

Let's Talk Performance Webinar FAQs

Safety Performance Management Measures

1. What is Transportation Performance Management and how is it expected to shape my State's processes and practices?

The Moving Ahead for Progress in the 21st Century Act (MAP-21) transformed the policy and programmatic framework for surface transportation investments. Transportation performance management will transform Federal highway programs and provide a means to more efficient investment of Federal transportation funds by focusing on national transportation goals, increasing the accountability and transparency of Federal highway programs, and improving transportation investment decision-making through performance-based planning and programming.

FHWA defines Transportation Performance Management as a strategic approach using system information to make investment and policy decisions to achieve national performance goals. It is systematically applied and a regular ongoing process; provides key information to help decision makers, allowing them to understand the consequences of investment decisions across transportation assets or modes; improves communications between decision makers, stakeholders, and the traveling public; and ensures targets and measures are developed in cooperative partnerships and based on data and objective information.

2. What are the major provisions of the Safety Performance Management Measures Final Rule (23 CFR 490)?

Safety Performance Management is part of the overall Transportation Performance Management program. The Safety Performance Measures (Safety PM) Final Rule supports the Highway Safety Improvement Program (HSIP) as it establishes safety performance measure requirements for the purpose of carrying out the HSIP and to assess fatalities and serious injuries on all public roads.

The Safety PM Final Rule establishes five performance measures as the five-year rolling averages for:

1. Number of Fatalities;
2. Rate of Fatalities per 100 Million Vehicle Miles Traveled (VMT);
3. Number of Serious Injuries;
4. Rate of Serious Injuries per 100 Million VMT; and
5. Number of Non-motorized Fatalities and Non-motorized Serious Injuries.

Three performance measures must be identical in the HSIP and the National Highway Traffic Safety Administration's Highway Safety Plan (HSP) [§490.209(a)(1)]. The common measures are the number of fatalities, the rate of fatalities per VMT, and the number of serious injuries.

The rule also establishes the process for State Departments of Transportation (DOTs) and Metropolitan Planning Organizations (MPOs) to use to establish and report on their annual safety targets. MPOs must establish targets within 180 days after the State DOT's targets are established and reported to FHWA by either agreeing to plan and program projects so



that they contribute toward the accomplishment of the State DOT target or committing to a quantifiable target for the metropolitan planning area. State DOTs and MPOs must coordinate on targets to the maximum extent practicable [§490.209(d)(1)].

Additionally, the rule establishes a process for FHWA to assess whether State DOTs have met or made significant progress toward meeting safety performance targets. A State DOT is determined to have met or made significant progress toward meeting its targets when at least four out of five safety performance targets are met or the outcome is better than baseline performance. If a State DOT has not met or made significant progress toward meeting its safety performance targets, for the next fiscal year the State DOT must use obligation authority equal to the HSIP apportionment for the fiscal year prior to the year for which the targets were not met or significant progress was not made. The State DOT will also be required to submit an HSIP Implementation Plan to FHWA that would describe the specific actions or components a State DOT would need to take to meet its targets [§490.211(d)].

Lastly, the rule establishes a single national definition for serious injuries to ensure a consistent and comparable system for reporting. The FHWA's Safety PM Final Rule (23 CFR 490) and NHTSA's Uniform Procedures for State Highway Safety Grants Program Interim Final Rule (23 CFR 1300) require that serious injuries be reported per the Model Minimum Uniform Crash Criteria (MMUCC) 4th Edition attribute for "Suspected Serious Injury (A)" as defined in the "Injury Status" element. Although compliance with the new serious injury definition is required by April 15, 2019, FHWA and NHTSA are encouraging adoption of the new definition on or before January 1, 2019, to ensure a consistent data set for the entire calendar year.

More information on the major provisions of the Safety Performance Management rule is available at http://safety.fhwa.dot.gov/hsip/spm/measures_final_rules.cfm

3. What is evidence-based target-setting for safety performance?

The basic concept for evidence-based safety target-setting is to link investments and policy decisions to performance. Typically, this is done by reviewing the achievements resulting from previous investments and applying that knowledge to estimate the expected improvement in safety outcomes that are likely to be achieved given expected levels of investment in the future. As agencies begin setting evidence-based targets, the approaches outlined below should be considered. The steps in target-setting are relatively simple, although implementation may be more complex:

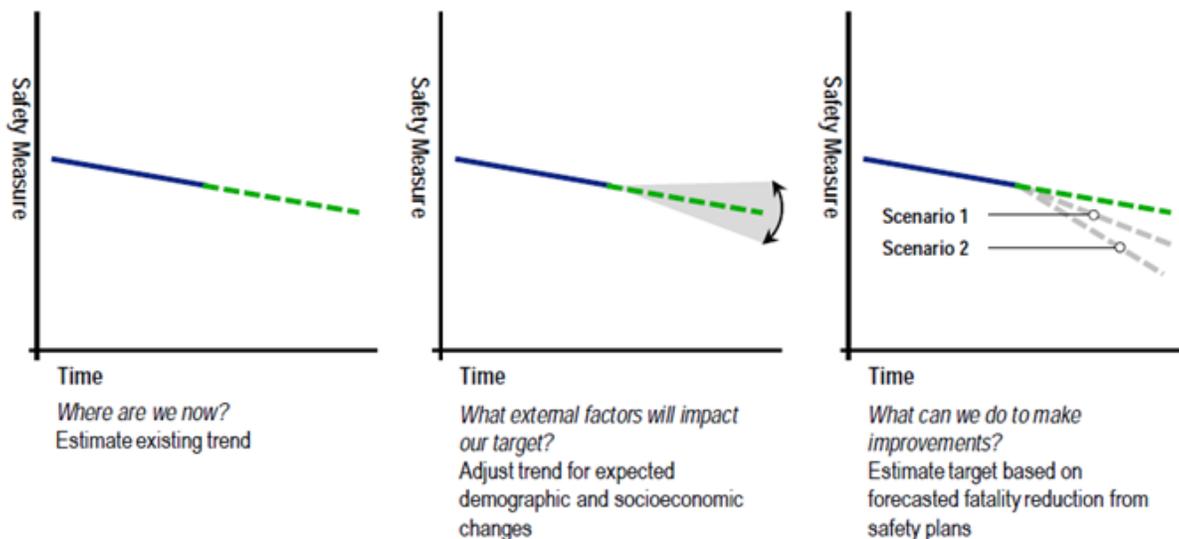
- Use trend analysis;
- Consider external factors (e.g., population, demographic distribution, etc.);
- Forecast fatality reductions based on planned implementation of proven countermeasures:
 - Identify potential for application of countermeasures (through SHSP, HSP, HSIP, or other planning processes);
 - Identify data on expected countermeasure impact;



- Develop constrained list of countermeasures based on expected effectiveness and available resources (e.g., expected lives saved per dollar of investment, etc.); and
- Estimate system, region, or State benefits based on the aggregation of expected countermeasures, discounting for potential overlap among emphasis areas.

Once the trend line forecast is developed, consideration of the forecasted fatality reductions and external factors will help quantify how aggressive the target can be. The below figure shows how these steps can be used to develop an evidence-based fatality target and what questions are being answered at each phase:

Target Setting Steps



Source: Cambridge Systematics, Inc.

A Safety Target Setting report is available at <http://safety.fhwa.dot.gov/hsip/spm/docs/safetyfinalrpt.pdf>

4. What data should be consulted as States begin the safety target-setting process?

Developing evidence-based safety targets requires multiple data sources and analytical methods. In addition to forecasting trends, States need to account for external factors (i.e., population); determine countermeasure effectiveness and prioritization; evaluate resource allocation; and define emphasis area overlaps. States will also want to evaluate targets in terms of ambition and achievability.



The FHWA does not identify a specific methodology to use when establishing safety targets. States have the flexibility to establish safety targets using the methodology and data sets they determine is most appropriate. To assist with establishing safety targets, States should consult multiple data sources. For example, States may use State data from their motor vehicle crash databases, trauma registry, the Fatal Analysis and Reporting System (FARS), the Highway Performance Monitoring System (HPMS), and others. As States consider external factors that might influence their targets, States should review additional information such as Census data, local travel demand models for VMT, and police citation and adjudication data. Reviewing countermeasure effectiveness information is important to determine how improvements may influence the target-setting decision. The FHWA's Crash Modification Clearinghouse, the Highway Safety Manual, and NHTSA's Countermeasures that Work document are examples of available resources that can be used.

Regardless of the data-driven methodology States use in establishing safety targets, the annual targets are established using a five-year rolling average. For example, to set a target for CY 2018 States will use five-year average data from years 2014-2018. The five consecutive five-year averages to review during the target-setting process would be 2008-2012, 2009-2013, 2010-2014, 2011-2015 and 2012-2016. These five different values can be used to create a trend line. The trend line can then be extrapolated and used to forecast future five-year averages including 2013-2017 and 2014-2018 for determining a State's CY 2018 targets.

5. How should States handle setting a target when trends are demonstrating increasing fatalities?

In 2015, the nation experienced a rise in fatalities. Many States have experienced the same increasing shift, and it is important to begin the process of identifying factors that might have led to increases. Data analysis can assist in identifying factors behind the increases. Statisticians and epidemiologists use a variety of analysis methods to draw conclusions and predict future fatalities. Annual counts, trend data, and data mining methods are examples practitioners use to gain perspective and draw conclusions.

The Safety PM regulation allows for a State to set any numerical target the State deems appropriate, even if a State decides to set an increased target. Both FHWA and NHTSA agree that safety targets should be driven by data. The safety performance measures are defined as five-year rolling averages to help provide for a better understanding of the overall fatality and serious injury data over time. Especially when there are years with significant increases or decreases, a five-year rolling average can help provide a smoothing effect. More information on the safety target-setting framework is available at <http://safety.fhwa.dot.gov/hsip/spm/docs/safetyfinalrpt.pdf>

Transportation performance management focuses agencies on desired outcomes, outlines how to attain results, clarifies necessary resources, and evaluates the results attained. It allows for clear and open discussions about desired outcomes and the direction that an agency should take, heightening the role of data and focusing attention on performance outcomes. Particularly in an era of increasing fatalities, providing clear documentation about what safety strategies were implemented and the performance results gives the public realistic expectations and a greater understanding of how safety



issues are being addressed. Establishing safety targets calls attention to highway safety challenges and directs attention to finding and implementing solutions.

When setting targets, a State should consider that if it does not meet an increasing target, it is likely that the actual outcome for that target will not be better than baseline performance. For example, if fatality trends indicate an increase in the number of fatalities, a State may set a target higher than the baseline year performance. If the actual outcome (2014-2018) is higher than the CY 2018 fatality target (2014-2018), a State would not meet its target and the actual outcome would not be better than baseline performance. For FHWA to determine that a State has met, or made significant progress toward meeting its safety targets, the State must either meet, or the actual outcome must be better than, baseline performance for four out of the five safety targets [§490.211(c)(2)].

6. How will FHWA determine progress toward meeting safety targets?

As required by 23 U.S.C. 148(i), FHWA will determine whether a State has met or made significant progress toward meeting its targets. This determination will be made when the outcome data for that calendar year are available – at the end of the calendar year following the target year. A State DOT is determined to have met or made significant progress toward meeting its targets when the targets for at least four of the five performance measures are either met or the outcome for a safety performance measure is better than baseline. An example is provided below.

| Performance Measures | Five Year Rolling Averages | | | Target Achieved? | Better than baseline? | Met or Made Significant Progress |
|---|--------------------------------|------------------|------------------------------|------------------|-----------------------|----------------------------------|
| | 2012 2016 Baseline Performance | 2014 2018 Target | 2014 2018 Actual Performance | | | |
| Number of Fatalities | 474.0 | 465.0 | 472.4 | No | Yes | Yes |
| Fatality Rate | 0.988 | 0.980 | 0.990 | No | No | |
| Number of Serious Injuries | 2,703.2 | 2,560.0 | 2,578.4 | No | Yes | |
| Serious Injury Rate | 4.288 | 4.126 | 4.214 | No | Yes | |
| Number of Non-motorized Fatalities and Serious Injuries | 113.2 | 108.0 | 107.6 | Yes | N/A | |

- The number of fatalities target was not met, but the actual performance in 2014-2018 (472.4) was better than the 2012-2016 baseline (474.0).
- The fatality rate target was not met. The actual performance (0.990) was worse than the baseline (0.988).
- The number of serious injuries target was not met, but the actual performance (2,578.4) was better than the baseline (2,703.2).



- The rate of serious injuries target was not met, but actual performance (4.214) was better than the baseline (4.288).
- The number of non-motorized fatalities and non-motorized serious injuries target was met.

Because four of the five targets were either met or were better than baseline, FHWA would determine that the State met or made significant progress toward meeting its safety performance targets.

The FHWA will not directly assess an MPO's progress toward meeting its targets in the same manner as State targets are assessed. Instead, FHWA will review MPO safety target performance as part of ongoing transportation planning process reviews, including the Transportation Management Area certification review and the Federal Planning Finding associated with the approval of the Statewide Transportation Improvement Program. If an MPO does not meet or achieve its established targets, the MPO is encouraged to develop a statement that describes how the MPO will work with the State and other partners to meet targets during the next performance period.

7. Who needs to be involved in the safety target-setting process?

Multiple stakeholders should be involved in the target-setting process. Because States must set identical targets for three safety performance measures common to both the HSIP and the HSP, the target-setting process has moved to one that should be co-led by the State DOT and the SHSO. MPOs must be involved as well so that MPO targets are coordinated with State DOT targets. The target-setting process should involve a wide range of agencies and individuals to achieve consensus in setting targets and define a shared purpose on the direction of safety programs.

8. What resources are available to assist me with the Safety Performance Management Measures Final Rule?

The FHWA offers a variety of materials and resources on the safety performance measures website <http://safety.fhwa.dot.gov/hsip/spm/> to help support your efforts. Included on the website is a compendium of resources specific to safety performance measures, target-setting, MPOs, meeting and making significant progress toward meeting targets, and other topics. In addition, under the "supplemental materials" heading of the webpage, you will find a list of trainings, opportunities, tools, and capacity-building resources as you coordinate and collaborate with stakeholders to establish CY 2018 targets http://safety.fhwa.dot.gov/hsip/spm/docs/resources_handout.pdf

