

Fatal Crash Dashboard Definitions

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Main Dashboard

- **Fatalities** – Persons who sustain a fatal injury in a motor vehicle crash, within 30 days of the incident, on Maryland public roadways. The Maryland State Police Automated Crash Reporting System (ACRS) follows national standards in determining the inclusion of fatally injured persons in statistical summaries, notably the [ANSI D.16 Manual on Classification of Motor Vehicle Traffic Crashes](#), and the National Highway Traffic Safety Administration’s (NHTSA) [Model Minimum Uniform Crash Criteria](#). The Maryland State Police [Fatality Analysis Reporting System](#) (FARS) Analyst, following national standards, also participates in determining the inclusion of these incidents. The ACRS report follows the KABCO scale to determine injury severity. Fatal injury incidents are indicated as a ‘K,’ injury severity level.

For each crash definition labeled to include the word ‘related,’ the total number of persons fatally injured in a crash with a driver exhibiting a particular behavior or other crash circumstances are included. For example, ‘speed related fatalities’ include any person fatally injured in a crash where at least one driver was indicated to be driving too fast for conditions or exceeding the speed limit. All definitions below will indicate whether it is a summary of persons, incidents, or vehicles.

Notes are included below where definitions have been updated compared to previous MHSO reporting, which will account for much of the differences in the numbers.

- **Young Drivers** – Drivers who sustain a fatal injury in a motor vehicle crash who are between the ages of 15 and 20.

Note: Previous MHSO reporting included only drivers between the ages of 16 and 20. In Maryland, drivers may obtain their learner’s permit at the age of 15 and 9 months.

- **Mature Drivers** – Drivers who sustain a fatal injury in a motor vehicle crash who are 65 and older. (Also referred to as ‘older’ or ‘aging’ drivers.)
- **Pedestrians** – Persons who are fatally injured in an incident involving a motor vehicle who are indicated as a ‘pedestrian’ in the Non-Motorist Type field. ‘Pedestrian’ was previously referred to as a ‘pedestrian on foot’; however, in practice, the definition is aligned with the [ANSI D16 definition \(2.2.36, page 17\)](#), excluding any personal conveyances.
- **Motorcyclists** – Persons, including riders or drivers and passengers, who are fatally injured in a motor vehicle crash where the Vehicle Body Type is indicated to be a ‘motorcycle.’
- **Bicyclists** – Persons who are fatally injured in an incident involving a motor vehicle who are indicated as ‘bicyclist’ or ‘other pedalcyclist’ in the Non-Motorist Type field.

- **Speed Related** – Persons who are fatally injured in an incident involving a motor vehicle where at least one driver in the crash was reported to be speeding, defined by having values of either ‘exceeded speed limit’ or ‘too fast for conditions’ in the *Contributing Circumstances-Person Actions* field.

Note: Previous reporting of speed related incidents by MHSO followed an earlier definition that included these values only in the first or second contributing circumstance fields, a format that is not applicable in ACRS. This new definition includes reports where a driver had these attributes assigned with no ranking or hierarchy.

- **Aggressive Driving (Related)** – Persons who are fatally injured in an incident involving a motor vehicle where at least one driver in the crash was reported to be exhibiting at least one of the following behaviors in the *Contributing Circumstances-Person Actions* field:
 - ‘Failed to yield right of way,’
 - ‘Failed to obey stop sign,’
 - ‘Failed to obey traffic signal,’
 - ‘Failed to obey other traffic control,’
 - ‘Failed to keep right of center,’
 - ‘Failed to stop for school bus,’
 - ‘Exceed speed limit,’
 - ‘Too fast for conditions,’
 - ‘Followed too closely,’
 - ‘Improper lane change,’
 - ‘Improper passing,’
 - ‘Failure to obey traffic signs, signals, or officer,’
 - ‘Disregarded other road markings,’
 - ‘Other improper action,’ or
 - ‘Operated motor vehicle in erratic/reckless manner.’

Note: Previous reporting of aggressive driving related incidents by MHSO used a definition that included at least two of these values in the first and second contributing circumstance fields. This new definition includes reports where a driver had any indication of these attributes assigned with no ranking or hierarchy.

- **Distracted Driving (Related)** – Persons who are fatally injured in an incident involving a motor vehicle where at least one driver in the crash was reported to be exhibiting the following behaviors in the *Contributing Circumstances-Person Actions* field:
 - ‘Not paying attention,’
 - ‘Cell phone in use,’ or
 - ‘Inattentive.’

or any of the following behaviors in the *Driver Distracted By* field:

- ‘Looked but did not see,’

- 'Other electronic device,'
 - 'By other occupants,'
 - 'By moving object in vehicle,'
 - 'Talking or listening to cellular phone,'
 - 'Dialing cellular phone,'
 - 'Adjusting audio and or climate controls,'
 - 'Using other device controls integral to vehicle,'
 - 'Using device object brought into vehicle,'
 - 'Distracted by outside person object or event,'
 - 'Eating or drinking,'
 - 'Smoking related,'
 - 'Other cellular phone related,'
 - 'No driver present,'
 - 'Inattentive or lost in thought,'
 - 'Texting from a cellular phone', or
 - 'Other distraction.'
- **Impairment Suspected or Determined** (Related) – Persons who are fatally injured in an incident involving a motor vehicle where at least one driver in the crash was reported to be under the influence of alcohol and/or drugs. Impairment is determined through the *Person Condition*, *BAC (Blood Alcohol Content)*, *Substance Use*, *Alcohol Test*, *Drug Test*, *Drug Test Result*, and *Contributing Circumstances-Person Actions* fields. A driver in a crash is suspected or determined to be impaired when the report indicates:
 - *Person Condition*: 'had been drinking,' 'using drugs,' or 'influenced by medications and/or drugs and/or alcohol'; or
 - *BAC (Blood Alcohol Content)*: at or above .01; or
 - *Substance Use*: 'present,' 'illegal present,' 'medication present,' 'combined use present,' 'alcohol contributed,' 'illegal drugs contributed,' 'medication contributed,' or 'combination contributed'; or
 - *Alcohol Test*: 'positive preliminary test,' or
 - *Drug Test*: 'positive preliminary test,' or
 - *Drug Test Result*: 'Positive (P),' or
 - *Contributing Circumstances-Person Actions*: 'under the influence of drugs,' 'under the influence of alcohol,' 'under the influence of medication,' or 'under combined influence.'

Note: These summaries include drug impairment and will not match alcohol-impaired fatality data reported by NHTSA FARS. Additionally, alcohol-impaired summaries reported by NHTSA include multiple imputation, a method to impute missing Blood Alcohol Concentration (BAC) values. These summaries only include what law enforcement has included on the crash report with no additional statistical calculations.

Previous reporting of impairment related incidents by MHSO included fewer attributes than this new definition. This definition presents a wider inclusion of attributes related to impairment and does not always indicate legal impairment, only that there was some evidence of alcohol and/or substance use by the driver.

Additional Note: Not all test results for alcohol and/or drugs are available in the early stages of a crash investigation. Results may be delayed, sometimes significantly, leading to incomplete data for these types of crashes. Crash reports are typically submitted within a short period of time after the incident and are available in this dashboard for analysis shortly thereafter. Even in the case of an approved report, some information may still be pending, and historically there have been delays in obtaining information related to impairment. More complete statistical trend analysis related to impairment is usually delayed until the next calendar year.

- **Unrestrained Occupants** – Persons (vehicle occupants only), who are fatally injured in an incident involving a motor vehicle where the *Safety Equipment Used* field was indicated to be 'None.' Drivers of motorcycles or mopeds are not included.

Emphasis Areas

- **Speed Related, Aggressive Driving, Impairment, Distracted Driving, Pedestrians, Bicyclists (see above).**
- **Intersection** (Related) – Persons who are fatally injured in an incident involving a motor vehicle where the *Junction* field indicates: 'intersection' or intersection-related.'
- **Roadway Departure** (Related) – Persons who are fatally injured in an incident involving a motor vehicle where the first *Sequence of Events* field indicates at least one of the following:
 - 'Ran off road right,'
 - 'Ran off road left,'
 - 'Cross median,'
 - 'Cross centerline,'
 - 'Bridge pier or support,'
 - 'Bridge rail,'
 - 'Culvert,'
 - 'Curb,'
 - 'Ditch,'
 - 'Embankment,'
 - 'Guardrail face,'
 - 'Guardrail end,'
 - 'Concrete traffic barrier,'
 - 'Other traffic barrier,'
 - 'Tree standing,'
 - 'Utility pole support,'
 - 'Traffic sign support,'
 - 'Traffic signal support,'
 - 'Other post pole support'
 - 'Fence,'

- 'Mailbox,'
- 'Building,'
- 'Other fixed object, or
- 'Cable barrier.'

Note: This is similar to, but not the same as, previous reporting on 'Run off the Road Related' crashes, a performance measure in the Maryland Strategic Highway Safety Plan (SHSP). This definition is more in line with the [FHWA definition of 'roadway departure'](#) crashes.

- **Work Zone** (Related) – Persons who are fatally injured in an incident involving a motor vehicle where the Construction Zone field is checked 'Yes.'
- **Drivers** – Persons who are fatally injured in an incident involving a motor vehicle indicated to be Person Type 'Driver.'
- **Passengers** – Persons who are fatally injured in an incident involving a motor vehicle indicated to be Person Type 'Occupant.'
- **Non-motorists** – Persons who sustain a fatal injury in an incident involving a motor vehicle who are indicated as any Non-Motorist Type in ACRS.

Interest Areas

Note: 'Fatalities' counts any persons killed in a crash and 'Reports' counts incidents following the same criteria.

- **Aggressive Driving, Bicyclists, Distracted Driving, Impairment, Intersection Related, Pedestrians, Roadway Departure, Speed Related, Work Zone**: Same definitions as the Emphasis Area dashboard.
- **Animal Involved** – A fatal injury motor vehicle crash where the Sequence of Events field indicates 'Struck Animal.'

Note: This will not match previous reporting from MHSO, which used a definition where the Harmful Event field was indicated as 'Animal.'

- **Drowsy Driving** (Related) – A fatal injury motor vehicle crash where at least one driver in the crash was reported to have the following conditions:
 - Person Condition 'fatigued/fainted,' 'apparently asleep'; or
 - Contributing Circumstances-Person Actions 'fell asleep, fainted, etc.'
- **Emergency Vehicle Involved** – A fatal injury motor vehicle crash where the Emergency Motor Vehicle Use field indicated 'Yes' which indicates operation of any motor vehicle that is legally

authorized by a government authority to respond to emergencies with or without the use of emergency warning equipment, such as police vehicle, fire truck, or ambulance while actually engaged in such response. 'Yes' is selected only if the motor vehicle involved in the crash was on an emergency response, regardless of whether the emergency warning equipment was in use.

Note: This will not match previous MHSO reporting where the *Vehicle Body Type* field indicated: 'Ambulance-Emergency,' 'Ambulance-Non-Emergency,' 'Fire Vehicle-Emergency,' 'Fire Vehicle-Non-Emergency,' 'Police Vehicle-Emergency,' or 'Police Vehicle-Non-Emergency.'

- **Highway-Rail Crossing (Related)** – A fatal injury motor vehicle crash where the first *Sequence of Events* indicates 'Struck Railway Vehicle.'

Note: This will not match previous MHSO reporting (*Train Involved*) where the *Most Harmful Event* field had an indication of 'Railway Train.'

- **Hit and Run** – A fatal injury motor vehicle crash where the law enforcement indicated 'Yes' in the *Left Scene of Crash* field for any vehicle involved in the *Vehicle Information* section.
- **Motorcyclists** – A fatal injury motor vehicle crash which includes both drivers and passengers where the *Vehicle Body Type* is indicated to be a 'motorcycle.'
- **School Bus Involved** – A fatal injury motor vehicle crash where the *Vehicle Body Type* is 'School Bus' or the *School Bus Involvement* field has an indication of 'Directly Involved' or 'Indirectly Involved.' This field indicates whether a school bus or motor vehicle functioning as a school bus for a school-related purpose is involved in the crash. The school bus, with or without a passenger on board, must be directly involved as a contact motor vehicle or indirectly involved as a non-contact motor vehicle (e.g., children struck when boarding or alighting from the school bus, two vehicles colliding as the result of the stopped school bus).

Note: This will not match previous MHSO reporting where the *Vehicle Body Type* field indicated 'School Bus' only.

Year to Date

- **Drivers, Passengers, Non-Motorists:** Same definitions as the Emphasis Area dashboard.
- **Route Types** – A fatal injury motor vehicle crash where the location is defined by the MDOT-SHA roadway inventory as:
 - **Local Road:** Owned and maintained by a local agency (non-state). Includes a combination of Route Types CO (County) and MU (Municipality).

- **State Road:** Owned and maintained by MDOT (including MDTA). Includes a combination of Route Types IS (Interstate Highway), US (United States Highway), and MD (Maryland Roadway).
- **Offroad:** A crash that originated off the roadway as indicated by law enforcement selecting 'Offroad' in the location section of ACRS. Examples include parking lots, driveways, private access roads, and any location not included in the [Highway Location Reference](#) (MDOT-SHA roadway inventory).

Occupants

- **Driver Contributing Factor** – A fatal injury motor vehicle crash where at least one driver had the following attributes from the *Contributing Circumstances-Person Actions* field indicated as:
 - Traffic Law Violations: Includes a combination of:
 - 'Did not comply with license restrictions,'
 - 'Failure to drive within a single lane,'
 - 'Improper turn on red,'
 - 'Failed to yield right of way,'
 - 'Failed to obey stop sign,'
 - 'Failed to obey traffic signal,'
 - 'Failed to obey other traffic control,'
 - 'Failed to keep right of center,'
 - 'Failed to stop for school bus,'
 - 'Wrong way on a one-way road,'
 - 'Exceeded the speed limit,'
 - 'Stopping in lane/roadway,'
 - 'Too fast for conditions,'
 - 'Followed too closely,'
 - 'Wrong side of the road,'
 - 'Failure to obey traffic signs, signals, or officer,' and
 - 'Disregarded other road markings.'
 - Inattentive
 - Failed to full time and attention
 - Ran off the road
 - Under the Influence: Includes a combination of:
 - 'Under the influence of drugs,'
 - 'Under the influence of alcohol,'
 - 'Under the influence of medication,' and
 - 'Under combined influence.'
 - Improper Action: Includes a combination of:

- ‘Improper turn,’
 - ‘Improper lane change,’
 - ‘Improper backing,’
 - ‘Improper passing,’
 - ‘Improper signal,’
 - ‘Improper parking,’ and
 - ‘Other improper action.’
 - Erratic operation of vehicle
 - Evasive Maneuver: Includes a combination of:
 - ‘Over-correcting/steering,’ and
 - ‘Swerved or avoided vehicle or object in the road.’
 - Fell asleep/fainted
 - Physical/mental difficulty
 - Using cell phone: Operator using cellular phone
 - Interference by passenger
- **Occupant Ages** – Persons (drivers and passengers) who sustain a fatal injury in a motor vehicle where age is determined by a calculation of the difference between the values in the *Crash Report Date* and *Date of Birth* fields.
 - **Occupant Sex** – Persons (drivers and passengers) who sustain a fatal injury in a motor vehicle where sex is determined by the *Sex* field, derived usually from a driver’s license or government-issued ID. Unknown may be ‘Other’ as indicated on the Maryland driver’s license.
 - **Safety Equipment Used** – Persons (drivers and passengers) who sustain a fatal injury in a motor vehicle where the *Safety Equipment Used* field is indicated as:
 - None
 - Belts: Includes a combination of:
 - ‘Lap belt only,’
 - ‘Shoulder belt only,’ and
 - ‘Shoulder/lap belts.’
 - Child Restraint: Includes a combination of:
 - ‘Child restraint system forward facing,’
 - ‘Child restraint system rear facing,’
 - ‘Booster seat,’ and
 - ‘Child restraint type unknown.’
 - Helmet (motor vehicle occupants only; does not include bicyclists or other non-motorists): Includes a combination of:
 - ‘MC helmet,’ and
 - ‘MC helmet and eye protection.’
 - Eye protection
 - Reflective clothing

- Lighting

Non-Motorists

- **Non-Motorist Type** – Persons who sustain a fatal injury in an incident involving a motor vehicle who are defined by the *Non-Motorist Type* field as:
 - Pedestrian: Pedestrian.
 - Bicyclist and Other Pedalcyclists: Includes a combination of Bicyclist and Other Pedalcyclist.
 - Other Non-Motorist: Includes a combination of:
 - ‘Rider of animal,’
 - ‘In animal-drawn vehicle,’
 - ‘Machine operator/rider,’
 - ‘Other conveyance,’ and
 - ‘Other.’
- **Routes Crashes Occurred On** – (See above.)
- **Actions at Time of Crash** – Non-motorists who sustain a fatal injury in an incident with a motor vehicle where the actions/circumstances of the Non-Motorist that may have contributed to the crash are selected from any data elements in the *Actions at Time of Crash* field based on the judgment of the law enforcement investigator.
- **Lighting Conditions** – Non-motorists who sustain a fatal injury in an incident with a motor vehicle where the *Light* condition field indicates the type/level of light that existed at the time of the motor vehicle crash.
- **Locations at Time of Crash** – Non-motorists who sustain a fatal injury in an incident with a motor vehicle where the location of the non-motorist is indicated in the *Non-Motorist Location* field.
- **Non-Motorist Movement** – Non-motorists who sustain a fatal injury in an incident with a motor vehicle where the action of the non-motorist immediately prior to the crash is indicated in the *Movement* field.
- **Age/Sex** – See above.

Vehicles

This dashboard summarizes each vehicle wherein at least one person was fatally injured, i.e., it is a count of vehicles (in contrast to persons or incidents), excepting *Collision Types*, which is a count of incidents/reports where a fatal injury occurred. Includes only occupant fatalities (i.e., excludes non-motorists).

- **Vehicle Body Type** – Number of vehicles wherein at least one person was fatally injured and where the *Vehicle Body Type* field indicates:
 - Passenger Vehicle: Includes a combination of...
 - ‘Passenger car,’
 - ‘Station wagon,’
 - ‘Limousine,’
 - ‘Recreational vehicle,’
 - ‘Pickup truck,’
 - ‘Van,’
 - ‘Other light truck 10,000 lbs. or less,’ and
 - ‘Sport utility vehicle.’
 - Heavy Vehicle: Includes a combination of:
 - ‘Cargo van/Light truck 2 axles (more than 10,000 lbs.),’
 - ‘Medium/heavy trucks 3 axles (more than 10,000 lbs.),’
 - ‘Truck tractor,’
 - ‘Transit bus,’
 - ‘Cross country bus,’ and
 - ‘Other bus.’
 - Motorcycle/Moped: Includes a combination of Motorcycle and Moped vehicle body types.
 - Emergency Vehicle: Includes a combination of:
 - ‘Ambulance/Emergency,’
 - ‘Ambulance/Non-Emergency,’
 - ‘Fire Vehicle/Emergency,’
 - ‘Fire Vehicle/Non-Emergency,’
 - ‘Ambulance/Emergency,’ and
 - ‘Ambulance/Non-Emergency.’

Note: This is not the same definition as ‘Emergency Vehicle Involved’ in the Interest Area dashboard.

- Autocycle
- Other/unknown: Includes a combination of:
 - ‘Farm vehicle,’
 - ‘Low speed vehicle,’
 - ‘All-terrain vehicle (ATV),’
 - ‘Snowmobile,’
 - ‘Other,’ and
 - ‘Unknown.’

- **Collision Types** – Number of incidents where at least one person was fatally injured and where the *Collision Type* field is indicated with the code that best describes the vehicle-to-vehicle movement directions. The movement direction of a vehicle is usually, but not necessarily, the same as the orientation direction of the vehicle.
 - Single Vehicle
 - Head On: Includes a combination of:
 - ‘Head on,’
 - ‘Head on left turn,’ and
 - ‘Angle meets head on.’
 - Sideswipe: Includes a combination of:
 - ‘Opposite Direction Sideswipe,’
 - ‘Same direction sideswipe,’
 - ‘Same direction right turn,’
 - ‘Same direction left turn,’
 - ‘Same direction both left turn,’ and
 - ‘Opposite direction both left turn.’
 - Angle: Includes a combination of:
 - ‘Straight movement angle,’
 - ‘Angle meets right turn,’ and
 - ‘Angle meets left turn.’
 - Rear end: Includes a combination of:
 - ‘Same direction rear end,’
 - ‘Same direction right turn,’ and
 - ‘Same direction left turn.’
 - Other unknown: Includes a combination of:
 - ‘Not applicable,’
 - ‘Other,’ and
 - ‘Unknown.’

- **Vehicle Circumstances** – Number of vehicles wherein at least one person was fatally injured and where the *Contributing Circumstances – Vehicle* field has indications of pre-existing motor vehicle defects or maintenance conditions that may have contributed to the crash.

- **Most Harmful Event** – Number of vehicles wherein at least one person was fatally injured and where the *Most Harmful Event* field has an indication for the event that resulted in the most severe injury.

- **Main Impact** – Number of vehicles wherein at least one person was fatally injured and where the *Areas of Impact/Areas Damaged* field in the *Main Impact* section has indications of the impact point that caused the most damage to the vehicle. In most cases, the *First Impact* and the *Main Impact* points will be the same. However, if a motor vehicle strikes another motor vehicle in the rear, causing superficial damage to the striking vehicle, but then turns sideways and strikes a tree causing significant

damage to the driver's door of that vehicle, the front of the striking vehicle is the *First Impact* point and the driver's door would be the *Main Impact* point.

- **Vehicle Movement** – Number of vehicles wherein at least one person was fatally injured and where the *Vehicle Movement* field has indications of the controlled maneuver for this motor vehicle prior to the beginning of the sequence of events.

Roadway

This dashboard summarizes each incident/report where a fatal injury occurred.

- **Routes Crashes Occurred On** – (See above.)
- **Weather at Time of Crash** – Number of incidents where at least one person was fatally injured and where the *Weather* field has indications of the prevailing atmospheric conditions that existed at the time of the crash.
- **Road Surface** – Number of incidents where at least one person was fatally injured and where the *Surface Condition* field has indications of the roadway surface condition at the time and place of the crash.
- **Road Condition** – Number of incidents where at least one person was fatally injured and where the *Road Condition* field has indications of the apparent condition of the road which may have contributed to the crash.
- **Road Contributing Factors** – Number of incidents where at least one person was fatally injured and where the *Contributing Circumstances – Road* field has indications of the apparent condition of the road which may have contributed to the crash.
- **Speed Limits** – Number of incidents where at least one person was fatally injured and where the *Speed Limit* field indicates the posted/statutory speed limit for the motor vehicle at the time of the crash. The authorization may be indicated by the posted speed limit, blinking sign at construction zones, etc.

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