# **Motorcycles 2020**



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### In 2020:

- 138 motorcyclists were killed in collisions, a 23% increase from 2019 when there were 112 motorcyclist fatalities.
- The number of individuals injured (1,969) in motorcycle-related crashes rose by 8% from 2019 (1.819).
- Fatal motorcycle collisions increased 19%, from 113 in 2019 to 134 in 2020.
- Fatalities per 100,000 motorcycle registrations increased by 20% from 2019.
- Most (71%) motorcycle operators were involved in multi-vehicle collisions.
- Among motorcyclists who died in crashes, 22% were helmeted, compared to 31% who suffered non-fatal injuries.
- Helmet use in collisions was highest among motorcyclists under 21 years of age (46%) and the lowest among motorcyclists ages 45 to 54 (24%).

This fact sheet contains information on motorcycle collisions, demographic characteristics of the people involved, helmet use, rates of alcohol impairment, primary factors in motorcycle collisions, and motorcycle licensing in Indiana during the 2020 as well as multi-year trend analysis. Analyses include data and definitions from sources listed on the last page of this report. Indiana collision data are collected by Indiana State Police officers and submitted to the Automated Reporting Information Exchange System (ARIES). ARIES data analyzed in this report were extracted March 29, 2021.

#### **General notes:**

- 1. Motorcycles include motorcycles, Class A and Class B motor driven cycles, and motorized bicycles.
- 2. A motorcycle operator is the person operating or driving the motorcycle; passenger is the person seated on, but not operating, the motorcycle; motorcyclist refers to either the operator or passenger.
- 3. Data discrepancies may exist between the 2020 Indiana traffic safety reports and previous traffic safety publications due to updates to the Indiana State Police ARIES data since the original publication dates.

## **Motorcyclist fatalities**

In 2020, 138 motorcyclists died in Indiana traffic collisions—a 23% increase from 2019 when there were 112 motorcyclist fatalities (Figure 1). The number of motorcyclists killed in collisions has fluctuated during the past 10 years, from a high of 151 in 2012 to a low of 98 in 2016. The largest single-year increase happened between 2016 and 2017 with a 47% jump. During the 10-year period, motorcycle collisions made up a small fraction of all collisions—typically less than 2%—but were responsible for a disproportionately high percentage of overall traffic fatalities (15% in 2020).

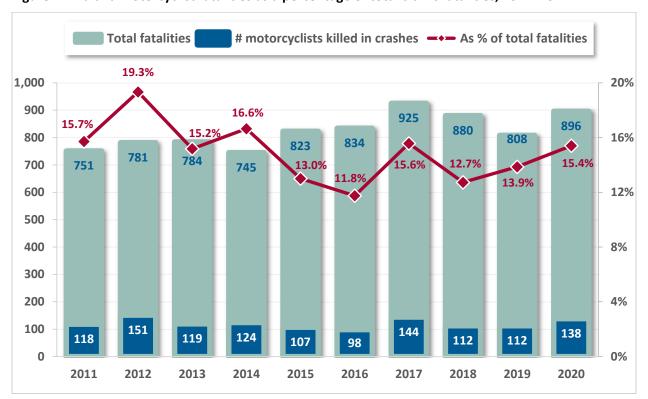


Figure 1. Indiana motorcyclist fatalities as a percentage of total traffic fatalities, 2011–20

Source: Analysis provided by the Indiana University Public Policy using data downloaded from the Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 29, 2021

# **Collisions involving motorcycles**

Motorcycle collisions increased between 2019 (2,582) and 2020 (2,785) (Table 1). The five-year trend shows about a 4% decline annually. From 2019 to 2020, fatal motorcycle collisions increased by 19%, from 113 to 134. Non-fatal motorcyclist injuries rose 8% from 2019. Fatalities per 100,000 registrations have increased 11% annually, from 39 to 59. In 2020, non-fatal injuries per 100,000 registrations increased 6% from 2019, and fatalities per 100,000 registrations rose by 20%.

Table 1. Motorcycle registrations and motorcyclist fatalities and injuries in Indiana collisions, 2016–20

	2016	2047	2010	2010	2020	Annual rate of change	
	2016	2017	2018	2019	2020	2019–20	2016–20
Motorcycle registrations	251,032	220,340	230,107	228,713	234,014	2.3%	-1.7%
Collisions	3,220	3,141	2,684	2,582	2,785	7.9%	-3.6%
Fatal collisions	99	141	101	113	134	18.6%	7.9%
Fatalities	98	144	112	112	138	23.2%	8.9%
Non-fatal injuries	2,326	2,288	1,932	1,819	1,969	8.2%	-4.1%
Per 100,000 motorcycle registrations							
Collisions	1,282.7	1,425.5	1,166.4	1,128.9	1,190.1	5.4%	-1.9%
Fatal collisions	39.4	64.0	43.9	49.4	57.3	15.9%	9.8%
Fatalities	39.0	65.4	48.7	49.0	59.0	20.4%	10.9%
Non-fatal injuries	926.6	1,038.4	839.6	795.3	841.4	5.8%	-2.4%

Sources: Analysis provided by the Indiana University Public Policy using data downloaded from the Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 29, 2021

Notes:

- 1) Non-fatal injuries include individuals with at least one incapacitating, non-incapacitating, or other injury.
- 2) Motorcycles include motorcycles, class A and class B motor-driven cycles, and motorized bicycles.

## People involved, fatalities, and injuries in motorcycle collisions

The number of motorcyclists involved in collisions increased by 9% between 2019 and 2020 (Table 2). The five-year trend between 2016 and 2020 shows a roughly 4% decline annually in motorcyclists involved in crashes (Table 2). The number of operators and passengers injured also increased between 2019 and 2020—by 9% and 5%, respectively. During the five-year period, the number of motorcyclists sustaining non-fatal injuries has declined annually with the exception of a bump in 2017 among passengers injured.

Operators accounted for 94% of 2020 motorcycle fatalities, with a 5% fatality rate compared to a 3% rate for passengers. The number of operators killed rose by 11% in the past five years, while passenger deaths decreased 8% during that time.

Indiana generally has experienced a decline in motorcycle collision-related injuries during the last five years. However, in 2020, 1,969 motorcyclists sustained non-fatal injuries during collisions, accounting for an overall increase of 8% from 2019. The number of passengers injured in crashes grew by 5% from 2019, while reports of injured operators rose by 9%.

Table 2. Motorcyclists involved in Indiana collisions by person type and injury status, 2016–20

	2016	2017	2010	2010	2020	Annual rate	e of change
	2016	2017	2018	2019	2020	2019–20	2016–20
All motorcyclists	3,407	3,403	2,875	2,701	2,943	9.0%	-3.6%
Operators	3,115	3,057	2,604	2,474	2,697	9.0%	-3.5%
Fatal	87	131	95	106	130	22.6%	10.6%
Non-fatal injuries	2,063	1,967	1,692	1,608	1,747	8.6%	-4.1%
Not injured	965	959	817	760	820	7.9%	-4.0%
Passengers	292	346	271	227	246	8.4%	-4.2%
Fatal	11	13	17	6	8	33.3%	-7.7%
Non-fatal injuries	263	321	240	211	222	5.2%	-4.1%
Not injured	18	12	14	10	16	60.0%	-2.9%
Fatality rate							
Operators	2.8%	4.3%	3.6%	4.3%	4.8%		
Passengers	3.8%	3.8%	6.3%	2.6%	3.3%		

Source: Analysis provided by the Indiana University Public Policy using data downloaded from the Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 29, 2021 Notes:

<sup>1)</sup> Motorcyclists include operators and passengers on motorcycles, class A and class B motor-driven cycles, and motorized bicycles.

<sup>2)</sup> Non-fatal injuries include individuals with at least one incapacitating, non-incapacitating, or other injury.

<sup>3)</sup> Not injured includes all individuals involved in collisions reported as null values in the injury status code field. Reporting officers are instructed to include all drivers in ARIES, but to include passengers in the crash report only if an injury occurs. Therefore, the count of uninjured passengers should be interpreted with caution.

# **Gender and age**

In 2020, as in other years, far more male motorcyclists (2,556) were involved in motorcycle collisions than female motorcyclists (381) (Table 3). Male motorcyclists accounted for the most fatalities (124), an increase of 18% from 2019. The number of female operators in collisions rose by 19% from 2019 to 2020. The number of female motorcycle operators killed also increased by 100% (from 7 to 14).

Table 3. Injury status of motorcyclists in Indiana collisions by gender and person type, 2016–20

Person type, gender,				, gen	. Cr ana p	Annual rate of change		
and injury status	2016	2017	2018	2019	2020	2019–20	2016–20	
All riders	3,407	3,403	2,875	2,701	2,943	9.0%	-3.6%	
Fatal	98	144	112	112	138	23.2%	8.9%	
Injured	2,326	2,288	1,932	1,819	1,969	8.2%	-4.1%	
Not injured	983	971	831	770	836	8.6%	-4.0%	
Male	2,951	2,913	2,462	2,378	2,556	7.5%	-3.5%	
Fatal	85	129	97	105	124	18.1%	9.9%	
Injured	1,965	1,896	1,608	1,555	1,671	7.5%	-4.0%	
Not injured	901	888	757	718	761	6.0%	-4.1%	
Female	449	482	409	321	381	18.7%	-4.0%	
Fatal	13	15	15	7	14	100.0%	1.9%	
Injured	361	392	324	264	298	12.9%	-4.7%	
Not injured	75	75	70	50	69	38.0%	-2.1%	
Operators only	3,108	3,049	2,600	2,472	2,691	8.9%	-3.5%	
Male	2,884	2,829	2,394	2,318	2,488	7.3%	-3.6%	
Fatal	84	127	94	104	124	19.2%	10.2%	
Injured	1,909	1,823	1,555	1,505	1,615	7.3%	-4.1%	
Not injured	891	879	745	709	749	5.6%	-4.2%	
Female	224	220	206	154	203	31.8%	-2.4%	
Fatal	3	4	1	2	6	200.0%	18.9%	
Injured	154	144	137	103	132	28.2%	-3.8%	
Not injured	67	72	68	49	65	32.7%	-0.8%	

Source: Analysis provided by the Indiana University Public Policy using data downloaded from the Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 29, 2021

Notes:

<sup>1)</sup> Excludes cases when gender or injury status are unknown.

<sup>2)</sup> Non-fatal injuries include individuals with at least one incapacitating, non-incapacitating, or other injury.

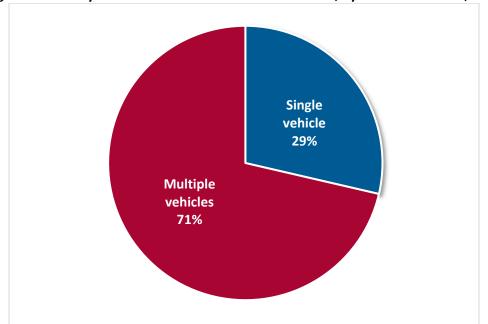
<sup>3)</sup> Not injured includes all individuals involved in collisions reported as null values in the injury status code field. Reporting officers are instructed to include all drivers in ARIES, but to include passengers in the crash report only if an injury occurs. Therefore, the count of uninjured passengers should be interpreted with caution.

Table 4 includes motorcycle operators involved in collisions by age group and by the number of vehicles involved—a single vehicle or multiple vehicles. In 2020, 71% of motorcycle drivers were involved in multi-vehicle collisions, and 29% were involved in single-vehicle collisions (Figure 2). Older drivers 65 years and older and young drivers ages 15 to 20 were consistently the most likely to be involved in multi-vehicle collisions from 2016 to 2020, with the exception of drivers ages 21 to 24 in 2018.

Table 4. Motorcycle drivers involved in Indiana collisions, by age and vehicles involved, 2016–20

			, , ,							
	20	016	2017		2018		20	19	2020	
Age group	Single vehicle	Multiple vehicles								
15-20	23.7%	76.3%	20.4%	79.6%	25.8%	74.2%	23.0%	77.0%	21.3%	78.7%
21-24	28.5%	71.5%	26.0%	74.0%	22.3%	77.7%	27.9%	72.1%	23.1%	76.9%
25-34	26.0%	74.0%	31.4%	68.6%	24.9%	75.1%	28.8%	71.2%	33.4%	66.6%
35-44	29.6%	70.4%	30.3%	69.7%	26.1%	73.9%	28.6%	71.4%	30.9%	69.1%
45-54	35.2%	64.8%	32.8%	67.2%	30.3%	69.7%	30.7%	69.3%	30.0%	70.0%
55-64	31.7%	68.3%	28.9%	71.1%	33.0%	67.0%	29.4%	70.6%	34.0%	66.0%
65+	21.4%	78.6%	17.9%	82.1%	23.6%	76.4%	21.9%	78.1%	19.4%	80.6%
All ages	28.9%	71.1%	28.4%	71.6%	27.2%	72.8%	27.9%	72.1%	29.2%	70.8%

Figure 2. Motorcycle drivers involved in Indiana collisions, by vehicles involved, 2020



Source: Analysis provided by the Indiana University Public Policy using data downloaded from the Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 29, 2021

### Helmet use

In Indiana, only operators and passengers younger than 18 and operators with a motorcycle learner's permit are required to wear a helmet. In 2020, data shows that 32% of motorcyclists in crashes were wearing helmets (Table 5). Twenty-two percent of motorcyclists killed in crashes and 31% who suffered non-fatal injuries were helmeted. Among motorcyclists sustaining fatal injuries, rates of helmet use have declined by 2% annually between 2016 and 2020 and by 19% from 2019.

As shown in Figure 3, 2020 helmet use in Indiana motorcycle collisions varied by age. Motorcyclists under 21 years of age (46%) had the highest rate of helmet use, followed by those aged 65 and older (40%). Motorcyclists 45 to 54 years old had the lowest rates of helmet use (24%). Male motorcyclists accounted for 87% of all motorcyclists in collisions and had a lower rate of helmet use (31%) than their female counterparts (35%) (Figure 4).

Table 5. Helmet use by motorcyclists in Indiana collisions by individual injury status, 2016–20

Helmet use/	2016	2017	7 2010 2010 2020		2020	Annual rate	e of change
injury status	2016	2017	2018	2019	2020	2019–20	2016–20
All motorcyclists	3,407	3,403	2,875	2,701	2,943	9.0%	-3.6%
Helmeted	1,081	1,120	882	937	932	-0.5%	-3.6%
Helmet use rate	31.7%	32.9%	30.7%	34.7%	31.7%	-8.7%	0.0%
Fatalities	98	144	112	112	138	23.2%	8.9%
Helmeted	23	38	20	30	30	0.0%	6.9%
Helmet use rate	23.5%	26.4%	17.9%	26.8%	21.7%	-18.8%	-1.9%
Non-fatal injuries	2,326	2,288	1,932	1,819	1,969	8.2%	-4.1%
Helmeted	707	751	561	605	618	2.1%	-3.3%
Helmet use rate	30.4%	32.8%	29.0%	33.3%	31.4%	-5.6%	0.8%
Not injured	983	971	831	770	836	8.6%	-4.0%
Helmeted	351	331	301	302	284	-6.0%	-5.2%
Helmet use rate	35.7%	34.1%	36.2%	39.2%	34.0%	-13.4%	-1.2%

Source: Analysis provided by the Indiana University Public Policy using data downloaded from the Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 29, 2021

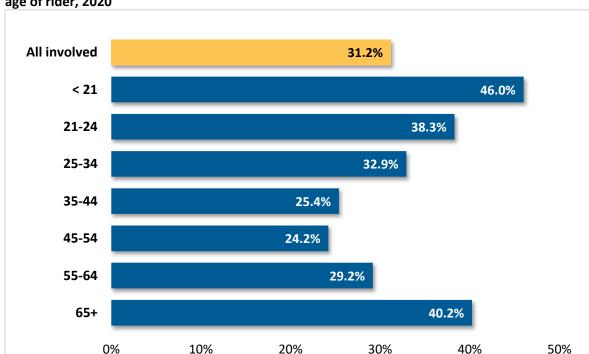


Figure 3. Percentage helmet use reported for motorcyclists involved in Indiana collisions by age of rider, 2020

Source: Analysis provided by the Indiana University Public Policy using data downloaded from the Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 29, 2021 Note: Excludes unknown age.

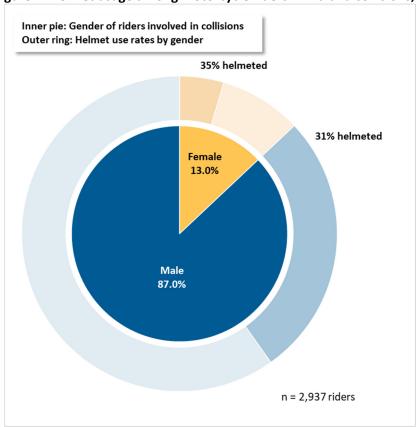


Figure 4. Helmet usage among motorcycle riders in Indiana collisions, by gender, 2020

Source: Analysis provided by the Indiana University Public Policy using data downloaded from the Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 29, 2021

Note: Includes cases with gender reported.

## **Alcohol**

The number of collisions involving motorcycle operators with a blood alcohol content (BAC) of 0.08 g/dL or more decreased from 91 in 2019 to 74 in 2020 (Table 6). From 2016 to 2020, the number of operators with 0.15 BAC and greater declined annually by 11%. During that same five-year period, among reported BAC results each year, the percent of motorcycle operators with reported BAC higher than 0.08 declined from 62% in 2016 to 46% in 2020 (Table 6 and Figure 5).

Table 6. Motorcycle operators in Indiana collisions, by blood alcohol content (BAC) (g/dL), 2016–20

		Count of m		perators		Annual rate of change		
BAC range, g/dL	2016	2017	2018	2019	2020	2019–20	2016–20	
Total motorcycle operators	3,115	3,057	2,604	2,474	2,697	9.0%	-3.5%	
No BAC reported	2,927	2,860	2,427	2,303	2,536	10.1%	-3.5%	
% total operators	94.0%	93.6%	93.2%	93.1%	94.0%			
< 0.01	46	60	54	67	63	-6.0%	8.2%	
% total operators	1.5%	2.0%	2.1%	2.7%	2.3%			
0.01 < 0.08	25	22	26	13	24	84.6%	-1.0%	
% total operators	0.8%	0.7%	1.0%	0.5%	0.9%			
0.08 < 0.15	45	34	36	42	29	-31.0%	-10.4%	
% total operators	1.4%	1.1%	1.4%	1.7%	1.1%			
0.15 and greater	72	81	61	49	45	-8.2%	-11.1%	
% total operators	2.3%	2.6%	2.3%	2.0%	1.7%			
As % of reported results								
< 0.01	24.5%	30.5%	30.5%	39.2%	39.1%			
0.01 < 0.08	13.3%	11.2%	14.7%	7.6%	14.9%			
0.08 < 0.15	23.9%	17.3%	20.3%	24.6%	18.0%			
0.15 and greater	38.3%	41.1%	34.5%	28.7%	28.0%			

Source: Analysis provided by the Indiana University Public Policy using data downloaded from the Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 29, 2021 Notes:

<sup>1)</sup> g/dL = grams per deciliter.

<sup>2)</sup> Excludes BAC > 0.59 g/dL.

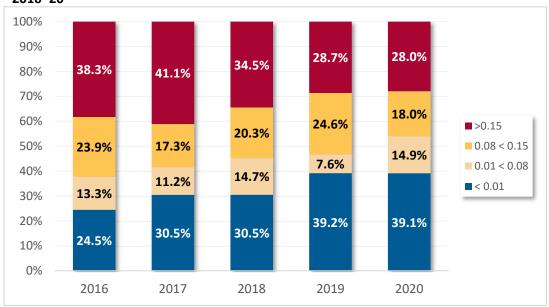


Figure 5. Motorcycle operators in Indiana collisions, by blood alcohol content (BAC) (g/dL), 2016–20

Source: Analysis provided by the Indiana University Public Policy using data downloaded from the Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 29, 2021

As shown in Table 7, the number of motorcycle operators killed who had a BAC of 0.08 g/dL or greater decreased from 21 in 2019 to 12 in 2020. The percentage of fatalities with reported BAC results in ARIES increased from a five-year low of 23% in 2016 to 35% in 2020. Considering only those with reported results, the percentage of impaired operators with a 0.08 BAC or greater who died in collisions has varied from 2016 to 2020—53% in 2017, which dropped to 27% in 2020.

Table 7. Motorcycle operators killed in collisions, by blood alcohol content, 2016–20

, ,	_						
BAC (g/dL) range	2016	2017	2018	2019	2020	Annual rate 2019–20	e of change 2016–20
Operators killed	87	131	95	106	130	22.6%	10.6%
Not reported or no test	67	91	56	57	85	49.1%	6.1%
0	12	17	20	26	25	-3.8%	20.1%
0.01 < 0.08	2	2	7	2	8	300.0%	41.4%
0.08 < 0.15	2	8	6	9	3	-66.7%	10.7%
0.15+	4	13	6	12	9	-25.0%	22.5%
% with reported results	23.0%	30.5%	41.1%	46.2%	34.6%		
% 0.08 or higher (of all reported results)	30.0%	52.5%	30.8%	42.9%	26.7%		

Source: Analysis provided by the Indiana University Public Policy using data downloaded from the Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 29, 2021 Notes:

- 1) g/dL = grams per deciliter.
- 2) Excludes BAC > 0.59 g/dL.

## Motorcycle collisions and attributability of fault to operators and drivers

In multi-vehicle collisions in 2020 involving motorcycles, there was a difference between the likelihood that the motorcycle operator or the other vehicle operator was deemed to be at fault (i.e., a vehicle's contributing circumstance matched the primary factor in the collision—referred to in Table 8 as being attributable). Multi-vehicle collisions in Indiana involving motorcycles most frequently involved an unsafe action by either or both the motorcyclist and the other vehicle drivers. Generally, however when an unsafe action was involved, the driver of the other vehicle was more likely to be at fault (57%) than the motorcycle operator (42%). In contrast, certain collisions involving specific primary factors were more likely to be attributed to motorcyclists, including unsafe speed, vehicle-related issues, loss of control, left of center, and disregarding a signal. Drivers of the other vehicles in motorcycle collisions were found to be at fault more often for factors such as unsafe backing, failure to yield right of way, and improper turning.

Table 8. Vehicles involved in Indiana multi-vehicle motorcycle collisions, by primary factor, vehicle type, and vehicle attributability to collision occurrence, 2020

	Vehicles	involved	Count of attribu		% Attributable		
Primary factor	Motorcycle	Other vehicles	Motorcycle	Other vehicles	Motorcycle	Other vehicles	
Unsafe actions	1,031	1,042	430	597	41.7%	57.3%	
Disregard signal/reg sign	80	83	49	30	61.3%	36.1%	
Failure to yield right of way	361	379	82	292	22.7%	77.0%	
Following too closely	214	189	113	80	52.8%	42.3%	
Improper lane usage	46	51	19	26	41.3%	51.0%	
Improper passing	56	56	29	22	51.8%	39.3%	
Improper turning	48	44	17	30	35.4%	68.2%	
Left of center	53	54	34	21	64.2%	38.9%	
Speed too fast for weather conditions	5	7	5	0	100.0%	0.0%	
Unsafe backing	39	47	8	41	20.5%	87.2%	
Unsafe lane movement	63	65	30	36	47.6%	55.4%	
Unsafe speed	64	65	44	17	68.8%	26.2%	
Wrong way on one way	2	2	0	2	0.0%	100.0%	
Distraction	41	47	20	25	48.8%	53.2%	
Vehicle-related	31	33	21	9	67.7%	27.3%	
Loss of control	30	26	20	8	66.7%	30.8%	
Environmental	39	27	24	15	61.5%	55.6%	
Cognitive impairment	2	3	1	1	50.0%	33.3%	
All other	95	80	66	42	69.5%	52.5%	
Total	1,269	1,258	582	697	45.9%	55.4%	



Source: Analysis provided by the Indiana University Public Policy using data downloaded from the Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 29, 2021

### Notes:

- 1) A vehicle is attributable to the occurrence of a collision when the officer marks a contributing circumstance for that vehicle that also matches the collision primary factor. In multi-vehicle collisions, more than one vehicle can be classified as attributable.
- 2) Data excludes single-vehicle collisions involving motorcycles and collisions with unknown or unreported primary factor.
- 3) Other vehicles excludes unknown unit type, pedestrians, bicycles, and animal-drawn vehicles.
- 4) Due to reorganizations of primary factors and vehicle classifications, some numbers may not be comparable to previous publications.

# Licensing among collision-involved motorcyclists

In 2020, 43% of motorcycle operators involved in collisions were licensed with motorcycle endorsements, and 43% did not have the endorsement on their license (Table 9). However, 14% had no license at all or were of unknown license status. Similar percentages apply for fatal motorcycle collision involvement—41% of operators had a motorcycle endorsement and 46% did not. In 2020, 15 unlicensed motorcycle operators were involved in fatal collisions.

Table 9. Driver's license type reported by motorcycle operators involved in Indiana traffic collisions, 2016–20

All motorcycle co	llisions					Annual rate	e of change	% total involved
Type of driver's license reported	2016	2017	2018	2019	2020	2019–20	2016–20	2020
All involved motorcycle (MC) operators	3,115	3,057	2,604	2,474	2,697	9.0%	-3.5%	100.0%
Licensed, MC endorsement	1,524	1,399	1,228	1,159	1,154	-0.4%	-6.7%	42.8%
Operators w/MC endorsement	1,035	988	861	836	834	-0.2%	-5.3%	30.9%
Chauffeur w/MC endorsement	211	164	136	110	105	-4.5%	-16.0%	3.9%
Motorcycle	140	132	137	110	131	19.1%	-1.6%	4.9%
Learner motorcycle	129	109	86	99	82	-17.2%	-10.7%	3.0%
Public passenger chauffeur w/MC endorsement	9	6	8	4	2	-50.0%	-31.3%	0.1%
Licensed, no MC endorsement	1,246	1,279	1,020	1,007	1,173	16.5%	-1.5%	43.5%
Operator	1,062	1,099	903	884	1,027	16.2%	-0.8%	38.1%
Commercial driver	80	89	60	70	84	20.0%	1.2%	3.1%
Learner's permit	61	60	31	35	41	17.1%	-9.5%	1.5%
Chauffeur	32	27	19	14	17	21.4%	-14.6%	0.6%
Public passenger chauffeur	5	0	1	1	0	-100%	-100.0%	0.0%
Drivers education learners permit	5	3	3	0	1	N/A	-33.1%	0.0%
Probationary operator license	1	1	3	3	3	0.0%	31.6%	0.1%
No license	311	341	325	278	322	15.8%	0.9%	11.9%
Unknown license status	34	38	31	30	48	60.0%	9.0%	1.8%
Fatal motorcycle collisions								
Motorcycle operators involved in fatal collisions	105	142	110	118	138	16.9%	7.1%	100.0%
Licensed, MC endorsement	58	63	54	60	56	-6.7%	-0.9%	40.6%
Operators w/MC endorsement	37	50	38	40	51	27.5%	8.4%	37.0%
Chauffeur w/MC endorcement	10	5	4	6	2	-66.7%	-33.1%	1.4%
Learner motorcycle	7	4	5	7	1	-85.7%	-38.5%	0.7%
Motorcycle	4	3	6	7	2	-71.4%	-15.9%	1.4%
Public passenger chauffeur w/MC endorsement	0	1	1	0	0	N/A	N/A	0.0%
Licensed, no MC endorsement	40	65	42	42	64	52.4%	12.5%	46.4%
Operator	35	60	34	38	59	55.3%	13.9%	42.8%
Commercial driver	5	1	3	2	4	100.0%	-5.4%	2.9%
Chauffeur	0	3	2	0	1	N/A	N/A	0.7%
Learner's permit	0	1	2	2	0	-100.0%	N/A	0.0%
Public passenger chauffeur	0	0	1	0	0	N/A	N/A	0.0%
No license	7	13	14	16	15	-6.3%	21.0%	10.9%
Unknown license status	0	1	0	0	3	N/A	N/A	2.2%

Sources: Analysis provided by the Indiana University Public Policy using data downloaded from the Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 29, 2021 Indiana Bureau of Motor Vehicles, as of May 14, 2021

## **Definitions**

**Alcohol-impaired:** A driver or operator is classified as alcohol-impaired when the driver has a blood alcohol content (BAC) test result at or above 0.08 g/dL. An alcohol-impaired collision involves at least one driver with 0.08 BAC or above.

Annual rate of change (ARC): The rate that a beginning value must increase or decrease each period (e.g., month, quarter, year) in a time series to arrive at the ending value in the time series. ARC is a smoothed rate of change because it measures change in a variable as if the change occurred at a steady rate each period with compounding. For example, to measure change in a variable from 2016 to 2020, it is calculated as (Value in 2020/Value in 2016)1/4 - 1.

**Motorcyclist:** includes the operators and passengers of motorcycles, Class A and Class B motor driven cycles, and motorized bicycles.

### **Data sources**

Indiana State Police Automated Reporting Information Exchange System (ARIES), downloaded as of March 29, 2021.

Indiana Bureau of Motor Vehicles, current as of May 14, 2021.