

## The Four Useful Danger Measures

Type of Danger Measure	FARS Fatality Count	Type of Miles	Population	Fatality Rate	Useful for Measuring the Efficacy of these Counter-Measures
Driver Danger (Operator of Vehicle)	Driver of Vehicle of Interest <sup>1</sup>	Driver-Miles-Traveled (DMT <sup>3</sup> )		Drivers per Miles	Endorsements, Personal Protective Equipment, Hi-Viz, Training, Law-Enforcement Strategies
Occupant Danger (In or On the Vehicle)	Occupant of Vehicle of Interest <sup>1</sup>	Occupant-Miles-Traveled (OMT)		Occupants per Miles	Personal Protective Equipment, Hi-Viz, Law-Enforcement Strategies (Note that the license compliance of the passenger is not important.)
Societal Danger per <b>Vehicle Mile</b> (Occupants and Non-Occupants <sup>2</sup> )	All Fatally Injured From the Crash <sup>2</sup>	Vehicle-Miles-Traveled (VMT)		All Victims per Miles	All
Societal Danger per <b>Population</b> (Occupants and Non-Occupants <sup>2</sup> )	All Fatally Injured From the Crash <sup>2</sup>		Population of Region of Interest	All Victims per Population	All Most Important Measure in Governance and Budget Allocation

1. NHTSA sorts vehicles into categories: Cars, Light Trucks, Motorcycles, Large Trucks, and Buses. Passenger Vehicles are the combined group of Cars and Light Trucks.
2. All people are included in societal counts. Any occupant of any vehicle, and any non-occupant fatally injured in the crash are included. Examples of Non-Occupants that also use public roadways are pedestrians, bicyclists and power wheelchair users.
3. Currently Driver-Miles-Traveled (DMT) is numerically equal to Vehicle-Miles-Traveled (VMT).

## The Four Useful Motorcycle Danger Measures

Type of Danger Measure	FARS Fatality Count	Type of Miles (Millions)	Population	Fatality Rate	Useful for Measuring the Efficacy of these Counter-Measures
Driver Danger (Motorcycle Driver)	4,684	19,606		23.9 Drivers per 100 Million Miles	Endorsements, Personal Protective Equipment, Hi-Viz, Training, Law-Enforcement Strategies
Occupant Danger (Motorcyclists)	4,976	21,118		23.6 Motorcyclists per 100 Million Miles	Personal Protective Equipment, Hi-Viz, Law-Enforcement Strategies (Note that the license compliance of the passenger is not important.)
Societal Danger per <b>Motorcycle Mile</b> (Occupants and Non-Occupants <sup>2</sup> )	5,076	19,606		25.9 Motorcycle Crash Fatalities per 100 Million Miles	All
Societal Danger per <b>Population</b> (Occupants and Non-Occupants <sup>2</sup> )	5,076		320,896,618	15.8 Motorcycle Crash Fatalities per Million Population	All Most Important Measure in Governance and Budget Allocation

1. NHTSA sorts vehicles into categories: Cars, Light Trucks, Motorcycles, Large Trucks, and Buses. Passenger Vehicles are the combined group of Cars and Light Trucks.
2. All people are included in societal counts. Any occupant of any vehicle, and any non-occupant fatally injured in the crash are included. Examples of Non-Occupants that also use public roadways are pedestrians, bicyclists and power wheelchair users.
3. Currently Driver-Miles-Traveled (DMT) is numerically equal to Vehicle-Miles-Traveled (VMT).