

VEHICLE TYPE AND CRASH INVOLVEMENT

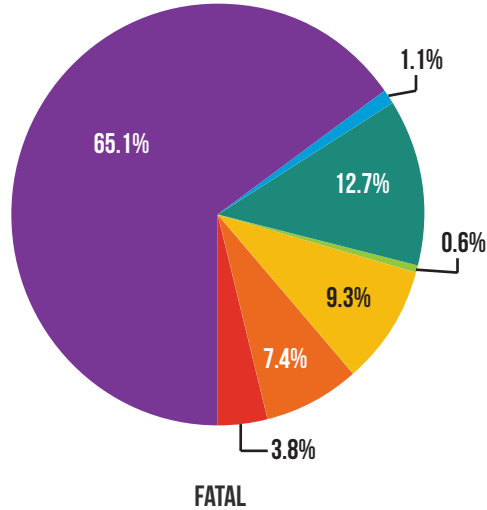
VEHICLE TYPE	MOTOR VEHICLES		FATAL CRASH		INJURY CRASH	PROPERTY DAMAGE ONLY	FATALITY IN VEHICLE		INJURY	NO INJURY
	Number of Vehicles	% of Total	Number	% of Total			Number	% of Total		
Passenger car, SUV, van	435,105	80.8	1,022	65.1	87,503	346,580	519	65.2	54,269	380,317
Motor home	9,030	1.7	18	1.1	1,835	7,177	6	0.8	1,041	7,983
Pickup truck	59,527	11.1	199	12.7	10,736	48,592	78	9.8	5,379	54,070
Small Truck under 10,000 lbs. GVWR	4,821	0.9	10	0.6	833	3,978	6	0.8	407	4,408
Motorcycle	3,384	0.6	146	9.3	2,460	778	136	17.1	2,405	843
Moped / goped	406	0.1	11	0.7	329	66	11	1.4	322	73
Go-cart / golf cart	47	0.0	0	0.0	23	24	0	0.0	19	28
Snowmobile	106	0.0	9	0.6	61	36	9	1.1	60	37
Off-Road Vehicle - ORV /	304	0.1	14	0.9	245	45	13	1.6	237	54
Other	2,522	0.5	13	0.8	430	2,079	5	0.6	186	2,331
Unknown	10,681	2.0	12	0.8	1,011	9,658	1	0.1	24	10,656
CDL Truck/Bus (break-down below)	12,479	2.3	116	7.4	2,194	10,169	12	1.5	596	11,871
Total Number of Vehicles	538,412	100.0	1,570	100.0	107,660	429,182	796	100.0	64,945	472,671

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

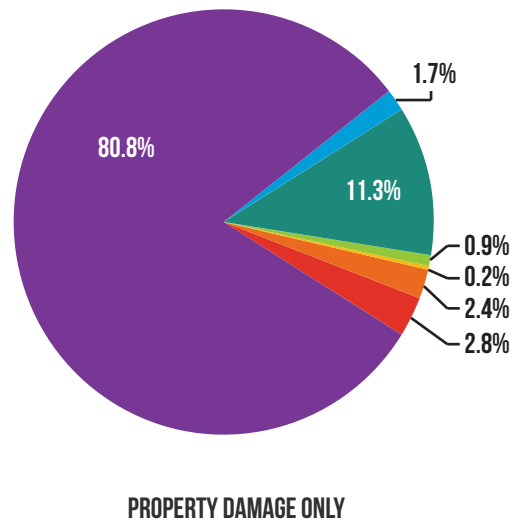
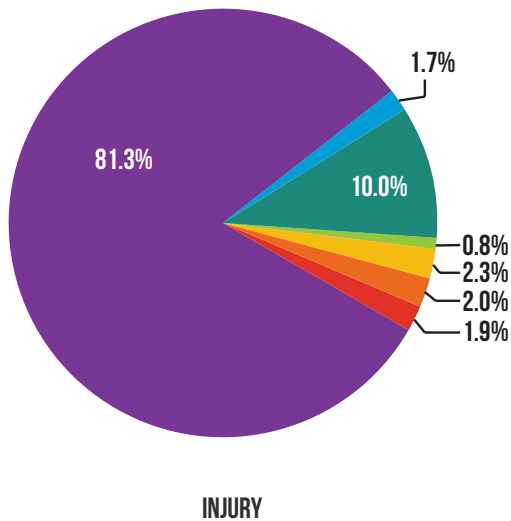
HEAVY TRUCK/BUS GROSS VEHICLE WEIGHT RATING	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	PROPERTY DAMAGE ONLY CRASHES	FATALITY IN HEAVY TRUCK		INJURY IN HEAVY TRUCK	NO INJURY IN HEAVY TRUCK
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total			Number of Heavy Trucks	% of Total		
10,000 lbs. or Less	496	4.0	0	0.0	32	464	0	0.0	5	491
10,001 - 26,000 lbs.	2,615	21.0	18	15.5	396	2,201	2	16.7	117	2,496
Greater than 26,000 lbs.	9,114	73.0	98	84.5	1,748	7,268	10	83.3	473	8,631
Uncoded & Errors	254	2.0	0	0.0	18	236	0	0.0	1	253
Total Number of Vehicles	12,479	100.0	116	100.0	2,194	10,169	12	100.0	596	11,871

VEHICLE TYPES IN CRASHES BY CRASH SEVERITY

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



The chart shows that 79.6 percent of vehicles involved in fatal crashes are passenger vehicles (passenger cars, SUVs, vans, motorhomes, pickup trucks, or trucks under 10,000 lbs.). Motorcycles have a fatal crash involvement of 9.3 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 (94.7%) 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	286,405	53.2	1,169	5,121	16,304	38,854	224,957
Turning left	36,831	6.8	106	669	2,775	5,986	27,295
Turning right	15,245	2.8	13	118	639	1,501	12,974
Stopped on roadway	55,841	10.4	48	473	2,478	9,946	42,896
In prior crash	494	0.1	1	14	41	91	347
Changing lanes	16,232	3.0	16	109	457	1,276	14,374
Backing	11,312	2.1	2	22	115	301	10,872
Slowing/stopping on roadway	56,374	10.5	41	392	1,984	8,657	45,300
Slowing/stopping other	765	0.1	4	12	27	103	619
Starting up on roadway	9,734	1.8	24	133	465	1,570	7,542
Starting up other	151	0.0	0	5	10	22	114
Entering parking	475	0.1	0	0	11	24	440
Leaving parking	1,289	0.2	1	11	62	136	1,079
Entering roadway	6,331	1.2	13	84	327	906	5,001
Leaving roadway	728	0.1	6	29	63	105	525
Making U-turn	1,090	0.2	3	18	75	161	833
Overtaking or passing	3,129	0.6	23	54	176	286	2,590
Avoiding object	489	0.1	1	7	32	61	388
Avoiding animal	875	0.2	0	20	85	119	651
Avoiding pedestrian	108	0.0	3	14	11	23	57
Avoiding vehicle (front/back)	3,648	0.7	11	78	254	520	2,785
Avoiding vehicle (angle)	1,516	0.3	5	25	98	216	1,172
Driverless moving	285	0.1	0	7	19	20	239
Parked	19,369	3.6	33	165	442	982	17,747
Crossing at intersection	54	0.0	0	2	6	15	31
Crossing not at intersection	8	0.0	0	0	0	1	7
Getting on/off vehicle	2	0.0	0	0	1	0	1
In roadway with traffic	16	0.0	0	0	2	4	10
In roadway against traffic	6	0.0	0	1	0	1	4
Standing or lying in roadway	5	0.0	0	0	0	2	3
Pushing/working on vehicle	4	0.0	1	0	0	0	3
Other working in roadway	13	0.0	0	0	0	1	12
Playing in roadway	0	0.0	0	0	0	0	0
In roadway other reason	6	0.0	0	0	1	0	5
Not in roadway	32	0.0	0	0	2	5	25
Negotiating a curve	1,173	0.2	17	68	128	159	801
Other	748	0.1	5	25	39	94	585
Unknown	7,629	1.4	24	51	171	485	6,898
TOTAL	538,412	100.0	1,570	7,727	27,300	72,633	429,182

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	2,265	66.9	2,505	67.5	118	504	816	533	498
Turning left	140	4.1	152	4.1	0	19	53	42	37
Turning right	104	3.1	113	3.0	2	13	36	33	28
Stopped on roadway	159	4.7	175	4.7	1	7	21	45	100
In prior crash	1	0.0	1	0.0	0	0	0	0	0
Changing lanes	59	1.7	61	1.6	1	6	24	8	20
Backing	0	0.0	0	0.0	0	0	0	0	0
Slowing/stopping on roadway	191	5.6	210	5.7	4	29	71	34	71
Slowing/stopping other	4	0.1	4	0.1	0	0	1	1	2
Starting up on roadway	35	1.0	36	1.0	2	4	12	7	11
Starting up other	1	0.0	1	0.0	0	0	0	0	1
Entering parking	1	0.0	1	0.0	0	0	0	0	1
Leaving parking	2	0.1	2	0.1	0	0	0	1	1
Entering roadway	16	0.5	16	0.4	1	6	5	2	2
Leaving roadway	11	0.3	12	0.3	1	2	6	2	1
Making U-turn	4	0.1	4	0.1	0	0	2	1	1
Overtaking or passing	67	2.0	69	1.9	5	12	26	12	9
Avoiding object	10	0.3	10	0.3	0	2	4	1	3
Avoiding animal	21	0.6	25	0.7	0	7	13	3	2
Avoiding pedestrian	1	0.0	1	0.0	0	0	1	0	0
Avoiding vehicle (front/back)	71	2.1	76	2.0	0	9	29	23	15
Avoiding vehicle (angle)	45	1.3	49	1.3	0	6	22	15	6
Driverless moving	2	0.1	2	0.1	0	0	0	1	0
Parked	58	1.7	58	1.6	0	0	1	1	8
Crossing at intersection	0	0.0	0	0.0	0	0	0	0	0
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	0	0.0	0	0.0	0	0	0	0	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	83	2.5	95	2.6	5	31	32	13	13
Other	6	0.2	6	0.2	1	0	3	1	1
Unknown	27	0.8	27	0.7	0	2	5	1	4
TOTAL	3,384	100.0	3,711	100.0	141	659	1,183	780	835

*This table includes 113 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	1,139	57.3	24	84	384	404	206
Turning left	44	2.2	0	4	21	12	6
Turning right	23	1.2	0	1	6	11	3
Stopped on roadway	16	0.8	0	2	7	4	2
In prior crash	0	0.0	0	0	0	0	0
Changing lanes	9	0.5	0	0	2	5	1
Backing	1	0.1	0	0	0	1	0
Slowing/stopping on roadway	9	0.5	1	1	3	1	3
Slowing/stopping other	1	0.1	0	0	0	1	0
Starting up on roadway	15	0.8	0	2	5	7	1
Starting up other	4	0.2	0	1	0	2	1
Entering parking	1	0.1	0	0	1	0	0
Leaving parking	1	0.1	0	0	1	0	0
Entering roadway	80	4.0	0	8	27	27	15
Leaving roadway	2	0.1	0	0	1	0	0
Making U-turn	2	0.1	0	0	0	1	1
Overtaking or passing	4	0.2	0	0	2	1	1
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)	8	0.4	0	0	6	1	1
Avoiding vehicle (angle)	6	0.3	0	1	1	4	0
Driverless moving	0	0.0	0	0	0	0	0
Parked	2	0.1	0	0	0	0	1
Crossing at intersection	408	20.5	5	22	141	160	65
Crossing not at intersection	80	4.0	4	16	30	14	9
Getting on/off vehicle	0	0.0	0	0	0	0	0
In roadway with traffic	34	1.7	1	7	6	15	3
In roadway against traffic	25	1.3	2	4	7	6	4
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	2	0.1	0	0	1	0	1
In roadway other reason	5	0.3	0	2	0	1	2
Not in roadway	26	1.3	0	1	6	13	6
Negotiating a curve	0	0.0	0	0	0	0	0
Other	22	1.1	0	0	8	5	5
Unknown	19	1.0	1	2	3	3	2
TOTAL	1,988	100.0	38	158	669	699	339

*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	60	2.6	0	6	19	21	12
Turning left	1	0.0	1	0	0	0	0
Turning right	1	0.0	0	1	0	0	0
Stopped on roadway	9	0.4	1	1	4	1	2
In prior crash	0	0.0	0	0	0	0	0
Changing lanes	1	0.0	0	1	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	1	0.0	0	0	1	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	14	0.6	0	2	7	4	1
Leaving roadway	1	0.0	0	0	0	0	1
Making U-turn	0	0.0	0	0	0	0	0
Overtaking or passing	3	0.1	0	0	1	0	1
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)	1	0.0	0	0	1	0	0
Driverless moving	0	0.0	0	0	0	0	0
Parked	0	0.0	0	0	0	0	0
Crossing at intersection	783	33.3	21	96	235	315	84
Crossing not at intersection	565	24.1	67	100	156	172	39
Getting on/off vehicle	24	1.0	1	4	7	11	0
In roadway with traffic	210	8.9	17	43	58	51	27
In roadway against traffic	38	1.6	3	4	8	17	4
Standing or lying in roadway	127	5.4	16	24	47	28	7
Pushing/working on vehicle	28	1.2	3	9	7	6	2
Other working in roadway	28	1.2	2	7	9	5	3
Playing in roadway	29	1.2	3	3	11	9	1
In roadway other reason	169	7.2	15	25	45	60	17
Not in roadway	100	4.3	3	15	37	37	7
Negotiating a curve	0	0.0	0	0	0	0	0
Other	103	4.4	3	16	27	45	11
Unknown	52	2.2	9	6	15	11	7
TOTAL	2,349	100.0	165	363	695	794	226

*Includes 106 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	2,654	0.5	7	79	241	399	1,928
Cross center/median	485	0.1	2	15	33	52	383
Ran off road left	989	0.2	1	15	78	129	766
Ran off road right	1,653	0.3	1	38	112	198	1,304
Re-enter road	113	0.0	0	2	6	12	93
Overturn	6,707	1.2	81	407	1,271	1,482	3,466
Separation of units	198	0.0	0	4	15	22	157
Fire/explosion	354	0.1	7	5	16	19	307
Immersion	49	0.0	3	1	3	5	37
Jackknife	205	0.0	0	2	3	13	187
Downhill runaway	20	0.0	0	0	2	4	14
Cargo loss/shift	462	0.1	0	0	10	10	442
Individual fell off	397	0.1	18	107	170	64	38
Other noncollision	1,448	0.3	2	35	90	167	1,154
SUBTOTAL	15,734	2.9	122	710	2,050	2,576	10,276

HAD A COLLISION WITH NONFIXED OBJECT	MOTOR VEHICLES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Vehicles	% of Total		A	B	C	
Pedestrian	2,036	0.4	166	347	593	674	256
Bicycle / Pedalcycle	1,807	0.3	33	138	625	638	373
Motor vehicle in transport	406,578	75.5	980	5,271	20,208	62,004	318,115
Parked motor vehicle	16,576	3.1	12	116	340	827	15,281
Railway train	53	0.0	3	8	5	9	28
Animal	48,324	9.0	7	61	272	564	47,420
Other nonfixed objects	4,127	0.8	9	29	125	191	3,773
SUBTOTAL	479,501	89.1	1,210	5,970	22,168	64,907	385,246

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	277	0.1	3	8	17	38	211
Bridge rail	409	0.1	1	2	19	46	341
Guardrail face	2,887	0.5	11	38	145	312	2,381
Guardrail end	559	0.1	1	16	44	73	425
Median barrier	4,501	0.8	5	69	306	764	3,357
Highway traffic sign post	2,797	0.5	8	18	50	105	2,616
Highway signal post	207	0.0	0	1	12	20	174
Luminaire/light support*	3,793	0.7	20	75	345	586	2,767
Other pole	1,066	0.2	2	17	48	83	916
Culvert	473	0.1	2	25	50	76	320
Curb	1,619	0.3	5	27	66	116	1,405
Ditch	6,246	1.2	14	147	427	760	4,898
Embankment	1,160	0.2	5	37	111	161	846
Fence	839	0.2	1	10	25	70	733
Mailbox	1,631	0.3	0	6	31	39	1,555
Tree	9,094	1.7	132	441	1,054	1,349	6,118
Rail crossing signal	92	0.0	1	2	3	12	74
Building	567	0.1	6	23	66	99	373
Traffic island	53	0.0	1	1	2	4	45
Fire hydrant	533	0.1	0	3	15	54	461
Impact attenuator	110	0.0	2	2	11	21	74
Other fixed object	2,027	0.4	8	47	159	198	1,615
SUBTOTAL	40,940	7.6	228	1,015	3,006	4,986	31,705

	MOTOR VEHICLES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Vehicles	% of Total		A	B	C	
Unknown Event	2,237	0.4	10	32	76	164	1,955
MOST HARMFUL EVENT TOTAL	538,412	100.0	1,570	7,727	27,300	72,633	429,182

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	1,098	0.2	2	28	65	173	830
Lights/reflectors	174	0.0	3	6	11	25	129
Steering	310	0.1	1	9	26	37	237
Tires/wheels	851	0.2	6	15	66	108	656
Windows	44	0.0	0	2	2	4	36
Coupling/hitch/chains	74	0.0	0	0	3	6	65
Other	1,044	0.2	2	16	57	119	850
None or Unknown	534,817	99.3	1,556	7,651	27,070	72,161	426,379
TOTAL	538,412	100.0	1,570	7,727	27,300	72,633	429,182

DRIVER HAZARDOUS ACTION

HAZARDOUS ACTION	MOTOR VEHICLES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Vehicles	% of Total		A	B	C	
None	273,444	50.8	678	3,338	12,460	35,226	221,742
Speed too fast	32,052	6.0	194	759	2,170	4,228	24,701
Speed too slow	331	0.1	1	6	16	54	254
Failed to yield	46,694	8.7	108	817	3,487	7,850	34,432
Disregard traffic control	10,743	2.0	84	369	1,188	2,739	6,363
Drove wrong way	427	0.1	9	21	42	79	276
Drove left of center	2,561	0.5	55	121	303	399	1,683
Improper passing	2,676	0.5	11	28	82	229	2,326
Improper lane use	12,882	2.4	14	86	351	892	11,539
Improper turn	5,222	1.0	6	60	227	596	4,333
Improper/no signal	541	0.1	0	5	18	63	455
Improper backing	8,067	1.5	1	12	36	180	7,838
Unable to stop in assured clear distance	77,280	14.4	46	509	2,711	12,434	61,580
Reckless driving	2,663	0.5	56	176	361	408	1,662
Careless/negligent driving	13,883	2.6	78	565	1,485	2,140	9,615
Other	17,270	3.2	78	397	1,152	2,192	13,451
Unknown	31,676	5.9	151	458	1,211	2,924	26,932
TOTAL	538,412	100.0	1,570	7,727	27,300	72,633	429,182

MICHIGAN BICYCLE CRASHES

2016 BICYCLE CRASH INFORMATION



In 2016, there were 1,988 bicyclists involved in motor vehicles crashes, with 38 bicyclists killed and 1,526 injured. More bicyclists within the 55-64 years of age group died than any other age group, with 11 killed (28.9%). The 16-20 age group had the greatest percentage of total fatalities and injuries (15.0%).

BICYCLE HELMET USE AND INJURY SEVERITY

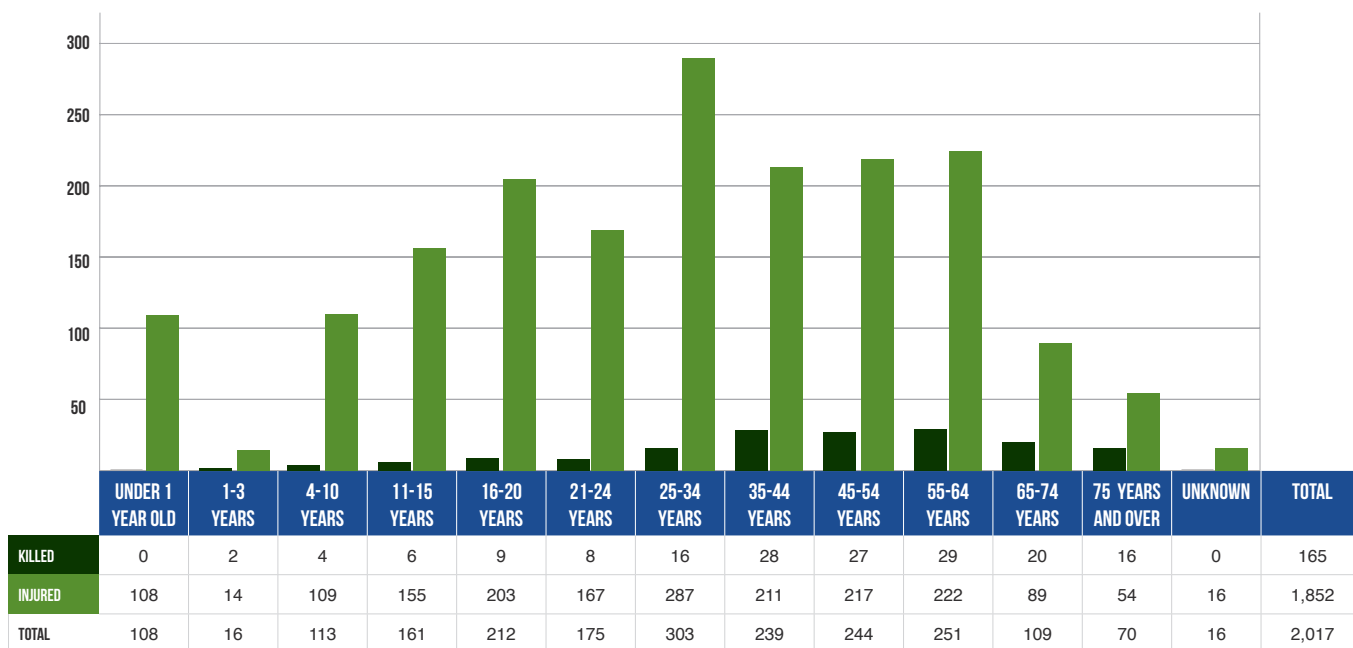
HELMET USE	FATALITY	INJURY			NO INJURY
		A	B	C	
Worn	7	19	83	82	45
Not worn	10	69	322	299	139
Unknown	21	70	264	318	155
Total	38	158	669	699	339

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."

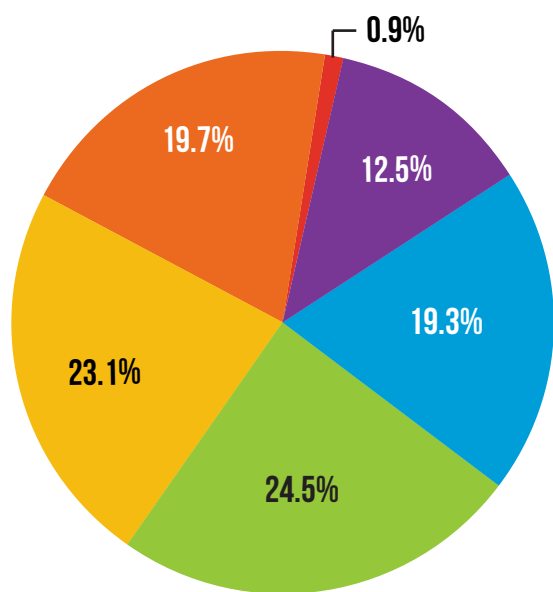
MICHIGAN PEDESTRIAN CRASHES

2016 PEDESTRIAN FATALITIES AND INJURIES

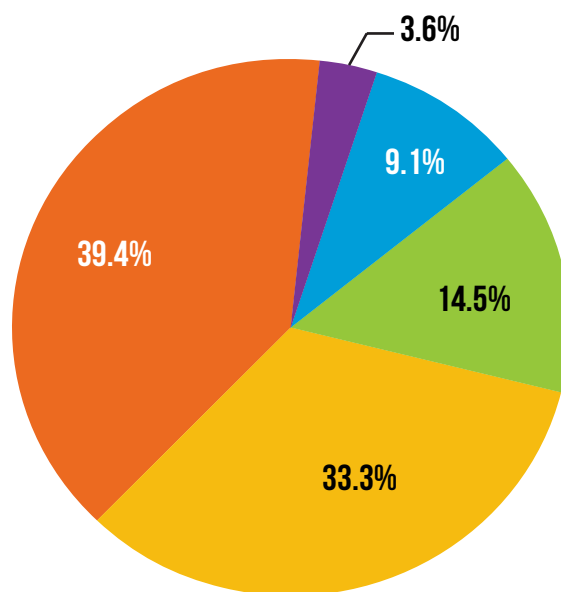


In 2016, there were 2,349 pedestrians involved in motor vehicle crashes, with 165 pedestrians killed and 1,852 injured. More pedestrians within the 55-64 years of age group died than any other age group, with 29 killed (17.6%). The 25-34 age group had the greatest percentage of injuries (15.5%), and the greatest percentage of total fatalities and injuries (15.0%).

■ 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	0	0.0	0	0	0	0	0
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	0	0.0	0	0	0	0	0
Re-enter road	0	0.0	0	0	0	0	0
Overturn	16	15.1	2	4	4	3	3
Separation of units	1	0.9	0	0	1	0	0
Fire/explosion	4	3.8	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	9	8.5	0	5	3	1	0
Other noncollision	2	1.9	0	0	1	0	1
SUBTOTAL	32	30.2	2	9	9	4	8

COLLISION WITH A NONFIXED OBJECT	SNOWMOBILES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Snowmobiles	% of Total		A	B	C	
Pedestrian	1	0.9	0	1	0	0	0
Bicycle / Pedalcycle	0	0.0	0	0	0	0	0
Motor vehicle in transport	36	34.0	2	5	4	8	17
Parked motor vehicle	1	0.9	0	0	0	0	1
Railway train	0	0.0	0	0	0	0	0
Animal	0	0.0	0	0	0	0	0
Other nonfixed objects	2	1.9	0	1	0	0	1
SUBTOTAL	40	37.7	2	7	4	8	19

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

COLLISION WITH 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	0	0.0	0	0	0	0	0
Guardrail end	0	0.0	0	0	0	0	0
Median barrier	1	0.9	0	1	0	0	0
Highway traffic sign post	1	0.9	0	0	0	0	1
Highway signal post	0	0.0	0	0	0	0	0
Luminaire/light support*	0	0.0	0	0	0	0	0
Other pole	0	0.0	0	0	0	0	0
Culvert	1	0.9	0	0	0	1	0
Curb	0	0.0	0	0	0	0	0
Ditch	1	0.9	1	0	0	0	0
Embankment	3	2.8	0	0	2	0	1
Fence	1	0.9	0	0	1	0	0
Mailbox	2	1.9	0	1	0	0	1
Tree	23	21.7	4	9	4	1	5
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	0.9	0	0	0	0	1
SUBTOTAL	34	32.1	5	11	7	2	9

	SNOWMOBILES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Snowmobiles	% of Total		A	B	C	
Unknown Event	0	0.0	0	0	0	0	0
MOST HARMFUL EVENT TOTAL	106	100.0	9	27	20	14	36

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 106 snowmobiles were reported in crashes on Michigan public roadways during 2016, resulting in nine fatal crashes. A total of 61 snowmobiles were involved in 59 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	9	3.0	0	5	1	3	0
Cross center/median	0	0.0	0	0	0	0	0
Ran off road left	3	1.0	0	0	1	2	0
Ran off road right	4	1.3	0	0	2	1	1
Re-enter road	0	0.0	0	0	0	0	0
Overturn	68	22.4	4	23	27	11	3
Separation of units	0	0.0	0	0	0	0	0
Fire/explosion	1	0.3	1	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	0	0.0	0	0	0	0	0
Individual fell off	39	12.8	2	14	19	4	0
Other noncollision	3	1.0	0	1	1	1	0
SUBTOTAL	127	41.8	7	43	51	22	4

COLLISION WITH A NONFIXED OBJECT	ORV/ATV		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of ORV/ATVs	% of Total		A	B	C	
Pedestrian	3	1.0	0	1	0	1	1
Bicycle / Pedalcycle	0	0.0	0	0	0	0	0
Motor vehicle in transport	96	31.6	4	21	30	13	28
Parked motor vehicle	8	2.6	0	2	1	1	4
Railway train	0	0.0	0	0	0	0	0
Animal	5	1.6	0	2	1	0	2
Other nonfixed objects	1	0.3	0	1	0	0	0
SUBTOTAL	113	37.2	4	27	32	15	35

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	0	0.0	0	0	0	0	0
Bridge rail	0	0.0	0	0	0	0	0
Guardrail face	2	0.7	0	0	1	1	0
Guardrail end	0	0.0	0	0	0	0	0
Median barrier	0	0.0	0	0	0	0	0
Highway traffic sign post	1	0.3	0	0	1	0	0
Highway signal post	0	0.0	0	0	0	0	0
Luminaire/light support*	2	0.7	0	1	1	0	0
Other pole	1	0.3	0	0	0	0	1
Culvert	1	0.3	0	0	0	1	0
Curb	0	0.0	0	0	0	0	0
Ditch	13	4.3	0	5	2	4	2
Embankment	1	0.3	0	1	0	0	0
Fence	1	0.3	0	0	1	0	0
Mailbox	1	0.3	0	1	0	0	0
Tree	29	9.5	2	19	7	1	0
Rail crossing signal	0	0.0	0	0	0	0	0
Building	1	0.3	0	0	0	0	1
Traffic island	0	0.0	0	0	0	0	0
Fire hydrant	1	0.3	0	0	0	1	0
Impact attenuator	0	0.0	0	0	0	0	0
Other fixed object	8	2.6	0	3	2	2	1
SUBTOTAL	62	20.4	2	30	15	10	5

	ORV/ATV		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of ORV/ATVs	% of Total		A	B	C	
Unknown Event	2	0.7	1	0	0	0	1
MOST HARMFUL EVENT TOTAL	304	100.0	14	100	98	47	45

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 304 off-road/all-terrain vehicles were reported in crashes on Michigan public roadways during 2016, resulting in 13 fatal crashes involving 14 ORV/ATVs. An additional 245 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	28	26.4	0	6	4	4	14
Speed too fast	28	26.4	5	8	9	2	4
Speed too slow	0	0.0	0	0	0	0	0
Failed to yield	18	17.0	1	2	1	3	11
Disregard traffic control	1	0.9	1	0	0	0	0
Drove wrong way	3	2.8	1	1	1	0	0
Drove left of center	0	0.0	0	0	0	0	0
Improper passing	0	0.0	0	0	0	0	0
Improper lane use	0	0.0	0	0	0	0	0
Improper turn	1	0.9	0	0	0	0	1
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	5	4.7	0	2	1	0	2
Reckless driving	2	1.9	0	1	0	1	0
Careless/negligent driving	6	5.7	0	4	1	0	1
Other	7	6.6	0	2	1	3	1
Unknown	7	6.6	1	1	2	1	2
TOTAL	106	100.0	9	27	20	14	36

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	52	17.1	2	11	20	7	12
Speed too fast	79	26.0	6	35	26	9	3
Speed too slow	0	0.0	0	0	0	0	0
Failed to yield	18	5.9	0	4	6	3	5
Disregard traffic control	6	2.0	0	4	1	1	0
Drove wrong way	3	1.0	0	0	0	1	2
Drove left of center	2	0.7	0	0	1	0	1
Improper passing	1	0.3	0	0	1	0	0
Improper lane use	1	0.3	0	1	0	0	0
Improper turn	4	1.3	0	1	1	1	1
Improper/no signal	0	0.0	0	0	0	0	0
Improper backing	1	0.3	0	0	0	0	1
Unable to stop in assured clear distance	15	4.9	0	3	4	3	5
Reckless driving	15	4.9	2	7	3	1	2
Careless/negligent driving	42	13.8	1	14	15	9	3
Other	38	12.5	3	13	11	5	6
Unknown	27	8.9	0	7	9	7	4
TOTAL	304	100.0	14	100	98	47	45

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	2015	2016	% CHANGE
Crashes	217	234	7.8%
Fatalities	4	2	-50.0%
Injuries	62	79	27.4%

A total of 234 crashes involving farm equipment were reported on Michigan roadways during 2016. Of those crashes, two were fatal with two people killed.

MICHIGAN VEHICLE-TRAIN CRASHES

VEHICLE-TRAIN CRASHES	2015	2016	% CHANGE
Crashes	49	59	20.4%
Fatalities	1	4	300.0%
Injuries	16	30	87.5%

A total of 59 crashes involving trains were reported in Michigan during 2016. Of those crashes, three were fatal with four people killed.

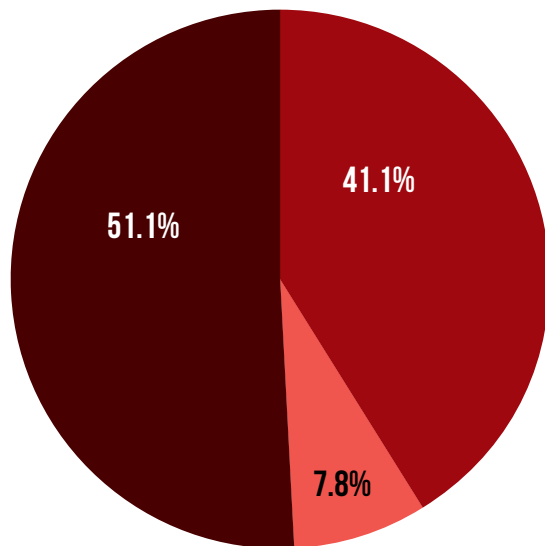
MICHIGAN MOTORCYCLE CRASHES

MOTORCYCLE DATA	2015	2016	% CHANGE
Motorcycle Registrations	257,465	258,265	0.3%
Motorcycles in Crashes	3,096	3,384	9.3%
Motorcyclist Deaths	138	141	2.2%
Motorcyclists Injured	2,347	2,622	11.7%
Death Rate based on 10,000 motorcycle registrations	5.36	5.46	1.9%
Estimated Mileage based on 3,000 miles per motorcycle	772,395,000	774,795,000	0.3%
Death Rate based on deaths per 100 million vehicle miles traveled	17.87	18.20	1.8%

Motorcycles were involved in 1.0 percent of all traffic crashes in Michigan in 2016. Injuries were proportionately more severe to motorcyclists than to persons in motor vehicles.

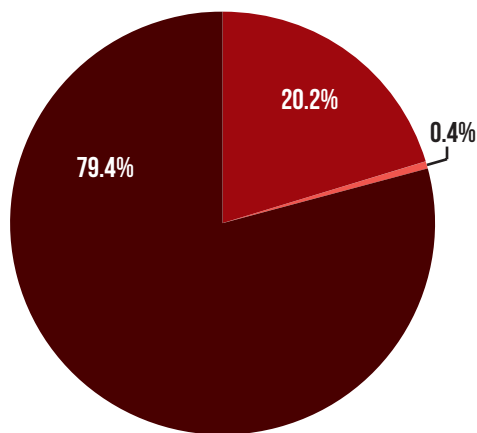
DRIVER GENDER INFORMATION

MALES FEMALES UNKNOWN

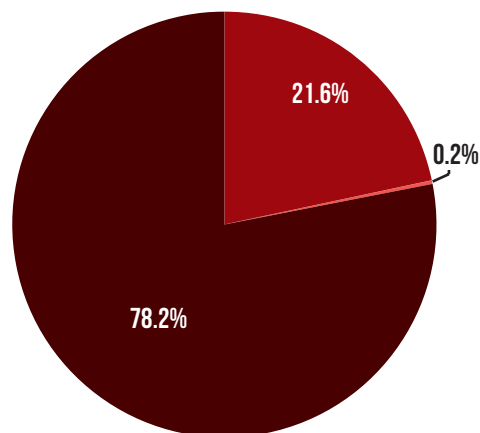


ALL CRASHES

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	49,678	1,923,244	837	2	26	5,037	468	0	463	13
16	80,415	134,215	7,789	14	10	1,360	56	0	54	1
17	91,812	133,598	10,961	23	16	1,712	62	1	47	1
18	89,294	135,903	13,486	34	22	2,198	64	2	39	3
19	100,502	132,592	13,878	39	23	2,215	57	1	46	1
20	109,112	136,358	13,751	29	19	2,201	55	0	58	3
21-24	470,489	570,792	53,159	155	83	8,078	175	0	201	9
25-29	601,664	658,551	55,776	171	94	8,138	141	1	213	9
30-34	552,443	593,158	44,540	124	52	6,193	131	0	135	7
35-39	539,637	583,466	40,622	132	63	5,464	87	3	131	13
40-44	520,374	573,796	37,741	100	42	5,061	66	3	139	15
45-49	598,925	648,400	40,240	111	50	5,294	103	4	124	16
50-54	637,440	699,694	39,657	114	55	5,603	134	7	161	14
55-59	674,948	732,231	36,554	107	57	5,076	130	4	148	19
60-64	622,892	660,547	28,918	119	66	4,177	91	7	131	10
65-69	521,058	557,306	21,083	64	42	3,144	45	4	69	10
70-74	372,158	383,629	13,490	47	28	2,155	22	4	49	10
75-79	248,205	268,622	8,590	40	34	1,409	15	1	32	6
80-84	159,785	188,909	5,225	31	37	932	5	0	24	5
85+	135,861	213,289	3,974	41	42	816	2	0	18	5
Unknown	---	---	48,141	73	0	82	79	0	67	0
TOTAL	7,176,692	9,928,300	538,412	1,570	861	76,345	1,988	42	2,349	170

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

AGE	LICENSED DRIVERS	TOTAL DRIVERS IN CRASHES*	CRASH RATE
0-15	49,678	837	0.017
16	80,415	7,789	0.097
17	91,812	10,961	0.119
18	89,294	13,486	0.151
19	100,502	13,878	0.138
20	109,112	13,751	0.126
21-24	470,489	53,159	0.113
25-29	601,664	55,776	0.093
30-34	552,443	44,540	0.081
35-39	539,637	40,622	0.075
40-44	520,374	37,741	0.073
45-49	598,925	40,240	0.067
50-54	637,440	39,657	0.062
55-59	674,948	36,554	0.054
60-64	622,892	28,918	0.046
65-69	521,058	21,083	0.040
70-74	372,158	13,490	0.036
75-79	248,205	8,590	0.035
80-84	159,785	5,225	0.033
85-89	95,616	2,918	0.031
90-94	34,390	877	0.026
95-99	5,541	178	0.032
100+	314	1	0.003
Total	7,176,692	490,271	---

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

* Excludes 48,141 drivers with unknown age

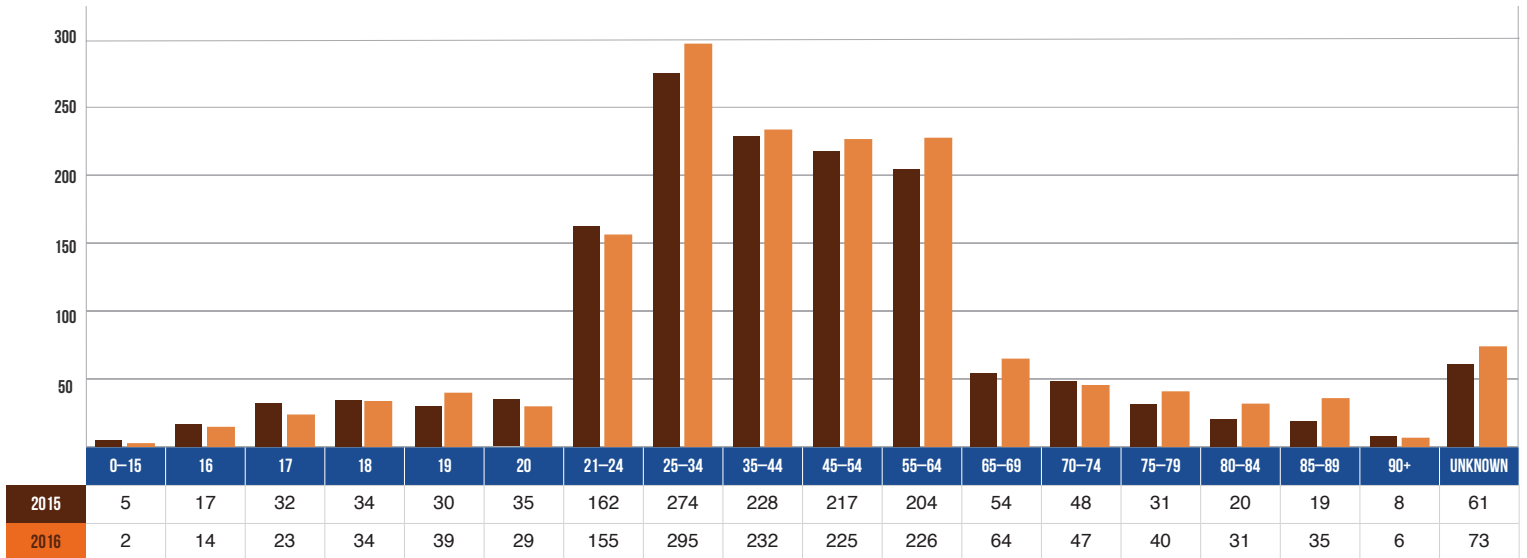
Licensed drivers age 18 have the highest crash rate at 0.151 (total crashes in age group divided by total number of licensed drivers in age group). The lower crash rates of the older groups (per licensed driver) may reflect reduced driving and exposure to the risk of a crash.

DRIVER AGE

AGE OF DRIVERS IN FATAL CRASHES	2015	2016	PERCENT CHANGE	PERCENT 2016 FATAL CRASH INVOLVEMENT	PERCENT ACTIVE DRIVING POPULATION*
15 years and under	5	2	-60.0	0.1	0.7
16 years	17	14	-17.6	0.9	1.1
17 years	32	23	-28.1	1.5	1.3
18 years	34	34	0.0	2.2	1.2
19 years	30	39	30.0	2.5	1.4
20 years	35	29	-17.1	1.8	1.5
21 - 24 years	162	155	-4.3	9.9	6.6
25 - 34 years	274	295	7.7	18.8	16.1
35 - 44 years	228	232	1.8	14.8	14.8
45 - 54 years	217	225	3.7	14.3	16.7
55 - 64 years	204	226	10.8	14.4	18.1
65 - 69 years	54	64	18.5	4.1	7.3
70 - 74 years	48	47	-2.1	3.0	5.2
75 - 79 years	31	40	29.0	2.5	3.5
80 - 84 years	20	31	55.0	2.0	2.2
85 - 89 years	19	35	84.2	2.2	1.3
90 years and over	8	6	-25.0	0.4	0.6
Unknown	61	73	19.7	4.6	---
Total	1,479	1,570	6.2	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	434,841	696	5,220	21,867	61,018	346,040
Fatigued or Asleep	3,277	17	131	400	664	2,065
Sick	1,504	9	56	160	421	858
Medicated	969	8	58	124	232	547
Emotional	2,200	15	117	324	635	1,109
Physically Disabled	497	19	119	65	95	199
Unknown	33,264	552	919	1,395	3,254	27,144
Other	5,238	92	425	803	1,094	2,824

Note: Drivers may have more than one condition including "Appeared 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*	468,035	86.9	339	51.5	2,859	12,457	37,093	414,796	491
Restraint Not Used	6,018	1.1	224	34.0	692	1,007	780	3,218	97
Unknown	64,359	12.0	95	14.4	275	621	1,366	15,008	46,994
TOTAL	538,412	100.0	658	100.0	3,826	14,085	39,239	433,022	47,582
DRINKING DRIVERS ONLY									
Restraint Used*	6,459	76.4	26	26.8	200	743	812	4,676	2
Restraint Not Used	677	8.0	58	59.8	167	166	113	173	0
Unknown	1,320	15.6	13	13.4	47	121	172	953	14
TOTAL	8,456	100.0	97	100.0	414	1,030	1,097	5,802	16
DRUGGED DRIVERS ONLY									
Restraint Used*	1,131	77.9	32	49.2	92	144	238	623	2
Restraint Not Used	117	8.1	23	35.4	29	18	17	30	0
Unknown	204	14.0	10	15.4	11	22	27	134	0
TOTAL	1,452	100.0	65	100.0	132	184	282	787	2
DRINKING AND DRUGGED DRIVERS ONLY									
Restraint Used*	809	69.8	14	29.2	66	118	139	472	0
Restraint Not Used	133	11.5	23	47.9	22	30	24	34	0
Unknown	217	18.7	11	22.9	17	38	35	115	1
TOTAL	1,159	100.0	48	100.0	105	186	198	621	1

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