
State of Maryland Traffic Records Strategic Plan 2026-2030

2/12/2026



ZERO DEATHS
MARYLAND
— Highway Safety Office —

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Executive Summary

I am pleased to present Maryland's Traffic Records Strategic Plan (TRSP) for 2026-2030. This plan outlines the upcoming strategies, activities, and priority areas for Maryland's Traffic Records Coordinating Committee (TRCC), which is administered by the Maryland Highway Safety Office (MHSO) within Maryland Department of Transportation's Motor Vehicle Administration (MDOT MVA), under the guidance of the MVA Administrator, Ms. Christine Nizer, who also serves as Maryland's Governor's Representative for Highway Safety and the Chair of the TRCC Executive Council.

Maryland employs a two-tiered Traffic Records Coordinating Committee (TRCC), with Technical and Executive councils comprised of data owners, managers, and users who oversee and are interested in these datasets. MHSO's Traffic Records Program Manager coordinates updates to Maryland's TRSP and leads the implementation of recommendations provided in the most recent National Highway Safety Administration (NHTSA) Traffic Records Program Assessment (2024).

High-quality State traffic records data are critical to effective safety programming, operational management, and strategic planning. An ideal traffic records system includes collecting, managing, and analyzing traffic safety data. It comprises six core data systems—crash, driver, vehicle, roadway, citation and adjudication, and injury surveillance—as well as the organizations and people responsible for them. Maryland strives toward a beneficial traffic records system that is timely, uniform, available, complete, accurate, and integrated. This Plan represents Maryland's vision of having the most effective traffic records system over the next five years. The TRSP represents a coordinated and cooperative approach with local, regional, statewide, and federal partners to maintain a traffic records system that supports the data-driven, science-based decision-making necessary to identify problems; develop, deploy, and evaluate countermeasures; and efficiently allocate resources.

The 2026-2030 TRSP represents a consensus approach to prioritizing improvements in Maryland's traffic records system that supports the vision of zero deaths on our roadways. Maryland's TRSP is closely aligned with the Strategic Highway Safety Plan (SHSP), also renewed for 2026-2030. The SHSP is a data-driven plan to administer safety initiatives and countermeasures to reduce and eliminate unnecessary road injuries. Efforts by the data owners and users are integral to supporting the strategies and outcomes of the SHSP.

Maryland's network of highway safety partners is committed to raising awareness of traffic safety issues and building comprehensive and practical traffic records to support safety programs. I look forward to implementing the projects and strategies outlined in this TRSP and continuing our work until there are zero deaths on Maryland roadways.

Sincerely,

Timothy J. Kerns, PhD
Director, Maryland Highway Safety Office

Introduction

Maryland is committed to making every trip safer, and the 2026–2030 Traffic Records Strategic Plan (TRSP) is the roadmap to keeping that promise. This plan brings together agencies, data experts, and safety advocates to improve how the State collects, shares, and acts on traffic safety information. The better the data, the smarter the safety solutions—and the closer the State gets to eliminating fatalities and reducing road crashes, injuries, and risks.

Over the next five years, this plan will focus on strengthening the systems that tell the story of what’s happening on Maryland’s roads. From crash reports to injury records, the State is improving how it connects the dots. That means cleaner data, faster delivery, and more substantial support for everything from enforcement to emergency response to infrastructure design.

Road safety isn’t a fixed destination—it’s a journey of continuous improvement. With this plan, Maryland is making steady, measurable progress toward building smarter, more intelligent, safer, and more connected systems for everyone who uses our roads.

Traffic Records Coordinating Committee Overview

Accurate, high-quality data are essential to advancing road safety in Maryland, and the Traffic Records Coordinating Committee (TRCC) plays a central leadership role in that effort. This group brings together experts from across agencies and disciplines to ensure that the traffic safety data are accurate, timely, and ready to inform real solutions.

The TRCC comprises data owners, system managers, and users from all corners of Maryland’s traffic records landscape—crash reports, roadway design, driver history, vehicle registration, traffic citations and adjudication, and injury surveillance. By focusing on six key benchmarks—timeliness, completeness, accuracy, uniformity, integration, and availability—the TRCC keeps everyone on the same page and works toward better, more reliable data.

For more than 20 years, the TRCC has helped turn data into action. From supporting highway safety plans to improving emergency response and crash prevention, this group ensures that Maryland’s traffic records data aren’t just stored—they’re working, evolving, and helping make roads safer.

Vision

Safer Maryland roads with fewer crashes, injuries, and no lives lost—driven by better data and stronger coordination across all traffic safety partners.

Mission

To improve the quality, speed, and usefulness of Maryland’s traffic safety data so agencies and partners can identify risks, act, make informed decisions, and evaluate efforts that lead to safer roads statewide.

Purpose

The TRCC is central in guiding Maryland’s traffic safety data efforts. It brings agencies together to keep the system coordinated, responsive, and forward-looking. Specifically, the TRCC:

- Oversees developing and regularly updating a plan that serves public and private traffic safety needs.
- Identifies technologies and innovations that can improve how Maryland collects and uses safety data.
- Supports the coordination and implementation of system improvements across agencies and partners.
- Provides a consistent forum for sharing safety data insights and aligning priorities across the traffic safety community.

Duties

Maryland's TRCC coordinates data improvement efforts across the State's traffic records system components (crash, roadway, citation/adjudication, driver, vehicle, and injury surveillance). Its key responsibilities include:

- Reviewing and advising on proposed updates or changes to Maryland's traffic records system components.
- Gathering input from agencies and organizations involved in collecting or using traffic data and representing those views in broader discussions.
- Evaluating new tools and technologies to ensure Maryland's systems stay current.
- Approving TRCC membership annually, as well as updates to the TRSP and the performance measures used to monitor progress.

TRCC Structure

The TRCC is a multi-level, interagency partnership designed to manage and improve Maryland's traffic records system. It includes:

- **Executive Council:** A leadership group of senior officials from key agencies that manage traffic records system components. The Executive Council helps shape the overall direction and meets twice yearly to review priorities and progress.
- **Technical Council:** A team of subject matter experts appointed by Executive Council members. These individuals oversee the operational aspects of Maryland's data systems, develop strategies, and meet regularly to drive progress. Members represent traffic safety, transportation, enforcement, public health, research, and data management sectors.
- **Special Committees:** These temporary working groups are formed to tackle focused issues. Examples include a Crash Data Availability Subcommittee, Model Minimum Uniform Crash Criteria (MMUCC) review groups, and task forces to guide projects and initiatives.

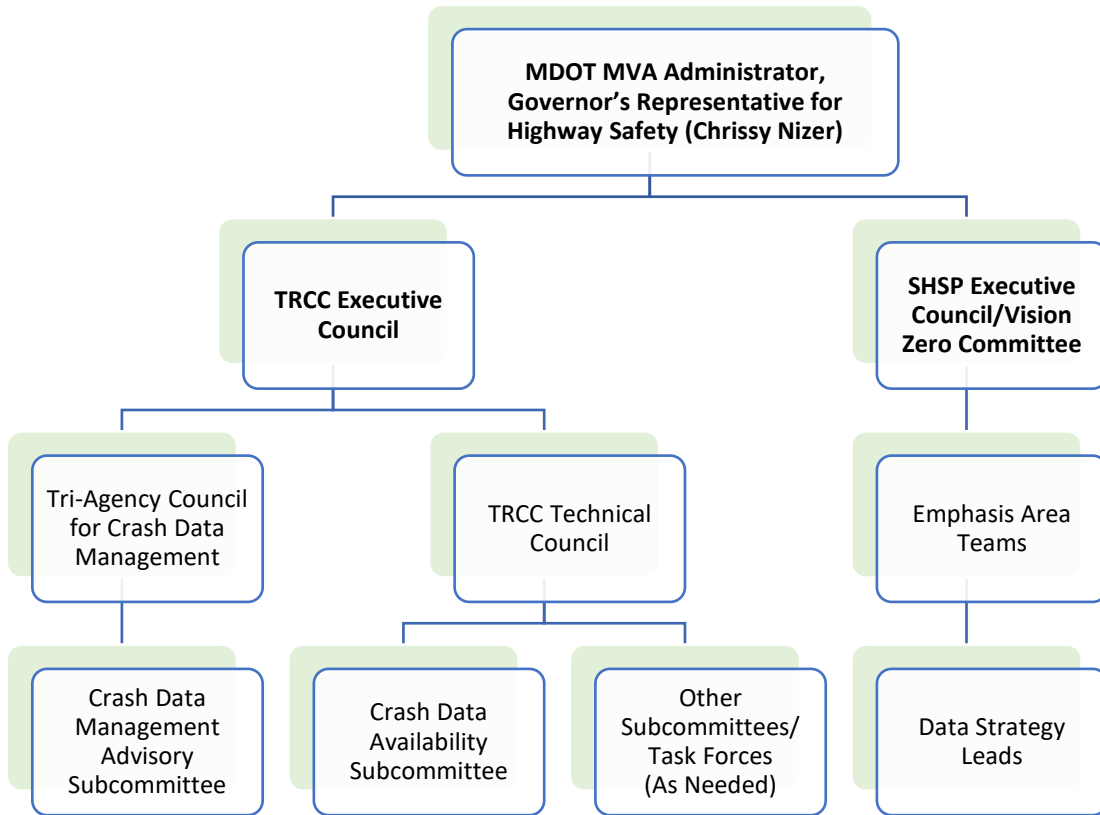
The TRCC also works with Maryland's broader safety planning efforts. Technical Council members serve as Strategic Highway Safety Plan (SHSP) Data Strategy Leads, bridging the TRSP and SHSP to ensure consistent, data-driven goals.

Members

TRCC members represent the six core components that form Maryland's traffic records system: crash, roadway, citation/adjudication, driver, vehicle, and injury surveillance. Members are drawn from State, local, and federal agencies and serve as data custodians and collaborators in system improvement.










Each Executive Council agency designates a representative for the Technical Council, ensuring that those closest to the data are involved in decision-making. Additional members include researchers, policy advisors, and public safety professionals with deep traffic records data and applications expertise.

Figure 1: Maryland's TRCC Structure



This group brings together the skills, authority, and insight needed to keep Maryland's traffic records system moving forward.

Table 1: Maryland’s Traffic Records System and Executive Council Members

Data System	Icon	Agency(ies)
Crash		Maryland Department of State Police (MDSP)
Citation/Adjudication		MDSP/Maryland District Court (MDC)
Driver		Maryland Department of Transportation (MDOT) Motor Vehicle Administration (MVA)
Vehicle		MDOT MVA
Roadway		MDOT State Highway Administration (SHA)
Injury Surveillance System <ul style="list-style-type: none"> • pre-hospital emergency medical services (EMS) • trauma registry • emergency department • hospital discharge • mortality data 		Maryland Institute for Emergency Medical Services Systems (MIEMSS) Maryland Health Services Cost Review Commission (HSCRC) Maryland Department of Health (MDH)
Technical Systems (Overall Support)		Maryland Department of Information Technology (DoIT)
Policy and Management (e.g., Data Governance)		MDOT – The Secretary’s Office (TSO)
TRCC Management		MDOT MVA Highway Safety Office (MHSO)

Background

Solid traffic safety decisions depend on solid data. Maryland's efforts to reduce road crashes, injuries, and fatalities rely on complete, accurate, and timely information. Federal legislation—starting with the Safe, Accountable, Flexible, and Efficient Transportation Equity Act (SAFETEA) of 2005—recognized this need and began offering states targeted funding to improve how safety data are collected and used.

That support continued under the Fixing America's Surface Transportation Act of 2015 (FAST Act), through the State Traffic Safety Information System Improvements Grant Program (23 CFR § 1300.22). To qualify for this funding, each state must submit a Traffic Records Strategic Plan (TRSP) that outlines how it will enhance its traffic records system. In Maryland, the TRSP is developed and coordinated by the Maryland Department of Transportation Motor Vehicle Administration's (MDOT MVA) Highway Safety Office (MHSO), in partnership with the Traffic Records Coordinating Committee (TRCC).

The **2026–2030 TRSP** builds on what's come before it. Like earlier versions, it reflects national best practices, incorporates federal assessment recommendations, and charts a clear course for strengthening Maryland's traffic records system. It aims to improve how data are collected, connected, and put to use, so agencies across the State can steer toward safer roadways with better tools and insights.

2011–2015 TRSP

Maryland's first formal TRSP was built on a detailed review of its systems and programs, completed in 2010. Two major assessments informed the effort:

- A NHTSA **Traffic Records Program Assessment** conducted in partnership with the National Highway Traffic Safety Administration (NHTSA), which compared Maryland's traffic records program to national performance ideals.
- The Federal Highway Administration (FHWA) evaluated the Crash Data Improvement Program (CDIP), offering a deep dive into how Maryland collected, managed, and shared crash data.

The recommendations from both assessments helped define priorities for improvement and laid the groundwork for the original TRSP.

2016–2020 TRSP

Maryland completed another NHTSA Traffic Records Program Assessment in late 2014 to prepare for the next five-year plan. Federal rules required that states respond to the recommendations from this assessment in their TRSP to remain eligible for funding under §405(c).

The 2016–2020 TRSP emphasized closer alignment with the Strategic Highway Safety Plan (SHSP), reinforcing the link between data quality and effective safety strategies. Each SHSP Emphasis Area Team worked closely with the TRCC to ensure that traffic records data supported the identification of problems and the evaluation of countermeasures.

The result was stronger collaboration between data stewards and end users, and a more targeted, practical approach to using traffic records data to improve safety outcomes.

2021–2025 TRSP

With the conclusion of the 2016–2020 TRSP, Maryland kicked off a new assessment and planning process in 2019 to guide the development of the 2021–2025 TRSP. The plan focused on improving system integration, expanding data linkages, and addressing recommendations from previous federal assessments.

Congress has encouraged states to conduct regular, independent peer reviews of their traffic records system. Under the FAST Act, states must complete at least one every five years to qualify for §405(c) funding. Maryland’s 2019 NHTSA Traffic Records Program Assessment helped identify areas of strength and pinpoint where further work was needed to achieve national ideals.

Federal regulations changed under the 2021 Infrastructure Investment and Jobs Act, allowing states to choose how they want to assess their traffic records system. Maryland chose to work with NHTSA and conducted a full, formal Traffic Records Assessment, similar to earlier years, in 2024.

2026-2030 TRSP

With this new plan's adoption, the 2021-2025 Plan is concluded. In September 2024, an NHTSA Traffic Records Program Assessment was completed to continue assessing progress toward the State’s goals and determining the priorities for the 2026-2030 TRSP.

The updated plan reflects lessons learned and progress made over the past several years. Developed through a collaborative process involving the TRCC, agency partners, and key stakeholders, the **2026–2030 TRSP** advances longstanding goals while addressing ongoing system needs. It emphasizes greater data integration, improved system performance, and continued alignment with national ideals to support safer, more informed decision-making across Maryland’s transportation network.

2024 NHTSA Traffic Records Program Assessment Results Summary

Maryland’s 2024 NHTSA Traffic Records Program Assessment built on the work of the 2019 review. Since then, the State has made meaningful progress in nearly every area.

Out of 328 assessment questions:

- **223** (68%) met the Advisory ideal;
- **45** (14%) partially met the ideal; and
- **60** (18%) did not meet the ideal.

Performance across system modules varied:

- **TRCC Management:** 88% of questions met the Advisory's ideal
- **Strategic Planning:** 73%
- **Crash Data:** 65%
- **Vehicle Data:** 67%
- **Driver Data:** 66%
- **Roadway Data:** 71%
- **Citation and Adjudication:** 54%
- **EMS/Injury Surveillance:** 71%
- **Data Use and Integration:** 92%

These results reflect Maryland’s significant progress in strengthening traffic records data quality and coordination. They also provide a clear roadmap for continued improvements, many of which were advanced through the 2021–2025 TRSP and remain priorities in the 2026–2030 plan.

TRCC Strategic Planning Process

To guide the development of the **2026–2030 TRSP**, the TRCC formed a dedicated TRSP Task Force in November 2024 (Appendix 1). Members were thoughtfully selected to ensure full representation of all data systems and agencies involved in Maryland’s Traffic Safety Information System Improvement Program. This group helped keep the process balanced, focused, and rooted in real-world traffic safety needs.

The TRSP was designed to:

- **Identify existing challenges** in Maryland’s traffic records system;
- **Prioritize needs and goals** based on gaps in system performance;
- **Establish performance-based measures** to track progress;
- **Outline how federal and state funds** (including §405(c) grants) will be used to address those needs; and
- **Document progress** toward meeting goals from previous TRSPs.

The TRSP Task Force relied on a structured, inclusive process to shape the **2026–2030 TRSP** strategies. Rather than a single group brainstorming session, feedback was collected in waves through targeted outreach to the TRSP Task Force, Crash Data Availability Subcommittee, TRCC Technical Council, and Crash Data Management Advisory Subcommittee.

The process included:

- **Forming a TRSP Task Force** composed of TRCC co-chairs, the TRCC State Coordinator, and other active TRCC members to identify initial priorities and shape the engagement approach;
- **Administering a written survey** to TRSP Task Force members and key subcommittees to gather feedback on past strategies, gaps in implementation, and proposed priorities for 2026–2030;
- **Conducting targeted discussions** with each group, including the Crash Data Availability Subcommittee, TRCC Technical Council, and Crash Data Management Advisory Subcommittee, to refine input and elevate shared concerns; and
- **Hosting a TRCC Workshop** in March 2025 to bring together stakeholders and build consensus on final strategy recommendations using the compiled survey and discussion results.

Feedback from all engagement efforts was documented and used to finalize the TRSP’s vision, goals, and strategic direction. The process ensured that every system area and stakeholder voice is represented in the final TRSP.

Frameworks Used During Discussion

While refining strategies, the TRSP Task Force considered:

- Ideal outcomes for each traffic records system component;
- Recommendations from the 2024 NHTSA Traffic Records Program Assessment;
- Ongoing challenges identified by TRCC members; and
- Strategies included in previous TRSPs that remained relevant.

This structured approach helped ensure that Maryland's strategies remain grounded in data, aligned with federal expectations, and tailored to the needs of system users at all levels. This approach gave every agency and stakeholder a voice in determining which strategies would guide Maryland's traffic records data work for the next five years.

The finalized sections were then reviewed and formally approved by the TRCC Technical and Executive Councils. These strategies form the foundation of Maryland's **2026–2030 TRSP** and will guide the State toward a safer, more innovative, more intelligent, and better-connected traffic records system.

TRSP Organization

Each section of the TRSP includes a description of the data area, its primary users, and a list of strategies prioritized by Maryland's traffic records community.

The TRCC is responsible for implementing the TRSP and keeping progress on track. Each year, the TRCC will:

- Prioritize traffic records improvement projects with member input;
- Identify and make use of at least one federal funding opportunity;
- Implement at least one new strategy that improves timeliness, accuracy, completeness, uniformity, integration, availability, or overall system performance;
- Direct all funding efforts toward projects identified in the TRSP;
- Ensure federal funds are used efficiently and effectively;
- Build a process to identify and document ongoing data system challenges;
- Support and deliver at least one training or technical assistance effort;
- Update and monitor performance-based measures and related metrics for all six core systems;
- Gather feedback through surveys and other methods to understand State and local needs and available resources; and
- Keep pace with technology by identifying and prioritizing tools to improve Maryland's traffic records system.

NHTSA Traffic Records Program Assessment—Recommendations

TRCC Recommendation

- None

Strategic Planning Recommendation

- None

Crash Recommendations

- Improve the data quality control program for the Crash data system to reflect best practices identified in the Traffic Records Program Assessment Advisory.

Vehicle Recommendations

- Improve the data quality control program for the Vehicle data system to reflect best practices identified in the Traffic Records Program Assessment Advisory.

Driver Recommendations

- Improve the data quality control program for the Driver data system to reflect best practices identified in the Traffic Records Program Assessment Advisory.
- Improve the interfaces with the Driver data system to reflect best practices identified in the Traffic Records Program Assessment Advisory.

Roadway Recommendations

- Improve the applicable guidelines for the Roadway data system to reflect best practices identified in the Traffic Records Program Assessment Advisory.
- Improve the data quality control program for the Roadway data system to reflect best practices identified in the Traffic Records Program Assessment Advisory.

Citation and Adjudication Recommendations

- Improve the data quality control program for the Citation and Adjudication systems to reflect best practices identified in the Traffic Records Program Assessment Advisory.
- Improve the interfaces with the Citation and Adjudication systems to reflect best practices identified in the Traffic Records Program Assessment Advisory.

Injury Surveillance Recommendations

- Improve the data quality control program for the Injury Surveillance systems to reflect best practices identified in the Traffic Records Program Assessment Advisory.
- Improve the procedures/ process flows for the Injury Surveillance systems to reflect best practices identified in the Traffic Records Program Assessment Advisory.

Data Use and Integration Recommendation

- None

Federal Inclusion Criteria

Throughout the five-year plan, the TRCC Program Manager will inform NHTSA with regular progress updates on Maryland's traffic records efforts. NHTSA and Federal Highway Administration (FHWA) Regional Program Managers are included during both planning and implementation to ensure Maryland's system continues to meet national expectations—and to help guide data improvements that support informed decision-making at the federal level.

In addition to NHTSA and FHWA, Maryland's TRSP benefits from the input, support, and collaboration of other federal partners (e.g., the Federal Motor Carrier Safety Administration (FMCSA)), including those involved in legislation, funding, and system development. Their guidance is critical to advancing safety data initiatives across the State.

Additional details on how Maryland coordinates with federal programs—and explores opportunities to secure additional safety funding—can be found in Appendix 2.

Monitoring and Updating the Strategic Plan

The TRSP is built around a five-year vision and set of goals. While the plan remains in place for the full five-year cycle, it's not a set-it-and-forget-it document.

The TRCC Technical Council monitors progress on each strategy and federal assessment recommendation every quarter, with a complete evaluation conducted annually. This helps flag any issues early and track what's working.

When a strategy is completed, it stays in the plan as a reference—but the TRCC shifts focus and resources to the next priority on the list. This ongoing review process helps Maryland stay on course and responsive throughout the five-year journey.

Traffic Records System Components and Strategies

The Advisory identifies three major sections of a state traffic records system:

- 1) Traffic Records System Management**
 - 1.1 Traffic Records Coordinating Committee (TRCC)
 - 1.2 Strategic Planning
- 2) Data Use and Integration**
- 3) Traffic Records System Components**
 - 3.1 Crash Data
 - 3.2 Vehicle Data
 - 3.3 Driver Data
 - 3.4 Roadway Data
 - 3.5 Citation and Adjudication
 - 3.6 Injury Surveillance
 - 3.6.1 Pre-hospital (EMS)
 - 3.6.2 Trauma Registry
 - 3.6.3 Emergency Department
 - 3.6.4 Hospital Discharge
 - 3.6.5 Vital Records

Traffic Records System Management (TRCC and Strategic Planning)

Description

The TRCC coordinates all traffic records system components (crash, roadway, citation/adjudication, driver, vehicle, and injury surveillance) using data quality performance measures (timeliness, completeness, accuracy, availability, integration, and uniformity) to advance the Maryland traffic safety community in achieving the vision of zero traffic-related deaths.

Target Users

TRCC Council Co-Chairs and Facilitator

Prioritized Strategies

1. Conduct and make available to appropriate people a complete traffic records system inventory with data definitions, flow diagrams for each component system, and a brief description of each data system and set, including who owns the data and contact information, any limitations on the use of the data, and for what the data system is best used.
2. Compile and make all data release policies and/or data-sharing agreements from all partners with traffic records data available to appropriate people, specifically identifying rules that allow intra- and inter-agency and public access.
3. Based on the release of new guidelines, create a timeline to review federal data element guidelines (e.g., MMUCC, NEMESIS, MIRE, AAMVA) during the TRSP five-year cycle to enhance the State traffic records system.
4. Continue to evaluate TRCC responsibilities with annual progress monitoring, tracking of agency policy decisions that affect the State's traffic records system, and continued progress documentation through meeting agendas/minutes/webinar recordings.
5. Create a Training Subcommittee to promote events, webinars, and other training opportunities, and review the training needs of traffic records system data collectors, managers, and end users on the State and local levels.
6. Document and report, at least annually, a summary of non-federally funded traffic records improvement projects to provide a complete picture of the State's efforts to improve systems.
7. Document the process currently used to consider State and local data users' needs into TRCC efforts. Continue to invite and include local data users in TRCC efforts to ensure local users' needs are considered in decisions with changes and improvements to the statewide traffic records system components.
8. Create a Performance Measure Subcommittee to improve performance measures contained within the TRSP. The Subcommittee will monitor the performance measures for each of the six data quality attributes (accuracy, completeness, timeliness, uniformity, availability, and integration) in each of the data system components (crash, vehicle, driver, roadway, citation/adjudication, and injury surveillance), agreed to in the current plan, and decide on any additional measures to be added in the current cycle. The Subcommittee will ensure meaningful goals and baselines are measurable and will conduct quarterly monitoring and annual reporting to the membership.
9. Compile data governance documentation from each data system owner and/or encourage each data owner to create a data quality governance program. Such a program will develop, publish (internal to TRCC), and maintain comprehensive data quality policies and procedures to reflect all applicable best practices identified in the NHTSA Traffic Records Program Assessment Advisory by:
 - a. documenting processes for data collection, maintenance, and quality assurance/quality control (QA/QC) to include identification of the steps and who is responsible for each step,
 - b. monitoring the collection, submission, processing, posting, feedback, and maintenance of all traffic records data,
 - c. developing workflow diagrams for system processes and interfaces,
 - d. developing a sample-based audit program of all records,
 - e. improving the interfaces with each data system,
 - f. improving applicable guidelines, and
 - g. developing and sharing data quality reports.

Data Use and Integration

Description

Data integration refers to connecting the six major traffic records system components (crash, vehicle, driver, roadway, citation and adjudication, and injury surveillance). Integrated datasets enable users to:

- conduct analyses and generate insights impossible to achieve if based solely on the contents of any singular data system;
- add detail to the understanding of each crash event, the roadway environment, and the people and vehicles involved; and
- efficiently expand the information available to decision-makers while avoiding the expense, delay, and redundancy of collecting the same information separately.

Benefits of Integrated Data

1. Lower costs to achieve a desired level of data content and availability.
2. Support for multiple perspectives in data analysis and decision-making.
3. Expanded opportunities for data quality validation and error correction.
4. Additional options for obtaining exposure data to form rates and ratio-based comparisons.
5. Enhanced accuracy and completeness of data describing crash events, the roadway environment, and the involved people and vehicles.
6. Increased relevance of information available for legislative and policy analysis.
7. Increased support for advanced methods of problem identification, countermeasure selection, and evaluation of program effectiveness.

Target Users

Data analysts (end users), policymakers, driver safety program managers, researchers, and the public.

Prioritized Strategies

1. Provide ongoing and timely access to traffic records data and analytical resources for problem identification, priority setting, data interpretation, and program evaluation.
2. Under the guidance of the TRCC Executive Council, assess how to integrate data from the traffic records system components to satisfy specific analytical inquiries. Such integration could make outputs and methodologies from State data linkage projects available to the public and State and local decision-makers to influence data-driven policy and reform and for research abiding by data security agreements.
3. Provide training sessions, presentations, webinars, and technical support to partners on all products and services provided by analytical resources (e.g., grant-funded university or college-based analysts) and GIS techniques and processes for traffic safety-related datasets.
4. Build sustainable, user-friendly linked datasets (if staffing and funding become available) rather than linking data on a case-by-case basis.
5. Advocate for funding, legislation, and/or policies to expand integration within the traffic records system.
6. Encourage the linkage of crash data with EMS records to further integrate crash data with the Maryland Trauma Registry (maintained by MIEMSS), hospital data systems, and vital records.

Crash Data

Description

The crash data system is the keystone of a state's traffic records system. The crash data not only hold the basic information critical to developing and deploying effective traffic safety countermeasures but also serve as the hub through which other systems are connected.

The crash file documents the characteristics of a motor vehicle crash and provides the following details about each incident:

- **Who:** Information about the drivers, occupants, and non-motorists involved in a crash (e.g., license status, age, sex).
- **What:** Information about the type of vehicle involved in a crash (e.g., make, model, body type, vehicle registration).
- **When:** Information detailing the time a crash occurred (e.g., time of day, day of week).
- **Where:** Information about the crash location (e.g., location name, latitude/longitude coordinates, type, attributes).
- **How:** Information describing the sequence of events and circumstances related to a crash from the first harmful event through the end of a crash and its outcomes (e.g., damage, injury).
- **Why:** Information about the interaction of various systems that may have contributed to the occurrence of a crash (e.g., weather, light conditions, driver actions, non-motorist actions) and/or the crash severity.

Through data integration or linkages, crash data assist in identifying the types of roadways, vehicles, and individuals involved in a crash. Crash data are also used to guide engineering and construction projects, prioritize law enforcement activity, select/evaluate safety countermeasures, analyze emergency response, and maximize the level of care, survivability, and analysis of related injuries.

Target Users

Data users, owners, executives in traffic records agencies, and driver safety program managers and researchers.

Prioritized Strategies

1. Create and maintain a data dictionary that includes all data definitions, business rules, rule exceptions, and linked data elements, with references to State and federal guidelines and standards (e.g., MMUCC, ANSI D.16), in a centralized document with versions for internal customers and the public. Continue to update as changes are made to the underlying data collection and system.
2. Define and provide a list of data elements and requirements for no apparent injury (also known as property-damage-only (PDO)) crash submission criteria for the statewide crash system. Evaluate the feasibility of implementing a short-form crash report for those minor crashes to improve the accuracy of no apparent injury crashes represented in the crash data system.
3. Evaluate a process for partner agencies to provide feedback and track correction requests made to data system managers regarding incomplete and inaccurate data submitted through the Automated Crash Reporting System (ACRS).
4. Develop a comprehensive crash data reporting training program that emphasizes crash data completeness and accuracy.
5. Maintain and enhance the integration between the crash and roadway data systems, ensuring MDSP and law enforcement agencies have the most up-to-date roadway files from MDOT SHA.

6. Recommend policy and procedures for submitting crash reports from local law enforcement agencies to MDSP through the ACRS system, including the definition of a timely submission, description of the fatal crash reconciliation process, and adoption of a process to include at least fatal crash reports from the United States Park Police (USPP).
7. Incorporate federal agency crash reports into the State system (e.g., United States Park Police).
8. Develop a model outline/reporting structure and standards for crash narratives (if consensus is reached to maintain a narrative field in the next iteration of ACRS).
9. Improve and maintain the Electronic Data Transfer (EDT) of all ACRS data to NHTSA.
10. Increase compliance with NHTSA MMUCC 6 guideline recommendations and consider implementing some suggested improvements by a stakeholder group in future iterations of ACRS. (If MMUCC 7 is released during the time period of this plan, begin review of latest standards.)
11. Integrate data elements collected by the Fatality Analysis Reporting System (FARS) Analyst into the ACRS data warehouse to improve the completion and accuracy of fatal crash records.
12. Integrate data elements from the MDOT MVA driver and vehicle systems to improve the data quality of the ACRS data warehouse.
13. Integrate data elements from FMCSA to improve the data quality of ACRS reports and the data warehouse.
14. Integrate data elements from MIEMSS to improve the data quality of ACRS reports and the data warehouse.
15. Integrate data elements from the MDSP Chemical Test for Alcohol Unit (CTAU) to improve the data quality of ACRS reports and the data warehouse.
16. Integrate data elements from the citation and adjudication systems to improve the data quality of ACRS reports and the data warehouse.
17. Provide QA/QC data dashboards and/or visualizations to law enforcement, identifying metrics related to errors and incomplete and inaccurate data collection.
18. Maintain current and develop new data dashboards and/or visualizations to make crash data available to authorized users (internal applications) and the public and measure the availability of these data through user surveys and application/website usage.

Driver and Vehicle Data

Description

Driver: The driver data system ensures that each person licensed to drive has one identity, one license to drive, and one record with the State. The driver file maintains information on all out-of-state or unlicensed drivers convicted of traffic violations within State boundaries.

Vehicle: The vehicle data system is an inventory of titling and registration data for each vehicle under the State's jurisdiction, including those reported as junk or expired. The inventory ensures that a descriptive record is maintained and made accessible for each vehicle and vehicle owner operating on public roadways.

Target Users

Law enforcement, driver and vehicle data managers/collectors, driver safety program managers and researchers, Commercial Driver License (CDL) employers, federal agencies, and the judicial system.

Prioritized Strategies

A. DRIVER

1. Collaborate with the MDSP to successfully integrate relevant elements from the crash data into the driver data system.
2. Enhance interfaces between the driver system and other components of the traffic records system.
3. Evaluate the feasibility of including Blood Alcohol Concentration (BAC) information on the driving record through an interface with external data systems or a manual process, including the resources needed to implement this action within a reasonable timeframe.
4. Maintain an updated data dictionary for the driver system and provide updates to Maryland's traffic records inventory.
5. Create and maintain updated data processing flow diagrams for critical driver transactions that detail data inputs, validation steps, interfaces with external data systems, and the time necessary to complete each element of the transaction.
6. Increase capability to monitor impaired driving offenders through driver system interfaces and integration with other data systems to ensure that offenders are appropriately identified and that subsequent license sanctions, conviction information, and follow-up activities are completed and recorded on the driver history.
7. Explore the feasibility of implementing a Model Impaired Driving Records Information System (MIDRIS).
8. Conduct a comprehensive review of Maryland's retention policy to determine if current practices need to be updated to reduce the amount of data stored in the driver system that does not hold State, federal, or administrative value.
9. Evaluate driver education program administration to review current data collection and measure progress toward established goals and objectives.
10. Continue participation in the Performance and Registration Information Systems Management (PRISM) program and develop performance measures to monitor system performance and compliance with program standards.

11. Continue participation in the State-to-State verification service in all driver license transactions and develop performance measures to monitor system performance and compliance with program standards.

B. VEHICLE

1. Collaborate with the MDSP to establish the integration of the relevant elements of the crash data into the vehicle data system.
2. Enhance interfaces between the vehicle data system and other components of the traffic records system.
3. Maintain an updated data dictionary vehicle system and provide updates to Maryland's traffic records inventory.
4. Create and maintain updated data processing flow diagrams for critical vehicle transactions that detail data inputs, validation steps, interfaces with external data systems, and the time necessary to complete each element of the transaction.
5. Recommend policy and technical procedures and identify resources to develop a comprehensive automated enforcement database for traffic safety research.

Roadway Data

Description

The roadway data system includes information about roadway design, construction, condition, and safety components such as guardrails, sidewalks, and signals. It comprises data collected by the State, such as State-maintained roadways and some local roadways, as well as data from local sources, such as county and municipal public works agencies and Metropolitan Planning Organizations (MPOs).

Target Users

Traffic engineers, Maryland Department of Transportation State Highway Administration (MDOT) Modes – Office of Highway Design (OHD), (and Data Services Engineering Division (DSED); data users (reporting systems needing location information (e.g. crash reports), and driver safety program managers and researchers.

Prioritized Strategies

1. Maintain process flow diagrams and written narrative details that outline data submission, returning error records, resubmission requirements, and procedures for local agencies submitting roadway data to MDOT SHA in the traffic records inventory.
2. Improve the data quality control program to reflect best practices identified in the NHTSA Traffic Records Program Assessment Advisory and the Roadway Safety Data Capability Assessment (RSDC).
 - a. Assist the roadway system custodian with developing quality management programs that list timeliness, accuracy, completeness, uniformity, availability, and integration performance measures.
 - b. Pursue a high level of detail on all segments and either intersections or curves on State-maintained roadways.
3. Improve the State roadway system to meet federal guidelines itemized in the All Roads Network of Linear-Referenced Data (ARNOLD).
 - a. Collaborate with jurisdictional partners to eliminate redundancy and capture all public roadways using a compatible uniform location referencing system in the roadway system.
 - b. Maintain an enterprise roadway information system.
 - c. Maintain interfaces between State and local roadway information systems.
 - d. Expand the Model Inventory of Roadway Elements (MIRE) data elements collected to improve analyses, develop and track potential countermeasures, and identify safety problems.
4. Develop and maintain interfaces between the roadway data system and the other components of the traffic records system.
5. Incorporate specific, quantifiable, and measurable improvements for MIRE fundamental data elements (FDE) to ensure access to a complete collection of the MIRE FDEs of all public roads by September 30, 2026.
 - a. Evaluate the status of MIRE FDE collection efforts, including FDEs currently maintained or not maintained in the roadway inventory and the public roads for which the FDEs are collected.
 - b. Document the appropriate data collection methodology for FDEs.
 - c. Coordinate with other agencies at the State and local levels.
 - d. Develop prioritization criteria for collecting MIRE FDEs on all public roads.

6. Develop the enterprise roadway data system to include MIRE FDEs (e.g., local traffic) that are not currently fully incorporated and fully document how to include additional data elements collected beyond the MIRE FDEs.
7. Enhance the Intersection Manager and roadway inventory to establish a clear hierarchy for main routes in ACRS location collection, simplifying the process to ensure officers collect accurate and complete data.

Additional Strategies Based on Recommendations from FHWA's RSDC Assessment:

8. Continue with the One Maryland One Centerline (OMOC) project, which facilitates the complete inventory of all roadway elements. Move closer to 100% accuracy in the inventory. The State maintains a high accuracy level (upwards of 90%).
9. Continue with the ESRI Roads and Highways implementation.
10. Continue data collection efforts for the safety data items—Bicycle/Pedestrian, Lighting, Work Zone, Structural Maintenance Zone Classification, and Guard Rails.
11. Develop a standardized set of performance measures that are reported at least annually for data managers, collectors, and users.
12. Continue developing the change management model to help track changes to the State roadway file.
13. Provide feedback to law enforcement agencies on crash reporting to allow the State to identify fields that require better validation edits, which will help collect better data on input.
14. Adopt more reliable methods for network screening because traditional methods are prone to error and require similar levels of data as the more reliable methods. The level of analytic capabilities needed to adopt more reliable methods is higher than traditional methods; still, the improved validity's payoff leads to identifying sites with more potential for safety improvement.
15. Attempt to obtain crash data from federal parks and military installations.
16. Continue to develop asset inventories of interest.
17. Ensure the data are accessible to all potential users (not siloed) from an asset management perspective.
18. Develop and implement Agile Assets or another similar inventory tool to support this need for all public roads.
19. Develop a complete inventory and safety-project tracking mechanism for all public roads.
20. Ensure that agency policies and procedures address the needs of new/infrequent users. The State iMap addresses most needs for data availability; however, there is an opportunity for electronic exchanges to provide data to users regularly.
21. Continue developing data documentation with the OMOC project. The State has data dictionaries available, which could be expanded to include guidance on data quality (where applicable).
22. Incorporate user satisfaction surveys as a potential measure of availability.
23. Draft policies that address the challenges in data management.
24. Empanel a data governance group (e.g., asset management committee) charged with developing data governance processes and publish a Data Governance manual/handbook.
25. Develop a Data Business Plan for managing core data programs in each agency/division.
26. Establish formal policies for approval of all new data management initiatives.
27. Review policies, standards, goals, and targets periodically to ensure that users' needs are sufficiently addressed and that the State's standards evolve in response to changing needs.
28. Identify new opportunities to integrate datasets (e.g., obtain bicycle and scooter crash data from local agencies) and continue to promote the use of integrated data in safety analysis.

29. Continue with the development of the OMOC project to move towards a fully integrated statewide enterprise system for safety analysis of all public roads.
30. Continue improving the automated assignment of crash data locations. For example, consider making manual adjustments to crashes beyond fatal crash reports.
31. Continue developing and completing initiatives to identify and address essential safety data gaps and periodically assess and refine data quality improvement processes.
32. Enhance coordination efforts for safety performance with MPOs and other stakeholders within the State by:
 - Applying the evidence-based approach across multiple planning cycles.
 - Conducting periodic reviews and refine the process and targets as needed.
 - Developing practices to strengthen performance-based planning and programming decisions.
33. Continue to expand capabilities to predict the impact of planned and programmed Highway Safety Improvement (HSIP) projects on future safety performance.
34. Expand the capability to access and review pertinent data on external factors likely to impact future safety performance, including socioeconomic data (population, demographics, jobs, etc.), vehicle miles traveled (VMT), and revenues.
35. Refine the capability to predict the impact of planned and all programmed Transportation Improvement Program (TIP) projects (other than those in the HSIP) on future safety performance.
36. Develop the advanced scenario analysis capability to estimate future safety performance for different sets of projects, program elements, and varying assumptions about external factors.

Citation and Adjudication Data

Description

The State's citation data system comprises all traffic violations issued on Maryland roadways by all law enforcement agencies. The adjudication data system includes information about the disposition of each charge issued on a traffic citation, allowing for evaluation of citation issuance, judicial disposition, and posting of applicable convictions to a driver record.

For traffic records purposes, the goal of the citation and adjudication data systems is to collect all information relevant to traffic-related citations in a central, statewide repository (linked to appropriate federal data systems) so authorized users can analyze it to improve and promote traffic safety.

Target Users

Law enforcement, driver system, Court system to include Drug and Specialty Courts, MDOT MVA MHSO and driver safety program managers and researchers.

Prioritized Strategies

1. Implement a citation tracking system (from issuance to disposition).
 - a. Include violations issued to commercial drivers/vehicles and make that information available to administrative stakeholders.
 - b. Support Federal Motor Carrier Safety Administration (FMCSA) requirements for recording, reporting, and adjudicating Commercial Driver License (CDL) violations and licensing status, including medical certification and appropriate endorsements.
 - c. Support the interfaces to connect needed data from the court system, driver licensing, crash, and large trucks/commercial vehicles with the other components of the traffic records system.
 - d. Maintain the ability to track impaired driving citations, administrative driver penalties and sanctions, juvenile offenders, court payments and appearances, deferral and dismissal of citations, record purging, and data governance.
 - e. Establish a biannual citation reporting system analysis report with MDOT MVA to enhance the tracking system and analyze the behavior of repeat offenders.
 - f. Explore a project to assess compliance with MIDRIS guidelines and develop a comprehensive DUI tracking system—incorporating BAC and other relevant testing—to support ongoing collaborative efforts addressing impaired driving, repeat offenders, recidivism, and emerging trends.
2. Maintain and improve the data dictionaries for the citation and adjudication systems to reflect best practices identified in the Traffic Records Program Assessment Advisory.
3. Establish a uniform process to ensure law enforcement submits paper citations to the Maryland District Court accurately and within the expected timeframes.
4. Expand the deployment and functionality of electronic citation capabilities as the standard for the State's e-citation system (ETIX) to all eligible law enforcement agencies, officers, and federal partners in the State
5. Maintain process flow diagrams and written narrative details that outline data submission, returning error records, and resubmission requirements for the citation/adjudication system, including all levels of courts, and include them in the traffic records inventory.
6. Evaluate and improve the accuracy and collection of vehicle make, model, and violation location on traffic citations in ETIX.

7. Expand the functionality of MDSP's Delta Plus platform by developing additional modules for traffic enforcement data collection (e.g., DR 15 form – Advice of Rights) and analysis of that data by law enforcement community members.
8. Establish policies and procedures for authorized users to conduct traffic safety research to access warnings in ETIX.
9. Recommend policy and application improvements for collecting race-based traffic stop data submitted to and maintained by the Maryland Statistical Analysis Center.
10. Increase automation of updates to driver records from court adjudication data by implementing/enhancing system interfaces.
11. Explore the possibilities of addressing the following interfaces: adjudication-vehicle, citation-driver, adjudication-crash, and update data dictionaries to reflect these interfaces.
12. Incorporate information about system interfaces in the citation and adjudication data dictionaries.
13. Collaborate with neighboring states to share data on drivers with cross-border violations. This would include receiving information on Maryland drivers who commit offenses in those states and sharing data with neighboring states on those states' drivers who commit offenses in Maryland.
14. Explore the possibility of incorporating and documenting National Information Exchange Model (NIEM) compliance regarding standards, data collection, and storage.
15. Evaluate MDSP CTAU's Form 34A (Alcohol Influence and preliminary breath test (PBT) Use Summary) to determine how to best use those data to analyze impaired drivers and consider developing a dashboard to upgrade data reporting from CTAU.

Injury Surveillance Data

Description

The injury surveillance data system tracks the frequency, severity, and nature of injuries sustained in motor vehicle crashes. It enables the integration of injury data with crash data. It makes this information available for analysis that supports research, prevention, problem identification, policy-level decision-making, efficient resource allocation, and program evaluation.

This section incorporates:

- pre-hospital emergency medical services (EMS);
- trauma registry;
- emergency department;
- hospital discharge; and
- mortality data (e.g., death certificates, medical examiner reports).

Target Users

Traffic records community, Injury Surveillance System managers, Emergency Medical Services community, and driver safety program managers and researchers.

Prioritized Strategies

1. Maintain process flow diagrams, written narrative details that outline data submission, returning error records and resubmission requirements for each of the core injury surveillance system components (EMS, Emergency Department, Hospital Discharge, Trauma Registry, Vital Records), and data dictionaries, and include these items in the traffic records inventory.
2. Work with data owners to establish data-sharing agreements to ensure injury surveillance system data are available for analytical purposes.
3. Assist each injury surveillance system component data owners with developing quality management systems that include performance measures for timeliness, accuracy, completeness, uniformity, availability, and integration. Document those measures and review and/or update every three years.
4. Develop training, data collection manuals, and validation rules that address high-frequency errors in each injury surveillance system component as they relate to the performance measures in the TRSP.
5. Track documented findings from quality control methods regarding completeness, accuracy, timeliness, integration, availability, and uniformity, and identify methods for improvement.
6. Improve the data quality control program for the Injury Surveillance systems to reflect best practices identified in the NHTSA Traffic Records Program Assessment Advisory.
7. Schedule meetings with representatives from the Maryland Health Services Cost Review Commission and Department of Health to discuss the importance of their role on the TRCC and how their data provides valuable information for describing the burden of motor vehicle crash injuries.
8. Establish numeric goals and performance metrics for the hospital discharge, emergency department, and vital records data systems so that each system's performance can be measured over time and improving/decreasing data quality can be tracked.
9. Develop a set of detailed data quality management reports for the hospital discharge, emergency department, and vital records data systems.

10. Engage owners and representatives of all injury surveillance data systems to participate in the TRCC. Having buy-in from all data owners will ensure long-term participation and increase the utility of the data.
11. Automate ACRS/FARS/eMEDS (electronic Maryland EMS Data System) crash data validations and reconciliations to improve completeness and accuracy of those data
12. Analyze injury surveillance data to evaluate occupant survivability on scene and location of death to understand the effect of and any additional need for post-crash care.

Benchmarking and Goal Setting

Maryland’s Traffic Records Strategic Plan follows a performance-based model, setting clear outputs—both short-term and intermediate—for six key data attributes: availability, accuracy, completeness, integration, uniformity, and timeliness.

These benchmarks help the State track how each traffic records system component is performing and where improvements are needed. Maryland identifies and evaluates performance measures tied to each system each year, using nationally recognized best practices.

Progress is tracked at least annually, and a summary of that progress is added to this plan as an official addendum—helping Maryland stay accountable and on track.

Prioritization Process

Projects overseen by the TRCC—especially those tied to federal grant funding—are prioritized using a structured points system and the Four Box Analysis method. This approach helps ensure Maryland invests time and resources into the efforts that will make the most significant impact.

Each project is scored based on the following questions:

1. How complex is the project regarding infrastructure, policy, or jurisdictional challenges?
2. How much will the project improve the traffic records system if successful?
3. What is the estimated cost—and how reliable is that estimate?
4. Are upgrades to one system needed to improve another?

Once projects are scored, they are placed into one of four categories based on expected payoff and risk or cost:

Table 2: Four Box Analysis

High Payoff – Low Risk or Cost Good Opportunity High Priority	High Payoff – High Risk or Cost Moderate Opportunity Middle Priority
Low Payoff – Low Risk or Cost Moderate Opportunity Middle Priority	Low Payoff – High Risk or Cost Poor Opportunity Low Priority

Projects are monitored throughout the year, with progress tracked to support reporting, funding decisions, and strategic adjustments as needed.

Implementation Process

Strategies outlined in the TRSP won't just sit on paper; they will be actively tracked throughout the five-year cycle.

Progress will be monitored through regular TRCC Technical Council meetings, Executive Council meetings, and an annual performance report. Action steps and related projects will be reviewed and documented as part of Maryland's Triennial Highway Safety Plan and Annual Grant Application to NHTSA.

The TRCC will also update and track performance measures annually, ensuring each strategy moves forward and contributes to a safer, more effective traffic records system.

Appendices

Appendix 1: Maryland Traffic Records Strategic Plan Task Force

Appendix 2: Federal Partners: Supporting Resources

Appendix 3: Update to 2024 NHTSA Traffic Records Program Assessment Recommendations

Appendix 4: Performance Measures

Appendix 5: Model Inventory of Roadway Elements (MIRE) Fundamental Data Elements (FDE)

Appendix 6: Maryland's Traffic Safety Information System Improvement Program

Appendix 7: Performance Measures Progress Calculations

Appendix 8: Emergency Medical Services (EMS) and Trauma Registry Performance Measures

Appendix 9: Funding Sources

Appendix 1: Maryland Traffic Records Strategic Plan Task Force

A special thanks to the dedicated members of Maryland's Traffic Records Strategic Plan Task Force. With their commitment to the Maryland traffic records system, we are pleased to present the Maryland Traffic Records Strategic Plan.

Candace Bailey, Maryland Department of Transportation (MDOT) Motor Vehicle Administration (MVA)

Cindy Burch, Baltimore Metropolitan Council

Joshua DeFisher, National Highway Traffic Safety Administration

Kartik Kaushik, University of Maryland National Study Center

Sean Lynn, Washington College GIS Program

Peter Moe, MDOT MVA

John Pietanza, Maryland Department of State Police

Michel Sheffer, MDOT State Highway Administration

State Traffic Records Coordinator

Douglas Mowbray, MDOT MVA Highway Safety Office

Appendix 2: Federal Partners: Supporting Resources

Federal Partners: Supporting Resources			
Type of Assessment or Analysis	Responsible Federal Partner	Description	Date Last Completed
Traffic Records Assessment	National Highway Traffic Safety Administration	Peer evaluations of state traffic records system capabilities. A report out includes ratings, recommendations, and considerations that the state may consider in working to improve their traffic records system.	September 2019; September 2024
Drivers Education Assessment	National Highway Traffic Safety Administration	Serves to guide all novice teen driver education and training programs in states striving to provide quality, consistent driver education and training.	August 2010
Impaired Driving Program Assessment	National Highway Traffic Safety Administration	A mechanism to assess the impaired-driving problem in the state, document the existing system, recommend improvements, and garner both political and public support to fund and implement improvements.	TIRF, Spring 2021; Spring/Summer 2023
Occupant Protection Program Assessment	National Highway Traffic Safety Administration	This assessment is to help states in a review of the occupant protection programs and to offer suggestions for improvement.	January 2020
Crash Data Improvement Program (CDIP)	Federal Highway Administration	CDIP is intended to provide states with a means to measure the quality of the information within their crash database. Originally, CDIP was established to help familiarize the collectors, processors, maintainers, and users with the concepts of data quality and how quality data helps to improve safety decisions.	July 2010
Roadway Data Improvement Program (RDIP)	Federal Highway Administration	RDIP is to help transportation agencies improve the quality of their roadway data to support safety initiatives. It provides traffic safety professionals a tool to assist them in identifying, defining, measuring, and ultimately improving the quality of the data within their roadway databases.	N/A
Roadway Safety Data Capability Assessment (RSDP)	Federal Highway Administration	RSDP is a collaborative effort between FHWA and states to develop robust, data-driven safety capabilities. RSDP includes a variety of projects aimed at improving the collection, analysis, management, and expansion of roadway data for use in safety programs and decision-making. FHWA uses information gathered from the states to identify common themes and	April 2012; January 2019

		critical gaps to develop a national gap analysis and action plan.	
Motor Carrier Safety Assistance Program	Federal Motor Carrier Safety Administration	Grants to improve the crash and inspection upload accuracy for Commercial Motor Vehicle Crashes in the State of Maryland in support of the Compliance Safety and Accountability (CSA) safety rating.	Ongoing (Consultant on staff with SHA Motor Carrier Division)
Highway Performance Monitoring System/All Roads Network of Linear Reference Data	Federal Highway Administration	Each state shall establish a safety data system covering all public roads, including non-State-owned public roads and roads on tribal land in the state in a geospatial manner. In other words, state highway agencies will have a geospatially enabled public roadway network or base map.	N/A
Go Teams	National Highway Traffic Safety Administration	Traffic Records GO Teams provide resources and assistance to state traffic records professionals as they work to better their traffic records data collection, management, and analysis capabilities. GO Teams are small groups of one to three subject matter experts designed to help states address traffic records issues.	Crash Data System Assistance, March-June 2021
Pedestrian and Bicycle Safety Program Assessment	National Highway Traffic Safety Administration	Examines significant components of a State's pedestrian safety program. Each State, in cooperation with its political subdivisions, should have a comprehensive pedestrian and bicycle program that educates and motivates its citizens to follow safe pedestrian and bicycle practices. A combination of legislation, regulations policy, enforcement, public information, education, incentives, and engineering is necessary to achieve significant, lasting improvements in pedestrian and bicycle crash rates, and to reduce resulting deaths and injuries.	April/May 2022

Appendix 3: Update to 2024 Traffic Records Assessment Recommendations (FFY2026 HSP Annual Application Submission)

MARYLAND TRAFFIC RECORDS ASSESSMENT RECOMMENDATIONS September 2019								
REC LABEL	RECOMMENDATION	Not Addressed	No Progress	Pending Action	Some Progress	Significant Progress	Complete	Notes
Crash1	Improve the data quality control program for the Crash data system to reflect best practices identified in the Traffic Records Program Assessment Advisory.					✓		MDSP and the TRCC continue to make significant progress toward the improvement of the crash data quality. The launch of ACRS 2.0 in 2024 resulted in many improvements to the data quality, especially the crash locations. Additional quality control efforts will continue now that Maryland has SEDC funding.
Vehicle1	Improve the data quality control program for the Vehicle data system to reflect best practices identified in the Traffic Records Program Assessment Advisory.					✓		With support from MHSO, MVA hired a Safety Data Analyst who will help to further develop MVAs Data Quality Program, including developing specific performance measures for vehicle records, and identify opportunities to add system linkages to external data sources, including citation, court and crash records. Data from crash records can now be evaluated for accuracy and consistency with MVA vehicle records on an ad hoc basis. MVA completed a full scale data sync of active vehicle records with the AAMVA NMVTIS validation system to improve the accuracy of the vehicle data elements used by that system.

Vehicle2	Improve the interfaces with the Vehicle data system to reflect best practices identified in the Traffic Records Program Assessment Advisory.					✓		With support from MHSO, MVA hired a Safety Data Analyst who will help to further develop MVAs Data Quality Program, including developing specific performance measures for vehicle records, and identify opportunities to add system linkages to external data sources, including citation, court and crash records. Linkages to crash data are in place for ad hoc analysis, joining crash data with vehicle records through common identifiers.
REC LABEL	RECOMMENDATION	Not Addressed	No Progress	Pending Action	Some Progress	Significant Progress	Complete	Notes
Driver1	Improve the data quality control program for the Driver data system to reflect best practices identified in the Traffic Records Program Assessment Advisory.					✓		With support from MHSO, MVA hired a Safety Data Analyst who will help to further develop MVAs Data Quality Program, including developing specific performance measures for driver records, and identify opportunities to add system linkages to external data sources, including citation, court and crash records. Ad hoc analyses have been conducted with data from crash and automated enforcement data sources to join supplemental vehicle and driver data elements with these sources. MVA continues to monitor AAMVA CDLIS data quality measures which now consistently meet the highest ratings in the AAMVA system, and these results are reviewed annually with the TRCC Technical Council. MVA deployed full integration with the commercial driver Drug and Alcohol Clearinghouse (DACH) to ensure that all commercial drivers maintain eligibility,

								with appropriate action taken through automated systems for noncompliant drivers.
Driver2	Improve the interfaces with the Driver data system to reflect best practices identified in the Traffic Records Program Assessment Advisory.					✓		With support from MHSO, MVA hired a Safety Data Analyst who will help to further develop MVAs Data Quality Program, including developing specific performance measures for driver records, and identify opportunities to add system linkages to external data sources, including citation, court and crash records. MVA established linkage to Maryland State Police Crash Reporting data to facilitate the development of enhanced public-facing crash dashboards, to include nonfatal crashes and to automate reporting used in highway safety program development and evaluation.
Roadway1	Improve the applicable guidelines for the Roadway data system to reflect best practices identified in the Traffic Records Program Assessment Advisory.					✓		MDOT SHA continues to support an ArcGIS Hub Portal for distribution of roadway datasets, and is accessible here: https://data-maryland.opendata.arcgis.com/pages/mdot
Roadway2	Improve the data quality control program for the Roadway data system that reflects best practices identified in the Traffic Records Program Assessment Advisory.					✓		MDOT SHA continues to improve QC processes and is working to ensure the roadway files are accessible and useful. SHA are doing quarterly centerline conflations with county NG911 data and adding MIRE attribution. With Esri Roads and Highways OMOC their data model is fairly robust and accurate.
REC LABEL	RECOMMENDATION	Not Addressed	No Progress	Pending Action	Some Progress	Significant Progress	Complete	Notes

Citation1	Improve the data quality control program for the Citation and Adjudication systems to reflect best practices identified in the Traffic Records Program Assessment Advisory.				✓			The District Court is working with MSP and local law enforcement agencies have developed processes to reduce errors entering the system. The Court is continuing to streamline the process. The goal is to reach 99% error free. MSP implemented a checkbox when there is no license which reduced the number of issues with assumed missing data.
Citation2	Improve the interfaces with the Citation and Adjudication systems that reflect best practices identified in the Traffic Records Program Assessment Advisory.					✓		The Maryland Judiciary completed their transition to the new MDEC system, onboarding Baltimore City as the final jurisdiction to convert to the electronic system. In 2014 the Maryland District Court System began a multi-year migration of the citation and adjudication data from a mainframe to a digital system, known as the Maryland Electronic Courts (MDEC) Conversion. MDEC provides self-represented litigants and attorneys greater access to courts with the ability to eFile and eServe court documents 24 hours a day, 7 days a week, from anywhere with an Internet connection. The goal of MDEC is to create a cost-effective, judiciary-wide integrated case management system that will enable courts at all levels to collect, store, process, and access records electronically.
ISS 1	Improve the procedures/ process flows for the Injury Surveillance systems to reflect best practices identified in the Traffic Records Program Assessment Advisory.					✓		MIEMSS continues to make progress in documenting its Data Governance Plan and will be a key a key partner in integrating eMEDS data with crash data under the SEDC project.

ISS2	Improve the data quality control program for the Injury Surveillance systems that reflects best practices identified in the Traffic Records Program Assessment Advisory.					✓	For the Injury Surveillance System components, Emergency Medical Services and Trauma Registry, each have been assigned all six Advisory data quality control measurements (including goals, baselines, and measurements). These were developed in conjunction with respective user groups and address Motor Vehicle Crash related patients directly or indirectly. Appendix 8 illustrates the many improvements and steady progress for the data derived from NEMIS-compliant patient run records.
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2024 Assessment Recommendations

	Number	%
Not addressed		0%
No progress		0%
Pending Action		0%
Some Progress	1	9%
Significant Progress	10	91%
Complete		0%
Total	11	100%

Updated as of June 2025

Appendix 4: Performance Measures

Roadway		Performance Measure Statement	Measure, BASELINE, GOAL	As of Date	Outcome
Roadway	Availability	Increase the # of users who access state roadway data for traffic safety research purposes.	<ul style="list-style-type: none"> •# of users who access state roadway data for traffic safety research purposes. •BASELINE: Not Yet Measured (downloads from SHA's GIS catalog) •GOAL TBD by Dec 31, 2025 	3/31/2025	No reported updates.
		Increase the satisfaction level of users accessing state roadway data from 0% to greater than 90% through a public survey.	<ul style="list-style-type: none"> •% of users satisfied accessing state roadway data •BASELINE: 95% or 5-point scale •GOAL: 98% or 4.8 point by Dec 31, 2025 	3/31/2025	
	Accuracy	Increase the % of correct/accurate values in data elements that do not have a state-level validation rule.	<ul style="list-style-type: none"> •% of correct/accurate values in data elements that do not have a state-level validation rule •BASELINE: 75% in 2019 •GOAL: 100% by Dec 31, 2025 and maintain through 2030 	3/31/2025	<p>Data freely available and published here annually: https://data-maryland.opendata.arcgis.com/pages/mdot</p> <p>Data cleanup complete and any errors identified are promptly corrected.</p>

Completeness	Increase the % of Baltimore City roadways captured in the state file.	<ul style="list-style-type: none"> •% of Baltimore City roadways captured in the state file •BASELINE: 70% in 2019 •GOAL: 100% by Dec 31, 2025 and maintain 	3/31/2025	County and City data from DoIT for NG911 purposes is conflated to OMOG quarterly. Near 100% completeness.
Integration	Increase the % of crash reports with location information that matches the state roadway file.	<ul style="list-style-type: none"> •% of crash reports with location information that matches the state roadway file •BASELINE: 50% •GOAL: 85% by Dec 31, 2025 	3/31/2025	Working with MDSP to provide data replacement for ACRS. This should raise accuracy to GOAL or higher.
		<ul style="list-style-type: none"> • % of local roadways that link to state LRS without error •BASELINE: (TBD) •GOAL: (TBD) 		
Timeliness	Reduce the # of days needed to incorporate roadway changes/additions to the state file.	<ul style="list-style-type: none"> •# of days needed to incorporate roadway changes/ additions to the state file •BASELINE: 365 •GOAL: fewer than 90 days by Dec 31, 2025 	3/31/2025	DoIT NG911 data is conflated quarterly, and we add state roadway project data before road open using drone derived imagery. still at 6 months; trying to get it to quarterly
Uniformity	Increase compliance with the Model Inventory for Roadway Elements guidelines and Fundamental Data	<ul style="list-style-type: none"> •% of MIRE Compliant FDEs in the state file 	3/31/2025	Local roadway data will remain the issue with completeness as the local jurisdictions do not capture and MDOT SHA is not funded to capture. HSIP dollars may help fill gap and provide incentive for all parties

		Elements— # of MIRE Fundamental Data Elements for non-local paved roads.	<ul style="list-style-type: none"> •BASELINE: 80% •GOAL: 100% by Dec 31, 2026 		
		Increase compliance with the Model Inventory for Roadway Elements guidelines and Fundamental Data Elements— # of MIRE Fundamental Data Elements for Local (based on functional classification) Paved Roads	<ul style="list-style-type: none"> •% of MIRE Compliant FDEs in the state file •BASELINE: 80% •GOAL: 100% by Dec 31, 2026 	3/31/2025	No reported updates.
		Increase compliance with the Model Inventory for Roadway Elements guidelines and Fundamental Data Elements— # of MIRE Fundamental Data Elements for Unpaved Roads.	<ul style="list-style-type: none"> •% of MIRE Compliant FDEs in the state file •BASELINE: 80% •GOAL: 100% by Dec 31, 2026 	3/31/2025	No reported updates.

Crash		Performance Measure Statement	Measure, BASELINE, GOAL		Outcome
Crash	Availability	Increase the # of users that visit Fatal Crash Dashboard and Tableau dashboards/data download applications (MDSP).	<ul style="list-style-type: none"> •# of page visits to the Fatal Crash Dashboard ZeroDeathsMD.gov website •BASELINE: 1205 avg/month 	3/31/2025	The program received # of hits

		<ul style="list-style-type: none"> •GOAL: 1300 avg/month by Dec 31, 2025 		
	Increase the # of users of the MHSO Zero Deaths Crash Data Resources web page.	<ul style="list-style-type: none"> •# of page visits to the Crash Dashboard ZeroDeathsMD.gov website •BASELINE: 2165 avg/month •GOAL: 2200 avg/month by Dec 31, 2025 	3/31/2025	Crash Data Resources ZeroDeathsMD BASELINE: March 2023 to March 2024 Page Visits (2,165 AVG per month).
	Increase the # of hits on public-facing dashboards derived from the Maryland State Police Data Warehouse ACRS data.	<ul style="list-style-type: none"> •# of page hits for crash data from the public Tableau data dashboard (2024 -) application •BASELINE:5942 (ACRS 1.0); 492 (ACRS 2.0) •GOAL:1100 per month by Dec 31, 2025 (based on ACRS 1.0 counts) 	3/31/2025	Tableau data download BASELINE: (Note: Tableau only keeps 6 months of logs. Will develop performance measures under SEDC program.) <ul style="list-style-type: none"> ·1.0 Page Hits: 11/23/2023 through 4/24/24: 5,942 ·2.0 Page Hits: 4/23/2024 through 5/21/24: 492
Accuracy	Decrease the # of crash reports marked as “off road” that should not have been.	<ul style="list-style-type: none"> •# of crash reports marked as “off road” •BASELINE: 19.75% in 2018 •GOAL: less than 5% by Dec 31, 2025 	3/31/2025	FFY2024: The # of crash reports marked as “off-road” continue to improve with the most recent measure showing a .18% decrease compared to the previous time period. FFY2025: The queues to review off-road have not yet been established for the new ACRS 2.0 2024 crash data, therefore Maryland has no progress to report on these measures.

	Reduce the average number of crashes greater than 250 feet from an SHA logmile reference mile point.	<ul style="list-style-type: none"> •# of crashes reported within 250 feet of an SHA logmile reference mile point •BASELINE: 105 in 2025 •GOAL: 0 by 2030 	3/31/2025	<p>FFY2025: 0.3% increase in GPS locations within the boundaries of Maryland.</p> <p>0.4% average increase in GPS locations within the boundaries of Maryland's 24 jurisdictions.</p>
Completeness	Reduce the number of unknown safety equipment values for fatally injured occupants in ACRS.	<ul style="list-style-type: none"> •Reduce the number of unknown safety equipment values •BASELINE: 44 in 2024 •GOAL: 0 in 2030 	3/31/2025	No outcome.
	Reduce the number of unknown safety equipment values for seriously injured occupants in ACRS at least 70%.	<ul style="list-style-type: none"> •Reduce the number of unknown safety equipment values •BASELINE:343 in 2024 •GOAL: 102 in 2030 		
	Reduce the number of unknown safety equipment values for injured occupants in ACRS at least 50%.	<ul style="list-style-type: none"> •Reduce the number of unknown safety equipment values •BASELINE: 2432 in 2024 •GOAL: 1216 in 2030 		
Integration	Increase the % of individuals transported crash records that link to an EMS records.	<ul style="list-style-type: none"> •Percent of reports (requiring transport) with EMS info that link to EMS report •BASELINE: 0 	3/31/2025	No progress reported.

		<ul style="list-style-type: none"> •GOAL: 100% 		
Timeliness	Reduce the average number of days of fatal crash report submission (date of crash to date of approval).	<ul style="list-style-type: none"> • # of days from crash date to approval in ACRS •BASELINE: 182 days in January 2024 •GOAL: 30 days or less in 2026 		
Uniformity	Increase compliance with the Model Minimum Uniform Crash Criteria SEDC.	<ul style="list-style-type: none"> Increase the MMUCC 6 compliance required SEDC elements •BASELINE: 40% •GOAL: 100% by December 31, 2029 		

Citation		Performance Measure Statement	Measure, BASELINE, GOAL		Outcome
Citation	Availability	Increase the # of users that visit a TBD citation data dashboard.	<ul style="list-style-type: none"> •MEASURE:# of page visits of TBD citation data dashboard •BASELINE: % •GOAL: 		
	Accuracy	Increase the % of citations that indicate an association with a crash (PD, PI, fatal) that matches a corresponding	<ul style="list-style-type: none"> •% of citations that indicate an association with a crash (PD, PI, fatal) that matches a corresponding crash record 	3/31/2025	No updates reported.

	crash record (citation # listed on crash report).	<ul style="list-style-type: none"> •BASELINE: 3% in 2018 (approximately 15,000 records) •GOAL: 75% by Dec 31, 2025 		
Completeness	Reduce the % of missing/unknown values on crash reports that should have a citation # (as identified in the citation file).	<ul style="list-style-type: none"> •% of case license #s that were found to be invalid in the Citation file •BASELINE: 3% in 2018 (approximately 15,000 records) •GOAL: 1% by Dec, 31 2025 	3/31/2025	No outcome.
	Increase the # of x/y longitude/latitude coordinates on electronic citations issued to motorists.	<ul style="list-style-type: none"> •% of citation records missing x/y longitude/latitude coordinates •BASELINE: TBD •TARGET: 85% with x/y long/lat coordinates 	3/31/2025	No outcome.
	Increase the percentage of cases in the Citation database with complete sex demographics.	<ul style="list-style-type: none"> •% of citation records with complete sex demographics in the citation /adjudication database. •BASELINE: TBD •GOAL: % with sex 	3/31/2025	No outcome.
	Increase the percentage of cases in the Citation database with DOB (Age).	<ul style="list-style-type: none"> •% of citation records with age (DOB) in the citation /adjudication database. 	3/31/2025	No outcome.

		<ul style="list-style-type: none"> •BASELINE: TBD •GOAL % with age 			
	Integration	Increase the % of impaired driving citations given to Maryland drivers that link to a CTAU record.	<ul style="list-style-type: none"> •% of impaired driving citations that link to a CTAU record •BASELINE:0 •GOAL: 	3/31/2025	
	Timeliness	Maintain the average time from citations issuance to entry into the court system (centralized database).	<ul style="list-style-type: none"> • average time taken to include a violation in the court file •BASELINE: 0 •GOAL: 90% submitted within 24 hours 	3/31/2025	No updates reported.
	Uniformity	N/A	<ul style="list-style-type: none"> •MEASURE: •BASELINE: % •GOAL: 		

Adjudication		Performance Measure Statement	Measure, BASELINE, GOAL		Outcome
Adjudication	Availability	Determine through a survey the usefulness and timeliness of appropriate users accessing and using JPORTAL data.	<ul style="list-style-type: none"> •time it takes for records to be entered from local jurisdictions into MDEC. •BASELINE: •GOAL: 		
	Accuracy	Increase the percentage of adjudication reference number records with no	<ul style="list-style-type: none"> •% of records with no errors in MDEC •BASELINE: XX % 		

		errors in critical data elements.	<ul style="list-style-type: none"> •GOAL: XX% by Dec 31, 2025 		
	Completeness	Increase the percentage of records in the database that are complete with no unknowns.	<ul style="list-style-type: none"> •% of complete records (no unknowns) in MDEC •BASELINE: XX % •GOAL: XX% by Dec 31, 2025 		
	Integration	Increase the percentage of appropriate records in the database that are linked with citation records.	<ul style="list-style-type: none"> •% of records linked with citation records •BASELINE: XX % •GOAL: XX% by Dec 31, 2025 		
	Timeliness	Increase the percentage of convictions sent to the DMV within 10 days of conviction.	<ul style="list-style-type: none"> •% convictions sent to DMV within 10 days of conviction •BASELINE: XX % •GOAL: XX% by Dec 31, 2025 		
	Uniformity	Increase the percentage of consistent adjudication data elements (like citation types and identifiers) across all jurisdictions.	<ul style="list-style-type: none"> •% of data elements that are consistent across all jurisdictions •BASELINE: XX % •GOAL: XX% by Dec 31, 2025 		

Driver		Performance Measure Statement	Measure, BASELINE, GOAL	Outcome
Drive 1	Availability	Increase the # of users and those that report	<ul style="list-style-type: none"> • # of unique users accessing system data 	No progress reported.

	successfully accessing driver record data electronically, including law enforcement, courts, employers and individuals.	<p>over a set period of time</p> <ul style="list-style-type: none"> •BASELINE: X in 20XX •GOAL: X in 20XX 		
		<ul style="list-style-type: none"> •# of times system data is accessed (by tracking logins, queries, data retrievals or extracts run, web site or dashboard hits, or other methods.) •BASELINE: X in 20XX •GOAL: X in 20XX 		
		<ul style="list-style-type: none"> •# system hits by court systems •BASELINE: X in 20XX •GOAL: X in 20XX 		
	Increase the number of driver data elements that are readily available to stakeholders.	<ul style="list-style-type: none"> •# of driver data elements that are readily available to stakeholders •BASELINE: •GOAL: 		
Accuracy	Reduce the rate of validation errors for critical driver record transactions - conviction error messages	<ul style="list-style-type: none"> •# and % of conviction error messages by the CDLIS Central Site •BASELINE: XX in 20XX 		decreased by 21.26%

	<ul style="list-style-type: none"> •GOAL: XX in 20XX. 		
Reduce the rate of validation errors for critical driver record transactions - withdrawal error messages	<ul style="list-style-type: none"> •# and % of withdrawal error messages by the CDLIS Central Site •BASELINE: XX in 20XX •GOAL: XX in 20XX. 		decreased by 100%
Reduce the rate of validation errors for critical driver record transactions - duplicates resolved outside 10-day federal time limit	<ul style="list-style-type: none"> •# and % of duplicates resolved outside 10-day federal time limit •BASELINE: XX in 20XX •GOAL: XX in 20XX. 		decreased by 90%
Reduce the rate of validation errors for critical driver record transactions - history errors returned	<ul style="list-style-type: none"> •# and % of history errors returned by the CDLIS Common Validation Processor •BASELINE: XX in 20XX •GOAL: XX in 20XX. 		decreased by 38%
Reduce the rate of validation errors for critical driver record transactions - updates sent to MPR PII that are returned	<ul style="list-style-type: none"> •# and % of updates sent to MPR PII that are returned in error •BASELINE: XX in 20XX •GOAL: XX in 20XX. 		decreased by 46.19%
Reduce the rate of validation errors for critical driver record transactions - updates	<ul style="list-style-type: none"> •# and % of updates sent to MPR SOR and ST/DLN returned in error 		decreased by 22.1%

	sent to MPR SOR and ST/DLN returned in error	<ul style="list-style-type: none"> •BASELINE: XX in 20XX •GOAL: XX in 20XX. 		
	Reduce the rate of validation errors for critical driver record transactions - negate messages returned in error	<ul style="list-style-type: none"> •# and % of negate messages returned in error •BASELINE: XX in 20XX •GOAL: XX in 20XX. 		decreased by 25.9%
	Reduce the percentage of active driver records with errors in critical data elements.	<ul style="list-style-type: none"> •% of active driver records with errors in critical data elements. •BASELINE: •GOAL: 		
Completeness	Reduce the % of missing/unknown values in critical driver records, including actions for commercial driver licenses/commercial vehicle-related offenses.	<ul style="list-style-type: none"> •% missing/unknown values of reporting critical driver records in the Driver System •BASELINE: XX percent in 20XX •GOAL: XX percent in 20XX 		No progress reported.
	Increase # of DR15 and 15A electronically entered from Delta Plus to the MVA system.	<ul style="list-style-type: none"> •# of reports electronically entered •BASELINE: 0 in 2025 •GOAL: XX 20XX 		
	Reduce the percentage of active driver records with missing critical data elements. (licensure)	<ul style="list-style-type: none"> •percentage of active driver records with missing critical data elements. •BASELINE: 		

		<ul style="list-style-type: none"> •GOAL: 		
	Increase the number of standards-compliant data elements with interface validation controls or obtained via linkage to other databases.	<ul style="list-style-type: none"> # of standards-compliant data elements with interface validation controls or obtained via linkage to other databases. •BASELINE: •GOAL: 		
Integration	Increase the # of systems that are integrated to produce real-time transactions/record updates.	<ul style="list-style-type: none"> •# of integrated systems •BASELINE: XX in 20XX •GOAL: XX in 20XX 		No progress reported.
	Increase the number of systems with real-time integration to driver data in the Customer Connect system.	<ul style="list-style-type: none"> •# of systems with real-time integration to driver data in the Customer Connect system •BASELINE: •GOAL: 		
	Increase the # of systems that are integrated to produce real-time transactions/record updates.	<ul style="list-style-type: none"> •% of driver records with ignition interlock device that link to IID database •BASELINE: XX in 20XX •GOAL: XX in 20XX 		
Timeliness	Increase the % of error records that are	<ul style="list-style-type: none"> •% of error records that are 		

	corrected and resubmitted within 24 hours.	corrected/resubmitted within 24 hours <ul style="list-style-type: none"> •BASELINE: XX in 20XX •GOAL: XX in 20XX. 		% of convictions sent successfully within the 10-day federal time limit: increased by 8.7%
		<ul style="list-style-type: none"> •MEASURE •BASELINE: XX in 20XX •GOAL: XX in 20XX. 		% of withdrawals sent successfully within the 10-day federal time limit: increased by 15.0%
		<ul style="list-style-type: none"> •MEASURE •BASELINE: XX in 20XX •GOAL: XX in 20XX. 		# of Transfers Resolved outside the 10-day federal time limit: decreased by 10%
	Reduce the median number of days from verdict dates, including administrative violations to the date the related sanction is posted in the Customer Connect system.	<ul style="list-style-type: none"> •Median # of days from verdict dates, including administrative violations to the date the related sanction is posted in the Customer Connect system •BASELINE: •GOAL: 		
Uniformity	Increase the # of driver data elements that are entered automatically after validation and improve consistency among driver-related fields in that are entered	<ul style="list-style-type: none"> •# of automatically entered vehicle (driver?) data elements •BASELINE: XX percent in 20XX •GOAL: XX percent in 20XX. 		No progress reported.

	into the vehicle data system manually.	<ul style="list-style-type: none"> •% of consistently and manually entered driver-related fields •BASELINE: XX percent in 20XX •GOAL: XX percent in 20XX 		
	Increase the number of standards-compliant data elements with interface validation controls or obtained via linkage to other databases.	<ul style="list-style-type: none"> # of standards-compliant data elements with interface validation controls or obtained via linkage to other databases •BASELINE: •GOAL: 		
	Increase compliance with AAMVA D.20.	<ul style="list-style-type: none"> •compliance with AAMVA •BASELINE: XX percent in 20XX •GOAL: XX percent in 20XX. 		

Vehicle		Performance Measure Statement	Measure, BASELINE, GOAL		Outcome
Vehicle	Availability	Increase the number of vehicle data elements readily available via public interfaces.	<ul style="list-style-type: none"> •# of vehicle data elements readily available via public interfaces •BASELINE: •GOAL: 		

Accuracy	Reduce the percentage of active vehicle records with errors in critical data elements.	<ul style="list-style-type: none"> •% of active vehicle records with errors in critical data elements •BASELINE: •GOAL: 		
Completeness	Reduce the percentage of active vehicle records with no missing critical data elements.	<ul style="list-style-type: none"> •% of active vehicle records with no missing critical data elements •BASELINE: •GOAL: 		
Integration	Increase the number of systems with real-time integration to vehicle data in the Customer Connect system.	<ul style="list-style-type: none"> •# of systems with real-time integration •BASELINE: •GOAL: 		
Timeliness	Reduce the median number of days from the date of a critical status change in the vehicle record to the date the status change is reflected in the Customer Connect system.	<ul style="list-style-type: none"> •median number of days from the date of a critical status change in the vehicle record to the date the status change is reflected in the Customer Connect system •BASELINE: •GOAL: 		
Uniformity	Increase the number of standards-compliant data elements validated by interface controls or obtained via linkage to other databases.	<ul style="list-style-type: none"> •# of standards-compliant data elements validated by interface controls or obtained via linkage to other databases. 		

		<ul style="list-style-type: none"> •BASELINE: •GOAL: 		
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EMS		Performance Measure Statement	Measure, BASELINE, GOAL		Outcome
EMS	Availability	Ensure that all data access requests for electronic Maryland EMS Data System® (eMEDS® - the State’s patient care reporting system) data/information are reviewed for appropriateness (non-confidentiality adherence) and follow up communication provided within 30 days.	*# of Data Access Committee (DAC) related approved EMS data requests are followed up on within 30 days. *BASELINE is 95%. *GOAL is to maintain 95% or greater during the current SFY.		See Appendix 9.
	Accuracy	Reduce the percent of Potential Motor Vehicle Crash (MVC) Transports with “Blank” Cause of Injury responses.	*# of MVC dispatch code records with a “Blank” Cause of Injury over the total # MVC dispatch code records (by Emergency Medical Services Operational Program {EMSOP}). *BASELINE is 18% statewide average *GOAL is to maintain an individual EMSOP average of 10% or less for all EMSOPS.		Accuracy: MVC Cause of Injury Blanks: .4 increase in blanks (no improvement)

		Increase the # of eMEDS® records that employ the use of the Computer-Aided Dispatch (CAD) data interface downloads.	*# of eMEDS® records with CAD downloads over the total # of records. *BASELINE is 96%. *GOAL is to maintain 96% or greater during the current SFY.		See Appendix 9.
	Completeness	Increase the % match of patient account # in the Shock Trauma Center Toxicology database to the HSCRC Hospital and ED database.	Increase from 87%-88% in 2015-2016 (the most recent years for which we have available data) to 95% by the year 2025. BASELINE GOAL		See Appendix 9.
		Increase the completeness % of MVC Cause on Injury data in eMEDS.	Increase the completeness % of MVC Cause on Injury data in eMEDS from 92% in 2017 to 99% in 2025. BASELINE GOAL		See Appendix 9.
	Integration	Increase the percent of eMEDS that match existing records within Chesapeake Regional Information System for Patients (CRISP, the State's health information exchange).	*# of eMEDS records provided to CRISP resulted in a match of a record within CRISP. BASELINE is 81%. GOAL is to maintain 81% or greater during the current SFY.		See Appendix 9.

			<p>*BASELINE is 81%.</p> <p>*GOAL is to maintain 81% or greater during the current SFY.</p>		
	Timeliness	Reduce the amount of time from unit dispatch until an eMEDS® record is properly marked completed by the clinician.	The statewide GOAL is to have an eMEDS® report properly marked completed within 24 hours or less of a unit's dispatch. A per jurisdiction BASELINE will be established and measured monthly with a jurisdictional GOAL of 95% of all calls being properly marked complete within 24 hours or less.		See Appendix 9.

Trauma Registry		Performance Measure Statement	Measure, BASELINE, GOAL		Outcome
Trauma Registry	Availability	Ensure that all data access requests for Maryland Trauma Registry (MTR) data/information are reviewed for appropriateness (non-confidentiality adherence) and follow up communication provided within 30 days.	<p>*# of Data Access Committee (DAC) related approved MTR data requests are followed up on within 30 days.</p> <p>*BASELINE is 95%.</p> <p>*GOAL is to maintain 95% or greater during the current SFY.</p>		See Appendix 9.

<p>Accuracy</p>	<p>Code of Maryland Regulations (COMAR) 30.08.05.21.1 - Inter-Rater Reliability (IRR) monitoring of the trauma data entered into the MTR to ensure the quality, reliability, and validity.</p>	<p>*COMAR 30.08.05.21.1 - The Trauma Registry shall have a plan to ensure IRR of the data entered into the MTR at individual trauma centers. Ongoing review and evaluation shall ensure the quality, reliability, and validity of the institution’s MTR registry data. *A State BASELINE for IRR (15-20 trauma center records monthly) will be determined over the current SFY; *The minimum GOAL is 95% and a 99% stretch, to assess accuracy gaps at the data abstraction level.</p>		<p>See Appendix 9.</p>
<p>Completeness</p>	<p>Reduce the % of missing/unknown values in data elements (Patient Age-years, Glasgow Coma Score, Systolic Blood Pressure, Injury Severity Score) used for the calculation of</p>	<p>*Utilize the report, “Percent Date Completeness for Specific Data Elements” to identify qualifying records which TRISS elements are below a BASELINE of 86%. The GOAL is</p>		<p>See Appendix 9.</p>

	Trauma Injury Severity Scores (TRISS).	95% for all elements, during the current SFY. *BASELINE is below 86% *The GOAL is 95% for all elements, during the current SFY.		
Integration	Maryland trauma center submissions to the National Trauma Data Bank (NTDB) are included in the overall NTDB data repository.	Yearly comparisons of Maryland trauma centers with the rest of NTDB submittals nationwide. The BASELINE was Calendar Years 2010-2015 and comparing years thereafter to BASELINE and current year. Any differences that MIEMSS deems necessary will be investigated further.		See Appendix 9.
	Measure the percent of Maryland Trauma Registry (MTR) that match existing records within Chesapeake Regional Information System for Patients (CRISP, the State's health information exchange).	*# of MTR records provided to CRISP resulted in a match of a record within CRISP. *BASELINE is [TBD]%. *GOAL is to maintain [TBD]% or greater during the current SFY		

	Timeliness	Verification of trauma records no later than 6 weeks after the end of each quarter.	*All trauma patient records shall be submitted both quarterly and annually. Verification of counts and data element completeness shall be within six weeks after the end of each quarter. *The GOAL is 100%.		See Appendix 9.
	Uniformity	Ensure Maryland Trauma Registry (MTR) compliance with the National Trauma Data Bank (NTDB) standard data elements and responses through successful periodic submission to NTDB.	*Each trauma center submits directly to the NTDB. MIEMSS currently does not receive feedback about the # of records successfully submitted on the first round. We are exploring a way to obtain this data over the current SFY. * The GOAL is 95%.		See Appendix 9.

ED/Inpatient Records		Performance Measure Statement	Measure, BASELINE, GOAL		Outcome
ED/Inpatient Records	Availability	Increase the # of users that report successfully accessing emergency department or inpatient discharge data for research purposes.	•Increase the percent of data users to 85% from approx. 85 requests/year by 2021. Note: working with CRISP and other partners on this task-		No reported updates.

		the outcome would be potentially more research done using hospital discharge data.		
Accuracy	Minimize the # of resubmissions for error corrections each quarter.	<ul style="list-style-type: none"> Reduce the error threshold from 10 % to 5 % for final quarterly submissions by 2022 (to be effective January 2021). BASELINE: GOAL:		No reported updates.
Completeness	Reduce the % of missing/unknown values in data elements that do not have a state-level validation rule.	<ul style="list-style-type: none"> Reduce the percent of errors for important variables by 2-3% from an average of 6%. BASELINE: GOAL:		No reported updates.
Integration	Increase the % of records with a traffic crash E-code and MAIS>1 that link to crash reports. Increase the % of records with an EMS transport that link to the EMS file.	BASELINE: GOAL:		No reported updates.
Timeliness	Reduce the # of days from the end of the quarter to when the file is ready for research/dissemination.	<ul style="list-style-type: none"> Reduce data processing time by 5 days by streamlining processing programs and edit checks July 2020, October 2020 and January 2021 - 		No reported updates.

		Data can be shared with external users sooner.		
Uniformity	Increase compliance with the most recent Uniform Billing Standard.	BASELINE: GOAL:		No reported updates.

Training and Administration		Performance Measure Statement	Measure, BASELINE, GOAL	Outcome
Training and Administration		Increase the number of TRCC members who have completed the ATSIP TR 101 course.	Increase the number of TRCC members who have completed the ATSIP TR 101 course from 0 to 34 Baseline-0 Goal: 34 by 2030 (51% of total roster)	No reported updates.

Appendix 5: MIRE FDE

Project Evaluation: 49. MIRE fundamental data elements

Describe actions the State will take moving forward to meet the requirement to have complete access to the MIRE fundamental data elements on all public roads by September 30, 2026.

- MDOT SHA has implemented Esri's Roads and Highways (R&H) software to manage our GIS roadway and LRS data for HPMS submission. This year MDOT SHA used Roads and Highways for their HPMS submission. With the Intersection Manager tool, our ability to better manager intersection data, and data gaps, we will be able to be 100 percent compliant by 2026.
- In conjunction with the Esri R&H implementation, we also began the One Maryland, One Centerline (OMOC) program where MDOT SHA has met with all 23 counties, and Baltimore City, to discuss the sharing of data between jurisdictions via one common geometry, maintained by the appropriate authority. We have begun a pilot conflation process between MDOT SHA and two county jurisdictions to test process and develop the protocols that will be used for the integration of the remaining counties of Maryland. This geometry will be the base of the R&H data model. This data sharing and cooperation between the local and state jurisdictions will better allow us to identify and fill data gaps, with the appropriate, authoritative information.
- FHWA has authorized several pilots to investigate developing methodologies to more accurately calculate local AADTs for lower functionally classified roadways. MIRE FDEs require this type of data, while the local jurisdictions do not have the wherewithal nor need to completely capture and maintain this type of data. Therefore, the need to develop better proxies or models to better estimate these AADTs for local roads is an ongoing FHWA investigation.

MIRE NAME (MIRE NO.)	NON-LOCAL PAVED ROADS SEGMENT		NON-LOCAL PAVED ROADS INTERSECTION		NON-LOCAL PAVED ROADS - RAMPS		LOCAL ROADS PAVED		UNPAVED ROADS		
	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	
ROADWAY SEGMENT											
Segment Identifier (12)	100	100					100	100	100	100	
Route Number (8)	100	100									

MIRE NAME (MIRE NO.)	NON-LOCAL PAVED ROADS SEGMENT		NON-LOCAL PAVED ROADS INTERSECTION		NON-LOCAL PAVED ROADS - RAMPS		LOCAL ROADS PAVED		UNPAVED ROADS	
	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
Route/Street Name (9)	100	100								
Federal Aid/Route Type (21)	100	100								
Rural/Urban Designation (20)	100	100					100	100		
Surface Type (23)	100	100					100	100		
Begin Point Segment Descriptor (10)	100	100					100	100	100	100
End Point Segment Descriptor (11)	100	100					100	100	100	100
Segment Length (13)	100	100								
Direction of Inventory (18)	100	100								
Functional Class (19)	100	100					100	100	100	100
Median Type (54)	100	100								
Access Control (22)	100	100								
One/Two Way Operations (91)	100	100								

	NON-LOCAL PAVED ROADS SEGMENT		NON-LOCAL PAVED ROADS INTERSECTION		NON-LOCAL PAVED ROADS - RAMPS		LOCAL ROADS PAVED		UNPAVED ROADS		
	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	
MIRE NAME (MIRE NO.)											
Number of Through Lanes (31)	100	90					100	90			
Average Annual Daily Traffic (79)	100	98					50	0			
AADT Year (80)	100	100									
Type of Governmental Ownership (4)	100	100					100	100	100	100	
INTERSECTION											
Unique Junction Identifier (120)			100	100							
Location Identifier for Road 1 Crossing Point (122)			100	100							
Location Identifier for Road 2 Crossing Point (123)			100	100							
Intersection/Junction Geometry (126)			85	85							
Intersection/Junction Traffic Control (131)			50	50							
AADT for Each Intersecting Road (79)			25	25							

MIRE NAME (MIRE NO.)	NON-LOCAL PAVED ROADS SEGMENT		NON-LOCAL PAVED ROADS INTERSECTION		NON-LOCAL PAVED ROADS - RAMPS		LOCAL ROADS PAVED		UNPAVED ROADS	
	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
AADT Year (80)			25	25						
Unique Approach Identifier (139)			75	75						
INTERCHANGE/RAMP										
Unique Interchange Identifier (178)					100	100				
Location Identifier for Roadway at Beginning of Ramp Terminal (197)					100	100				
Location Identifier for Roadway at Ending Ramp Terminal (201)					100	100				
Ramp Length (187)					100	100				
Roadway Type at Beginning of Ramp Terminal (195)					100	100				
Roadway Type at End Ramp Terminal (199)					100	100				
Interchange Type (182)					100	100				
Ramp AADT (191)					100	100				

MIRE NAME (MIRE NO.)	NON-LOCAL PAVED ROADS SEGMENT		NON-LOCAL PAVED ROADS INTERSECTION		NON-LOCAL PAVED ROADS - RAMPS		LOCAL ROADS PAVED		UNPAVED ROADS	
	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
Year of Ramp AADT (192)					100	100				
Functional Class (19)					100	100				
Type of Governmental Ownership (4)					100	100				
Totals (Average Percent Complete):	100.00	100.00	72.5	72.5	100.00	100.00	89.44	87.78	100.00	100.00

Appendix 6: Maryland's Traffic Safety Information System Improvement Program (FFY2026)

Problem Identification

Hardware, software, personnel, and procedures that capture, store, transmit, analyze, and interpret traffic safety data are critical components to Maryland's traffic records system. The datasets managed by this system include crash, driver licensing and history, vehicle registration and titling, commercial motor vehicle, roadway, injury control, citation/adjudication, and EMS/trauma registry data.

Maryland employs a two-tiered Traffic Records Coordinating Committee (TRCC), with both General (or technical) and Executive Councils, comprised of data owners, data managers, and data users with oversight and interest in the datasets listed above. MHSO staff serves on the TRCC General Council and subcommittees, and advises the TRCC Executive Council, which oversees and approves the Maryland Traffic Records Strategic Plan (TRSP).

The MHSO's Traffic Records Program Manager coordinates updates to TRSP and leads the implementation of recommendations provided in the 2019 and 2024 NHTSA Traffic Records Assessments, including the development of performance measures for all six systems in the traffic records system. The current TRSP (2021–2025) is aligned with the 2021–2025 Maryland Strategic Highway Safety Plan (SHSP), and members from both the Executive and Technical Councils frequently discuss related topics and meet twice a year in back-to-back meetings. The Traffic Records Program Manager serves as a Data Strategy Lead and/or Action Step Lead for all SHSP Emphasis Area Teams (EATs). Maryland is currently working on the development of the 2026-2030 plan.

Solution

The accurate collection and timely dissemination of traffic records information are crucial to ensuring positive results from projects and strategies within the five-year plan. Data elements form the informational backbone for all the MHSO's programs and the SHSP itself. All activities, from enforcement to education, rely on good data, and the MHSO's focus is to provide effective data support and analysis for programs that can help the State meet traffic safety goals in reducing crashes and resulting injuries and fatalities.

Maryland's Traffic Records Executive Council's leadership goal is to develop a comprehensive statewide traffic records system that provides traffic safety professionals with reliable, accurate, and timely data to inform decisions and actions for implementing proven countermeasures and managing and evaluate safety activities to resolve traffic safety problems. The traffic records system encompasses the hardware, software, personnel, and procedures that capture, store, transmit, analyze, and interpret traffic safety data. This system is used to manage basic crash data from all law enforcement agencies, along with information on driver licensing and history, vehicle registration and titling, commercial motor vehicles, roadways, injury control efforts, citation and adjudication activities, and the EMS/trauma registry.

Maryland's Traffic Records Executive Council provides policy leadership to the TRCC and its efforts to continually review and assess the status of Maryland's traffic safety information system and its components. The TRCC oversees the development and update of the Traffic Records Strategic Plan to

serve public- and private-sector needs for traffic safety information, to identify technologies and other advancements necessary to improve the system, and to support the coordination and implementation of system improvements.

The MHSO participates on all levels of the TRCC through its own staff and through a grant-funded project at the National Study Center for Trauma and EMS (NSC) called the Maryland Center for Traffic Safety Analysis (MCTSA), a more comprehensive, expert staff-based approach to provide services based on the Crash Outcome Data Evaluation System (CODES) and other traffic records data and to meet the wide and varied needs of the MHSO and its partners.

MHSO staff members work with subject matter experts from the MCTSA project to help manage the TRSP, and the MHSO continues the CODES program. These are some of the ways in which the MHSO relies on its many partner agencies to make data accessible for highway safety planning, as it employs various systems and programs, with the help of State agencies and grantees, to collect, maintain and analyze internal data information.

The mission to provide data and analytical support to traffic safety professionals at the local, State, regional, and national levels drive the direction of the Traffic Records Program. Projects to be considered for funding by the Traffic Safety Information System Improvement Program must adhere to goals and objectives within the TRSP and provide support for the data needs of the traffic records community.

Action Plan

Traffic safety information system projects funded for FFY 2024 are listed below, each referencing the TRSP strategy and the NHTSA Traffic Records Program Assessment recommendation addressed:

Proposed Projects

Project Agency: Maryland Highway Safety Office (Staffing: Traffic Records Program Manager)
Program Area: Traffic Records Project Funds / Type: 405C
Countermeasures: Support for safety program areas that cite NHTSA Countermeasures That Work (2023, 11th Edition) in the Annual Grant Application.
SHSP Strategies: <ul style="list-style-type: none"> • Use the collection, analysis and evaluation of data on all roads in Maryland to identify distracted driving safety issues, target audiences and locations of concern, as well as support the improvement of the data quality (timeliness, accuracy, completeness, uniformity, accessibility, integration). • Use the collection, analysis and evaluation of data on all roads in Maryland to identify impaired by alcohol and drugged driving emphasis area safety issues, target audiences and locations of concern, as well as support the improvement of data quality (timeliness, accuracy, completeness, uniformity, accessibility, integration) of impaired driving related data. • Use the collection, analysis and evaluation of data on all roads in Maryland to identify occupant protection (OP) safety issues, target audiences and locations of concern, as well as support the improvement of the data quality (timeliness, accuracy, completeness, uniformity, accessibility, and integration).

- Use the collection, analysis and evaluation of data on all roads in Maryland to identify pedestrian and bicycle safety issues, target audiences and locations of concern, as well as support the improvement of the data quality (timeliness, accuracy, completeness, uniformity, accessibility, and integration).
- Use the collection, analysis and evaluation of data on all roads in Maryland to identify speed and aggressive driving related issues, target audiences and locations of concern, as well as support the improvement of the data quality (timeliness, accuracy, completeness, uniformity, accessibility, integration).

TRSP Strategies:

- Prioritize strategic plan responsibilities using annual timelines.
- Catalog and publish data release policies and/or data sharing agreements from all partners with traffic records data, specifically identifying rules that allow intra- and inter-agency access, and public access.
- Review and prioritize federal data element requirements—Model Minimum Uniform Crash Criteria Guideline (MMUCC), National Emergency Medical Services (EMS) Information System (NEMSIS), and Model Inventory of Roadway Elements (MIRE)—to enhance State traffic records data improvement systems.
- Institutionalize the evaluation of TRCC responsibilities:
 - Monitor annual progress of the TRCC strategic plan.
 - Track agency policy decisions that impact the State’s traffic records system.
 - Document progress through Council Meeting agendas/minutes.
- Improve performance measure monitoring and oversight at the TRCC. Assign responsibility to performance measure owners for reporting to the membership at each meeting.
- Establish regular quality control reporting and enhance the review of technical and training needs of traffic records system end users, expanding to a wider range of stakeholders and end-user needs.
- Ensure the annual addenda to the five-year plan are robust and detailed enough to meet the federal grant reporting requirements and provide the State with the necessary oversight and monitoring of its traffic records systems progress.
- Improve performance measures contained within the Strategic Plan by adding meaningful goals and baselines in addition to establishing quarterly monitoring at the TRCC.

Assessment Recommendation:

- Strengthen the TRCC’s abilities for strategic planning that reflect best practices identified in the Traffic Records Program Assessment Advisory.

Project Description: Funds are used to staff one full-time position at the Maryland Highway Safety Office to be the Statewide Traffic Records Coordinator.

Project Agency: Crash Center for Research and Education (CORE)

Program Area: Traffic Records

Project Funds / Type: 405C

Countermeasures: Support for safety program areas that cite NHTSA Countermeasures That Work (2023, 11th Edition) in the Annual Grant Application.

SHSP Strategies:

- Use the collection, analysis and evaluation of data on all roads in Maryland to identify distracted driving safety issues, target audiences and locations of concern, as well as support the

improvement of the data quality (timeliness, accuracy, completeness, uniformity, accessibility, integration).

- Use the collection, analysis and evaluation of data on all roads in Maryland to identify impaired by alcohol and drugged driving emphasis area safety issues, target audiences and locations of concern, as well as support the improvement of data quality (timeliness, accuracy, completeness, uniformity, accessibility, integration) of impaired driving related data.
- Use the collection, analysis and evaluation of data on all roads in Maryland to identify occupant protection (OP) safety issues, target audiences and locations of concern, as well as support the improvement of the data quality (timeliness, accuracy, completeness, uniformity, accessibility, and integration).
- Use the collection, analysis and evaluation of data on all roads in Maryland to identify pedestrian and bicycle safety issues, target audiences and locations of concern, as well as support the improvement of the data quality (timeliness, accuracy, completeness, uniformity, accessibility, and integration).
- Use the collection, analysis and evaluation of data on all roads in Maryland to identify speed and aggressive driving related issues, target audiences and locations of concern, as well as support the improvement of the data quality (timeliness, accuracy, completeness, uniformity, accessibility, integration).

TRSP Strategies:

- Provide ongoing access to traffic records data and analytic resources for problem identification, priority setting, and program evaluation with analytical partner support.
- Integrate data from traffic records component systems to satisfy specific analytical inquires.
- Provide timely access to data analyses and interpretation upon request.
- Make outputs from state data linkage systems available to state and local decision-makers to influence data-driven policy and reform.
- Make outputs from state data linkage systems available to the general public.
- Make integrated data outputs from data linkage systems available for research abiding by data security agreements.
- Provide training sessions, presentations, webinars, and technical support to partners on all products and services provided by analysis resources (e.g., grant-funded university- or college-based analysts) in addition to GIS techniques and processes for traffic safety related datasets.
- Develop improved data visualization tools used to access the crash data.

Assessment Recommendation:

- Improve the data quality control program for the Crash data system to reflect best practices identified in the Traffic Records Program Assessment Advisory.
- Improve the data quality control program for the Citation and Adjudication systems to reflect best practices identified in the Traffic Records Program Assessment Advisory.
- Improve the interfaces with the Citation and Adjudication systems that reflect best practices identified in the Traffic Records Program Assessment Advisory.

Project Description: Epidemiologic Support for Traffic Safety Research

Project Agency: Maryland Department of State Police (MDSP)
Program Area: Traffic Records
Project Funds / Type: SEDC
Countermeasures: Support for safety program areas that cite NHTSA Countermeasures That Work (2023, 11th Edition) in the Annual Grant Application.
<p>SHSP Strategies:</p> <ul style="list-style-type: none"> • Use the collection, analysis and evaluation of data on all roads in Maryland to identify distracted driving safety issues, target audiences and locations of concern, as well as support the improvement of the data quality (timeliness, accuracy, completeness, uniformity, accessibility, integration). • Use the collection, analysis and evaluation of data on all roads in Maryland to identify impaired by alcohol and drugged driving emphasis area safety issues, target audiences and locations of concern, as well as support the improvement of data quality (timeliness, accuracy, completeness, uniformity, accessibility, integration) of impaired driving related data. • Use the collection, analysis and evaluation of data on all roads in Maryland to identify occupant protection (OP) safety issues, target audiences and locations of concern, as well as support the improvement of the data quality (timeliness, accuracy, completeness, uniformity, accessibility, and integration). • Use the collection, analysis and evaluation of data on all roads in Maryland to identify pedestrian and bicycle safety issues, target audiences and locations of concern, as well as support the improvement of the data quality (timeliness, accuracy, completeness, uniformity, accessibility, and integration). • Use the collection, analysis and evaluation of data on all roads in Maryland to identify speed and aggressive driving related issues, target audiences and locations of concern, as well as support the improvement of the data quality (timeliness, accuracy, completeness, uniformity, accessibility, integration).
<p>TRSP Strategies:</p> <ul style="list-style-type: none"> • Provide a narrative description of the process by which the Model Minimum Uniform Crash Criteria Guideline (MMUCC) was used to identify what crash data elements and attributes are included in the crash database and police crash report. • Develop and release documentation on changes made to the Automated Crash Reporting System (ACRS) and related databases based on the latest MMUCC recommendations, and MSP and TRCC input. • Convert reporting systems and reports to account for changes in fields, codes, and definitions in ACRS. • Develop and maintain a data dictionary that includes American National Standards Institute (ANSI) D-16 and ANSI D-20 definitions, which include rules of use, rules exceptions, and identify those data elements that are populated through linkages to other traffic records system components. • Develop and maintain a comprehensive data quality management protocol to monitor collection, submission, processing, posting, and maintenance of crash data. • Define and provide a list of data elements for property-damage-only (PDO) crash submission criteria for the statewide crash system and implement a short-form crash report for minor PDO crashes • Define and provide a list of data elements that are populated in the crash system through linkages to other traffic records system components (e.g., the driver file, the vehicle file, the roadway inventory, or Statewide mapping system). (MMUCC mapping).

<ul style="list-style-type: none"> • Develop crash data system performance measures and monitor at least annually. • Provide feedback to law enforcement agencies regarding incomplete and inaccurate data submitted through ACRS. • Develop a comprehensive crash data reporting training program with an emphasis on crash data completeness and accuracy. • Improve the interface between the crash and roadway data systems, ensuring MSP and law enforcement agencies have the most up-to-date roadway files from MDOT SHA. • Establish policy and procedures for the timely submission of crash reports from local law enforcement agencies to MSP through the ACRS system. • Incorporate federal agency crash reports into the state system (e.g., National Park Police). • Link crash data with EMS records to help integrate crash with Trauma Registry, Hospital, and Vital Records. • Develop improved data visualization tools used to access the crash data.
<p>Assessment Recommendation:</p> <ul style="list-style-type: none"> • Improve the data quality control program for the Crash data system to reflect best practices identified in the Traffic Records Program Assessment Advisory.
<p>Project Description: 2026 SEDC Project</p>

<p>Project Agency: Washington College GIS Program</p>
<p>Program Area: Traffic Records</p> <p>Project Funds / Type: 405C</p>
<p>Countermeasures: Support for safety program areas that cite NHTSA Countermeasures That Work (2023, 11th Edition) in the Annual Grant Application.</p>
<p>SHSP Strategy:</p> <ul style="list-style-type: none"> • Use the collection, analysis, and evaluation of data on all roads in Maryland to identify distracted driving safety issues, target audiences and locations of concern, as well as support the improvement of the data quality (timeliness, accuracy, completeness, uniformity, accessibility, integration). • Use the collection, analysis, and evaluation of data on all roads in Maryland to identify impaired by alcohol and drugged driving emphasis area safety issues, target audiences and locations of concern, as well as support the improvement of data quality (timeliness, accuracy, completeness, uniformity, accessibility, integration) of impaired driving related data. • Use the collection, analysis, and evaluation of data on all roads in Maryland to identify occupant protection (OP) safety issues, target audiences and locations of concern, as well as support the improvement of the data quality (timeliness, accuracy, completeness, uniformity, accessibility, and integration). • Use the collection, analysis, and evaluation of data on all roads in Maryland to identify pedestrian and bicycle safety issues, target audiences and locations of concern, as well as support the improvement of the data quality (timeliness, accuracy, completeness, uniformity, accessibility, and integration). • Use the collection, analysis, and evaluation of data on all roads in Maryland to identify speed and aggressive driving related issues, target audiences and locations of concern, as well as support the improvement of the data quality (timeliness, accuracy, completeness, uniformity, accessibility, integration).
<p>TRSP Strategies:</p>

- Provide ongoing access to traffic records data and analytic resources for problem identification, priority setting, and program evaluation with analytical partner support.
- Integrate data from traffic records component systems to satisfy specific analytical inquires.
- Provide timely access to data analyses and interpretation upon request.
- Make outputs from state data linkage systems available to state and local decision-makers to influence data-driven policy and reform.
- Make outputs from state data linkage systems available to the general public.
- Make integrated data outputs from data linkage systems available for research abiding by data security agreements.
- Provide training sessions, presentations, webinars, and technical support to partners on all products and services provided by analysis resources (e.g., grant-funded university- or college-based analysts) in addition to GIS techniques and processes for traffic safety related datasets.
- Develop improved data visualization tools used to access the crash data.

Assessment Recommendations:

1. Improve the data quality control program for the Crash data system to reflect best practices identified in the Traffic Records Program Assessment Advisory.
2. Improve the data quality control program for the Citation and Adjudication systems to reflect best practices identified in the Traffic Records Program Assessment Advisory.
3. Improve the interfaces with the Citation and Adjudication systems that reflect best practices identified in the Traffic Records Program Assessment Advisory.

Project Description: Traffic Safety Geospatial Analysis and Applications

Evaluation

Goals are prioritized for appropriate components of the traffic records information system, with objectives developed based on the periodic assessments, ongoing TRCC evaluation and input, and other state agency-identified needs. The TRCC sets performance measures for priority objectives identified in the TRSP, which are reviewed regularly throughout each year. Systems are evaluated for quantitative progress, such as improved timeliness and completeness, with reports submitted to NHTSA at least annually. Additionally, MHSO grants are evaluated during and after implementation through grantee reporting using proven process evaluation measures.

Appendix 7: Performance Measures Annual Progress Calculations (FFY2026)

1. Crash Data: Accuracy: The percentage of crash locations within the state of Maryland and within the jurisdictions.

This is a measure of the GPS Coordinates assigned by law enforcement in the Automated Crash Reporting System (ACRS). A review of points withing the boundaries of the state of Maryland and within the jurisdictions where the crash occurred was calculated using the public download tool provided by the Maryland State Police and run by the Washington College GIS Program.

Improvement Calculated: 0.22% increase in GPS locations within the boundaries of Maryland; .56% decrease within police station buffers.

April 1, 2023 to March 31st, 2024		
	Count	Percent
Total Crashes	110,268	100%
Within Maryland Boundary (+ Bridges/Tunnels)	110,004	99.76%
Outside Of Maryland Boundary	264	0.24%
Within Maryland Waterways	50	0.05%
Within Police Buffers	718	0.65%

April 1, 2024 to March 31st, 2025		
	Count	Percent
Total Crashes	105,242	100%
Within Maryland Boundry (+ Bridges/Tunnels)	105,226	99.98%
Outside Of Maryland Boundary	16	0.02%
Within Maryland Waterways	11	0.01%
Within Police Buffers	97	0.09%

April 1st - December 31st 2023 Crashes within police buffers	696
January 1st - March 31'st 2024 Crashes within police buffers	22

2. Citation Data:

a. Completeness, Stops Within Maryland Boundary: 4.89% increase

Citations					
April 1, 2022 to March 31st, 2023			April 1, 2023 to March 31st, 2024		
	Count	Percent		Count	Percent
Total Citations	618,145	100.00%	Total Citations	529,309	100.00%
Within Maryland Boundary (+ Bridges/Tunnels)	282,869	45.76%	Within Maryland Boundary (+ Bridges/Tunnels)	268,092	50.65%
Outside Of Maryland Boundary	248	0.04%	Outside Of Maryland Boundary	374	0.07%
Within Maryland Waterways	3	0.00%	Within Maryland Waterways	2	0.00%
No XY's	335,025	54.20%	No XY's	260,841	49.28%
Stops					
April 1, 2022 to March 31st, 2023			April 1, 2023 to March 31st, 2024		
	Count	Percent		Count	Percent
Total Stops	282,213	100.00%	Total Stops	256,025	100.00%
Within Maryland Boundary (+ Bridges/Tunnels)	139,492	49.43%	Within Maryland Boundary (+ Bridges/Tunnels)	128,950	50.37%
Outside Of Maryland Boundary	88	0.03%	Outside Of Maryland Boundary	180	0.07%
Within Maryland Waterways	3	0.00%	Within Maryland Waterways	2	0.00%
No XY's	142,630	50.54%	No XY's	126,893	49.56%

3. EMS Data:

1. Accuracy: MVC Cause of Injury Blanks: **.4 increase in blanks (did not meet).**

eMEDS records related to Motor Vehicle Crash (MVC) transports represent roughly 30% on average annually all injury transports. This category for EMS transport is second only to falls (45.6%). A cooperative relationship has been maintained between the Maryland Department of Transportation’s Highway Safety Office (MHSO), the TRCC, and the Maryland Institute for Emergency Medical Services Systems (MIEMSS) for the achievement of a mutually important common goal in the reduction of motor vehicle crash related patient morbidity and mortality. Additionally, both agencies value the importance of timely, complete, and accurate data as it pertains to the prehospital patient assessment, care, and outcome. However, data collection for all incident responses has become extensive and multi-faceted for responding personal with the growth of the electronic Maryland Emergency Medical Services Data System (eMEDS®).

Maryland EMS Operational Programs (EMSOP)	April 1, 2019 to March 30, 2020		April 1, 2020 to March 30, 2021		April 1, 2021 to March 30, 2022		April 1, 2022 to March 30, 2023		April 1, 2023 to March 30, 2024		April 1, 2024 to March 30, 2025	
	Total Potential MVC Exports	% Potential MVC Exports w/ "Blank" COI	Total Potential MVC Exports	% Potential MVC Exports w/ "Blank" COI	Total Potential MVC Exports	% Potential MVC Exports w/ "Blank" COI	Total Potential MVC Exports	% Potential MVC Exports w/ "Blank" COI	Total Potential MVC Exports	% Potential MVC Exports w/ "Blank" COI	Total Potential MVC Exports	% Potential MVC Exports w/ "Blank" COI
B	400	6.0%	337	7.4%	368	1.9%	389	2.1%	394	2.0%	806	2.1%
BA	5,122	32.5%	3,074	31.3%	3,907	31.7%	4,568	31.9%	4,848	28.4%	4,506	30.2%
BB	1,459	13.8%	1,102	14.4%	1,178	9.8%	1,495	6.8%	1,470	8.6%	1,316	6.8%
BC	6,494	46.2%	4,357	43.3%	4,566	44.5%	4,756	42.3%	5,325	42.3%	5,247	44.5%
D	904	6.2%	655	13.1%	772	3.1%	756	4.0%	870	4.7%	442	3.2%
E	236	8.1%	201	8.5%	163	3.7%	241	1.2%	252	1.6%	212	4.7%
F	638	11.1%	501	11.4%	452	11.3%	517	6.8%	534	7.5%	511	8.2%
G	1,300	10.8%	800	13.4%	875	6.3%	1,153	8.3%	1,105	7.1%	1,140	7.7%
I	1,149	11.3%	844	13.2%	924	9.2%	1,155	6.1%	1,186	7.5%	1,271	5.8%
J	948	10.0%	691	11.9%	710	8.0%	843	9.1%	809	9.9%	819	8.9%
K	5,808	15.5%	4,495	16.0%	4,982	11.2%	5,297	9.3%	5,303	11.2%	5,360	10.8%
L	205	3.4%	177	5.1%	161	3.1%	180	2.8%	194	1.0%	196	2.0%
M	994	13.2%	779	13.5%	831	13.5%	928	8.2%	1,000	7.9%	1,032	7.6%
N	189	12.7%	154	9.1%	95	6.3%	170	4.1%	176	1.1%	164	4.3%
O	438	7.5%	313	9.6%	349	4.0%	383	3.7%	389	3.3%	400	4.8%
Q	819	2.4%	806	4.8%	595	0.3%	757	0.4%	843	0.2%	820	0.1%
R	650	11.2%	412	16.3%	475	6.5%	636	5.5%	664	5.3%	738	6.4%
S	271	12.9%	187	9.1%	269	3.3%	272	3.7%	335	5.1%	262	2.7%
T	114	8.8%	75	13.3%	78	6.4%	74	1.4%	113	6.2%	108	6.5%

U	437	26.5%	328	16.8%	174	17.2%	310	11.9%	334	6.3%	335	10.1%
V	251	9.6%	207	12.6%	224	5.4%	248	3.2%	267	4.1%	252	2.4%
W	907	9.9%	723	10.1%	613	2.4%	536	2.6%	671	3.1%	559	2.5%
X	5,400	17.1%	4,409	18.7%	4,193	15.3%	4,427	11.7%	4,350	12.6%	4,479	14.8%
Y	3,251	14.3%	2,241	16.9%	2,318	12.9%	2,631	10.6%	2,909	11.4%	3,061	9.1%
Z	93	8.6%	78	20.5%	68	2.9%	79	3.8%	76	6.6%	79	7.6%
Grand Total	38,477	21.5%	27,946	21.0%	29,340	18.4%	32,801	16.4%	34,417	16.8%	34,115	17.2%
Count <10%		9		7		17		20		20		20

4. MVA Driver Records: Submission to CDLIS

During the performance period (April 1, 2023 – March 31, 2024, compared to April 1, 2024 – March 31, 2025), MDOT MVA reports improvement in ten out of eleven AAMVA CDLIS data quality measures for which complete data are available. (Red = no progress.)

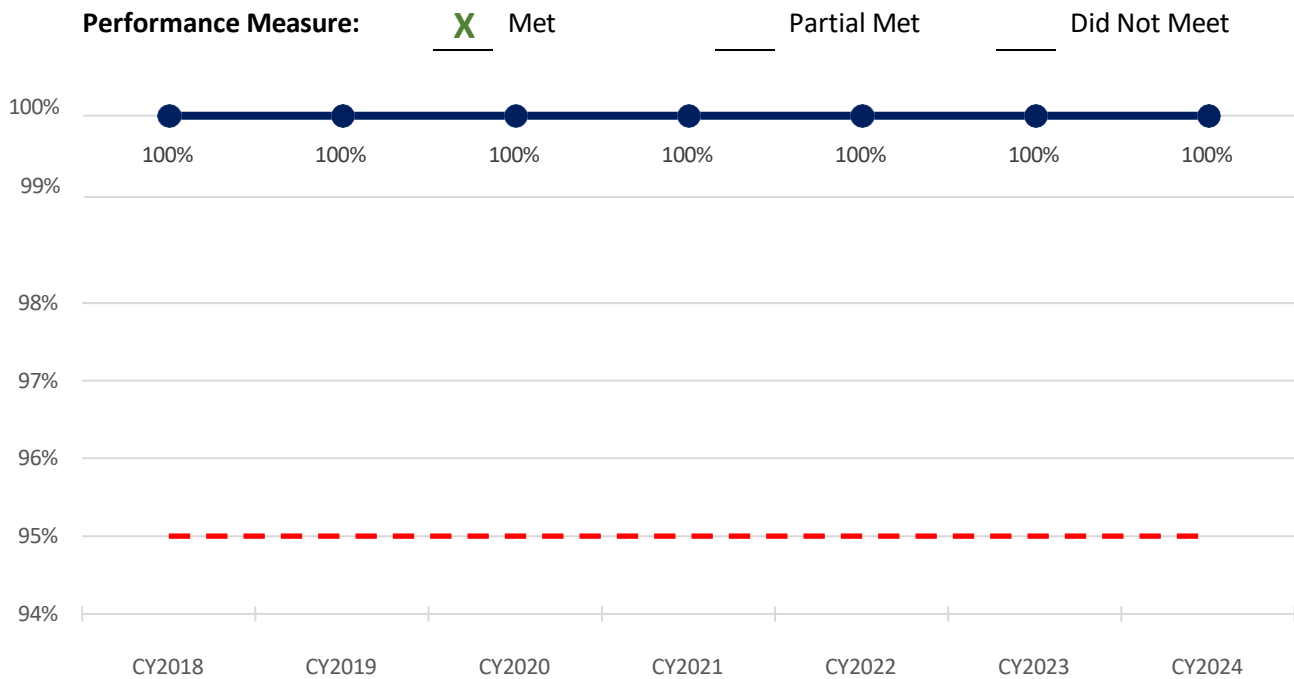
- Timeliness: % of convictions sent successfully within the 10-day federal time limit: increased by 0.9%
- Accuracy: % of conviction messages returned in error by the CDLIS Central Site: increased by 18.5%
- Timeliness: % of withdrawals sent successfully within the 10-day federal time limit: increased by 0.4%
- Accuracy: % of withdrawal messages returned in error by the CDLIS Central Site: No change.
- Accuracy: Number of Duplicates Resolved outside the 10-day federal time limit: increased by 30%
- Timeliness: Number of Transfers Resolved outside the 10-day federal time limit: decreased by 83.3%
- Accuracy: Number of history errors returned by the CDLIS Common Validation Processor: increased by 1035.5%
- Accuracy: % of messages sent to update MPR PII returned in error: decreased by 79.8%
- Accuracy: % of messages sent to update MPR SOR and ST/DLN returned in error: increased by 16.2%
- Accuracy: % of Pointer deletions messages returned in error: decreased by 3.6%
- Accuracy: % of Negate messages returned in error: increased by 405.6%

Measure	Baseline Period (4/21-3/22)	Prior Period (4/23-3/24)	Performance Period (4/24-3/25)	% Change from Prior Period	Improved?
Conviction Timeliness	88.11%	96.1%	97.0%	0.9%	Y
Conviction Error Rate	0.55%	0.42%	0.50%	18.5%	N
Withdrawal Timeliness	50.53%	92.6%	93.0%	0.4%	Y
Withdrawal Error Rate	30.08%	0.00%	0.9%	0.0%	N
Duplicate Resolution Timeliness	4.17	0.83	1.1	30.0%	N
Transfer Resolution Timeliness	2.92	3.50	0.6	-83.3%	Y
Data Quality of History	77.8	54.7	620.8	1035.7%	N
Data Quality of MPR PII	3.90%	0.69%	0.14%	-79.8%	Y
Data Quality of MPR SOR	2.60%	2.78%	3.23%	16.2%	N
Data Quality of Pointer Deletions	8.00%	0.162%	0.156%	-3.6%	Y
Data Quality of Negates	6.00%	0.31%	1.59%	405.6%	N

Appendix 8: Emergency Medical Systems (EMS) and Trauma Registry Performance Measures

ACCESSIBILITY

<u>Performance Measure Statement</u>	<u>Measure (Baseline/Goal)</u>
Ensure that all data access requests for electronic Maryland EMS Data System® (eMEDS® -- the State’s patient care reporting system) data/information are reviewed for appropriateness (non-confidentiality adherence) and follow up communication is provided within 30 days.	Number of Data Access Committee (DAC) related approved EMS data requests are followed up on within 30 days. Baseline is 95%. Goal is to maintain 95% or greater during the current CY.



Notes:

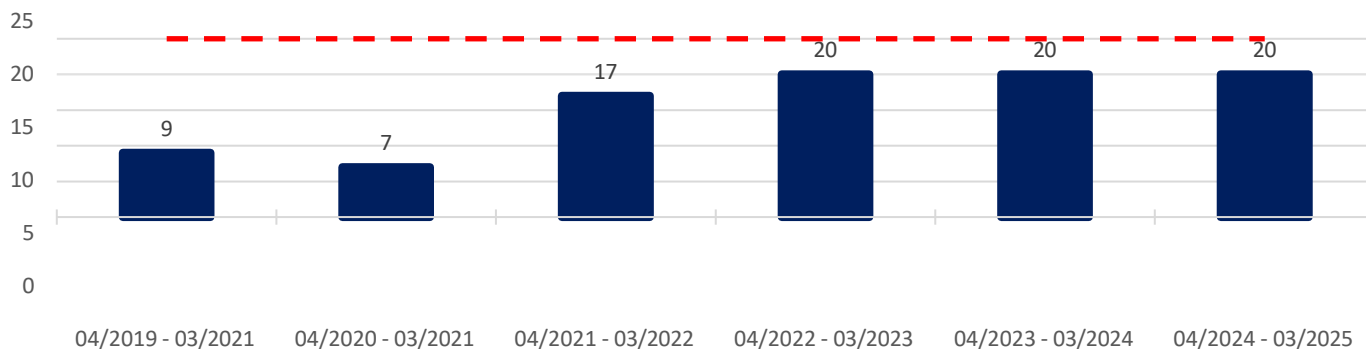
- Percentage Compliance Goal (95%+): Currently achieving 100%
- MIEMSS consistently meets this performance measure by providing approved data requests within the 30-day timeframe. Notably, MIEMSS staff begin collecting and preparing data while simultaneously working with requestors to finalize details (such as IRB approvals, payment processing, and agreement signatures), ensuring efficient delivery.

ACCURACY

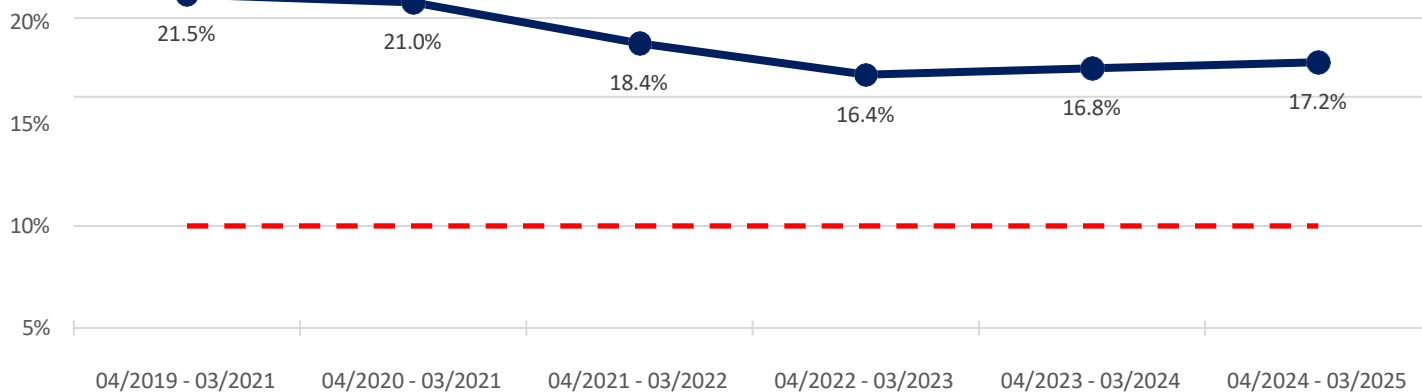
Performance Measure Statement	Measure (Baseline/Goal)
Reduce the percent of Potential Motor Vehicle Crash (MVC) Transports with “Blank” Cause of Injury responses: Statewide CY 2017 Baseline – 18%	Number of MVC dispatch code records with a “Blank” Cause of Injury over the total number MVC dispatch code records (by Emergency Medical Services Operational Program {EMSOP}). Baseline is 18% statewide average. Goal is to maintain an individual EMSOP average of 10% or less for all EMSOPS.

Performance Measure: Met Partial Met Did Not Meet

Count of EMSOPs Less Than 10%



State Average



Notes:

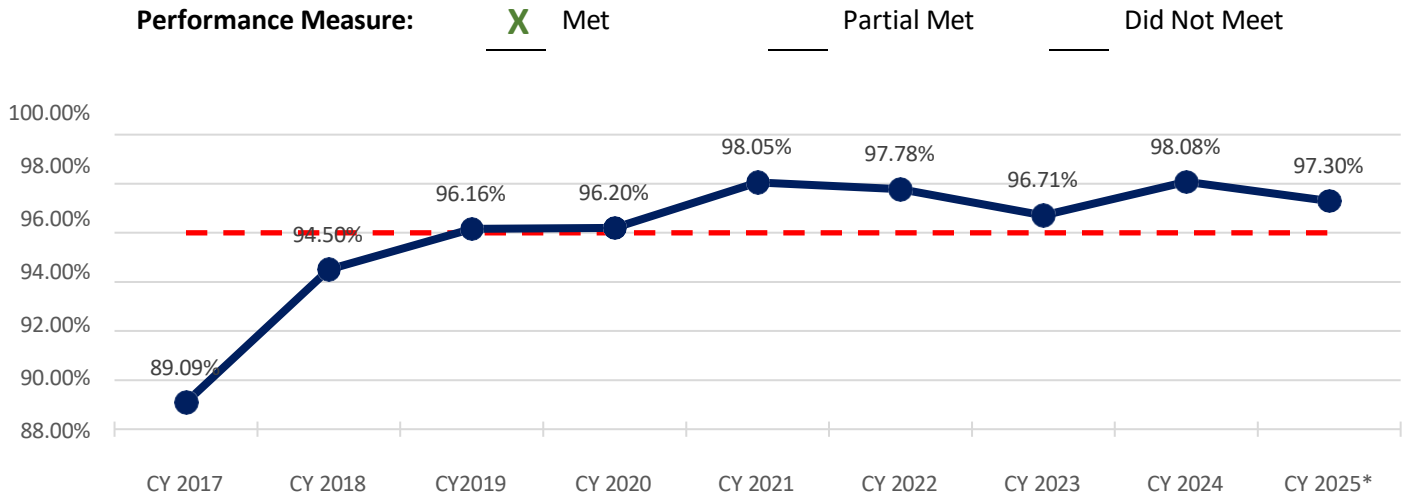
- Slight increase since 04/2022 reporting.

Maryland EMS Operational Programs (EMSOP)	April 1, 2019 to March 30, 2020		April 1, 2020 to March 30, 2021		April 1, 2021 to March 30, 2022		April 1, 2022 to March 30, 2023		April 1, 2023 to March 30, 2024		April 1, 2024 to March 30, 2025	
	Total Potential MVC Exports	% Potential MVC Exports w/ "Blank" COI	Total Potential MVC Exports	% Potential MVC Exports w/ "Blank" COI	Total Potential MVC Exports	% Potential MVC Exports w/ "Blank" COI	Total Potential MVC Exports	% Potential MVC Exports w/ "Blank" COI	Total Potential MVC Exports	% Potential MVC Exports w/ "Blank" COI	Total Potential MVC Exports	% Potential MVC Exports w/ "Blank" COI
B	400	6.0%	337	7.4%	368	1.9%	389	2.1%	394	2.0%	806	2.1%
BA	5,122	32.5%	3,074	31.3%	3,907	31.7%	4,568	31.9%	4,848	28.4%	4,506	30.2%
BB	1,459	13.8%	1,102	14.4%	1,178	9.8%	1,495	6.8%	1,470	8.6%	1,316	6.8%
BC	6,494	46.2%	4,357	43.3%	4,566	44.5%	4,756	42.3%	5,325	42.3%	5,247	44.5%
D	904	6.2%	655	13.1%	772	3.1%	756	4.0%	870	4.7%	442	3.2%
E	236	8.1%	201	8.5%	163	3.7%	241	1.2%	252	1.6%	212	4.7%
F	638	11.1%	501	11.4%	452	11.3%	517	6.8%	534	7.5%	511	8.2%
G	1,300	10.8%	800	13.4%	875	6.3%	1,153	8.3%	1,105	7.1%	1,140	7.7%
I	1,149	11.3%	844	13.2%	924	9.2%	1,155	6.1%	1,186	7.5%	1,271	5.8%
J	948	10.0%	691	11.9%	710	8.0%	843	9.1%	809	9.9%	819	8.9%
K	5,808	15.5%	4,495	16.0%	4,982	11.2%	5,297	9.3%	5,303	11.2%	5,360	10.8%
L	205	3.4%	177	5.1%	161	3.1%	180	2.8%	194	1.0%	196	2.0%
M	994	13.2%	779	13.5%	831	13.5%	928	8.2%	1,000	7.9%	1,032	7.6%
N	189	12.7%	154	9.1%	95	6.3%	170	4.1%	176	1.1%	164	4.3%
O	438	7.5%	313	9.6%	349	4.0%	383	3.7%	389	3.3%	400	4.8%
Q	819	2.4%	806	4.8%	595	0.3%	757	0.4%	843	0.2%	820	0.1%
R	650	11.2%	412	16.3%	475	6.5%	636	5.5%	664	5.3%	738	6.4%
S	271	12.9%	187	9.1%	269	3.3%	272	3.7%	335	5.1%	262	2.7%
T	114	8.8%	75	13.3%	78	6.4%	74	1.4%	113	6.2%	108	6.5%
U	437	26.5%	328	16.8%	174	17.2%	310	11.9%	334	6.3%	335	10.1%
V	251	9.6%	207	12.6%	224	5.4%	248	3.2%	267	4.1%	252	2.4%
W	907	9.9%	723	10.1%	613	2.4%	536	2.6%	671	3.1%	559	2.5%
X	5,400	17.1%	4,409	18.7%	4,193	15.3%	4,427	11.7%	4,350	12.6%	4,479	14.8%
Y	3,251	14.3%	2,241	16.9%	2,318	12.9%	2,631	10.6%	2,909	11.4%	3,061	9.1%
Z	93	8.6%	78	20.5%	68	2.9%	79	3.8%	76	6.6%	79	7.6%
Grand Total	38,477	21.5%	27,946	21.0%	29,340	18.4%	32,801	16.4%	34,417	16.8%	34,115	17.2%
Count <10%		9		7		17		20		20		20

COI: Cause of Injury

COMPLETENESS

<p>Performance Measure Statement Increase the number of eMEDS® records that employ the use of the Computer-Aided Dispatch (CAD) data interface downloads.</p>	<p>Measure (Baseline/Goal) Number of eMEDS® records with CAD downloads over the total number of records. Baseline is 96%. Goal is to maintain 96% or greater during the current CY.</p>
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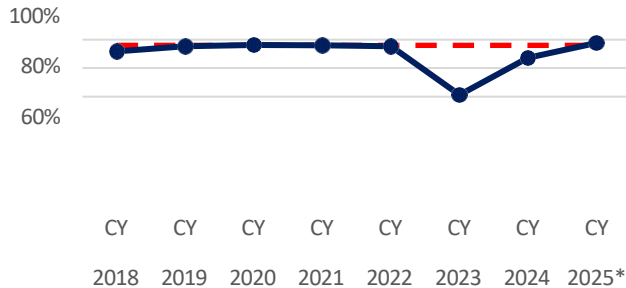


Note: *CY2025 only includes Qtr 1 data

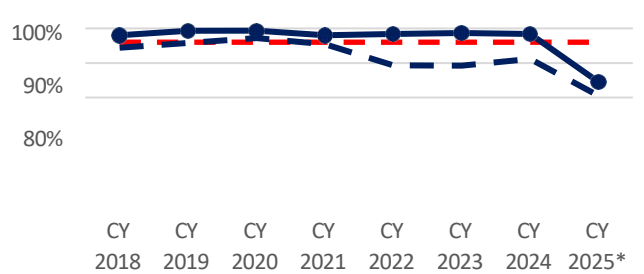
Notes:

- System reliability fluctuates due to county CAD system dependencies. Various factors impact performance, including regular system updates, vendor transitions, and external security vulnerabilities.

2023 EMSOP Detail



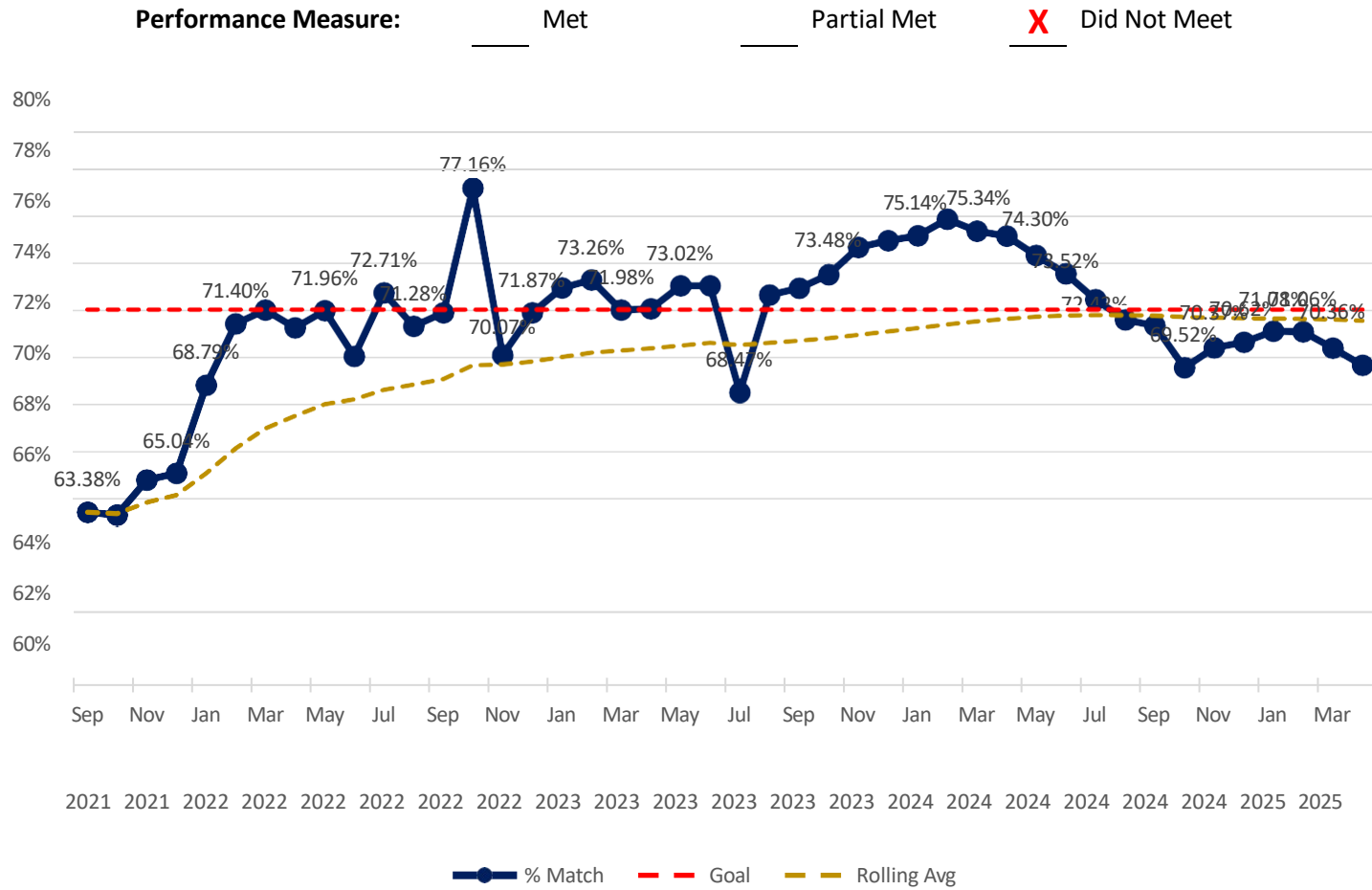
2025 EMSOP Detail



- Calendar Year 2023:
 - One EMSOP's transition to a new CAD vendor resulted in significant statewide decline in CAD Download utilization for eMEDS reports, falling below the EMSOP's historical average.
- Calendar Year 2025:
 - Expected performance decrease observed. One EMSOP experienced a "cyber incident of external origin" affecting their CAD system, which subsequently impacted the CAD Download functionality within eMEDS, causing statewide utilization to drop below the EMSOP's historical average.
- MIEMSS At Hospital Ambulances (@HA) Application: This custom application tracks ambulance activity at hospitals in real-time. For effective operation, jurisdictions must submit specific data points through their CAD feed to ImageTrend. A positive outcome has been that jurisdictions have enhanced their CAD data quality to support @HA, which simultaneously improves clinician utilization of CAD Download when completing Patient Care Reports. Access the dashboard at: <https://aha.miemss.org/dashboard>

INTEGRATION

<p>Performance Measure Statement Increase the percent of eMEDS that match existing records within Chesapeake Regional Information System for Patients (CRISP, the State’s health information exchange).</p>	<p>Measure (Baseline/Goal) Number of eMEDS records provided to CRISP that resulted in a match of a record within CRISP. Baseline is 72%. Goal is to maintain 72% or greater.</p>
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Notes:

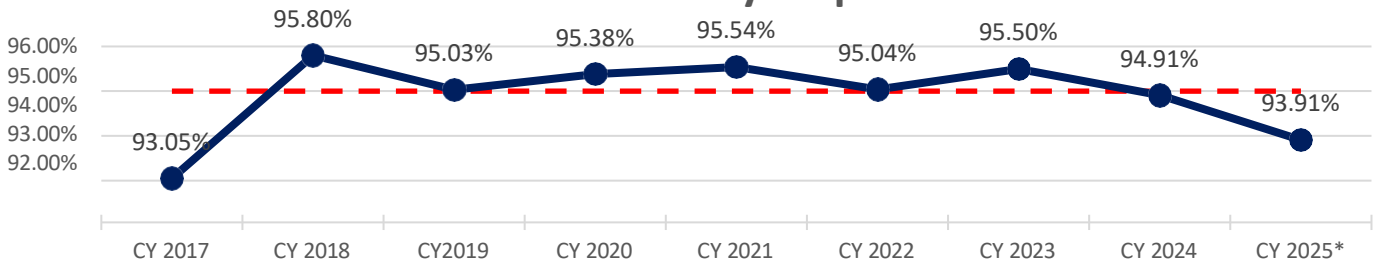
- Most Recent Match Rate for EMS Data: 69.64%
- A 100% match rate is inherently unattainable. The continuous introduction of new patients into the CRISP system ensures the patient population is constantly evolving, as current patients receiving treatment will always include individuals who have not previously been entered into the system.

TIMELINESS

<u>Performance Measure Statement</u>	<u>Measure (Baseline/Goal)</u>
Reduce the amount of time from unit dispatch until an eMEDS® record is properly marked completed by the clinician.	The statewide goal is to have an eMEDS® report properly marked completed within 24 hours or less of a unit's dispatch. A per jurisdiction baseline will be established and measured monthly with a jurisdictional goal of 95% of all calls being properly marked complete within 24 hours or less.

Performance Measure: _____ Met _____ Partial Met X Did Not Meet

Percent of Reports Marked Finished within 24hrs of Unit Notified by Dispatch

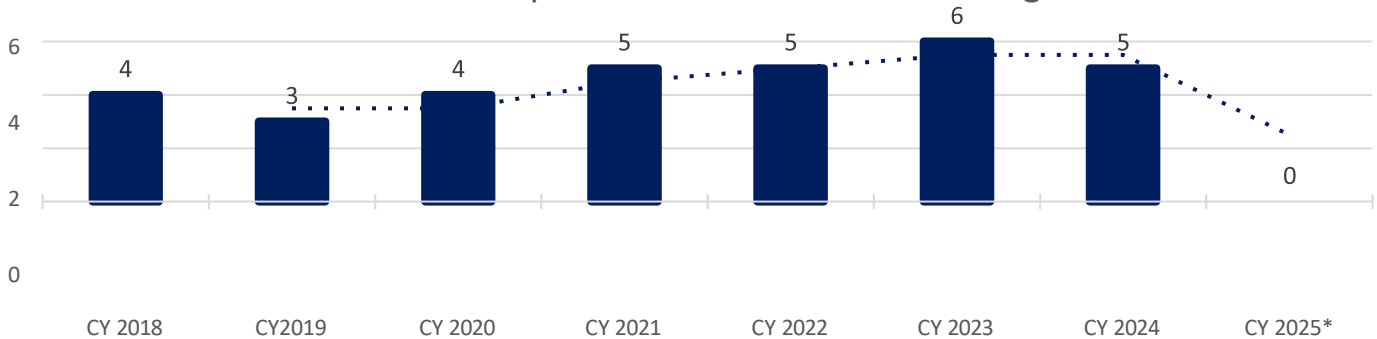


Notes:

Note: *CY2025 only includes Qtr 1 data

- Standardization Progress: EMSOPs previously showed inconsistent use of the "report finished" functionality, which is the key status indicator for this performance measure. In Q4 2024, MIEMSS implemented approved system configuration changes across all EMSOPs, enabling the development of comprehensive statewide guidance that clarifies:
 - Proper procedures for marking reports as finished
 - System-triggered processes that activate when following these procedures
- Implementation Components:
 - System Configurations: [Post Reminder Settings](#), [Locking Workflow Settings](#), & [Finish Incident Settings](#)
 - User Resources: [Marking Reports as Finished when Complete](#)
- Measurable Improvements: The standardized configurations and guidance have significantly reduced non-compliance. As of Q1 2025, no EMSOPs have 75% or more reports left unmarked as finished—a substantial improvement. While better utilization of this feature has temporarily lowered the yearly average, it establishes an accurate baseline. With this improved adoption, MIEMSS can now effectively identify and address instances where eMEDS reports are not completed within the 24-hour window.

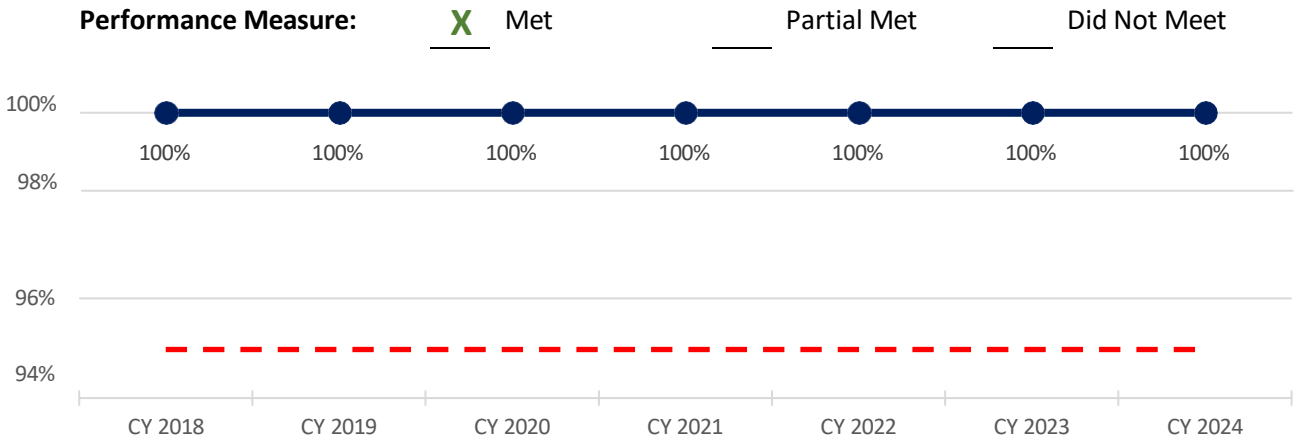
EMSOPs where Report Marked Finished is Missing >=75%



Note: *CY2025 only includes Qtr 1 data

UNIFORMITY

<p>Performance Measure Statement Ensure compliance with the National Emergency Medical Services Information System (NEMSIS) standard data elements and responses through successful periodic submission to NEMSIS.</p>	<p>Measure (Baseline/Goal) Number of eMEDS® records successfully submitted to NEMSIS over the total number of records submitted first time. Baseline is 100%. Goal is to maintain 100% during the current CY.</p>
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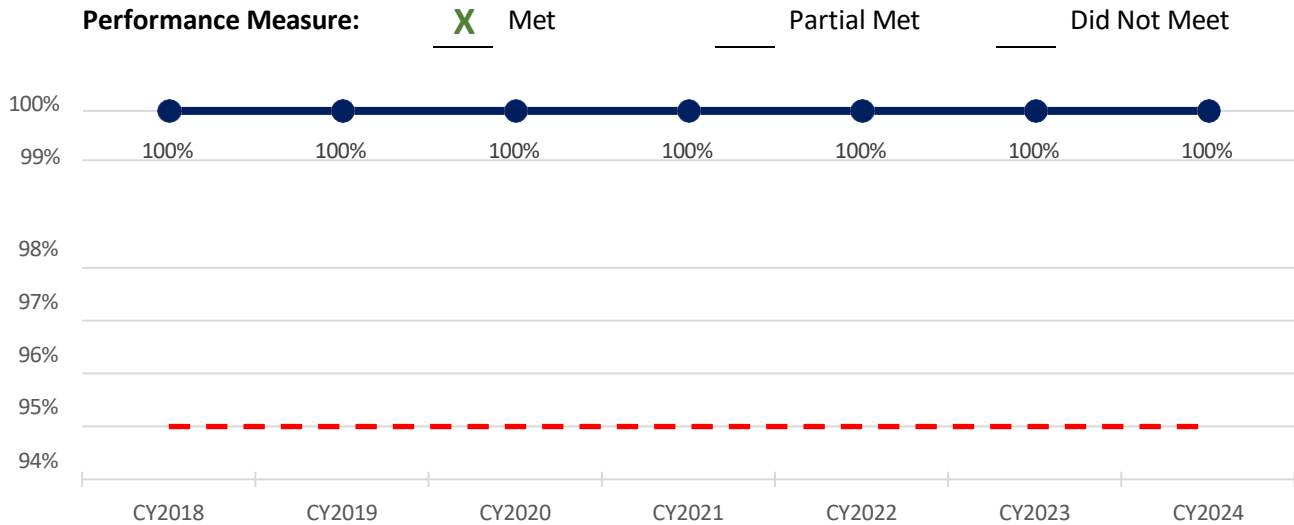
Notes:

- Percentage Compliance Goal (≥100%): Currently achieving 100%
- All records submitted by MIEMSS are accepted by NEMSIS. In the event of any submission issues, NEMSIS contacts MIEMSS directly to resolve discrepancies. Following resolution, previously unsubmitted or rejected records are promptly reprocessed and uploaded to maintain complete compliance.

TRAUMA REGISTRY

ACCESSIBILITY

Performance Measure Statement	Measure (Baseline/Goal)
Ensure that all data access requests for Maryland Trauma Registry (MTR) data/information are reviewed for appropriateness (non-confidentiality adherence) and follow up communication is provided within 30 days.	Number of Data Access Committee (DAC) related approved MTR data requests are followed up on within 30 days. Baseline is 95%. Goal is to maintain 95% or greater during the current CY.



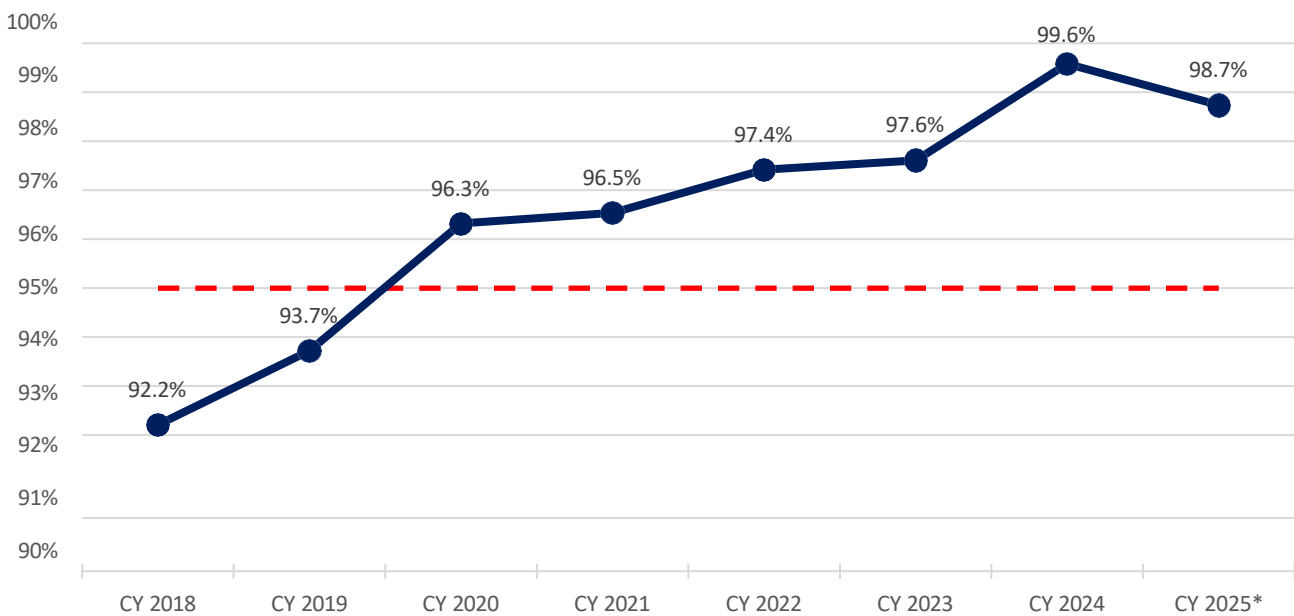
Notes:

- Percentage Compliance Goal (≥95%): Currently achieving 100%
- MIEMSS consistently meets this performance measure by providing approved data requests within the 30-day timeframe. Notably, MIEMSS staff begin collecting and preparing data while simultaneously working with requestors to finalize details (such as IRB approvals, payment processing, and agreement signatures), ensuring efficient delivery.

ACCURACY

Performance Measure Statement	Measure (Baseline/Goal)
Code of Maryland Regulations (COMAR) 30.08.05.21.I - Inter-Rater Reliability (IRR) monitoring of the trauma data entered into the MTR to ensure the quality, reliability, and validity of the data.	COMAR 30.08.05.21.I - The Trauma Registry shall have a plan to ensure IRR of the data entered into the MTR at individual trauma centers. Ongoing review and evaluation shall ensure the quality, reliability, and validity of the institution’s MTR registry data. A State baseline for IRR (5% of trauma center records monthly) will be determined over the current CY; the minimum goal is 95% and a 99% stretch to assess accuracy gaps at the data abstraction level.

Performance Measure: **X** Met Partial Met Did Not Meet

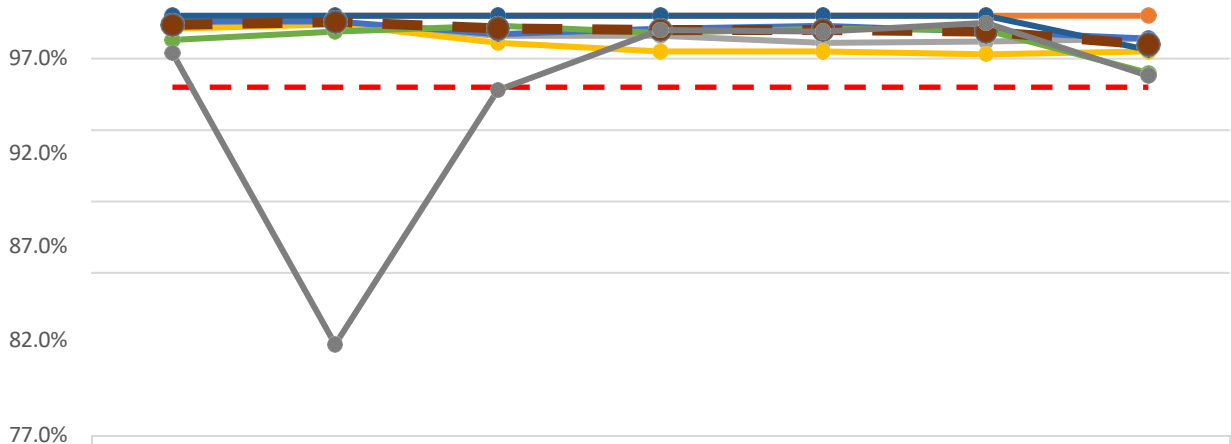


Note: *CY2025 only includes Qtr 1 data

COMPLETENESS

<p>Performance Measure Statement</p> <p>Reduce the percentage of missing/unknown values in data elements (Patient Age-years, Glasgow Coma Score, Systolic Blood Pressure, Injury Severity Score) used for the calculation of Trauma Injury Severity Scores (TRISS).</p>	<p>Measure (Baseline/Goal)</p> <p>Utilize the report, “Percent Date Completeness for Specific Data Elements” to identify qualifying records for which TRISS elements are below a baseline of 86%. The goal is 95% for all elements, during the current CY.</p>
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Performance Measure: X Met Partial Met Did Not Meet



	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022	CY 2023	CY 2024
Target	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%
Age	99.9%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
ED SBP	99.2%	99.5%	98.6%	98.6%	98.1%	98.2%	98.4%
ED RR	99.1%	99.4%	98.1%	97.5%	97.5%	97.3%	97.5%
ED GCS	99.6%	99.6%	98.7%	99.1%	99.3%	98.9%	98.4%
ISS	98.3%	98.9%	99.3%	98.8%	99.1%	99.0%	96.0%
Injury Type	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	97.6%
CY_Avg	99.4%	99.6%	99.1%	99.0%	99.0%	98.9%	98.0%
BAC	97.4%	77.0%	94.8%	99.0%	98.9%	99.5%	95.8%

Notes:

1. Percentage Compliance Goal is 95+%: CY2024: 98.0%
2. For all six (6) data elements, the measurement has a greater than 95% compliance rate.
 - Age (years)
 - ED Systolic Blood Pressure (SBP)
 - ED Respiratory Rate (RR)
 - ED Glasgow Coma Scale (GCS)
 - Injury Severity Score (ISS)
 - Injury Type
 - *Blood Alcohol Content (BAC) - not included in TRISS average*

INTEGRATION

Measure 1

Performance Measure Statement	Measure (Baseline/Goal)
Maryland trauma center submissions to the National Trauma Data Standard (NTDS) are included in the overall NTDS data repository.	Yearly comparisons of Maryland trauma centers with the rest of NTDS submissions nationwide. The baseline was Calendar Years 2010-2015 and comparing years thereafter to baseline and current year. Any differences that MIEMSS deems necessary will be investigated further.

Performance Measure: X Met Partial Met Did Not Meet

Submissions

	Number Submitted to NTDS	Number Accepted by NTDS	Percentage
Annual Submissions (CY 2023)	9,285	9,285	100%
Quarterly Submissions (CY 2024)	12,894	12,894	100%
Total Submissions	22,179	22,179	100%

Notes:

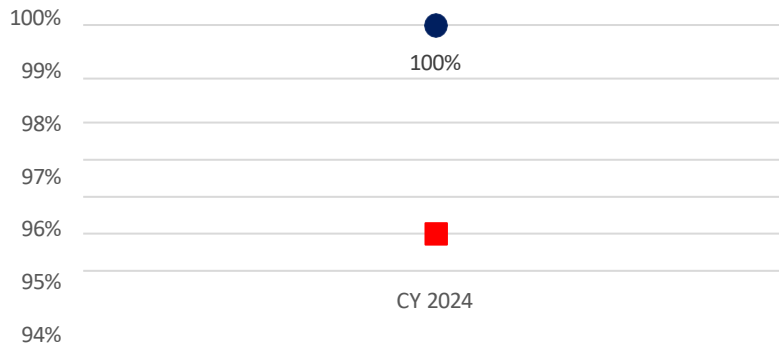
1. Annual call for data does not end until after June 2 of the “next” calendar year.
2. We are meeting this measure with 100% for both annual and quarterly submissions. The Trauma Registry now has an inclusion button for an International Trauma Data Exchange (ITDX) report check that produces errors prior to NTDS submission. This allows the centers to correct their data prior to submission to the NTDS.
3. For the centers that submit annually (n=4), data is only available for CY2023.

Measure 2

<u>Performance Measure Statement</u>	<u>Measure (Baseline/Goal)</u>
Measure the percent of Maryland Trauma Registry (MTR) records that match existing records within Chesapeake Regional Information System for Patients (CRISP, the State’s health information exchange).	Number of MTR records provided to CRISP resulting in a match of a record within CRISP. Baseline is 95%. Goal is to maintain 95% or greater during the current calendar year.

Performance Measure: X Met _____ Partial Met _____ Did Not Meet

Trauma Registry & CRISP Data Integration
Patient/Record Matching



Notes:

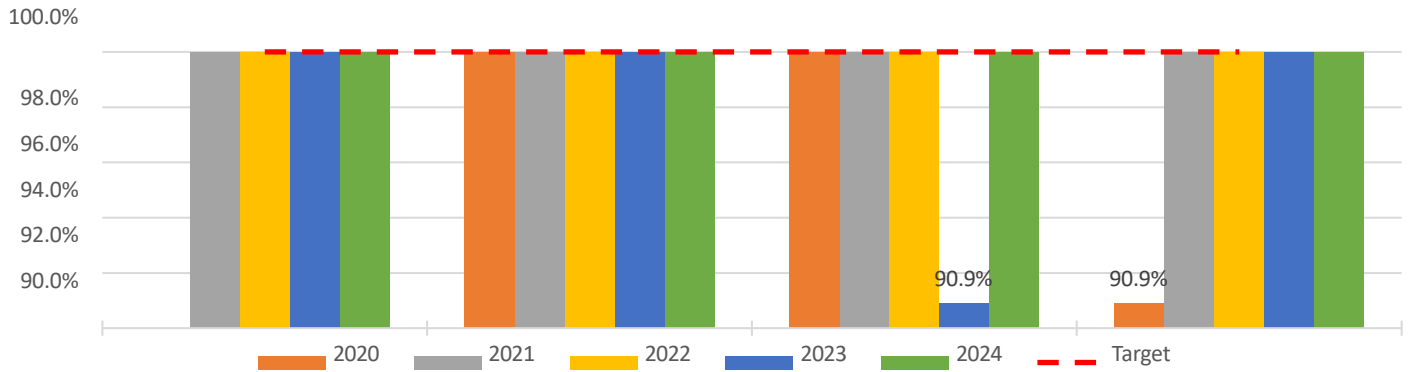
1. This is a **new integration of data systems** as of calendar year 2024 (data submitted March 2025).
2. The result of this integration is the use of this data in other Maryland healthcare initiatives.

TIMELINESS

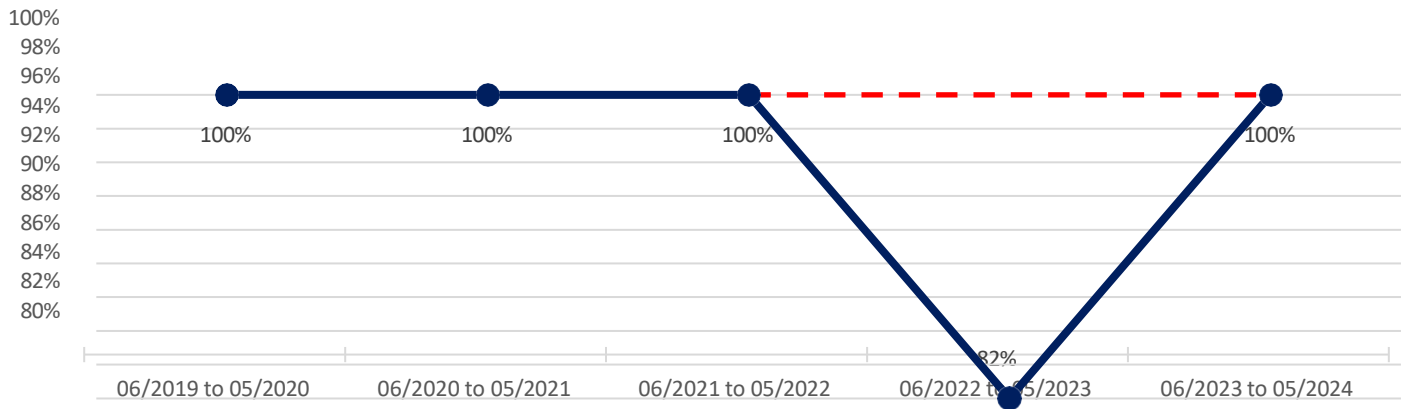
<u>Performance Measure Statement</u>	<u>Measure (Baseline/Goal)</u>
Verification of trauma records no later than 6 weeks after the end of each quarter.	All trauma patient records shall be submitted both quarterly and annually. Verification of counts and data element completeness shall be within six weeks after the end of each quarter. The goal is 100%.

Performance Measure: X Met ___ Partial Met ___ Did Not Meet

Quarterly Submissions



Annual Submissions



Notes:

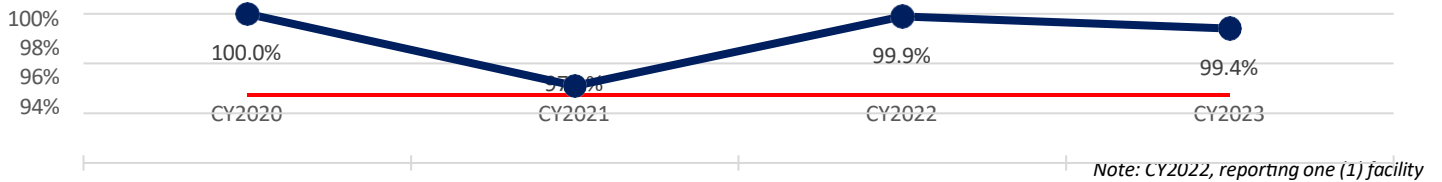
1. Percentages above are the percent of centers that submitted within the provided timeframe. This is not the percentage of records.
2. Quarterly Submission CY2020 Qtr 4:
 - o MIEMSS moved to a new version of the Maryland State Trauma Registry (ESO Gen 6). Only one center was slightly delayed as a result of the transition. That center's data was submitted a short while later.
3. Quarterly Submission CY2023 Qtr 3 **AND** Annual Submission June 2022 to May 2023:
 - o Due to changes in the system by the vendor, some of the centers periodically had difficulties submitting their data.

UNIFORMITY

<p>Performance Measure Statement Ensure Maryland Trauma Registry (MTR) compliance with the National Trauma Data Standard (NTDS) standard data elements and responses through successful periodic submission to NTDS.</p>	<p>Measure (Baseline/Goal) Each trauma center submits directly to the NTDS. MIEMSS currently does not receive feedback about the number of records successfully submitted on the first round. We are exploring a way to obtain this data over the current CY. The goal is 95%.</p>
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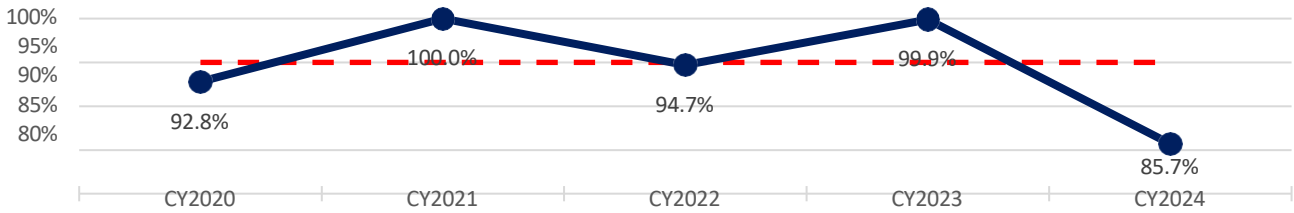
Performance Measure: X Met ___ Partial Met ___ Did Not Meet

NTDS Submission Uniformity - **Annual** Submissions



Performance Measure: ___ Met ___ Partial Met X Did Not Meet

NTDS Submission Uniformity - **Quarterly** Submissions



Notes:

1. In CY2024, six (6) out of seven (7) trauma centers submitted data within the required timeframe.
2. There are eleven (11) designated trauma centers in the State of Maryland. Of these centers, four (4) report annually and seven (7) report quarterly.
 - Annual Reporting Centers:
 - American College of Surgeons (ACS) NTDS requires annual data submission.
 - In CY2023, Maryland has met the measure. All centers have submitted data for CY2023.
 - Quarterly Reporting Centers:
 - Quarterly Submission are made by ACS-TQIP Centers – TQIP collects more data points (performance measures) than the general NTDS and requires more frequent submissions. The goal for the quarterly data submission was also met.

ACRONYMS

@HA.....At Hospital Ambulances. MIEMSS developed tracks ambulance activity at hospitals in real-time.

ACS.....American College of Surgeons.

BACBlood Alcohol Content.

CADComputer-Aided Dispatch application used by 911 centers to track and record unit/patient information within each county.

COICause of Injury.

COMARCode of Maryland Regulations.

CRISP.....Chesapeake Regional Information System for Patients. The State’s health information exchange (HIE)

CY.....Calendar Year (January 1 to December 31).

DAC.....Data Access Committee within MIEMSS.

EDEmergency Department.

eMEDS®Electronic Maryland EMS Data System means the web-based electronic prehospital data collection system operated by MIEMSS.

EMSOPEmergency medical services operational program means: (a) A jurisdictional EMS operational program; or (b) An institution, agency, corporation, or other entity that is licensed by MIEMSS as a commercial service under Education Article, §13-515, Annotated Code of Maryland.

GCSGlasgow Coma Scale.

IRB.....Institutional Review Board.

IRR.....Inter-Rater Reliability.

ISSInjury Severity Score.

ITDXInternational Trauma Data Exchange.

MIEMSSMaryland Institute for Emergency Medical Services Systems means the State agency established by Education Article, §13-503, Annotated Code of Maryland.

MTRMaryland Trauma Registry.

MVC.....Motor Vehicle Collision.

NEMSISNational Emergency Medical Services Information System

NTDS.....National Trauma Data Standard.

RRRespiratory Rate.

SBP.....Systolic Blood Pressure.

SEMACStatewide EMS Advisory Council.

SFYState Fiscal Year (July 1 to June 30).

TQIPTrauma Quality Improvement Program from American College of Surgeons.

TRISS.....Trauma Injury Severity Scores.

Appendix 9: FFY2024-2026 TRSP Projects with Funding Sources

#	Project	Funding
	<ul style="list-style-type: none"> Maryland Center for Traffic Safety Analysis (MCTSA) (National Study Center for Trauma and EMS) 	NHTSA 405c
	<ul style="list-style-type: none"> Seat Belt Observation Project (NOPUS Analysis) (National Study Center for Trauma and EMS) 	NHTSA 405b
	<ul style="list-style-type: none"> Implementation of Web Based Crash Forecasting Application and Approaches to Reach Zero Deaths in MD (Crash CORE/National Study Center) 	NHTSA 402
	<ul style="list-style-type: none"> Toxicology Sampling (Drugged Driving Data Project) (National Study Center for Trauma and EMS) Impaired Driving Analysis and SPIDRE Support (Washington College) DRE Database Development in Delta Plus (MSP ITD) 	NHTSA 405d
	<ul style="list-style-type: none"> Traffic Records Program Manager/MHSO TRCC Coordinator Position 	NHTSA 405c
	<ul style="list-style-type: none"> Traffic Records Data Improvement and Accessibility (Washington College) 	NHTSA 405c
	<ul style="list-style-type: none"> Maryland Safety and Crash Analysis Network (MSCAN) 	State Funding; FHWA HSIP
	<ul style="list-style-type: none"> Customer Connect (Driver and Vehicle Systems, MDOT-MVA) 	Maryland State Funds
	<ul style="list-style-type: none"> CDLIS, State State/SPEXS (MDOT-MVA) 	Maryland State Funds
	<ul style="list-style-type: none"> PRISM (MDOT MVA) FMCSA Facial Recognition Pilot Program (MDOT MVA) 	FMCSA
	<ul style="list-style-type: none"> SAFETYNET Data Management (SHA Motor Carrier Division) 	FMCSA
	<ul style="list-style-type: none"> Commercial Vehicle Crashes Dashboard Development (Washington College and SHA Motor Carrier Division) 	FMCSA
	<ul style="list-style-type: none"> Race/Ethnicity and Traffic Stops in Maryland (NSC; Washington College; Crash CORE) 	1906
	<ul style="list-style-type: none"> Crash Data Improvements 	SEDC