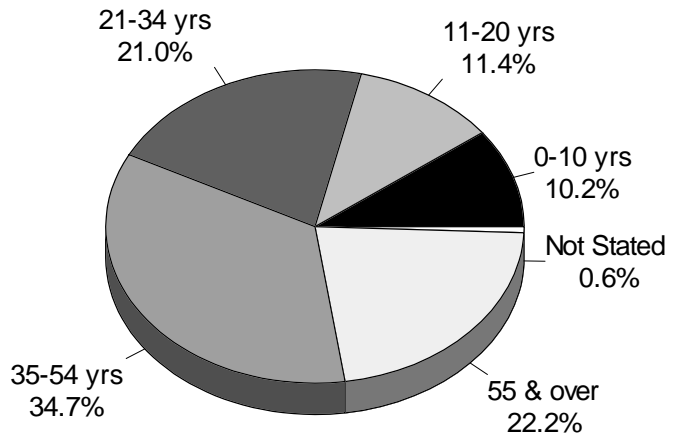
In 1997, there were 3,749 pedestrians involved in motor vehicles crashes, with 167 pedestrians killed and 3,198 injured. The number killed represents a 13.0 percent decrease in fatalities from 1996.

Children under 16 years of age accounted for 26 (15.6%) of the pedestrian deaths in 1997. Adults over the age of 54 accounted for 37 (22.2%) of the pedestrian deaths in 1997.

### Pedestrians Injured



### Pedestrians Killed





## MICHIGAN SNOWMOBILE ON ROADWAY CRASHES

### Most Harmful Event

#### MOST SEVERE OUTCOME IN CRASH

NONCOLLISION	Snowmobiles		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
Loss of control	10	2.1	0	6	2	0	2
Cross center/median	0	0.0	0	0	0	0	0
Ran off road left	1	0.2	0	0	0	0	1
Ran off road right	2	0.4	0	1	0	1	0
Re-enter road	0	0.0	0	0	0	0	0
Overturn	28	5.9	0	8	10	5	5
Separation of units	2	0.4	0	0	0	0	2
Fire/explosion	0	0.0	0	0	0	0	0
Immersion	0	0.0	0	0	0	0	0
Jackknife	0	0.0	0	0	0	0	0
Downhill runaway	0	0.0	0	0	0	0	0
Cargo loss/shift	1	0.2	0	0	0	0	1
Individual fell off	32	6.7	0	11	12	9	0
Other noncollision	4	0.8	0	0	2	1	1
NONCOLLISION Subtotal	80	16.8	0	26	26	16	12

#### MOST SEVERE OUTCOME IN CRASH

HAD A COLLISION WITH NONFIXED OBJECT	Snowmobiles		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
Pedestrian	4	0.8	0	2	1	1	0
Pedalcycle	1	0.2	0	0	0	1	0
Motor vehicle in transport	201	42.2	9	53	22	41	76
Parked motor vehicle	21	4.4	1	7	1	4	8
Railway train	1	0.2	0	0	0	0	1
Animal	17	3.6	0	2	0	3	12
Other nonfixed objects	6	1.3	0	2	2	1	1
COLLISION NONFIXED Subtotal	251	52.7	10	66	26	51	98



## MICHIGAN SNOWMOBILE ON ROADWAY 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	1	0	1	0
Bridge parapet end	0	0.0	0	0	0	0	0
Bridge rail	0	0.0	0	0	0	0	0
Guardrail face	1	0.2	0	0	0	1	0
Guardrail end	0	0.0	0	0	0	0	0
Median barrier	1	0.2	0	1	0	0	0
Highway traffic sign post	4	0.8	0	3	0	0	1
Signal post	0	0.0	0	0	0	0	0
Luminaire/light support	1	0.2	0	0	0	0	1
Utility pole	4	0.8	0	1	0	1	2
Other pole	3	0.6	0	0	0	0	3
Culvert	5	1.1	0	0	1	3	1
Curb	0	0.0	0	0	0	0	0
Ditch	4	0.8	0	2	0	0	2
Embankment	10	2.1	0	3	6	0	1
Fence	3	0.6	0	0	1	0	2
Mailbox	3	0.6	0	0	2	0	1
Tree	50	10.5	5	20	9	7	9
Rail crossing signal	0	0.0	0	0	0	0	0
Building	2	0.4	0	0	1	0	1
Traffic island	0	0.0	0	0	0	0	0
Fire hydrant	0	0.0	0	0	0	0	0
Impact attenuator	0	0.0	0	0	0	0	0
Other fixed object	19	4.0	1	6	3	1	8
COLLISION FIXED Subtotal	112	23.5	6	37	23	14	32
Unknown Event	33	6.9	0	10	6	5	12
<b>TOTAL MOST HARMFUL EVENT</b>	<b>476</b>	<b>100.0</b>	<b>16</b>	<b>139</b>	<b>81</b>	<b>86</b>	<b>154</b>

A total of 476 snowmobiles were reported in crashes on Michigan roadways during 1997. Of these snowmobiles, 16 were involved in fatal crashes with 15 of their drivers and 1 passenger killed.



## MICHIGAN ORV/ATV ON ROADWAY CRASHES

### Most Harmful Event

### MOST SEVERE OUTCOME IN CRASH

NONCOLLISION	ORV/ATV		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
Loss of control	5	2.8	0	1	3	1	0
Ran off road left	0	0.0	0	0	0	0	0
Overturn	29	16.4	1	11	13	3	1
Separation of Unit	1	0.6	0	0	0	1	0
Individual fell off	12	6.8	0	5	6	1	0
Other noncollision	4	2.3	0	1	2	0	1
<b>NONCOLLISION Subtotal</b>	<b>51</b>	<b>28.8</b>	<b>1</b>	<b>18</b>	<b>24</b>	<b>6</b>	<b>2</b>
<b>HAD A COLLISION WITH NONFIXED OBJECT</b>							
Pedestrian	0	0.0	0	0	0	0	0
Pedalcycle	1	0.6	0	0	0	1	0
Motor vehicle in transport	67	37.9	0	13	12	13	29
Parked motor vehicle	5	2.8	0	2	0	0	3
Animal	4	2.3	0	0	0	0	4
Other nonfixed objects	2	1.1	0	0	0	1	1
<b>COLLISION NONFIXED Subtotal</b>	<b>79</b>	<b>44.6</b>	<b>0</b>	<b>15</b>	<b>12</b>	<b>15</b>	<b>37</b>
<b>HAD A COLLISION WITH FIXED OBJECT</b>							
Bridge rail	1	0.6	0	0	1	0	0
Guardrail face	0	0.0	0	0	0	0	0
Traffic sign post	0	0.0	0	0	0	0	0
Luminaire support	0	0.0	0	0	0	0	0
Utility pole	2	1.1	1	0	0	1	0
Culvert	0	0.0	0	0	0	0	0
Ditch	6	3.4	1	1	1	1	2
Embankment	0	0.0	0	0	0	0	0
Mailbox	2	1.1	0	0	2	0	0
Tree	17	9.6	2	8	3	4	0
Building	1	0.6	0	0	1	0	0
Other fixed object	7	4.0	0	2	3	2	0
<b>COLLISION FIXED Subtotal</b>	<b>36</b>	<b>20.3</b>	<b>4</b>	<b>11</b>	<b>11</b>	<b>8</b>	<b>2</b>
Unknown Event	11	6.2	0	2	4	3	2
<b>TOTAL MOST HARMFUL EVENT</b>	<b>177</b>	<b>100.0</b>	<b>5</b>	<b>46</b>	<b>51</b>	<b>32</b>	<b>43</b>

A total of 177 Off Road Vehicles/All Terrain Vehicles were reported in crashes on Michigan roadways during 1997. Of these ORV/ATVs, 5 were involved in fatal crashes and 5 of their operators were killed.

## MICHIGAN SNOWMOBILE ON ROADWAY CRASHES

### MOST SEVERE OUTCOME IN CRASH

Driver Hazardous Action	All Snowmobiles		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
None	125	26.3	4	28	21	21	51
Speed too fast	126	26.5	4	53	24	23	22
Speed too slow	2	0.4	0	0	2	0	0
Failed to yield	63	13.2	1	14	5	10	33
Disregard traffic control	5	1.1	0	3	0	0	2
Drove wrong way	3	0.6	1	1	1	0	0
Drove left of center	9	1.9	1	3	0	2	3
Improper passing	3	0.6	0	0	0	2	1
Improper lane use	4	0.8	0	0	1	2	1
Improper turn	4	0.8	0	1	0	2	1
Improper/no signal	0	0.0	0	0	0	0	0
Improper backing	2	0.4	0	0	0	0	2
Unable to stop in assured clear distance	36	7.6	1	12	9	4	10
Other	63	13.2	4	14	14	13	18
Unknown	31	6.5	0	10	4	7	10
<b>TOTAL</b>	<b>476</b>	<b>100.0</b>	<b>16</b>	<b>139</b>	<b>81</b>	<b>86</b>	<b>154</b>

## MICHIGAN ORV/ATV ON ROADWAY CRASHES

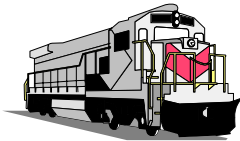
### MOST SEVERE OUTCOME IN CRASH

Driver Hazardous Action	All ORV/ATVs		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
None	39	22.0	0	8	8	11	12
Speed too fast	37	20.9	3	13	10	9	2
Speed too slow	0	0.0	0	0	0	0	0
Failed to yield	20	11.3	0	6	4	4	6
Disregard traffic control	2	1.1	0	0	2	0	0
Drove wrong way	0	0.0	0	0	0	0	0
Drove left of center	2	1.1	0	1	0	0	1
Improper passing	1	0.6	0	0	0	1	0
Improper lane use	4	2.3	0	1	0	0	3
Improper turn	2	1.1	0	1	0	0	1
Improper/no signal	0	0.0	0	0	0	0	0
Improper backing	2	1.1	0	0	0	0	2
Unable to stop in assured clear distance	8	4.5	0	2	1	1	4
Other	47	26.6	0	10	21	6	10
Unknown	13	7.3	2	4	5	0	2
<b>TOTAL</b>	<b>177</b>	<b>100.0</b>	<b>5</b>	<b>46</b>	<b>51</b>	<b>32</b>	<b>43</b>



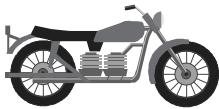
## MICHIGAN FARM EQUIPMENT CRASHES

A total of 251 crashes involving farm equipment were reported on Michigan roadways during 1997. Of these crashes, 2 were fatal crashes with 1 driver and 1 passenger of the farm equipment killed.



## MICHIGAN VEHICLE - TRAIN CRASHES

A total of 124 crashes involving trains were reported in Michigan during 1997. The National Highway Traffic Safety Administration's 1997 Fatal Accident Reporting System [13] reported 11 fatal train crashes in Michigan, and 14 persons killed as a result of those collisions.

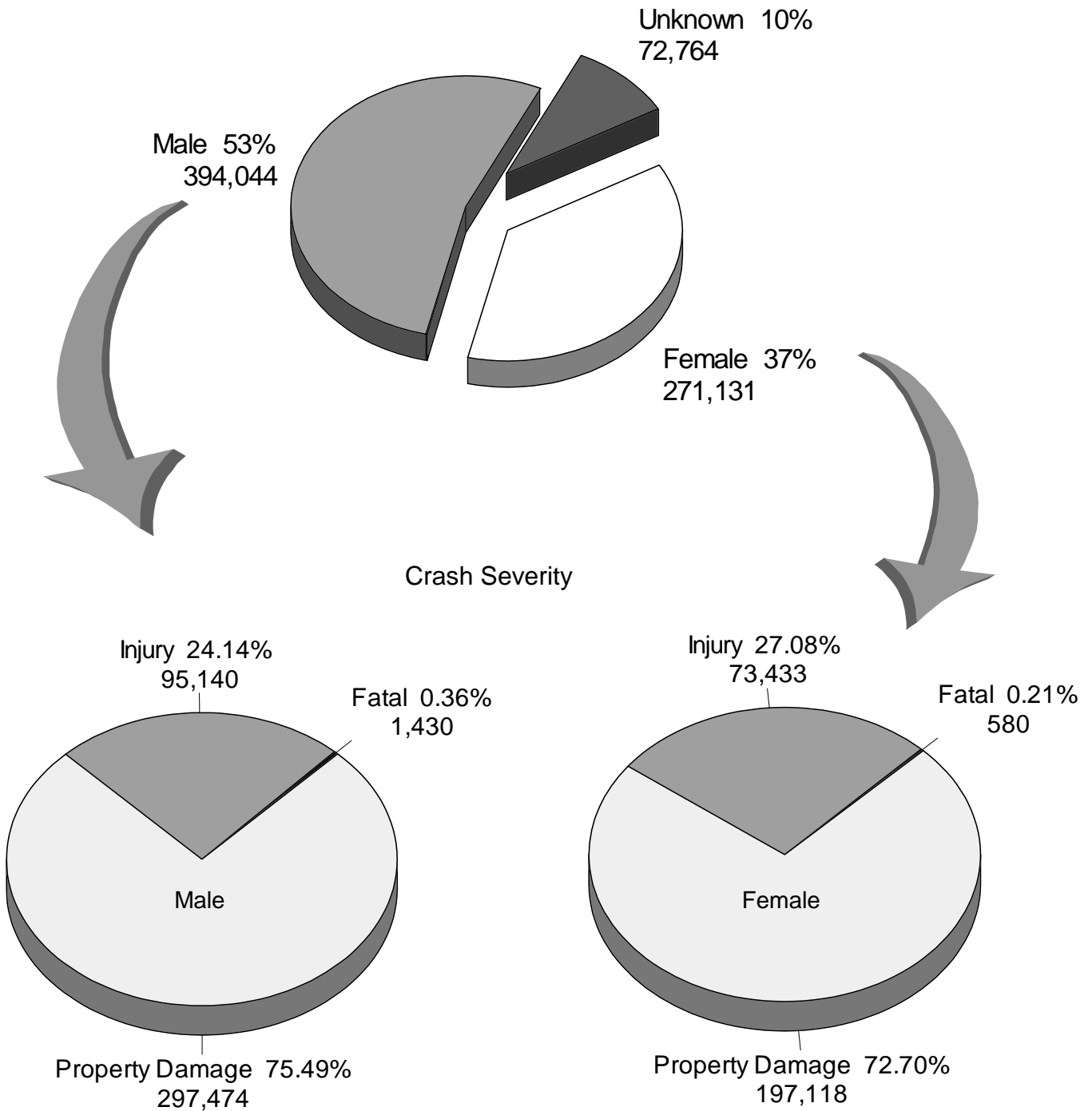


## MOTORCYCLE AND MOTOR SCOOTER DATA

MOTORCYCLE & MOTOR SCOOTER DATA	1996	1997	% Change
Registrations	128,335.0	136,030.0	6.0
Crashes	2,468.0	2,465.0	-0.1
Deaths	62.0	63.0	1.6
Persons Injured	2,200.0	2,103.0	-4.4
Death Rate based on 10,000 cycle registrations	4.8	4.6	-4.2
Estimated Mileage based on 3,000 miles per cycle	385,005,000.0	408,090,000.0	6.0
Death Rate based on deaths per 100 million vehicle miles traveled	16.1	15.4	-4.3

Motorcycles were involved in 0.58 percent of all traffic crashes in Michigan in 1997. Injuries were proportionately more severe to motorcyclists than to persons in motor vehicles. The 1997 death rate for motorcyclists was 15.4 per 100 million vehicle miles traveled compared to the overall 1.6 mileage death rate per 100 million vehicle miles traveled.

## DRIVER GENDER INFORMATION - ALL CRASHES



A higher proportion of crashes involved male drivers than female drivers. When we examine the severity of crashes involving drivers of each gender, we see that fatal crashes are more prevalent among male drivers than female drivers (0.4% vs. 0.2%).

This 1997 chart was processed with numbers for all drivers (vehicle level).

## REPORTED AGE OF DRIVERS INVOLVED IN ALL 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	1,098	3	105	65	245	238	180	105	78	26	53
Alger	616	6	81	51	103	126	81	44	28	17	79
Allegan	5,937	31	998	558	1,296	1,159	688	364	202	147	494
Alpena	2,075	7	389	146	331	400	254	174	133	83	158
Antrim	1,402	4	207	122	276	276	195	108	70	41	103
Arenac	1,405	5	219	102	273	303	200	125	70	40	68
Baraga	612	4	70	49	122	123	90	44	30	19	61
Barry	3,301	18	544	263	735	663	461	262	125	67	163
Bay	7,394	27	1,296	643	1,337	1,311	861	459	341	263	856
Benzie	860	4	116	65	163	195	118	63	43	25	68
Berrien	9,864	41	1,412	742	1,772	1,572	1,111	659	452	290	1,813
Branch	3,119	11	518	276	591	574	388	193	124	89	355
Calhoun	11,030	53	1,645	908	2,126	2,019	1,331	710	519	311	1,408
Cass	2,764	15	386	200	513	485	298	180	94	55	538
Charlevoix	1,782	9	282	114	323	402	216	134	87	48	167
Cheboygan	1,449	7	213	112	270	294	184	107	82	41	139
Chippewa	2,394	6	354	228	454	414	268	146	94	60	370
Clare	2,196	6	332	172	447	469	301	186	117	63	103
Clinton	4,123	15	655	366	816	833	586	281	161	100	310
Crawford	1,114	4	135	75	223	236	177	83	52	26	103
Delta	3,546	11	560	248	573	656	470	247	204	138	439
Dickinson	2,146	4	277	92	332	409	269	135	111	99	418
Eaton	7,024	20	1,246	591	1,412	1,339	980	479	264	158	535
Emmet	2,695	7	422	186	545	536	362	199	113	74	251
Genesee	29,140	138	4,547	2,487	5,805	5,322	3,605	1,840	1,233	719	3,444
Gladwin	1,439	7	216	98	331	303	200	132	71	41	40
Gogebic	1,049	3	157	45	125	140	98	53	62	58	308
Grand Traverse	6,468	16	1,145	487	1,238	1,295	870	442	280	193	502
Gratiot	2,501	11	413	253	494	460	323	187	111	92	157
Hillsdale	3,164	9	545	296	642	562	394	219	104	98	295
Houghton	2,136	3	354	217	347	332	245	148	99	75	316
Huron	2,597	6	471	194	502	489	358	197	138	105	137
Ingham	23,426	75	3,738	2,889	4,840	4,106	2,818	1,300	731	488	2,441
Ionia	3,889	18	670	396	853	774	514	238	118	96	212
Iosco	1,746	3	267	130	341	336	245	159	91	78	96
Iron	1,107	3	130	64	146	199	153	95	86	46	185
Isabella	4,056	16	728	544	785	722	463	280	158	83	277
Jackson	11,588	40	1,897	907	2,355	2,151	1,447	749	465	359	1,218
Kalamazoo	17,061	74	2,724	1,910	3,527	2,969	2,066	984	646	440	1,721
Kalkaska	1,170	2	181	97	240	237	172	82	52	35	72
Kent	46,687	192	7,335	4,845	10,386	8,686	5,263	2,507	1,546	1,067	4,860
Keweenaw	102	0	14	13	18	16	8	5	6	5	17
Lake	799	5	79	47	164	176	132	79	42	27	48
Lapeer	5,587	30	1,008	458	1,247	1,201	726	350	172	90	305
Leelanau	952	4	132	82	156	198	125	81	45	22	107

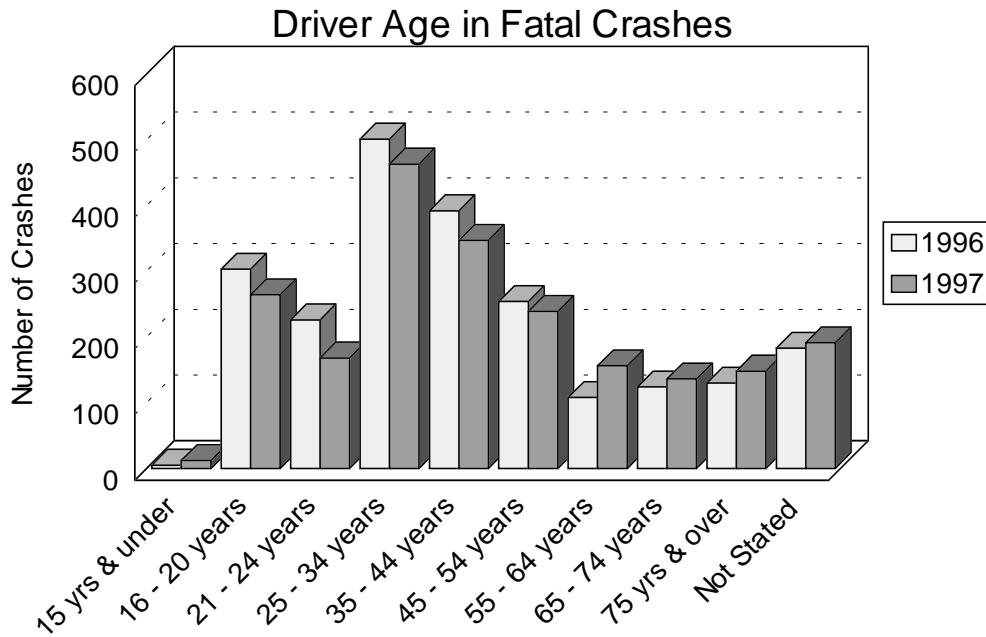
## REPORTED AGE OF DRIVERS INVOLVED IN ALL CRASHES (continued)

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	5,996	19	1,151	467	1,074	962	778	403	250	218	674
Livingston	9,113	36	1,756	740	1,914	1,927	1,157	539	272	155	617
Luce	407	4	60	34	77	83	46	34	10	17	42
Mackinac	1,217	1	138	89	208	266	182	111	58	26	138
Macomb	55,462	134	8,284	4,675	11,825	10,145	6,391	3,497	2,463	1,580	6,468
Manistee	1,523	9	208	102	309	318	213	117	77	63	107
Marquette	4,475	16	806	383	711	776	541	226	190	110	716
Mason	2,395	12	400	187	421	478	336	184	118	71	188
Mecosta	3,755	16	704	483	707	640	476	273	155	89	212
Menominee	2,229	7	315	116	341	426	256	140	101	69	458
Midland	4,982	14	926	426	1,023	958	683	342	197	122	291
Missaukee	958	1	154	79	185	202	126	89	48	23	51
Monroe	8,359	37	1,466	589	1,411	1,392	862	449	287	191	1,675
Montcalm	4,427	27	795	402	945	856	572	294	190	119	227
Montmorency	660	6	88	54	138	128	98	60	43	20	25
Muskegon	10,522	33	1,868	946	2,115	1,924	1,314	679	504	352	787
Newaygo	2,902	17	511	227	624	611	384	222	123	80	103
Oakland	96,291	277	12,971	8,047	21,936	19,542	12,481	5,925	3,629	2,221	9,262
Oceana	1,560	6	253	114	334	312	205	119	52	30	135
Ogemaw	1,602	4	213	126	312	368	245	150	82	33	69
Ontonagon	682	3	76	43	90	130	89	62	46	16	127
Osceola	1,993	8	260	173	464	412	255	172	83	44	122
Oscoda	617	2	68	32	125	143	107	63	38	15	24
Otsego	1,706	2	316	134	327	339	228	106	79	42	133
Ottawa	13,801	53	2,803	1,399	2,905	2,558	1,520	787	472	355	949
Presque Isle	930	0	150	92	159	146	121	101	69	33	59
Roscommon	1,657	7	242	122	296	353	235	135	115	63	89
Saginaw	15,379	45	2,469	1,340	3,021	2,852	1,918	1,097	725	466	1,446
St. Clair	9,306	32	1,806	817	1,790	1,609	1,104	514	354	277	1,003
St. Joseph	3,855	14	662	327	714	636	418	283	157	83	561
Sanilac	2,477	9	434	202	511	514	330	184	132	65	96
Schoolcraft	773	3	91	60	142	132	93	61	54	24	113
Shiawassee	3,879	21	725	335	776	733	487	243	166	113	280
Tuscola	3,157	14	562	259	664	648	419	227	130	85	149
Van Buren	4,477	18	718	394	826	792	560	297	184	121	567
Washtenaw	22,427	59	3,143	2,346	4,831	4,017	2,843	1,117	676	388	3,007
Wayne	182,281	432	17,085	12,923	33,860	27,595	18,502	9,369	6,718	3,792	52,005
Wexford	2,907	9	451	207	573	562	395	196	137	78	299
UNKNOWN	190	0	20	8	42	42	24	6	7	3	38
Totals	737,939	2,380	104,361	62,332	148,546	132,233	87,288	44,487	29,041	18,149	109,122

## DRIVER AGE

AGE OF DRIVERS IN FATAL CRASHES	1996	1997	% Change	% 1997 Fatal Crash Involvement	Percent Active Driving Population*
15 years and under	5	12	140.0	0.6	1.5
16 - 20 years	303	264	-12.9	12.4	8.5
21 - 24 years	226	168	-25.7	7.9	7.0
25 - 34 years	501	463	-7.6	21.8	20.2
35 - 44 years	392	347	-11.5	16.3	21.8
45 - 54 years	254	239	-5.9	11.3	17.1
55 - 64 years	108	156	44.4	7.3	10.6
65 - 74 years	124	136	9.7	6.4	8.2
75 years and over	130	148	13.8	7.0	5.1
Not Stated	183	191	4.4	9.0	---
<b>TOTALS</b>	<b>2,226</b>	<b>2,124</b>	<b>-4.6</b>	<b>100.0</b>	<b>100.0</b>

\* Figures courtesy of the Michigan Department of State [14]



**REGISTRATION TRANSACTIONS**  
**(Includes Original, Renewal, Correction, and Replacements)**  
Registration data courtesy of the Michigan Department of State [15]

COUNTY	VEHICLE						OTHER		
	Passenger	Commercial	Trailer	Motorcycle	Total Plates	Total Revenue	Watercraft	Snowmobile	Moped
Alcona	7,017	3,625	2,641	155	13,438	\$ 694,733.50	2,534	828	70
Alger	4,950	3,006	1,585	196	9,737	483,939.15	1,714	1,411	15
Allegan	57,687	24,600	15,475	1,591	99,353	5,748,036.71	10,752	2,771	287
Alpen	18,545	10,217	6,140	480	35,382	2,801,505.08	4,521	2,109	47
Antrim	13,468	5,832	4,206	372	23,878	1,304,949.21	4,854	1,708	53
Arenac	9,752	4,953	3,314	270	18,289	1,001,774.08	3,761	1,273	42
Baraga	3,945	2,471	1,197	126	7,739	418,330.22	1,044	685	10
Barry	31,576	14,027	9,340	1,011	55,954	2,908,838.98	8,676	1,448	97
Bay	70,541	23,153	18,177	1,649	113,520	6,540,021.49	10,156	4,630	262
Benzie	9,501	4,136	2,977	258	16,872	838,298.77	3,696	1,120	31
Berrien	102,781	32,096	17,998	2,474	155,349	8,795,240.44	13,557	2,551	486
Branch	23,872	11,406	6,905	658	42,841	2,444,734.85	6,135	727	148
Calhoun	87,247	26,781	15,201	2,083	131,312	7,331,684.48	10,161	1,414	371
Cass	28,474	12,592	7,456	855	49,377	2,654,513.80	8,375	1,764	147
Charlevoix	15,813	6,991	4,601	507	27,912	1,560,355.77	4,652	2,168	53
Cheboygan	14,757	7,491	4,831	418	27,497	1,530,159.35	5,088	2,812	88
Chippewa	17,588	9,089	5,586	444	32,707	1,794,370.38	4,532	3,794	78
Clare	17,406	8,683	5,716	469	32,274	1,722,630.97	4,389	1,691	61
Clinton	37,603	14,947	10,527	939	64,016	3,653,197.34	6,152	2,167	196
Crawford	7,094	3,627	2,506	218	13,445	713,603.24	2,690	1,239	26
Delta	23,464	12,092	7,804	648	44,008	2,383,656.06	4,801	2,872	118
Dickinson	16,214	8,254	5,252	557	30,277	1,722,009.77	3,415	1,830	141
Eaton	61,563	20,966	13,479	1,636	97,644	6,782,416.78	8,297	1,951	208
Emmet	19,724	8,023	5,076	509	33,332	1,957,046.37	4,983	2,352	95
Genesee	274,791	75,544	44,676	6,267	401,278	23,727,159.05	32,081	10,032	570
Gladwin	14,856	7,527	5,039	439	27,861	1,466,643.33	4,745	1,596	69
Gogebic	9,206	4,753	2,243	240	16,442	844,006.80	2,379	1,439	42
Grand Traverse	51,605	17,365	13,203	1,248	83,421	4,961,611.57	12,286	4,161	148

**REGISTRATION TRANSACTIONS (continued)**

COUNTY	VEHICLE						OTHER		
	Passenger	Commercial	Trailer	Motorcycle	Total Plates	Total Revenue	Watercraft	Snowmobile	Moped
Gratiot	22,900	10,235	7,161	593	40,889	2,264,190.59	3,452	1,292	99
Hillsdale	25,381	12,489	6,701	743	45,314	2,471,915.02	4,768	776	112
Houghton	17,925	7,465	3,562	510	29,462	1,592,375.95	3,511	2,189	70
Huron	23,029	11,561	6,714	513	41,817	2,526,347.49	3,395	2,393	191
Ingham	176,729	41,481	22,276	3,524	244,010	14,568,948.59	15,709	3,238	563
Ionia	31,946	13,898	8,305	857	55,006	2,939,207.26	5,039	1,267	162
Iosco	17,034	7,853	5,681	408	30,976	1,670,972.04	5,114	1,455	107
Iron	7,429	4,226	2,376	243	14,274	735,175.05	2,381	986	44
Isabella	27,504	12,087	7,350	699	47,640	3,143,672.70	4,396	1,437	77
Jackson	92,422	32,929	19,398	2,622	147,371	8,525,244.89	15,347	2,712	359
Kalamazoo	147,920	36,920	23,271	3,496	211,607	12,802,555.25	18,535	2,573	502
Kalkaska	8,765	5,634	3,549	290	18,238	1,359,097.13	2,532	1,509	29
Kent	355,157	98,427	69,978	7,336	530,898	36,071,955.08	44,425	8,481	1,093
Keweenaw	1,097	496	248	21	1,862	94,250.79	356	127	5
Lake	5,538	3,061	1,840	163	10,602	530,081.34	2,163	750	26
Lapeer	49,509	22,808	12,564	1,728	86,609	5,087,182.27	6,810	3,178	111
Leelanau	12,558	4,757	3,928	310	21,553	1,195,191.99	5,036	1,287	72
Lenawee	57,703	23,231	12,864	1,757	95,555	5,348,944.11	8,844	2,604	326
Livingston	91,048	31,761	20,714	2,995	146,518	9,584,898.74	16,385	4,567	171
Luce	3,163	2,137	1,486	61	6,847	400,789.19	1,304	1,006	15
Mackinac	6,426	3,680	2,246	141	12,493	676,492.75	2,955	1,983	30
Macomb	535,337	121,553	59,947	10,637	727,474	47,814,509.18	48,402	13,521	1,201
Manistee	14,386	6,689	4,563	410	26,048	1,400,839.51	3,650	1,111	79
Marquette	35,682	15,787	8,381	1,130	60,980	3,336,688.83	6,730	4,066	126
Mason	16,823	7,384	4,860	484	29,551	1,624,486.69	4,114	1,072	94
Mecosta	19,800	8,894	5,711	540	34,945	1,874,433.75	4,756	1,241	52
Menominee	13,503	6,604	4,476	421	25,004	1,350,548.88	2,735	1,301	304
Midland	54,629	16,303	13,461	1,429	85,822	4,750,968.05	9,096	2,237	173
Missaukee	7,109	4,485	2,879	223	14,696	820,283.76	2,037	1,105	29

**REGISTRATION TRANSACTIONS (continued)**

COUNTY	VEHICLE						OTHER		
	Passenger	Commercial	Trailer	Motorcycle	Total Plates	Total Revenue	Watercraft	Snowmobile	Moped
Monroe	86,799	33,414	17,307	2,725	140,245	8,376,086.04	10,709	3,772	411
Montcalm	32,393	15,255	9,635	838	58,121	3,145,560.07	6,861	1,649	175
Montmorency	5,714	3,553	2,335	135	11,737	673,120.29	2,213	1,200	11
Muskegon	102,848	31,264	21,685	3,068	158,865	8,419,276.44	14,895	3,525	527
Newaygo	25,546	11,995	8,190	738	46,469	2,369,055.48	6,517	1,969	109
Oakland	841,667	161,675	89,302	16,648	1,109,292	78,713,069.59	80,618	19,142	1,538
Oceana	15,018	7,475	3,839	430	26,762	1,428,663.35	2,854	1,280	97
Ogemaw	12,164	6,604	4,374	387	23,529	1,288,429.53	3,317	1,458	41
Ontonagon	4,593	2,808	1,526	129	9,056	467,957.02	1,072	1,264	14
Osceola	12,370	6,853	3,827	292	23,342	1,309,935.21	2,560	1,274	29
Oscoda	5,235	2,931	1,773	159	10,098	517,961.37	1,872	882	8
Otsego	13,250	6,705	4,210	370	24,535	1,599,047.32	2,970	2,385	32
Ottawa	136,231	40,052	33,487	3,292	213,062	12,904,635.58	22,659	5,062	793
Presque Isle	8,760	5,144	3,097	221	17,222	933,308.82	2,937	1,389	39
Roscommon	15,961	6,729	5,367	375	28,432	1,523,917.64	6,282	3,147	158
Saginaw	134,366	37,225	27,064	2,526	201,181	11,938,285.13	16,291	6,263	375
St. Clair	99,200	36,036	18,973	2,767	156,976	9,133,746.93	14,258	4,563	322
St. Joseph	35,989	15,109	9,179	1,321	61,598	3,285,181.29	8,325	815	201
Sanilac	25,283	12,719	6,504	734	45,240	2,637,232.45	2,222	1,584	71
Schoolcraft	4,670	2,914	1,863	123	9,570	528,915.82	1,786	1,196	31
Shiawassee	43,658	18,413	11,295	1,300	74,666	4,272,596.09	5,896	2,528	196
Tuscola	34,264	16,845	10,442	1,096	62,647	3,400,330.26	4,736	2,874	136
Van Buren	42,891	17,571	9,425	1,223	71,110	3,804,274.19	8,078	1,701	200
Washtenaw	188,947	40,855	19,854	4,094	253,750	15,943,469.74	14,881	3,249	488
Wayne	1,270,237	235,084	99,597	19,222	1,624,140	109,068,327.80	70,303	13,521	2,241
Wexford	18,024	7,813	5,295	497	31,629	1,738,757.88	4,460	2,041	70
Non-Resident	52,926	20,648	12,417	319	86,310	29,225,229.03	36,424	4,354	116
Unknown County							394	56	14
Totals	6,198,496	1,762,771	1,031,503	136,030	9,128,800	\$593,994,084.77	800,793	230,150	18,624

