# State of West Virginia

## Traffic Records Assessment

**April 28, 2022**

National Highway Traffic Safety Administration

Technical Assessment Team

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## Introduction

This Traffic Records Program Assessment is the second of the online question-and-answer evaluations of West Virginia's Traffic Records System. This review is built upon the previous assessment conducted five years ago. Since the last assessment, West Virginia has made progress in improving several aspects of their traffic records system.

West Virginia has a well-documented and active Traffic Records Coordinating Committee (TRCC) with membership at both the executive and technical levels, designated leadership, and representation reflective of all six core data systems. The State's Traffic Records Strategic Plan (TRSP) is reviewed, updated, and approved annually by the Traffic Records Coordinator. The TRSP identifies data system deficiencies, lists projects to address each deficiency, and lists performance measures used to gauge progress.

West Virginia has increased the percentage of law enforcement agencies collecting and submitting crash data electronically to 100 percent. All agencies utilize the ReportBeam software application, and all crash reports undergo the same validation checks and business rules. Reports are submitted to the West Virginia Division of Highways which serves as the legislated custodian for the crash database.

The West Virginia Department of Transportation Division of Motor Vehicles (DMV) has sole custodial responsibility for the driver data system including both commercial and non-commercial driver data. The DMV is also responsible for the vehicle data system. The State's driver data and records are maintained in a mainframe system. The driver data can readily interact with other systems such as the Problem Driver Pointer System and the Commercial Driver License Information System. Planning is underway for the modernization of the legacy vehicle data system.

Regarding the roadway information, the West Virginia Department of Transportation is responsible for 90 percent of the State's roadways. All roadways in the State are located using the Route ID/Milepost Linear Referencing System. West Virginia's roadway information is also maintained in ESRI's Roads and Highways which helps to maintain the accuracy of route information. The State hopes to complete phase one of a new transportation asset inventory project by 2023.

Citation data is used by the State's Highway Safety Office in conjunction with the crash data. Data is also sent out for use by the regional coordinators. The Uniform Judicial Application (UJA) is utilized by the magistrate courts and is searchable by both public and State entities. All Magistrate citations are manually entered into ReportBeam and the UJA with final dispositions posted to the driver data system at the Division of Motor Vehicles.

West Virginia has a newly developed emergency medical services data system and established hospital (trauma and inpatient) and vital records data systems. For emergency department data, the West Virginia Office of Epidemiology and Prevention Services can access data from 70 percent of the State's emergency departments. Data from each of these systems is available to support and evaluate highway safety efforts although the absence of mechanism of injury information (E-codes) make the identification of crash related injuries problematic.

Overall, West Virginia has continued to make progress over the last five years and has the opportunity to expand the role of the TRCC and the use of its data resources. The development of new data systems within the State provides the opportunity to engage data owners, develop useful performance measures, and ingrain the role of the TRCC in the development of tools and programs to enhance the State's ability to provide data for its problem identification, resource allocation, and program evaluation activities.

## Assessment Results

A traffic records system consists of data about a State's roadway transportation network and the people and vehicles that use it. The six primary components of a State traffic records system are: Crash, Driver, Vehicle, Roadway, Citation/Adjudication, and Injury Surveillance. Quality traffic records data exhibiting the six primary data quality attributes—timeliness, accuracy, completeness, uniformity, integration, and accessibility—is necessary to improve traffic safety and effectively manage the motor vehicle transportation network, at the Federal, State, and local levels. Such data enables problem identification, countermeasure development and application, and outcome evaluation. Continued application of data-driven, science-based management practices can decrease the frequency of traffic crashes and mitigate their substantial negative effects on individuals and society.

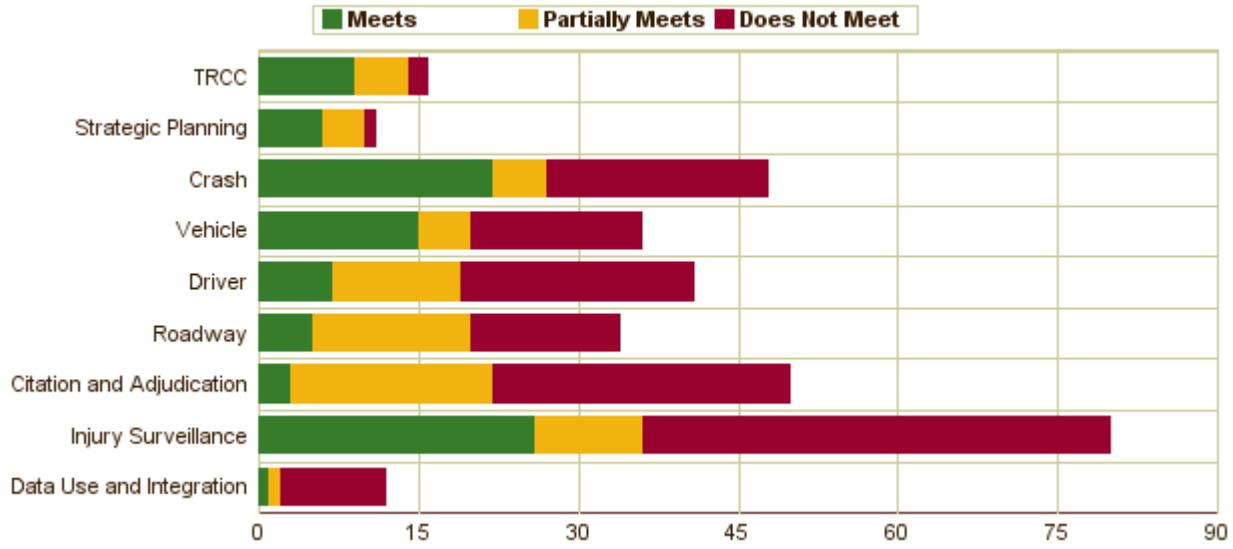
State traffic records systems are the culmination of the combined efforts of collectors, managers, and users of data. Collaboration and cooperation between these groups can improve data and ensure that the data is used in ways that provide the greatest benefit to traffic safety efforts. Thoughtful, comprehensive, and uniform data use and governance policies can improve service delivery, link business processes, maximize return on investments, and improve risk management.

Congress has recognized the benefit of independent peer reviews for State traffic records data systems. These assessments help States identify areas of high performance and areas in need of improvement in addition to fostering greater collaboration among data systems. In order to encourage States to undertake such reviews regularly, Congress' Fixing America's Surface Transportation Act (FAST ACT) legislation requires States to conduct or update an assessment of its highway safety data and traffic records system every 5 years in order to qualify for §405(c) grant funding. The State's Governor's Representative must certify that an appropriate assessment has been completed within five years of the application deadline.

Out of 328 assessment questions, West Virginia met the Advisory ideal for 94 questions (29%), partially met the Advisory ideal for 76 questions (23%) and did not meet the Advisory ideal for 158 questions (48%).

As Figure 1: Rating Distribution by Module illustrates, within each assessment module, West Virginia met the criteria outlined in the Traffic Records Program Assessment Advisory 56% of the time for Traffic Records Coordinating Committee Management, 55% of the time for Strategic Planning, 46% of the time for Crash, 42% of the time for Vehicle, 17% of the time for Driver, 15% of the time for Roadway, 6% of the time for Citation and Adjudication, 33% of the time for EMS / Injury Surveillance, and 8% of the time for Data Use and Integration.

*Figure 1: Rating Distribution by Module*




States are encouraged to use the recommendations, considerations and conclusions of this report as a basis for the State data improvement program strategic planning process, and are encouraged to review the report at least annually to gauge how the State is addressing the items outlined.

## Recommendations & Considerations

According to 23 CFR Part 1200, §1200.22, applicants for State traffic safety information system improvements grants are required to maintain a State traffic records strategic plan that—

> *"(3) Includes a list of all recommendations from its most recent highway safety data and traffic records system assessment; (4) Identifies which such recommendations the State intends to implement and the performance measures to be used to demonstrate quantifiable and measurable progress; and (5) For recommendations that the State does not intend to implement, provides an explanation."*

The following section provides West Virginia with the traffic records assessment recommendations and associated considerations detailed by the assessors. The broad recommendations provide West Virginia flexibility in addressing them in an appropriate manner for your State goals and constraints. Considerations are more detailed, actionable suggestions from the assessment team that the State may wish to employ in addressing their recommendations. GO Teams, CDIPs (Crash Data Improvement Program) and MMUCC Mappings are available for targeted technical assistance and training.

### TRCC Recommendations

**None**

*Considerations for implementing your TRCC recommendations*

- Develop a list of common data elements among the various traffic records databases. This would assist the State with the integration or linking of the various traffic records data systems for an even

more effective analysis of traffic safety issues.

- Establish a traffic records inventory. This will lead to the exchange of information about what data is continued in and available from each system. The development of an inventory can lead to conversations of traffic records data availability and help devise new ways to combine and analyze datasets for the purpose of improving traffic safety.
- Establish a matrix or SWOT analysis to identify projects and to engage the TRCC on allocations of the Federal traffic records improvement grant funds. Start with developing an internal funding allocation or decision-making matrix by using the NHTSA guides. This not only can lead to strengthening partnerships but open additional sources of funding for potential projects as well.

### Summary

The State has a Traffic Records Coordinating Committee (TRCC) with diverse membership from six of the core database systems, which includes both technical and executive membership. The State has a documented charter and committee membership, which lists the responsibilities of the membership and the coordinator, signed March 18, 2013. The TRCC met three times within the last calendar year and is shy of one meeting to meet the ideal This should be considered as an easy win to adjust the TRCC schedule to accommodate an additional meeting.

The TRCC facilitates discussion about the State's traffic records system, with custodial agencies reporting new system upgrades, projects, progress, and areas of concern. The State could consider including additional content to the meeting minutes to show what the next steps are, what information is going to be integrated into the Strategic Plan, when any action items are assigned to members, and who has custodial ownership of said items. This could assist with the tracking of ideas, potential new projects, or areas the TRCC should focus on.

The TRCC has a designated coordinator, who the State reported assists the State Highway Safety Office in the allocation of funding, but there is no evidence to suggest that the TRCC membership is involved in funding decisions. The State could consider developing a funding matrix, voting process, or yearly solicitation of projects to assist with engagement and direction for the TRCC. This could also assist the TRCC with strategies in the Strategic Plan to address prior Traffic Record Assessment findings.

The State has done an incredible job documenting at least one performance measure for each of the core databases. This use of data and self-evaluation will continue to assist the State with establishing goals and objectives and tracking progress over time. The State will continue to have metrics to assess how a project will support their overall goals and objectives and to quantify how funded projects impact the performance measures.

The State does not currently have a traffic records inventory but does have strong participation from the TRCC including the quality control and quality improvement programs impacting their core data systems. The State could consider utilizing their membership to highlight a data system at each of the TRCC meetings. This provides time to highlight the work done by their partners, gather information on each

system, and to potentially discover new projects for each system or crossing multiple systems. The State has shown this with the eCitation program and could continue leveraging this experience to make the same strides in other areas.

## Strategic Planning Recommendations

**None**

*Considerations for implementing your Strategic Planning recommendations*

- The 2022 TRSP update includes a level of effort but useful additions would be the inclusion of the following:
  a. Prioritize all projects at the State level or at a minimum, within each partner agency level.
  b. Update the status of project yearly.
  c. Include life cycle costs in the project description.
  d. Identify which projects are approved by the TRCC vs. based on funding provided by partner agencies.
- Add an additional TRCC meeting or conduct a longer meeting to allow the review and discussion of the strategic plan with the full TRCC prior to finalizing the plan. At a minimum, perhaps provide a draft of the plan to all stakeholders for comments prior to finalizing.
- Develop a formal process for the following:
  a. Identifying performance measures and corresponding metrics.
  b. Prioritizing traffic record improvement projects listed in the strategic plan.
  c. Determine project life cycle costs. With technology ever-changing, a note in the annual plan estimating the lifecycle for each system and project would help future planning and funding decisions.

### Summary

West Virginia's Traffic Records Strategic Plan is reviewed, updated, and approved annually by the Traffic Records Coordinator. All aspects of the strategic plan are maintained and managed by the coordinator including providing regular progress reports to Federal partners and maintaining and updating the plan based on changing priorities and accomplishments within the State.

The coordinator obtains project information from each partner agency at least once a year to allow for updating the Strategic Plan. Although the last revision took place in 2021, there are many inconsistencies with the project information listed in Appendix 3 of the strategic plan. Projects (active and complete) were last revised anywhere between 2013 and up to 2021. Some projects had excellent documentation. Others were missing information such as the funding source and amount or were updated with "ongoing

development" in a recent year even though the project might show as completed in a prior year.

The State described the process for updating the strategic plan as the member agencies providing the requested project update(s) to the coordinator, and then the coordinator completing the plan for approval and submission. Although the coordinator is responsible for developing and maintaining the plan, the member agencies are also invested in the traffic records systems and should each contribute to the success of the statewide plan. Perhaps the State could look at having quarterly or bi-annual project report-outs at a TRCC meeting by the members for each project vs. requesting updates via email. Then yearly, have the full TRCC meet for discussion, review, and approval of the plan as a group prior to finalizing the plan and submitting.

The TRSP has projects that address both State and local data needs, a good example being the eCitation project, but the TRCC does not have a permanent local agency member on the TRCC. The coordinator stated he is in direct contact with local agencies, which is a positive first step, but the State might consider expanding the TRCC's membership. If the eCitation program or any other program is to be used statewide, a variety of potential data users should be heard so that the State does not develop a program based only on what the State thinks is needed.

Since the State is also working to provide a web-based system that "improves access to crash data for a broad variety of users", this may be a good time to include other traffic safety data users such as municipal planners, university researchers, and county or local law enforcement as members of the TRCC.

The coordinator did a nice job addressing each recommendation from the 2016 Traffic Records Assessment. In Appendix 2, the State detailed each recommendation with an explanation of how it will be addressed and the performance measure(s) to be used to identify quantitative and measurable progress. However, it is difficult to know if the majority of the recommendations were addressed or completed. It is suggested that the State add a column to the grid to identify a timeline with a completion date.

The State also did an excellent job for each of the data sets that address performance measures, numerical goals and benchmarks. The State documented both the NHTSA model performance measures and the State's translation to meet each of the six attributes for all of the core systems with an added bonus of data linkage between systems. The State has given the anticipated benchmarks and improvements they hope to see within each area as well as quantifiable ways to track their progress. This will add to an ease of translation when asking the TRCC membership to provide these data measures or explain to a member what benchmarks they are looking to achieve.

As documented in the strategic plan, the TRCC does a good job of addressing technical and training needs. There were multiple examples that center around the electronic data collection systems being implemented. Although the State met the advisory ideal, they might consider having a core database owner present at the TRCC meetings to further showcase the capabilities of the system while training other members on its functionality and encouraging conversations around potential data linkage or future projects. Training can

be a low-cost solution to identifying or preventing deficiencies in the data.

The State generally does a good job when documenting projects being undertaken in the strategic plan, establishing timelines and responsibilities, and considering the use of new technology, but they could improve documenting lifecycle costs. The State considers new technology in multiple projects but fails to consider full lifecycle costs (beyond the initial program and hardware costs for agencies and maintenance costs) when implementing traffic records projects. The initial capital outlay cost is important, but it is only a portion of the costs over the asset's lifecycle that needs to be considered when making the investment decisions.

The State also provided several projects where they are making an effort to coordinate with key Federal traffic records data systems. Projects include DMV using a batch process to interface with AAMVA NMVTIS; the State Trauma Registry working to collect data that are NEMSIS compliant; the State assisting DOH to ensure wvOASIS will include all MIRE data elements, and DMV continues to modify computer programming and systemic procedures to meet standards set within the CDL program by the FMCSA. In addition, the TRCC includes the FMCSA and FHWA representatives who regularly attended the 2021 TRCC meetings. Because the State traffic records data has a real effect on national data systems, this and future coordination of program integration will be of a benefit to West Virginia.

## Crash 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 interfaces with the Crash data system to reflect best practices identified in the Traffic Records Program Assessment Advisory.

### *Considerations for implementing your Crash recommendations*

- Create and sustain crash system performance measures that can be frequently monitored by stakeholders. Metrics relating to crash reporting timeliness, accuracy, and completeness could be beneficial in monitoring and maintaining the continued effectiveness and performance of the crash system. This will help to ensure it remains relevant and useful to data system managers in the coming years.
- Improve documentation of crash system processes and establishing methods to better monitor data quality. Improved documentation of these processes will help ensure consistency, assist with system training, and will lead to a more stable and reliable crash reporting system.
- Develop system interfaces with TRCC partners to improve data quality across core component traffic records systems. These interfaces should include possibilities allowing for auto-population of data into the crash system from driver, vehicle, and other traffic records systems.

## Summary

West Virginia has increased the percentage of law enforcement agencies collecting and submitting crash data electronically to 100 percent, which is a great accomplishment for the State and something for which they should be proud. This progress will greatly improve the quality and timeliness of crash data available to decision-makers and traffic safety professionals statewide. All agencies reporting crashes electronically utilize the ReportBeam software application, and all crash reports undergo the same validation rules consistent with those in the statewide crash system prior to submission.

The West Virginia crash system is consolidated into a single database. West Virginia utilizes the MMUCC guidelines when identifying data elements for its crash system. The State is in the process of updating their crash report and hopes to have that process completed in 2023. Consideration should be given to routinely measuring its crash system against current MMUCC standards to help determine if further improvements or revisions to the crash report form are needed or desired. MMUCC mapping assistance can be requested from NHTSA, who can help measure the data West Virginia collects against the MMUCC guideline, providing the State with a roadmap for future changes to its data collection form.

Population of data elements in the crash system from other traffic records systems such as Driver, Vehicle, EMS, Injury Surveillance, or Roadway can have great benefits. Interfacing between the crash system and other traffic records systems can further improve the quality and effectiveness of the data housed. There may be an opportunity to expand and improve interfacing between systems to auto-populate data into the crash system from Driver, Vehicle, and other systems. Additional interfaces and integration with other traffic records systems could be explored through partnerships at the TRCC.

Dialogue regarding possible opportunities for improvement or expansion of data linkages, interfaces, and integration amongst the State traffic records systems should be ongoing among TRCC membership where all core traffic records systems managers and stakeholders are represented. As traffic records systems data becomes more widely used, system interfaces and data integration will be crucial. Improved data linkage and integration will streamline processes, improve data quality, reduce duplication of effort, and allow data to be fully utilized to make roadways safer.

Given the rising importance of traffic safety data which often starts with the crash system, it is extremely helpful to establish and maintain useful performance measures and a robust quality control program for improving and monitoring completeness, timeliness, and accuracy. In-depth and detailed agency-level feedback for local law enforcement agencies is also useful. Strong performance measures and performance measure reporting is a vital aspect of a successful crash system. West Virginia has very limited performance metrics in place for the crash system and establishing data quality measurements is important to monitoring and oversight.

West Virginia should continue to make use of available NHTSA resources to assist with developing procedures for monitoring and maintaining performance metrics, once they have been established, to ensure they remain relevant and useful to the data system managers in the coming years. Additional resources include the “NHTSA Model Performance Measures for State Traffic Records Systems”

document, which is a good resource for identifying and implementing appropriate measures for all traffic systems.

West Virginia appears to have only a few quality assurance and quality control processes in place for the crash system, particularly documentation and workflows illustrating the overall crash system processes could be improved. Upgraded documentation and process flow charts regarding errors, data quality and completeness, and quality control monitoring will help with consistency in how these steps are handled and will lead to a more stable and reliable crash reporting system. Additionally, developing metrics to monitor how many reports are being submitted by each department on a regular basis would be helpful in ensuring that departments are submitting crashes to the system as expected and on trend with historical values. If an agency is under-reporting, then the State should follow up with the agency to determine if reports are not being lost, left unsubmitted, or if there is a software issue causing reports to go missing.

Opportunities for crash system growth in the coming years include: developing a new MMUCC compliant crash form; improving documentation of crash system processes and establishing methods to better monitor data quality; exploring potential system interfaces and data integration possibilities with TRCC partners to improve data quality across core component traffic records systems; and creating and sustaining useful crash system performance measures that can be frequently monitored by stakeholders.

## Vehicle Recommendations

3. Improve the data dictionary for the Vehicle data system to reflect best practices identified in the Traffic Records Program Assessment Advisory.
4. Improve the data quality control program for the Vehicle data system to reflect best practices identified in the Traffic Records Program Assessment Advisory.
5. Improve the interfaces with the Vehicle data system to reflect best practices identified in the Traffic Records Program Assessment Advisory.

### *Considerations for implementing your Vehicle recommendations*

- Institute a comprehensive data quality control system that measures all data quality attributes and keeps records of those attributes so that they can be reported to and discussed at TRCC meetings.
- Develop flow charts of step-by-step registration and title processes. This gives the staff an opportunity to review processes, ensures that everyone is handling processes in the same manner, helps to remove unnecessary steps in processing, and provides for a continuous review process for the titles and registration employees. Collecting the time necessary for each step in each process also provides supervisors with data for performance measurement and potential for process improvement or automation.
- Develop a comprehensive data dictionary and a policy that addresses changes to forms, manuals, and procedures that ensures that all are kept in sync when laws or regulations are changed.

## Summary

West Virginia reports that it is in the planning stages of replacing its legacy vehicle data system, which will provide an opportunity for improvement on several fronts. At this time, the State's vehicle system has a number of positive attributes. The vehicle system operates in real time, all Vehicle Identification Numbers are validated using Vintelligence software, and registration documents are barcoded for both accuracy and time-savings by officers using electronic data collection software.

The State reports daily to NMVTIS via batch process and checks NMVTIS prior to issuing a new title. AAMVA brands are used on West Virginia titles and the State carries forward brand histories from prior states of record. Authority is provided to certain employees to correct obvious errors in the data system.

West Virginia is a participant in the PRISM system and flags stolen vehicles in its system when they are reported by law enforcement.

Although the present system has numerous positive characteristics, updating the system provides opportunity for improvement. One thing that would be beneficial to West Virginia's vehicle data system is documentation. The system will need a complete and formal data dictionary which lists all data elements and definitions for each and will include edit checks and validation rules. Now is the time to ensure that the naming conventions used in the driver and vehicle systems are the same so that if the systems are later combined, it will be easier and feasible to do so.

Although time-consuming to develop, the State needs step-by-step process flows that list the time for each step for registration and titling. Development of process flows help managers to ensure that staff is aware of and understand processes, assists in eliminating unnecessary steps, and develops a useful continuous improvement process. Adding the time to complete each step to the process flow document can provide helpful information for performance management as well.

There is no comprehensive data quality management program in place at this time. Data quality is not just the function of information technology staff or of operational staff, but a joint effort on their part. The State's TRCC is the group where the interactions take place that should develop the cooperation and coordination needed to improve data quality. No data quality reporting to the TRCC is done by the vehicle data managers. Development of data quality measures should be done with the development of the new system, including measures of data quality attributes of timeliness (even a real-time system can have lags with the time it takes paperwork to get to the point of entry into the system), accuracy, completeness, uniformity, integration, and accessibility. Once these measures are developed, baseline measurements should be taken, goals for improvement should be set, and interim measures should be taken at set points throughout the year. Then the measures should be reported to the TRCC. This reporting of measures for all component systems of the State's traffic record system provides the TRCC with information about where to place funding resources but also informs the entire TRCC about the breadth of data that is available throughout the State for use in traffic safety research. It can also provide information about where interfaces and integration are most favorable with other component systems.

From a data management standpoint, interim measures ensure that subtle degradation of data quality does not go unnoticed. Slow reduction in data quality can build to a point where mitigation is both costly and takes a great deal of time and resources.
Finally, the State should conduct trend analysis of its vehicle data to ensure that all its transactions are being handled appropriately and correctly and to determine changes in the vehicle population that might be contributing to traffic safety issues. Some types of vehicles may be over-represented in certain motor vehicle crashes.

## Driver Recommendations

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

### *Considerations for implementing your Driver recommendations*

- Develop a complete data dictionary for all fields in the driver data system with definitions, fields sizes, validations rules, and field values as well as formal guidelines and procedures for when and how the dictionary should be updated.
- Develop and adopt a comprehensive data management program for the driver data system. The development and monitoring of the data performance measures would enable the State to continually improve driver system data and enhance system availability and reliability.
- Review facial recognition software prior to the issuance of the credential.

### Summary

The West Virginia Department of Transportation Division of Motor Vehicles (DMV) has sole custodial responsibility for the driver data system including both commercial and non-commercial driver data.

The State's driver data and records are maintained in a mainframe type system. Driver data is kept in a manner that is easily available to interact with other systems such as the Problem Driver Pointer System and the Commercial Driver License Information System. The system maintains data regarding the original issuance of permits, licenses, and endorsements as well as any subsequent issuance. Some training, such as driver improvement, is only maintained if it was court ordered or needed for the reduction of points. Other education, such as motorcycle training, is maintained in the system but not recorded on the driver history. The driver data system is defined in documents, process manuals, and or flow diagrams, however there was no evidence that a complete data dictionary exists with documented processes or procedures on when to update the dictionary.

The West Virginia driver program is supported by programs and resources to deter licensing fraud. The system interfaces to the Problem Driver Pointer System, Commercial Driver License Information System, Social Security On-Line Verification System, and the SAVE system. These interfaces assist the State in the promotion of the "One Driver, One License, One Record" ideology. Additionally, the State does have facial recognition in place, but it is only after the credential has been issued that the comparisons are made. West Virginia DMV is scheduled to implement State 2 State which will enhance their processes of promoting the 1 license 1 record ideology and allow for a timelier and more accurate update of an individual's complete driver history or credential data into the driver data system.

The State's driver data system is not supported by any performance measures that were identified during this assessment. Sample performance measures and guidance can be found in the publication, "Model Performance Measure for State Traffic Records Systems" (DOT HS 811 441). Additionally, the system has some components of a DUI tracking system, but there does not appear to be a unified DUI Tracking System within the State or legislation that grants administrative authority prior to adjudication for impaired driving incidents.

## Roadway Recommendations

9. Improve the applicable guidelines for the Roadway data system to reflect best practices identified in the Traffic Records Program Assessment Advisory.
10. Improve the data quality control program for the Roadway data system to reflect best practices identified in the Traffic Records Program Assessment Advisory.
11. Improve the procedures/ process flows for the Roadway data system to reflect best practices identified in the Traffic Records Program Assessment Advisory.

### *Considerations for implementing your Roadway recommendations*

- Include a field in the data dictionary that indicates if an element is a MIRE FDE.
- Document the procedures for adding new elements into the data dictionary and include guidance as to when the dictionary should be updated.
- Develop performance measures for the six performance attributes. The measures could help West Virginia with the development and implementation of projects that would enhance the effectiveness of their overall roadway system. NHTSA document DOT HS 811 441 "Model Performance Measures for State Traffic Records System" is a good starting point.

### Summary

West Virginia is responsible for over 90 percent of all the roadways in the State. They use a Route ID/Milepost LRS system for all roadways, including those they are not responsible for. Roadway and Traffic data is located using the same LRS. There is an online data portal that includes information on assets, boundaries, roads, and traffic. The most recent State's Roadway Network Data can be downloaded from this location.

West Virginia had been working on developing a comprehensive transportation management system as part of an enterprise resource planning project. This was to modernize and include all the data systems under one umbrella. Unfortunately, it did not turn out to be a successful project. However, one of the positives from the project is that the new LRS became the baseline and is maintained in ESRI Roads and Highways. The State's roadway information is also maintained in ESRI Roads and Highways. The implementation of ESRI Roads and Highways has introduced procedures that help check the accuracy of route information to help ensure the database is accurate.

Another outcome from the aforementioned project was the development of the inventory of MIRE data elements. The data dictionary definitions will be used in a new transportation asset inventory project. The MIRE compliant asset inventory will be maintained in the same software as bridge and pavement management which are linked to the roadway information using the new LRS. The State is hoping to have phase one completed by 2023.

All data elements currently collected within a system are documented within that system's data dictionary. There is no official guidance on how the dictionaries are updated, but they are revised when the appropriate system data elements are updated or changed. There are also no formal guidelines for the collection of data for the roadway inventory. There are plans to include more documentation for data collection through the app which is being used to update forms. There are some informal guidelines based on the date field constraints found within the data dictionary.

Crash data location methodology previously was linked to the roadway and traffic data using a group of compatible fields. Currently the State is working on implementing the AASHTOWare Safety, powered by Numetric, as the platform for a new safety management system which will allow for the linkage between crash and roadway data. This effort will include an automated process for locating crash data using logic to determine the correct Route ID and milepost from the new LRS. The location information will be stored in the crash records database. This project should begin in April.

West Virginia has not established performance measures for any of the six attributes. They do have established timeframes for some data sets to ensure the information is submitted by the required deadlines.

West Virginia is working to enhance their ability to link their roadway, traffic, and crash data so they can perform more safety analysis. They are hoping that by 2023 they will have completed their first phase toward this.

## Citation and Adjudication Recommendations

12. Improve the data dictionary for the Citation and Adjudication systems to reflect best practices identified in the Traffic Records Program Assessment Advisory.
13. Improve the data quality control program for the Citation and Adjudication systems to reflect best practices identified in the Traffic Records Program Assessment Advisory.

14. Improve the interfaces with the Citation and Adjudication systems to reflect best practices identified in the Traffic Records Program Assessment Advisory.

*Considerations for implementing your Citation and Adjudication recommendations*

- Draft formal data dictionaries. Ideally, the State maintains system-specific data dictionaries for the citation systems (electronic and manual) as well as the courts' case management systems used in the State. These system data dictionaries document all variables in the data collection form and/or software and all variables in the database (including derived variables).
- Assess whether a statewide numbering system is feasible. It was mentioned that eCitations are in the process of being implemented. This will go a long way to streamline and provide consistency for this process. The ideal citation system contains a process grounded in a unique citation number assigned by a statewide authority and used by all law enforcement agencies.
- Develop an interface between the citation and adjudication data systems and the driver and vehicle systems.
- Formally document the process of tracking BAC and any drug testing results. It is imperative that citation and adjudication systems include DUI offender records to include communication and exchange of data with other statewide and local agencies that participate in the management of these cases to provide the proper oversight and accountability for offenders. The DUI tracking system should be interactive and accessible to all who are in contact with a DUI offender, from arrest through compliance with sanctions. A DUI tracking system includes the citation, the administrative per se paperwork and information about the administrative hearing, the alcohol evaluation (if any), education/therapy recommendations, assignments and completion, the court disposition, sanctions imposed (interlock, etc.), and compliance and re-licensure.

**Summary**

The Uniform Judicial Application (UJA) is a State system utilized by the magistrate courts that is searchable by both public and State entities. All Magistrate citations are manually entered into ReportBeam and the UJA. Final dispositions are posted to the driver data system at the DMV, and the DMV maintains the driver record data. However, it is unclear how municipal court citations are reported to the DMV. It is also not clear if resolutions of any appeals from the courts are posted to the driver data system.

Citation data is used by the State's Highway Safety Office where data is analyzed alongside crash data and then sent out to the regional coordinators. The regional coordinators use this data to assist law enforcement in finding problem locations and improving enforcement activities. Magistrates utilize the UJA to check the data of offenders through their personal data that can inform the prosecution of offenders and adjudication of cases. However, there was no mention of any analyses or supporting documents provided to confirm that these processes are conducted to identify problem areas to inform traffic safety program countermeasures and planning.

All adjudicated citations are applied to the Driver Record through the DMV mainframe which is the repository for all adjudicated citations. However, this repository is not linked to the magistrate court system

UJA program to allow for deferrals or dismissals to be identified in the driver history. Citations adjudicated through magistrate courts are filed separately from municipal courts in independent systems. Additionally, the magistrate court system UJA program is the only program that can track a citation from issuance to adjudication, to include dismissals or citations in a pending status. It is unknown whether the State captures citation dispositions from municipalities.

All adjudicated citations are applied to the Driver Record through the DMV mainframe, which is the repository for all adjudicated citations, and does not track the citation during the adjudication process, This repository is not linked to court system UJA program to allow for deferrals or dismissals to be identified in the driver history.

It appears some statewide systems provide real-time information on individuals' criminal histories to include traffic violations, criminal and civil case information, and disposition information to authorized court staff, prosecutors, and law enforcement agencies, but it does not appear that the DMV has access or tracks this information. WEAPON provides access to driver query, person query, title, vehicle registration, etc., however WEAPON is only accessible to law enforcement.

There are significant challenges with linking the citation data with the ReportBeam software for their crash data system. However, in instances where the investigating agency can issue e-citations, they are capable of doing so while completing the crash report which automatically links the crash report and citation together permanently; however, there is no consistency for agencies reporting in this regard. At this time, it does not appear that the State has an interoperable citation system that interfaces with the crash system to document violations and charges related to the crash. The State is attempting a full implementation of e-citation and there is a location to enter citation/violation data related to the crash, but it is not done consistently in their electronic or manual processing.

As with the citation data system, there are significant challenges regarding the adjudication system and integration of the crash data system, including the implementation of statewide e-citation data, the ReportBeam software, and current communication issues between agencies. The State is working to update the crash system to resolve these challenges.

The State is working to have all citations received from ReportBeam entered into a Traffic Records database for highway safety analysis. Once the data is in the database, West Virginia Division of Highways will be able to conduct highway safety analysis using the citation data in conjunction with both the crash and roadway data.

Although there are informal data checks performed by various system staff, West Virginia does not have State-established numeric goals or performance metrics for either citation or adjudication system formal performance measures.

## Injury Surveillance Recommendations

15. Improve the data quality control program for the Injury Surveillance systems to reflect best practices identified in the Traffic Records Program Assessment Advisory.

16. Improve the interfaces with the Injury Surveillance systems to reflect best practices identified in the Traffic Records Program Assessment Advisory.

*Considerations for implementing your Injury Surveillance recommendations*

- Create a baseline for each of the six performance measures (timeliness, accuracy, completeness, uniformity, integration, and accessibility), set performance goals, and monitor systemic improvements to the data. Alternatively, and more realistically, West Virginia Office of Emergency Medical Services should evaluate the quality of the data and then select the performance measures that are a priority. Timeliness, completeness, and accuracy are the most straightforward and commonly evaluated and monitored performance measures. There are timeliness requirements for EMS data submission which can serve as performance goals. Any variations from the goals can be reported back to the EMS provider and corrected prior to those variations becoming a long-term problem. The second opportunity, as the State configures ImageTrend Report Writer, is the ability to develop descriptive statistics and reports that will inform injury surveillance activities as well as templates for conducting trend and comparative analyses, from year-to-year or comparing like providers. The third opportunity is to formalize and document the processes and procedures for the collection of data, quality assurance, and use and disclosure of data, among other functions. This would provide for business continuity in the event of staff turnover and serve as an operational manual for staff.
- Develop descriptive statistics and reports that will inform injury surveillance activities as well as templates for conducting trend and comparative analyses, from year-to-year or comparing like providers.
- Formalize and document the processes and procedures for the collection of data, quality assurance, and use and disclosure of data, among other functions. This would provide for business continuity in the event of staff turnover and serve as an operational manual for staff.
- As each of the agencies evaluate and subsequently monitor the data systems for quality issues, they can simultaneously 1) identify high frequency errors to inform data collection manuals, training content, and software validation rules; 2) develop provider-specific data quality reports for critical data elements, selecting those performance measures which are a priority based on the evaluation of the data system; and 3) develop a template for conducting trend and comparative analyses, from year-to-year or comparing geographical areas.
- Ensure representation from each of the agencies participating in injury surveillance on the TRCC.
- Require hospitals to submit an E-code to identify the mechanism of injury for trauma patients. Absence of an E-code on the hospital data systems limits the use of the data for traffic safety purposes and presents a challenge in the event the State pursues linking the crash data to the hospital data. Working with the State's hospital association and the State's chapter for medical coding (i.e., American Association of Medical Coding Professionals) may help increase the voluntary submission until such time the State can require mandatory submission.

## Summary

Data integration and access to integrated traffic records data sets are important components of a comprehensive state traffic records system. Linkage among the traffic records data sets can add detail to the understanding of each crash event, the roadway environment, and the individuals and vehicles involved. Integrated data expands the ability of States to identify and analyze problem areas and develop solutions to reduce crashes and prevent fatalities and injuries.

There is no single agency or entity that quantifies the burden of injuries due to motor vehicle crashes. While most of the injury surveillance systems capture the adequate information to quantify the burden, the lack of mandatory collection of the external cause of injury code (E-code) within the hospital data systems is a shortcoming.

**Emergency Medical Services**

The West Virginia Office of Emergency Medical Services (OEMS) has transitioned to a new data collection vendor, ImageTrend. The EMS data collection is NEMSIS v3.4-compliant; by legislative rule, all EMS agencies must submit to the State EMS database. ImageTrend then exports the records to the national database. While the system is operational, the staff are adjusting to the new platform as well as learning how to maximize functionality including the report-writing capabilities.

Automated edit checks and validation rules are inherent to the ImageTrend data collection system and submitted ePCRs must satisfy those checks and rules to be accepted into the system. Transmission is not completed if ePCRs are rejected. The State does not have a documented process for correcting and resubmitting records with errors.

Performance measures have not been established for the EMS data; however, the staff intends to use the report-writing capabilities to address timeliness, accuracy, completeness, and uniformity. Validation rules and edit checks ensure complete, accurate, and uniform data to an extent but without periodic monitoring of critical data elements one would not know if the system were performing as expected. The transition to the new system provides the State with an excellent opportunity to set performance goals (based on statutory requirement, policy, or best practice), establish a baseline, and monitor the health and quality of the EMS data. Once the data quality reports are established and monitored, the State can develop comparative and trend reports to identify unexplained differences in the EMS data across years, regions, and agencies.

EMS data is available through NEMSIS; other requests are subject to review and approval by the OEMS Research Committee. There is no feedback loop for users of the EMS data to provide data quality feedback to the data collectors and data managers. Many states collect this feedback through regular end user group meetings, EMS program meetings, and other forums that bring together EMS data collectors and managers, end users, and others who may use the EMS data as part of injury surveillance and prevention programs and traffic safety programs.

**Emergency Department and Hospital Discharge Databases**

There is no single entity that maintains a statewide emergency department database. Rather, the West Virginia Office of Epidemiology and Prevention Services can access data from 70 percent of the State's emergency departments, accounting for 75 percent of all emergency department visits. The emergency department syndromic surveillance system does not collect the external cause of injury code (E-code) but a built-in syndrome identifies motor vehicle crashes based on chief complaint. The State has the ability to track the frequency, severity, and nature of injuries can be done, however, the State is not currently doing so.

Summary data is available from the emergency department data syndromic surveillance system for problem identification and program evaluation. Upon authorization, emergency department data is available to those outside of the Department of Health and Human Resources. The accessibility of record-level data and the process by which data is requested is unknown.

The West Virginia Healthcare Authority within the Department of Health and Human Resources maintains the statewide hospital discharge database. The database contains the information necessary to track the frequency, nature, and severity of motor vehicle crash injuries but the data has not been used in that capacity. It is unclear, without the mandatory collection of E-code, how the State defines motor vehicle crash as the cause of injury for tracking motor vehicle injuries.

Hospital discharge data is available to outside parties for analysis; requestors must submit a data request form and a signed data use agreement to the West Virginia Health Care Authority. Additionally, the data is available via online resources.

Emergency department records are subject to automated edit checks and validation rules as defined in the Public Health Information Network (PHIN) Messaging Guide; the same was not addressed for the hospital discharge records. Additionally, there does seem to be a process for the correction and resubmission of rejected records but neither the PHIN Messaging Guide (emergency department data) nor the Data Elements Specification (hospital discharge data) adequately described those processes.

Performance measures have not been established for the emergency department or hospital discharge databases. There are submission timelines for both data systems, but timelines are not performance measures. Data quality reports addressing completeness and accuracy are generated for individual hospitals, but these do not address completeness and accuracy at the system level. There are no performance measures for uniformity, accessibility, or integration. Data quality review of injury records at the system level cannot be conducted as E-code is not a mandatory data element.

Neither the Abbreviated Injury Scale (AIS) nor the Injury Severity Score (ISS) are derived from the State emergency department and hospital discharge data for injury patients.

Data quality feedback from key users is not provided to data collectors and managers though a feedback loop is under development for the emergency department data. There is an informal feedback loop for the hospital discharge data that addresses record-level issues but not data quality at the system level.

Data quality reports are not shared with the State TRCC for either hospital database.

**Trauma Registry**

West Virginia Legislative Rule requires all designated trauma centers in the State to collect and submit information to the statewide Trauma and Emergency Medical Information System which is compliant with the National Trauma Data Standards. The State Trauma Registry data tracks the frequency, severity, and nature of injuries through the ISS and AIS, as well as other clinical codes captured in the system.

The trauma data is used regularly to identify problems, evaluate programs, and allocate resources. It is also available to outside parties; requestor applications are subject to review and approval (or rejection, modification) by the OEMS Research Committee.

Edit checks and validation rules are inherent to both versions of the State's V5 trauma registry, ensuring that entered trauma registry data falls within a range of acceptable values and is logically consistent. Beyond the checks and rules, data quality reviews are conducted biannually for each facility and critical data elements are reviewed and corrected. The facility can resolve any issues prior to or at the data review. The State performs follow-up with each facility ensuring all issues are resolved.

The State maintains timeliness requirements for trauma registry data, informal goals for accuracy, and records are not accepted into the system unless they are complete and meet uniform standards. Reports are created based on the requirements and informal goals, but these do not constitute performance measures, nor do they give feedback on the overall quality and health of the statewide trauma registry data.

**Vital Records**

The West Virginia Health Statistics Center collects and manages the State’s vital records data. Edit checks and validation rules are inherent to the system; however, quality control reviews are conducted at the time of submission to ensure completeness, accuracy, and uniformity in compliance with national standards.

Medical examiners handle deaths resulting from motor vehicle injuries and complete the death certificates. Nature of injury is captured in a text field; it is a literal description of the cause of death. The text field nature of some of the vital records data makes quality reviews challenging. Information can be analyzed based on demographics, geography, and time.

Aggregate vital records data is available to outside parties through ad hoc query, static reports are

published by the Health Statistics Center, and lastly, via an interactive form by federal agencies. West Virginia Code ensures the availability of vital records data for statistical purposes.

**Opportunities**

Increasing the usefulness of the data dictionaries for the EMS data, emergency department, and hospital discharge data systems helps those working with the data collections systems, the data users, and those interested in data linkage projects. The EMS data dictionary is based on NEMSIS, but does not include State-specific data elements, their definitions, attributes, and data collection rules. The State relies on the PHIN Messaging Guide for Syndromic Surveillance as the data dictionary but again, any State-specific data elements are not addressed. Lastly, the Healthcare Authority maintains a data schema for the hospital discharge data system, but it lacks element and attribute definitions, exclusions, and data collection rules.

Absence of an E-code on the hospital data systems limits the use of the data for traffic safety purposes and presents a challenge in the event the State pursues linking the crash data to the hospital data. Requiring hospitals to submit an E-code is a challenge itself but a worthy endeavor advantageous for all injury surveillance stakeholders from traffic safety to elder care (falls) to child safety (bike helmets). Working with the State's hospital association and the State's chapter for medical coding (i.e., American Association of Medical Coding Professionals) may help increase the voluntary submission until such time the State can require mandatory submission.

A common issue among each of the injury surveillance agencies is the lack of established performance measures for timeliness, completeness, accuracy, uniformity, accessibility, and integration. The automated quality controls inherent to each of the systems should ensure completeness, accuracy, and uniformity, but a review of each measure at the State level would make certain the system is functioning correctly and enable the data managers to identify any loss of quality in a timely manner. Timeliness, completeness, accuracy, and uniformity can be measured based on data within the system. Accessibility and integration are external measures. Accessibility is the measure of a user's ability to obtain and use the data and is often measured through customer satisfaction surveys. Accessibility metrics may measure if the data met the needs of the user or was the data provided within a reasonable time. Integration is the linking of databases using common identifiers. Metrics may include the number of databases linked or the number of expected linkages versus the number of actual linkages.

With the EMS system in its early stages, there exists three opportunities. The first is to create a baseline for each of the six performance measures (timeliness, accuracy, completeness, uniformity, integration, and accessibility), set performance goals, and monitor systemic improvements to the data. Alternatively, and more realistically, West Virginia OEMS should consider evaluating the quality of the data and then selecting the performance measures that are a priority. Timeliness, completeness, and accuracy are the most straightforward and commonly evaluated and monitored performance measures. There are timeliness requirements for EMS data submission which can serve as performance goals. Any variations from the goals can be reported back to the EMS provider and corrected prior to those variations becoming a long-

term problem. The second opportunity, as the State configures ImageTrend Report Writer, is the ability to develop descriptive statistics and reports that will inform activity surveillance activities as well as templates for conducting trend and comparative analyses, from year-to-year or comparing like providers. The third opportunity is to formalize and document the processes and procedures for the collection of data, quality assurance, and use and disclosure of data, among other functions. This would provide for business continuity in the event of staff turnover and serve as an operational manual for staff.

As each of the agencies evaluate and subsequently monitor the data systems for quality issues, they can simultaneously 1) identify high frequency errors to inform data collection manuals, training content, and software validation rules; 2) develop provider-specific data quality reports for critical data elements, selecting those performance measures which are a priority based on the evaluation of the data system; and 3) develop a template for conducting trend and comparative analyses, from year-to-year or comparing like providers.

In recent years, data-driven performance management has proven to be critical in meeting grant requirements and rising Congressional expectations. NHTSA has available several publications that address performance measures for traffic records systems, including "Model Performance Measures for State Traffic Records Systems," (DOT HS 811 441). This publication offers several examples of performance measures not only for the injury surveillance data systems, but for each of the six components that make up a traffic records system.

Data quality reports are not shared with the TRCC by any of the agencies involved in injury surveillance for traffic safety. Representation from each of the agencies participating in injury surveillance would be of value to the TRCC and highway safety stakeholders, and each agency should consider submitting a brief description of their system, a data dictionary (including a list of identifiers that would facilitate the integration of the disparate traffic records systems), access instructions, and any limitations on the use and/or release of the data – an injury surveillance data inventory of sorts. The TRCC can provide support to the participating agencies in data quality improvement and data integration activities as well as other projects that address traffic safety through data-driven analyses.

## Data Use and Integration Recommendations

**None**

*Considerations for implementing your Data Use and Integration recommendations*

- Expand the Traffic Records Coordinating Committee membership to include research analysts and data managers to promote discussion and integration of traffic records data.
- Revisit the development of a data governance policy and include data managers and technical partners with the executive group.
- Review agency data access policies and collaborate to identify pathways to data integration.

## Summary

Behavioral program managers have access to the crash data in the Report Beam system and are able to conduct basic analyses. The Division of Highways also has system and analytical personnel able to assist partners and conduct more in-depth studies. There is a new coordinator for the West Virginia Traffic Records Coordinating Committee (TRCC) and that change should bring a renewed focus on data integration among the traffic records component system. Expanding TRCC membership to data analysts and managers will promote data integration projects, which would then become part of the Traffic Records Strategic Plan. While efforts to establish a data governance policy have not been successful, convening a group to include a variety of safety data partners, possibly from the TRCC, may help bring the executive efforts to fruition. Data governance would be key to promoting and facilitating the data system integration. Data access policies should be reviewed among the partner agencies, Departments of Motor Vehicles, Transportation, and Health and Human Resources, to understand any laws or regulations related to data accessibility. Such conversations would also help partners understand the benefits of data integration and work more closely together, especially as the Numetric System for Safety Management project begins implementation.

## Assessment Rating Changes

For each question, a rating was assigned based on the answers and supporting documentation provided by the State. The ratings are shown as three icons, depicting 'meets,' 'partially meets,' or 'does not meet.' The table below shows changes in ratings from the last assessment for all the questions that were unchanged (N=223). This does not include new questions (N=21) and questions that can be partially mapped to questions from the last assessment (N=84).

Legend:

| | Rating Changes from Last Assessment | | |
|---|---|---|---|
| System | Meets | Partially Meets | Does not Meet |
| **Traffic Records Coordinating Committee** | | | |
| Traffic Records Coordinating Committee | 0 | 0 | 0 |
| **Strategic Planning for the Traffic Records System** | | | |
| Strategic Planning for Traffic Records Systems | +1 | +1 | -2 |
| **Crash Data System** | | | |
| Description and Contents of the Crash Data System | 0 | -1 | +1 |
| Applicable Guidelines for the Crash Data System | 0 | 0 | 0 |
| Data Dictionary for the Crash Data System | 0 | 0 | 0 |
| Procedures and Process Flows for Crash Data Systems | +1 | -2 | +1 |
| Crash Data Systems Interface with Other Components | 0 | -1 | +1 |
| Data Quality Control Programs for the Crash System | +1 | 0 | -1 |
| **Vehicle Data System** | | | |
| Description and Contents of the Vehicle Data System | 0 | 0 | 0 |
| Applicable Guidelines for the Vehicle Data System | +1 | -1 | 0 |
| Vehicle System Data Dictionary | 0 | 0 | 0 |
| Procedures and Process Flows for the Vehicle Data System | -1 | 0 | +1 |
| Vehicle Data System Interface with Other Traffic Record System Components | 0 | 0 | 0 |
| Data Quality Control Programs for the Vehicle Data System | 0 | +1 | -1 |
| **Driver Data System** | | | |
| Description and Contents of the Driver Data System | +1 | -1 | 0 |
| Applicable Guidelines for the Driver Data System | 0 | 0 | 0 |
| Data Dictionary for the Driver Data System | 0 | +1 | -1 |
| Procedures and Process Flows for the Driver Data System | +3 | -2 | -1 |
| Driver System Interface with Other Components | 0 | +1 | -1 |
| Data Quality Control Programs for the Driver System | 0 | +1 | -1 |
| **Roadway Data System** | | | |
| Description and Contents of the Roadway Data System | -1 | +1 | 0 |

| | | | |
|---|---|---|---|
| Applicable Guidelines for the Roadway Data System | 0 | -1 | +1 |
| Data Dictionary for the Roadway Data System | 0 | +1 | -1 |
| Procedures and Process Flows for the Roadway Data System | 0 | +2 | -2 |
| Intrastate Roadway System Interface | +1 | 0 | -1 |
| Data Quality Control Programs for the Roadway Data System | 0 | +2 | -2 |
| **Citation and Adjudication Systems** | | | |
| Description and Contents of the Citation and Adjudication Data Systems | -2 | +2 | 0 |
| Applicable Guidelines and Participation in National Data Exchange Systems for the Citation and Adjudication Systems | 0 | 0 | 0 |
| Data Dictionary for the Citation and Adjudication Data Systems | -1 | +2 | -1 |
| Procedures and Process Flows for the Citation and Adjudication Data Systems | +1 | -1 | 0 |
| Citation and Adjudication Systems Interface with Other Components | 0 | 0 | 0 |
| Quality Control Programs for the Citation and Adjudication Systems | 0 | 0 | 0 |
| **Injury Surveillance Systems** | | | |
| Emergency Medical Systems (EMS) Description and Contents | -4 | -1 | -3 |
| EMS – Guidelines | -2 | 0 | -1 |
| EMS – Data Dictionary | -4 | 0 | 0 |
| EMS – Procedures & Processes | -4 | -2 | -2 |
| Injury Surveillance Data Interfaces | 0 | -1 | +1 |
| EMS – Quality Control | +1 | -1 | 0 |
| Emergency Department and Hospital Discharge – Quality Control | -2 | +1 | +1 |
| Trauma Registry – Quality Control | 0 | +1 | -1 |
| Vital Records – Quality Control | 0 | +1 | -1 |
| Emergency Department - System Description | 0 | 0 | +2 |
| Emergency Department – Data Dictionary | 0 | +1 | 0 |
| Emergency Department – Procedures & Processes | 0 | +1 | +1 |
| Hospital Discharge – System Description | +2 | 0 | +1 |
| Hospital Discharge – Data Dictionary | 0 | +1 | 0 |
| Hospital Discharge – Procedures & Processes | +2 | 0 | 0 |
| Emergency Department and Hospital Discharge – Guidelines | 0 | 0 | +1 |
| Emergency Department and Hospital Discharge – Procedures & Processes | 0 | +1 | 0 |
| Trauma Registry – System Description | +2 | 0 | 0 |
| Trauma Registry – Guidelines | +2 | 0 | 0 |
| Trauma Registry – Data Dictionary | +1 | 0 | 0 |
| Trauma Registry – Procedures & Processes | +2 | 0 | 0 |

| | | | |
|---|---|---|---|
| Vital Records – System Description | +1 | 0 | 0 |
| Vital Records – Data Dictionary | +1 | 0 | 0 |
| Vital Records – Procedures & Processes | +1 | 0 | 0 |
| Injury Surveillance System | 0 | 0 | 0 |
| **Data Use and Integration** | | | |
| Data Use and Integration | 0 | 0 | 0 |
| | | | |
| ***Total Change*** | ***+4*** | ***+7*** | ***-11*** |

## Methodology and Background

In 2018, the National Highway Traffic Safety Administration updated the *Traffic Records Program Assessment Advisory* (Report No. DOT HS 811 644). This *Advisory* was drafted by a group of traffic safety experts from a variety of backgrounds and affiliations, primarily personnel actively working in the myriad State agencies responsible for managing the collection, management, and analysis of traffic safety data. The *Advisory* provides information on the contents, capabilities, and data quality of effective traffic records systems by describing an ideal that supports data-driven decisions and improves highway safety. Note that this ideal is used primarily as a uniform measurement tool; it is neither NHTSA's expectation nor desire that States pursue this ideal blindly without regard for their own unique circumstances. In addition, the *Advisory* describes in detail the importance of quality data in the identification of crash causes and outcomes, the development of effective interventions, implementation of countermeasures that prevent crashes and improve crash outcomes, updating traffic safety programs, systems, and policies, and evaluating progress in reducing crash frequency and severity.

The *Advisory* is based upon a uniform set of questions derived from the ideal model traffic records data system. This model and suite of questions is used by independent subject matter experts in their assessment of the systems and processes that govern the collection, management, and analysis of traffic records data in each State. The 2018 *Advisory* reduces the number of questions, eases the evidence requirements, and appends additional guidance to lessen the burden on State respondents.

As part of the 2018 update, the traffic records assessment process was altered as well. While it remains an iterative process that relies on the State Traffic Records Assessment Program (STRAP) for online data collection, the process has been reduced to two question-answer cycles. In each, State respondents can answer each question assigned to them before the assessors examine their answers and supporting evidence, at which point the assessors rate each response. At the behest of States who wanted increased face-to-face interaction, a second onsite review will now be held between the first and second rounds. The facilitator will lead this discussion and any input from this meeting will be entered into STRAP for the State's review. The second and final question and answer cycle is used to clarify responses and provide the most accurate rating for each question following the onsite review. To assist the State in responding to each question, the *Advisory* also provides State respondents with suggested evidence that identify the specific information appropriate to answer each assessment question.

The assessment facilitator works with the State assessment coordinator to prepare for the assessment and establish a schedule consistent with the example outlined in Figure 1. Actual schedules may vary as dates may be altered to accommodate State-specific needs.

Independent assessors rate the responses and determines how closely a State's capabilities match those of the ideal system outlined in the *Advisory*. Each system component is evaluated independently by two or more assessors, who reach a consensus on the ratings. Specifically, the assessors rate each response and determine if a State (a) meets the description of the ideal traffic records system, (b) partially meets the ideal description, or (c) does not meet the ideal description. The assessors write a brief narrative to explain their rating for each question, as well as a summary for each section and any considerations—actionable suggestions for improvement—that will be included with the assessment's recommendations.

**Figure 2: Sample Traffic Records Assessment Timetable**

| | | |
|---|---|---|
| Upon NHTSA TR Team receipt of request | | Initial pre-assessment conference call |
| 1 month prior to kickoff meeting | | Facilitator introduction pre-assessment conference call |
| Between facilitator conference call and kickoff | | State Coordinator assigns questions, enters contact information into STRAP, and builds initial document library |
| **Assessment** | Monday, Week 1 | **Onsite Kickoff Meeting** |
| | Monday, Week 1 – 12pm EST, Friday, Week 3 | **Round 1 Data Collection**: State answers standardized assessment questions |
| | Friday, Week 3 – Wednesday, Week 5 | **Round 1 Analysis**: Assessors review State answers, rate all responses and complete all draft conclusions |
| | Thursday, Week 5 – Monday, Week 7 | **Review Period**: State reviews the assessors' initial ratings in preparation for the onsite meeting. |
| | Tuesday, Week 7 | **Onsite Review Meeting**: Facilitator and State respondents meet to discuss questions; clarifications entered into STRAP |
| | Wednesday, Week 7 – 12pm EST, Friday, Week 9 | **Round 2 Data Collection**: State provides final response to the assessors' preliminary ratings and onsite clarifications |
| | Friday, Week 9 – Monday, Week 11 | **Round 2 Analysis**: make final ratings |
| | Tuesday, Week 11 – Monday, Week 12 | Facilitator prepares final report |
| Week 12 | | NHTSA delivers final report to State and Region |
| (After completion of assessment, date set by State) | | NHTSA hosts webinar to debrief State participants |
| (After completion of assessment) | | (OPTIONAL) State may request GO Team, CDIP or MMUCC Mapping, targeted technical assistance or training |

In order for NHTSA to accept and approve an assessment each question must have an answer. When appropriate, however, a State may answer questions in the negative ("no," don't know," etc.)". These responses constitute an acceptable answer and will receive a "does not meet" rating. An assessment with unanswered or blank questions will not be acceptable and cannot be used to qualify for §405(c) grant funds.

**Figure 3: State Schedule for the Traffic Records Assessment**

| | |
|---|---|
| Kickoff | January 31, 2022 |
| Begin first Q&A Cycle | January 31, 2022 |
| End first Q&A Cycle | February 18, 2022 |
| Begin Review Period | March 03, 2022 |
| Onsite Meeting | March 15, 2022 |
| Begin second Q&A Cycle | March 15, 2022 |
| End second Q&A Cycle | April 01, 2022 |
| Assessors' Final Results Complete | April 19, 2022 |
| Final Report Due | May 02, 2022 |
| Debrief | May 02, 2022 |

# Appendix A: Question Details, Ratings and Assessor Conclusions

This section presents the assessment's results in more granular detail by providing the full text, rating, and assessor analysis for each question. This section can be useful to State personnel looking to understand why specific ratings were given and further identify areas to target for improvement.

## Questions, Ratings and Assessor Conclusions

### Traffic Records Coordinating Committee

1. ***Does the TRCC membership include executive and technical staff representation from all six data systems?***

   Meets Advisory Ideal

   The TRCC has documented membership from all six core system databases, with both technical and executive membership displayed. They have created a TRCC charter with signatures from the appropriate authority and appear to be one core membership, instead of separating the two committees. While not a traditional two-level system, the makeup of the representatives includes Director level representatives that have been delegated the authority to speak for those executives that signed the Agreement to the State Traffic Records Strategic Plan and TRCC dated March 18, 2013. If the State has found this is best for their needs and is showing membership in all areas, there are no issues, and it is commended they have structured their committee to meet the needs of its membership.

   Change Notes: Rating Improved.
   From 'Partially Meets Advisory Ideal' to 'Meets Advisory Ideal'.

2. ***Do the executive members of the TRCC regularly participate in TRCC meetings and have the power to direct the agencies' resources for their respective areas of responsibility?***

   Meets Advisory Ideal

   The State has documented the charter and committee membership, showing attendance at multiple TRCC meetings. The executive members of the TRCC regularly participate in TRCC meetings, and they have the power to direct their agency's resources. The State could consider adding more details to their meeting minutes to further show the progress that has taken place at their meetings as well as any action items needed.

   Change Notes: Rating Improved.
   From 'Partially Meets Advisory Ideal' to 'Meets Advisory Ideal'.

3. ***Do the custodial agencies seek feedback from the TRCC members when major projects or system redesigns are being planned?***

   Partially Meets Advisory Ideal

   TRCC members provide and obtain feedback on significant projects (e.g., during the integration of systems). Although system integration was noted as discussed in both the 3/29/21 and 4/27/21 TRCC meetings, it is unclear how custodial agencies inform the TRCC of a major project and then what the agency does with the feedback they receive.

   Change Notes: New Question.

4. ***Does the TRCC involve the appropriate State IT agency or offices when member agencies are planning and implementing technology projects?***

Meets Advisory Ideal

The TRCC membership includes IT membership from all six core databases and shows both the technical and executive levels present. The TRCC meeting minutes have shown that not only are the IT members a part of the TRCC membership, but they also are regularly attending the meetings which will lead to informed conversation and decision making when discussing any potential projects, performance measures, and potential data sharing and linkage. Additional IT staff are available if needed for a specific project.

Change Notes: Rating Unchanged.

5. ***Is there a formal document authorizing the TRCC?***

Meets Advisory Ideal

West Virginia has a formal charter establishing the authority and responsibility of the TRCC. It is signed by twelve agency representatives of the Committee and is dated March 18, 2013.

Change Notes: Rating Unchanged.

6. ***Does the TRCC provide the leadership and coordination necessary to develop, implement, and monitor the State Traffic Records Strategic Plan?***

Partially Meets Advisory Ideal

The Traffic Records Coordinator/TRCC chairperson is the single point of contact for the maintenance and management of the State Traffic Records Strategic Plan (STRP). The remaining members of the TRCC provide their project information and assist with decision making. This suggests that the role of the TRCC is minimal in developing the TRSP.

Change Notes: Rating Unchanged.

7. ***Does the TRCC advise the State Highway Safety Office on allocation of Federal traffic records improvement grant funds?***

Does Not Meet Advisory Ideal

The coordinator advises and assists the State Highway Safety Office in the allocation of Federal traffic records improvement grant funds and refers to an eCitation project, which is receiving 405(c) funds. There was no evidence provided that the full TRCC is involved in allocating funds or that they have a role determining the yearly program funding. It was reported that the State allocated 405(c) funds for equipment to increase participation in the state's eCitation program, however no information or documentation was provided that the TRCC provided input in this decision. No other allotted funding was identified that the Coordinator or the TRCC approved. The State could consider adding a funding allocation or decision-making matrix to the plan to ensure transparency to the TRCC members and any others reviewing the documentation. The State could consider a NHTSA GO Team to assist them with doing this if they are so inclined.

Change Notes: Rating Changed.
From 'Partially Meets Advisory Ideal' to 'Does Not Meet Advisory Ideal'.

8. ***Does the TRCC identify core system performance measures and monitor progress?***

Meets Advisory Ideal

The State has reported and documented within the strategic plan the TRCC identification of core system performance and monitors progress by providing one performance measure for each of the six core systems and described how the TRCC identified it and has tracked its progress over time. The State has provided many examples of this, notably within the vehicle system. There was a noticeable amount of inaccurate data when it came to data on vehicle registration, especially hand typed VIN numbers. The DMV decided to place bar codes on registration cards so that their information could be scanned reducing the number of errors that come from hand typing. This then led to improved parts of the eCitation system as now their officers are able to scan registration cards, making their jobs quicker, more efficient, and more accurate.

Change Notes: Rating Unchanged.

9. ***Does the TRCC enable meaningful coordination among stakeholders and serve as a forum for the discussion of the State's traffic records programs, challenges, and investments?***

Meets Advisory Ideal

The details in the strategic plan, the charter, and TRCC sample meeting minutes that identify who attended the TRCC meetings established the TRCC as a forum for discussion and coordination among the stakeholders. It should be noted that since the entire TRCC does not always attend meetings, it would be helpful if the minutes were expanded to include more detail on what was discussed, assigned, or decided in the meetings, and then share that information with all committee members.

Change Notes: Rating Unchanged.

10. ***Does the TRCC have a traffic records inventory?***

Does Not Meet Advisory Ideal

The State does not currently have a traffic records inventory. The State could consider engaging the assistance of a NHTSA GO Team to help outline best practices and ways to begin documentation of a traffic records inventory. Another option is to consider having each core database present data at each TRCC meeting and begin the collection of a data inventory from each area. This process also gives time for interaction, training, questions, and potential data linkage between systems as documentation is made.

Change Notes: Rating Unchanged.

11. ***Does the TRCC have a designated chair?***

Meets Advisory Ideal

Tyler Thaxton is both the Chair and the Traffic Records Coordinator of the TRCC. His position is housed within the West Virginia Governor's Highway Safety Office (GHSP) of the Division of Motor Vehicles. As the Chair/Coordinator his responsibilities are documented in Chapter 5 of the FY22 TRSP.

Change Notes: Rating Unchanged.

**12.** ***Is there a designated Traffic Records Coordinator?***

Meets Advisory Ideal

The State has a Traffic Records Coordinator and has further documented that the Coordinator is the chairperson of the Traffic Records Coordinating Committee and administers the daily business of the committee. All aspects of the strategic plan are maintained and managed by the Coordinator, as well as regular progress reports are provided to Federal sponsors about its implementation. Additional responsibilities of the Traffic Records Coordinator include the following: 1. Maintain awareness and track the status of all safety information systems within the state. 2. Maintain regular communications with the TRCC. 3. Regularly report or obtain status information of all projects listed within the strategic plan. 4. Maintain and update the strategic plan based on changing priorities and accomplishments within the State. 5. Maintain the roster of the TRCC.

Change Notes: Rating Unchanged.

**13.** ***Does the TRCC meet at least quarterly?***

Partially Meets Advisory Ideal

The State has shown that they are currently meeting 3 times a year, just shy of the recommendation of quarterly meetings. As a consideration, the State could add an additional meeting and adjust to a quarterly schedule to include a 4th meeting.

Change Notes: Rating Unchanged.

**14.** ***Does the TRCC review quality control and quality improvement programs impacting the core data systems?***

Partially Meets Advisory Ideal

The TRCC serves as a quality control monitor for all traffic records programs. Although many of the projects in the strategic plan are quality improvement projects, it is not evident from the meeting minutes that the TRCC reviewed any of the projects or programs. The meeting minutes did provide several references to data (citation, electronic distribution, HIPAA, etc.) and a reference to possible problems moving to Google Suite. These all may be quality control discussions, but there was not enough detail to determine this.

Change Notes: Rating Unchanged.

**15.** ***Does the TRCC assess and coordinate the technical assistance and training needs of stakeholders?***

Meets Advisory Ideal

The State provided evidence on how training was identified and provided for the eCitation program, and how a quality control plan for the Crash Records Database is being developed. This plan will focus on further enhancement of the existing edits and clarifications to officer training. These two examples provide evidence that agencies have brought technical assistance and training needs to the attention of the TRCC to be addressed.

Change Notes: Rating Improved.
From ‘Partially Meets Advisory Ideal’ to ‘Meets Advisory Ideal’.

16. ***Do the TRCC's program planning and coordination efforts reflect traffic records improvement funding sources beyond § 405(c) funds?***

Partially Meets Advisory Ideal

The State has shown in the strategic plan that there are traffic safety projects funded by the State, but it is unclear the type of funding used to fund said project. The State has shown projects funded with 405(c) and 408 funds. The State has documented use of State funds for projects within the plan as well. The State could consider a more defined funding breakdown, so it is easier to track funding sources for each potential or current project. This could also assist in the project planning of available funding sources, especially when discussing available and allocated funds.

Change Notes: Rating Unchanged.

## Strategic Planning for Traffic Records Systems

17. ***Does the State Traffic Records Strategic Plan address existing data and data systems areas of opportunity and document how these are identified?***

Meets Advisory Ideal

All of the data system improvement recommendations from the 2016 Assessment, as well as how they were or if they will be addressed in FY2022, are listed in the State Traffic Records Strategic Plan (STRSP) Appendix 2. Additionally, in Appendix 3 of the STRSP, specific projects include the review of system deficiencies and a plan to address. Although the State meets the advisory ideal, the State could consider updating projects that have due dates and adding a column to their grid to add the true completion date.

Change Notes: Rating Improved.
From 'Partially Meets Advisory Ideal' to 'Meets Advisory Ideal'.

18. ***Does the State Traffic Records Strategic Plan identify countermeasures that address at least one of the performance attributes (timeliness, accuracy, completeness, uniformity, integration, and accessibility) for each of the six core data systems?***

Meets Advisory Ideal

The State has documented both the NHTSA model performance measures and the State's translation to meet each of the six attributes for all of the core systems with an added bonus of data linkage between systems. The State has given the anticipated benchmarks and improvements they hope to see within each area as well as quantifiable ways to track their progress. This will add to an ease of translation when asking the TRCC membership to provide these data measures or explain to a member what benchmarks they are looking to achieve. The State should be commended for the nice job in developing performance measures.

Change Notes: Rating Unchanged.

19. ***Does the TRCC have a process for identifying at least one performance measure and the corresponding metrics for the six core data systems in the State Traffic Records Strategic Plan?***

Meets Advisory Ideal

Although no formal process was identified, the State reported that the performance measures were

reviewed yearly to ensure metrics were met or if new metrics needed to be set. Quantitative measures for each core area are listed in Appendix 4 of the STRSP. Development of a process to review performance measures on a regular basis is strongly encouraged.

Change Notes: Rating Improved.
From 'Partially Meets Advisory Ideal' to 'Meets Advisory Ideal'.

**20.** ***Does the TRCC have a process for prioritizing traffic records improvement projects in the State Traffic Records Strategic Plan?***

Does Not Meet Advisory Ideal

Documentation provided by the State "identifies" to the TRCC whether a project meets the criteria listed in Section 14 of the STRSP but doesn't appear to have a priority assigned either by the TRCC or by the agencies. (i.e., The Vehicle data system provided their #1 project and a list of projects with no prioritization. Roadway had six projects listed but as some were in progress vs. in discovery and it appears this is just a list.) A consideration for the State would be to prioritize all projects within the State or at least within each agency. Another consideration for the State is adding a more concrete marking of which projects are decided on by the TRCC, which are added based on funding provided by partner agencies, and if there is any need to add a project SWOT analysis for times multi-projects are competing for 405(c) funding.

Change Notes: Rating Unchanged.

**21.** ***Does the TRCC identify and address technical assistance and training needs in the State Traffic Records Strategic Plan?***

Meets Advisory Ideal

As documented in the STRSP, the TRCC identifies and addresses technical and training issues. Technical assistance was addressed where the Coordinator tracks the status of all IT systems included in the STRSP and reports out to the TRCC. Additionally, there were examples of technical assistance in the STRSP such as determining the need to develop the State's first electronic data collection system. The State has pointed to recent efforts around providing training to officers and court clerks on how to properly use the ReportBeam system. Although the State meets the advisory ideal, they could consider having a core database owner present at the TRCC meetings to further showcase the capabilities of the system while training other members on its functionality and encouraging conversations around potential data linkage or future projects. Another consideration for the State is to apply for a NHTSA GO Team to provide training in an area of interest, be it data linkage, strategic planning, performance measures, or any other area the TRCC membership is interested in further technical assistance.

Change Notes: Rating Improved.
From 'Partially Meets Advisory Ideal' to 'Meets Advisory Ideal'.

**22.** ***Does the TRCC have a process for establishing timelines and responsibilities for projects in the State Traffic Records Strategic Plan?***

Partially Meets Advisory Ideal

There is not a process to establish timelines and responsibilities for projects since these are determined and maintained by the agencies. The STRSP provides criteria in Section 14 to assist the agencies in determining its High/Low Cost and High/Low Payoff. The State could look at

quarterly report-outs by members for each of these projects, possibly with any updates to data quality, performance measures, or funding. The State could also consider adding a section within the plan to outline the process for projects, example: 405c funded projects versus other funding sources that they may not be in control of. As no additional information was provided, the rating is unchanged.

Change Notes: Rating Unchanged.

***23. Does the TRCC have a process for integrating and addressing State and local (to include federally recognized Indian Tribes, where applicable) data needs and goals into the State Traffic Records Strategic Plan?***

Partially Meets Advisory Ideal

Local needs are addressed as they are brought to the TRCC, and there is not a permanent local member on the TRCC. The TRCC coordinator is engaged in direct contact with local agencies in regard to the eCitation project, which is a positive step for the State to further the membership and opinions within the TRCC. Another consideration for the State is to contact metropolitan planning organizations, local law enforcement, and other safety memberships in the community to participate in their meetings.

Change Notes: Rating Unchanged.

***24. Does the TRCC consider the use of new technology when developing and managing traffic records projects in the State Traffic Records Strategic Plan?***

Meets Advisory Ideal

While it is unclear if the TRCC as a whole considers the use of new technology in traffic records projects, a review of the projects included in the STRSP provide evidence that the agencies consider new technology when developing and managing traffic records projects. The goals in the plan include focusing on improving data collection and data quality as well as improving system integration.

Change Notes: Rating Unchanged.

***25. Does the State Traffic Records Strategic Plan consider lifecycle costs in implementing improvement projects?***

Partially Meets Advisory Ideal

The State provided an example of the eCitation project which included initial program costs (e.g., program software and initial hardware for agencies) and yearly maintenance. Other than maintenance costs, the project did not include lifecycle costs (replacement hardware, licensing, software upgrades, operating costs, etc.) However, it should be noted that the eCitation project is a great example of how to implement a project that will most likely have agency support as well as buy-in from the officers.

Change Notes: Rating Changed.
From ‘Meets Advisory Ideal’ to ‘Partially Meets Advisory Ideal’.

**26.** ***Does the State Traffic Records Strategic Plan make provisions for coordination with key Federal traffic records data systems?***

Meets Advisory Ideal

Several references were made in the STRSP of coordinating the State's programs with Federal traffic records data systems. Examples include: DMV is currently using a batch process to interface with AAMVA NMVTIS; The State Trauma Registry is working to collect data that are NEMSIS compliant; the State is assisting DOH to ensure OASIS will include all MIRE data elements, and DMV continues to modify computer programming and systemic procedures to meet standards set within the CDL program by the FMCSA. In addition to the above examples, the TRCC includes the FMCSA and FHA representatives who regularly attended the 2021 meetings. Therefore, it is evident the TRCC and the TRSP are making efforts to coordinate with Federal systems.

Change Notes: Rating Improved.
From 'Does Not Meet Advisory Ideal' to 'Meets Advisory Ideal'.

**27.** ***Is the TRCC's State Traffic Records Strategic Plan reviewed, updated and approved annually?***

Partially Meets Advisory Ideal

The TRCC Coordinator reported that the STRSP is reviewed, updated, and approved annually. Per Section 5.0 of the STRSP, the traffic record coordinator responsibilities include obtaining status information of all projects which are then added to the STRSP. The last revision took place on July 26, 2021. To meet the advisory ideal, the TRCC should review as a group prior to finalizing and submitting the plan.

Change Notes: Rating Improved.
From 'Does Not Meet Advisory Ideal' to 'Partially Meets Advisory Ideal'.

## Description and Contents of the Crash Data System

**28.** ***Is statewide crash data consolidated into one database?***

Meets Advisory Ideal

West Virginia's Statewide crash data is consolidated into one database. All crash data is collected electronically via ReportBeam software which is compiled into a single statewide server (facilitated by ReportBeam) upon approval of each crash report.

Change Notes: Rating Unchanged.

**29.** ***Is the statewide crash system's organizational custodian clearly defined?***

Meets Advisory Ideal

The West Virginia Division of Highways (WVDOH) is the organizational custodian for the statewide crash database. §17C-4 of the West Virginia State Code clearly identifies that law enforcement agencies are to report crashes to the Division of Highways (§17C-4-7) on the State approved PAR (§17C-4-9) and that analyzing crash data is also WVDOH's responsibility (§17C-4-14).

Change Notes: Rating Unchanged.

**30.** ***Does the State have criteria requiring the submission of fatal crashes to the statewide crash system?***

Meets Advisory Ideal

§17C-4-7(a) of the West Virginia State Code requires that anyone involved in a motor vehicle crash resulting in the death or injury of any person or in total property damage to the apparent extent of $1000 or more report the crash to the nearest law enforcement agency. §17C-4-7 further requires the investigating law enforcement agencies to complete a report of the crash and submit it to the Division of Highways. As §17C-4 is a little vague as to the line between a fatal and serious injury, the State utilizes FARS guidelines and ANSI D16.1 to classify crash severity. By this standard, any injury resulting in death within 30 days of the date of the crash is considered a fatality. The ANSI D16.1 Manual is further used for decisions as to whether or not a crash counts in the Statewide totals for the year; however, all submitted crashes – private property or otherwise disqualified from the State totals – are maintained within the State Crash Records Database.

Change Notes: Rating Unchanged.

**31.** ***Does the State have criteria requiring the submission of injury crashes to the statewide crash system?***

Meets Advisory Ideal

§17C-4-6 of the West Virginia State Code requires that anyone involved in a motor vehicle crash resulting in the death or injury of any person or in total property damage to the apparent extent of $1000 or more report the crash to the nearest law enforcement agency. §17C-4-7 further requires the investigating law enforcement agencies to complete a report of the crash and submit it to the Division of Highways. ANSI D16.1 and the KABCO scale are used to further describe the severity of injuries received in a crash.

Change Notes: Rating Unchanged.

**32.** ***Does the State have criteria requiring the submission of property damage only (PDO) crashes to the statewide crash system?***

Meets Advisory Ideal

§17C-4-6 of the West Virginia State Code requires that anyone involved in a motor vehicle crash not resulting in the death or injury of any person but resulting in total property damage to the apparent extent of $1000 or more, report the crash to the nearest law enforcement agency. §17C-4-7 further requires the investigating law enforcement agencies to complete a report of the crash and submit it to the Division of Highways. ANSI D16.1 and the KABCO scale are used to further support the collection of these non-injury, damage producing crashes.

Change Notes: Rating Unchanged.

**33.** ***Does the State have statutes or other criteria specifying timeframes for crash report submission to the statewide crash database?***

Meets Advisory Ideal

West Virginia State Code (WVSC 17C-4-7(c-d)) clearly outlines that crash reports are to be submitted to the West Virginia DOT's Division of Highways within 24 hours of completing a crash investigation. It furthers details that if a crash investigation cannot be completed within 10 days of

the crash, that the law enforcement officer shall submit a preliminary report regarding the crash and submit the final report within 24 hours of completing the investigation.

Change Notes: New Question.

***34. Does the statewide crash system record the crashes that occur in non-trafficway areas (e.g., parking lots, driveways)?***

Meets Advisory Ideal

West Virginia's State Crash Records Database has the ability to record crashes occurring in non-trafficway areas. However, reporting these types of crashes is not mandated by State Code. They encourage the State's law enforcement agencies to report these types of crashes, particularly when they result in the death or serious injury of an involved individual. Thus, to the extent that law enforcement agencies elect to report them, the State Crash Records Database includes crashes occurring in non-trafficway areas including parking lots, driveways, within closed boundaries of work zones, trails, and on private property as well as other examples. As described in previous questions, these crashes are filtered out of Statewide Crash totals; however, they are stored within the database.

Change Notes: Rating Unchanged.

***35. Is data from the crash system used to identify crash risk factors?***

Partially Meets Advisory Ideal

There doesn't appear to be any changes to how the State uses Crash Records data from the crash system to identify crash risk factors since the last traffic records assessment. West Virginia says they use the Crash Records Database to define, substantiate, and evaluate any and all highway safety concerns, including the identification of crash risk factors. The State did not provide any specific documentation of how data from the crash system is used to identify crash risk factors by providing example reports and/or analyses that examine locations, roadway features, behaviors, driver characteristics, or vehicle characteristics as they relate to crash risk. Full documents for the West Virginia's Strategic Highway Safety Plan, Highway Safety Improvement Program, and Highway Safety Plan have been provided as documentation of how data from the crash system is used to identify crash risk factors. Identifying which data elements are utilized to identify crash risk factors would be helpful. The Crash Records Database previously was used in conjunction with the Driver Database to identify several categories of at-risk drivers, such as drivers that have been involved in crashes meeting a certain criteria, frequency, or circumstance, so that the drivers could be reviewed for certain remedial actions. Unfortunately, this particular use is no longer on-going since the development of the new Crash Records Database backend has been completed. The DMV's attorney has greatly complicated, to the point of stopping, all attempts to integrate the Crash Records Database with any of DMV's systems. The discrete linking of datasets is ideal for analytic purposes. Perhaps educating the legal representative for the DMV regarding the importance of integrating these systems to inform countermeasures in this regard would be helpful. Utilizing your TRCC to advocate for this integration could be helpful as well.

Change Notes: Rating Unchanged.

***36. Is data from the crash system used to guide engineering and construction projects?***

Meets Advisory Ideal

In a previous assessment, West Virginia used the Safety Management Module of their ERP System to identify opportunities for highway safety improvements through a network screening process. The Safety Module was then used to select locations, define countermeasures, and to develop engineering and construction projects to improve safety concerns. Due to issues within a few non-safety related modules, the DOT elected to abandon the Transportation Management System portion of the State's ambitious ERP project mentioned in previous assessments. This unexpectedly and disappointingly resulted in a decision to no longer support the Highway Safety Management System which was the one operational portion of the project. As such, Traffic Engineering has spent a considerable amount of time during the past couple of years trying to determine the best path forward. A decision was recently made to pursue the purchase of AASHTOWare Safety (or Numetric as it is best known). The DOH is currently in the process of purchasing this, and it is hoped that the development of this system can begin in March or April. West Virginia's State Crash Records Database is used to guide and substantiate engineering and construction projects. Documentation has been provided to support how data from the crash system used to guide engineering and construction projects. Additionally, further explanation has described additional efforts to provide crash data to select, prioritize, and evaluate all HSIP projects including railroad projects, whereby the Crash Rate and Totals by Federal Class and sample summary provide cumulative totals for specific variables. In addition, Summaries and Listings of crashes for both bridge and pavement rehab projects are provided and include a comparison to Statewide Averages with additional categories compared for pavement rehab projects. HSIP staff additionally reviews pavement rehab project-related crash data whenever crash rates are at or above the Statewide Average for a variety of categories and provides recommendations as to potential safety improvements to consider when developing a project. Upon implementation of the Numetric software, the current efforts will likely be more streamlined regarding this process.

Change Notes: Rating Unchanged.

***37. Is data from the crash system regularly used to prioritize law enforcement activity?***

Does Not Meet Advisory Ideal

West Virginia did not provide documentation on how the crash system is 'regularly' used to prioritize law enforcement activity by providing a sample location-based analysis and any associated law enforcement activities. There are no agencies using the DDACT's model at this time. Their response says to provide the type of information needed, a response from a specific law enforcement agency would be required. There is nothing preventing any specific law enforcement agency from responding to this question. Their narrative explains that the Governor's Highway Safety Program does utilize the Crash System (Report Beam) for assigning priority enforcement issues. They cite that this is evidenced through some of the strategies within the SHSP and the HSP but also failed to provide specific examples. The capabilities exist to monitor for high speed involved crashes, injuries, fatalities, DUI related crashes, unbelted fatalities, as an example by roadways, mile markers, counties, etc. They cite that Regional Coordinators have used the Report Beam Mapping application to show high pedestrian, bicycle, and crash locations for areas in their regions but again no specific examples were provided. The State is working to increase the usage of Crash data for deployment of enforcement activities. The State is looking at an AASHTO crash data application that will make it easier to retrieve data from the crash database. The State is working hard to increase the usage of crash data to benchmark all of their enforcement activities.

They also plan to increase training for local law enforcement agencies to improve their data entry and show them how to use the data for their own purposes. Increasing access to crash data is a priority issue.

Change Notes: Rating Unchanged.

**38.** ***Is data from the crash system used to evaluate safety countermeasure programs?***

Does Not Meet Advisory Ideal

In the past, West Virginia utilized the Safety Management Module which had built-in capabilities for conducting evaluations of all completed safety projects. This was the tool that utilized data from the crash system to evaluate safety countermeasure programs. Unfortunately, the loss of the Safety Management Module which had built-in capabilities for conducting before and after evaluations of all completed safety projects has left the State with a more labor intensive method of completing these studies than was envisioned for this point in time. They did provide evidence that they are rating some projects before and after completion for crashes. It's not completely clear how a before and after crash study of this aggregate scale would be utilized to effectively evaluate any specific safety countermeasure used. No cost effectiveness ratings were provided on the chart. They anticipate the Numetric system will also make this process much more seamless once again.

Change Notes: Rating Changed.
From 'Partially Meets Advisory Ideal' to 'Does Not Meet Advisory Ideal'.

## Applicable Guidelines for the Crash Data System

**39.** ***Is there a process by which MMUCC is used to help identify what crash data elements and attributes the State collects?***

Meets Advisory Ideal

The Uniform Traffic Crash Report was last revised in 2007. At that time the crash report was fully MMUCC compliant, and the MMUCC elements were a primary driver in the development of that revision. MMUCC has changed significantly in years since your report was last revised. The question and evidence were updated to reflect the process by which MMUCC is used to identify the crash data elements the State collects. The State has provided MMUCC mapping documents and gave a detailed description regarding efforts to comply with MMUCC 5th edition.

Change Notes: Rating Unchanged.

**40.** ***Is there a process by which ANSI D.16 is used to help identify the definitions in the crash system data dictionary?***

Meets Advisory Ideal

ANSI D.16 was used in defining information within the Crash Data Dictionary. In previous assessments, West Virginia DOH has not had one document specifically labeled as the "Crash Data Dictionary", rather they had multiple documents (Training Manuals, File Layouts, Business Rules, etc.) that when used together constituted a data dictionary. Recent improvements in their staffing levels have enabled them to begin the development of an official Crash Data Dictionary, a draft of the data dictionary was included as evidence of the process. ANSI D.16 definitions were

used in its development. While the standards were not followed 100 percent, deviations were with good reason and well thought out and provided as examples of the process.

Change Notes: Rating Unchanged.

## Data Dictionary for the Crash Data System

**41.** ***Does the data dictionary provide a definition for each data element and define that data element's allowable values/attributes?***

Meets Advisory Ideal

The State provided a 2022 "draft" Crash Data Dictionary which provides both a definition and allowable values for each data element within the Crash Records Database.

Change Notes: Rating Unchanged.

**42.** ***Does the data dictionary document the system edit checks and validation rules?***

Meets Advisory Ideal

The State provided a 2022 "draft" Crash Data Dictionary which includes the business rules, validation rules, and edit checks that are built into ReportBeam and utilized when a PAR is completed.

Change Notes: Rating Unchanged.

**43.** ***Is the data dictionary up-to-date and consistent with the field data collection manual, coding manual, crash report, database schema and any training materials?***

Meets Advisory Ideal

West Virginia provided a brand new draft 2022 Crash Data Dictionary. Since the data dictionary was recently updated, it is consistent with the field data collection manual, coding manual, crash report, database schema, and any training materials, and it appears that they meet the advisory ideal. Their strategy to maintain consistency is to have the same person develop 'All' of their documentation. They don't appear to have a formal process used to ensure that this data dictionary is consistent with the field data collection manual, coding manual, crash report, database schema, and any other training materials they may have if something changes. In the response, it is clear, with the exception of this new data dictionary, that all the other documentation were previously developed at another time. The State should consider developing a formal process that ensures that all these documents remain consistent.

Change Notes: Rating Unchanged.

**44.** ***Does the crash system data dictionary indicate the data elements populated through links to other traffic records system components?***

Does Not Meet Advisory Ideal

West Virginia reported that due to current revisions to the State Crash Database, most data elements are not linked. When the PAR was last updated, most fields that MMUCC recommended to be obtained via link were actually placed on the PAR itself, as it was known that the Crash

Records Database was going to be completely revised after data collection on the new PAR began, thus there would be nothing to link to until sometime in the future. Crash data elements collected on the crash report are not populated through links to other traffic records system components. Without such links the data dictionary cannot indicate which elements are linked or derived from other systems. The exceptions to this were the Roadway Linked Data fields and a couple of injury related linked fields. The Roadway Linked fields are not included in the data dictionary as they are included in the Roadway Log's data dictionary. Injury Area and Injury Description were left off of the PAR and thus the data dictionary because they would have required more significant medical knowledge than the officer would likely possess. It was envisioned that this information would ultimately come from the State's EMS Run Database and/or the State Trauma Registry; however, in spite of multiple attempts to obtain this information, the State has yet to see this come into fruition.

Change Notes: Rating Unchanged.

## Procedures and Process Flows for Crash Data Systems

***45. Does the State collect an identical set of data elements and attributes from all reporting agencies, independent of collection method?***

Meets Advisory Ideal

The State reported §17C-4 of the West Virginia State Code clearly identifies that law enforcement agencies are to report crashes to the Division of Highways (§17C-4-7(c)) on the State approved PAR (§17C-4-9). At the time of the last PAR update, the State transitioned to electronic reporting capabilities. All agencies utilize this PAR and all agencies utilize ReportBeam.

Change Notes: New Question.

***46. Does the State reevaluate their crash form at regular intervals?***

Partially Meets Advisory Ideal

West Virginia last updated their crash form in 2007 which was a major revision. An update of their crash report is in the plans for the near future around late 2022 to 2023. One respondent said they upgrade their report every ten years, but admits they are off schedule. The State's process for conducting crash form reviews and their frequency was cited as "when it becomes apparent or required that an update is necessary." West Virginia DOH generally develops a draft updated by UTCR, and then convenes a UTCR Committee Meeting to discuss the revision and reasons behind it. West Virginia State Code requires that all UTCR revisions require the approval of the Commissioner of Highways, the Commissioner of Motor Vehicles, and the Superintendent of the West Virginia State Police. Once the committee agrees upon the proposed revision, an approval letter is drafted to the aforementioned people, and once it is signed the updated form is moved into production within the data collection software and a letter explaining the change and any necessary modifications to training materials is sent to all of the State's law enforcement agencies. This was most recently done in 2019 to update injury definitions. The question is asking if the State reevaluates their crash form at some regular interval. There doesn't appear to be a formal process that evaluates the State's crash form on any specific documented regular interval. Instead, they have a process in place on how to accomplish it when it becomes apparent or required that it is necessary to do it.

Change Notes: New Question.

**47.** ***Does the State maintain accurate and up-to-date documentation detailing the policies and procedures for key processes governing the collection, reporting, and posting of crash data- including the submission of fatal crash data to the State FARS unit and commercial vehicle crash data to SafetyNet?***

Does Not Meet Advisory Ideal

West Virginia says documentation has taken a backseat to many day-to-day responsibilities, although they are beginning to make some progress in this area. Currently most of their policies are covered within training or procedures manuals, rather than in formal policy documents. The State mentioned they are awaiting updated guidelines from FARS for the manuals and have been waiting to receive those prior to completing their manual update to both systems. The State mentioned that there are routine processes and coordination between West Virginia DOH/FARS/SafetyNet that occur throughout the year to ensure appropriate data sets are matching, however, there is no current formal documentation process.

Change Notes: Rating Changed.
From 'Partially Meets Advisory Ideal' to 'Does Not Meet Advisory Ideal'.

**48.** ***Are the quality assurance and quality control processes for managing errors and incomplete data documented?***

Partially Meets Advisory Ideal

West Virginia utilizes a robust set of business rules within ReportBeam to help prevent incomplete data from being submitted and to prevent many common errors made by law enforcement. This is actually common practice, and most States utilize business or validation rules to help with the quality of their data. This question and evidence required were updated to emphasize the quality assurance and quality control processes for managing such errors and incomplete data. The State says they are in the early stages of developing a formalized data cleaning and quality control program. They have developed a list of data checks that are routinely ran and used for cleaning up data. In addition, to control for potential loss of data, information is being moved from a 3rd party contractor to the State Crash Records Database, and there are plans for further automating correction procedures and ERP enhancements.

Change Notes: Rating Changed.
From 'Meets Advisory Ideal' to 'Partially Meets Advisory Ideal'.

**49.** ***Do the document retention and archival storage policies meet the needs of safety engineers and other users with a legitimate need for long-term access to the crash data reports?***

Partially Meets Advisory Ideal

West Virginia DOH currently has crash data dating back to 1999. The State feels this easily meets the needs of safety engineers and other users with a legitimate need for long-term access to the crash data reports. The State provided a DRAFT Data Retention Policy Plan which will be implemented upon management and legal review and reports maintaining crash data dating back to 1999. Once implemented, the State will be in full compliance.

Change Notes: Rating Unchanged.

**50.** ***Do all law enforcement agencies collect crash data electronically?***

Meets Advisory Ideal

All law enforcement agencies throughout the State use their ReportBeam software for crash reports and citations and can be further expanded to collect data for any statewide law enforcement form.

Change Notes: Rating Improved.
From 'Partially Meets Advisory Ideal' to 'Meets Advisory Ideal'.

**51.** ***Do all law enforcement agencies submit their data to the statewide crash system electronically?***

Meets Advisory Ideal

All law enforcement agencies submit their data to the statewide crash software ReportBeam. Very rarely, paper reports are submitted usually by small municipal agencies. The question and evidence were updated to request more useful percentages as well as plans for 100 percent electronic data submission. The State receives more than 99 percent of their crashes via ReportBeam. In 2020, only two crashes reports were manually entered into the system, so less than one percent came in on paper.

Change Notes: Rating Improved.
From 'Partially Meets Advisory Ideal' to 'Meets Advisory Ideal'.

**52.** ***Do all law enforcement agencies collecting crash data electronically in the field apply validation rules consistent with those in the statewide crash system prior to submission?***

Meets Advisory Ideal

All law enforcement agencies collecting crash data electronically utilize ReportBeam and in the field apply validation rules consistent with those in the statewide crash system prior to submission. These validations and business rules are the same for every law enforcement agency within the State. This software also runs several quality checks while the report is being submitted and will prompt the officer for conflicts or missing information. ReportBeam also conducts a final review and approval upon submission. The only exception to this is under the license key that the State uses to manually enter paper-based reports. In 2020, only two reports came in on paper.

Change Notes: Rating Improved.
From 'Partially Meets Advisory Ideal' to 'Meets Advisory Ideal'.

## Crash Data Systems Interface with Other Components

**53.** ***Does the crash system have a real-time interface with the driver system?***

Does Not Meet Advisory Ideal

The West Virginia State crash system does not have a real-time interface with the driver system due at least in part to challenges presented by the West Virginia DMV.

Change Notes: Rating Unchanged.

**54.** ***Does the crash system have a real-time interface with the vehicle system?***

Does Not Meet Advisory Ideal

The crash system does not currently have a real-time interface with the vehicle system.

Change Notes: Rating Unchanged.

**55.** ***Does the crash system interface with the roadway system?***

Does Not Meet Advisory Ideal

The crash system does not currently interface with the roadway system, so on-site verification and validation of the crash location information to ensure accurate roadway information is retrieved is not possible. The State doesn't have smart mapping technology to verify the location, in lieu of relying solely on GPS. However, the two systems are able to be linked and used for comprehensive highway safety analysis. This is routinely done and has been for many years. Prior to linking the databases, some manipulation of the data must occur as the databases "linking" fields are not formatted in the same manner.

Change Notes: Rating Changed.
From 'Partially Meets Advisory Ideal' to 'Does Not Meet Advisory Ideal'.

**56.** ***Does the crash system interface with the citation and adjudication systems?***

Does Not Meet Advisory Ideal

The crash system does not directly interface with the citation and adjudication systems. The evidence required for this question was updated to clarify the actions enabled by interfacing. However, it was noted that GHSP routinely receives all citation data from their crash mapping software, ReportBeam, and stores it within their office. It was also reported that West Virginia DOH requested that all citation data from 2015 forward be provided for use in highway safety analysis. In response to this, GHSP provided 350,000 individual XML records whereby West Virginia DOH is in the process of building tables within the Crash Records Database in which to store the data. Once the data is in the database, West Virginia DOH will be able to conduct highway safety analysis using the citation data in conjunction with both the crash and roadway data but will still lack interface properties.

Change Notes: Rating Unchanged.

**57.** ***Does the crash system have an interface with EMS?***

Does Not Meet Advisory Ideal

The crash system does not have an interface with any portion of the EMS system. But efforts are underway to create such interfaces. Perhaps education and training among hospital staff and forming an MOU for data purposes would benefit this process.

Change Notes: Rating Unchanged.

**58.** ***Are there automated edit checks and validation rules to ensure that entered data falls within a range of acceptable values and is logically consistent among data elements?***

Meets Advisory Ideal

ReportBeam has automated edit checks and validation rules to ensure that entered data falls within a range of acceptable values and is logically consistent among data elements. Documentation of these business rules has been provided.

Change Notes: Rating Unchanged.

**59.** ***Is limited State-level correction authority granted to quality control staff working with the statewide crash database to amend obvious errors and omissions without returning the report to the originating officer?***

Meets Advisory Ideal

Field specific change tracking has been developed to flag fields where changes have been made either by the State or the officer and allows the State to review both changes and determine which change to apply.

Change Notes: Rating Unchanged.

**60.** ***Are there formally documented processes for returning rejected crash reports to the originating officer and tracking resubmission of the report in place?***

Meets Advisory Ideal

The ReportBeam software has built in processes for returning rejected crash reports and tracking resubmission of the report. Screenshots have been provided; however, those screenshots relevant to this specific question have not been highlighted.

Change Notes: Rating Unchanged.

**61.** ***Does the State track crash report changes after the original report is submitted by the law enforcement agency?***

Meets Advisory Ideal

ReportBeam automatically stores Report Snapshots each and every time a crash report is modified so the ability exists to compare version of a report. Additionally, ReportBeam stores an activity log for each crash report that is submitted to the ReportBeam Server.

Change Notes: New Question.

**62.** ***Are there timeliness performance measures tailored to the needs of data managers and data users?***

Does Not Meet Advisory Ideal

No crash data performance measures have currently been approved. However, their safety data staff has been working to develop draft safety performance measures for timeliness. §17C-4 of the West Virginia State Code requires law enforcement officers to submit PARs within twenty-four

hours of completing the investigation The State Code further requires that in the event that the investigating law-enforcement officer cannot complete the investigation within ten days of the crash, that they submit a preliminary report of the crash to the Division of Highways on the tenth day after the crash and submit the final report within twenty-four hours of completion of the investigation. As such, they are working to develop a dashboard which monitors that Median Number of Days to Receive a Crash for Performance Measure C-T-1.

Change Notes: Rating Unchanged.

**63.** ***Are there accuracy performance measures tailored to the needs of data managers and data users?***

Does Not Meet Advisory Ideal

Performance measures on all counts are relatively new to them; however, they have processes to reconcile the data, but a "measurement of various pieces of this process needs to become more formalized and routine to begin to be used as a performance measure in this area". While no crash data performance measures have currently been approved, their safety data staff are working to develop draft safety performance measures for accuracy. Work to identify “critical data elements” has begun. Injury Severity and reconciliation of FARS Data with the State Crash Database make the top of the list. Processes to reconcile the data exist, but a measurement of various pieces of this process needs to become more formalized and routine to begin to be used as a performance measure in this area.

Change Notes: Rating Unchanged.

**64.** ***Are there completeness performance measures tailored to the needs of data managers and data users?***

Does Not Meet Advisory Ideal

West Virginia is not currently implementing completeness performance measures tailored to the needs of data managers and data users. No crash data performance measures have currently been approved; however, their safety data staff are working to develop draft safety performance measures for Completeness. The completeness of the overall dataset for a specific timeframe and its ability to be used for analysis are leading the conversations in developing completeness performance measures. Although the ReportBeam Business Rules create parameters for data entry, these are not measurable performance measures.

Change Notes: Rating Unchanged.

**65.** ***Are there uniformity performance measures tailored to the needs of data managers and data users?***

Does Not Meet Advisory Ideal

No crash data performance measures have currently been approved. Their safety data staff are working to develop draft safety performance measures for uniformity. There is a single Statewide crash report form using the same data definitions, instruction, and each variable is entered using the same data model. Uniformity reflects the consistency among the files or records in a database. It may be possible to aggregate the variables populated by the agencies and look at quarterly/year trends, develop a current baseline, and monitor values for changes.

Change Notes: Rating Unchanged.

**66.** ***Are there integration performance measures tailored to the needs of data managers and data users?***

Does Not Meet Advisory Ideal

No crash data performance measures have currently been approved. Their safety data staff has been working to develop draft safety performance measures for integration. Integration reflects the ability of records in a database to be linked to a set of records in another of the six core databases so the State is on the right track regarding preparation for this. However, the State reported significant challenges in this regard including issues with medical affiliates and the DMV. The State should focus on strengthening relationships between agencies and drafting MOUs that implement creating unique identifiers eliminating PII to first integrate these databases, and while implementing this develop performance measures.

Change Notes: Rating Unchanged.

**67.** ***Are there accessibility performance measures tailored to the needs of data managers and data users?***

Does Not Meet Advisory Ideal

No crash data performance measures have currently been approved. Their safety data staff are working to develop draft safety performance measures for accessibility.

Change Notes: Rating Unchanged.

**68.** ***Has the State established numeric goals-performance metrics-for each performance measure?***

Does Not Meet Advisory Ideal

West Virginia is in the process of developing numeric goals for each category, but none have been formally approved or adopted at this point. The State has reported that performance measures are not high on the priority list since they have had significant staffing issues and other challenges in this regard. However, their description of initial solutions and plans for performance measures are sound.

Change Notes: Rating Unchanged.

**69.** ***Is there performance reporting that provides specific timeliness, accuracy, and completeness feedback to each law enforcement agency?***

Does Not Meet Advisory Ideal

West Virginia does not have any performance measures in place; therefore, they would be unable to report specific timeliness, accuracy, and completeness feedback to each law enforcement agency. Work is currently underway to assess the current versus past reporting levels of law enforcement agencies. This assessment will result in notification of those agencies that are not reporting or those agencies that are reporting at lower rates than previously recorded.

Change Notes: Rating Unchanged.

**70.** ***Are detected high-frequency errors used to prompt revisions, update the validation rules, and generate updated training content and data collection manuals?***

Does Not Meet Advisory Ideal

At this time, high-frequency errors are not used to prompt revisions, update the validation rules, and generate updated training content, and data collection manuals. The State does note problems, frequent errors, and frequent questions regarding the data — even to the point of noting specific reports that show the issue. They plan to use the information to assist in their upcoming crash report revision and from there hope, with increased staffing levels, they can routinely identify and use this type of information to train and make improvements.

Change Notes: Rating Unchanged.

**71.** ***Are quality control reviews comparing the narrative, diagram, and coded contents of the report considered part of the statewide crash database's data acceptance process?***

Does Not Meet Advisory Ideal

No quality control reviews comparing the narrative, diagram, and coded contents of the report are used as part of the statewide crash database's data acceptance process. The State has provided a draft document regarding revised quality control processes and will provide a more comprehensive quality control process for the new crash data collection software during the upcoming form revision.

Change Notes: Rating Unchanged.

**72.** ***Are sample-based audits periodically conducted for crash reports and related database content?***

Meets Advisory Ideal

There are multiple methods used to audit location data. Monthly, the official locations assigned to each crash by the State's third party undergo a formal quality review. The reports located during the previous month are put through a series of checks to evaluate the accuracy of assigned locations. These include verifying the validity of route numbers, their associated sign system and, if applicable, supplemental designations, ensuring that "Ramp" crashes have an accurately assigned ramp, ensuring that local names of routes and streets properly conform to database standards, etc. This same process is periodically repeated by linking the Crash Records Database to the Roadway Database, resulting in the identification of locations assigned in the Crash Database that do not match locations within the Roadway Database. These are performed annually. Prior to the release of location specific data, Traffic Safety Staff review and when needed, reassign more accurate locations to crash data. This is currently done on a 100 percent level for all location-specific crash data requests. Additionally, there are annual QC processes that are run for all data. These processes can be running at any point during the year if needed. Data request specific audits are manually performed to ensure quality data is provided in response to a request.

Change Notes: Rating Improved.
From 'Does Not Meet Advisory Ideal' to 'Meets Advisory Ideal'.

***73. Are periodic comparative and trend analyses used to identify unexplained differences in the data across years and jurisdictions?***

Does Not Meet Advisory Ideal

Periodic comparative and trend analyses are conducted, but there is no formal documentation of these processes. A narrative was provided explaining that they are completing this type of analysis using an 'annual' review and identification of Low and Non-Reporting Law Enforcement Agencies. This review identifies agencies that either failed to report any crashes during the previous year or show a 10 percent or greater drop in reporting for the previous year. Letters requesting verification of accurate reporting and/or the submission of late reports follow the generation of this report. These summary reports do not adequately serve as information to provide trend analyses across multiple years and jurisdictions. These documents only show year to year percent changes. A one-year analysis will not provide a full trend analysis to properly inform better data collection and reporting and enhance countermeasures.

Change Notes: Rating Unchanged.

***74. Is data quality feedback from key users regularly communicated to data collectors and data managers?***

Partially Meets Advisory Ideal

Some strides have been made in this area, particularly within DOH. They have successfully simplified updating of data that is determined to be inaccurate or incorrect. This is mostly completed for locations but can be done with any field in the database. A huge part of this effort has been by encouraging their engineers and MPOs to identify crashes they encounter that they feel are inaccurately located and to provide a correct location, and then they will make the change and provide an updated dataset. It seems with a uniform electronic reporting system that data quality feedback would be easily attainable. Perhaps utilizing the State TRCC to provide reports for review might identify data quality issues to facilitate that this is regularly communicated to each data manager.

Change Notes: Rating Unchanged.

***75. Are data quality management reports provided to the TRCC for regular review?***

Does Not Meet Advisory Ideal

West Virginia makes it very clear that data quality management reports are not and will not be provided to the TRCC for regular review. They do not believe this should be a function of their TRCC. It seems that the State may be misinterpreting how reports of this kind could or should be shared. Data quality management reports and discussions where various agencies can help one another is often a key component for TRCCs. Perhaps re-evaluating how these reports are shared and discussed might be considered, whereby providing for a more positive discussion to facilitate better outcomes for everyone.

Change Notes: Rating Unchanged.

## Description and Contents of the Driver Data System

***76. Does custodial responsibility for the driver data system-including commercially-licensed drivers-reside in a single location?***

Meets Advisory Ideal

Custodial responsibility for the driver and commercial driver records in West Virginia is with the driver services section of the Division of Motor Vehicles, which is under the management of the West Virginia Department of Transportation.

Change Notes: Rating Unchanged.

***77. Does the driver data system capture details of novice driver, motorcycle, and driver improvement (remedial) training histories?***

Partially Meets Advisory Ideal

West Virginia's driver system captures driver improvement courses, generally as a means of point reduction on an individual record. All novice and basic motorcycle courses are reviewed and kept in the electronic storage system or in the document repository program "Back Office," but not on the driving record. Recording of types and providers of training for all drivers can be used to determine the most effective training for the driving population within the State of West Virginia.

Change Notes: Rating Changed.
From 'Meets Advisory Ideal' to 'Partially Meets Advisory Ideal'.

***78. Does the driver data system capture and retain the dates of original issuance for all permits, licensing, and endorsements (e.g., learner's permit, provisional license, commercial driver's license, motorcycle license)?***

Meets Advisory Ideal

The State driver data system is a mainframe system where all original and subsequent issue dates are maintained for licenses, permits, and endorsements.

Change Notes: Rating Improved.
From 'Partially Meets Advisory Ideal' to 'Meets Advisory Ideal'.

## Applicable Guidelines for the Driver Data System

***79. Is driver information maintained in a manner that accommodates interaction with the National Driver Register's PDPS and CDLIS?***

Meets Advisory Ideal

Driver data is maintained in West Virginia DMV's data system in a format that allows interaction between the system and the Problem Driver Pointer System as well as CDLIS.

Change Notes: Rating Unchanged.

## Data Dictionary for the Driver Data System

**80.** ***Are the contents of the driver data system documented with data definitions for each field?***

Does Not Meet Advisory Ideal

West Virginia DMV does not appear to have a data dictionary where each field is defined or documented.

Change Notes: Rating Unchanged.

**81.** ***Are all valid field values-including null codes-documented in the data dictionary?***

Does Not Meet Advisory Ideal

West Virginia's driver data system does not appear to have a data dictionary with all fields, including null values documented and defined. The supporting document submitted by the responder only defines the State's conviction and translations to ACD codes.

Change Notes: Rating Unchanged.

**82.** ***Are there edit checks and data collection guidelines for each data element?***

Does Not Meet Advisory Ideal

The State's response indicates that there may be edit checks and collection values for each field but neglected to attach the required edit guideline.

Change Notes: Rating Unchanged.

**83.** ***Is there guidance on how and when to update the data dictionary?***

Partially Meets Advisory Ideal

Although there does not appear to be a full data dictionary for the driver system, the response indicates that updates are undertaken when State laws change or when AAMVA releases new information. These facts should be noted in a State policy that guides updates to the driver data system so that documentation for the driver data system remains up-to-date and consistent with State and national law and policy.

Change Notes: Rating Improved.
From 'Does Not Meet Advisory Ideal' to 'Partially Meets Advisory Ideal'.

## Procedures and Process Flows for the Driver Data System

**84.** ***Does the custodial agency maintain accurate and up-to-date documentation detailing: the licensing, permitting, and endorsement issuance procedures; reporting and recording of relevant convictions, driver education, driver improvement course; and recording of information that may result in a change of license status (e.g., sanctions, withdrawals, reinstatement, revocations, cancellations and restrictions) including manual or electronic reporting and timelines, where applicable?***

Partially Meets Advisory Ideal

The response to this question indicates that changes to a driver record cannot occur unless preconditions are met, which indicates that all such conditions are programmed into the driver system. Generally, there are hundreds of conditions (convictions, withdrawals, failure to pay child support, etc.) within State and federal laws that might trigger a change to a license status. No information has been provided that indicates how the State ensures that the system is kept up-to-date and in sync with changing State and federal policy and law and that the documentation is up-to-date as well.

Change Notes: New Question.

**85.** ***Is there a process flow diagram that outlines the driver data system's key data process flows, including inputs from other data systems?***

Does Not Meet Advisory Ideal

No evidence was provided with this question that demonstrates process flows of data within the driver system. Process flows, though time-consuming to produce, are valuable in terms of helping to ensure that staff are all aware of proper procedures and that there are no unnecessary or repetitive steps in procedures. Development of process flows can act as an effective way to retrain and reorient staff and to conduct a continuous improvement review.

Change Notes: Rating Unchanged.

**86.** ***Are the processes for error correction and error handling documented for: license, permit, and endorsement issuance; reporting and recording of relevant convictions; reporting and recording of driver education and improvement courses; and reporting and recording of other information that may result in a change of license status?***

Partially Meets Advisory Ideal

There does not appear to be a document that identifies the processes used in error correction and handling. The State did provide a report that shows corrections are done and logged for suspensions, but this does not validate the processes are documented or processed for any categories.

Change Notes: Rating Improved.
From 'Does Not Meet Advisory Ideal' to 'Partially Meets Advisory Ideal'.

**87.** ***Are there processes and procedures for purging data from the driver data system documented?***

Does Not Meet Advisory Ideal

West Virginia DMV does not purge driver data from the driver system.

Change Notes: Rating Unchanged.

**88.** ***In States that have the administrative authority to suspend licenses based on a DUI arrest independent of adjudication, are these processes documented?***

Does Not Meet Advisory Ideal

Based on 2020 West Virginia legislation, the Division of Motor Vehicles does not have administrative authority to suspend or revoke licenses INDEPENDENT of adjudication but must wait until the adjudicative process has taken place, with the exception of a CDL license (a federal

program), which can be downgraded to a regular license pending the result of the adjudication.

Change Notes: Rating Changed.
From 'Partially Meets Advisory Ideal' to 'Does Not Meet Advisory Ideal'.

***89. Are there established processes to detect false identity licensure fraud?***

Partially Meets Advisory Ideal

The State performs a One-to-One photo match at the time of license issuance. When fraud is detected, documents are provided to the DMV's Investigative Unit for further review. The response supports that the State does have fraud deterrents but did not provide evidence of a documented process or explain the process in the narrative.

Change Notes: Rating Unchanged.

***90. Are there established processes to detect internal fraud by individual users or examiners?***

Meets Advisory Ideal

Internal fraud requires a number of types of activities for adequate detection. Review of transactions that may occur during off-hours or after hours; unusually high rates of similar types of transactions in one office or by one examiner; exit audit of documents presented by applicants conducted by supervisory personnel; and trend analyses are all types of efforts that can detect internal fraud. The State lists a number of efforts: limiting edits to supervisory and managerial personnel; covert review of knowledge and skills testers; use of test proctors.

Change Notes: Rating Improved.
From 'Does Not Meet Advisory Ideal' to 'Meets Advisory Ideal'.

***91. Are there established processes to detect CDL fraud?***

Partially Meets Advisory Ideal

The State primarily depends on PDPS, CDLIS, and SOLV to detect CDL fraud. Additional verification can be done on medical examiner certificates and military waivers. However, there is no mention of review of skills testing fraud, nor of other types of fraudulent documentation provided by applicants.

Change Notes: Rating Improved.
From 'Does Not Meet Advisory Ideal' to 'Partially Meets Advisory Ideal'.

***92. Does the State transfer the Driver History Record (DHR) electronically to another State when requested due to a change in State of Record?***

Partially Meets Advisory Ideal

West Virginia is not yet certified for State-to-State electronic transfer of driver history records but is in the process of becoming certified. The State does transfer the West Virginia driver history to the new licensing state by paper through the US Postal Service or as a PDF through electronic mail.

Change Notes: New Question.

**93.** ***Does the State obtain the previous State of Record electronically upon request?***

Partially Meets Advisory Ideal

West Virginia DMV will obtain the driver history from the previous state of licensure only for commercial drivers, if there is a PDPS issue, or if there is suspected fraud. By not pulling the driver history for the non-commercial driver, the State will break the link of a total driver history that could hinder identification of poor driver safety.

Change Notes: New Question.

**94.** ***Does the State run facial recognition prior to issuing a credential?***

Does Not Meet Advisory Ideal

The State does not use facial recognition prior to the issuance of a product. Facial recognition may be used when fraud is suspected, but this would occur after the product has been issued to the individual.

Change Notes: New Question.

**95.** ***Does the State exchange driver photos with other State Licensing agencies upon request?***

Meets Advisory Ideal

The Division of Motor Vehicles shares photos with States willing to sign a confidentiality agreement.

Change Notes: New Question.

**96.** ***Are there policies and procedures for maintaining appropriate system and information security?***

Meets Advisory Ideal

West Virginia DMV enforces system access and information security following DOT and West Virginia Office of Technology (WVOT) policies. Supplied as evidence was an attached copy of the Account Management policy.

Change Notes: Rating Improved.
From 'Partially Meets Advisory Ideal' to 'Meets Advisory Ideal'.

**97.** ***Are there procedures in place to ensure that driver system custodians track access and release of driver information?***

Meets Advisory Ideal

The State provided Information Disclosure rules for the Division of Motor Vehicles that covered both HIPAA and the DPPA in detail.

Change Notes: Rating Improved.
From 'Partially Meets Advisory Ideal' to 'Meets Advisory Ideal'.

***98.*** ***Does the State post at-fault crashes to the driver record?***

Does Not Meet Advisory Ideal

The State does not post at fault crashes to the driver history.

Change Notes: Rating Unchanged.

***99.*** ***Does the State's DUI tracking system interface with the driver data system?***

Does Not Meet Advisory Ideal

The mainframe driver system has DUI data on drivers but the State does not have a DUI tracking system, which is meant to be accessible by all those who interact with the DUI violator from probation to alcohol evaluators to DUI educators, to alcohol or drug therapy providers, to ignition interlock providers, to the court system, to the driver license examiners and those who conduct administrative hearings. Such a system is meant to ensure that no DUI driver is re-licensed prior to completion of all court-ordered sanctions, and to provide an insight into the most effective types of education, therapy and sanctions to prevent recidivism.

Change Notes: Rating Unchanged.

***100.*** ***Is there an interface between the driver data system and the Problem Driver Pointer System, the Commercial Driver Licensing System, the Social Security Online Verification system, and the Systematic Alien Verification for Entitlement system?***

Partially Meets Advisory Ideal

There is an interface, which implies "real time" interaction with CDLIS, PDPS, and SSOLV. The interaction with SAVE, however, is not real time and is a manual check of the applicant's immigration status.

Change Notes: Rating Unchanged.

***101.*** ***Does the custodial agency have the capability to grant authorized law enforcement personnel access to information in the driver system?***

Partially Meets Advisory Ideal

Information from the driver database is available to law enforcement personnel through NLETS. Photographs are available to the West Virginia State Police through the DMV photo repository and law enforcement can request and receive copies of certified driving records.

Change Notes: Rating Unchanged.

***102.*** ***Does the custodial agency have the capability to grant authorized court personnel access to information in the driver system?***

Partially Meets Advisory Ideal

The DMV has the authority to grant access to the Driver system to court personnel but maintains a system where DMV employees provide the service. Upon request by a law enforcement officer a certified copy of a driving record is provided to the court for a DUI adjudication.

Change Notes: Rating Improved.
From ‘Does Not Meet Advisory Ideal’ to ‘Partially Meets Advisory Ideal’.

***103.*** ***Is there a formal, comprehensive data quality management program for the driver system?***

Does Not Meet Advisory Ideal

The State does not have a formal comprehensive data quality management program for the driver data system.

Change Notes: Rating Unchanged.

***104.*** ***Are there automated edit checks and validation rules to ensure entered data falls within a range of acceptable values and is logically consistent among data elements?***

Does Not Meet Advisory Ideal

Although the response indicates that validation rules and edit checks are used, the response did not provide specificity in terms of how they are used.

Change Notes: Rating Unchanged.

***105.*** ***Are there timeliness performance measures tailored to the needs of data managers and data users?***

Does Not Meet Advisory Ideal

The response indicates that there are performance measures for driver system data, but none are provided. Examples of driver system timeliness measures, as well as performance measures for all attributes of the data quality in the driver system may be found in the publication, "Model Performance Measures for State Traffic Records Systems" (DOT HS 811 441), which can be found on NHTSA's website.

Change Notes: Rating Unchanged.

***106.*** ***Are there accuracy performance measures tailored to the needs of data managers and data users?***

Does Not Meet Advisory Ideal

The State did not provide any performance measures for driver data accuracy.

Change Notes: Rating Unchanged.

***107.*** ***Are there completeness performance measures tailored to the needs of data managers and data users?***

Does Not Meet Advisory Ideal

The State has not developed completeness measures for the driver data system. An example of a completeness measure for the driver system is the percentage of records that contain no missing data elements.

Change Notes: Rating Unchanged.

**108.** ***Are there uniformity performance measures tailored to the needs of data managers and data users?***

Does Not Meet Advisory Ideal

Although the State's response indicates that there are uniformity procedures, no measures have been provided. An example of a driver system uniformity measure would be: "Number of standards-compliant data elements entered into the driver database." Relevant standards would include ANSI D.20.

Change Notes: Rating Unchanged.

**109.** ***Are there integration performance measures tailored to the needs of data managers and data users?***

Does Not Meet Advisory Ideal

There were no integration measures for the driver database provided. A measure might be the number of component systems of the West Virginia Traffic Records System with which the West Virginia driver system is integrated.

Change Notes: Rating Unchanged.

**110.** ***Are there accessibility performance measures tailored to the needs of data managers and data users?***

Does Not Meet Advisory Ideal

The State responded there are accessibility performance measures in place but failed to provide the required evidence to support this.

Change Notes: Rating Unchanged.

**111.** ***Has the State established numeric goals-performance metrics-for each performance measure?***

Does Not Meet Advisory Ideal

The State has not developed numeric goals-performance metrics for each performance measure.

Change Notes: Rating Unchanged.

**112.** ***Is the detection of high frequency errors used to generate updates to training content and data collection manuals, update the validation rules, and prompt form revisions?***

Partially Meets Advisory Ideal

The response indicates that directors evaluate and determine if high frequency errors are related to training and manuals then take needed action, but no information is given as to the process by which high frequency errors are used to generate new training content, update manuals, how it is determined if the errors are related to training, validation rules or whether new edit checks could mitigate the problems, or how often the reviews are undertaken.

Change Notes: Rating Improved.
From ‘Does Not Meet Advisory Ideal’ to ‘Partially Meets Advisory Ideal’.

**113.** ***Are sample-based audits conducted periodically for the driver reports and related database contents for that record?***

Does Not Meet Advisory Ideal

West Virginia DMV does not conduct sample-based audits periodically for the driver reports and related database contents.

Change Notes: Rating Unchanged.

**114.** ***Are periodic comparative and trend analyses used to identify unexplained differences in the data across years and jurisdictions?***

Does Not Meet Advisory Ideal

Trend analyses are not conducted in West Virginia. They can be useful in determining changes in the driver demographic for the State and in planning for needed additional resources. Such trend analyses can also be used to ensure that no data is missing when year to year and office to office comparisons are made.

Change Notes: Rating Unchanged.

**115.** ***Is data quality feedback from key users regularly communicated to data collectors and data managers?***

Does Not Meet Advisory Ideal

The State's response advises feedback and process evaluation occur constantly, but this does not directly address the question regarding the data quality feedback from the data managers and end users.

Change Notes: Rating Unchanged.

**116.** ***Are data quality management reports provided to the TRCC for regular review?***

Does Not Meet Advisory Ideal

There is an indication that data quality reports are provided to the TRCC, but no example report was provided, and no performance measures were noted in previous questions. A data quality management program and a Traffic Records Coordinating Committee manage the funding and help to improve the quality of traffic records data within the State in order to improve traffic safety. Once measures of each data quality attribute are established and measures are taken on a regular basis, the TRCC can determine where the most return on investment is possible for the traffic records system in terms of strategic planning and investment of resources. Without consistent measures of quality, accurate measures of need and potential for improvement is impossible to determine. At a more granular level, in each data system it is possible for data to subtly degrade without notice if measures are not taken and reviewed on a regular basis. This can be due to staff changes, resource issues, new legislation or other problems, and restoration of prior levels of data quality can be slow and costly if not caught in a timely manner.

Change Notes: Rating Unchanged.

## Description and Contents of the Vehicle Data System

***117. Does custodial responsibility of the identification and ownership of vehicles registered in the State-including vehicle make, model, year of manufacture, body type, and adverse vehicle history (title brands)-reside in a single location?***

Meets Advisory Ideal

The West Virginia Division of Motor Vehicles is the custodian of the vehicle identification and ownership data, which is housed with the Office of Technology on the DMV mainframe.

Change Notes: Rating Unchanged.

***118. Does the State or its agents validate every VIN with a verification software application?***

Meets Advisory Ideal

All Vehicle Identification Numbers entered into the vehicle data system are verified using Vintelligence software at the time of data entry.

Change Notes: Rating Unchanged.

***119. Are vehicle registration documents barcoded-using at a minimum the 2D standard-to allow for rapid, accurate collection of vehicle information by law enforcement officers in the field using barcode readers or scanners?***

Meets Advisory Ideal

Registration documents are barcoded using the AAMVA standard 2D barcode and those barcodes can be used by law enforcement officers to populate their software with vehicle data.

Change Notes: Rating Unchanged.

## Applicable Guidelines for the Vehicle Data System

***120. Does the vehicle system provide title information data to the National Motor Vehicle Title Information System (NMVTIS) at least daily?***

Meets Advisory Ideal

West Virginia DMV's vehicle system does provide title information data to the National Motor Vehicle Title Information System (NMVTIS) via batch process daily.

Change Notes: Rating Unchanged.

***121. Does the vehicle system query NMVTIS before issuing new titles?***

Meets Advisory Ideal

West Virginia DMV performs a title query of NMVTIS prior to the titling of an out of state title. All others are done at the time the title is entered into the system.

Change Notes: Rating Improved.
From ‘Partially Meets Advisory Ideal’ to ‘Meets Advisory Ideal’.

**122.** ***Does the State incorporate brand information recommended by AAMVA and/or received via NMVTIS on the vehicle record, whether the brand description matches the State's brand descriptions?***

Meets Advisory Ideal

The State uses brand information recommended by AAMVA and/or received via NMVTIS on the vehicle record.

Change Notes: Rating Unchanged.

**123.** ***Does the State participate in the Performance and Registration Information Systems Management (PRISM) program?***

Meets Advisory Ideal

The West Virginia DMV participates in the Performance and Registration Information Systems Management.

Change Notes: Rating Unchanged.

## Vehicle System Data Dictionary

**124.** ***Does the vehicle system have a documented definition for each data field?***

Partially Meets Advisory Ideal

Two documents were provided with this response that listed definitions for a number of (but not all) the data elements in the vehicle system, which remains on a mainframe legacy system.

Change Notes: Rating Unchanged.

**125.** ***Does the vehicle system include edit check and data collection guidelines that correspond to the data definitions?***

Meets Advisory Ideal

The State's vehicle data system does contain edit checks and validations. Documentation was submitted that identifies the data fields that have edit checks.

Change Notes: Rating Unchanged.

**126.** ***Are the collection, reporting, and posting procedures for registration, title, and title brand information formally documented?***

Does Not Meet Advisory Ideal

The State has provided its administrative rules and regulations for titling a vehicle. This information is general and provides the authority for the DMV Commissioner to promulgate rules related to titling of vehicles. This is not specific enough to act as policy and procedure guidance for all titling transactions. The State has not documented the procedures that are used in the titling, recording, or collection of data for the vehicle system.

Change Notes: Rating Unchanged.

***127.*** ***Is there a process flow that outlines the vehicle system's key data process flows, including inputs from other data systems?***

Does Not Meet Advisory Ideal

The State does not have a process flow diagram of the vehicle data system that includes key inputs and outputs.

Change Notes: Rating Changed.
From 'Meets Advisory Ideal' to 'Does Not Meet Advisory Ideal'.

***128.*** ***Does the vehicle system flag or identify vehicles reported as stolen to law enforcement authorities?***

Meets Advisory Ideal

West Virginia DMV's vehicle data system uses indicators to identify stolen and recovered vehicles. These indicators can be seen by law enforcement.

Change Notes: Rating Unchanged.

***129.*** ***If the vehicle system does flag or identify vehicles reported as stolen to law enforcement authorities, are these flags removed when a stolen vehicle has been recovered or junked?***

Meets Advisory Ideal

"Stolen vehicle" flags are removed from the vehicle system when a vehicle is recovered.

Change Notes: Rating Unchanged.

***130.*** ***Does the State record and maintain the title brand history (previously applied to vehicles by other States)?***

Meets Advisory Ideal

The State captures, maintains, and transfers title brand history.

Change Notes: Rating Unchanged.

***131.*** ***Are the steps from initial event (titling, registration) to final entry into the statewide vehicle system documented?***

Partially Meets Advisory Ideal

The State submitted a flow chart that outlines the titling cycle. This is a great high-level view of the titling process but the State should also have a document that outlines the steps for titling a vehicle for the agents to complete their task.

Change Notes: Rating Changed.
From 'Meets Advisory Ideal' to 'Partially Meets Advisory Ideal'.

***132. Is the process flow annotated to show the time required to complete each step?***

Partially Meets Advisory Ideal

West Virginia DMV does not track the time to process each step of the titling process but does track from the time of receipt to the time entered into the mainframe. While this is helpful, it is more useful to the business processes to track the time to complete each step of the process. It can be used in development of employee performance standards and in developing efficiencies within the work unit.

Change Notes: Rating Changed.
From 'Meets Advisory Ideal' to 'Partially Meets Advisory Ideal'.

***133. Does the process flow show alternative data flows and timelines?***

Does Not Meet Advisory Ideal

The State only tracks the time between receipt until completed in the mainframe. By only tracking this timeline, there is no place that alternative data flows and times would be tracked.

Change Notes: Rating Changed.
From 'Partially Meets Advisory Ideal' to 'Does Not Meet Advisory Ideal'.

***134. Does the process flow include processes for error correction and error handling?***

Meets Advisory Ideal

Steps for error correction are outlined in the flow chart document.

Change Notes: Rating Unchanged.

## Vehicle Data System Interface with Other Traffic Record System Components

***135. Are the driver and vehicle files unified in one system?***

Does Not Meet Advisory Ideal

The State's driver and vehicle data are not unified in one system.

Change Notes: Rating Unchanged.

***136. Is personal information entered into the vehicle system using the same conventions used in the driver system?***

Does Not Meet Advisory Ideal

The driver system and vehicle system use different naming conventions. This makes combining the systems more difficult if and when that effort is undertaken. Using different naming conventions for driver and vehicle systems makes it more difficult to match insurance policies to vehicles or drivers and makes investigation of crashes and crimes more difficult for law enforcement officials.

Change Notes: Rating Unchanged.

**137.** ***When discrepancies are identified during data entry in the crash data system, are vehicle records flagged for possible updating?***

Does Not Meet Advisory Ideal

The State's Crash Reporting system and the vehicle data systems are not linked, so any possible identifiable errors in the data are not recognized.

Change Notes: Rating Unchanged.

## Data Quality Control Programs for the Vehicle Data System

**138.** ***Is the vehicle system data processed in real-time?***

Meets Advisory Ideal

The State's vehicle data is captured or edited in real time.

Change Notes: Rating Unchanged.

**139.** ***Are there automated edit checks and validation rules to ensure that entered data falls within a range of acceptable values and is logically consistent among data elements?***

Meets Advisory Ideal

The acceptable values for each data element were provided including edit checks.

Change Notes: Rating Unchanged.

**140.** ***Are statewide vehicle system staff able to amend obvious errors and omissions for quality control purposes?***

Meets Advisory Ideal

DMV supervisory staff are allowed to correct obvious errors and omissions in vehicle data.

Change Notes: Rating Unchanged.

**141.** ***Are there timeliness performance measures tailored to the needs of data managers and data users?***

Does Not Meet Advisory Ideal

The State does not have timeliness measures for its vehicle data. Having a real-time data system limits the need for timeliness measures, but there are still measures that can be used to ensure that data is reaching the system for data entry in a timely manner. Examples of acceptable timeliness measures can be found in the following document: "Model Performance Measures for State Traffic Records Systems" which can be found on the NHTSA website. Development of such measures, baseline measurement and regular measurement can help the State to find even subtle degradation of data integrity, which, if left unaddressed is time-consuming and difficult to correct. Such issues can occur as a result of staff shortages or changes, new legislation, changes in policies, etc. Having measures and goals helps to ensure that data quality remains high.

Change Notes: Rating Unchanged.

**142.** ***Are there accuracy performance measures tailored to the needs of data managers and data users?***

Does Not Meet Advisory Ideal

There are currently no accuracy measures in place. As noted in the previous rating, example measures can be found in Model Performance Measures for State Traffic Records Systems.

Change Notes: Rating Unchanged.

**143.** ***Are there completeness performance measures tailored to the needs of data managers and data users?***

Does Not Meet Advisory Ideal

The West Virginia DMV has not established completeness performance measures tailored to the needs of data managers and data users.

Change Notes: Rating Unchanged.

**144.** ***Are there uniformity performance measures tailored to the needs of data managers and data users?***

Does Not Meet Advisory Ideal

The State does not have uniformity measures in place but notes that it intends to develop such measures as it modernizes its Title system.

Change Notes: Rating Unchanged.

**145.** ***Are there integration performance measures tailored to the needs of data managers and data users?***

Does Not Meet Advisory Ideal

The State does not have integration measures in place for the vehicle system. Integration measures can be simply, "the percentage of vehicle records that are linked to another system or file."

Change Notes: Rating Unchanged.

**146.** ***Are there accessibility performance measures tailored to the needs of data managers and data users?***

Does Not Meet Advisory Ideal

The vehicle system does not have accessibility measures in place.

Change Notes: Rating Unchanged.

**147.** ***Has the State established numeric goals-performance metrics-for each performance measure?***

Does Not Meet Advisory Ideal

There are currently no performance measures for the West Virginia vehicle system, thus no metrics or goals for such measures.

Change Notes: Rating Unchanged.

**148.** ***Is the detection of high frequency errors used to generate updates to training content and data collection manuals, update the validation rules, and prompt form revisions?***

Does Not Meet Advisory Ideal

While the response indicates that the State reacts to errors by updating training, there is no information about how it determines that errors are high-frequency, what reviews are done of training materials, manuals, or forms to determine the need for revision, or other processes undertaken to determine the need for changes.

Change Notes: Rating Unchanged.

**149.** ***Are sample-based audits conducted for vehicle reports and related database contents for that record?***

Partially Meets Advisory Ideal

The response indicates that this occurs but only as relates to using the system as designed, rather than data quality issues. For vehicle records, sample audits can be as simple as transactions with the more complex or risky transactions being reviewed at a higher percentage rate than the more routine transactions.

Change Notes: Rating Improved.
From 'Does Not Meet Advisory Ideal' to 'Partially Meets Advisory Ideal'.

**150.** ***Are periodic comparative and trend analyses used to identify unexplained differences in the data across years and jurisdictions within the State?***

Does Not Meet Advisory Ideal

Vehicle data trend analyses can quickly identify errors or missing data, as well as identify unexplained changes in statewide vehicle ownership, from jurisdiction-to-jurisdiction and year-to-year. Such reviews can also be helpful in terms of reviewing vehicle data in concert with safety research. For example, new research shows that pick-up trucks and SUVs are more likely to be involved in pedestrian / vehicle crashes. A review of the annual changes in percentage of those types of vehicles within a state can be used to alert enforcement entities, transportation planners, and / or those developing traffic safety media messages to address specific audiences or locales within the State.

Change Notes: Rating Unchanged.

**151.** ***Is data quality feedback from key users regularly communicated to data collectors and data managers?***

Partially Meets Advisory Ideal

The respondent indicates that feedback from users is relayed to programmers. This action does not address issues with data collection or data entry that might impact data quality or data consistency. A procedure for relaying feedback from users to those who most impact the quality of the data is needed. The State also did not provide the documented process or any samples of how or where this has occurred.

Change Notes: Rating Improved.
From 'Does Not Meet Advisory Ideal' to 'Partially Meets Advisory Ideal'.

***152.*** ***Are data quality management reports provided to the TRCC for regular review?***

Does Not Meet Advisory Ideal

There are currently no measures taken of data quality attributes in the vehicle system. Those attributes (timeliness, accuracy, completeness, consistency, integration, accessibility) should be measured on a regular basis and those measures should be reported quarterly to the TRCC so that a strategic and coordinated effort can be made to ensure that data needed to improve highway safety is available throughout the State of West Virginia. The TRCC exists to coordinate and engender cooperation related to the totality of traffic safety data within the State and ensure that data is of the highest quality possible. Discussions of data quality at the TRCC encourages all data collectors and users to more fully understand the breadth of data available, the common data elements in the various systems and raises possibilities for integration and interfaces that both save time and improve quality of data by reducing duplicate data entry in various databases.

Change Notes: Rating Unchanged.

## Description and Contents of the Roadway Data System

***153.*** ***Are all public roadways within the State located using a compatible location referencing system?***

Meets Advisory Ideal

The State has a single linear referencing system based on a Route ID milepost configuration. They own approximately 90 percent of the public roads. They have an online tool that allows anyone to see the routes.

Change Notes: Rating Unchanged.

***154.*** ***Are the collected roadway and traffic data elements located using a compatible location referencing system (e.g., LRS, GIS)?***

Meets Advisory Ideal

West Virginia roadway and traffic data elements are located using the same LRS for both State owned and non-State owned roadways. They have an open data portal that can be used to access the information.

Change Notes: Rating Unchanged.

***155.*** ***Is there an enterprise roadway information system containing roadway and traffic data elements for all public roads?***

Partially Meets Advisory Ideal

The State is currently in the process of developing a system that will allow all systems to be linked via the LRS.

Change Notes: Rating Improved.
From ‘Does Not Meet Advisory Ideal’ to ‘Partially Meets Advisory Ideal’.

**156.** ***Does the State have the ability to identify crash locations using a referencing system compatible with the one(s) used for roadways?***

Meets Advisory Ideal

West Virginia maps crash data using the same LRS as the roadway and traffic elements. They have been compatible since the 1970's. Maps have been provided.

Change Notes: Rating Unchanged.

**157.** ***Is crash data incorporated into the enterprise roadway information system for safety analysis and management use?***

Does Not Meet Advisory Ideal

The crash data is not currently incorporated in the enterprise management system. However, they are working on using the Numetric software to allow the crash and roadway data to be linked.

Change Notes: Rating Changed.
From 'Meets Advisory Ideal' to 'Does Not Meet Advisory Ideal'.

## Applicable Guidelines for the Roadway Data System

**158.** ***Are all the MIRE Fundamental Data Elements collected for all public roads?***

Partially Meets Advisory Ideal

Documentation provides evidence that all MIRE 2.0 elements were mapped in 2019, 73 percent of roadway segment elements are available for all public roads.

Change Notes: Rating Unchanged.

**159.** ***Do all additional collected data elements for any public roads conform to the data elements included in MIRE?***

Does Not Meet Advisory Ideal

The response indicates that all MIRE elements will be collected, but documentation provided is a listing which doesn't include definitions or what elements are or are not FDEs. There is no indication of whether elements will be collected for all public roads or for state roads only.

Change Notes: Rating Changed.
From 'Partially Meets Advisory Ideal' to 'Does Not Meet Advisory Ideal'.

## Data Dictionary for the Roadway Data System

**160.** ***Are all the MIRE Fundamental Data Elements for all public roads documented in the enterprise system's data dictionary?***

Partially Meets Advisory Ideal

West Virginia has a data dictionary that lists the MIRE FDE's, however there is no information indicating if each element is for all roadways, State roadways or public roadways. It also does not provide any information indicating which elements are the FDE's.

Change Notes: Rating Unchanged.

***161.*** ***Are all additional (non-Fundamental Data Element) MIRE data elements for all public roads documented in the data dictionary?***

Partially Meets Advisory Ideal

Non-FDE elements can be found in the data dictionary. However, not all non-FDE data elements collected are in the data dictionary. There is no indication which elements are collected for public roadways or State roads.

Change Notes: Rating Unchanged.

***162.*** ***Does local, municipal, or tribal (where applicable) roadway data comply with the data dictionary?***

Partially Meets Advisory Ideal

The State owns the majority of the roadways. Those roads not owned by the State are imported from an outside source and converted into the State's data standards. However there is no indication if the data complies before imported.

Change Notes: Rating Improved.
From 'Does Not Meet Advisory Ideal' to 'Partially Meets Advisory Ideal'.

***163.*** ***Is there guidance on how and when to update the data dictionary?***

Partially Meets Advisory Ideal

Although there is no official guidance, the data dictionary is updated when the system changes.

Change Notes: Rating Improved.
From 'Does Not Meet Advisory Ideal' to 'Partially Meets Advisory Ideal'.

## Procedures and Process Flows for the Roadway Data System

***164.*** ***Are the steps for incorporating new elements into the roadway information system (e.g., a new MIRE element) documented to show the flow of information?***

Does Not Meet Advisory Ideal

There are no documented processes for incorporating new elements.

Change Notes: Rating Changed.
From 'Partially Meets Advisory Ideal' to 'Does Not Meet Advisory Ideal'.

***165.*** ***Are the steps for updating roadway information documented to show the flow of information?***

Partially Meets Advisory Ideal

West Virginia DOT has a few documents that they use for providing information on updates. They have not provided any information on who is responsible for filling out the forms, where those forms are sent, or who actually goes in and makes the updates.

Change Notes: Rating Improved.
From 'Does Not Meet Advisory Ideal' to 'Partially Meets Advisory Ideal'.

***166.*** ***Are the steps for archiving and accessing historical roadway inventory documented?***

Partially Meets Advisory Ideal

The current ESRI Roads and Highways has temporal capabilities and can be used for accessing historical data for the newer LRS. Information on the State LRS can be accessed using a website back to 1996 for the old system. No steps or who is responsible for the historical data were provided.

Change Notes: Rating Improved.
From 'Does Not Meet Advisory Ideal' to 'Partially Meets Advisory Ideal'.

***167.*** ***Are the procedures used to collect, manage, and submit local agency roadway data (e.g., county, MPO, municipality, tribal) to the statewide inventory documented?***

Does Not Meet Advisory Ideal

There are no procedures for collection, management or submission of data from the locals.

Change Notes: Rating Unchanged.

***168.*** ***Are procedures for collecting and managing the local agency (to include tribal, where applicable) roadway data compatible with the State's enterprise roadway inventory?***

Partially Meets Advisory Ideal

Procedures for adding local roads to State LRS are described and include agencies responsible. Although it seems there are only a limited number of instances where the State isn't responsible for the process, it is not completely clear how compatibility between local agency roadway data is maintained in cases where the State doesn't perform this work.

Change Notes: Rating Improved.
From 'Does Not Meet Advisory Ideal' to 'Partially Meets Advisory Ideal'.

***169.*** ***Are there guidelines for collection of data elements as they are described in the State roadway inventory data dictionary?***

Partially Meets Advisory Ideal

There are no formal guidelines for the collection of data elements for the roadway inventory data system. There is some documentation and the narrative indicates there are informal processes for some data collection.

Change Notes: Rating Improved.
From 'Does Not Meet Advisory Ideal' to 'Partially Meets Advisory Ideal'.

## Intrastate Roadway System Interface

***170.*** ***Are the location coding methodologies for all State roadway information systems compatible?***

Meets Advisory Ideal

Most of the State's data systems are on the new LRS. Some data systems such as the Crash Records Database are not. Those systems that are not on the new LRS are still relatable to other State systems.

Change Notes: Rating Unchanged.

***171.*** ***Are there interface linkages connecting the State's discrete roadway information systems?***

Partially Meets Advisory Ideal

Those data sets maintained in ESRI Roads and Highways can be linked with the Bridge and Pavement Management Systems. However not all roadway data can be linked. West Virginia is currently working on getting all roadway data inventories into the same software that will allow linkage. They anticipate this will be done by 2023.

Change Notes: Rating Unchanged.

***172.*** ***Are the location coding methodologies for all regional, local, and tribal roadway systems compatible?***

Partially Meets Advisory Ideal

West Virginia owns over 90 percent of the roadways. A description for the process used to import local, municipal, or tribal (where applicable) roadway data into its road system is provided; however, it doesn't indicate if the data complies with the State's location coding methodologies before import.

Change Notes: Rating Improved.
From 'Does Not Meet Advisory Ideal' to 'Partially Meets Advisory Ideal'.

***173.*** ***Do roadway data systems maintained by regional and local custodians (e.g., MPOs, municipalities, and federally recognized Indian Tribes) interface with the State enterprise roadway information system?***

Does Not Meet Advisory Ideal

There are no interfaces between the State and other roadway owners. The State is responsible for over 90 percent of the roadway so interfaces are not a high priority.

Change Notes: Rating Unchanged.

***174.*** ***Does the State enterprise roadway information system allow MPOs and local transportation agencies (to include federally recognized Tribes, where applicable) on-demand access to data?***

Meets Advisory Ideal

West Virginia has an online system that allows MPOs, municipal governments and other local agencies to access roadway data.

Change Notes: Rating Improved.
From 'Partially Meets Advisory Ideal' to 'Meets Advisory Ideal'.

***175.*** ***Do Roadway system data managers regularly produce and analyze data quality reports?***

Partially Meets Advisory Ideal

A release schedule and link are given in the response, but no sample report is provided as documentation.

Change Notes: Rating Unchanged.

***176.*** ***Is there a formal program of error/edit checking for data entered into the statewide roadway data system?***

Partially Meets Advisory Ideal

While there is no formal program for checking for errors or editing errors, ESRI Roads and Highways has built in procedures that check accuracy of route information. Edits are done within a versioned database and then checked by another reviewer before being added to the official data base.

Change Notes: Rating Improved.
From 'Does Not Meet Advisory Ideal' to 'Partially Meets Advisory Ideal'.

***177.*** ***Are there procedures for prioritizing and addressing detected errors?***

Partially Meets Advisory Ideal

There are no formal procedures for prioritizing or addressing errors. With the implementation of ESRI Roads and Highways, procedures have been developed to help with accuracy of route information that include the editing of errors.

Change Notes: Rating Improved.
From 'Does Not Meet Advisory Ideal' to 'Partially Meets Advisory Ideal'.

***178.*** ***Are there procedures for sharing quality control information with data collectors through individual and agency-level feedback and training?***

Does Not Meet Advisory Ideal

There are no procedures for sharing quality control information with data collectors. West Virginia is in the process of modernizing their system and hopes that they will be able to share information in the future.

Change Notes: Rating Unchanged.

***179.*** ***Are there timeliness performance measures tailored to the needs of data managers and data users?***

Does Not Meet Advisory Ideal

There are no timeliness performance measures established.

Change Notes: Rating Unchanged.

**180.** ***Are there accuracy performance measures tailored to the needs of data managers and data users?***

Does Not Meet Advisory Ideal

There are no accuracy performance measures established.

Change Notes: Rating Unchanged.

**181.** ***Are there completeness performance measures tailored to the needs of data managers and data users?***

Does Not Meet Advisory Ideal

There are no completeness performance measures established.

Change Notes: Rating Unchanged.

**182.** ***Are there uniformity performance measures tailored to the needs of data managers and data users?***

Does Not Meet Advisory Ideal

There are no uniformity performance measures established.

Change Notes: Rating Unchanged.

**183.** ***Are there accessibility performance measures tailored to the needs of data managers and data users?***

Does Not Meet Advisory Ideal

There are no accessibility performance measures established.

Change Notes: Rating Unchanged.

**184.** ***Are there integration performance measures tailored to the needs of data managers and data users?***

Does Not Meet Advisory Ideal

There are no integration performance measures established.

Change Notes: Rating Unchanged.

**185.** ***Has the State established numeric goals-performance metrics-for each performance measure?***

Does Not Meet Advisory Ideal

There are no established goals or metrics for any of the performance measures.

Change Notes: New Question.

**186.** ***Are data quality management reports provided to the TRCC for regular review?***

Does Not Meet Advisory Ideal

Currently there are no reports provided to the TRCC for data quality management.

Change Notes: New Question.

***187.*** ***Is citation and adjudication data used for the prosecution of offenders; adjudication of cases; traffic safety analysis to identify problem locations, problem drivers, and issues related to the issuance of citations; and for traffic safety program planning purposes?***

Partially Meets Advisory Ideal

Citation data is used by the State's highway safety office where data is analyzed alongside crash data and then sent out to the regional coordinators. The regional coordinators use this data to assist law enforcement in finding problem locations and improving enforcement activities. Magistrates utilize the Uniform Judicial Application or (UJA) which allows for magistrates to check the data of offenders through their personal data that can inform the prosecution of offenders and adjudication of cases. However, there was no mention of any analyses or supporting documents provided to confirm that these processes are conducted to identify problem areas to inform traffic safety program countermeasures and planning.

The State should consider providing reports, spreadsheets, etc. reflecting how citation and adjudication is used, displayed to those entities and purposes mentioned above.

Change Notes: Rating Improved.
From 'Does Not Meet Advisory Ideal' to 'Partially Meets Advisory Ideal'.

***188.*** ***Is there a statewide authority that assigns unique citation numbers?***

Partially Meets Advisory Ideal

Law enforcement creates a unique citation number through ReportBeam or paper, and the Magistrate Courts assign each citation number and enter it into a system, but there is no statewide authority that assigns unique citation numbers. The Statute was listed, yet a copy of the Statute and the relevant text were not provided. It is suggested the State assess whether a statewide numbering system is feasible through a Statewide Office of Record for Citations (i.e., MVD, WVSCA, State law enforcement), if that exists. It was mentioned that eCitations are in the process of being implemented. This will go a long way to streamline and provide consistency for this process.

Change Notes: Rating Unchanged.

***189.*** ***Are all citation dispositions-both within and outside the judicial branch-tracked by a statewide citation tracking system?***

Partially Meets Advisory Ideal

All adjudicated citations are applied to the Driver Record through the DMV mainframe which is the repository for all adjudicated citations. However, this repository is not linked to court system "UJA" program to allow for deferrals or dismissals to be identified in the driver history. It was noted that the DMV annual report provides listings of all adjudicated citations. The State also reported citations adjudicated through magistrate courts are filed separately from municipal courts in independent systems. Additionally, the court system "UJA" program is the only program that can track a citation from issuance to adjudication, to include dismissals or citations in a pending status. These processes and how citations are tracked were not described. It appears that the State has systems in place to evaluate the possibility of consolidating systems, therefore, it would benefit the State to evaluate the possibility of incorporating these dispositions into a Statewide system.

Change Notes: Rating Unchanged.

***190.*** ***Are final dispositions (up to and including the resolution of any appeals) posted to the driver data system?***

Partially Meets Advisory Ideal

All Magistrate citations are manually entered into ReportBeam and the Magistrate Court System (UJA). In addition, final dispositions are posted to the driver data system at the DMV and the DMV maintains the driver record data. However, it is unclear how municipal court citations are reported to the DMV. It is also not clear if resolutions of any appeals from the courts are posted to the driver data system. Further explanation and flowcharts or processes for this to occur are needed.

Change Notes: Rating Unchanged.

***191.*** ***Are the courts' case management systems interoperable among all jurisdictions within the State (including tribal, local, municipal, and State)?***

Partially Meets Advisory Ideal

The Uniform Judicial Application (UJA) is a State system searchable by both public and State entities, however, only law enforcement and court staff have access to PII. The UJA is centralized for the magistrate courts, but it is not clear if other jurisdictions within the State utilized this system. It would be helpful if the State addressed whether other jurisdictions (i.e., (tribal-if exists, local, municipal, State), centrally collect case management information. Further description regarding protocols governing interoperability and communications capabilities of the UJA are needed. It is also unclear the role municipal courts play with regard to this system. Sample queries in the form of a screenshot or process flow diagrams were not provided. Critical functional elements and key stakeholder roles were also not provided. The State might consider utilizing unique identifiers outside of law enforcement and court staff for increased interoperability.

Change Notes: Rating Improved.
From ‘Does Not Meet Advisory Ideal’ to ‘Partially Meets Advisory Ideal’.

***192.*** ***Is there a statewide system that provides real-time information on individuals' driving and criminal histories?***

Partially Meets Advisory Ideal

It appears there are several statewide systems that provide real-time information on individuals' criminal histories to include traffic violations, criminal and civil case information, and disposition information. The systems can be accessed in all counties by all authorized court staff, prosecutors, and law enforcement agencies, but there does not appear to be access to the public. Also, there does not appear to be real-time access to driving histories that is tracked by DMV.

Change Notes: Rating Changed.
From ‘Meets Advisory Ideal’ to ‘Partially Meets Advisory Ideal’.

***193.*** ***Do all law enforcement agencies, parole agencies, probation agencies, and courts within the State participate in and have access to a system providing real-time information on individuals driving and criminal histories?***

Partially Meets Advisory Ideal

WEAPON provides access to driver query, person query, title, vehicle registration, and many

more. Please see the attached document for a list of accessible information. However, it appears this is accessible to law enforcement only. It is suggested the State explore the possibility of providing this information to other traffic record stakeholders, i.e., parole agencies, probation agencies, and the courts for providing real-time access to individual's driving and criminal histories.

Change Notes: Rating Changed.
From 'Meets Advisory Ideal' to 'Partially Meets Advisory Ideal'.

## Applicable Guidelines and Participation in National Data Exchange Systems for the Citation and Adjudication Systems

***194.*** ***Are DUI convictions and traffic-related felonies reported according to Uniform Crime Reporting (UCR) guidelines?***

Partially Meets Advisory Ideal

It appears that the State is NIBRS and UCR compliant, however race of the individual is not included on the citation. However, if the offense is an Arrestee, a Criminal Investigative Report is written, and the race is entered into the software program provided for data collection. Given the attached evidence, the State makes a compliant effort by including the data that is missing. It would benefit the State to formally document this situation and specifically address DUI convictions and traffic-related felonies reflecting compliance with NIBRS and UCR guidelines.

Change Notes: Rating Unchanged.

***195.*** ***Do the appropriate portions of the citation and adjudication systems adhere to the NIEM Justice domain guidelines?***

Does Not Meet Advisory Ideal

Although it is reported to be not applicable to the West Virginia Supreme Court, it is in the best interest of the courts and stakeholders to adhere to best practices with regard to citation and adjudication systems to provide ideal systems that facilitate timely, accurate, and accessible data to stakeholders to better inform processes throughout adjudication and countermeasures implemented to serve the public and enhance public safety. Citation and adjudication data systems ideally meet current national law enforcement and court standards. Most of these systems are based on currently applicable guidelines and standards including the Functional Requirement Standards for Traffic Court Case Management Systems managed by the National Center for State Courts; the National Information Exchange Model Justice domain managed by the Department of Justice and the Department of Homeland Security; and the Model Impaired Driver Records Information System managed by NHTSA.

Change Notes: Rating Unchanged.

***196.*** ***Does the State use any National Center for State Courts (NCSC) guidelines for court records?***

Partially Meets Advisory Ideal

The State uses the National Center for State Courts guidelines for court records. The development

of the Uniform Traffic Citation, in alignment with the court system, police agencies, and the DMV, is noted, however, there was no evidence provided to support this statement, i.e., data element/content comparisons, performance measure reports, matrices/rubrics showing compliance.

Change Notes: Rating Changed.
From 'Meets Advisory Ideal' to 'Partially Meets Advisory Ideal'.

## Data Dictionary for the Citation and Adjudication Data Systems

***197.*** ***Does the statewide citation tracking system have a data dictionary?***

Does Not Meet Advisory Ideal

West Virginia does not have a formal data dictionary for their statewide citation tracking system. The document provided does provide eCitation metadata, updated in 2022. This document can be utilized in the development of a formal data dictionary. If the citation system is maintained in-house, the State should develop an effort to formalize a data dictionary for the system. If vendor supported, the State should work with their vendor to identify this documentation.

Change Notes: Rating Unchanged.

***198.*** ***Do the courts' case management system data dictionaries provide a definition for each data field?***

Partially Meets Advisory Ideal

It appears the courts' case management system data dictionary does provide a description for each data field. Each element of data collected has a table structure and all table elements are defined and described within the data dictionary. The State provided the Traffic Related portion of the data dictionary for the system. It would benefit the State to identify the entire data dictionary for the case management system, to include DUI.

Change Notes: Rating Unchanged.

***199.*** ***Do the citation data dictionaries clearly define all data fields?***

Partially Meets Advisory Ideal

A Traffic Related Metadata set was provided that appears to be a portion of a data dictionary that defines traffic related data fields. It is suggested the State explore the existence of a comprehensive data dictionary of the UJA system maintained in Magistrate Services. Although the State reported that the magistrate courts maintain a statewide system that tracks all magistrate cases, information is missing regarding other court systems within the State. Ideally, the State maintains system-specific data dictionaries for the citation systems (electronic and manual) as well as the courts' case management systems used in the State. The data dictionary lists the name of the element in the database as well as the commonly understood description. Furthermore, the dictionary provides an established data definition and validated values—including appropriate null codes—for each field in the data system. All system edits are also documented in the data dictionary. The dictionary explains each element—specifically, what is and is not included, the rules of use, and any exceptions to these rules. The data dictionary indicates which data fields are populated through linkages to other traffic records components and which data fields are used to link citation and

adjudication data to other traffic records components.

It is suggested the State explore the existence of a comprehensive data dictionary of the UJA system maintained in Magistrate Services.

Change Notes: Rating Improved.
From 'Does Not Meet Advisory Ideal' to 'Partially Meets Advisory Ideal'.

***200.*** ***Do the courts' case management system data dictionaries clearly define all data fields?***

Partially Meets Advisory Ideal

The courts' case management system, traffic related Metadata document, is a portion of a more comprehensive data dictionary and defines data elements. Other documents provided to support relationships between manuals, screen shots, and instructions give the impression that documents exist to bring together a formalized data dictionary, identifying data elements, linkages, updates, etc.

Change Notes: Rating Changed.
From 'Meets Advisory Ideal' to 'Partially Meets Advisory Ideal'.

***201.*** ***Are the citation system data dictionaries up-to-date and consistent with the field data collection manual, training materials, coding manuals, and corresponding reports?***

Does Not Meet Advisory Ideal

Although the eCitation Metadata document is updated in alignment with the data collection system, the State did not provide evidence reflecting that the data dictionary is up-to-date and consistent with a field data collection manual, training materials, coding manuals, and corresponding reports.

Change Notes: Rating Unchanged.

***202.*** ***Do the citation data dictionaries indicate the data fields that are populated through interfaces with other traffic records system components?***

Does Not Meet Advisory Ideal

It does not appear the citation data dictionary, eCitation Metadata, indicates that data fields are populated through interfaces with other traffic records system components. There are signs that licenses and registrations are scanned into the electronic citation, but it is unclear from what agency populates this data. A unified court system would be helpful in this instance. Ideally, the State maintains system-specific data dictionaries for the citation systems (electronic and manual) as well as the courts' case management systems used in the State.

Change Notes: Rating Unchanged.

***203.*** ***Do the courts' case management system data dictionaries indicate the data fields populated through interface linkages with other traffic records system components?***

Does Not Meet Advisory Ideal

In West Virginia, it does not appear the courts' case management system data dictionary, traffic related metadata, indicates that data fields are populated through interface linkages with other

traffic records system components. It is suggested the State explore possible interface linkages with other traffic records system components. The TRCC is a great place to begin, soliciting possible flow processes and data elements used for traffic records to be exchanged.

Change Notes: Rating Unchanged.

## Procedures and Process Flows for the Citation and Adjudication Data Systems

***204.*** ***Does the State track citations from point of issuance to posting on the driver file?***

Partially Meets Advisory Ideal

There is no way to track citations prior to adjudication other than individually running a report from the mainframe, however the UJA court system does have this ability. Any analysis/tracking is completed after the fact via adhoc or annual reporting. This reporting only addresses adjudicated citations. The court system has a program (UJA) that could track citations from point of issuance to adjudication. Adjudicated citations are received at the DMV in the following methods: email/E-citation or hard copy mail via USPS. The State does have systems and processes in place to evaluate whether they can exchange this data electronically.

Change Notes: Rating Improved.
From 'Does Not Meet Advisory Ideal' to 'Partially Meets Advisory Ideal'.

***205.*** ***Does the State distinguish between the administrative handling of court payments in lieu of court appearances (mail-ins) and court appearances?***

Meets Advisory Ideal

Detailed information regarding the administrative handling of court payments in lieu of court appearances (mail-ins) and court appearances including referenced statutes has been provided. Mail-in appearances and court appearances both follow the same steps to adjudication by the court. The charges that must be answered in person, telephone appearance and/or plea of a traffic citation is governed by Rule 7 of the Magistrate Rules of Criminal Procedure.

Change Notes: Rating Unchanged.

***206.*** ***Does the State have a system for tracking administrative driver penalties and sanctions?***

Partially Meets Advisory Ideal

In West Virginia, the driver system mainframe is the repository for all administrative penalties (Revocation, Suspension, disqualification etc.). The system that holds this type of information is accessed by a research query or annual report. It is suggested the State explore the development of a webpage or another automated method to provide timely, consistent, and accessible data to be used for problem identification, identifying driver trends, etc.

Change Notes: Rating Improved.
From 'Does Not Meet Advisory Ideal' to 'Partially Meets Advisory Ideal'.

***207.*** ***Does the State track the number and types of traffic citations for juvenile offenders?***

Does Not Meet Advisory Ideal

The number and types of traffic citations for juvenile offenders are tracked the same as for adults on any juvenile offense permitted to be adjudicated by magistrates, however there is no information for those citations that occur in other jurisdictions. An annual list of the numbers and types of citations issued to juvenile offenders was not provided. It is suggested the State explore the possibility of developing reports to capture this type of information.

Change Notes: Rating Unchanged.

***208.*** ***Are deferrals and dismissals tracked by the court case management systems or on the driver history record (DHR) to insure subsequent repeat offenses are not viewed as first offenses?***

Partially Meets Advisory Ideal

Deferrals and dismissals are tracked within the court case management system, per previous responses, however, they are not specifically flagged or included in any type of reporting or exchange. The State explains that deferrals and dismissals are tracked on the driver history record and may be used to ensure subsequent repeat offenses, however, it is not clear if this information is being used by prosecutors, the courts, etc. to look beyond first offenses.

The DUI tracking system should be interactive and accessible to all who are in contact with a DUI offender, from arrest through compliance with sanctions. A DUI tracking system includes the citation, the administrative per se paperwork and information about the administrative hearing, the alcohol evaluation (if any), education/therapy recommendations, assignments and completion, the court disposition, sanctions imposed (interlock, etc.), and compliance and re-licensure. Tracking deferral and dismissal of citations is considered a critical functional element of this process.

Change Notes: Rating Unchanged.

***209.*** ***Are there State and/or local criteria for deferring or dismissing traffic citations and charges?***

Meets Advisory Ideal

Procedures for deferral and dismissal are set by statute and court rules. The process is initiated before the court by either the prosecutor or defendant, depending on case variables and which statute or rule governs the particular charge. The court then grants or denies the request and oversees compliance if a deferral. Rule 7(d) of the Magistrate Court Rules of Criminal Procedure.

Change Notes: Rating Improved.
From ‘Partially Meets Advisory Ideal’ to ‘Meets Advisory Ideal’.

***210.*** ***Are the processes for retaining, archiving or purging citation records defined and documented?***

Meets Advisory Ideal

The processes for retaining, archiving or purging citation records have been explained. Records are retained pursuant to Rule 12 of the Rules of Administrative Procedure for Magistrate Courts of which are well defined and documented.

Change Notes: Rating Improved.
From ‘Does Not Meet Advisory Ideal’ to ‘Meets Advisory Ideal’.

***211.*** ***Are there security protocols governing data access, modification, and release in the adjudication system?***

Does Not Meet Advisory Ideal

There are a few security protocols governing data access, modification, and release in the adjudication system that only apply to court employees. There appears to be no security protocols governing data access, modification, and release in the adjudication system that pertains to all other traffic records stakeholders.

Ideally, all State and local courts participate in and have access to an interfaced network of data systems that provide this degree of information access. For traffic records purposes, the goal of the citation and adjudication system is to collect all the information relevant to traffic records-related citations in a central, statewide repository (and linked to appropriate Federal data systems) so the information can be analyzed by authorized users to improve and promote traffic safety. Additionally, information from this system also supports traffic safety analysis that identifies trends in citation issuance, prosecution, and case disposition.

Change Notes: Rating Unchanged.

***212.*** ***Does the State have an impaired driving data tracking system that uses some or all the data elements or guidelines of NHTSA's Model Impaired Driving Records Information System (MIDRIS), which provides a central point of access for DUI Driver information from the time of the stop/arrest through adjudication, sanctions, rehabilitation, prosecution and posting to the driver history file?***

Partially Meets Advisory Ideal

The DMV maintains a controlled access DUI tracking system that tracks a DUI incident from arrest to adjudication. However, it is still unclear if this system complies with the data elements or guidelines of NHTSA's Model Impaired Driving Records Information System (MIDRIS).

Change Notes: Rating Improved.
From ‘Does Not Meet Advisory Ideal’ to ‘Partially Meets Advisory Ideal’.

***213.*** ***Does the DUI tracking system include BAC and any drug testing results?***

Partially Meets Advisory Ideal

In West Virginia the DMV tracking system includes BAC and any drug testing results. However, it is suggested the State formally document the process of tracking the BAC and any drug testing results. The documentation provided is through 2017. Ideally, BAC and drug testing information should be more current.

Change Notes: Rating Unchanged.

***214.*** ***Does the citation system interface with the driver system to collect driver information to help determine the applicable charges?***

Does Not Meet Advisory Ideal

Only adjudicated citations are entered into the driver record to determine applicable revocation periods, etc. however the systems are not interfaced to determine applicable charges prior to adjudication.

Change Notes: Rating Unchanged.

***215.*** ***Does the citation system interface with the vehicle system to collect vehicle information and carry out administrative actions (e.g., vehicle seizure, forfeiture, interlock)?***

Does Not Meet Advisory Ideal

The citation system does not interface with the vehicle system to collect vehicle information and carry out administrative actions.

Change Notes: Rating Unchanged.

***216.*** ***Does the citation system interface with the crash system to document violations and charges related to the crash?***

Does Not Meet Advisory Ideal

There are significant challenges with linking the citation data with the ReportBeam software for their crash data system. However, in instances where the investigating agency has the ability to issue e-citations, they are capable of doing so while completing the crash report which automatically links the crash report and citation together permanently; however, there is no consistency for agencies reporting in this regard. At this time, it does not appear that the State has an interoperable citation system that interfaces with the crash system to document violations and charges related to the crash. The State is attempting a full implementation of e-citation, and there is a location to enter citation/violation data related to the crash, but it is not done consistently in their electronic or manual processing.

Change Notes: Rating Changed.
From 'Partially Meets Advisory Ideal' to 'Does Not Meet Advisory Ideal'.

***217.*** ***Does the adjudication system interface with the driver system to post dispositions to the driver file?***

Partially Meets Advisory Ideal

The DMV database is post adjudication. Additionally in prior answers, it was acknowledged that there is no linkage of these systems during the adjudication process. It was noted dispositions for e-citations can be transmitted electronically. Mailed-in citations can also be added to the driver file.

Change Notes: New Question.

***218.*** ***Does the adjudication system interface with the vehicle system to collect vehicle information and carry out administrative actions (e.g., vehicle seizure, forfeiture, interlock mandates, and supervision)?***

Does Not Meet Advisory Ideal

The adjudication system does not interface with the vehicle system. Law enforcement officers, prosecutors, probation officers, parole officers, and judges benefit from having real-time access to individuals' driving and criminal histories to appropriately cite, charge, adjudicate, and impose penalties and sanctions. Ideally, all State and local courts participate in and have access to an interfaced network of data systems that provide this degree of information access. For traffic records purposes, the goal of the citation and adjudication system is to collect all the information relevant to traffic records-related citations in a central, statewide repository (and linked to appropriate Federal data systems) so the information can be analyzed by authorized users to improve and promote traffic safety. Ideally, information from this system also supports traffic safety analysis that identifies trends in citation issuance, prosecution, and case disposition.

Change Notes: Rating Unchanged.

***219.*** ***Does the adjudication system interface with the crash system to document violations and charges related to the crash?***

Does Not Meet Advisory Ideal

Despite their best efforts, the current adjudication system does not interface with the crash system, whereby significant challenges regarding implementation of statewide e-citation data, the ReportBeam software, and current communication issues between agencies. The State is working to resolve these challenges and with the updates to the crash system, it is anticipated that these systems will be linked. The State is working to have all citations received from ReportBeam entered into a Traffic Records database for highway safety analysis. Once the data is in the database, West Virginia DOH will be able to conduct highway safety analysis using the citation data in conjunction with both the crash and roadway data.

Change Notes: Rating Unchanged.

## Quality Control Programs for the Citation and Adjudication Systems

***220.*** ***Are there timeliness performance measures tailored to the needs of citation systems managers and data users?***

Does Not Meet Advisory Ideal

No timeliness performance measures are in place. Timeliness reflects the span in time between the occurrence of an event and entry of information into the appropriate databases. Timeliness can also measure the time from when the custodial agency receives the data to the point when the data is entered into the database. While a State determines the events of interest, many States use the citation date issued and the date of disposition to track timeliness.

Example measurements:

• The median or mean number of days from (a) the data a citation is issued to (b) the date the citation is entered into the statewide citation database (or first-available repository).

• The median or mean number of days from (a) the date of charge disposition to (b) the charge

disposition is entered into the statewide adjudication database (or first-available repository).

Note: As with West Virginia, many States do not have statewide databases for citation or adjudication records. For those States' citation and adjudication system, timeliness and other data quality attributes should be measured at the individual first-available repositories.

Change Notes: Rating Unchanged.

***221.*** ***Are there accuracy performance measures tailored to the needs of citation systems managers and data users?***

Does Not Meet Advisory Ideal

The data is reviewed for accuracy by court staff; however, no formal performance measures are in place. There are also "built-in measures," however, there is no evidence to support this statement. It would be beneficial for the State to identify the accuracy measures used, including the most current baseline and actual values for each. Accuracy reflects the degree to which the data is error-free, satisfies internal consistency checks, and does not exist in duplicate within a single database. An error means the recorded value from some data element of interest is incorrect. An error does not mean the information is missing from the record. Erroneous information in a database may not always be detected. In some cases, it is possible to determine the values entered for a variable or data element are not legitimate codes. In other cases, errors can be detected by matching with external sources of information. It may also be possible to determine that duplicate records have been entered for the same event. An agency can measure accuracy using a set of data elements that the State considers critical. Examples of errors include the duplication of citation records and invalid statutes being recorded in the database.

Example measurements:
• The percentage of citation records with no errors in critical data elements.
• The percentage of charge disposition records with no errors in critical data elements.

Change Notes: Rating Unchanged.

***222.*** ***Are there completeness performance measures tailored to the needs of citation systems managers and data users?***

Does Not Meet Advisory Ideal

Although it was reported that measures are defined by mandatory data elements and the programming code determines that a data element is "required" and will not permit the user to pass the element without entering the data or selecting a value, the completeness measures used, including the most current baseline and actual values for each were not provided. Data completeness measures reflect both the number of records considered that are missing from the driver database (e.g., events of interest that occurred but were not entered into the database) and the number of missing (blank) data elements in the records that are in a database. The citation system has both internal and external considerations for completeness. External completeness for this system can be assessed by identifying the total number of citations issued. Unless a state controls this electronically from a central source, this will be difficult to quantify. The internal completeness can be measured by calculating the percentages of completeness from data elements within the dataset.

Example measurements:
•The percentage of citation records with no missing critical data elements.
•The percentage of citation records with no missing critical data elements.
•The percentage of citation records with no missing data elements.
•The percentage of unknowns or blanks in critical data elements for which unknown is not an acceptable value.

Change Notes: Rating Changed.
From 'Partially Meets Advisory Ideal' to 'Does Not Meet Advisory Ideal'.

***223. Are there uniformity performance measures tailored to the needs of citation systems managers and data users?***

Does Not Meet Advisory Ideal

All users of the eCitation system have the exact same citation form to fill out. This form is modeled after the paper citation and has all the same data fields. All agencies in the State use either the eCitation or the paper citation. However, it does not seem as though there are specific performance measures to identify the completeness of the statewide citation system. Uniformity reflects the consistency among the files or records in a database and may be measured against some independent standard, preferably a national standard. Within a State, all jurisdictions should collect and report the same data using the same definitions and procedures. If the same data elements are used in different State files, they should be identical or at least compatible (e.g., names, addresses, geographic locations). Data collection procedures and data elements should also agree with nationally accepted guidelines and standards such as the Model Impaired Driving Records Information System (MIDRIS).

Example Measurements:
•The percentage of citation records entered into the State database with common uniform statewide violation codes.
•The number of Model Impaired Driving Record Information System (MIDRIS)-compliant data elements entered into the citation database or obtained via linkage with other systems' databases.
•The percentage of citation records entered into the database with common uniform statewide violation codes.

Change Notes: Rating Unchanged.

***224. Are there integration performance measures tailored to the needs of citation systems managers and data users?***

Does Not Meet Advisory Ideal

There are no integration performance measures tailored to the needs of citation systems managers and data users. Integration reflects the ability of records in a database to be linked to a set of records in another of the six core databases – or components thereof – using common or unique identifiers. Integration differs in one important respect from the first four attributes of data quality. By definition, integration is a performance attribute that always involves two or more traffic records subsystems. Integration highlights the capability of records within the citation system to be linked with another dataset from one of the other core traffic records systems. Interface linkages among the criminal justice system, the civil justice system, and the citation system are necessary to manage administrative cases, criminal traffic cases, and final case disposition. Specifically, case

management systems throughout the State should be interoperable—capable of sharing data between courts and supplying disposition data to the statewide repository. Final disposition is forwarded to the driver and vehicle systems. Citation data—used in the process of issuing a citation—is linked with the driver system to collect driver information, to carry out administrative actions (e.g., suspension, revocation, cancellation, interlock), and to determine applicable charges. Citation data is linked to the vehicle file to collect vehicle information and to carry out administrative actions (e.g., vehicle seizure, forfeiture, interlock). Citation data is also linked to the crash system to document incident location, and associated violations and charges resulting from the crash.

Adjudication data—initial charge, dispositional charge, and dispositional order—is linked with the driver system to obtain certified driver records, to carry out administrative actions (e.g., suspension, revocation, cancellation, interlock), to determine the applicable charges, and to post the dispositions to the driver file. Adjudication data is linked to the vehicle file to carry out administrative actions (e.g., vehicle seizure, forfeiture, interlock). Adjudication is also linked to the crash system to document violations and charges resulting from the crash.
Example measurement: Number of records within the citation State's Court Case Management System database that are linked to another traffic records system: the State's Driver history database.

Change Notes: Rating Unchanged.

***225.*** ***Are there accessibility performance measures tailored to the needs of citation systems managers and data users?***

Does Not Meet Advisory Ideal

There are no accessibility performance measures tailored to the needs of citation systems managers and data users. Accessibility reflects the ability of legitimate users to successfully obtain desired data. It serves as a way for data managers to quantify how users are served and if there is a need for any new methods for access. An example measurement can be a user satisfaction survey of a State's data request process.

Change Notes: Rating Changed.
From 'Partially Meets Advisory Ideal' to 'Does Not Meet Advisory Ideal'.

***226.*** ***Has the State established numeric goals-performance metrics-for each citation system performance measure?***

Does Not Meet Advisory Ideal

Numeric goals for each citation system performance measure have not been established. It is suggested the State explore the development of a Data Management Plan, monitored by the TRCC, to address numeric goals for each performance measure in the citation system. Please reference NHSTA's Performance Measure Guidelines.

Change Notes: New Question.

***227.*** ***Are there timeliness performance measures tailored to the needs of adjudication systems managers and data users?***

Does Not Meet Advisory Ideal

Case law deadlines are defined in statute. However, there are no measures to ensure timeliness. Timeliness is measured in the lapse reflected in the span in time between the occurrence of an event and its entry of information into the citation and adjudication system appropriate databases. Timeliness can also measure the time from when the custodial agency receives the data to the point when the data is entered into the database. While a State determines the events of interest, many States use the citation date issued and the date of disposition to track timeliness.

Example measurements:
•The average number of days from the date a citation is issues to the date the citation is available in the State citation database.
•The median or mean number of days from (a) the data a citation is issued to (b) the date the citation is entered into the statewide citation database (or first-available repository).
•The median or mean number of days from (a) the date of charge disposition to (b) the charge disposition is entered into the statewide adjudication database (or first-available repository).

Note: Many States do not have statewide databases for citation or adjudication records. For those States' citation and adjudication system, timelines and other data quality attributes should be measured at the individual first-available repositories.

It is suggested the State explore the development of a Data Management Plan, monitored by the TRCC, to address timeliness performance measures to apply to the citation system.

Change Notes: Rating Unchanged.

***228.*** ***Are there accuracy performance measures tailored to the needs of adjudication systems managers and data users?***

Does Not Meet Advisory Ideal

Regular audits are conducted, however there is no current system in place that tracks accuracy measures. Accuracy includes the errors in information recorded within the database. Missing reflects the degree to which the data is error-free, satisfies internal consistency checks, and does not exist in duplicate within a single database. Error means the recorded value from some data element of interest is incorrect. Error does not mean the information is not included in this measure. Erroneous information in a database cannot always be detected. In some cases, it is possible to determine the values entered for a variable or data element are not legitimate codes. In other cases, errors can be detected by matching with external sources of information. It may also be possible to determine that duplicate records have been entered for the same event. An agency can measure this accuracy using a set of data elements that the State considers critical to assess accuracy. Examples of errors include the duplication of citation records and invalid statutes being recorded in the database.

Example measurement:
•The percentage of citation records with no errors in critical data elements.
•The percentage of charge disposition records with no errors in critical data elements.

Please reference NHSTA's Model Performance Guidelines to address performance measures: https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/811441.

Change Notes: Rating Unchanged.

***229.*** ***Are there completeness performance measures tailored to the needs of adjudication systems managers and data users?***

Does Not Meet Advisory Ideal

The court performs regular audits to check for missing required data elements. However, no completeness performance measures tailored to the needs of adjudication systems managers and data users were reported.

Change Notes: Rating Unchanged.

***230.*** ***Are there uniformity performance measures tailored to the needs of adjudication systems managers and data users?***

Does Not Meet Advisory Ideal

The court enters the information into their system themselves, conforming the data to their uniformity standards. However, no uniformity performance measures tailored to the needs of adjudication systems managers and data users were reported.

Change Notes: New Question.

***231.*** ***Are there integration performance measures tailored to the needs of adjudication systems managers and data users?***

Does Not Meet Advisory Ideal

No integration performance measures exist at this time. Integration reflects the ability of records in a database to be linked to a set of records in another of the six core databases – or components thereof – using common or unique identifiers. Integration differs in one important respect from the first four attributes of data quality. By definition, integration is a performance attribute that always involves two or more traffic records subsystems. Integration highlights the capability of records within the citation system to be linked with another dataset from one of the other core traffic records systems. Interface linkages among the criminal justice system, the civil justice system, and the citation system are necessary to manage administrative cases, criminal traffic cases, and final case disposition. Specifically, case management systems throughout the State should be interoperable—capable of sharing data between courts and supplying disposition data to the statewide repository. Final disposition is forwarded to the driver and vehicle systems.

Please reference NHSTA's Model Performance Guidelines to address performance.

Change Notes: Rating Unchanged.

***232.*** ***Are there accessibility performance measures tailored to the needs of adjudication systems managers and data users?***

Does Not Meet Advisory Ideal

Although the State has a unified court system and utilizes the UJA, no evidence of accessibility

performance measures tailored to the needs of adjudication systems managers and data users was provided.

Accessibility reflects the ability of legitimate users to successfully obtain desired data. It serves as a way for data managers to quantify how users are served and if there is a need for any new methods for access. Example measurement: User satisfaction survey of a State's data request process

Please reference NHSTA's Model Performance Guidelines to address performance.

Change Notes: New Question.

***233.*** ***Has the State established numeric goals-performance metrics-for each adjudication system performance measure?***

Does Not Meet Advisory Ideal

West Virginia does not have State established numeric goals-performance metrics-for each adjudication system performance measure. It is suggested the State explore the development of a Data Management Plan, monitored by the TRCC, to address numeric goals for each performance measure in the citation system. Please reference NHSTA's Performance Measure Guidelines: https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/811441.

Change Notes: New Question.

***234.*** ***Does the State have performance measures for its DUI Tracking system?***

Does Not Meet Advisory Ideal

There are no performance measures for its DUI Tracking system. Ideally, DUI tracking systems have additional quality control procedures to ensure that the data is accurate and timely given the impactful nature of DUI dispositions. It is suggested West Virginia explore the possibility of developing a DUI tracking component based off the statewide case management system. Once this is completed, performance measures can be developed.

Change Notes: Rating Unchanged.

***235.*** ***Are sample-based audits conducted periodically for citations and related database content for that record?***

Partially Meets Advisory Ideal

Regular sample-based audits, and system audits are conducted by magistrate court staff however, these audits are different in that they are conducted in a formal manner, and records are reviewed, based upon type. It is suggested the State document the methodology and outcomes of such audits, (i.e., reports, spreadsheets, performance measures).

Change Notes: New Question.

***236.*** ***Are data quality management reports provided to the TRCC for regular review?***

Does Not Meet Advisory Ideal

Data quality management reports are not regularly provided to the State TRCC. Custodial agencies should work together to establish and review the sufficiency of their data quality control programs and review the results of the performance measures used to track system performance. Data managers and key users should regularly review data quality reports. The procedures that should be documented include information sharing with data collectors via individual and agency feedback, training, and changes to applicable manuals, data dictionaries, and edit checks. This can be incorporated into the Stata's Strategic Plan and monitored by the TRCC.

Change Notes: New Question.

## Injury Surveillance System

***237.*** ***Is there an entity in the State that quantifies the burden of motor vehicle injury using EMS, emergency department, hospital discharge, trauma registry and vital records data?***

Does Not Meet Advisory Ideal

There is no central agency in West Virginia that uses injury surveillance data systems to quantify the burden of injury due to motor vehicle crashes.

Change Notes: New Question.

***238.*** ***Are there any other statewide databases that are used to quantify the burden of motor vehicle injury?***

Does Not Meet Advisory Ideal

There are no other injury data sets available to use, but stroke and STEMI registries are under development.

Change Notes: Rating Unchanged.

***239.*** ***Do the State's privacy laws allow for the use of protected health information to support data analysis activities?***

Does Not Meet Advisory Ideal

The Department of Health and Human Resources (DHHR) has a Privacy and Security Policy that addresses access to confidential information, that document is based on Federal Rules. Information about any State privacy laws was unavailable for review.

Change Notes: New Question.

## Emergency Medical Systems (EMS) Description and Contents

***240.*** ***Is there a statewide EMS database?***

Meets Advisory Ideal

West Virginia Legislative Rule 64CSR46, section 3.2.3 states that all EMS agencies shall collect, maintain, and report accurate patient data for all incidents. The patient care reports (PCR) shall be submitted to the State following the conclusion of providing services to a patient, in accordance with policies and guidelines established by the Office of Emergency Medical Services (OEMS). Documentation to support the narrative was provided.

Change Notes: Rating Improved.
From 'Does Not Meet Advisory Ideal' to 'Meets Advisory Ideal'.

***241.*** ***Does the EMS data track the frequency, severity, and nature of injuries sustained in motor vehicle crashes in the State?***

Partially Meets Advisory Ideal

The EMS data collection software captures the frequency, severity, and nature of injuries sustained in motor vehicle crashes; however, adjusting to a new software platform has slowed the State's ability to use that information.

Change Notes: Rating Improved.
From 'Does Not Meet Advisory Ideal' to 'Partially Meets Advisory Ideal'.

***242.*** ***Is the EMS data available for analysis and used to identify problems, evaluate programs, and allocate resources?***

Does Not Meet Advisory Ideal

Analyses of EMS data are not currently being conducted. The recent transition to the ImageTrend system will expand access and use of the Report Writer at the State and local levels.

Change Notes: Rating Unchanged.

## EMS – Guidelines

***243.*** ***Does the State have a NEMSIS-compliant statewide database?***

Meets Advisory Ideal

State Legislative Rule 64CSR48, section 3.2 requires that West Virginia participate in the NEMSIS electronic data collection project. As of December 2021, all agencies in the State are using NEMSIS 3.4-compliant electronic PCRs and export records to the State EMS database. ImageTrend then exports the records to the national data system. Documentation was provided to support the narrative.

Change Notes: Rating Unchanged.

## EMS – Data Dictionary

***244.*** ***Does the EMS system have a formal data dictionary?***

Partially Meets Advisory Ideal

The State utilizes the NEMSIS data dictionary and has a data layout for the EMS system that identifies which elements are compliant with NEMSIS and which are State-specific. This is not a robust data dictionary in that it does not include definitions, attributes, and data collection rules for those elements not in the NEMSIS dataset.

Change Notes: Rating Changed.
From 'Meets Advisory Ideal' to 'Partially Meets Advisory Ideal'.

## EMS – Procedures & Processes

***245.*** ***Is there a single entity that collects and compiles data from the local EMS agencies?***

Meets Advisory Ideal

The West Virginia Office of EMS (OEMS) is responsible for managing the EMS data system and works with ImageTrend to monitor data collection.

Change Notes: Rating Unchanged.

***246.*** ***Is aggregate EMS data available to outside parties (e.g., universities, traffic safety professionals) for analytical purposes?***

Meets Advisory Ideal

EMS data is available through NEMSIS and other requests may be submitted to the OEMS Director, Division of Trauma, Designation and Categorization. The data request form is available to all interested parties and all requests are ultimately sent to the OEMS Research Committee for review and approval.

Change Notes: Rating Improved.
From 'Partially Meets Advisory Ideal' to 'Meets Advisory Ideal'.

***247.*** ***Are there procedures in place for the submission of all EMS patient care reports to the Statewide EMS database?***

Meets Advisory Ideal

The State maintains procedures for the submission of all EMS patient care reports to the Statewide EMS database. Agencies employing ImageTrend ELITE submit directly; agencies employing approved vendor programs have their data exported to ImageTrend by the vendor which is then imported into the statewide database. All PCRs are electronic, no paper reports are accepted. Documentation supporting the narrative was provided.

Change Notes: Rating Unchanged.

***248.*** ***Are there procedures for returning data to the reporting EMS agencies for quality assurance and improvement (e.g., correction and resubmission)?***

Does Not Meet Advisory Ideal

Once a PCR satisfies system business rules, there is no process for returning records for error-correction. There may be cases where errors are found during trend analyses, values may satisfy business rules but be incorrect/inaccurate.

Change Notes: Rating Unchanged.

## EMS – Quality Control

***249.*** ***Are there automated edit checks and validation rules to ensure that entered EMS data falls within a range of acceptable values and is logically consistent among data elements?***

Meets Advisory Ideal

Automated edit checks and validation rules are inherent to the data collection systems used by West Virginia EMS agencies to ensure that data falls within a range of acceptable values and is logically consistent among data elements. The schematron validation rules were provided as supporting documentation.

Change Notes: Rating Improved.
From 'Partially Meets Advisory Ideal' to 'Meets Advisory Ideal'.

***250.*** ***Are there processes for returning rejected EMS patient care reports to the collecting entity and tracking resubmission to the statewide EMS database?***

Does Not Meet Advisory Ideal

Reports must satisfy the validation rules and edit checks outlined in the Schematron. If reports are rejected, transmission is not completed. There is no process for returning records with errors that satisfy the business rules.

Change Notes: Rating Unchanged.

***251.*** ***Are there timeliness performance measures tailored to the needs of EMS system managers and data users?***

Does Not Meet Advisory Ideal

State Legislative Rule requires all reports be submitted to the receiving facility within 72 hours of the incident and the State is working with the system vendor to create daily tracking reports. Requirements are not performance measures, but the quarterly monitoring of report submissions is helpful. A performance measure includes a baseline, goal, and timeframe and is used to evaluate the health of the whole data system. An example is 'to increase the reception of all PCRs within 72 hours post-incident from 90 percent in 2022 to 95 percent in 2025' so the quarterly evaluations will allow monitoring of progress toward the goal.

Change Notes: Rating Unchanged.

***252.*** ***Are there accuracy performance measures tailored to the needs of EMS system managers and data users?***

Does Not Meet Advisory Ideal

There are no accuracy performance measures at this time. It is worthy to note that the new EMS data collection software is operational and the State is able to focus on developing reports that address performance measures, accuracy being one.

Change Notes: Rating Unchanged.

***253.*** ***Are there completeness performance measures tailored to the needs of EMS system managers and data users?***

Does Not Meet Advisory Ideal

There are no completeness performance measures for the EMS data. As the new system has become operational, the West Virginia OEMS has the opportunity to build reports for the completeness performance measure and set a baseline measure. Any completeness requirements, whether by policy or Code/Rule, should serve as the goal against which actual performance is measured.

Change Notes: Rating Unchanged.

***254.*** ***Are there uniformity performance measures tailored to the needs of EMS system managers and data users?***

Does Not Meet Advisory Ideal

There are no uniformity performance measures for the EMS data. As the new system has become operational, the West Virginia OEMS has the opportunity to build reports for the uniformity performance measure and set a baseline measure. Any uniformity requirements, whether by policy or Code/Rule, should serve as the goal against which actual performance is measured.

Change Notes: Rating Unchanged.

***255.*** ***Are there integration performance measures tailored to the needs of EMS system managers and data users?***

Does Not Meet Advisory Ideal

Integration is the linking of two or more (historical) data sets based on common identifiers, such as emergency medical services to crash data to emergency department/hospital discharge data. Integration performance measures are based on the number of data sets linked, the number of records linked versus the number of expected records linked, and/or the quality of the integration. These measures cannot be built into a data collection system, rather these measures are external to any single system and developed when planning data integration.

Change Notes: Rating Unchanged.

***256.*** ***Are there accessibility performance measures tailored to the needs of EMS system managers and data users?***

Does Not Meet Advisory Ideal

Accessibility is the ability of interested parties to obtain access to the data and is measured

typically through customer satisfaction surveys. These surveys ask customers about the timeliness of response by an agency and if the information provided meets their needs. As more and more states make (de-identified, aggregate) data available through websites or portals, satisfaction surveys can be triggered prior to a customer leaving the website. There are no performance measures established for the EMS data.

Change Notes: Rating Unchanged.

***257. Has the State established numeric goals-performance metrics-for each EMS system performance measure?***

Does Not Meet Advisory Ideal

The State has not established numeric goals-performance metrics-for each EMS system performance measure. However, with the introduction of a new data collection system, the West Virginia OEMS has a great opportunity to establish goals and metrics for five of the six performance measures (integration is an external performance measure, dependent on linkages occurring outside of a data collection system). The State should look to West Virginia Code or Rule that set a requirement (timeliness of submission, NEMSIS, etc.) and use that as the goal, establish a baseline with current information, and measure actual performance against both. Monitoring these performance measures provides information about the health and quality of the EMS data.

Change Notes: Rating Unchanged.

***258. Are quality control reviews conducted to ensure the completeness, accuracy, and uniformity of injury data in the EMS system?***

Does Not Meet Advisory Ideal

Quality control reviews are not conducted to ensure the completeness, accuracy, and uniformity of EMS data. The State does intend to capitalize on the capabilities of the new EMS data collection system and build reports specific to each performance measure.

Change Notes: Rating Unchanged.

***259. Are periodic comparative and trend analyses used to identify unexplained differences in the EMS data across years and agencies?***

Does Not Meet Advisory Ideal

The State does not conduct periodic comparative and trend analyses to identify unexplained differences in the EMS data. The State does intend to capitalize on the report writing capabilities of the new EMS data collection system and create reports that compare data across years, counties, regions, and agencies.

Change Notes: Rating Unchanged.

***260. Is data quality feedback from key users regularly communicated to EMS data collectors and data managers?***

Does Not Meet Advisory Ideal

EMS data collectors and data managers do not collect data quality feedback from key users. Many

States collect this feedback through regular end user group meetings, EMS program meetings, and other forums that bring together EMS data collectors and managers, end users, and others who may use the EMS data as part of injury surveillance and prevention programs and traffic safety programs.

Change Notes: Rating Unchanged.

***261.*** ***Are EMS data quality management reports produced regularly and made available to the State TRCC?***

Does Not Meet Advisory Ideal

EMS data quality management reports are not produced nor made available to the State TRCC. The OEMS intends to leverage the report writing capabilities of the new ImageTrend data collection software and produce reports to be shared with the State TRCC.

Change Notes: Rating Unchanged.

## Emergency Department - System Description

***262.*** ***Is there a statewide emergency department (ED) database?***

Partially Meets Advisory Ideal

The Office of Epidemiology and Prevention Services is able to access data from 70 percent of emergency departments, which accounts for 75 percent of emergency department visits.

Change Notes: Rating Unchanged.

***263.*** ***Does the emergency department data track the frequency, severity, and nature of injuries sustained in motor vehicle crashes in the State?***

Does Not Meet Advisory Ideal

The ED syndromic surveillance system has a built-in syndrome "Motor Vehicle Accidents" which uses the chief complaint data predominantly. Though the capability to track frequency, severity, and nature of injuries is there, the State is not actively leveraging its use.

Change Notes: Rating Changed.
From 'Partially Meets Advisory Ideal' to 'Does Not Meet Advisory Ideal'.

***264.*** ***Is the emergency department data available for analysis and used to identify problems, evaluate programs, and allocate resources?***

Does Not Meet Advisory Ideal

Summary data is available from the emergency department data system, but it is unclear if the record-level data is accessible to analysts outside of the Department of Health and Human Resources.

Change Notes: Rating Unchanged.

## Emergency Department – Data Dictionary

***265.*** ***Does the emergency department dataset have a formal data dictionary?***

Partially Meets Advisory Ideal

The State utilizes the Public Health Information Network (PHIN) Messaging Guide for Syndromic Surveillance as the emergency department data dictionary. This document was developed by the International Society for Disease Surveillance and the Centers for Disease Control and Prevention. It is unclear if the West Virginia emergency department data system is identical to this national model or if a State-specific data dictionary has been developed.

Change Notes: Rating Changed.
From 'Meets Advisory Ideal' to 'Partially Meets Advisory Ideal'.

## Emergency Department – Procedures & Processes

***266.*** ***Is there a single entity that collects and compiles data on emergency department visits from individual hospitals?***

Does Not Meet Advisory Ideal

Most of the hospitals in West Virginia are connected via the Health Information Exchange which acts as a pass through mechanism and sends the data to the National Syndromic Surveillance Program cloud. However, the intent of this question is an entity (typically a hospital association or state agency) that maintains a historical database of emergency department and hospital discharge data for health-related analyses, data linkage, or for release to other state agencies and researchers with a stake in the health and care of its citizens.

Change Notes: Rating Changed.
From 'Meets Advisory Ideal' to 'Does Not Meet Advisory Ideal'.

***267.*** ***Is aggregate emergency department data available to outside parties (e.g., universities, traffic safety professionals) for analytical purposes?***

Partially Meets Advisory Ideal

Emergency department data is available for analysis upon authorization; the process to request authorization is not clear.

Change Notes: Rating Improved.
From 'Does Not Meet Advisory Ideal' to 'Partially Meets Advisory Ideal'.

## Hospital Discharge – System Description

***268.*** ***Is there a statewide hospital discharge database?***

Meets Advisory Ideal

The West Virginia Healthcare Authority, part of the Department of Health and Human Resources, maintains the statewide hospital discharge database.

Change Notes: Rating Improved.
From 'Partially Meets Advisory Ideal' to 'Meets Advisory Ideal'.

***269.*** ***Does the hospital discharge data track the frequency, severity, and nature of injuries sustained in motor vehicle crashes in the State?***

Does Not Meet Advisory Ideal

The hospital discharge data contains the information necessary to track the frequency, nature, and severity of traffic crash injuries, but has not been used to do so.

Change Notes: Rating Changed.
From 'Meets Advisory Ideal' to 'Does Not Meet Advisory Ideal'.

***270.*** ***Is the hospital discharge data available for analysis and used to identify problems, evaluate programs, and allocate resources?***

Meets Advisory Ideal

Hospital discharge data is available to outside parties for analysis. Interested parties must submit a data request form, with a signed data use agreement, to the West Virginia Health Care Authority. Additionally, the data is available via online resources. The data request form and use agreement were provided in support of the narrative.

Change Notes: Rating Improved.
From 'Does Not Meet Advisory Ideal' to 'Meets Advisory Ideal'.

## Hospital Discharge – Data Dictionary

***271.*** ***Does the hospital discharge dataset have a formal data dictionary?***

Partially Meets Advisory Ideal

The Healthcare Authority maintains a data schema for the hospital discharge data system, but it does not include all element and attribute definitions, exclusions, etc.

Change Notes: Rating Unchanged.

## Hospital Discharge – Procedures & Processes

***272.*** ***Is there a single entity that collects and compiles data on hospital discharges from individual hospitals?***

Meets Advisory Ideal

Hospital discharge data is collected by the West Virginia Healthcare Authority, which is part of the Department of Health and Human Resources.

Change Notes: Rating Improved.
From 'Does Not Meet Advisory Ideal' to 'Meets Advisory Ideal'.

***273.*** ***Is aggregate hospital discharge data available to outside parties (e.g., universities, traffic safety professionals) for analytical purposes?***

Meets Advisory Ideal

Aggregate hospital discharge data available to outside parties for analytical purposes upon request. Interested parties must submit a data request form, with a signed data use agreement to the West Virginia Health Care Authority for approval.

Change Notes: Rating Unchanged.

## Emergency Department and Hospital Discharge – Guidelines

***274.*** ***Are Abbreviated Injury Scale (AIS) and Injury Severity Score (ISS) derived from the State emergency department and hospital discharge data for motor vehicle crash patients?***

Does Not Meet Advisory Ideal

Neither the Abbreviated Injury Scale (AIS) nor the Injury Severity Score (ISS) are derived from the State emergency department and hospital discharge data for injury patients.

Change Notes: Rating Unchanged.

## Emergency Department and Hospital Discharge – Procedures & Processes

***275.*** ***Are there procedures for collecting, editing, error-checking, and submitting emergency department and/or hospital discharge data to the statewide repository?***

Partially Meets Advisory Ideal

Procedures for submitting emergency data to the National Syndromic Surveillance Program cloud via the health information exchange in HL7 format are contained in the PHIN Messaging Guide. The PHIN Messaging Guide was submitted as evidence. No information was provided for submitting the hospital discharge data to the statewide database was provided.

Change Notes: Rating Changed.
From ‘Meets Advisory Ideal’ to ‘Partially Meets Advisory Ideal’.

## Emergency Department and Hospital Discharge – Quality Control

***276.*** ***Are there automated edit checks and validation rules to ensure that entered data falls within a range of acceptable values and is logically consistent among data elements?***

Partially Meets Advisory Ideal

The automated edit checks and validation rules ensuring that entered data falls within a range of acceptable values and is logically consistent among data elements are contained in the PHIN Messaging Guide for the emergency department data. The hospital discharge data was not addressed.

Change Notes: Rating Changed.
From ‘Meets Advisory Ideal’ to ‘Partially Meets Advisory Ideal’.

***277.*** ***Are there processes for returning rejected emergency department and/or hospital discharge records to the collecting entity and tracking resubmission to the statewide emergency department and hospital discharge databases?***

Does Not Meet Advisory Ideal

There seems to be a process for each the emergency department and hospital discharge data to correct and resubmit rejected records to the respective systems, but the narrative did not adequately describe those processes. Rather the warning messages and PHIN Messaging Guide were submitted as evidence. The Data Collection Policies and Procedures guide (mentioned in the Data Elements Specification document) for hospital inpatient data reporting requirements was not submitted as evidence.

Change Notes: Rating Changed.
From 'Meets Advisory Ideal' to 'Does Not Meet Advisory Ideal'.

***278.*** ***Are there timeliness performance measures tailored to the needs of emergency department and/or hospital discharge database managers and data users?***

Does Not Meet Advisory Ideal

The emergency department and hospital discharge data systems contain the information necessary to develop a timeliness performance measure. However, submission timelines and deadlines do not constitute such a measure. A performance measure includes a baseline, goal, and timeframe and is used to evaluate the health of the whole data system. An example is 'to increase the number of emergency department records submitted within 3 days of treatment from 90 percent in 2022 to 95 percent in 2025.'

Change Notes: Rating Unchanged.

***279.*** ***Are there accuracy performance measures tailored to the needs of emergency department and/or hospital discharge database managers and data users?***

Does Not Meet Advisory Ideal

Data quality reports are generated for hospitals that include data accuracy issues. However, facility-level reporting does not constitute a system accuracy performance measure. A performance measure includes a baseline, goal, and timeframe and is used to evaluate the health of the whole data system. An example is 'to reduce the occurrence of duplicate records in the hospital discharge data set from 10 percent of submissions in 2022 to 5 percent in 2025.'

Change Notes: Rating Unchanged.

***280.*** ***Are there completeness performance measures tailored to the needs of emergency department and/or hospital discharge database managers and data users?***

Does Not Meet Advisory Ideal

Data quality reports are generated for hospitals that address completeness measures. However, facility-level reporting does not constitute a system completeness performance measure. A performance measure includes a baseline, goal, and timeframe and is used to evaluate the health of the whole data system. An example is 'to reduce the occurrence of incomplete records on initial submission to the hospital discharge data set from 15 percent of submissions in 2022 to 10 percent in 2025.'

Change Notes: Rating Unchanged.

***281.*** ***Are there uniformity performance measures tailored to the needs of emergency department and/or hospital discharge database managers and data users?***

Does Not Meet Advisory Ideal

There are no uniformity performance measures for the hospital data systems.

Change Notes: Rating Unchanged.

***282.*** ***Are there integration performance measures tailored to the needs of emergency department and/or hospital discharge database managers and data users?***

Does Not Meet Advisory Ideal

There are no integration performance measures for the hospital data systems.

Change Notes: Rating Unchanged.

***283.*** ***Are there accessibility performance measures tailored to the needs of emergency department and/or hospital discharge database managers and data users?***

Does Not Meet Advisory Ideal

There are no accessibility performance measures for the hospital data systems.

Change Notes: Rating Unchanged.

***284.*** ***Has the State established numeric goals-performance metrics-for each emergency department and/or hospital discharge database performance measure?***

Does Not Meet Advisory Ideal

With no formal performance measures, there are no associated metrics.

Change Notes: Rating Unchanged.

***285.*** ***Are quality control reviews conducted to ensure the completeness, accuracy, and uniformity of injury data in the emergency department and/or hospital discharge databases?***

Does Not Meet Advisory Ideal

Injury records are not subject to regular data quality reviews because E-codes, which denote an injury record, are not mandatory.

Change Notes: Rating Unchanged.

***286.*** ***Is data quality feedback from key users regularly communicated to emergency department and/or hospital discharge data collectors and data managers?***

Does Not Meet Advisory Ideal

A feedback loop is under development for the emergency department data system. It was reported that there is a feedback loop for the hospital discharge data, but it seems to be informal and for record-level issues and not system quality.

Change Notes: Rating Unchanged.

***287.*** ***Are emergency department and/or hospital discharge data quality management reports produced regularly and made available to the State TRCC?***

Does Not Meet Advisory Ideal

Data quality management reports are not shared with the TRCC.

Change Notes: Rating Unchanged.

## Trauma Registry – System Description

***288.*** ***Is there a statewide trauma registry database?***

Meets Advisory Ideal

West Virginia Legislative Rule § 64-27-10.2 requires all West Virginia designated trauma centers to collect and provide information to the statewide Trauma and Emergency Medical Information System (TEMIS). The documentation provided supports the narrative.

Change Notes: Rating Improved.
From 'Partially Meets Advisory Ideal' to 'Meets Advisory Ideal'.

***289.*** ***Does the trauma registry data track the frequency, severity, and nature of injuries sustained in motor vehicle crashes in the State?***

Meets Advisory Ideal

The State Trauma Registry (STR) can track the frequency, severity, and nature of injuries through the Injury Severity Scores (ISS) and other clinical codes captured in the system. Submitted documentation supports the narrative.

Change Notes: Rating Unchanged.

***290.*** ***Is the trauma registry data available for analysis and used to identify problems, evaluate programs, and allocate resources?***

Meets Advisory Ideal

Trauma registry data is used to identify problems, evaluate programs, and allocate resources; the State listed some projects that used trauma registry data including emergency department length of stay evaluation for Acute Trauma Transfers, IV antibiotic administration for open fractures, and Aeromedical transportation metrics.

Change Notes: Rating Unchanged.

## Trauma Registry – Guidelines

***291.*** ***Does the State's trauma registry database adhere to the National Trauma Data Standards?***

Meets Advisory Ideal

There are two versions of the STR that facilities may use, WV - 123V5 Trauma Registry and WV - 45V5 Trauma Registry, and both are compliant with the National Trauma Data Standards.

Change Notes: Rating Unchanged.

***292.*** ***Are AIS and ISS derived from the State trauma registry for motor vehicle crash patients?***

Meets Advisory Ideal

Both AIS and ISS are derived from the State trauma registry for motor vehicle crash patients. Reports for both severity scores were submitted as supporting documentation.

Change Notes: Rating Unchanged.

## Trauma Registry – Data Dictionary

***293.*** ***Does the trauma registry have a formal data dictionary?***

Meets Advisory Ideal

The State maintains a "West Virginia Trauma Registry Policies, Procedures, Definitions & Disciplines Manual" for both the 45V5 Trauma Registry and the 123V5 Trauma Registry. Both documents were attached to support the narrative.

Change Notes: Rating Unchanged.

## Trauma Registry – Procedures & Processes

***294.*** ***Is aggregate trauma registry data available to outside parties (e.g., universities, traffic safety professionals) for analytical purposes?***

Meets Advisory Ideal

Aggregate trauma registry data is available to outside parties with an approved request. Requests are submitted via email on the attached form to the West Virginia OEMS Director, Division of Trauma, Designation and Categorization. After initial review, the request is submitted to the West Virginia OEMS Research Committee for approval, rejection, or request for modifications. The request form was submitted as supporting documentation.

Change Notes: Rating Improved.
From ‘Partially Meets Advisory Ideal’ to ‘Meets Advisory Ideal’.

***295.*** ***Are there procedures for returning trauma data to the reporting trauma center for quality assurance and improvement (e.g., correction and resubmission)?***

Meets Advisory Ideal

Data reviews are conducted twice each year at every facility and Critical Data Elements are reviewed and corrected. The facility is able to resolve any issues prior to or at the data review. Before the meeting, the State checks for any corrections made.

Change Notes: Rating Unchanged.

***296.*** ***Are there automated edit checks and validation rules to ensure that entered trauma registry data falls within a range of acceptable values and is logically consistent among data elements?***

Meets Advisory Ideal

Edit checks and validation rules are inherent to both versions of the State's V5 trauma registry, ensuring that entered trauma registry data falls within a range of acceptable values and is logically consistent among data elements.

Change Notes: Rating Unchanged.

***297.*** ***Are there timeliness performance measures tailored to the needs of trauma registry managers and data users?***

Does Not Meet Advisory Ideal

Trauma registry critical elements require patient data entry within two weeks of patient discharge for PI activities and within two months for morbidity and mortality determinations, and loop closure. These requirements are not timeliness performance measures, rather goals against which the actual submissions should be measured and monitored. The ongoing, monthly evaluation of compliance for designation may be used to develop a performance measure that includes a baseline, goal, and timeframe. The health of the whole data system is then evaluated. An example is 'to increase the completion of all trauma records within two weeks post-discharge from 90 percent in 2022 to 95 percent in 2025' so the compliance evaluations will allow monitoring of progress toward the goal.

Change Notes: Rating Unchanged.

***298.*** ***Are there accuracy performance measures tailored to the needs of trauma registry managers and data users?***

Does Not Meet Advisory Ideal

The State has an informal goal of 90 percent accuracy in all elements and 95 percent accuracy in Critical Data elements, but this is not a performance measure. These accuracy goals are met on a facility-by-facility basis through reviews which does not address the overall health of the data system. A performance measure includes a baseline, goal, and timeframe and is used to evaluate the health of the whole data system. An example is 'to improve the accuracy of all data elements in the STR from 80 percent in 2022 to 85 percent in 2025' and conduct regular monitoring of progress toward the goal.

Change Notes: Rating Unchanged.

***299.*** ***Are there completeness performance measures tailored to the needs of trauma registry managers and data users?***

Does Not Meet Advisory Ideal

It was reported that all elements must be completed for the record to be accepted, but this is not a performance measure. A performance measure includes a baseline, goal, and timeframe and is used to evaluate the health of the whole data system. An example may be 'to improve the completeness of all non-Critical Data Elements in the STR from 50 percent in 2022 to 60 percent

in 2025' and conduct regular monitoring of progress toward the goal.

Change Notes: Rating Unchanged.

***300.*** ***Are there uniformity performance measures tailored to the needs of trauma registry managers and data users?***

Does Not Meet Advisory Ideal

Utilizing the same registry structure and inclusion criteria does not constitute a systemwide uniformity performance measure. This measure is especially useful as changes are made to coding or definitions, to ensure all registrars are reporting consistently. A performance measure includes a baseline, goal, and timeframe and is used to evaluate the health of the whole data system. An example is 'to improve the usage of (insert new/updated code) among appropriate trauma cases from 60 percent in 2022 to 75 percent in 2025.'

Change Notes: Rating Unchanged.

***301.*** ***Are there integration performance measures tailored to the needs of trauma registry managers and data users?***

Does Not Meet Advisory Ideal

There are no integration performance measures for the Trauma Registry. Pulling information into the Trauma Registry from EMS and referring facilities is an example of an interface, not an integration. Integration is the linking of full datasets, typically after a selected period of time, for analytical purposes (interface is a more real-time sharing of information between the systems to complete reports).

Change Notes: Rating Unchanged.

***302.*** ***Are there accessibility performance measures tailored to the needs of trauma registry managers and data users?***

Does Not Meet Advisory Ideal

Accessibility measures the ability of interested parties (researchers, state agencies, etc.) to obtain and use the data. Typically this is ascertained through customer service surveys asking users about their experience in obtaining the data, using the data, if the data met their needs, etc. There are no accessibility performance measures tailored to the needs of trauma registry managers and data users.

Change Notes: Rating Unchanged.

***303.*** ***Has the State established numeric goals-performance metrics-for each trauma registry performance measure?***

Does Not Meet Advisory Ideal

The State has several metrics that serve as requirements or benchmarks, but with no formal performance measures there are no associated metrics.

Change Notes: Rating Unchanged.

***304.*** ***Are quality control reviews conducted to ensure the completeness, accuracy, and uniformity of injury data in the trauma registry?***

Meets Advisory Ideal

Each submitting facility STR submissions undergo a quality control review at least twice each year. Detailed reports are generated and discussions are held between the State and facility.

Change Notes: Rating Unchanged.

***305.*** ***Is data quality feedback from key users regularly communicated to trauma registry data collectors and data managers?***

Partially Meets Advisory Ideal

Data quality feedback is shared with trauma registrars through several mechanisms, such as biannual reviews, workshops, and meetings; weekly discussions; and monthly committee meetings. Those exchanges seem to focus on data corrections or system issues identified by the State. Key data users are users beyond the trauma program who use the data for injury surveillance and prevention or traffic safety programs. It is unclear if those key data users provide feedback to the State.

Change Notes: Rating Improved.
From 'Does Not Meet Advisory Ideal' to 'Partially Meets Advisory Ideal'.

***306.*** ***Are trauma registry data quality management reports produced regularly and made available to the State TRCC?***

Does Not Meet Advisory Ideal

Data reports are not shared with the Traffic Records Coordinating Committee.

Change Notes: Rating Unchanged.

## Vital Records – System Description

***307.*** ***Is there a statewide vital records database?***

Meets Advisory Ideal

The State's vital records database is owned by the Health Statistics Center.

Change Notes: Rating Improved.
From 'Partially Meets Advisory Ideal' to 'Meets Advisory Ideal'.

***308.*** ***Does the vital records data track the occurrence of motor vehicle fatalities in the State?***

Meets Advisory Ideal

All deaths due to motor vehicle injuries in West Virginia are Medical Examiner Cases and are reported on death certificates. The nature of the injuries is captured in the literal description of the cause of death on death certificates. The information can be analyzed based on demographics, geography, and time.

Change Notes: Rating Unchanged.

**309.** ***Is the vital records data available for analysis and used to identify problems, evaluate programs, and allocate resources?***

Meets Advisory Ideal

The State's vital records data is available for analysis as a de-identified dataset; identifiable data is available to most local, state, or federal government agencies. The West Virginia Health Statistics Center shares vital records data with the State's Fatal Accident Reporting System.

Change Notes: Rating Unchanged.

## Vital Records – Data Dictionary

**310.** ***Does the vital records system have a formal data dictionary?***

Meets Advisory Ideal

A comprehensive and detailed data dictionary is maintained for death records.

Change Notes: Rating Unchanged.

## Vital Records – Procedures & Processes

**311.** ***Is aggregate vital records data available to outside parties (e.g., universities, traffic safety professionals) for analytical purposes?***

Meets Advisory Ideal

Aggregate vital records data is available to outside parties via ad hoc query. Static reports are published by the Health Statistics Center. The vital records data is also available via an interactive form by federal agencies. It should be noted that the provision of this information is provided for specifically in West Virginia Code.

Change Notes: Rating Unchanged.

## Vital Records – Quality Control

**312.** ***Are there automated edit checks and validation rules to ensure that entered vital records data falls within a range of acceptable values and is logically consistent among data elements?***

Meets Advisory Ideal

Automated edit checks ensure that only certain values are entered into some fields. However, there are several text fields on the death certificate. Automated and manual edit checks are performed on those text fields both in-house and at the federal level.

Change Notes: Rating Unchanged.

**313.** ***Are quality control reviews conducted to ensure the completeness, accuracy, and uniformity of injury data in the vital records?***

Partially Meets Advisory Ideal

Quality control reviews are conducted at the point of submission to ensure a record is complete, accurate, and conforms to national standards. It is unclear if analyses are conducted on the system to identify any areas of concern.

Change Notes: Rating Improved.
From 'Does Not Meet Advisory Ideal' to 'Partially Meets Advisory Ideal'.

**314.** ***Are vital records data quality management reports produced regularly and made available to the State TRCC?***

Does Not Meet Advisory Ideal

Vital records data quality management reports are not made available to the State TRCC.

Change Notes: Rating Unchanged.

## Injury Surveillance Data Interfaces

**315.** ***Is there an interface among the EMS data and emergency department and hospital discharge data?***

Does Not Meet Advisory Ideal

The State does not have an interface between the hospital discharge, emergency department, and EMS systems.

Change Notes: Rating Unchanged.

**316.** ***Is there an interface between the EMS data and the trauma registry data?***

Does Not Meet Advisory Ideal

While EMS agencies are required to share a copy of the PCR with the receiving facility, there is no interface between the EMS data system and the STR.

Change Notes: Rating Changed.
From 'Partially Meets Advisory Ideal' to 'Does Not Meet Advisory Ideal'.

## Data Use and Integration

**317.** ***Do behavioral program managers have access to traffic records data and analytic resources for problem identification, priority setting, and program evaluation?***

Meets Advisory Ideal

Many traffic safety partners in the State have access to the ReportBeam Server to conduct basic analyses of crash data. Program managers have access to that system and analytical personnel at the West Virginia Division of Highways (WVDOH) that can conduct in-depth analyses. The data

has been used for development of the Strategic Highway Safety Plan and the Governor's Highway Safety Program (GHSP) Annual Report.

Change Notes: Rating Improved.
From 'Partially Meets Advisory Ideal' to 'Meets Advisory Ideal'.

***318.*** ***Does the State have a data governance process?***

Does Not Meet Advisory Ideal

Efforts have been made to establish a data governance committee, but the committee comprised only executive leadership and excluded those who are involved in the data lifecycle (managers, analysts, users) and day-to-day handling of the data. Executive leadership is necessary to ensure collaboration among data owners and establish policies addressing the integration of traffic records data. However, it is the data managers that oversee the procedures and tools used to handle, store, and protect data that are necessary voices on a governance committee. Data analysts and users can add to a governance committee with their knowledge and experience from using the data to support traffic safety programs. Without input and guidance from those data users and managers, the committee has not progressed far in developing a data governance policy.

Change Notes: Rating Unchanged.

***319.*** ***Does the TRCC promote data integration by aiding in the development of data governance, access, and security policies for integrated data?***

Does Not Meet Advisory Ideal

The Traffic Records Coordinating Committee (TRCC) does not promote data integration, which may be improved upon by recruiting the analysts and users of the traffic data systems, especially those individuals who lean towards innovation and insightfulness. The new TRCC coordinator has an opportunity to set forth a mission that aligns with that of the US DOT to maximize the overall quality of safety data and analysis based on State traffic records data across all six core systems: crash, vehicle, driver, roadway, citation & adjudication, and injury surveillance.

Change Notes: Rating Unchanged.

***320.*** ***Is driver data integrated with crash data for specific analytical purposes?***

Does Not Meet Advisory Ideal

Driver data from the Department of Motor Vehicles (DMV) has not been available to the West Virginia DOH since the Crash Records Database was built and the crash report updated. Crash data is available to the DMV, but driver data is not accessible for an interface or integration.

The Driver Privacy Protection Act does not prohibit the driver data from being shared with the West Virginia DOH; sharing driver data is allowable under the permitted purpose of any government agency to carry out its functions. Problem identification, priority setting, and program evaluation by the West Virginia DOH or any other government agency falls under this permitted purpose. Data sharing requires an agreement between the agencies and the DMV may require the de-identification of any linked data to ensure driver privacy, but again, data sharing can be accomplished.

Change Notes: Rating Unchanged.

***321.*** ***Is vehicle data integrated with crash data for specific analytical purposes?***

Does Not Meet Advisory Ideal

Vehicle data from the DMV has not been available to the West Virginia DOH since the Crash Records Database was built and the crash report updated. Crash data is available to the DMV, but vehicle data is not accessible for an interface or integration.

Change Notes: Rating Unchanged.

***322.*** ***Is roadway data integrated with crash data for specific analytical purposes?***

Partially Meets Advisory Ideal

West Virginia's roadway data is integrated with crash data for analytical purposes. While there have been many issues in creating and maintaining the identifiers for linkage, the linked data is used to guide and support engineering and construction projects. There is an extensive history to the integration of crash and roadway data systems, which has been affected by upgrades to both systems and project changes in the recent past. Understanding the evolution of each data system will be critical as the State moves forward in developing the Numetric System for Safety Management. The integration of crash and roadway data has proven benefits related to data quality, analyses, and accessibility.

Change Notes: Rating Changed.
From 'Meets Advisory Ideal' to 'Partially Meets Advisory Ideal'.

***323.*** ***Is citation and adjudication data integrated with crash data for specific analytical purposes?***

Does Not Meet Advisory Ideal

While crash and citation information is captured by law enforcement using the ReportBeam application, the data systems are not integrated. This is due to the systems having different management agencies, complications in rolling out an electronic citation system, and barriers to communication. It is hoped that recent sharing of citation data with the West Virginia DOH and the planned incorporation of citation data into the upcoming Numetric system will facilitate broader data integration and analysis.

Change Notes: Rating Unchanged.

***324.*** ***Is injury surveillance data integrated with crash data for specific analytical purposes?***

Does Not Meet Advisory Ideal

Previously, a project was initiated to integrate crash, EMS, trauma registry, and vital records data and produce a de-identified file for analysis. Unforeseen circumstances prevented that project from being completed, but EMS data is included in the outline for the upcoming Numetric project. Crash + EMS linkage is difficult because, while the systems are able to capture the other report numbers, those numbers are often generated at different points in the incident and follow-up coordination may be challenging. It seems that there is a foundation established for this integration and future efforts should build on that. The TRCC is the perfect venue for aiding in the data governance and integration.

Change Notes: Rating Unchanged.

***325.*** ***Are there examples of data integration among crash and two or more of the other component systems?***

Does Not Meet Advisory Ideal

West Virginia is in a transition period when it comes to traffic records data integration. There have been some past efforts that were successful, some not, and near-future plans for integration. The TRCC can facilitate the efforts; executive leadership at the participating agencies can help to ensure effective collaboration, appropriate data-sharing agreements, and that data managers implement the technical and security aspects of data sharing.

Change Notes: Rating Unchanged.

***326.*** ***Is data from traffic records component systems-other than crash-integrated for specific analytical purposes?***

Does Not Meet Advisory Ideal

There are plans to integrate citation and roadway data, but that has not been accomplished yet.

Change Notes: Rating Unchanged.

***327.*** ***For integrated datasets, do decision-makers have access to resources-skilled personnel and user-friendly access tools-for use and analysis?***

Does Not Meet Advisory Ideal

There are skilled personnel working within the safety agencies that may serve as a resource, but there are no integration projects at this time. As the Numetric system is developed, it will make it easier to use linked data.

Change Notes: Rating Changed.
From 'Partially Meets Advisory Ideal' to 'Does Not Meet Advisory Ideal'.

***328.*** ***For integrated datasets, does the public have access to resources-skilled personnel and user-friendly access tools-for use and analysis?***

Does Not Meet Advisory Ideal

There is no access to integrated datasets for the public, but an online portal is planned as part of the Numetric system.

Change Notes: Rating Changed.
From 'Partially Meets Advisory Ideal' to 'Does Not Meet Advisory Ideal'.

# Appendix B – Assessment Participants

### State Highway Safety Office Representative(s)

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Governor's Highway Safety Program
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## State and Local Respondents

The following State and Local staff assisted in the Assessment by providing responses to the Advisory criteria and questions.

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# Appendix C

## National Acronyms and Abbreviations

| | |
|---|---|
| AADT | Average Annual Daily Traffic |
| AAMVA | American Association of Motor Vehicle Administrators |
| AASHTO | American Association of State Highway and Transportation Officials |
| ACS | American College of Surgeons |
| AIS | Abbreviated Injury Score |
| ANSI | American National Standards Institute |
| ATSIP | Association of Transportation Safety Information Professionals |
| BAC | Blood Alcohol Concentration |
| CDC | Center for Disease Control |
| CDIP | NHTSA's Crash Data Improvement Program |
| CDLIS | Commercial Driver License Information System |
| CODES | Crash Outcome Data Evaluation System |
| DDACTS | Data Driven Approaches to Crime and Traffic Safety |
| DHS | Department of Homeland Security |
| DMV | Department of Motor Vehicles |
| DPPA | Drivers Privacy Protection Act |
| DOH | Department of Health |
| DOJ | Department of Justice |
| DOT | Department of Transportation |
| DOT-TRCC | The US DOT Traffic Records Coordinating Committee |
| DRA | Deputy Regional Administrator (NHTSA) |
| DUI | Driving Under the Influence |
| DUID | Driving Under the Influence of Drugs |
| DWI | Driving While Intoxicated |
| ED | Emergency Department |
| EMS | Emergency Medical Service |
| FARS | Fatality Analysis Reporting System |
| FDEs | Fundamental Data Elements |
| FHWA | Federal Highway Administration |
| FMCSA | Federal Motor Carrier Safety Administration |
| GCS | Glasgow Coma Scale |
| GDL | Graduated Driver Licensing |
| GES | General Estimates System |
| GHSA | Governors Highway Safety Association |
| GIS | Geographic Information System |
| GJXDM | Global Justice XML Data Model |
| GPS | Global Positioning System |
| GRA | Government Reference Architecture |
| HIPAA | Health Information Privacy and Accountability Act |
| HPMS | Highway Performance Monitoring System |
| HSIP | Highway Safety Improvement Plan |
| HSP | Highway Safety Plan |
| ICD-10 | International Classification of Diseases and Related Health Problems |
| IRB | Institutional Review Board |

| | |
|---|---|
| ISS | Injury Severity Score |
| IT | Information Technology |
| JIEM | Justice Information Exchange Model |
| LEIN | Law Enforcement Information Network |
| MADD | Mothers Against Drunk Driving |
| MCMIS | Motor Carrier Management Information System |
| MIDRIS | Model Impaired Driving Records Information System |
| MIRE | Model Inventory of Roadway Elements |
| MMUCC | Model Minimum Uniform Crash Criteria |
| MOU | Memorandum of Understanding |
| MPO | Metropolitan Planning Organization |
| NAPHSIS | National Association for Public Health Statistics and Information Systems |
| NCHIP | National Criminal History Improvement Program |
| NCHS | National Center for Health Statistics |
| NCIC | National Crime Information Center |
| NCSC | National Center for State Courts |
| NDR | National Driver Register |
| NEMSIS | National Emergency Medical Service Information System |
| NGA | National Governor's Association |
| NHTSA | National Highway Traffic Safety Administration |
| NIBRS | National Incident-Based Reporting System |
| NIEM | National Information Exchange Model |
| NLETS | National Law Enforcement Telecommunication System |
| NMVTIS | National Motor Vehicle Title Information System |
| NTDS | National Trauma Data Standard |
| PAR | Police Accident Report |
| PDPS | Problem Driver Pointer System |
| PDO | Property Damage Only |
| PII | Personally Identifiable Information |
| RA | Regional Administrator (NHTSA) |
| RDIP | FHWA's Roadway Data Improvement Program |
| RPM | Regional Program Manager (NHTSA) |
| RTS | Revised Trauma Score |
| RMS | Records Management System |
| RPC | Regional Planning Commission |
| SaDIP | FMCSA's Safety Data Improvement Program |
| SAVE | Systematic Alien Verification for Entitlements |
| SHSP | Strategic Highway Safety Plan |
| SME | Subject Matter Expert |
| SSOLV | Social Security Online Verification |
| STRAP | State Traffic Records Assessment Program |
| SWISS | Statewide Injury Surveillance System |
| TCD | Traffic Control Devices |
| TRA | Traffic Records Assessment |
| TRIPRS | Traffic Records Improvement Program Reporting System |
| TRCC | Traffic Records Coordinating Committee |
| TRS | Traffic Records System |
| UCR | Uniform Crime Reports |

| | |
|---|---|
| VIN | Vehicle Identification Number |
| VMT | Vehicle Miles Traveled |
| XML | Extensible Markup Language |

## State-Specific Acronyms and Abbreviations

| | |
|---|---|
| DHHR | Department of Health and Human Resources |
| DMV | Division of Motor Vehicles |
| DOH | Division of Highways |
| GHSP | Governor's Highway Safety Program |
| MIDRIS | Model Impaired Driving Records Information System |
| OEMS | Office of Emergency Medical Services |
| PHIN | Public Health Information Network |
| STR | State Trauma Registry |
| TEMIS | Trauma and Emergency Medicine Information System |
| UJA | Uniform Judicial Application |
| WVOT | West Virginia Office of Technology |