SHRP2 Safety Implementation Assistance Program
AASHTO Subcommittee on Safety Management

Dean Kanitz, Michigan DOT
September 12, 2014
Today’s Presentation

• Implementation Assistance:  
  *Concept to Countermeasure, Research to Deployment Using the SHRP2 Safety Databases*
  
  o Three-phased approach
  o Timeline and expectations
  o Participants

• Other research activities
Data from 3,147 volunteer drivers in six sites: 5 million trips and 50 million miles

New data collected 12,500 centerline miles consistent across six sites

Acquired data (DOTs, others) on 200,000 centerline miles with varying conditions - roadway, weather, traffic ..
AASHTO SHRP2 Safety Task Force

• **Multi-disciplinary team** designed to assist FHWA/AASHTO in safety implementation

• Representatives from **AASHTO-related safety committees**
  – Rudy Malfabon, chair
  – Sandra Larson, vice chair

• Assisted in designing the **FHWA/AASHTO three-phased approach** used in the Round 4 solicitation

• Reviewed proposals and **made recommendations** for Phase 1

• Will review research findings and make **recommendations for Phase 2**
Objectives of SHRP2 Safety Implementation

• Demonstrate use of the SHRP2 Safety data
• Increase states’ understanding of the potential uses of the data
• Identify countermeasures
• Reduce crashes!
Safety Implementation Process

Phase I - Proof of Concept with a sample reduced data set: January – September 2015

Phase II full data set and in-depth analysis & countermeasure identification: To begin Fall 2015

Possible Phase III to adopt or implement countermeasure nationally: 2016
Research Topics

- Driver speed
- **Roadway features** and driver performance
- Preceding **contributory events**
- **Vulnerable** road users
- Intersections
Phase I

- 11 projects funded $100,000 for Phase I (DOTs can augment the budget with matching funds if they wish)
- Participants use small pilot data set of NDS and RID data
- Participants must present findings within nine months of the “proof of concept”
- As part of final Phase 1 presentation, participants must show that a full analysis with larger data set will be effective; a detailed cost estimate for completing Phase 2 will also be needed
Safety – 10 DOTs Selected in Round 4

- 11 Proof of Concept projects in 10 states

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<th>Category</th>
<th>State DOT</th>
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<td>Pedestrian</td>
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<td>Adverse Conditions</td>
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<td>Roadway Lighting</td>
<td>Washington DOT</td>
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Safety Topics – Round 4 IAP selections

Florida: How do drivers interact with pedestrian features at signalized intersections when pedestrians are or are not present?

Iowa: Which driver and roadway characteristics play the most significant role in road departure crashes and safety critical events

Michigan: The interrelationship between speed limits geometry and driver behavior

Minnesota: What role do speed and distraction play in work zone crashes or near crashes?

North Carolina: Evaluation of the interaction between horizontal and vertical alignment on rural two lane roads

Nevada: Assessing the influence of driver, vehicle, roadway and environmental factors on pedestrians - turning - traffic crashes at intersections

New York: Pedestrian safety and high-visibility markings

Utah: How is driver behavior and performance impacted while in the vicinity of closely spaced interchange ramps?

Washington: Examination of episodic speeding on Washington State roads

Washington: Illumination safety research

Wyoming: Role of adverse conditions on speed behavior and drivers
Phase II: Actionable Research

- Only occurs with successful completion of Phase I and authorization by FHWA and Safety Task Force
- Efforts will consist of in-depth and detailed analysis of the proposed research question using SHRP2 Safety data
- Results should be findings and recommendations leading to potential new insights and/or countermeasures
- Deliverables should include:
  - Detailed plan for Phase III
  - Cost estimate for Phase III
Phase III: Deployment

- May be authorized by FHWA and Safety Task Force
- Will be subject to findings in Phase II research
- Will NOT include additional research
- Activities may include:
  - Integration of findings into manuals, guidelines, policies
  - Countermeasure development, public service programs, new outreach to drivers
  - Pilot testing
- Countermeasures may be included in future rounds of the Implementation Assistance Program
Michigan’s Project

- Assessing how speed limits on certain types of roadways affect driver behavior
- Emphasis on limited access facilities
- Potential outcomes:
  - Modifications to maximum speed limits
  - Use of advisory sign location and designs
  - How different drivers relate to speed
Related SHRP2 Safety Research

• SHRP2 S08 Projects:
  – Phased approach used as model for IAP projects
  – Final research reports available soon
  – Topics:
    • Horizontal curves
    • Offset left turn lanes
    • Driver glance patterns

• NCHRP 20-7 (368): Development of a Roadmap for Use of SHRP2 Safety Data to Enhance Existing Publications:
  – MUTCD, Human Factors Guide
Where to Find More Information

• AASHTO SHRP2 web site Safety page: http://shrp2.transportation.org/Pages/Safety.aspx
• FHWA: www.fhwa.dot.gov/goSHRP2
• About the NDS:
  • InSight website https://insight.shrp2nds.us/
  • Recorded NDS webinar http://www.trb.org/StrategicHighwayResearchProgram2SHRP2/SafetyWebinars.aspx
• About the RID:
  • Recorded RID webinar http://www.trb.org/StrategicHighwayResearchProgram2SHRP2/SafetyWebinars.aspx
Questions

Implementation Assistance:
www.fhwa.dot.gov/goSHRP2

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