



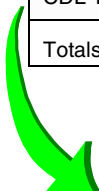
VEHICLE TYPE CRASH INVOLVEMENT



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	530,931	70.6	1404	63.0	134,925	394,602	830	71.2	87,474	442,627
Van and Motorhome	55,842	7.4	152	6.8	13,121	42,569	60	5.2	7,118	48,664
Pickup	104,963	14.0	367	16.5	22,424	82,172	157	13.5	11,915	92,891
Small Truck (under 10,000 lbs.)	11,100	1.5	28	1.3	2,531	8,541	8	0.7	1,344	9,748
Cycle	2,468	0.3	61	2.7	1,892	515	59	5.1	1,860	549
Moped	296	0.0	1	0.0	219	76	1	0.1	208	87
Go Cart	7	0.0	0	0.0	4	3	0	0.0	3	4
Snowmobile	499	0.1	16	0.7	290	193	13	1.1	263	223
Off Road Vehicle	205	0.0	8	0.4	148	49	8	0.7	139	58
Other	1,899	0.3	9	0.4	412	1,478	5	0.4	160	1,734
Uncoded	23,203	3.1	25	1.1	2,712	20,466	8	0.7	588	22,607
CDL Truck/Bus (breakdown below)	20,391	2.7	158	7.1	4,358	15,875	16	1.4	1,147	19,228
Totals	751,804	100.0	2,229	100.0	183,036	566,539	1,165	100.0	112,219	638,420



CDL Truck/Bus 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	2,526	12.4	7	4.4	423	2,096	0	0.0	96	2,430
Commercial Vehicle: Group A	9,353	45.9	91	57.6	2,071	7,191	9	56.3	460	8,884
Commercial Vehicle: Group B	4,438	21.8	36	22.8	1,019	3,383	4	25.0	368	4,066
Commercial Vehicle: Group C	566	2.8	4	2.5	107	455	0	0.0	50	516
Other Truck	1,113	5.5	6	3.8	229	878	3	18.8	72	1,038
Unknown Truck	2,395	11.7	14	8.9	509	1,872	0	0.0	101	2,294
Totals	20,391	100.0	158	100.0	4,358	15,875	16	100.0	1,147	19,228

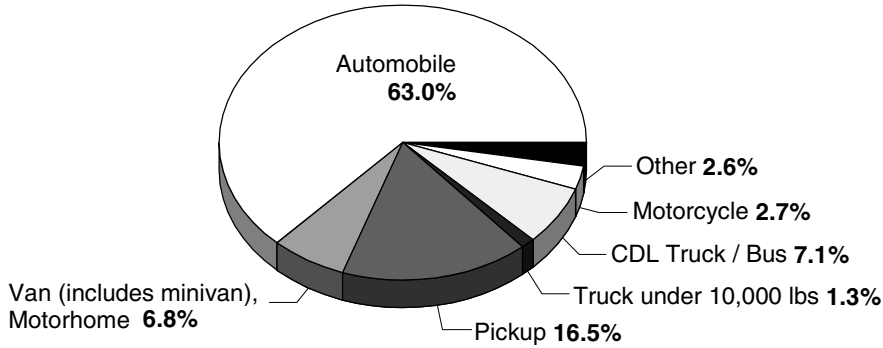
Group "A" is any vehicle that is towing a vehicle or trailer that has a gross vehicle weight rating (GVWR) over 10,000 lbs.

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.

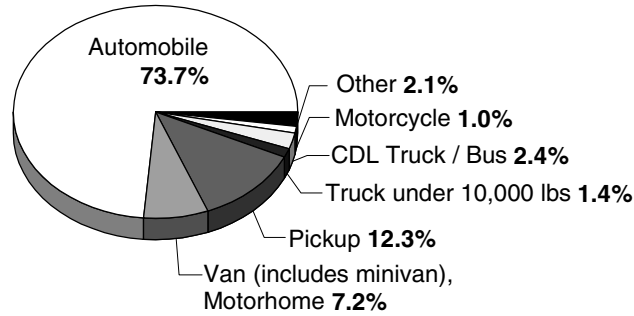
VEHICLE TYPES IN CRASHES BY CRASH SEVERITY

FATAL



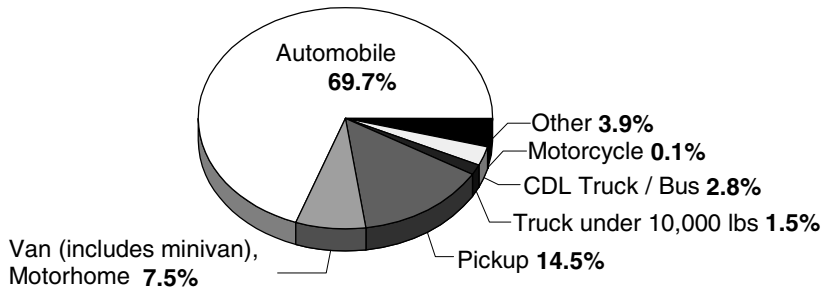
The top chart shows that 4 out of 5 vehicles involved in fatal crashes are automobiles or pickups. Van, Motorhome, the vehicle type that includes the popular minivan, has a fatal crash involvement of 6.8 percent.

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	387,356	51.5	1,653	13,597	25,631	58,965	287,510
Turning left	58,386	7.8	125	2,136	4,551	10,057	41,517
Turning right	21,520	2.9	17	356	893	2,506	17,748
Stopped on roadway	71,682	9.5	73	1,271	3,499	17,057	49,782
In prior crash	1,356	0.2	6	53	95	269	933
Changing lanes	16,729	2.2	33	301	601	1,792	14,002
Backing	18,884	2.5	8	106	224	751	17,795
Slowing/stopping on roadway	59,463	7.9	50	861	2,354	12,928	43,270
Slowing/stopping other	956	0.1	0	16	49	182	709
Starting up on roadway	13,497	1.8	30	369	778	2,426	9,894
Starting up other	478	0.1	2	17	28	74	357
Entering parking	1,124	0.1	0	9	28	79	1,008
Leaving parking	3,179	0.4	2	48	134	372	2,623
Entering roadway	11,136	1.5	22	310	711	1,692	8,401
Leaving roadway	1,683	0.2	22	110	183	215	1,153
Making U-turn	1,954	0.3	3	82	99	298	1,472
Overtaking or passing	7,155	1.0	36	283	447	789	5,600
Avoiding object	2,130	0.3	4	69	232	337	1,488
Avoiding pedestrian	213	0.0	4	28	24	43	114
Avoiding vehicle (front/back)	6,374	0.8	49	216	496	1,121	4,492
Avoiding vehicle (angle)	2,774	0.4	7	108	225	454	1,980
Driverless moving	576	0.1	0	14	26	28	508
Parked	31,998	4.3	33	495	994	1,434	29,042
Crossing at intersection	94	0.0	2	11	10	23	48
Crossing not at intersection	49	0.0	2	15	8	12	12
Getting on/off vehicle	12	0.0	0	1	3	0	8
In roadway with traffic	15	0.0	0	2	2	3	8
In roadway against traffic	11	0.0	0	3	0	2	6
Standing/lying in roadway	9	0.0	0	2	2	1	4
Pushing/working on vehicle	16	0.0	0	2	2	1	11
Other working in roadway	5	0.0	1	0	1	0	3
Playing in roadway	6	0.0	0	2	0	1	3
In roadway other reason	20	0.0	0	3	2	5	10
Not in roadway	13	0.0	0	1	1	0	11
Other	642	0.1	2	24	45	87	484
Unknown	30,309	4.0	43	654	1,264	3,815	24,533
TOTAL	751,804	100.0	2,229	21,575	43,642	117,819	566,539

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	1,638	66.4	1,910	66.2	46	470	642	413	286
Turning left	102	4.1	121	4.2	2	26	39	18	32
Turning right	106	4.3	119	4.1	0	15	39	33	27
Stopped on roadway	106	4.3	122	4.2	1	9	14	38	56
In prior crash	0	0.0	1	0.0	0	1	0	0	0
Changing lanes	37	1.5	40	1.4	1	8	12	7	10
Backing	2	0.1	2	0.1	0	0	0	0	2
Slowing/stopping on roadway	119	4.8	134	4.6	2	16	48	34	34
Slowing/stopping other	4	0.2	5	0.2	0	2	0	0	3
Starting up on roadway	25	1.0	27	0.9	0	6	8	8	5
Starting up other	2	0.1	2	0.1	0	0	0	2	0
Entering parking	0	0.0	0	0.0	0	0	0	0	0
Leaving parking	1	0.0	1	0.0	0	0	1	0	0
Entering roadway	21	0.9	34	1.2	0	6	10	12	5
Leaving roadway	11	0.4	11	0.4	1	2	3	2	3
Making U-turn	4	0.2	4	0.1	0	0	1	1	2
Overtaking or passing	71	2.9	83	2.9	3	38	23	11	8
Avoiding object	28	1.1	29	1.0	0	1	16	6	6
Avoiding pedestrian	3	0.1	3	0.1	0	0	0	0	3
Avoiding vehicle (front/back)	52	2.1	57	2.0	2	5	18	22	10
Avoiding vehicle (angle)	38	1.5	45	1.6	0	9	18	13	4
Driverless moving	1	0.0	1	0.0	0	0	0	1	0
Parked	34	1.4	34	1.2	0	1	0	0	6
Crossing at intersection	1	0.0	8	0.3	0	0	2	4	2
Crossing not at intersection	0	0.0	6	0.2	1	1	1	1	2
Getting on/off vehicle	0	0.0	0	0.0	0	0	0	0	0
In roadway with traffic	0	0.0	3	0.1	0	1	2	0	0
In roadway against traffic	0	0.0	1	0.0	0	0	1	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	3	0.1	0	2	1	0	0
In roadway other reason	0	0.0	2	0.1	0	0	0	2	0
Not in roadway	0	0.0	1	0.0	0	0	1	0	0
Other	4	0.2	9	0.3	0	2	3	1	0
Unknown	58	2.4	69	2.4	3	12	18	17	11
TOTAL	2,468	100.0	2,887*	100.0	62	633	921	646	517

* Includes 108 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	1,636	52.9	15	161	598	579	233
Turning left	90	2.9	2	18	33	30	6
Turning right	37	1.2	0	6	15	8	6
Stopped on roadway	12	0.4	0	4	2	2	3
In prior crash	1	0.0	0	1	0	0	0
Changing lanes	39	1.3	2	5	9	15	6
Backing	2	0.1	0	0	1	1	0
Slowing/stopping on roadway	9	0.3	0	1	7	1	0
Slowing/stopping other	7	0.2	1	1	1	3	1
Starting up on roadway	32	1.0	0	5	10	14	3
Starting up other	4	0.1	0	0	1	2	1
Entering parking	6	0.2	0	3	1	0	2
Leaving parking	5	0.2	0	0	0	4	1
Entering roadway	235	7.6	2	33	105	64	25
Leaving roadway	11	0.4	0	3	3	4	1
Making U-turn	9	0.3	0	2	2	5	0
Overtaking or passing	5	0.2	0	0	4	1	0
Avoiding object	4	0.1	0	0	0	2	2
Avoiding pedestrian	0	0.0	0	0	0	0	0
Avoiding vehicle (front/back)	13	0.4	0	0	5	4	3
Avoiding vehicle (angle)	12	0.4	0	1	3	6	2
Driverless moving	0	0.0	0	0	0	0	0
Parked	1	0.0	0	0	0	1	0
Crossing at intersection	380	12.3	4	35	130	136	71
Crossing not at intersection	161	5.2	5	32	57	47	15
Getting on/off vehicle	0	0.0	0	0	0	0	0
In roadway with traffic	47	1.5	1	8	20	14	2
In roadway against traffic	41	1.3	0	5	17	16	2
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	20	0.6	0	3	6	6	3
In roadway other reason	31	1.0	0	3	11	12	4
Not in roadway	25	0.8	0	1	11	13	0
Other	58	1.9	0	7	18	20	8
Unknown	157	5.1	0	27	53	35	20
TOTAL	3,091*	100.0	32	365	1,123	1,046	420

* Includes 105 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	180	4.5	5	23	63	55	18
Turning left	36	0.9	2	10	9	7	3
Turning right	13	0.3	0	2	2	7	0
Stopped on roadway	15	0.4	1	5	4	3	1
In prior crash	12	0.3	0	5	4	2	0
Changing lanes	1	0.0	0	1	0	0	0
Backing	4	0.1	0	0	2	1	0
Slowing/stopping on roadway	2	0.1	0	1	1	0	0
Slowing/stopping other	1	0.0	0	1	0	0	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	2	0.1	0	1	1	0	0
Leaving parking	1	0.0	0	0	0	0	0
Entering roadway	26	0.7	2	7	8	6	1
Leaving roadway	4	0.1	1	1	1	1	0
Making U-turn	0	0.0	0	0	0	0	0
Overtaking or passing	0	0.0	0	0	0	0	0
Avoiding object	0	0.0	0	0	0	0	0
Avoiding pedestrian	1	0.0	0	0	0	1	0
Avoiding vehicle (front/back)	5	0.1	1	1	2	0	0
Avoiding vehicle (angle)	1	0.0	0	0	1	0	0
Driverless moving	6	0.2	0	1	0	5	0
Parked	21	0.5	0	2	3	3	8
Crossing at intersection	911	22.9	22	200	255	369	32
Crossing not at intersection	1,143	28.8	65	311	336	343	42
Getting on/off vehicle	87	2.2	1	22	29	26	2
In roadway with traffic	191	4.8	26	49	57	43	11
In roadway against traffic	62	1.6	1	17	21	16	4
Standing/lying in roadway	154	3.9	21	41	28	47	7
Pushing/working on vehicle	58	1.5	2	21	18	13	3
Other working in roadway	49	1.2	1	15	16	15	2
Playing in roadway	102	2.6	1	27	34	25	7
In roadway other reason	218	5.5	15	68	60	56	14
Not in roadway	165	4.2	10	43	53	52	5
Other	108	2.7	2	27	27	43	3
Unknown	391	9.8	13	94	107	126	19
TOTAL	3,971*	100.0	192	997	1,142	1,265	182

* Includes 193 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	6,885	0.9	20	242	545	1,055	5,023
Cross center/median	1,407	0.2	2	61	76	164	1,104
Ran off road left	1,131	0.2	3	50	86	144	848
Ran off road right	1,859	0.2	2	44	124	257	1,432
Re-enter road	207	0.0	1	12	20	36	138
Overturn	9,138	1.2	108	898	1,785	2,001	4,346
Separation of units	2,734	0.4	5	71	140	448	2,070
Fire/explosion	921	0.1	4	24	26	106	761
Immersion	105	0.0	1	8	11	14	71
Jackknife	497	0.1	1	4	13	57	422
Downhill runaway	114	0.0	0	7	7	16	84
Cargo loss/shift	881	0.1	0	7	19	43	812
Individual fell off	463	0.1	18	131	136	82	96
Other noncollision	2,225	0.3	3	72	152	195	1,803
NONCOLLISION Subtotal	28,567	3.8	168	1,631	3,140	4,618	19,010

MOST SEVERE OUTCOME IN CRASH

HAD A COLLISION WITH NONFIXED OBJECT	Motor Vehicles		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
Pedestrian	3,198	0.4	187	828	904	973	306
Pedalcycle	2,820	0.4	32	326	979	918	565
Motor vehicle in transport	500,434	66.6	1,390	14,017	28,833	91,346	364,848
Parked motor vehicle	21,502	2.9	13	259	661	1,014	19,555
Railway train	177	0.0	12	20	25	28	92
Animal	63,515	8.4	5	90	385	851	62,184
Other nonfixed objects	6,199	0.8	14	94	250	403	5,438
COLLISION NONFIXED Subtotal	597,845	79.5	1,653	15,634	32,037	95,533	452,988

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	784	0.1	14	48	75	118	529
Bridge parapet end	503	0.1	1	12	21	37	432
Bridge rail	576	0.1	0	24	46	77	429
Guardrail face	3,304	0.4	3	84	214	442	2,561
Guardrail end	636	0.1	4	43	73	100	416
Median barrier	2,712	0.4	5	123	314	645	1,625
Highway traffic sign post	2,990	0.4	2	28	64	150	2,746
Signal post	306	0.0	1	2	7	28	268
Luminaire/light support	710	0.1	4	41	70	76	519
Utility pole	4,478	0.6	27	283	666	730	2,772
Other pole	1,318	0.2	6	42	98	134	1,038
Culvert	778	0.1	5	64	122	120	467
Curb	2,125	0.3	1	32	81	194	1,817
Ditch	7,906	1.1	25	328	797	1,149	5,607
Embankment	2,051	0.3	13	117	219	350	1,352
Fence	1,860	0.2	1	24	64	117	1,654
Mailbox	2,658	0.4	2	20	59	126	2,451
Tree	12,615	1.7	175	1,054	1,847	1,930	7,609
Rail crossing signal	116	0.0	0	4	4	8	100
Building	1,126	0.1	11	82	128	164	741
Traffic island	55	0.0	0	0	5	4	46
Fire hydrant	663	0.1	2	25	46	78	512
Impact attenuator	62	0.0	0	2	9	11	40
Other fixed object	3,699	0.5	11	128	282	354	2,924
COLLISION FIXED Subtotal	54,031	7.2	313	2,610	5,311	7,142	38,655

MOST SEVERE OUTCOME IN CRASH

	Motor Vehicles		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
Unknown Event	71,361	9.5	95	1,700	3,154	10,526	55,886
TOTAL MOST HARMFUL EVENT	751,804	100.0	2,229	21,575	43,642	117,819	566,539

VEHICLE DEFECTS IN CRASH INVOLVEMENT

MOST SEVERE OUTCOME IN CRASH

VEHICLE DEFECTS	Motor Vehicles		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
Brakes	2,234	0.3	6	68	176	475	1,509
Lights/reflectors	442	0.1	0	20	27	65	330
Steering	322	0.0	1	11	38	42	230
Tires/wheels	840	0.1	4	39	67	112	618
Windows	489	0.1	3	10	34	71	371
Other	1,576	0.2	6	48	80	201	1,241
Unknown/None	745,901	99.2	2,209	21,379	43,220	116,853	562,240
TOTAL	751,804	100.0	2,229	21,575	43,642	117,819	566,539

DRIVER HAZARDOUS ACTION

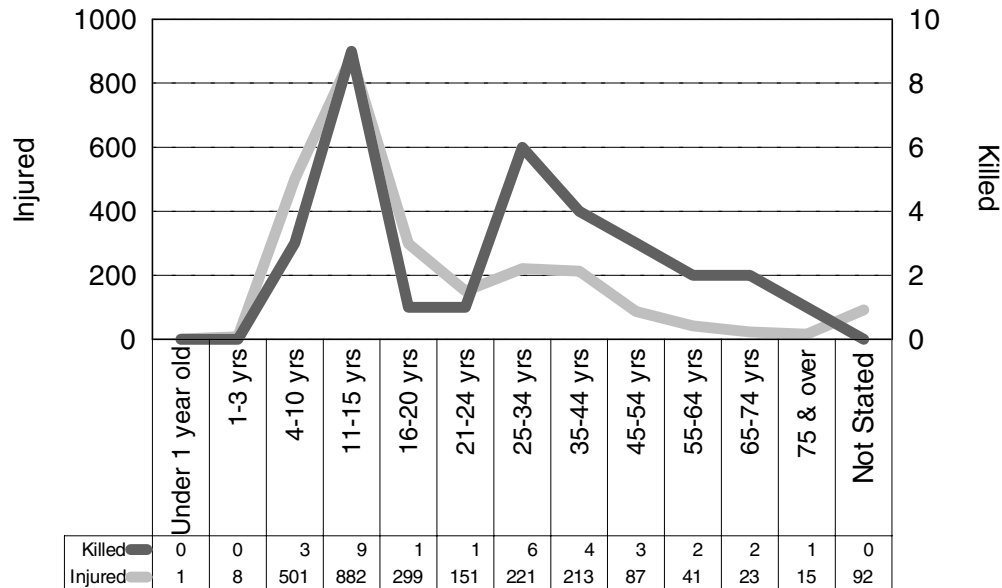
MOST SEVERE OUTCOME IN CRASH

HAZARDOUS ACTION	All Vehicles		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
None	378,307	50.3	922	9,437	19,354	56,953	291,641
Speed too fast	46,754	6.2	339	2,346	4,624	7,395	32,050
Speed too slow	1,451	0.2	4	52	88	292	1,015
Failed to yield	65,962	8.8	186	2,547	5,453	11,989	45,787
Disregard traffic control	18,117	2.4	122	1,221	2,139	4,243	10,392
Drove wrong way	588	0.1	10	43	60	105	370
Drove left of center	4,951	0.7	116	450	557	689	3,139
Improper passing	5,596	0.7	19	138	213	522	4,704
Improper lane use	16,374	2.2	22	245	503	1,434	14,170
Improper turn	10,402	1.4	14	236	472	1,379	8,301
Improper/no signal	1,142	0.2	0	19	35	112	976
Improper backing	14,232	1.9	1	38	100	438	13,655
Unable to stop in assured clear distance	96,543	12.8	80	1,582	4,189	21,499	69,193
Other	38,828	5.2	205	1,932	3,558	5,252	27,881
Unknown	52,557	7.0	189	1,289	2,297	5,517	43,265
TOTAL	751,804	100.0	2,229	21,575	43,642	117,819	566,539



MICHIGAN BICYCLE CRASHES

1996 Bicycle Crash Information



In 1996, there were 3,091 bicyclists involved in motor vehicles crashes, with 32 bicyclists killed and 2,534 injured. The number of bicyclists killed represents a 14.3 percent increase from 1995.

Children under 16 years of age accounted for 12 (37.5%) of the bicycle deaths in 1996.

BICYCLE HELMET USE AND INJURY SEVERITY

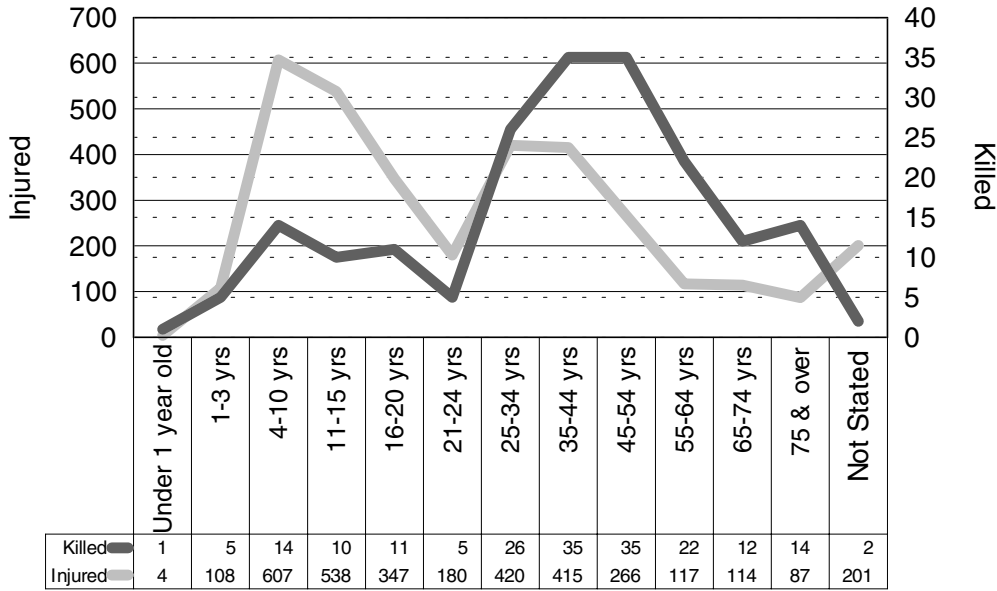
HELMET USE	Fatality	Injury			No Injury
		A	B	C	
Worn	1	9	41	25	11
Not Worn	12	107	317	249	89
Unknown	19	249	765	772	320
TOTALS	32	365	1,123	1,046	420

The National Center for Statistics and Analysis of the National Highway Traffic Safety Administration cites a study by the Centers for Disease Control [10] 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."



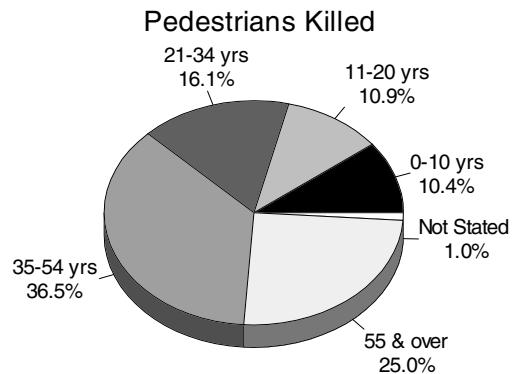
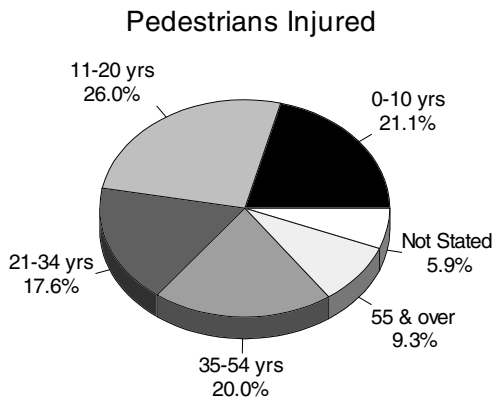
MICHIGAN PEDESTRIAN CRASHES

1996 Pedestrian Crash Information



In 1996, there were 3,971 pedestrians involved in motor vehicles crashes, with 192 pedestrians killed and 3,404 injured. The number killed represents a 1.1 percent increase in fatalities from 1995.

Children under 16 years of age accounted for 30 (15.6%) of the pedestrian deaths in 1996. Adults over the age of 54 accounted for 48 (25.0%) of the pedestrian deaths in 1996.





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	12	2.4	0	2	2	2	6
Cross center/median	0	0.0	0	0	0	0	0
Ran off road left	2	0.4	0	1	0	1	0
Ran off road right	0	0.0	0	0	0	0	0
Re-enter road	0	0.0	0	0	0	0	0
Overturn	37	7.4	0	10	18	2	7
Separation of units	3	0.6	0	0	1	0	2
Fire/explosion	2	0.4	0	0	0	0	2
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	0	0.0	0	0	0	0	0
Individual fell off	30	6.0	0	12	11	5	2
Other noncollision	13	2.6	0	1	3	1	8
NONCOLLISION Subtotal	99	19.8	0	26	35	11	27

MOST SEVERE OUTCOME IN CRASH

HAD A COLLISION WITH NONFIXED OBJECT	Snowmobiles		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
Pedestrian	8	1.6	1	3	2	0	2
Pedalcycle	0	0.0	0	0	0	0	0
Motor vehicle in transport	186	37.3	8	39	17	30	92
Parked motor vehicle	20	4.0	2	7	2	4	5
Railway train	1	0.2	0	0	0	0	1
Animal	22	4.4	0	1	1	3	17
Other nonfixed objects	9	1.8	1	1	4	0	3
COLLISION NONFIXED Subtotal	246	49.3	12	51	26	37	120



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	1	0.2	0	1	0	0	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	1	0.2	0	1	0	0	0
Median barrier	0	0.0	0	0	0	0	0
Highway traffic sign post	1	0.2	0	1	0	0	0
Signal post	1	0.2	0	0	1	0	0
Luminaire/light support	0	0.0	0	0	0	0	0
Utility pole	1	0.2	0	0	0	0	1
Other pole	2	0.4	0	1	1	0	0
Culvert	3	0.6	0	0	0	1	2
Curb	0	0.0	0	0	0	0	0
Ditch	8	1.6	0	2	0	1	5
Embankment	7	1.4	0	1	3	2	1
Fence	5	1.0	0	4	0	0	1
Mailbox	4	0.8	0	1	1	1	1
Tree	57	11.4	2	23	15	13	4
Rail crossing signal	0	0.0	0	0	0	0	0
Building	1	0.2	0	0	0	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	16	3.2	1	5	4	3	3
COLLISION FIXED Subtotal	109	21.8	3	40	25	22	19
Unknown Event	45	9.0	1	5	8	4	27
TOTAL MOST HARMFUL EVENT	499	100.0	16	122	94	74	193

A total of 499 snowmobiles were reported in crashes on Michigan roadways during 1996. Of these snowmobiles, 16 were involved in fatal crashes with 13 of their drivers 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	4	2.0	1	1	1	0	1
Ran off road left	1	0.5	0	0	1	0	0
Overturn	29	14.1	1	13	7	8	0
Cargo loss/shift	1	0.5	0	0	0	0	1
Individual fell off	13	6.3	0	5	4	4	0
Other noncollision	3	1.5	0	0	2	1	0
NONCOLLISION Subtotal	51	24.9	2	19	15	13	2

HAD A COLLISION WITH NONFIXED OBJECT

Pedestrian	4	2.0	0	4	0	0	0
Pedalcycle	1	0.5	0	0	0	0	1
Motor vehicle in transport	80	39.0	3	16	23	12	26
Parked motor vehicle	5	2.4	0	0	0	0	5
Animal	4	2.0	0	1	1	0	2
Other nonfixed objects	1	0.5	0	0	1	0	0
COLLISION NONFIXED Subtotal	95	46.3	3	21	25	12	34

HAD A COLLISION WITH FIXED OBJECT

Bridge pier or abutment	1	0.5	0	0	0	0	1
Guardrail face	2	1.0	0	1	0	0	1
Traffic sign post	2	1.0	0	0	1	0	1
Luminaire support	1	0.5	0	0	0	0	1
Utility pole	2	1.0	0	0	1	1	0
Culvert	1	0.5	0	1	0	0	0
Ditch	5	2.4	0	1	2	2	0
Embankment	2	1.0	0	1	1	0	0
Fence	4	2.0	0	2	1	0	1
Mailbox	2	1.0	0	2	0	0	0
Tree	17	8.3	3	8	4	1	1
Building	1	0.5	0	0	0	1	0
Other fixed object	5	2.4	0	1	4	0	0
COLLISION FIXED Subtotal	45	22.0	3	17	14	5	6

Unknown Event	14	6.8	0	1	3	3	7
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TOTAL MOST HARMFUL EVENT	205	100.0	8	58	57	33	49
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A total of 205 Off Road Vehicles/All Terrain Vehicles were reported in crashes on Michigan roadways during 1996. Of these ORV/ATVs, 8 were involved in fatal crashes and 8 of their operators and 1 passenger 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	147	29.5	2	17	28	27	73
Speed too fast	137	27.5	4	57	36	16	24
Speed too slow	0	0.0	0	0	0	0	0
Failed to yield	43	8.6	2	11	2	6	22
Disregard traffic control	3	0.6	0	0	0	1	2
Drove wrong way	10	2.0	1	3	1	1	4
Drove left of center	3	0.6	1	1	0	0	1
Improper passing	4	0.8	0	0	0	0	4
Improper lane use	5	1.0	1	0	0	1	3
Improper turn	2	0.4	0	0	0	0	2
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	39	7.8	2	6	6	9	16
Other	52	10.4	3	21	10	6	12
Unknown	52	10.4	0	6	11	7	28
TOTAL	499	100.0	16	122	94	74	193

MICHIGAN ORV/ATV ON ROADWAY CRASHES

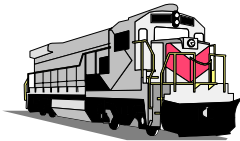
MOST SEVERE OUTCOME IN CRASH

Driver Hazardous Action	All ORV/ATVs		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
None	31	15.1	0	5	7	6	13
Speed too fast	50	24.4	3	19	15	11	2
Speed too slow	1	0.5	0	1	0	0	0
Failed to yield	27	13.2	2	8	4	6	7
Disregard traffic control	2	1.0	0	2	0	0	0
Drove wrong way	1	0.5	0	1	0	0	0
Drove left of center	5	2.4	0	0	3	1	1
Improper passing	0	0.0	0	0	0	0	0
Improper lane use	2	1.0	0	0	1	0	1
Improper turn	4	2.0	0	0	4	0	0
Improper/no signal	1	0.5	0	0	0	1	0
Improper backing	2	1.0	0	0	0	0	2
Unable to stop in assured clear distance	8	3.9	0	1	1	1	5
Other	54	26.3	3	16	19	7	9
Unknown	17	8.3	0	5	3	0	9
TOTAL	205	100.0	8	58	57	33	49



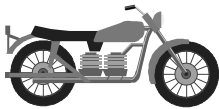
MICHIGAN FARM EQUIPMENT CRASHES

A total of 256 crashes involving farm equipment were reported on Michigan roadways during 1996. Of these crashes, 4 were fatal crashes with 1 driver of the farm equipment killed.



MICHIGAN VEHICLE - TRAIN CRASHES

A total of 119 crashes involving trains were reported in Michigan during 1996. The National Highway Traffic Safety Administration's 1996 Fatal Accident Reporting System [11] reported 12 fatal train crashes in Michigan, and 15 persons killed as a result of those collisions.

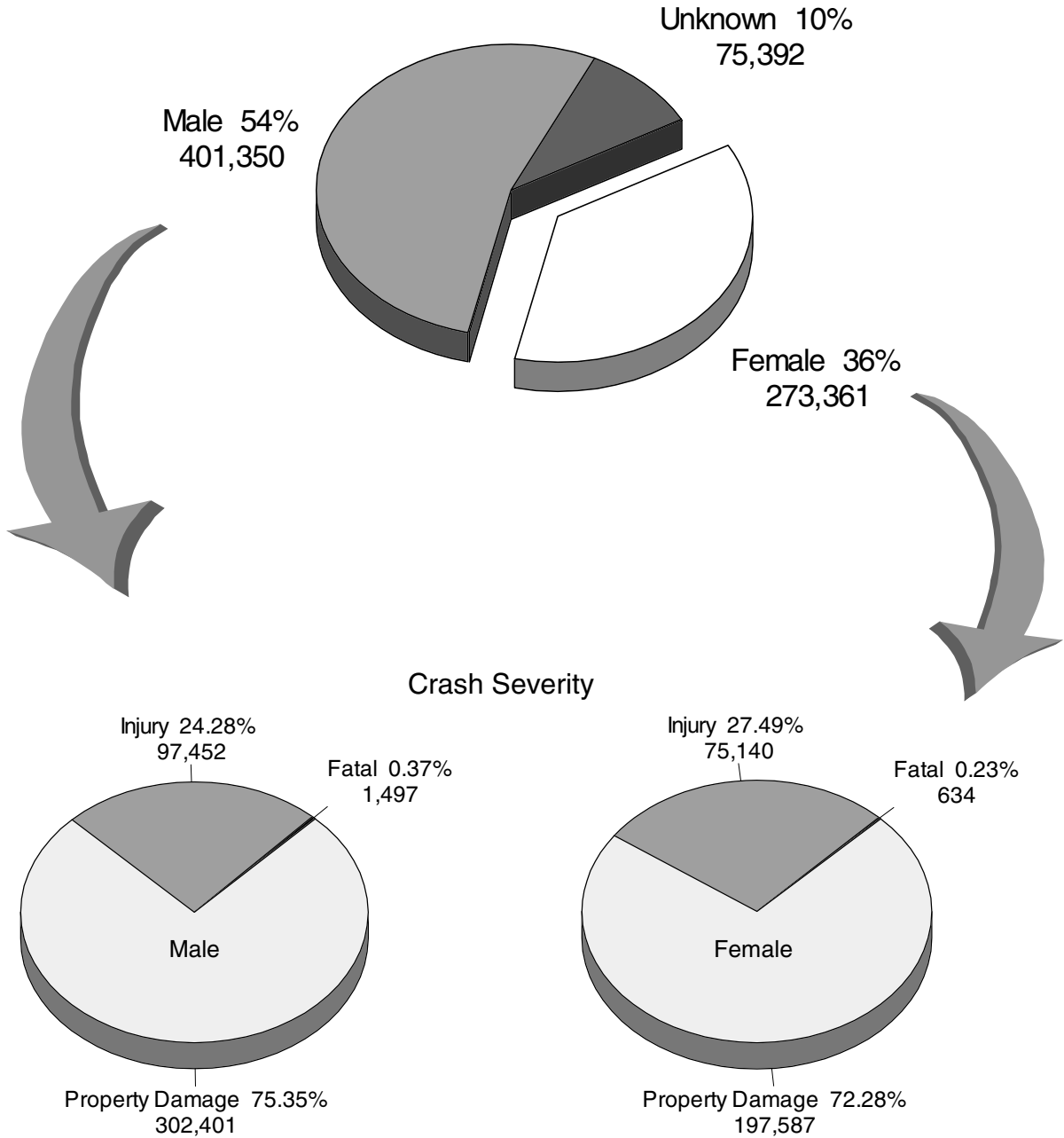


MOTORCYCLE AND MOTOR SCOOTER DATA

MOTORCYCLE & MOTOR SCOOTER DATA	1995	1996	% Change
Registrations	126,957.0	128,335.0	1.1
Crashes	2,651.0	2,468.0	-6.9
Deaths	82.0	62.0	-24.4
Persons Injured	2,324.0	2,200.0	-5.3
Death Rate based on 10,000 cycle registrations	6.5	4.8	-26.2
Estimated Mileage based on 3,000 miles per cycle	380,871,000.0	385,005,000.0	1.1
Death Rate based on deaths per 100 million vehicle miles traveled	21.5	16.1	-25.1

Motorcycles were involved in 0.57 percent of all traffic crashes in Michigan in 1996. Injuries were proportionately more severe to motorcyclists than to persons in motor vehicles. The 1996 death rate for motorcyclists was 16.1 per 100 million vehicle miles traveled compared to the overall 1.7 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 1996 chart was processed with numbers for all drivers (vehicle level).

DRIVER AGE

AGE OF DRIVERS IN FATAL CRASHES	1995	1996	% Change	% 1996 Fatal Crash Involvement	Percent Active Driving Population*
15 years and under	10	5	-50.0	0.2	0.8
16 - 20 years	314	303	-3.5	13.6	8.5
21 - 24 years	220	226	2.7	10.2	7.2
25 - 34 years	466	501	7.5	22.5	20.8
35 - 44 years	442	392	-11.3	17.6	22.0
45 - 54 years	260	254	-2.3	11.4	16.9
55 - 64 years	146	108	-26.0	4.9	10.4
65 - 74 years	121	124	2.5	5.6	8.4
75 years and over	129	130	0.8	5.8	5.0
Not Stated	203	183	-9.9	8.2	---
TOTALS	2,311	2,226	-3.7	100.0	100.0

* Figures courtesy of the Michigan Department of State [12]

