Tribal Lands Safety Research

Current research shows the rate of death and significant injury from motor vehicle crashes is much higher for American Indians than for other populations in the United States. Tribal transportation leaders and federal agencies agree that this is an area of elevated concern and priority. Unfortunately, there is very little research to guide strategic policies and investments to improve safety. The Roadway Safety Institute, a regional University Transportation Center housed at the University of Minnesota, is collaborating with tribal governments on three projects to better address these challenges.

Collaborating with American Indian Communities to Re-Interpret and Strategize about Transportation Safety Risks in Tribal Lands

This study aims to get a better picture of the nature of transportation safety concerns in tribal governance areas, analyze the sources of safety risks and problems, identify successful programs and policies, and generate recommendations about policies and investments. Tribal government leaders, transportation coordinators, and other key community members can offer extremely valuable insights in this analysis. Therefore, this study centers around qualitative data collection and a problem-solving approach in collaboration with tribal governments. Our goal is to provide a more nuanced, informative, and fair picture of the problem and strategies to improve safety. Preliminary research has unearthed several previously undocumented explanations that merit closer study, both to better understand what is happening and to support effective responses.

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GIS Data Acquisition and Spatial Analysis of Factors Affecting Traffic Crashes on Tribal Lands

This study is investigating the potential for new advances in Geographic Information Systems (GIS) to enhance the collection, availability, and use of information related to transportation safety. Conducted in partnership with Esri, the study includes a preliminary assessment of geo-related traffic safety information. Through collaborative analysis with tribal communities, the study is also developing prototype GIS applications to assist tribes in transportation safety planning. These applications are being evaluated through a series of stakeholder assessments.

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Education Activities for Tribal Youth

Several Institute initiatives are bringing our research projects and resources to underrepresented K-12 students—including those in tribal communities—to promote safety, education, and STEM careers.

The University of Minnesota Extension has a long-standing partnership with the White Earth Nation to operate a summer Academy of Math and Science for reservation youth in grades 4–8. The program focuses on hands-on learning and uses Indian culture and heritage as a vehicle for studying math, science, and engineering. In 2015, the Institute sponsored one day of the two-week camp in June. RSI staff taught several classes about safe travel in a variety of modes. The Institute is also exploring opportunities to connect female American Indian youth to mentors through a partnership with WTS and its Transportation YOU program. Though the initial efforts are based in Minnesota, we plan to expand to the rest of Region 5 in our second year.

In addition, the Institute is developing new curriculum packages that can be easily shared with tribal and other communities through Transportation YOU programs, summer camps, STEM festivals, and other events that reach students of diverse backgrounds.

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About the Institute

The Roadway Safety Institute is the Region 5 University Transportation Center, led by the University of Minnesota. Other members are the University of Akron, the University of Illinois at Urbana-Champaign, Southern Illinois University Edwardsville, and Western Michigan University. Driven by the goal of preventing crashes to reduce fatalities and life-changing injuries, the Institute’s activities focus on human-centered solutions to advance roadway safety.