



Photo by NMDOT

# New Mexico Motorcycle Crash Data

New Mexico Motorcycle  
Safety Program Committee Meeting



University of New Mexico  
Geospatial and Population Studies (UNM-GPS)

Traffic Research Unit

Prepared for the NMDOT Traffic Safety

Division Under Contract 6380

October 2, 2022



# Agenda

- Crashes and Fatalities
- Distribution by Age Group
- Motorcycle Vehicle Types
- Licensing
- Driver Behavior
- Fatality Rates
- Helmet Usage
- All data exclude ATVs
- Data sources:
  - NMDOT Crash Databases
    - 2017 – 2021 data, preliminary 2021.
  - NMDOT Fatal Log
    - Preliminary 2021 data, as of Aug 2022
  - NM TRD MVD License File
    - July 2021 (rates)
    - Dec 2021 (% licensed)
  - NHTSA Product Information Catalog and Vehicle Listing (vPIC)

Definition: “Motorcyclists” or “Motorcycle Riders” includes drivers and passengers.

# New Mexico Crash Report → NMDOT Crash Database

The image shows a 'STATE OF NEW MEXICO UNIFORM CRASH REPORT' form. Key sections include: 'REPORTING DEPARTMENT' (0000000000), 'CRASH DATE (MM/DD/YY)', 'MILITARY TIME', 'CITY OCCURRED IN', 'COUNTY', 'TOTAL NUMBER OF VEHICLES', 'Case Number', 'CAD Number', 'CRASH CLASSIFICATION', 'VEHICLE NO. HEADED', 'VEHICLE INFORMATION' (make, model, year, color, body style, etc.), 'DRIVER INFORMATION' (license type, sex, age, etc.), and 'OCCUPANT INFORMATION'. The form is divided into sections for 'VEHICLE NO. 1', 'VEHICLE NO. 2', and 'OCCUPANT - OTHER'. It includes checkboxes for 'On Roadway' vs 'Off Roadway', 'Hit and Run', 'At Intersection', and 'Other Object'. It also features a diagram of a vehicle with checkboxes for damage locations like 'Front', 'Rear', 'Left Side', and 'Right Side'. The bottom of the form includes 'STATE OF NEW MEXICO UNIFORM CRASH REPORT' and 'NM Statute 66-7-209'.

Crash Data

Agency, City, County, Crash Severity, Date, Time, Crash Location

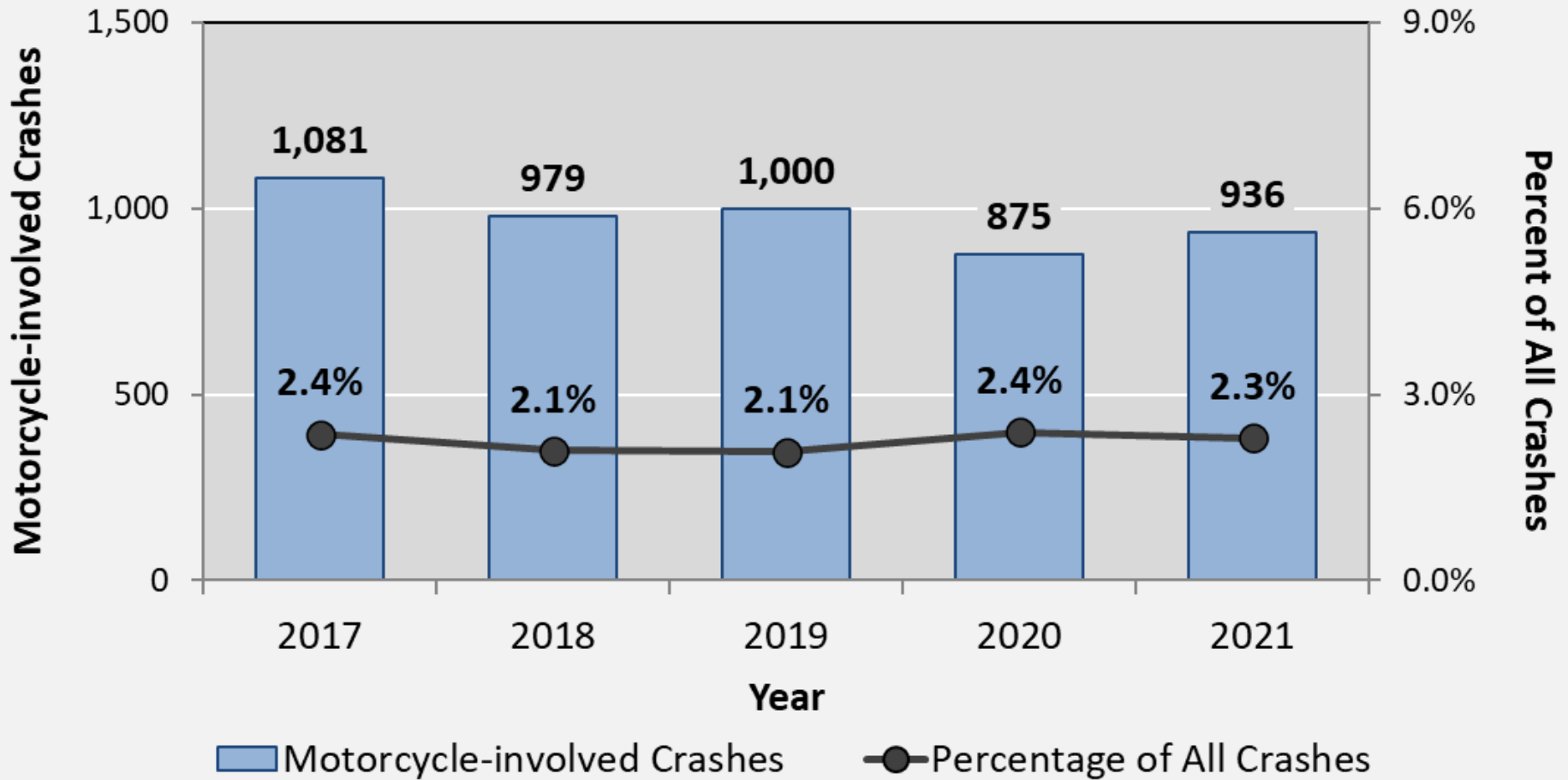
Vehicle Data

Contributing Factors, Vehicle VIN, Make, License Type, Driver Alcohol-involvement

Occupant Data

Age, Sex, Injury, Helmet Use

# Motorcycle-involved Crashes

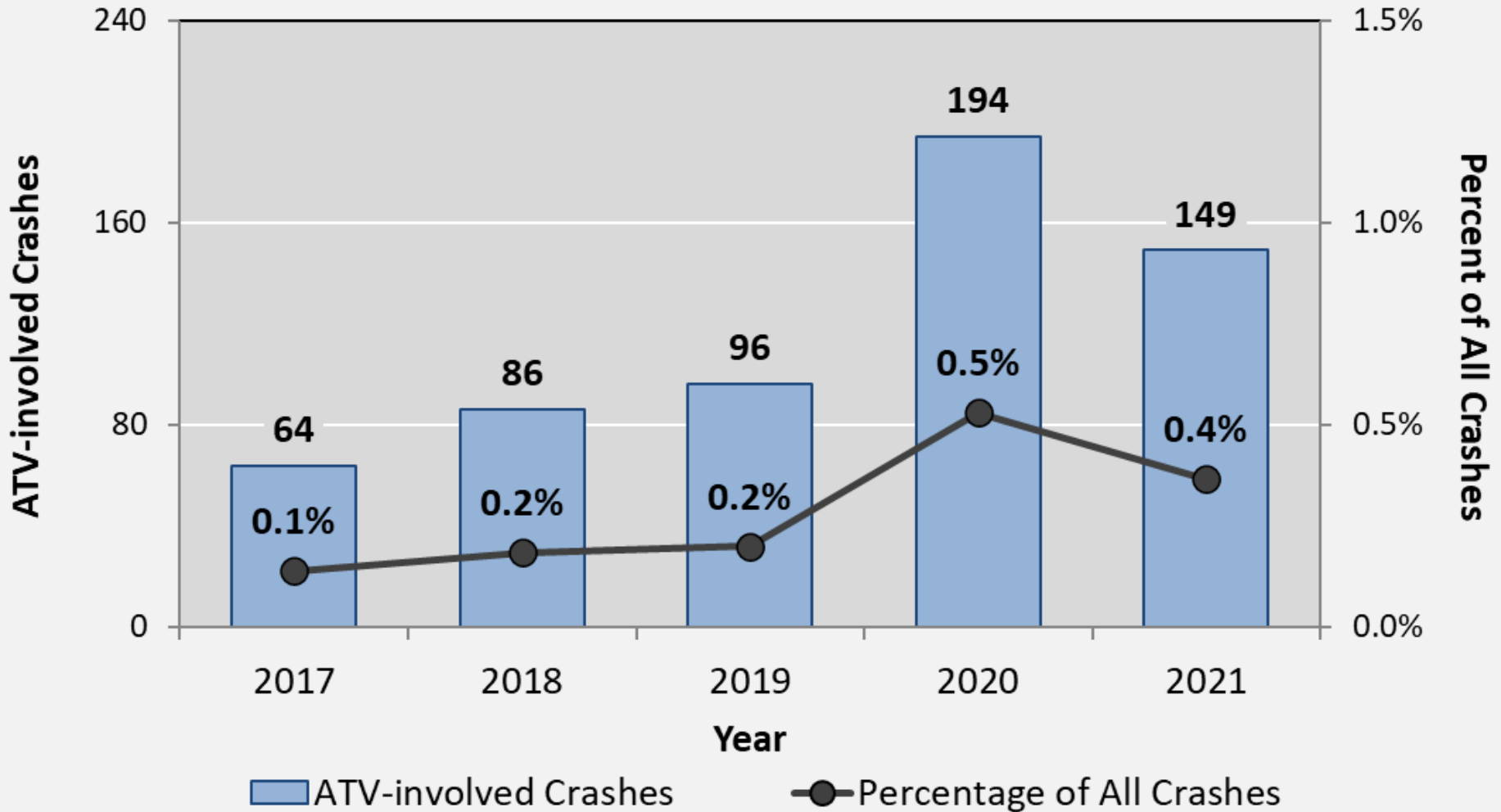


# Motorcyclists in Crashes by Severity of Injury, 2017 - 2021

Year	Severity of Injuries to Motorcyclists (Drivers & Passengers) in Crashes										Total Motorcyclists	
	Fatalities (Class K)		Suspected Serious Injuries (Class A)		Suspected Minor Injuries (Class B)		Possible Injuries (Class C)		No Apparent Injuries (Class O)			
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
2017	53	4%	161	13%	520	43%	196	16%	266	22%	1,196	100%
2018	47	4%	116	11%	491	45%	202	19%	227	21%	1,083	100%
2019	55	5%	134	12%	474	43%	185	17%	255	23%	1,103	100%
2020	46	5%	117	12%	473	49%	157	16%	170	18%	963	100%
2021	55	5%	141	14%	536	51%	142	14%	168	16%	1,042	100%
<b>Total</b>	<b>256</b>	<b>5%</b>	<b>669</b>	<b>12%</b>	<b>2,494</b>	<b>46%</b>	<b>882</b>	<b>16%</b>	<b>1,086</b>	<b>20%</b>	<b>5,387</b>	<b>100%</b>

Severity of Injuries to All People in <i>All Vehicles</i> in All Crashes, 2017 - 2021												
<b>Total</b>	<b>2,076</b>	<b>0.4%</b>	<b>5,200</b>	<b>1%</b>	<b>24,249</b>	<b>5%</b>	<b>63,776</b>	<b>12%</b>	<b>440,665</b>	<b>82%</b>	<b>535,966</b>	<b>100%</b>

# ATV-involved Crashes



ATVs are excluded from all data in this presentation.

# Motorcycle Drivers in Crashes by Age Group and Vehicle Type, 2017 - 2021

Crash Database 2017 - 2021		vPIC-Derived Motorcycle Type							
Age Group	Total Motorcycle Drivers	Touring	Cruiser	Sport	Standard / Street	Moped / Scooter	Dirt Bike / Dual Sport / Off-Road	Trike / Unenclosed 3-Wheeled	Missing Data
<18	245	6	18	57	29	11	44	0	80
18-19	117	0	24	56	9	6	3	0	19
20-24	680	26	148	274	66	17	18	0	131
25-29	587	54	159	183	57	10	26	0	98
30-34	512	69	153	114	50	18	11	0	97
35-39	425	83	145	61	34	15	8	3	76
40-44	416	101	126	59	39	13	12	3	63
45-49	395	98	139	33	30	13	16	4	62
50-54	414	138	127	20	26	22	11	0	70
55-59	398	122	127	11	25	21	13	6	73
60-64	286	106	83	6	16	9	9	3	54
65-69	190	64	56	4	17	6	3	7	33
70 +	165	53	38	8	15	10	4	11	26
Missing	176	24	25	28	13	1	6	0	79
<b>Total</b>	<b>5,006</b>	<b>944</b>	<b>1,368</b>	<b>914</b>	<b>426</b>	<b>172</b>	<b>184</b>	<b>37</b>	<b>961</b>

# Motorcycle Vehicles in Crashes by Age Group and Vehicle Make, 2017 - 2021

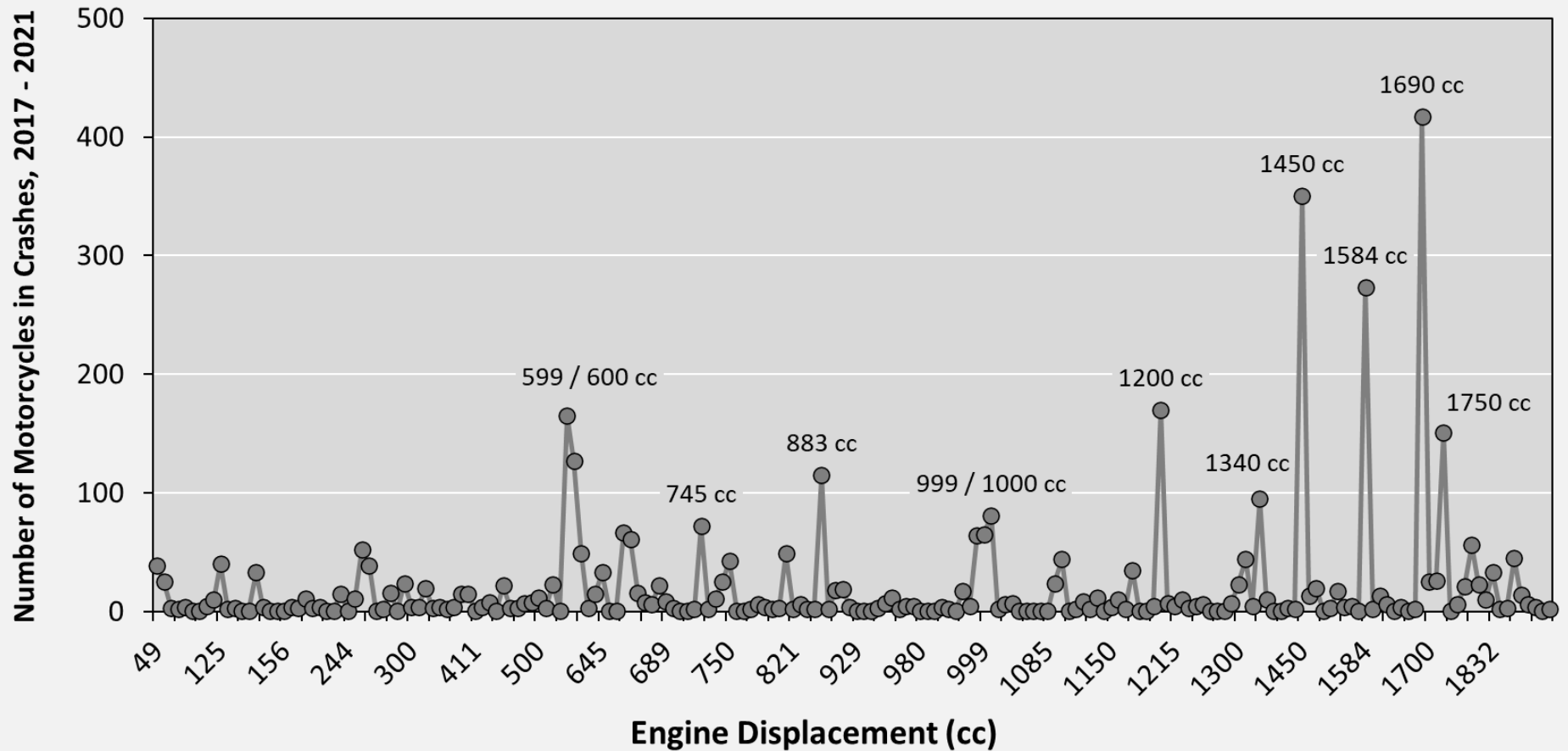
Driver Age Group	Motorcycle Vehicles in Crashes by Driver Age Group and Manufacturer, 2017 - 2021												Total Vehicles
	Harley Davidson	Honda	Yamaha	Kawasaki	Suzuki	BMW	Triumph	Ducati	Victory	Can-Am	Other	Missing Data	
<18	15	37	42	50	29	3	4	0	0	0	37	28	245
18-19	14	25	27	21	12	3	3	1	1	0	6	4	117
20-24	134	124	138	124	75	4	13	7	0	0	35	26	680
25-29	148	113	115	77	52	8	11	6	5	0	32	20	587
30-34	163	70	75	58	56	15	9	6	4	0	38	18	512
35-39	180	52	52	35	43	7	7	2	4	1	28	14	425
40-44	203	33	47	31	37	11	2	2	6	1	25	18	416
45-49	196	41	42	23	23	11	8	3	2	2	23	21	395
50-54	225	39	30	23	22	17	4	0	3	0	34	17	414
55-59	217	38	30	19	19	17	5	2	4	1	29	17	398
60-64	153	39	22	12	10	13	3	1	1	0	21	11	286
65-69	94	23	21	8	7	8	4	2	1	1	13	8	190
70 +	70	30	8	10	4	12	4	0	0	4	18	5	165
Missing Data	42	22	24	12	10	6	1	0	1	0	8	50	176
<b>Total</b>	<b>1,854</b>	<b>686</b>	<b>673</b>	<b>503</b>	<b>399</b>	<b>135</b>	<b>78</b>	<b>32</b>	<b>32</b>	<b>10</b>	<b>347</b>	<b>257</b>	<b>5,006</b>



# Motorcycles in Crashes by Vehicle Type, 2017 - 2021

Vehicle Type	Motorcycles in Crashes					Total Motorcycles
	2017	2018	2019	2020	2021	
Touring	203	191	221	151	178	944
Cruiser	315	263	283	243	264	1,368
Sport	197	196	166	160	195	914
Standard / Street	87	84	82	82	91	426
Moped / Scooter	37	39	32	31	33	172
Dirt Bike / Dual Sport / Off-Road	36	30	29	38	51	184
Trike / Unenclosed 3-Wheeled	10	6	6	7	8	37
Missing Data	227	192	209	182	151	961
<b>Total</b>	<b>1,112</b>	<b>1,001</b>	<b>1,028</b>	<b>894</b>	<b>971</b>	<b>5,006</b>

# Motorcycles in Crashes by Engine Displacement, 2017 - 2021



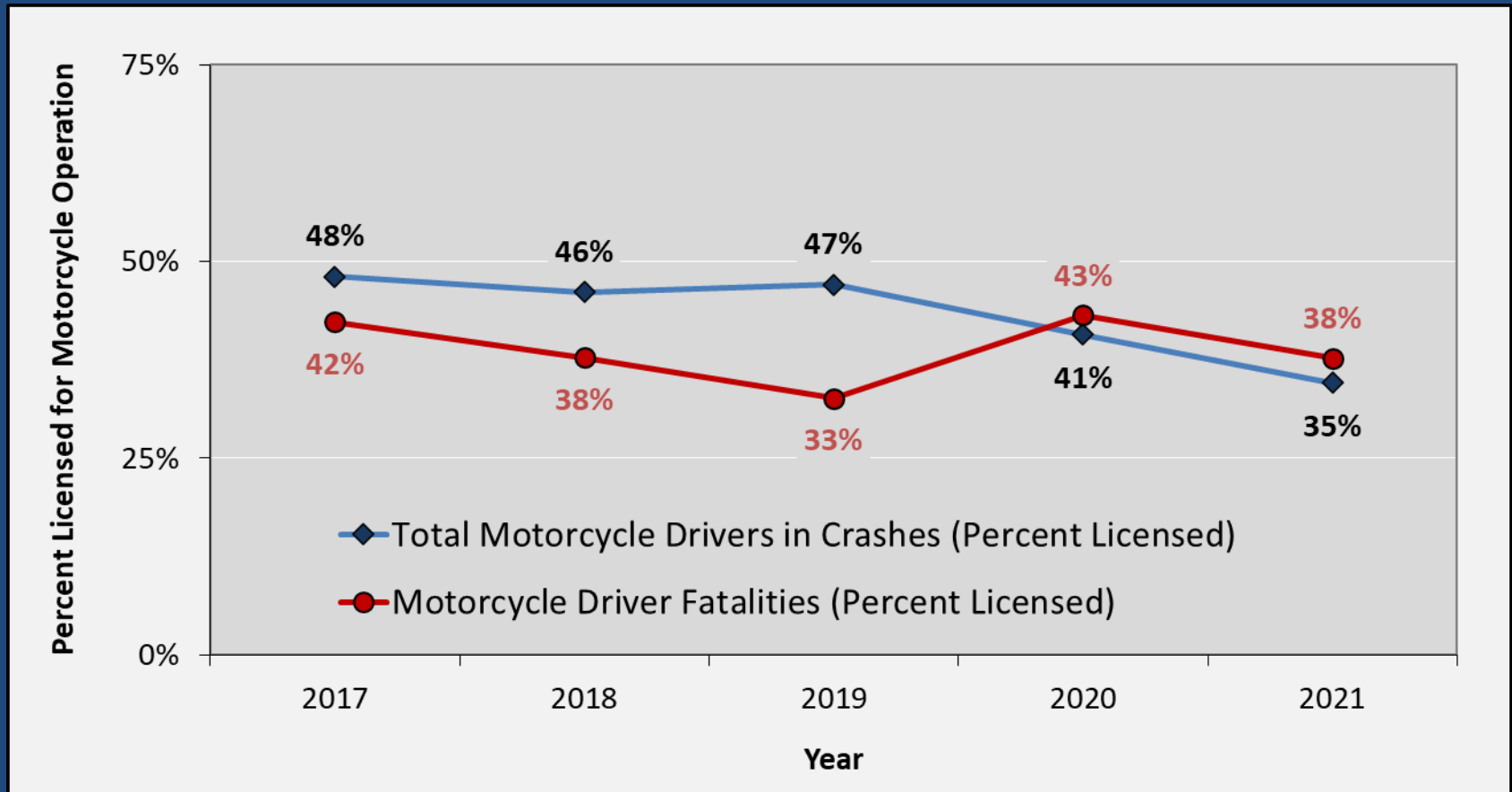
# Percentage of Motorcycle Drivers in Crashes Licensed for Motorcycle Operation by Vehicle Type, 2017 - 2021

Vehicle Type	Motorcycle Drivers in Crashes (Percent Licensed)				
	2017	2018	2019	2020	2021
Touring	62%	55%	57%	59%	49%
Cruiser	58%	54%	49%	50%	42%
Sport	39%	43%	40%	30%	30%
Standard / Street	45%	44%	59%	39%	30%
Moped / Scooter	32%	13%	28%	26%	27%
Dirt Bike / Dual Sport / Off-Road	36%	33%	45%	26%	29%
Trike / Unenclosed 3-Wheeled	70%	50%	83%	43%	50%
Missing Data	35%	40%	37%	29%	17%
Total	48%	46%	47%	41%	35%

“Licensed” means either an “M” class license or endorsement of W, Y or Z, on either the crash report or in the MVD License Driver database.

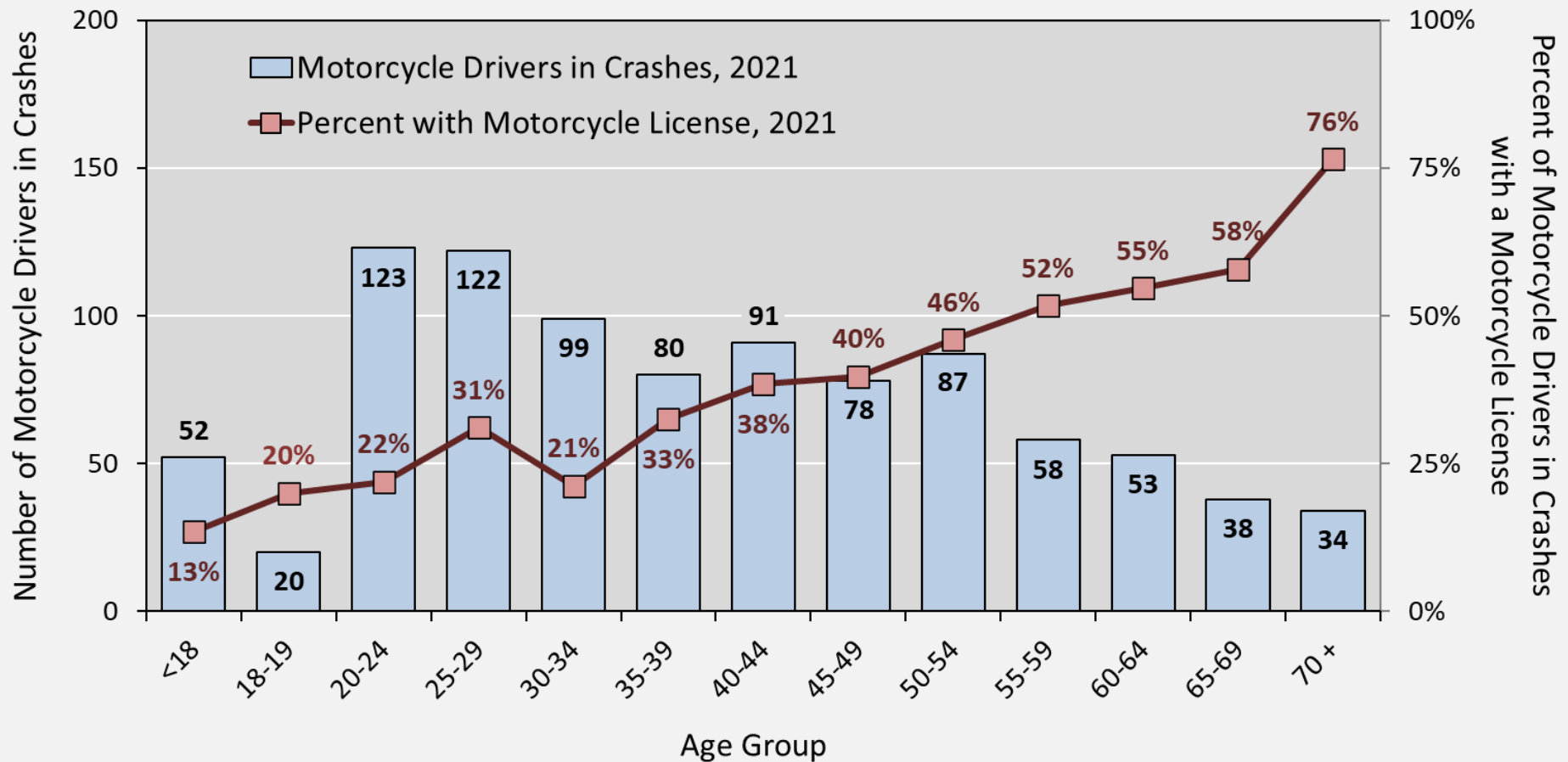
Darker shading identifies smaller percentages.

# Motorcycle Drivers in Crashes Licensed for Motorcycle Operation, 2017 - 2021



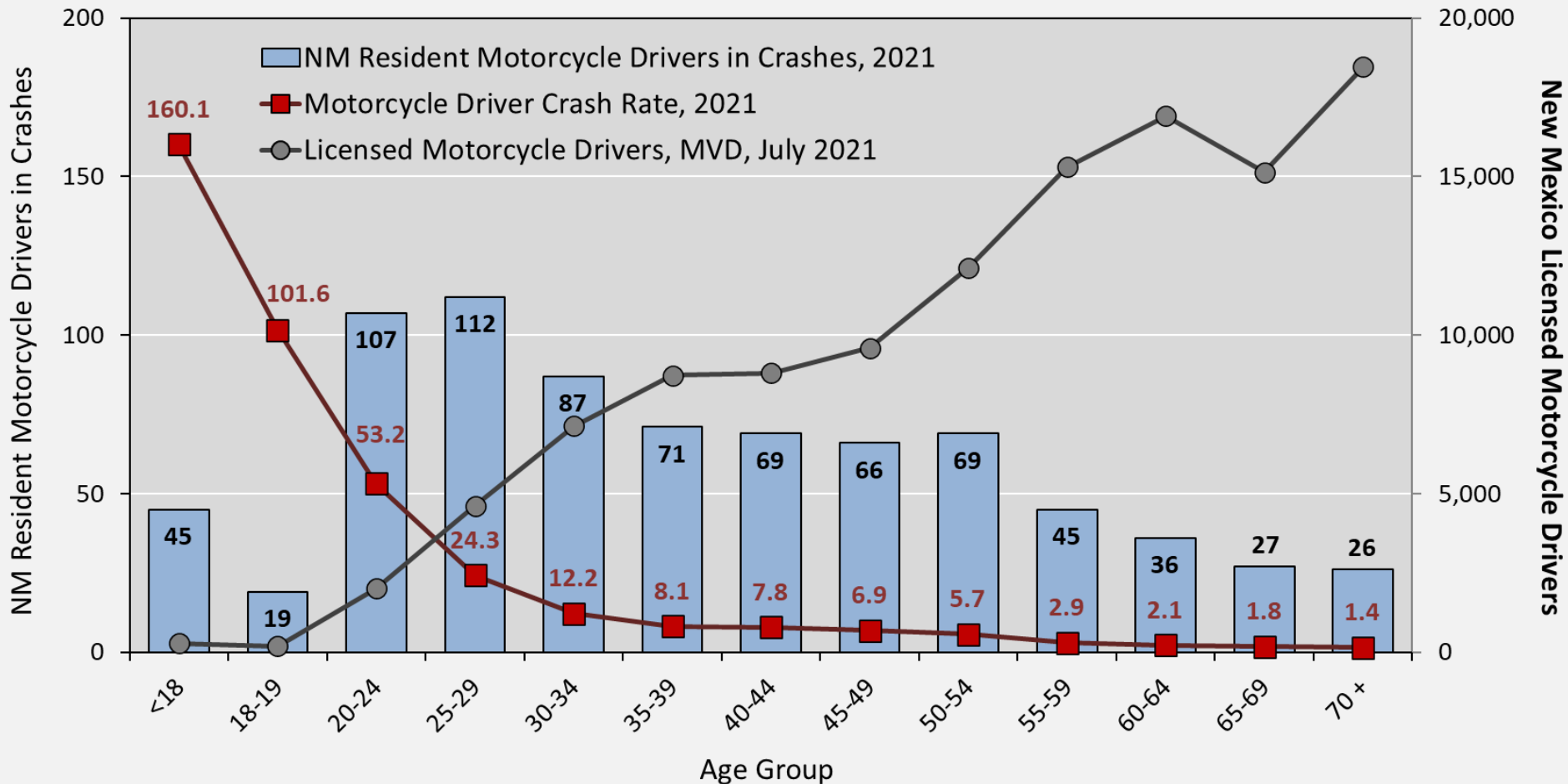
Licensed means either an “M” class license or endorsement of W, Y or Z, on either the crash report or in the MVD License Driver database.

# Motorcycle Drivers in Crashes by Age Group and MC Endorsement/License, 2021



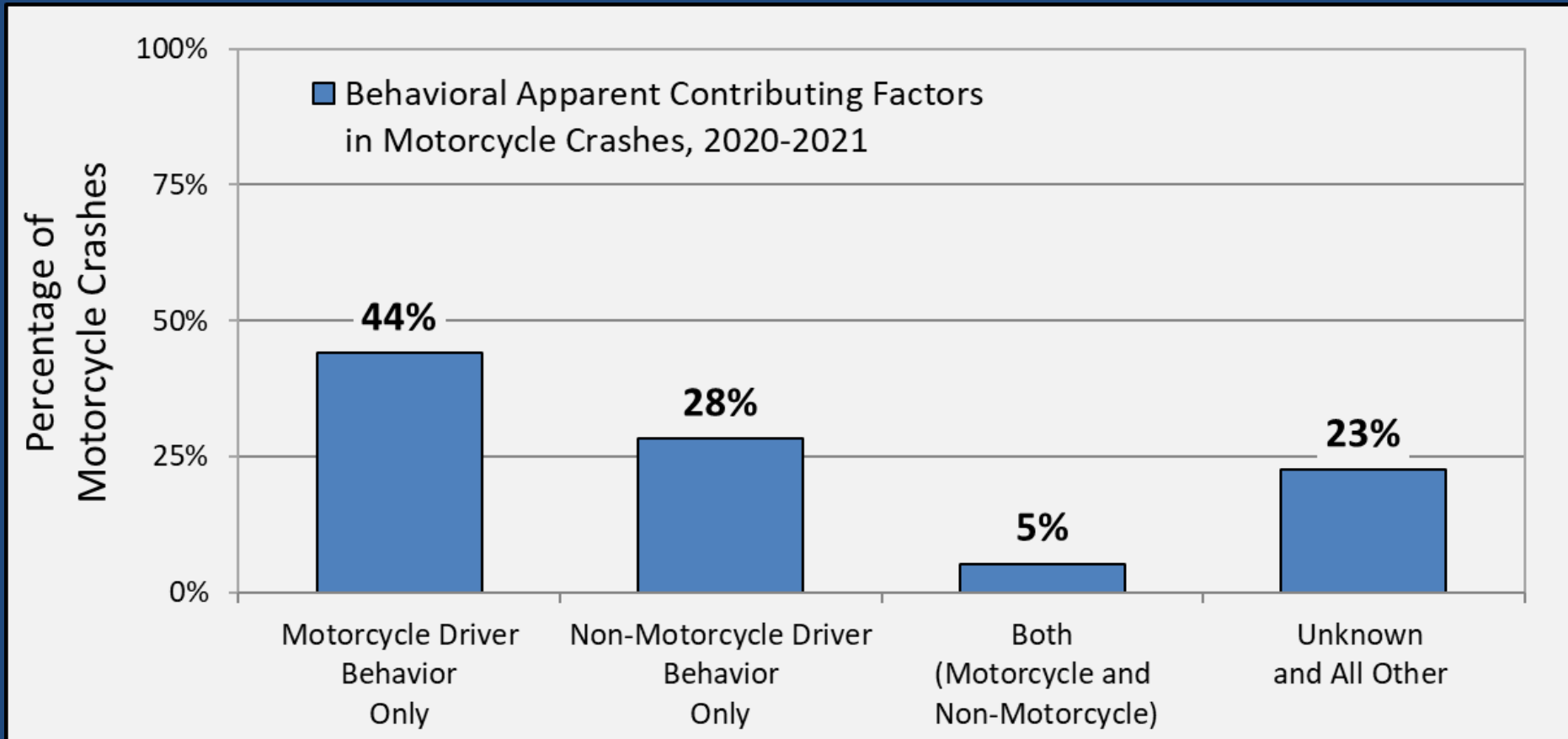
Overall, in 2021, at least 35% of motorcycle drivers in crashes had a motorcycle license or endorsement.

# Crash Rates by Age Group, 2021

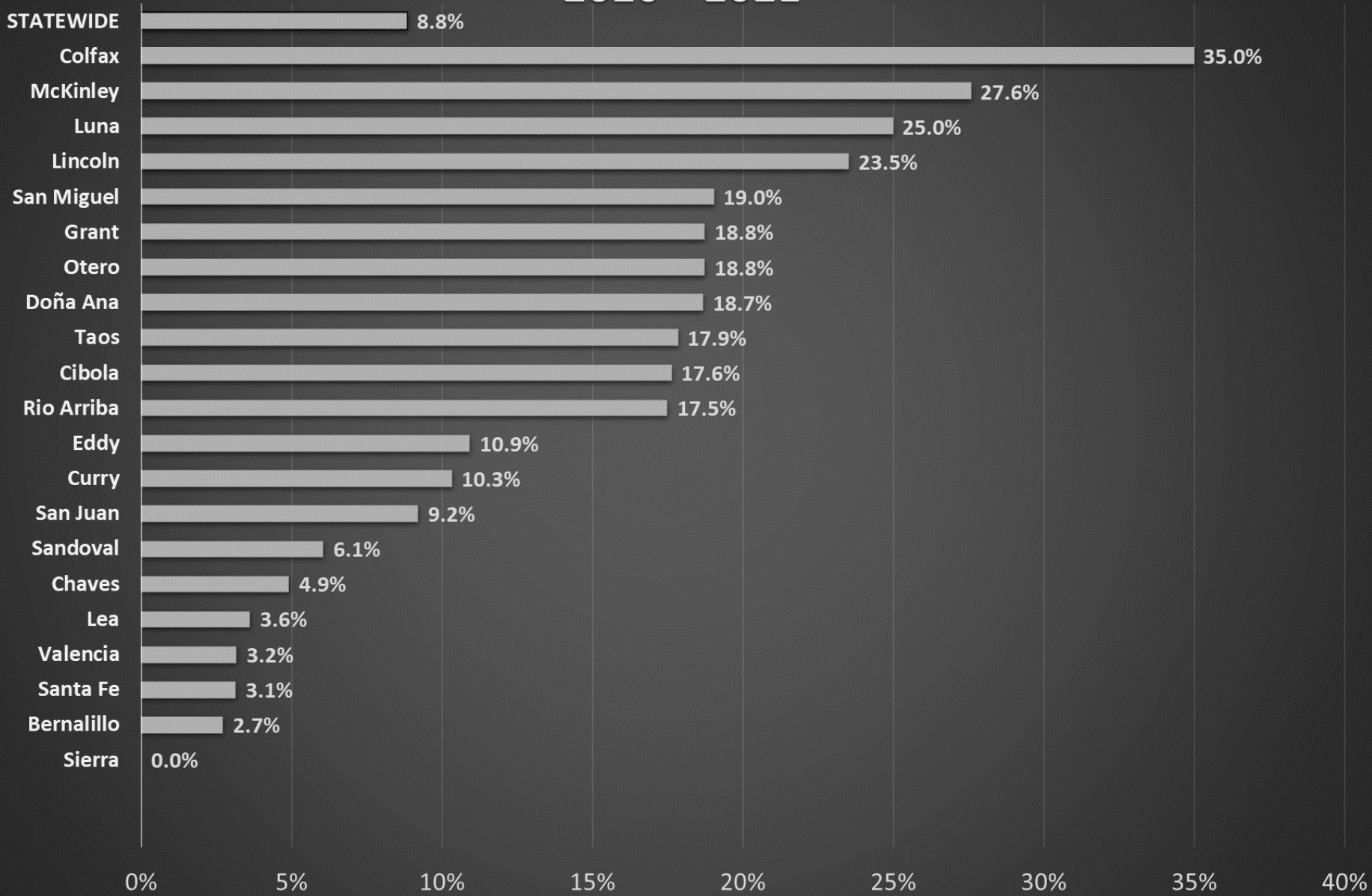


Crash Rate: The number of New Mexico resident motorcycle drivers in crashes per 1,000 MVD motorcycle licenses/endorsements in each age group. Excludes parked motorcycles.

# Driver Behaviors in Motorcycle Crashes, 2020 - 2021

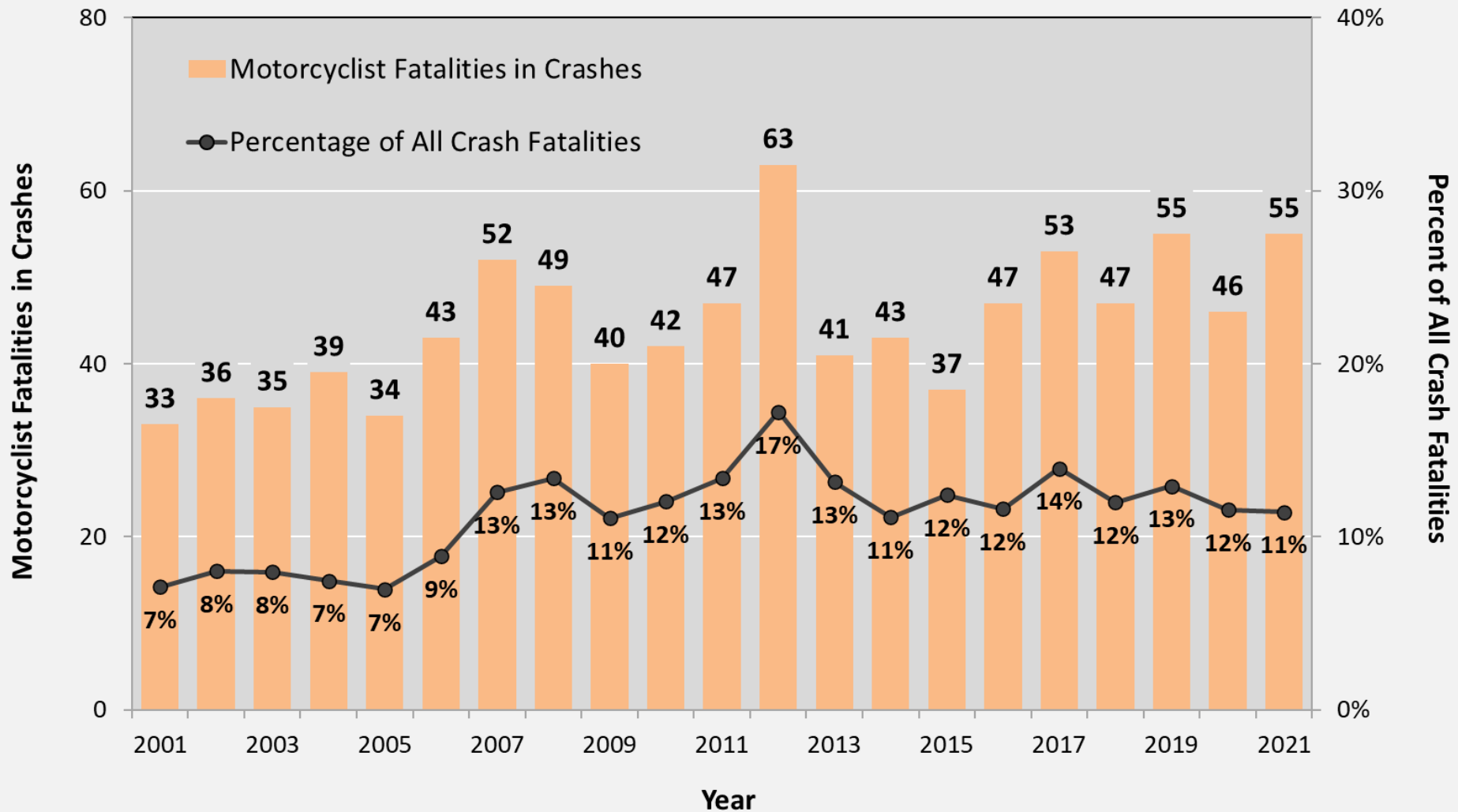


# Out-of-State Motorcycle Drivers in Crashes, 2020 - 2021





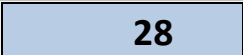
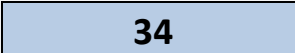








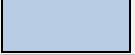


# Motorcyclist Fatalities in Crashes

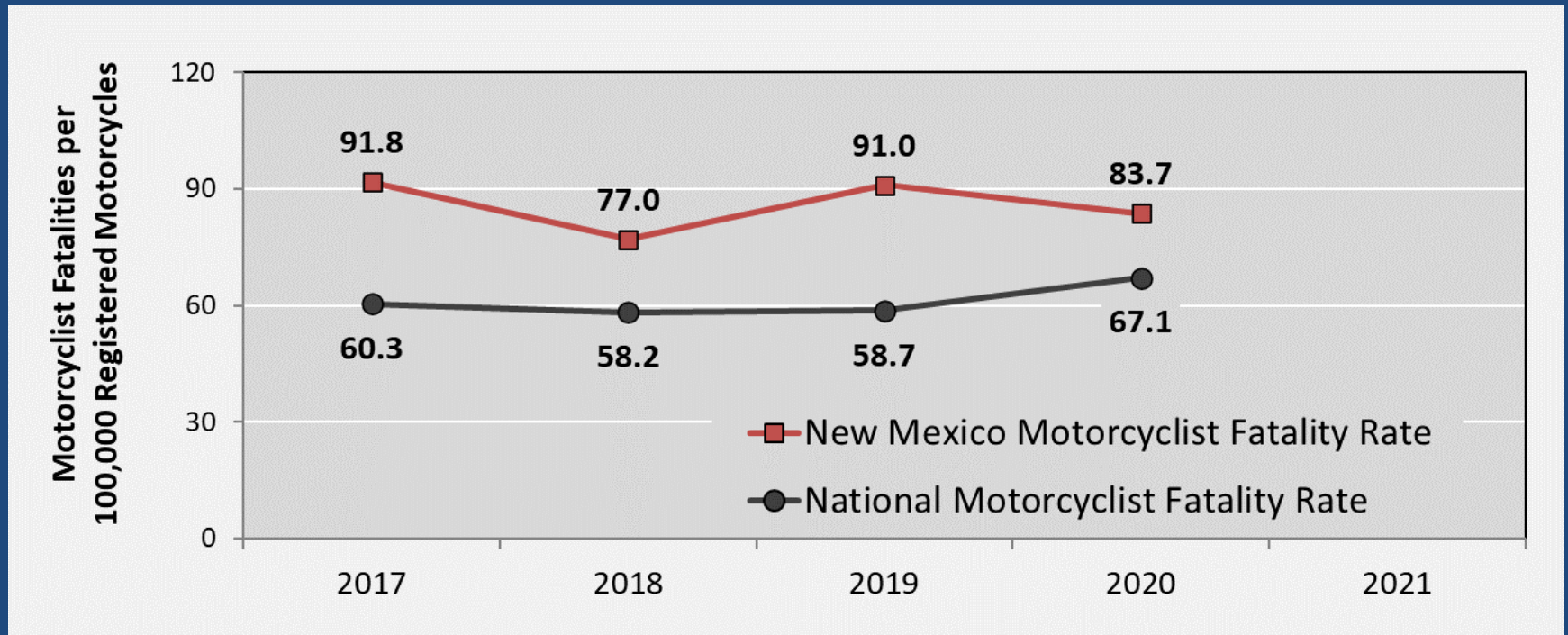


Data from 2021 are preliminary.

# Motorcyclist Fatality Rates by Age Group, 2017 - 2021

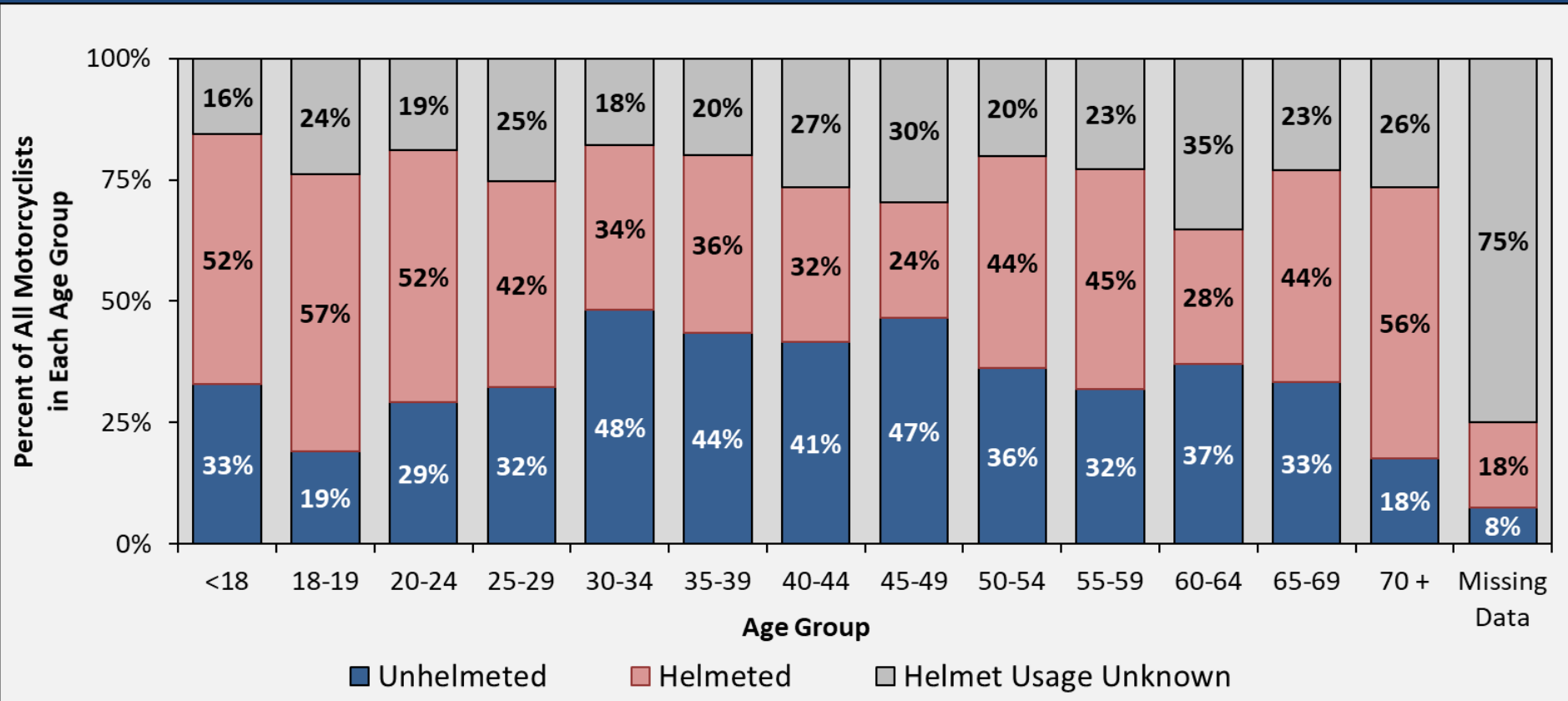
Age Group	Motorcyclist Fatalities, 2017 - 2021	Total Motorcyclists in Crashes, 2017 - 2021		Total Fatalities in Crashes, 2017 - 2021	
		Count	Percent Killed	Count	Percent Motorcyclists
<18	 6	295	2.0%	154	3.9%
18-19	 3	130	2.3%	40	7.5%
20-24	 28	708	4.0%	210	13.3%
25-29	 34	626	5.4%	247	13.8%
30-34	 20	537	3.7%	201	10.0%
35-39	 23	462	5.0%	195	11.8%
40-44	 23	449	5.1%	137	16.8%
45-49	 20	438	4.6%	150	13.3%
50-54	 26	448	5.8%	146	17.8%
55-59	 27	434	6.2%	172	15.7%
60-64	 17	298	5.7%	129	13.2%
65-69	 14	198	7.1%	98	14.3%
70 +	 15	167	9.0%	194	7.7%
Missing Data	0	197	0.0%	3	0.0%
<b>Total</b>	<b>256</b>	<b>5,387</b>	<b>4.8%</b>	<b>2,076</b>	<b>12.3%</b>

# New Mexico and National Motorcyclist Fatality Crash Rates



Year	Motorcycle Drivers in Crashes (NM Residents)	Motorcyclist Fatalities	NM Registered Motorcycles	NM Licensed Motorcycle Drivers	NM Driver Crash Rate per 1,000 Registered Motorcycles	NM Driver Crash Rate per 1,000 Licensed Motorcycle Drivers	Fatality Rate per 100,000 Registered Motorcycles	Fatality Rate per 100,000 Licensed MC Drivers
2017	1,016	53	57,718	120,120	17.6	8.5	91.8	44.1
2018	877	47	61,074	118,499	14.4	7.4	77.0	39.7
2019	919	55	60,466	118,764	15.2	7.7	91.0	46.3
2020	830	46	54,946	118,987	15.1	7.0	83.7	38.7
2021	870	55		119,288		7.3		46.1

# Helmet Usage as a Percentage of Motorcyclists in Crashes in Each Age Group, 2021



# Motorcyclists in Crashes by Helmet Usage, 2017 - 2021

Year	Helmet Usage of Motorcyclists in Crashes						Total Motorcyclists in Crashes	
	Helmeted		Unhelmeted		Missing Data		Count	Percent
	Count	Percent	Count	Percent	Count	Percent		
2017	477	<b>40%</b>	380	<b>32%</b>	339	<b>28%</b>	1,196	<b>100%</b>
2018	428	<b>40%</b>	321	<b>30%</b>	334	<b>31%</b>	1,083	<b>100%</b>
2019	431	<b>39%</b>	317	<b>29%</b>	355	<b>32%</b>	1,103	<b>100%</b>
2020	386	<b>40%</b>	335	<b>35%</b>	242	<b>25%</b>	963	<b>100%</b>
2021	413	<b>40%</b>	369	<b>35%</b>	260	<b>25%</b>	1,042	<b>100%</b>
Total	2,135	<b>40%</b>	1,722	<b>32%</b>	1,530	<b>28%</b>	5,387	<b>100%</b>

Possible causes of missing data: Hit-and-run situations, officer training, or urgent medical transport.

# Motorcyclist Fatalities in Crashes by Helmet Usage, 2017 - 2021

Year	Motorcyclists in Crashes						Increased Risk of Fatal Injury**
	Fatalities		Total Motorcyclists*		Percent Killed		
	Helmeted	Unhelmeted	Helmeted	Unhelmeted	Helmeted	Unhelmeted	
2017	18	35	477	380	3.8%	9.2%	2.4 x greater
2018	19	26	428	321	4.4%	8.1%	1.8 x greater
2019	18	37	431	317	4.2%	11.7%	2.8 x greater
2020	19	27	386	335	4.9%	8.1%	1.6 x greater
2021	20	35	413	369	4.8%	9.5%	2.0 x greater
<b>Total</b>	<b>94</b>	<b>160</b>	<b>2,135</b>	<b>1,722</b>	<b>4.4%</b>	<b>9.3%</b>	<b>2.1 x greater</b>

\* Helmet usage data is unavailable for 28% (1,530) motorcycle riders in crashes

\*\* Based on the fatality ratio (i.e. percentage of unhelmeted fatalities divided by the percentage of helmeted fatalities).

# Motorcyclist Fatalities in Crashes by Age Group and Helmet Usage, 2017 - 2021

Age Group	Motorcyclist Fatalities in Crashes										
	Helmeted					Unhelmeted					Total
	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021	
<18	1	0	2	0	0	0	0	0	2	1	6
18-19	0	1	0	1	0	0	1	0	0	0	3
20-24	5	5	3	5	3	3	2	1	0	1	28
25-29	2	2	3	1	4	4	4	4	2	8	34
30-34	0	1	1	2	3	2	2	4	1	4	20
35-39	0	1	1	0	2	4	4	5	3	3	23
40-44	4	0	1	2	2	0	3	4	5	2	23
45-49	0	0	0	2	0	1	2	5	2	7	20
50-54	1	3	1	2	2	5	3	3	2	3	26
55-59	0	0	2	1	1	10	2	6	4	1	27
60-64	0	1	1	1	1	5	1	3	2	2	17
65-69	2	1	1	2	1	1	1	0	3	2	14
70 +	3	4	2	0	1	0	1	2	1	1	15
<b>Total</b>	<b>18</b>	<b>19</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>35</b>	<b>26</b>	<b>37</b>	<b>27</b>	<b>35</b>	<b>256</b>

# Motorcyclist Fatalities in Crashes by Vehicle Type and Helmet Usage, 2017 - 2021

Vehicle Type	Helmeted Motorcycle Fatalities					Unhelmeted Motorcycle Fatalities					Total
	2017	2018	2019	2020	2021	2017	2018	2019	2020	2021	
Touring	1	3	3	3	1	18	8	11	9	10	67
Cruiser	2	1	2	4	4	3	7	15	7	7	52
Sport	6	8	6	5	11	7	7	5	0	7	62
Standard / Street	2	1	3	1	1	0	2	1	6	3	20
Moped / Scooter	0	1	0	0	0	1	0	0	0	1	3
Dirt Bike/Dual Sport/Off-Rd.	0	0	0	3	0	1	0	0	0	1	5
Trike/Unenclosed 3-Wheeled	1	1	0	0	0	0	0	0	2	0	4
Missing Data	6	4	4	3	3	5	2	5	3	6	41
<b>Total</b>	18	19	18	19	20	35	26	37	27	35	254

Vehicle type data are unavailable for 16% (41 out of 254).





2017 Albuquerque Balloon Fiesta  
<https://iamnm.com/2017-albuquerque-balloon-fiesta/>

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