

VEHICLE TYPE AND CRASH INVOLVEMENT

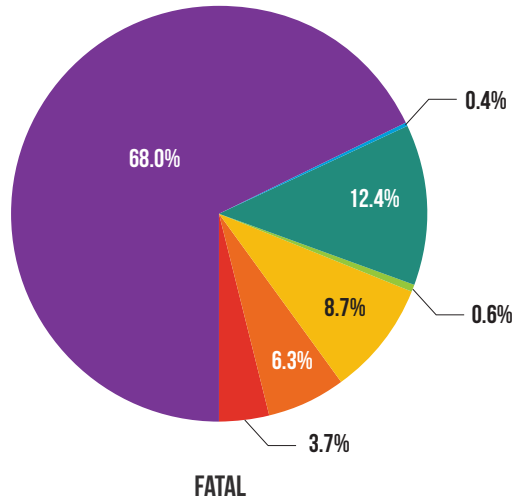
VEHICLE TYPE	MOTOR VEHICLES		FATAL CRASH		INJURY CRASH	PROPERTY DAMAGE ONLY	FATALITY IN VEHICLE		INJURY	NO INJURY
	Number of Vehicles	% of Total	Number	% of Total			Number	% of Total		
Passenger Car, SUV, Van	444,817	82.3	1,040	68.0	88,365	355,412	530	67.6	54,862	389,425
Motorhome	1,521	0.3	6	0.4	267	1,248	4	0.5	168	1,349
Pickup truck	59,444	11.0	190	12.4	10,421	48,833	69	8.8	5,261	54,114
Small Truck under 10,000 lbs. GVWR	3,575	0.7	9	0.6	595	2,971	2	0.3	245	3,328
Motorcycle	2,964	0.5	133	8.7	2,105	726	129	16.5	2,066	769
Moped / goped	417	0.1	6	0.4	348	63	6	0.8	344	67
Go-cart / golf cart	46	0.0	2	0.1	18	26	2	0.3	14	30
Snowmobile	119	0.0	5	0.3	75	39	4	0.5	71	44
Off-Road Vehicle - ORV / All-Terrain Vehicle - ATV	347	0.1	23	1.5	248	76	21	2.7	236	90
Other	2,266	0.4	8	0.5	341	1,917	4	0.5	152	2,110
Unknown	11,455	2.1	12	0.8	1,131	10,312	1	0.1	20	11,434
CDL Truck/Bus (break-down below)	13,416	2.5	96	6.3	2,437	10,883	12	1.5	666	12,738
Total Number of Vehicles	540,387	100.0	1,530	100.0	106,351	432,506	784	100.0	64,105	475,498

Note: School bus cannot be broken out of CDL Truck/Bus

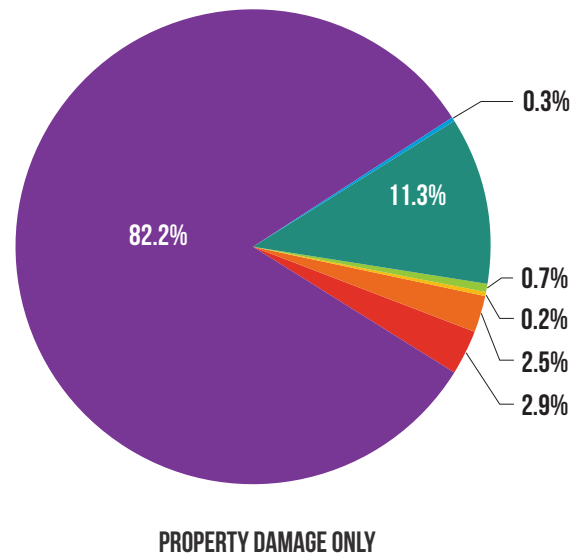
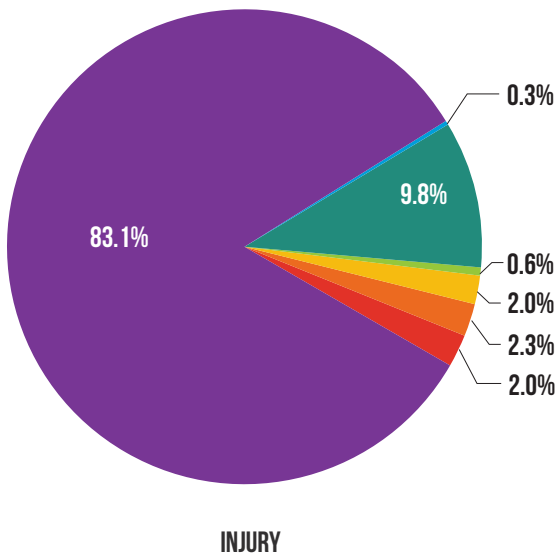
CDL TRUCK/BUS SUB-CATEGORY TYPE	MOTOR VEHICLES		FATAL CRASH		INJURY CRASH	PROPERTY DAMAGE ONLY	FATALITY IN VEHICLE		INJURY	NO INJURY
	Number of Vehicles	% of Total	Number	% of Total			Number	% of Total		
10,000 lbs. or Less	256	1.9	0	0.0	17	239	0	0.0	6	250
10,001 - 26,000 lbs.	3,464	25.8	17	17.7	498	2,949	4	33.3	173	3,287
Greater than 26,000 lbs.	9,302	69.3	79	82.3	1,897	7,326	8	66.7	486	8,808
Unknown Truck	394	2.9	0	0.0	25	369	0	0.0	1	393
Total Number of Vehicles	13,416	100.0	96	100.0	2,437	10,883	12	100.0	666	12,738

VEHICLE TYPES IN CRASHES BY CRASH SEVERITY

■ PASSENGER CAR, SUV, VAN
 ■ MOTORHOME
 ■ PICKUP TRUCK
 ■ TRUCK UNDER 10,000 LBS.
 ■ MOTORCYCLE
 ■ CDL TRUCK/BUS
 ■ OTHER



The chart shows that 81.4 percent of vehicles involved in fatal crashes are passenger vehicles (passenger cars, station wagons, vans, minivans, motorhomes, pickups, or trucks under 10,000 lbs.). Motorcycles have a fatal crash involvement of 8.7 percent.



Passenger vehicles (passenger cars, SUVs, vans, motorhomes, pickup trucks, or trucks under 10,000 lbs.) make up an even larger share of vehicles in injury crashes (93.7%) and property damage only (PDO) crashes (94.4%) than they do of fatal crashes.

Note: "Other" consists of moped, go-cart, snowmobile, off-road vehicle, other, and unknown.

ACTION PRIOR TO CRASH

DRIVER ACTION	VEHICLES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number	% of Total		A	B	C	
Going straight ahead	292,278	54.1	1,121	5,602	17,192	37,405	230,958
Turning left	37,136	6.9	84	788	3,056	5,827	27,381
Turning right	15,794	2.9	8	143	667	1,496	13,480
Stopped on roadway	52,877	9.8	71	439	2,603	8,849	40,915
In prior crash	428	0.1	4	19	32	90	283
Changing lanes	17,026	3.2	19	114	447	1,265	15,181
Backing	10,727	2.0	1	21	94	267	10,344
Slowing/stopping on roadway	56,101	10.4	49	373	1,925	8,485	45,269
Slowing/stopping other	709	0.1	1	7	28	111	562
Starting up on roadway	9,373	1.7	22	113	510	1,390	7,338
Starting up other	136	0.0	0	3	10	14	109
Entering parking	468	0.1	1	3	11	25	428
Leaving parking	1,205	0.2	2	11	48	124	1,020
Entering roadway	5,953	1.1	20	94	337	798	4,704
Leaving roadway	652	0.1	5	29	57	90	471
Making U-turn	1,053	0.2	7	11	67	142	826
Overtaking or passing	3,145	0.6	14	71	161	315	2,584
Avoiding object	464	0.1	2	14	31	54	363
Avoiding animal	952	0.2	1	15	82	98	756
Avoiding pedestrian	88	0.0	4	7	12	12	53
Avoiding vehicle (front/back)	3,450	0.6	22	134	251	448	2,595
Avoiding vehicle (angle)	1,394	0.3	1	27	110	186	1,070
Driverless moving	229	0.0	2	4	6	21	196
Parked	18,867	3.5	28	169	510	926	17,234
Crossing at intersection	86	0.0	0	5	10	21	50
Crossing not at intersection	14	0.0	0	2	0	2	10
Getting on/off vehicle	0	0.0	0	0	0	0	0
In roadway with traffic	23	0.0	0	4	0	3	16
In roadway against traffic	16	0.0	0	2	2	1	11
Standing or lying in roadway	3	0.0	0	0	0	0	3
Pushing/working on vehicle	9	0.0	0	1	1	2	5
Other working in roadway	5	0.0	0	0	1	0	4
Playing in roadway	1	0.0	0	0	0	0	1
In roadway other reason	19	0.0	1	1	2	4	11
Not in roadway	56	0.0	1	3	8	13	31
Negotiating a curve	2,829	0.5	23	126	230	302	2,148
Other	835	0.2	4	24	69	96	642
Unknown	5,986	1.1	12	54	127	339	5,454
TOTAL	540,387	100.0	1,530	8,433	28,697	69,221	432,506

ACTION PRIOR TO CRASH (CONTINUED)

MOTORCYCLIST ACTION	MOTORCYCLES		MOTORCYCLISTS*		FATALITY	INJURY			NO INJURY
	Number of Motorcycles	% of Total	Number of Motorcyclists	% of Total		A	B	C	
Going straight ahead	2,015	68.0	2,205	68.1	117	523	689	369	472
Turning left	120	4.0	131	4.0	0	21	43	25	42
Turning right	79	2.7	84	2.6	0	10	26	19	28
Stopped on roadway	120	4.0	131	4.0	1	9	24	28	67
In prior crash	0	0.0	0	0.0	0	0	0	0	0
Changing lanes	59	2.0	62	1.9	2	17	15	7	20
Backing	3	0.1	3	0.1	0	0	1	0	2
Slowing/stopping on roadway	176	5.9	191	5.9	6	20	57	42	62
Slowing/stopping other	3	0.1	3	0.1	0	0	1	1	1
Starting up on roadway	30	1.0	33	1.0	0	3	13	3	13
Starting up other	0	0.0	0	0.0	0	0	0	0	0
Entering parking	1	0.0	2	0.1	0	0	2	0	0
Leaving parking	3	0.1	3	0.1	0	1	1	1	0
Entering roadway	14	0.5	15	0.5	1	1	5	2	6
Leaving roadway	9	0.3	11	0.3	0	4	1	3	3
Making U-turn	5	0.2	6	0.2	1	0	1	0	4
Overtaking or passing	53	1.8	61	1.9	3	24	20	5	6
Avoiding object	4	0.1	4	0.1	0	1	0	2	1
Avoiding animal	14	0.5	14	0.4	0	3	6	1	4
Avoiding pedestrian	1	0.0	1	0.0	0	0	0	0	0
Avoiding vehicle (front/back)	68	2.3	75	2.3	1	10	30	16	18
Avoiding vehicle (angle)	32	1.1	34	1.1	0	4	13	11	6
Driverless moving	2	0.1	2	0.1	0	0	0	0	0
Parked	34	1.1	35	1.1	0	0	0	1	12
Crossing at intersection	3	0.1	3	0.1	0	1	1	0	1
Crossing not at intersection	0	0.0	0	0.0	0	0	0	0	0
Getting on/off vehicle	0	0.0	0	0.0	0	0	0	0	0
In roadway with traffic	0	0.0	0	0.0	0	0	0	0	0
In roadway against traffic	1	0.0	1	0.0	0	0	0	1	0
Standing or 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	0	0.0	0	0	0	0	0
Not in roadway	0	0.0	0	0.0	0	0	0	0	0
Negotiating a curve	97	3.3	108	3.3	5	28	40	21	14
Other	8	0.3	9	0.3	0	1	3	0	5
Unknown	10	0.3	10	0.3	0	3	2	2	0
TOTAL	2,964	100.0	3,237	100.0	137	684	994	560	787

*This table includes 75 motorcyclists (drivers and passengers) with unknown injury severity

ACTION PRIOR TO CRASH (CONTINUED)

BICYCLIST ACTION	BICYCLISTS*		FATALITY	INJURY			NO INJURY
	Number of Bicyclists	% of Total		A	B	C	
Going straight ahead	1,030	59.8	11	90	386	348	154
Turning left	49	2.8	1	6	23	10	7
Turning right	12	0.7	0	4	2	2	4
Stopped on roadway	9	0.5	0	1	2	3	3
In prior crash	0	0.0	0	0	0	0	0
Changing lanes	18	1.0	0	2	9	7	0
Backing	0	0.0	0	0	0	0	0
Slowing/stopping on roadway	1	0.1	0	0	0	1	0
Slowing/stopping other	1	0.1	0	0	0	1	0
Starting up on roadway	11	0.6	0	1	2	5	3
Starting up other	4	0.2	0	0	0	2	2
Entering parking	2	0.1	0	0	1	1	0
Leaving parking	0	0.0	0	0	0	0	0
Entering roadway	61	3.5	1	6	20	21	4
Leaving roadway	2	0.1	0	0	0	1	1
Making U-turn	3	0.2	0	2	0	1	0
Overtaking or passing	0	0.0	0	0	0	0	0
Avoiding object	2	0.1	0	0	1	0	1
Avoiding animal	0	0.0	0	0	0	0	0
Avoiding pedestrian	1	0.1	0	0	1	0	0
Avoiding vehicle (front/back)	0	0.0	0	0	0	0	0
Avoiding vehicle (angle)	5	0.3	0	1	3	1	0
Driverless moving	2	0.1	0	0	0	0	1
Parked	3	0.2	0	0	1	0	0
Crossing at intersection	343	19.9	2	21	144	105	54
Crossing not at intersection	65	3.8	1	11	22	21	7
Getting on/off vehicle	0	0.0	0	0	0	0	0
In roadway with traffic	32	1.9	4	5	5	10	6
In roadway against traffic	13	0.8	0	2	5	4	1
Standing or lying in roadway	0	0.0	0	0	0	0	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	3	0.2	0	1	0	2	0
In roadway other reason	9	0.5	0	2	4	2	1
Not in roadway	14	0.8	0	0	7	7	0
Negotiating a curve	0	0.0	0	0	0	0	0
Other	19	1.1	0	1	7	3	4
Unknown	9	0.5	1	1	0	3	1
TOTAL	1,723	100.0	21	157	645	561	254

*Includes 85 bicyclists with unknown injury severity

ACTION PRIOR TO CRASH (CONTINUED)

PEDESTRIAN ACTION	PEDESTRIANS*		FATALITY	INJURY			NO INJURY
	Number of Pedestrians	% of Total		A	B	C	
Going straight ahead	39	1.6	1	4	24	6	3
Turning left	2	0.1	0	0	0	0	2
Turning right	0	0.0	0	0	0	0	0
Stopped on roadway	6	0.2	0	2	0	1	3
In prior crash	0	0.0	0	0	0	0	0
Changing lanes	0	0.0	0	0	0	0	0
Backing	0	0.0	0	0	0	0	0
Slowing/stopping on roadway	0	0.0	0	0	0	0	0
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	0	0.0	0	0	0	0	0
Leaving parking	0	0.0	0	0	0	0	0
Entering roadway	11	0.5	0	2	6	3	0
Leaving roadway	0	0.0	0	0	0	0	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 animal	0	0.0	0	0	0	0	0
Avoiding pedestrian	0	0.0	0	0	0	0	0
Avoiding vehicle (front/back)	1	0.0	0	0	0	1	0
Avoiding vehicle (angle)	0	0.0	0	0	0	0	0
Driverless moving	0	0.0	0	0	0	0	0
Parked	0	0.0	0	0	0	0	0
Crossing at intersection	869	36.0	20	119	278	337	89
Crossing not at intersection	542	22.5	55	111	186	140	36
Getting on/off vehicle	22	0.9	1	4	9	7	0
In roadway with traffic	221	9.2	19	51	61	60	22
In roadway against traffic	39	1.6	3	8	10	15	3
Standing or lying in roadway	120	5.0	14	29	31	32	9
Pushing/working on vehicle	20	0.8	3	5	7	3	1
Other working in roadway	31	1.3	3	6	1	15	6
Playing in roadway	27	1.1	0	2	14	10	1
In roadway other reason	197	8.2	16	57	44	46	29
Not in roadway	86	3.6	8	10	29	29	5
Negotiating a curve	0	0.0	0	0	0	0	0
Other	112	4.6	2	19	31	43	7
Unknown	65	2.7	13	15	10	11	6
TOTAL	2,411	100.0	158	444	742	759	222

*Includes 86 pedestrians with unknown injury severity

MOST HARMFUL EVENT

NONCOLLISION	MOTOR VEHICLES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Vehicles	% of Total		A	B	C	
Loss of control	3,099	0.6	5	130	270	392	2,302
Cross center/median	605	0.1	4	21	56	94	430
Ran off road left	1,141	0.2	1	31	76	124	909
Ran off road right	1,885	0.3	1	37	132	220	1,495
Re-enter road	140	0.0	0	3	9	11	117
Overturn	6,400	1.2	87	420	1,279	1,310	3,304
Separation of units	345	0.1	2	10	21	40	272
Fire/explosion	374	0.1	9	13	14	22	316
Immersion	283	0.1	4	0	5	12	262
Jackknife	210	0.0	0	3	8	22	177
Downhill runaway	21	0.0	0	1	0	3	17
Cargo loss/shift	395	0.1	0	2	8	22	363
Individual fell off	362	0.1	11	102	159	44	46
Other noncollision	1,130	0.2	2	27	92	118	891
SUBTOTAL	16,390	3.0	126	800	2,129	2,434	10,901

COLLISION WITH A NONFIXED OBJECT	MOTOR VEHICLES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Vehicles	% of Total		A	B	C	
Pedestrian	2,108	0.4	156	386	655	672	239
Bicycle / Pedalcycle	1,622	0.3	22	143	620	527	310
Motor vehicle in transport	404,780	74.9	958	5,708	21,299	59,126	317,689
Parked motor vehicle	16,477	3.0	17	118	419	784	15,139
Railway train	49	0.0	2	3	4	8	32
Animal	52,334	9.7	14	72	300	546	51,402
Other nonfixed objects	3,798	0.7	15	26	106	180	3,471
SUBTOTAL	481,168	89.0	1,184	6,456	23,403	61,843	388,282

MOST HARMFUL EVENT (CONTINUED)

COLLISION WITH A FIXED OBJECT	MOTOR VEHICLES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Vehicles	% of Total		A	B	C	
Bridge/pier/abutment	242	0.0	3	6	22	29	182
Bridge rail	378	0.1	1	5	22	46	304
Guardrail face	2,862	0.5	5	38	122	332	2,365
Guardrail end	602	0.1	4	20	41	97	440
Median barrier	4,250	0.8	5	83	295	807	3,060
Highway traffic sign post	3,041	0.6	3	16	77	120	2,825
Highway signal post	170	0.0	2	4	7	20	137
Luminaire/light support	3,696	0.7	22	112	338	545	2,679
Other pole	1,218	0.2	5	19	69	112	1,013
Culvert	463	0.1	2	25	63	59	314
Curb	1,571	0.3	3	22	78	89	1,379
Ditch	5,834	1.1	15	129	466	674	4,550
Embankment	1,004	0.2	6	37	100	135	726
Fence	808	0.1	2	8	29	70	699
Mailbox	1,555	0.3	0	6	16	39	1,494
Tree	8,991	1.7	120	519	1,078	1,214	6,060
Rail crossing signal	72	0.0	0	2	3	7	60
Building	513	0.1	8	22	73	84	326
Traffic island	29	0.0	0	4	1	1	23
Fire hydrant	499	0.1	0	5	22	41	431
Impact attenuator	161	0.0	0	7	12	35	107
Other fixed object	1,741	0.3	8	58	127	177	1,371
SUBTOTAL	39,700	7.3	214	1,147	3,061	4,733	30,545

	MOTOR VEHICLES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Vehicles	% of Total		A	B	C	
Unknown Event	3,129	0.6	6	30	104	211	2,778
MOST HARMFUL EVENT TOTAL	540,387	100.0	1,530	8,433	28,697	69,221	432,506

VEHICLE DEFECTS IN CRASH INVOLVEMENT

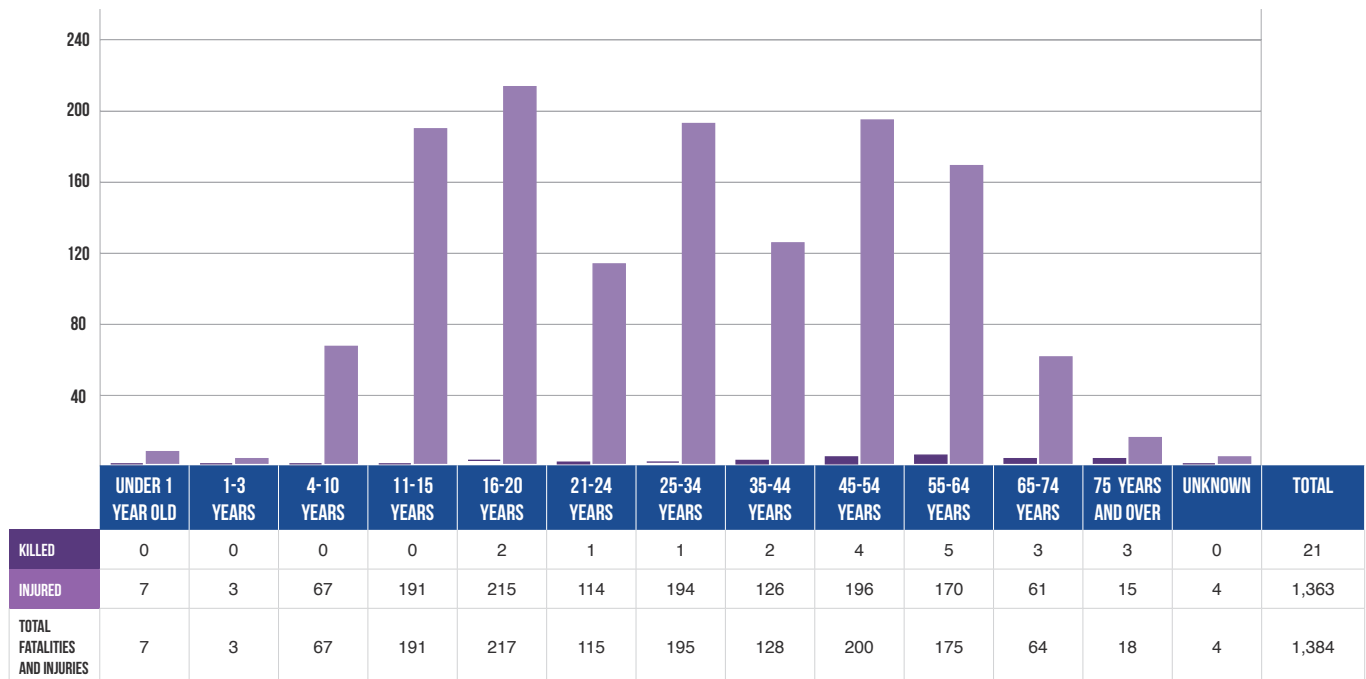
VEHICLE DEFECTS	MOTOR VEHICLES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Vehicles	% of Total		A	B	C	
Brakes	1,165	0.2	2	28	56	193	886
Lights/reflectors	167	0.0	1	6	11	17	132
Steering	314	0.1	0	5	27	42	240
Tires/wheels	815	0.2	2	16	65	106	626
Windows	29	0.0	0	2	3	3	21
Coupling/hitch/chains	118	0.0	0	4	1	4	109
Other	2,972	0.5	2	51	156	372	2,391
None or Unknown	534,807	99.0	1,523	8,321	28,378	68,484	428,101
TOTAL	540,387	100.0	1,530	8,433	28,697	69,221	432,506

DRIVER HAZARDOUS ACTION

HAZARDOUS ACTION	MOTOR VEHICLES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Vehicles	% of Total		A	B	C	
None	273,468	50.6	671	3,630	13,023	33,459	222,685
Speed too fast	31,143	5.8	161	816	2,213	3,856	24,097
Speed too slow	254	0.0	3	4	17	31	199
Failed to yield	46,812	8.7	102	921	3,726	7,391	34,672
Disregard traffic control	10,291	1.9	67	353	1,299	2,514	6,058
Drove wrong way	374	0.1	13	17	39	69	236
Drove left of center	2,446	0.5	58	149	287	377	1,575
Improper passing	2,779	0.5	8	39	115	223	2,394
Improper lane use	13,364	2.5	12	89	378	1,016	11,869
Improper turn	5,332	1.0	10	58	264	534	4,466
Improper/no signal	477	0.1	0	5	22	41	409
Improper backing	7,429	1.4	1	6	49	150	7,223
Unable to stop in assured clear distance	75,830	14.0	52	533	2,921	11,668	60,656
Reckless driving	2,564	0.5	73	230	352	406	1,503
Careless/negligent driving	12,775	2.4	81	543	1,308	1,938	8,905
Other	17,012	3.1	67	439	1,195	1,954	13,357
Unknown	38,037	7.0	151	601	1,489	3,594	32,202
TOTAL	540,387	100.0	1,530	8,433	28,697	69,221	432,506

MICHIGAN BICYCLE CRASHES

2017 BICYCLIST FATALITIES AND INJURIES



In 2017, there were 1,723 bicyclists involved in motor vehicle crashes, with 21 bicyclists killed and 1,363 injured. More bicyclists within the 55-64 years of age group died than any other age group, with 5 killed (23.8%). The 16-20 age group had the greatest percentage of total fatalities and injuries (15.7%).

BICYCLE HELMET USE AND INJURY SEVERITY

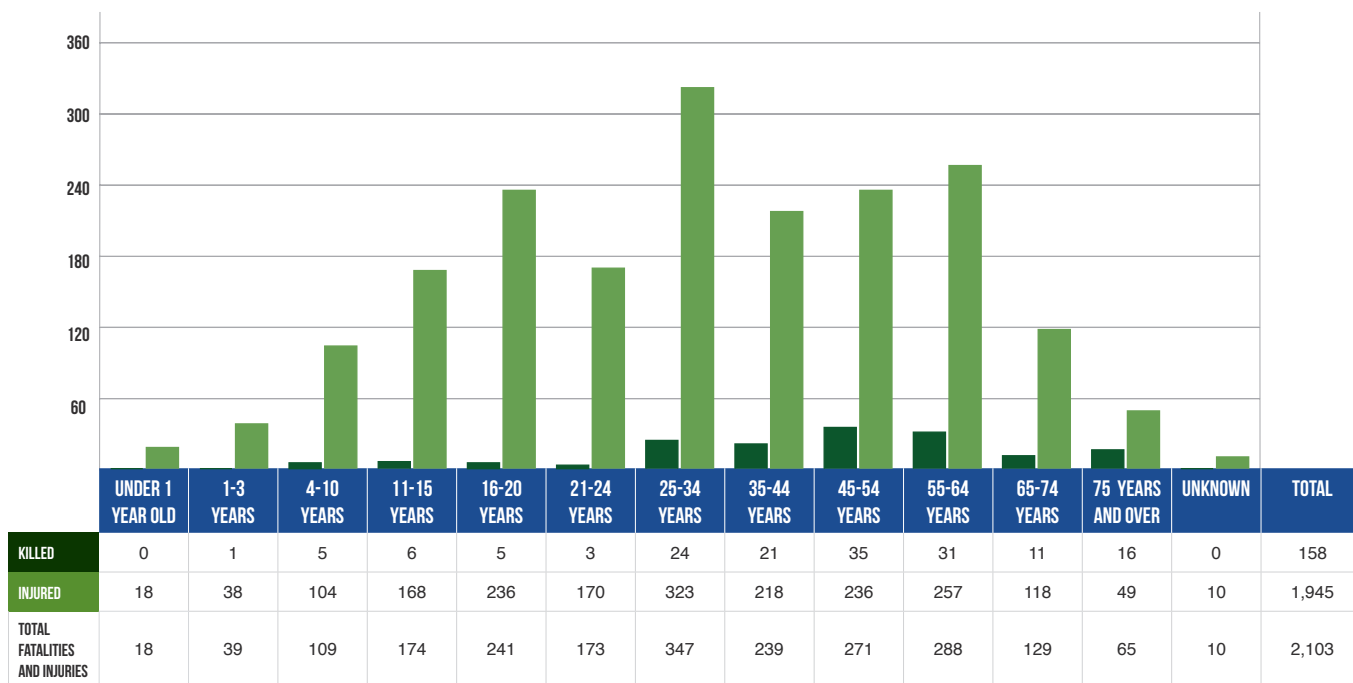
HELMET USE	FATALITY	INJURY			NO INJURY
		A	B	C	
Worn	5	17	92	61	26
Not Worn	10	80	311	265	99
Unknown	6	60	242	235	129
Total	21	157	645	561	254

Note: 85 bicyclists had an unknown degree of injury and are not represented in this table

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

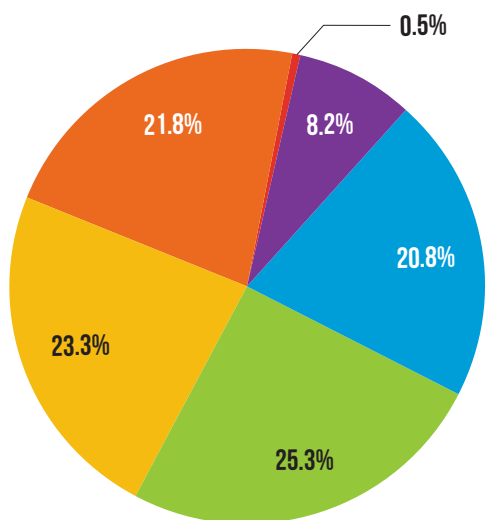
MICHIGAN PEDESTRIAN CRASHES

2017 PEDESTRIAN FATALITIES AND INJURIES

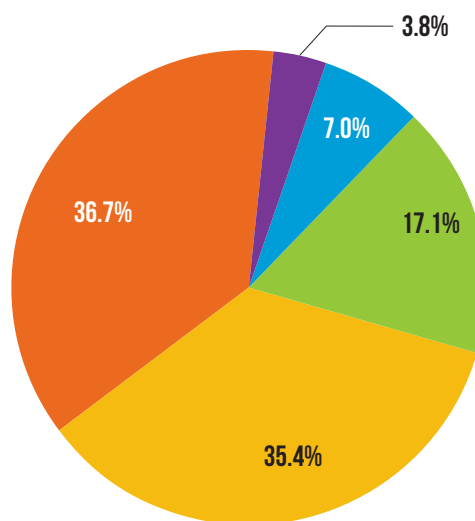


In 2017, there were 2,411 pedestrians involved in motor vehicle crashes, with 158 pedestrians killed and 1,945 injured. More pedestrians within the 45-54 years of age group died than any other age group, with 35 killed (22.2%). The 25-34 age group had the greatest number of injuries (16.6%), and the greatest percentage of total fatalities and injuries (16.5%).

■ 0-10 YEARS
 ■ 11-20 YEARS
 ■ 21-34 YEARS
 ■ 35-54 YEARS
 ■ 55 AND OVER
 ■ UNKNOWN



PEDESTRIANS INJURED



PEDESTRIANS KILLED

MICHIGAN SNOWMOBILE CRASHES ON PUBLIC ROADWAYS - MOST HARMFUL EVENT

NONCOLLISION	SNOWMOBILES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Snowmobiles	% of Total		A	B	C	
Loss of control	5	4.2	0	2	0	2	1
Cross center/median	0	0.0	0	0	0	0	0
Ran off road left	0	0.0	0	0	0	0	0
Ran off road right	1	0.8	0	0	0	0	1
Re-enter road	0	0.0	0	0	0	0	0
Overturn	14	11.8	0	4	2	3	5
Separation of units	1	0.8	0	0	0	1	0
Fire/explosion	3	2.5	0	0	0	0	3
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	12	10.1	0	4	5	3	0
Other noncollision	1	0.8	0	0	1	0	0
SUBTOTAL	37	31.1	0	10	8	9	10

COLLISION WITH A NONFIXED OBJECT	SNOWMOBILES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Snowmobiles	% of Total		A	B	C	
Pedestrian	1	0.8	0	1	0	0	0
Bicycle / Pedalcycle	0	0.0	0	0	0	0	0
Motor vehicle in transport	44	37.0	3	9	4	5	23
Parked motor vehicle	0	0.0	0	0	0	0	0
Railway train	0	0.0	0	0	0	0	0
Animal	4	3.4	0	1	1	0	2
Other nonfixed objects	0	0.0	0	0	0	0	0
SUBTOTAL	49	41.2	3	11	5	5	25

MICHIGAN SNOWMOBILE CRASHES ON PUBLIC ROADWAYS - MOST HARMFUL EVENT (CONTINUED)

COLLISION WITH A FIXED OBJECT	SNOWMOBILES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Snowmobiles	% of Total		A	B	C	
Bridge/pier/abutment	0	0.0	0	0	0	0	0
Bridge rail	0	0.0	0	0	0	0	0
Guardrail face	2	1.7	0	0	0	1	1
Guardrail end	0	0.0	0	0	0	0	0
Median barrier	0	0.0	0	0	0	0	0
Highway traffic sign post	0	0.0	0	0	0	0	0
Highway signal post	0	0.0	0	0	0	0	0
Luminaire/light support	1	0.8	1	0	0	0	0
Other pole	1	0.8	0	0	0	0	1
Culvert	0	0.0	0	0	0	0	0
Curb	0	0.0	0	0	0	0	0
Ditch	1	0.8	0	0	1	0	0
Embankment	1	0.8	1	0	0	0	0
Fence	0	0.0	0	0	0	0	0
Mailbox	0	0.0	0	0	0	0	0
Tree	24	20.2	0	13	4	5	2
Rail crossing signal	0	0.0	0	0	0	0	0
Building	0	0.0	0	0	0	0	0
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	1	0.8	0	1	0	0	0
SUBTOTAL	31	26.1	2	14	5	6	4

	SNOWMOBILES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Snowmobiles	% of Total		A	B	C	
Unknown Event	2	1.7	0	0	1	1	0
MOST HARMFUL EVENT TOTAL	119	100.0	5	35	19	21	39

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

A total of 119 snowmobiles were reported in crashes on Michigan public roadways during 2017, resulting in four fatal crashes. A total of 75 snowmobiles were involved in 71 injury crashes.

MICHIGAN ORV/ATV CRASHES ON PUBLIC ROADWAYS - MOST HARMFUL EVENT

NONCOLLISION	ORV/ATV		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of ORV/ATVs	% of Total		A	B	C	
Loss of control	17	4.9	0	8	5	4	0
Cross center/median	2	0.6	0	0	0	1	1
Ran off road left	1	0.3	0	0	1	0	0
Ran off road right	1	0.3	0	0	0	1	0
Re-enter road	1	0.3	0	0	1	0	0
Overturn	73	21.0	5	29	19	12	8
Separation of units	1	0.3	0	0	0	0	1
Fire/explosion	4	1.2	0	0	0	0	4
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	36	10.4	1	13	19	3	0
Other noncollision	3	0.9	0	1	0	0	2
SUBTOTAL	139	40.1	6	51	45	21	16

COLLISION WITH A NONFIXED OBJECT	ORV/ATV		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of ORV/ATVs	% of Total		A	B	C	
Pedestrian	2	0.6	0	0	0	1	1
Bicycle / Pedalcycle	0	0.0	0	0	0	0	0
Motor vehicle in transport	120	34.6	8	26	31	12	43
Parked motor vehicle	12	3.5	0	1	3	0	8
Railway train	0	0.0	0	0	0	0	0
Animal	4	1.2	1	2	0	0	1
Other nonfixed objects	4	1.2	1	0	2	1	0
SUBTOTAL	142	40.9	10	29	36	14	53

MICHIGAN ORV/ATV CRASHES ON PUBLIC ROADWAYS - MOST HARMFUL EVENT (CONTINUED)

COLLISION WITH A FIXED OBJECT	ORV/ATV		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of ORV/ATVs	% of Total		A	B	C	
Bridge/pier/abutment	1	0.3	0	0	1	0	0
Bridge rail	0	0.0	0	0	0	0	0
Guardrail face	1	0.3	0	0	0	1	0
Guardrail end	0	0.0	0	0	0	0	0
Median barrier	1	0.3	0	0	1	0	0
Highway traffic sign post	2	0.6	0	1	0	0	1
Highway signal post	0	0.0	0	0	0	0	0
Luminaire/light support	1	0.3	0	1	0	0	0
Other pole	2	0.6	0	1	1	0	0
Culvert	1	0.3	0	1	0	0	0
Curb	0	0.0	0	0	0	0	0
Ditch	12	3.5	1	4	3	2	2
Embankment	5	1.4	0	3	2	0	0
Fence	2	0.6	0	0	0	0	2
Mailbox	0	0.0	0	0	0	0	0
Tree	26	7.5	2	17	3	3	1
Rail crossing signal	0	0.0	0	0	0	0	0
Building	2	0.6	1	1	0	0	0
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	7	2.0	3	2	2	0	0
SUBTOTAL	63	18.2	7	31	13	6	6

	ORV/ATV		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of ORV/ATVs	% of Total		A	B	C	
Unknown Event	3	0.9	0	0	1	1	1
MOST HARMFUL EVENT TOTAL	347	100.0	23	111	95	42	76

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

A total of 347 off-road/all-terrain vehicles were reported in crashes on Michigan public roadways during 2017, resulting in 20 fatal crashes. An additional 248 ORV/ATVs were involved in injury crashes.

MICHIGAN SNOWMOBILE CRASHES ON PUBLIC ROADWAYS

DRIVER HAZARDOUS ACTION	SNOWMOBILES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Snowmobiles	% of Total		A	B	C	
None	40	33.6	1	7	4	9	19
Speed too fast	30	25.2	0	12	8	3	7
Speed too slow	1	0.8	0	1	0	0	0
Failed to yield	8	6.7	1	2	0	1	4
Disregard traffic control	2	1.7	0	1	0	0	1
Drove wrong way	0	0.0	0	0	0	0	0
Drove left of center	1	0.8	0	0	0	0	1
Improper passing	0	0.0	0	0	0	0	0
Improper lane use	3	2.5	0	2	1	0	0
Improper turn	0	0.0	0	0	0	0	0
Improper/no signal	0	0.0	0	0	0	0	0
Improper backing	0	0.0	0	0	0	0	0
Unable to stop in assured clear distance	6	5.0	0	1	1	1	3
Reckless driving	3	2.5	0	2	0	1	0
Careless/negligent driving	10	8.4	2	3	2	0	3
Other	8	6.7	0	3	2	3	0
Unknown	7	5.9	1	1	1	3	1
TOTAL	119	100.0	5	35	19	21	39

MICHIGAN ORV/ATV CRASHES ON PUBLIC ROADWAYS

DRIVER HAZARDOUS ACTION	ORV/ATV		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of ORV/ATVs	% of Total		A	B	C	
None	75	21.6	2	17	19	11	26
Speed too fast	89	25.6	8	34	32	9	6
Speed too slow	0	0.0	0	0	0	0	0
Failed to yield	30	8.6	0	5	8	4	13
Disregard traffic control	7	2.0	1	3	0	3	0
Drove wrong way	0	0.0	0	0	0	0	0
Drove left of center	4	1.2	0	1	1	1	1
Improper passing	0	0.0	0	0	0	0	0
Improper lane use	3	0.9	0	0	1	1	1
Improper turn	4	1.2	0	1	1	0	2
Improper/no signal	1	0.3	0	0	1	0	0
Improper backing	1	0.3	0	1	0	0	0
Unable to stop in assured clear distance	8	2.3	0	2	1	0	5
Reckless driving	14	4.0	3	6	2	3	0
Careless/negligent driving	43	12.4	1	20	13	4	5
Other	30	8.6	3	6	10	3	8
Unknown	38	11.0	5	15	6	3	9
TOTAL	347	100.0	23	111	95	42	76

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

MICHIGAN FARM EQUIPMENT CRASHES

FARM EQUIPMENT CRASHES	2016	2017	% CHANGE
Crashes	234	223	-4.7%
Fatalities	2	1	-50.0%
Injuries	79	65	-17.7%

A total of 223 crashes involving farm equipment were reported on Michigan roadways during 2017. Of those crashes, one was fatal with one person killed.

MICHIGAN VEHICLE-TRAIN CRASHES

VEHICLE-TRAIN CRASHES	2016	2017	% CHANGE
Crashes	59	51	-13.6%
Fatalities	4	2	-50.0%
Injuries	30	20	-33.3%

A total of 51 crashes involving trains were reported in Michigan during 2017. Of those crashes, two were fatal with two people killed.

MICHIGAN MOTORCYCLE CRASHES

MOTORCYCLE DATA	2016	2017	% CHANGE
Motorcycle Registrations	258,265	258,487	0.1%
Motorcycles in Crashes	3,384	2,964	-12.4%
Motorcyclist Deaths	141	137	-2.8%
Motorcyclists Injured	2,622	2,238	-14.6%
Death Rate based on 10,000 motorcycle registrations	5.46	5.30	-2.9%
Estimated Mileage based on 3,000 miles per motorcycle	774,795,000	775,461,000	0.1%
Death Rate based on deaths per 100 million vehicle miles traveled	18.20	17.67	-2.9%

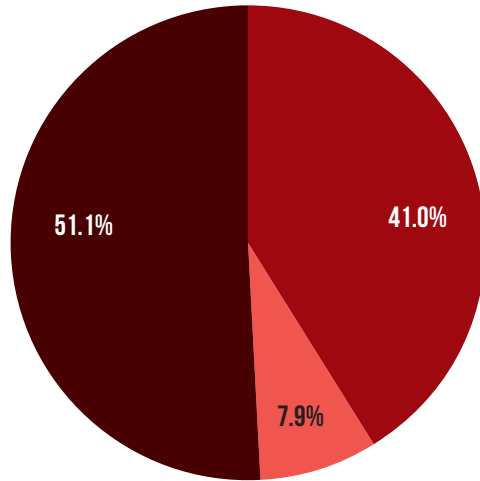
Motorcycles were involved in 0.9 percent of all traffic crashes in Michigan in 2017. Injuries were proportionately more severe to motorcyclists than to persons in motor vehicles.

DRIVER GENDER INFORMATION

MALES

FEMALES

UNKNOWN

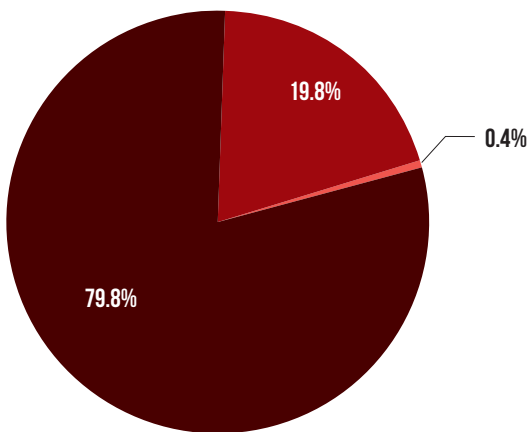


ALL CRASHES

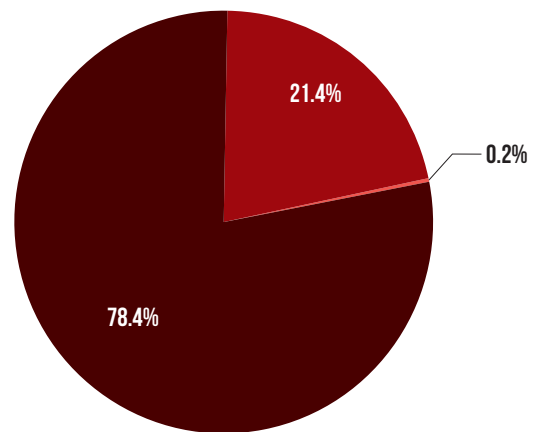
PROPERTY DAMAGE ONLY

INJURY

FATAL



MALE CRASH SEVERITY



FEMALE CRASH SEVERITY

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

PERSON AGE - DEMOGRAPHICS AND CRASH INVOLVEMENTS

AGE	LICENSED DRIVERS	MICHIGAN POPULATION	TOTAL DRIVERS IN CRASHES	DRIVERS IN FATAL CRASHES	OCCUPANTS KILLED	OCCUPANTS INJURED	TOTAL BICYCLISTS IN CRASHES	BICYCLISTS IN FATAL CRASHES	TOTAL PEDESTRIANS IN CRASHES	PEDESTRIANS IN FATAL CRASHES
0-15	49,583	1,910,519	854	2	27	4,903	317	0	399	18
16	78,400	131,824	7,972	16	9	1,359	63	0	38	1
17	93,089	134,306	10,637	14	6	1,784	52	0	57	0
18	88,310	135,643	13,104	24	11	2,124	50	1	45	0
19	101,577	132,492	13,475	28	19	2,150	51	0	61	4
20	108,381	135,667	13,419	37	21	1,976	55	1	63	3
21-24	462,279	567,005	51,711	174	95	7,685	136	1	194	4
25-29	607,287	676,087	57,754	191	105	8,211	136	1	210	8
30-34	559,817	593,016	45,553	135	66	6,224	109	0	180	17
35-39	545,410	592,177	41,148	97	51	5,557	92	1	139	12
40-44	517,288	563,657	36,747	96	54	4,753	63	1	129	10
45-49	588,874	642,154	40,161	111	49	5,381	95	0	133	16
50-54	620,180	680,338	38,690	120	59	5,255	132	4	175	24
55-59	667,102	725,134	37,411	110	52	5,076	131	3	188	17
60-64	633,182	675,096	29,642	89	56	4,039	67	2	131	14
65-69	526,687	562,365	21,488	73	33	3,186	52	4	88	8
70-74	390,997	416,853	14,573	58	41	2,170	25	1	57	5
75-79	264,018	283,027	8,901	29	29	1,448	16	2	41	9
80-84	162,512	191,193	5,186	32	26	980	3	0	16	3
85+	135,413	213,758	3,786	38	40	776	2	1	14	5
Unknown	---	---	48,175	56	0	48	76	0	53	0
TOTAL	7,200,386	9,962,311	540,387	1,530	849	75,085	1,723	23	2,411	178

CRASH RATE PER LICENSED DRIVER BY AGE OF DRIVER IN ALL CRASHES

AGE	LICENSED DRIVERS	TOTAL DRIVERS IN CRASHES*	CRASH RATE
0-15	49,583	854	0.017
16	78,400	7,972	0.102
17	93,089	10,637	0.114
18	88,310	13,104	0.148
19	101,577	13,475	0.133
20	108,381	13,419	0.124
21-24	462,279	51,711	0.112
25-29	607,287	57,754	0.095
30-34	559,817	45,553	0.081
35-39	545,410	41,148	0.075
40-44	517,288	36,747	0.071
45-49	588,874	40,161	0.068
50-54	620,180	38,690	0.062
55-59	667,102	37,411	0.056
60-64	633,182	29,642	0.047
65-69	526,687	21,488	0.041
70-74	390,997	14,573	0.037
75-79	264,018	8,901	0.034
80-84	162,512	5,186	0.032
85-89	93,837	2,771	0.030
90-94	35,469	863	0.024
95-99	5,762	142	0.025
100+	345	10	0.029
Total	7,200,386	492,212	0.068

Note: Data entry errors resulted in an over-representation of age "100+" drivers

* Excludes 48,175 drivers with unknown age

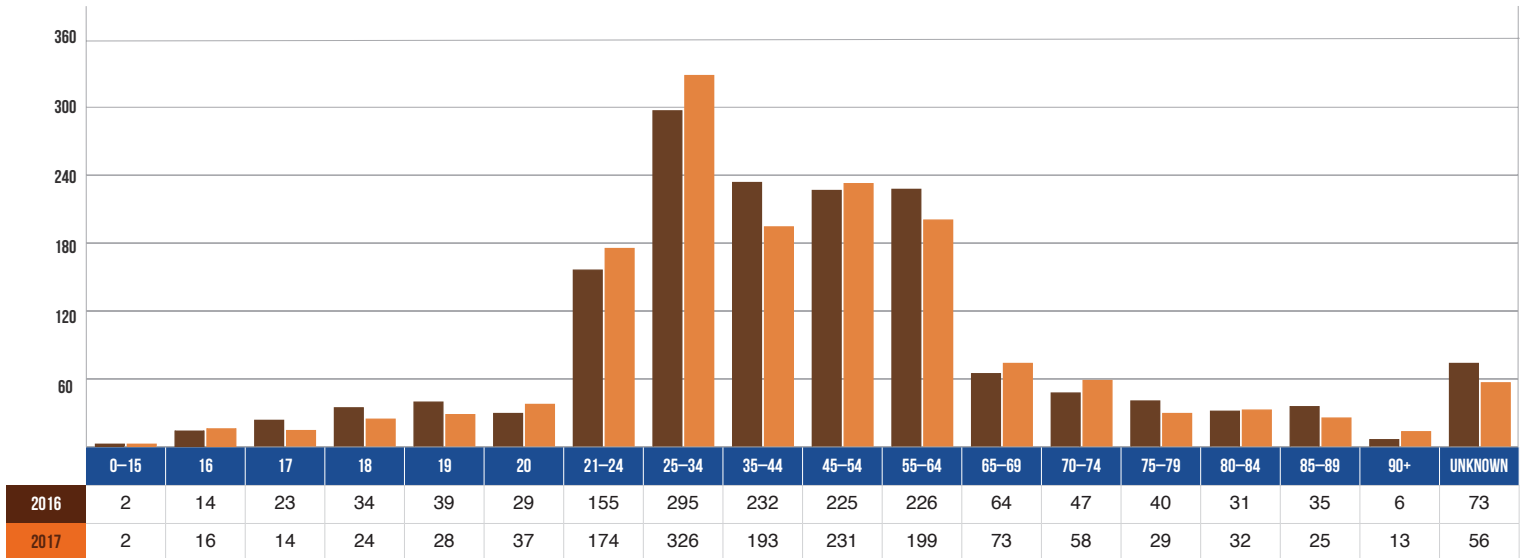
Licensed drivers age 18 have the highest crash rate at 0.148 (total crashes in age group divided by total number of licensed drivers in age group). The lower crash rates of the older groups (per licensed driver) may reflect reduced driving and exposure to the risk of a crash.

DRIVER AGE

AGE OF DRIVERS IN FATAL CRASHES	2016	2017	PERCENT CHANGE	PERCENT 2017 FATAL CRASH INVOLVEMENT	PERCENT ACTIVE DRIVING POPULATION*
15 years and under	2	2	0.0	0.1	0.7
16 years	14	16	14.3	1.0	1.1
17 years	23	14	-39.1	0.9	1.3
18 years	34	24	-29.4	1.6	1.2
19 years	39	28	-28.2	1.8	1.4
20 years	29	37	27.6	2.4	1.5
21 - 24 years	155	174	12.3	11.4	6.4
25 - 34 years	295	326	10.5	21.3	16.2
35 - 44 years	232	193	-16.8	12.6	14.8
45 - 54 years	225	231	2.7	15.1	16.4
55 - 64 years	226	199	-11.9	13.0	18.1
65 - 69 years	64	73	14.1	4.8	7.3
70 - 74 years	47	58	23.4	3.8	5.4
75 - 79 years	40	29	-27.5	1.9	3.7
80 - 84 years	31	32	3.2	2.1	2.3
85 - 89 years	35	25	-28.6	1.6	1.3
90 years and over	6	13	116.7	0.8	0.6
Unknown	73	56	-23.3	3.7	---
Total	1,570	1,530	-2.5	100.0	100.0

* Figures courtesy of the Michigan Department of State [13]

DRIVER AGE IN FATAL CRASHES



DRIVER CONDITION

POSSIBLE CONDITIONS OF DRIVER	CONDITIONS (CODED BY POLICE)	FATAL CRASHES	INJURY CRASHES			PROPERTY DAMAGE ONLY
			A	B	C	
Normal	430,601	644	5,477	22,748	57,217	344,515
Fatigued or Asleep	3,428	9	160	424	671	2,164
Sick	1,470	8	52	170	344	896
Medicated	857	5	55	107	188	502
Emotional	4,059	41	214	640	1,128	2,036
Physically Disabled	918	33	279	127	157	322
Unknown	39,868	581	1,033	1,700	4,150	32,404
Other	8,895	149	720	1,424	1,758	4,844

Note: Drivers may have more than one condition including "Normal." These are driver conditions that, in the opinion of the investigating officer, were involved in the crash. While some conditions may be evident, others (such as distraction) will only be known if the driver admits to the condition, thus leading to possible underreporting.

DRIVER INJURY SEVERITY BY RESTRAINT, ALCOHOL, AND DRUG USE

RESTRAINT USAGE	DRIVERS		FATALITY		INJURY			NO INJURY	UNKNOWN
	Number	% of Total	Number	% of Total	A	B	C		
ALL DRIVERS									
Restraint Used*	466,686	86.4	362	54.3	3,075	13,497	34,970	414,439	343
Restraint Not Used	4,963	0.9	219	32.8	754	906	670	2,402	12
Unknown	68,738	12.7	86	12.9	378	717	1,524	16,672	49,361
TOTAL	540,387	100.0	667	100	4,207	15,120	37,164	433,513	49,716
DRINKING DRIVERS ONLY									
Restraint Used*	6,594	75	43	34.4	250	760	785	4,752	4
Restraint Not Used	647	7.4	65	52	169	188	78	146	1
Unknown	1,550	17.6	17	13.6	81	179	154	1,112	7
TOTAL	8,791	100.0	125	100	500	1,127	1,017	6,010	12
DRUGGED DRIVERS ONLY									
Restraint Used*	1,209	77.6	35	60.3	104	149	231	690	0
Restraint Not Used	114	7.3	14	24.1	32	23	13	32	0
Unknown	235	15.1	9	15.5	23	22	57	124	0
TOTAL	1,558	100.0	58	100	159	194	301	846	0
DRINKING AND DRUGGED DRIVERS ONLY									
Restraint Used*	846	65.4	27	36.5	64	122	133	497	3
Restraint Not Used	153	11.8	30	40.5	50	26	24	23	0
Unknown	295	22.8	17	23	31	39	37	170	1
TOTAL	1,294	100.0	74	100	145	187	194	690	4

Note: 'Restraint Used' includes shoulder belt only, lap belt only, both lap and shoulder belts, restraint failed, and helmet worn