

SHRP 2 Safety Data, Update 4 May 18, 2015

This is the fourth in a series of updates about Phase 1 of the implementation of the SHRP 2 Safety Data by TRB in collaboration with its partners, Federal Highway Administration (FHWA), the American Association of State Highway and Transportation Officials (AASHTO), and the National Highway Traffic Safety Administration (NHTSA). As was noted in the first of these updates, “Phase 1” is governed by a Safety Data Oversight Committee (SDOC). “Phase 1” is an experimental program designed to make the safety data as widely available as possible to qualified researchers and to gather information needed to lay the foundation for use of the data beyond the first four to five years.

This edition of the update focuses on who is using the safety data and for what research topics. A number of organizations have already completed research projects, have projects underway, or are arranging to use the SHRP 2 safety data at the “InDepth” level. This is a level of data use at which a license to use the data is required and in which a research database is assembled or the database user works in the secure data enclave that has been established at Virginia Tech Transportation Institute so that research using personally identifying information can be viewed and analyzed. (A future edition of the SHRP 2 Safety Data Update will focus on use of the “InSight” web portal—a way to obtain more limited access to the data.)

Even before the SHRP 2 database was entirely completed, there were three pilot projects (the SHRP2 “S08” series projects using the data for research). Although this was a difficult undertaking, valuable research results on several critical safety topics resulted. Reports on these three pilot projects have been published and are available on the Internet at:

Safer Glances, Driver Inattention, and Crash Risk:

<http://www.trb.org/Publications/Blurbs/171327.aspx>

Offset Left-Turn Lanes: <http://www.trb.org/Publications/Blurbs/171264.aspx>

Roadway Departures on Rural Two-Lane Curves:

<http://www.trb.org/Publications/Blurbs/171254.aspx>

InDepth customers now include organizations located in North America and in Europe. Types of organizations that have been or will be users include universities, private consulting firms, automotive original equipment manufacturers (OEMs), state DOTs, national laboratories, Federal agencies including FHWA and NHTSA, public health organizations, non-profit research institutions, and the automobile insurance industry. Almost a dozen “Concept to Countermeasures” implementation assistance projects sponsored by FHWA and AASHTO are underway using the SHRP 2 safety data and involve partnerships between state DOTs and research organizations such as universities. More information about this effort may be found at:

[http://www.fhwa.dot.gov/goshrp2/Solutions/Safety/NDS/Concept to Countermeasure Research to Deployment Using the SHRP2 Safety Data](http://www.fhwa.dot.gov/goshrp2/Solutions/Safety/NDS/Concept_to_Countermeasure_Research_to_Deployment_Using_the_SHRP2_Safety_Data)

The diversity of the user base for the data is interesting. However, the diversity of the research topics being addressed or soon to be addressed is even more interesting. Past, present, and pending research topics involving use of the SHRP 2 safety data include:

- Driver behavior and safety on curves
- Offset left turn lanes
- Lane departure warning systems
- Driver distraction/inattention
- Rural intersections
- Vehicle safety defects
- Speeding
- Animal/vehicle collisions
- “Road rage”
- Driver fatigue
- Crash risk by gender and age
- Seatbelt use
- Crash risk and driver health conditions
- Markings at pedestrian crossings
- Driver impairment risk and personality
- Autonomous vehicle safety systems
- Speed limits, roadway geometry, and driver behavior
- Closely-spaced freeway interchange ramps
- Roadway departure
- Work zones
- Inclement weather, driver behavior and traffic safety
- Fuel economy and vehicle operating costs

This last topic indicates some of the potential the database has for uses in *non-safety* research areas such as traffic operations and transportation planning.

More publications resulting from use of the SHRP 2 safety data will begin to appear during 2015.