

Safety Performance Measures Fact Sheet

Safety Performance Measures

Number of Fatalities: The total number of persons suffering fatal injuries in a motor vehicle crash during a calendar year.

Rate of Fatalities: The ratio of total number of fatalities to the number of vehicle miles travelled (VMT, in 100 million VMT) in a calendar year.

Number of Serious Injuries: The total number of persons suffering at least one serious injury in a motor vehicle crash during a calendar year.

Rate of Serious Injuries: The ratio of total number of serious injuries to the number of VMT (in 100 million VMT) in a calendar year.

Number of Non-motorized Fatalities and Non-motorized Serious Injuries: The combined total number of non-motorized fatalities and non-motorized serious injuries involving a motor vehicle during a calendar year.

Five Performance Measures	
✓	Number of Fatalities
✓	Rate of Fatalities per 100 million VMT
✓	Number of Serious Injuries
✓	Rate of Serious Injuries per 100 million VMT
✓	Number of Non-motorized Fatalities and Non-motorized Serious Injuries

Data Sources

Fatality Data: Fatality Analysis Reporting System (FARS). Final FARS data is to be used if it is available, otherwise FARS Annual Report File (ARF) data may be used, which is generally available one year before Final FARS data.

Volume Data: State VMT data is derived from the Highway Performance Monitoring System (HPMS). Metropolitan Planning Organization (MPO) VMT, if applicable, is estimated by the MPO.

Serious Injury Data: State motor vehicle crash database. Agencies must use the definition for "Suspected Serious Injury (A)" from the MMUCC, 4th edition by April 14, 2019. Prior to April 14, 2019 agencies may use injuries classified as "A" on the KABCO scale through use of NHTSA conversion tables. However, agencies are encouraged to begin using the MMUCC, 4th edition definition and attributes at the beginning of 2019 for a complete and consistent data file for the calendar year.

Number of Non-motorized Fatalities and Non-motorized Serious Injuries: FARS and State motor vehicle crash database. The number of non-motorized fatalities is the total number of fatalities with the FARS person attribute codes: (5) Pedestrian, (6) Bicyclist, (7) Other Cyclist, and (8) Person on Personal Conveyance. The number of non-motorized serious injuries is the total number of serious injuries where the injured person is, or is equivalent to, a pedestrian (2.2.36) or a pedalcyclist (2.2.39) as defined in ANSI D16.1-2007.

What You Need to Know About Establishing Targets

States:

- States will first establish statewide targets in their August 31, 2017 HSIP Annual Report for calendar year 2018, and annually thereafter.
- Targets are applicable to all public roads regardless of functional classification or ownership.
- For common performance measures (number of fatalities, rate of fatalities and number of serious injuries), targets must be identical to the targets established for the NHTSA Highway Safety Grants program in the Highway Safety Plan.
- States also have the option to establish any number of urbanized area targets and one non-urbanized area target for any or all of the measures. If a State chooses to do so, it is required to report the urbanized area boundaries used and evaluate and report progress for each target. Urbanized and non-urbanized area targets are not included in the significant progress determination.

Coordination and Collaboration:

- Performance management connects the Highway Safety Improvement Program (HSIP) and Highway Safety Plan (HSP) to the Strategic Highway Safety Plan (SHSP) to promote a coordinated relationship for common performance measures, resulting in comprehensive transportation and safety planning.
- The State DOT and MPOs in the State must coordinate when establishing targets, to the maximum extent practicable.
- A wide range of stakeholders should work together to establish targets. This includes, the State DOT, State Highway Safety Office, MPOs, FHWA Division Office, NHTSA Regional Office, Law Enforcement Agencies and EMS (Include all 4 E's of Highway Safety)
- Set targets that are data-driven and realistic, maintain momentum and remain focused.



What You Need to Know About Establishing Targets (continued)

MPOs:

- MPOs must establish targets specific to the MPO planning area for the same five safety performance measures for all public roads in the MPO planning area within 180 days after the State establishes each target. The MPO can choose between:
 - agreeing to support the State target; **OR**
 - establishing specific numeric targets for a safety performance measure (number or rate);
- MPOs may select either option for each individual safety performance measure.
- MPOs that choose to establish a rate target must report the VMT estimate used to establish that target and the methodology to develop the VMT estimate. MPOs should make maximum use of data prepared for HPMS when preparing the rate-based target denominator. If an MPO develops data specifically for the denominator, it should use methods to compute VMT that are consistent with those used for other Federal reporting purposes.
- MPO targets are reported to the State DOT, which must be able to provide them to FHWA, upon request. MPO targets are not included in the assessment of whether a State met or made significant progress toward meeting its targets.

Performance Measure	State Target		MPO Target For Each Performance Measure, Support State Target or Establish MPO-Specific Target
	Target Reported in HSIP Annual Report for FHWA	Target Reported in Highway Safety Plan for NHTSA	
Number of Fatalities	✓	= ✓	✓
Rate of Fatalities	✓	= ✓	✓
Number of Serious Injuries	✓	= ✓	✓
Rate of Serious Injuries	✓	Not required	✓
Number of Non-motorized Fatalities and Non-motorized Serious Injuries	✓	Not required	✓

Example Target Calculations

5-Year Rolling Average: Each target is based on a 5-year rolling average, which is the average of 5 individual, consecutive points of data. The 5-year rolling average provides a better understanding of the overall data over time without eliminating years with significant increases or decreases; and provides a mechanism for accounting for regression to the mean. If a particularly high or low number of fatalities and/or serious injuries occur in one year, a return to a level consistent with the average in the previous year may occur.

The **number targets** are calculated by adding the number for the measure for each of the most recent 5 consecutive years ending in the year for which the targets are established, dividing by 5, and rounding to the **tenth** decimal place. The **rate targets** are calculated similarly yet rounded to the **thousandth** decimal place. This more accurately reveals the change from one 5-year average to another that might otherwise be obscured if the number was truncated.

Example: Number of Fatalities

Year	2011	2012	2013	2014	2015
Number of Fatalities	471	468	493	468	462*

*From FARS Annual Report File, if Final FARS is not available

To determine the target for number of fatalities:

- Add the number of fatalities for the most recent 5 consecutive calendar years ending in the year for which the targets are established: $471 + 468 + 493 + 468 + 462 = 2,362$
- Divide by five and round to the nearest tenth decimal place: $2,362 / 5 = 472.4$

Example: Rate of Fatalities

Year	2011	2012	2013	2014	2015
Number of Fatalities	471	468	493	468	462*
100 VMT	454	490	466	492	495
Rate of Fatalities	1.04	0.96	1.06	0.95	0.93

*From FARS Annual Report File, if Final FARS is not available

To determine the target for rate of fatalities:

- Add the rate of fatalities for the most recent 5 consecutive calendar years ending in the year for which the targets are established: $1.04 + 0.96 + 1.06 + 0.95 + 0.93 = 4.94$
- Divide by five and round to the nearest thousandth decimal place: $4.94 / 5 = 0.988$

