

Traffic Records Integration Program: Three-Year Strategic Plan: CY24-CY27

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TRAFFIC RECORDS INTEGRATION PROGRAM



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Version History

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Purpose

This document describes the Office of Financial Management (OFM)'s Public Safety Policy and Research Center (PSPRC)'s Traffic Records Integration Program (TRIP) three-year plan for data governance, integration and maintenance, and research and data analysis. In addition to outlining proposed projects for CY 2024 to CY 2027, the plan describes the TRIP and the PSPRC's knowledge translation and dissemination plan.

The research projects documented and proposed in this plan are intended to support Washington's strategic objectives, needs, and priorities. Specific projects and priorities are subject to change based on the needs of the state and federal grant availability. It is also expected that the TRIP will have opportunities to collaborate with external stakeholders and to align proposed external research with high-need, mission aligned research and program evaluation.

Introduction

About Forecasting and Research

OFM Forecasting and Research is uniquely positioned as a source for data, research, and statistical analyses to inform decisions by the Governor, the legislature, other state agencies, research communities, and the public. OFM's Forecast and Research is home to in-house analytical research and databases ranging from health care, education, demographic characteristics, criminal justice, traffic safety, and economic trends. As data stewards, we value privacy, security, and access. We are committed to promoting diverse and inclusive research communities, reliable data sources, rigorous program evaluations, and accessible information. The OFM's Forecasting and Research houses the Public Safety Policy and Research Center (PSPRC), the Population Unit, the Forecasting Systems Units, Health Care Research Center (HCRC), and the Education Research and Data Center (ERDC).

About the PSPRC

The PSPRC housed within OFM's Forecast and Research and is uniquely positioned as a source for public safety data, research, and statistical analyses to inform decisions by the Governor, the legislature, other state agencies, research communities, and the public. We are home to in-house analytical research and databases ranging from public safety including its tenets of criminal justice, traffic safety, public health, corrections, and law, justice, and order. The PSPRC houses the Sentencing Guidelines Commission (SGC), the Sex Offender Policy Board (SOPB), the Criminal Justice Research and Statistics Center (CJRSC) - Washington's Statistical Analysis Center (SAC), and the Traffic Records Integration Program (TRIP).

About the TRIP

In 2019, the Washington Traffic Safety Commission (WTSC) awarded the OFM with a grant to manage the TRIP; this public health and safety effort is supported by funding from the National Highway Transportation Safety Administration (NHTSA)'s continuing efforts to combine public health and traffic safety data resources.

The purpose of the TRIP is to develop and maintain a data repository for public health and safety research to further the goals of the Target Zero¹ to achieve zero fatalities or serious injuries on our highways. This data repository will enhance capacity to assess crash risk factors and the human, administrative, and financial toll from crashes on

¹ Target Zero is Washington's goal to achieve a multi-modal transportation system with no fatalities or serious injuries. [Target Zero – Washington's Strategic Highway Safety Plan](#)



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Washington roadways. By integrating different data sources, issues with data collection or other systemic issues surrounding individual datasets might be overcome. This holistic approach will support a more comprehensive crash-outcome dataset to support public health and safety research.

With this effort, the TRIP will create an avenue of information for the public and policymakers to address long standing issues as well as new risks for drivers in Washington. The linkage of this data will give Washington the means to support public health traffic information to save lives. Additionally, research efforts with the TRIP data will help inform policy on efficient ways to reduce and eliminate fatalities and serious injuries from traffic collisions; this data repository aims to also provide comprehensive and longitudinal data to evaluate the effectiveness of efforts and programs, best practices, and evidence-based strategies designed to reaching Target Zero.

The TRIP has successfully been able to link select information from the Department of Transportation (DOT), Administrative Office of the Courts (AOC), Washington State Patrol (WSP), and Department of Licensing (DOL) data. The TRIP is currently working on integrating select Department of Health (DOH) data as well. The TRIP is leveraging the aforementioned state data to look in depth at how vehicle crashes impact the public health and safety of Washington state residents. Through this linkage, the TRIP can incorporate data for each stage of a crash, and the events occurring thereafter – to the roadway, to the crash, to police interaction, to court interaction.

Overview

The TRIP aims to integrate six core data systems (crash, roadway, driver, vehicle, citation and adjudication, and injury surveillance) to provide quality (accurate, complete, uniform, timely, accessible, and integrated) data to support traffic safety research.

Description

The primary goal of this project is to develop the TRIP repository which will integrate data from six core areas – crash, vehicle, driver, roadway, citation and adjudications, and injury surveillance - with crash records providing the foundation for linking pre- and post-crash data. By linking these sources, the state will have a comprehensive crash-outcome dataset to support federal reporting requirements and traffic safety research. The TRIP maintains a database for public safety research to further the goals of the Target Zero Strategic Highway Safety Plan adopted by Washington State. TRIP core functions include: (1) developing performance measures for core traffic data systems for monitoring six system attributes (accuracy, completeness, uniformity, timeliness, accessibility, and integration) and (2) creating a central linkage repository to be used for research studies of public health monitoring that may include collision records, health records, court records, licensing records, and state toxicology records.

Integration will take place in two phases, with the integration of the four primary sources occurring in the first phase, and then the integration of Department of Health (DOH) data. Table 1 lists the eight data sets with the data source and a description of the data.

Table 1. Data Sources

Data	Source	Description
Statewide Crash Data – Collision Location	Washington State Department of Transportation (DOT)	DOL maintains records of Washington State crash and collision information including location.
Driver License History and Ignition Interlocks Device (IDD)	Washington State Department of Licensing (DOL)	DOL maintains driver license history and IID data (i.e., instrument to measure breath alcohol content (BAC) level)



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Court Case Filings – Judicial Information System	Washington State Administrative Office of the Courts (AOC)	AOC maintains statewide electronic court records database for all cases seen by courts in Washington State (excluding King County Superior courts as of 2019)
DUI-related Toxicology Results	Washington State Patrol (WSP)	WSP maintains driving under the influence (DUI)-related toxicology results.
Comprehensive Hospital Abstract Reporting System	Washington State Department of Health (DOH)	DOH maintains record level information on inpatient and observation patient community hospital stays in Washington State.
Rapid Health Information Network	Washington State Department of Health (DOH)	DOH maintains real-time syndromic surveillance patient data from emergency medical services (EMS) and participating hospitals and clinics in Washington State.
Emergency Medical Services Information System (EMS) and Washington State Trauma Registry (WTR)	Washington State Department of Health (DOH)	DOH maintains the registry of patient information for individuals who sustain serious injuries and are treated in trauma designated Washington State hospitals, including individuals who were dead on arrival or transferred to another acute care facility.
Death Vital Records	Washington State Department of Health (DOH)	DOH maintains collection of death records that took place in Washington State.

The TRIP’s Activities

I. Data Governance and Sharing Activities

These activities will continue to support data governance and the sharing and support of the TRIP endeavors (both internal and external). Data governance is critical to ensure the availability, usability, integrity, and security of the data in the system. It regulates both data intake as well as data release processes.

- A. Data Governance Manual (quarterly review to update)
 - Data governance is necessary to assure that data is safely and securely collected, shared, used, and in compliance with both internal and external data policies.
- B. External Data Sharing and Data Sharing Agreement (as needed basis)
 - A template of a data share agreement (DSA) has been created to support the sharing of the TRIP data to support for external research use.
- C. Additional Tools
 - Data Resources: The TRIP will create data resources such as data request processes, data approval processes, and other tools to help data providers and external stakeholders and researchers to utilize the TRIP repository.
 - Learning Series and Other Publications: The TRIP will create series of report to show the utility of integrating state records with Washington state crash records in effort to examine six core areas – crash, vehicle, driver, roadway, citation and adjudications, and injury surveillance.
 - Website: The TRIP will create and update their website to offer more information about the TRIP, data resources, data dashboards, and publications.
 - Data Dashboards: The TRIP will use data dashboards to create an avenue of information for the public and policymakers to address long standing and issues for drivers in Washington. The dashboards represent ongoing data analyses, visualizations, and research conducted by TRIP.
 - All data products will be reviewed by appropriate data providers.

II. Data Integration Activities

This is a central activity for the project and each data source will undergo the data integration process, data readiness, data dictionary, data profiling, and data validation.



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- A. Data Sharing Agreement
 - Receiving data from different data providers are integral to supporting the TRIP's goal to create a traffic safety repository for a comprehensive crash-outcome dataset to support federal reporting requirements and traffic safety research.
- B. Data Dictionaries and Data Readiness
 - The TRIP will create data dictionaries and readiness documentation for data housed in the TRIP repository to provide necessary and detailed data insights into the quality and limitations of input data across various standardized dimensions.
- C. Linkage Dashboards
 - The TRIP's goal is to integrate data from six core areas – crash, vehicle, driver, roadway, citation and adjudications, and injury surveillance - with crash records providing the foundation for linking pre- and post-crash data. By linking these sources, the state will have a comprehensive crash-outcome dataset to support federal reporting requirements and traffic safety research. The dashboards represent some of the ongoing data analyses, visualizations, and data quality linkages conducted by TRIP.
- D. Annual Feeds and Data Marts
 - The TRIP will work with data partners to create annual data feeds and standardize data marts. This will include but not be limited to: setting up data feed for WSTC to improve FARS reporting, creating annual data feed to DOT with Toxicology data to improve drug and alcohol reporting, and annual data feed to DOT with DOH data to improve injury reporting.
- E. Additional Tools
 - Meetings: The TRIP will Schedule quarterly meetings with data providers to discuss current and future endeavors for the TRIP.
 - Data Resources: The TRIP will create data resources such as data request processes, data approval processes, and other tools to help data providers and external stakeholders and researchers to utilize the TRIP repository.
- F. Annual Data Quality Report for Data Providers
 - Create a new annual data quality report which would serve both grant requirements as well as end users of TRIP data requests. The purpose of this new report would be to refocus all current data quality reporting tracks. End users of TRIP data would have a source of information about the data quality metrics which would be more in-depth than a public facing dashboard can provide.
 - The annual data quality report will be sent to all data suppliers for review and approval.
 - Potentially, parts of the annual report could then feed up to the dashboards to be more accessible for a more general audience.

III. Research and Analytical Activities

Research and analytical activities are critical for the TRIP's mission and goals. Note: The TRIP will support external requests which will include completing external research processes, WSIRB processes, data sharing and contract production, and review with data partners. This section is intended to discuss internal research and analytical activities.

A. Assessing Disparities and Disproportionality in Traffic Safety

Finding where these inequalities are within traffic safety and public health, and determining changes to health, court, and traffic policies or practices to reduce those inequalities is vital. An assessment of potential disparities in traffic safety will be a useful tool for policymakers and the public to assess the disproportionality.



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A1. Evaluating the driver profiles of single-, multi-, and no crash driver who have IID installed in their vehicle by completing simple exploratory analyses to create dashboards and reports.

A2. Assessing the racial disparities between DUI-related crashes and rearrests through analysis of archival data, this report will describe and review the relationship between DUI related crashes and racial disparities in terms of frequency of arrests.

A3. Assessing how trends in traffic citations and enforcement of traffic law impacts serious injury and fatality rates.

A4. What is the driver abstract profile of the DUI crash-involved driver? Can we derive a crash-risk rating based on information from driver abstracts? For example, utilizing predictive modeling, after the first speeding ticket, crash-involvement risk doubles, after the second it quadruples, etc.)

B. The Impact of Motor Vehicle Crashes on the Washington State Healthcare System

Assessing the impacts of Motor Vehicle Crashes (MVC) (both due to DUI and non-DUI related behavior) on Washington State inpatient and outpatient community hospital admissions and discharges, emergency department (ED) visits, and Emergency Management Services (EMS) in urban and rural MVC rates.

B1. Assessing clinical assessments of Motor Vehicle Collision Injury Severity by examining if multi-vehicle crashes are more likely to produce serious injuries or fatalities than single vehicle collisions. This endeavor will utilize DOT and DOH data to assess if there is a difference in injury outcomes based on number of vehicles controlling for weight vehicle types or other factors which change the force of impact on vehicles.

B2. Evaluating short- and long-term health data to improve the reporting of any fatalities and serious injuries related to motor vehicle collisions by assessing how distracted driving increase crash severity. This endeavor will determine if distracted driving is more dangerous than driving under the influence. Longitudinal data analysis comprised of exploratory analysis creating a baseline for analysis. Use similar discrete choice inferential analysis to compare impacts of distracted vs impaired driving.

B3. Examining the different hospitalization rates and costs due to MVC among different age groups, racial/ethnic breakdowns, and evaluating the common set of injuries in traffic collisions that lead to fatalities.

C. The Impact of Motor Vehicle Crashes on the Washington State Court System

Assessing the impacts of Motor Vehicle Crashes (MVC) on Washington State inpatient court systems in urban and rural MVC rates.

C1. Assessing how crashes impact criminal and civil cases, in terms of racial disparities and decision outcomes.

C2. Examining the DUI filing and adjudication rates for crash-involved drivers as compared to DUIs apprehended roadside.

Knowledge Translation and Dissemination Plan

A planned strategy for sharing research and evaluation findings and translating those findings into practice and/or use for decision-making, is essential for any successful program. This section describes a condensed version of the PSPRC's plan for translating knowledge gained and communicating knowledge to both internal and external stakeholders and practitioners.

Knowledge Translation Plan

The transfer of knowledge from research to practice is essential for improving outcomes. This knowledge translation plan serves to reduce the gap from the time new knowledge is created to when it is put into practice. The knowledge translation plan will also increase investment in research and support for research/practitioner partnerships. The knowledge transition plan will include:

- supporting a dynamic and iterative process that includes the synthesis, dissemination, exchange, and ethically sound application of knowledge to improve operations
- engaging outreach and generating awareness, interest, buy-in, shared knowledge through products (e.g., policy briefs, publications, workshops, webinars, conferences, professional development, in-service training, network, media, social media)
- facilitating policy changes via collaborations/partnerships and ongoing task forces comprised of a range of individuals (e.g., researchers, legislators, external stakeholders, community agency members),
- providing more effective products and strengthen the state with data driven decisions
- obtaining four different types of knowledge: (1) scientific (i.e., learning through research), (2) experiential (i.e., learning through practice), (3) pragmatic (i.e., learning through action), and (4) cultural (i.e., learning through being)
- advising and supporting the development and maintenance of training materials (including employing training opportunities, selecting/tailoring/implementing interventions)
- creating a collaborative environment between knowledge users and knowledge producers which yields mutual learning through the process of planning, producing, disseminating, and applying existing or new knowledge

Dissemination Plan

OFM's PSPRC's will complete knowledge products for each completed project including but not limited to:

- **Briefing:** A research brief is intended to be a one-to-two-page report highlighting the background and the key findings.
- **Report:** A report is intended to be an expansion of the brief to expand on literature, methodologies, findings, and implications.
- **Dashboard:** If applicable, briefings or reports can be converted into a dashboard to make it more digestible to OFM's audience and to be updated periodically to represent current data.
- **Academic Manuscript:** A manuscript is a thorough research paper written to be published with a peer-reviewed academic journal in order to contribute to the field the project relates to.
- **Presentations/ Conferences:** A presentation is intended to be an informative and instructional speech, talk, or discussion that explains the research conducted and implications surrounding the work.

In all products, the TRIP will continue to ask for review to ensure full transparency of projects to relevant data partners, including but not limited to Traffic Data Analysis and Evaluation (TDAE) committee members as well as funders, and data partners.