



DELAWARE

2021-2025 Strategic Highway Safety Plan: Towards Zero Deaths



Motorcycle Fatality & Serious Injury Data Analysis
October 26, 2022



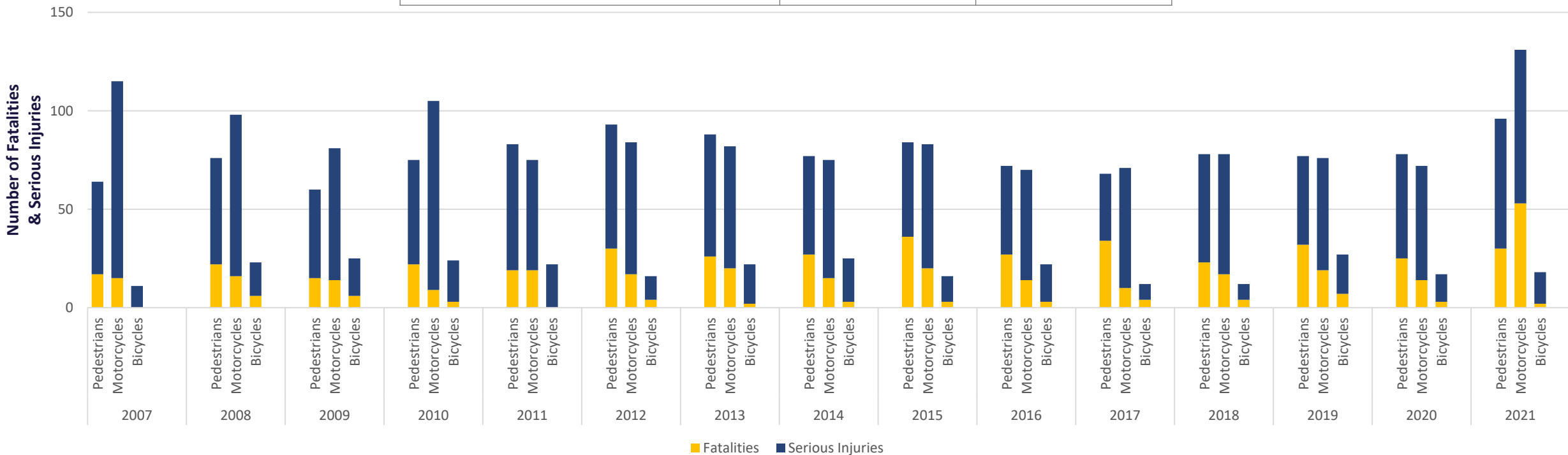
Vulnerable User Definition

- Definition for purposes of this presentation:
 - Pedestrians
 - Bicyclists
 - Motorcyclists
- Delaware Vulnerable User Law ([Title 21 §4176E](#)):
 - Pedestrian
 - Highway worker
 - Person riding an animal or animal-drawn carriage (includes passengers)
 - Person operating or passenger of a farm tractor, skateboard, roller skates, in-line skates, scooter, moped, bicycle, motorcycle, wheelchair, or electric personal mobility device
- Federal definition (for purposes of Vulnerable Road User Special Rule):
 - A non-motorist with a Fatality Analysis Reporting System (FARS) person attribute code of Pedestrian, Bicyclist, Other Cyclist, and Person on Personal Conveyance”
 - Does not include motorcyclists



Vulnerable User Fatalities & Serious Injuries

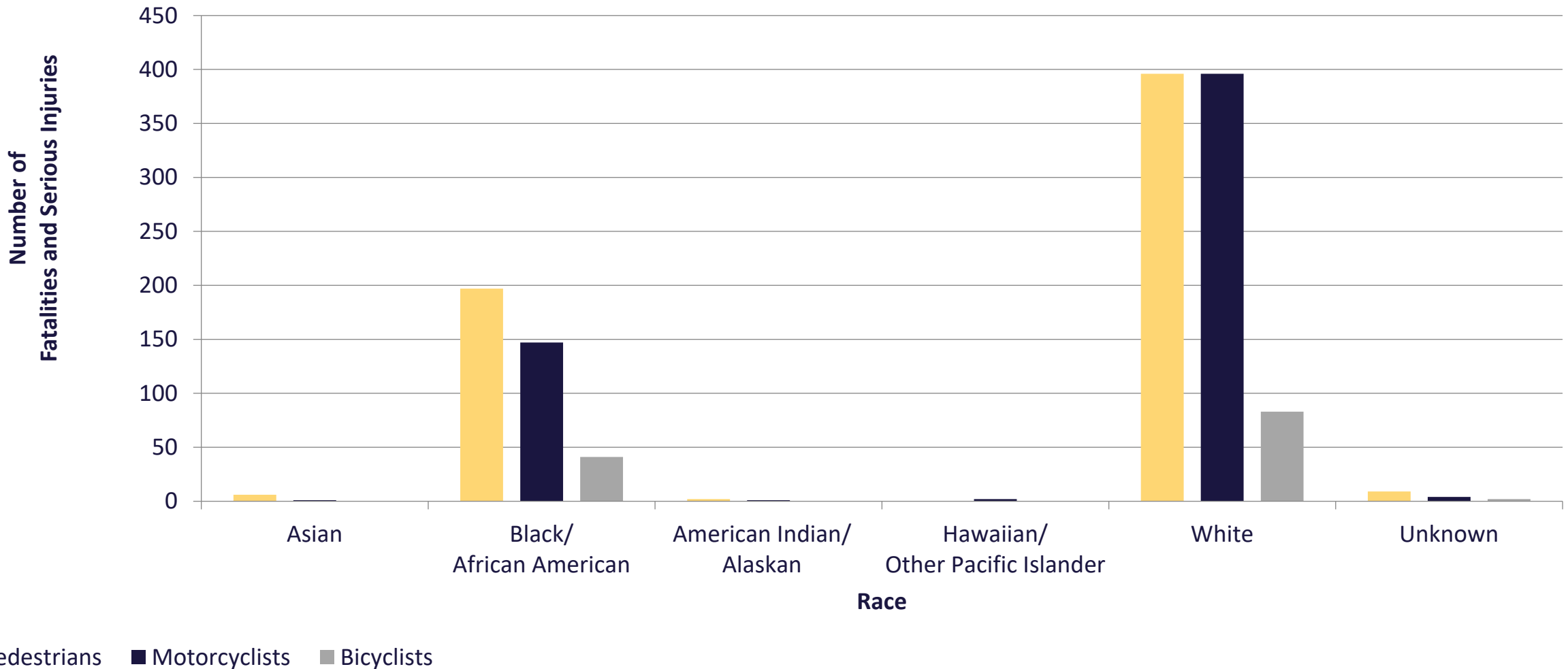
Vulnerable Users	% Total Fatalities (2015-2021)	% Total Serious Injuries (2015-2021)
Pedestrians (Emphasis Area 5)	24%	10%
Motorcyclists (Emphasis Area 6)	13%	13%
Bicyclists (Non-Selected EA)	3%	3%





Vulnerable User Fatalities & Serious Injuries

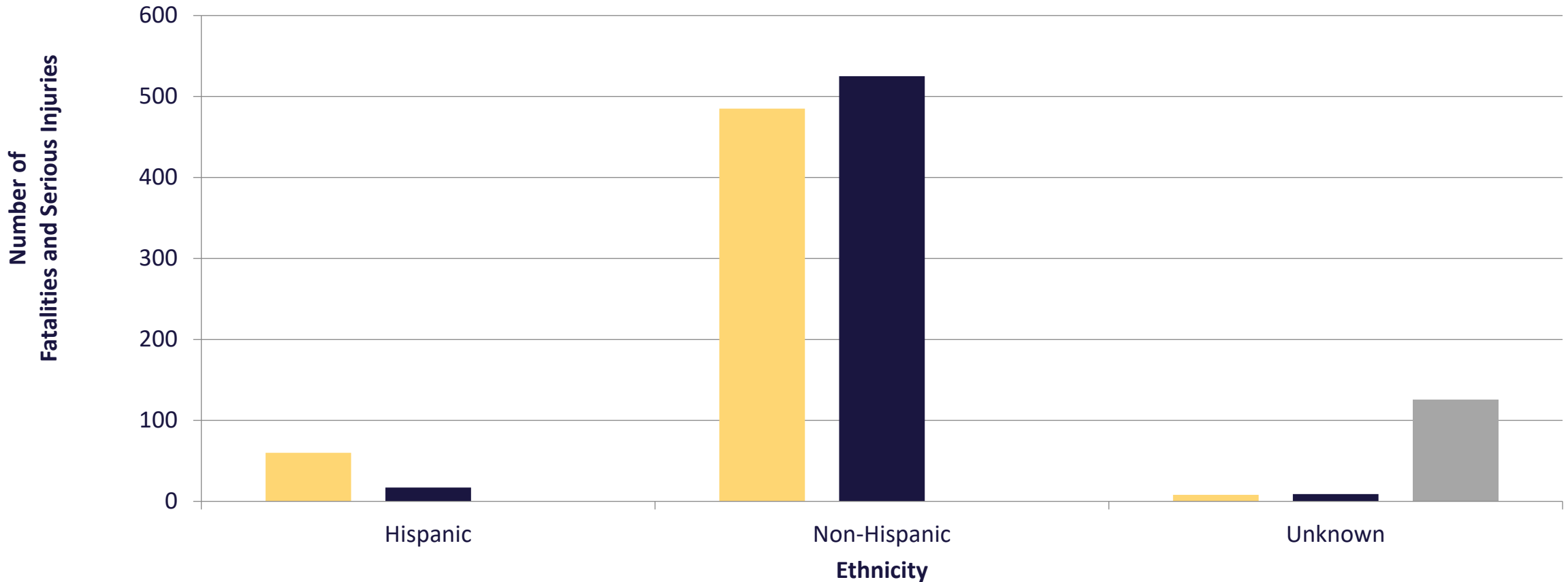
Race and Ethnicity Demographics





Vulnerable User Fatalities & Serious Injuries

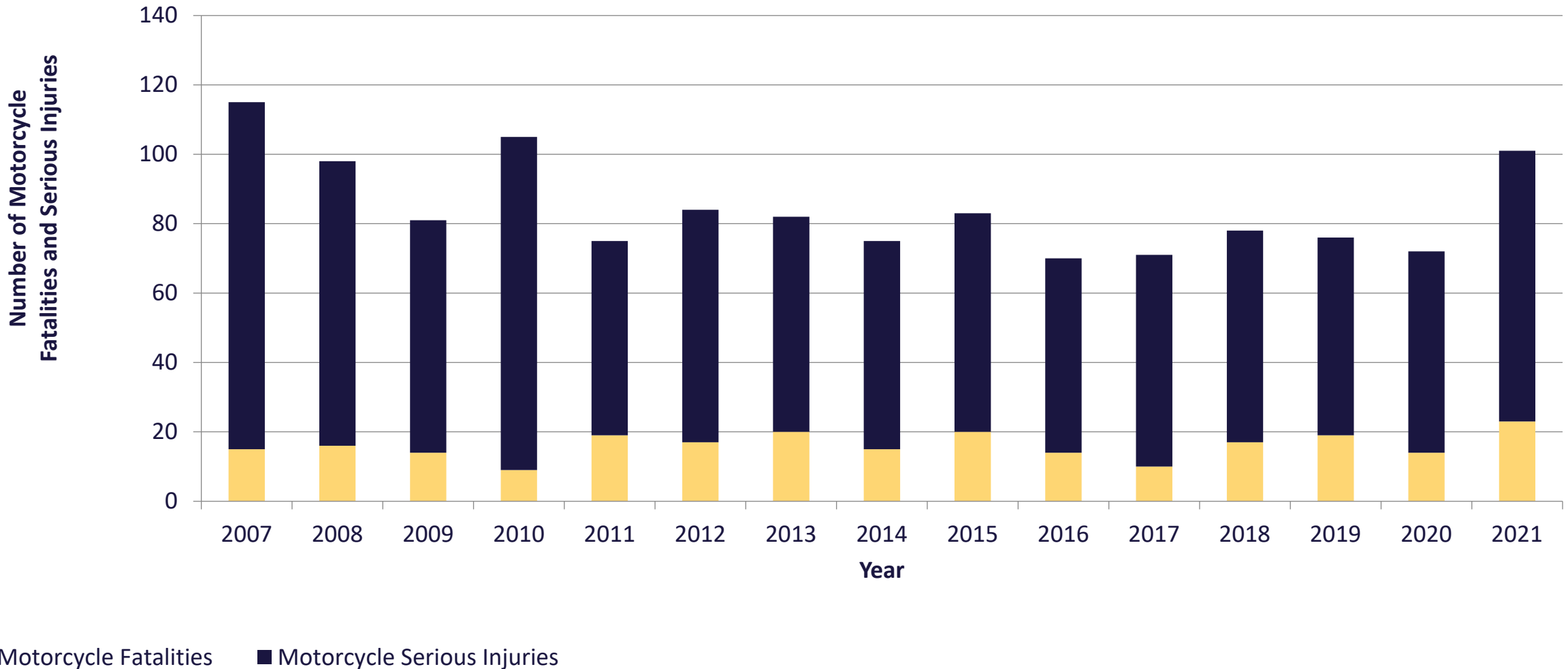
Race and Ethnicity Demographics



■ Pedestrians ■ Motorcyclists ■ Bicyclists



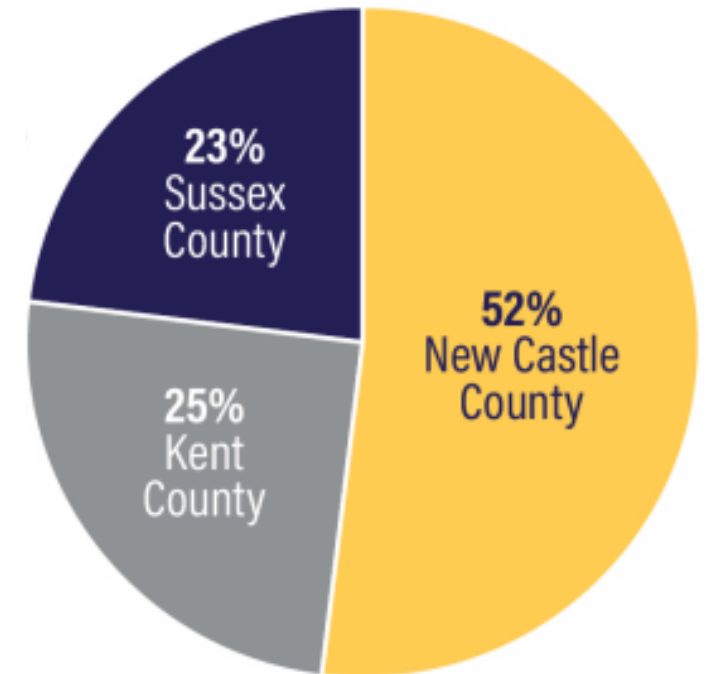
Motorcycle Fatalities & Serious Injuries





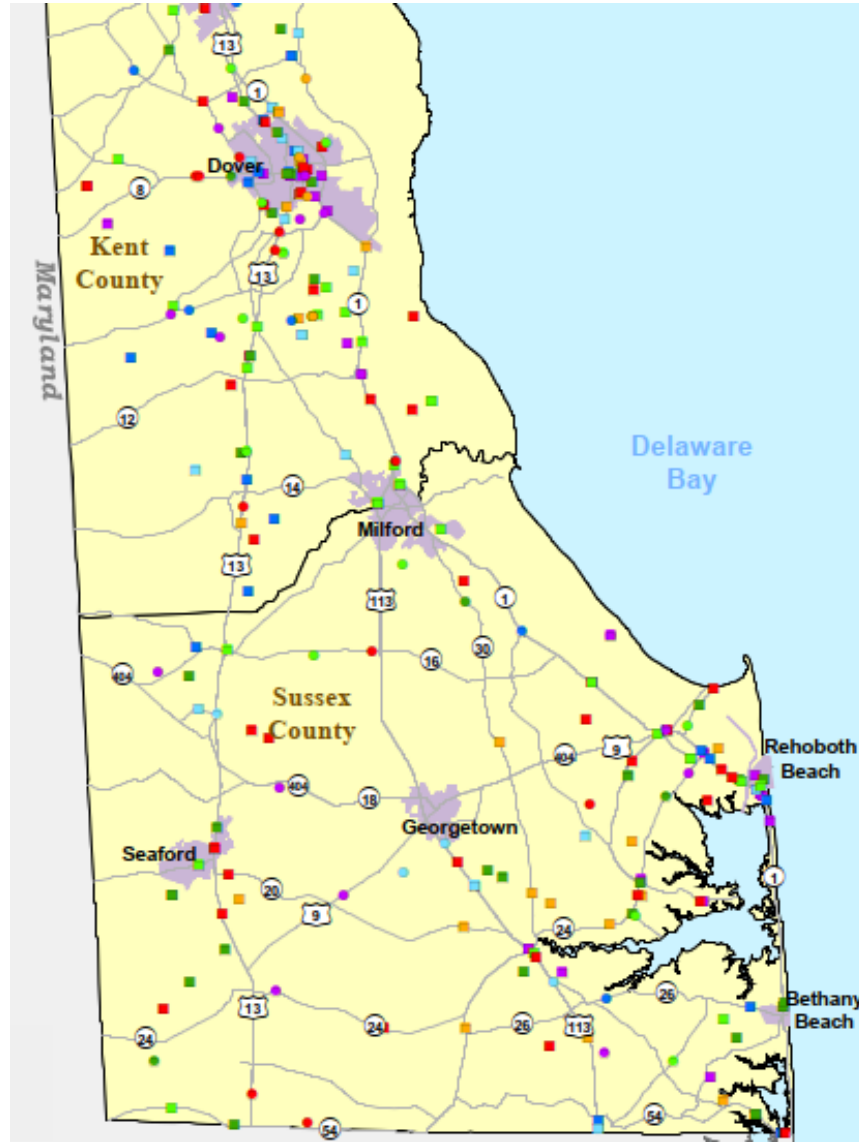
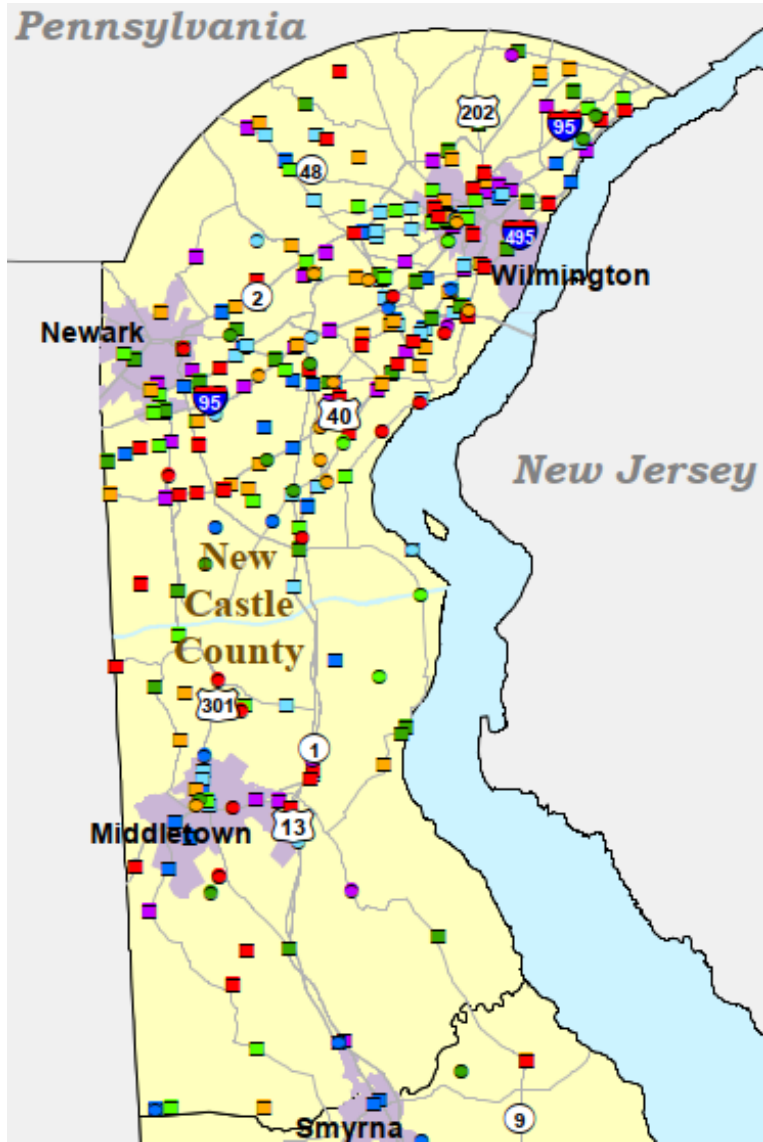
Motorcycle Fatalities & Serious Injuries

- Motorcycle fatality and serious injury general trends (from 2015-2019 SHSP)
 - 88% involved males
 - 77% occurred between May and October
 - 68% occurred in urban areas
 - 58% occurred on a Friday, Saturday, or Sunday
 - 56% involved persons aged 30 – 59
 - 46% occurred between 3PM and 9PM
 - 37% were not wearing a helmet
- Additional Data Analysis
 - Further evaluation of the manner of impact
 - Further evaluation of lighting conditions
 - Further evaluation of surface conditions





Motorcycle Fatalities & Serious Injuries



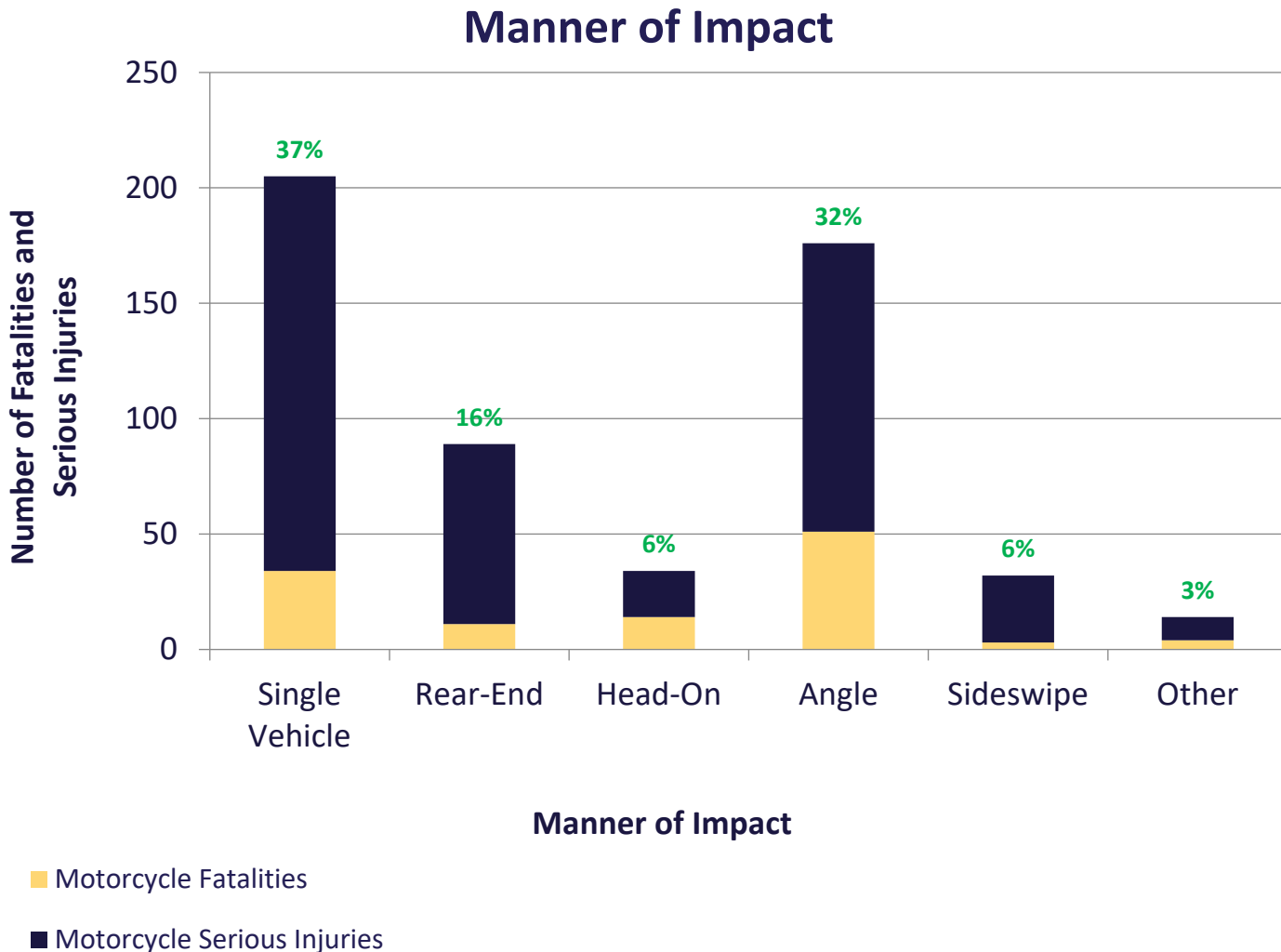
Motorcycles						
Year	New Castle County		Kent County		Sussex County	
	Fatalities	Serious Injuries	Fatalities	Serious Injuries	Fatalities	Serious Injuries
2015	5	33	7	14	8	16
2016	8	32	4	15	2	9
2017	5	40	1	12	4	9
2018	10	29	4	11	6	21
2019	6	27	8	18	5	12
2020	10	35	4	11	0	12
2021	12	38	7	18	4	22
Total	56	234	35	99	29	101
%	64%		15%		21%	

● Fatality*
 ■ Serious Injury*
 ■ Municipality

* Each symbol represents a crash location. Multiple crashes may have occurred at or near the same location, therefore, symbols may overlap. Additionally, multiple fatalities and/or serious injuries may have resulted from a single crash.
 Analysis years 2015 - 2021



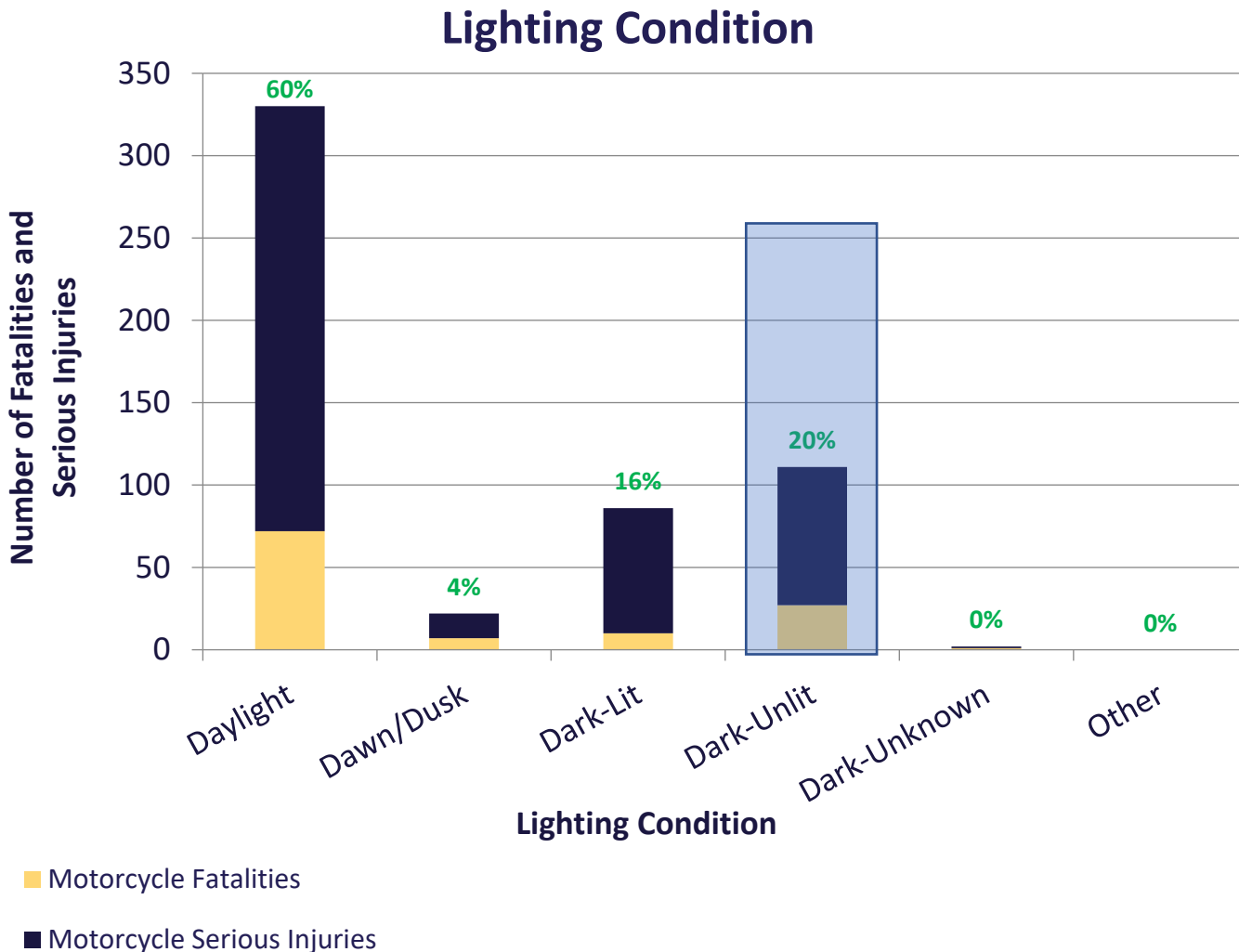
Motorcycle Fatalities & Serious Injuries



- 26% of motorcycle fatalities involved a roadway departure
 - 16% of motorcycle roadway departures involved a motorcycle striking a ditch
- 32% of motorcycle fatalities and serious injuries involved an angle crash
 - 58% occurred at unsignalized intersections
 - 49% of angle crashes involving a motorcycle involved no contributing action on the part of the motorcyclist



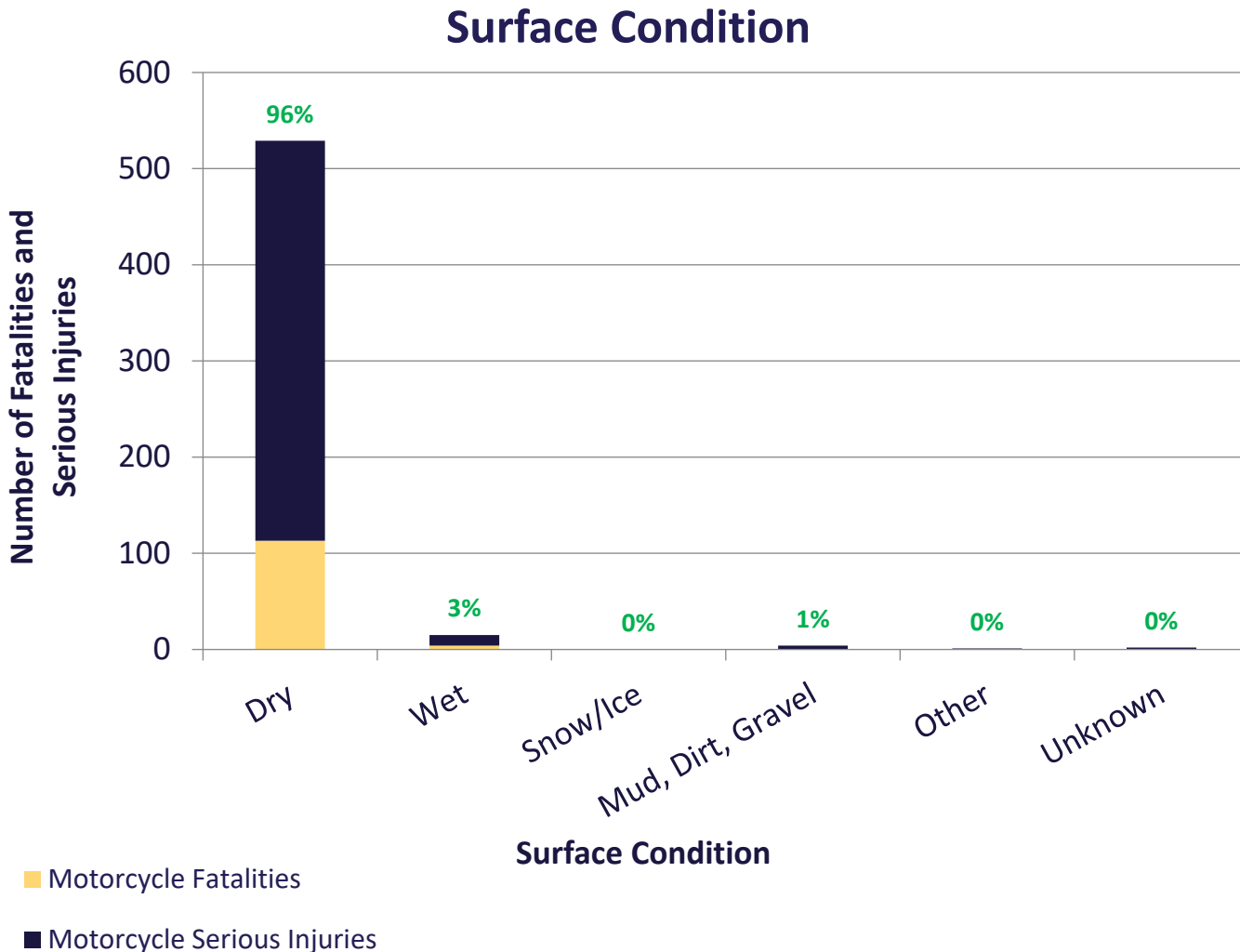
Motorcycle Fatalities & Serious Injuries



- Motorcycle fatalities and serious injuries under **dark/unlit** lighting conditions:
 - 20% of all motorcycle fatalities & serious injuries
 - 81% on rural collector or local roads
 - 43% occurred on a curve
 - 26% involved an impaired motorcycle operator
 - 50% involving a single vehicle only (the motorcycle)



Motorcycle Fatalities & Serious Injuries



- Motorcycle fatalities & serious injuries under wet road conditions:
 - 3% of all motorcycle fatalities and serious injuries
 - 50% of wet roadway motorcycle crashes occurred on urban principal arterials
 - 27% wet roadway motorcycle crashes occurred on curves
 - 47% wet roadway motorcycle crashes occurred under dark/unlit conditions
 - 40% wet roadway motorcycle crashes involved a single vehicle (the motorcycle)
 - 13% of wet roadway motorcycle crashes involved a roadway departure