



Tribal Transportation Safety Summary



**Accomplishments during
Moving Ahead for Progress
in the 21st Century (Map-21)**

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Introduction

Inter Tribal Council of Arizona, Inc. (ITCA) Tribal Epidemiology Center (TEC) is assisting tribes to address a major health disparity for American Indians — motor vehicle crash unintentional injuries.



As a public health authority, the ITCA TEC has the capacity to secure and analyze large data sets, such as crash data, hospitalization discharge data, trauma data and IHS patient medical data, and to administer grant programs. Since 2000, small grants, to support a variety of transportation safety projects, were contracted with ITCA by the Arizona Department of Health Services (ADHS), Federal Highway Administration (FHWA), and Arizona Department of Transportation (ADOT). Starting in 2008, the Department of Health and Human Services (DHHS), Office of Minority Health (OMH), has funded the ITCA TEC for motor vehicle crash injury prevention, which has resulted in pass through funds to several tribes within the IHS Phoenix Area.

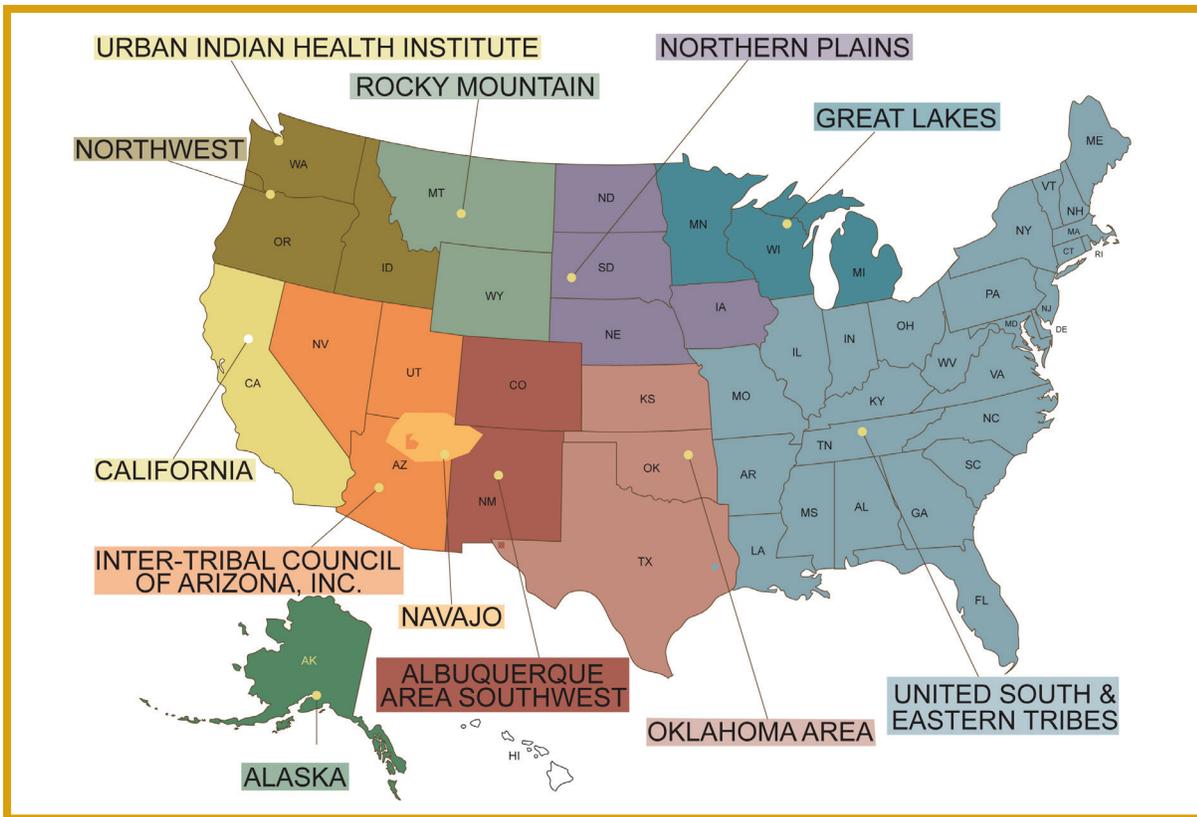


Image: Southwest TEC

Figure 1. There are 12 TECs serving tribes within the Indian Health Service (IHS) areas. The ITCA TEC serves Tribes in the IHS Phoenix and Tucson Areas: Arizona, Nevada and Utah, except for the Navajo Nation.

According to 2003 to 2012 state statistics provided to the Centers for Disease Control and Prevention (CDC), the age-adjusted motor vehicle crash fatality rates for American Indians in Arizona, Nevada and Utah were higher than the state fatality rates (Figure 2).

To address tribal motor vehicle crash injuries, the ITCA TEC is assisting tribes with capacity building by fostering:

- *Partnerships* within transportation, law enforcement, health and emergency medical services
- *Surveillance* — collecting and analyzing injury data
- Evidence-based prevention *strategies* - behavioral and engineering
- *Policy* — tribal traffic codes
- *Career pathways* — tribal internships and jobs

ITCA TEC’s technical assistance for road safety audits, injury data collection and analyses, safety planning, and training have been foundational to the following initiatives.

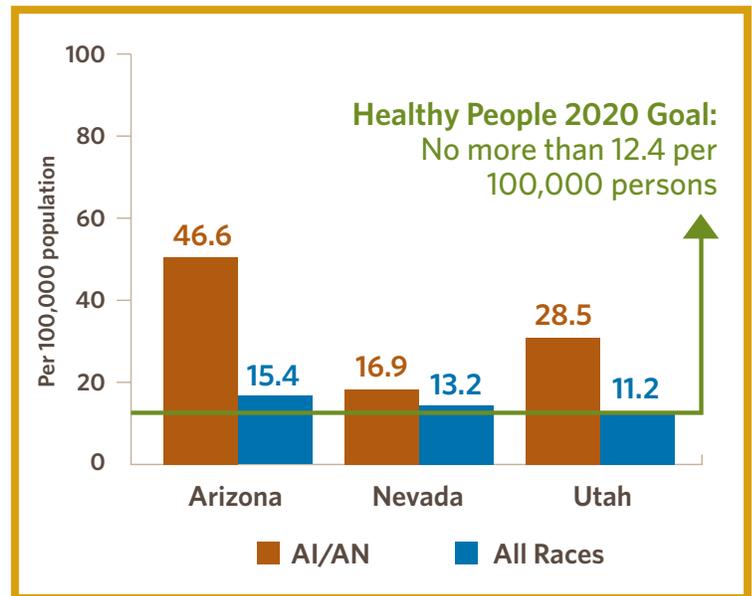


Image: CDC WISQARS

Figure 2. Age-Adjusted Mortality Rates for MVCs among AI/AN and All Races in Arizona, Nevada, and Utah 2003-2012

Source: <http://www.cdc.gov/injury/wisqars/index.html>

Road Safety Assessment/Audit (RSA)

A Road Safety Assessment/Audit (RSA) is an eight-step process to assess the safety of a roadway. In 2005, ITCA staff trained with FHWA during a RSA train-the-trainer course. In 2006, while completing the original ADOT tribal safety research project, Building Tribal Traffic Safety Capacity, the ITCA assisted ADOT to perform the first state RSA. As a result, the Tohono O’odham Nation has been coordinating projects with Bureau of Indian Affairs (BIA), a metropolitan planning organization and ADOT to remedy the road hazards at an intersection of a two-lane state road with a BIA road. Experiencing positive outcomes, the ITCA TEC is promoting tribal RSAs in conjunction with motor vehicle crash injury prevention.

RSA—continued on next page >>>

RSA Case Studies

Duckwater Shoshone Tribe

Duckwater Shoshone Tribe is located on 3,854 acres of the Duckwater Shoshone Reservation within the remote interior of Nevada. Concerned about emergency response and the prevention of motor vehicle crash injuries, the Duckwater Shoshone Police Department applied to the ITCA TEC for a small five-year grant and technical assistance. In 2012, the tribe compiled 12-years of crash data in a spreadsheet for the RSA. The RSA identified numerous safety issues both on the BIA roads within the reservation and an adjacent two lane state access road. Pavement markers, signage, drainage, lighting, pedestrian facilities and cattle guards are needed improvements. During the RSA, the injury prevention coalition engagement included identifying concerns, participating in the day and night field reviews, and reviewing the RSA report and recommendations.



Figure 3. Residents of the Duckwater Shoshone Reservation travel one to six hours to essential services.

As follow-up to the RSA, the tribe has negotiated with the Nevada Department of Transportation (NDOT) for safety funding to address the low cost road safety improvements. In 2013, the tribe applied for Tribal Transportation Program (TTP) Safety Funds to improve pedestrian facilities (Figure 5). In November 2014, the tribe presented the RSA at the American Public Health Association Conference themed Healthography: How where you live affects your health and well-being.

Partnerships: Duckwater injury prevention coalition, NDOT, Kimley-Horn and Associates, Inc. (KHA), Nye County Road Maintenance, IHS, and ITCA TEC

Funding: 1. DHHS-OMH 2. Highway Safety Improvement Program (HSIP) 3. TTP Safety Funds



Figure 4. The state road is traveled year round to Eureka, Elko and Reno, Nevada, for schooling, meetings, medical services, and shopping.



Figure 5. A pedestrian crossing between the school and health clinic needs improvement

TeMoak Tribe of Western Shoshone

TeMoak Tribe of Western Shoshone is comprised of four Bands located near Elko in northeastern Nevada - Battle Mountain Colony is west, Wells Colony is northeast, South Fork Reservation is south, and Elko Colony is within the city. The tribe applied to the ITCA TEC for a five-year grant to prevent motor vehicle crash injuries after a collision in one Colony's commercial area. In 2012, a RSA for each Band was completed. Safety issues are access management, pedestrian facilities, lighting and parking within the commercial areas of the Colonies, and pavement markers, signage, lighting, guardrails, and vegetation management in residential areas.

The tribe is providing a local match to NDOT funds to improve road safety on each of the three Colonies and the South Fork Reservation. The RSA and federal safety funds have provided the means for the tribe to work on road improvements.

Partnerships: TeMoak injury prevention coalition, NDOT, KHA, IHS, and ITCA TEC

Funding: 1. DHHS-OMH 2. HSIP 3. TTP

Kaibab Band of Paiute Indians

Kaibab Band of Paiute Indians is located in remote, northwestern Arizona on the 120,840 acre Kaibab Paiute Indian Reservation. The two lane state road on the reservation is both a freight corridor and a tourist route to the northern rim of the Grand Canyon National Park.

Since 2009, the tribe has been partnering with the ITCA TEC to prevent motor vehicle crash injuries. Concerned about crashes occurring with large, heavy commercial vehicles, the injury prevention coalition encouraged tribal leadership to request ADOT to perform two intersection RSAs.



Photo: AZ DOT

Figure 8. The existing right-of-way can accommodate the recommended turning lane reconfigurations from the county road to the state road, as well the left and right turn lanes on the state road.



Photo: NV DOT

Figure 6. Since there are numerous signs needing replacement, following the RSA, the tribe invested in software to establish a sign inventory.



Photo: AZ DOT

Figure 7. Each of the three tribal commercial areas need a road design to accommodate traffic pedestrians and parking.

The 2014 RSA involved a county road intersecting the two lane state road at the commercial area of the reservation. The existing turning lanes are insufficient to accommodate the turning radius of large vehicles entering the gas station and museum parking lots or the recreational vehicle park. The tribe will be identifying safety funds to improve the intersection.

During the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), the initial RSA was performed at the intersection of a BIA road with the state road.

Partnerships: Kaibab injury prevention coalition, ADOT, Mojave County Road Maintenance, Arizona Department of Public Safety (ADPS), BIA, IHS and ITCA TEC

Funding: 1. DHHS-OMH 2. HSIP

Tribal Safety Plan Case Study

Gila River Indian Community

Gila River Indian Community was the first Tribe in Arizona to prepare a Tribal Safety Plan framework. In 2012, ADOT and the ITCA TEC applied to FHWA for Accelerated Safety Action Program funds for a tribal safety planning project. In 2013, no tribes in Arizona had a safety plan, which made it challenging for them to interface with ADOT on the development of the Arizona Strategic Highway Safety Plan. Once funding was secured, the ITCA TEC collaborated with the tribe to develop a pilot Tribal Safety Plan framework. The ITCA TEC approached the FHWA to facilitate two workshops, since their staff had experience preparing Safety Management System plans with tribes outside of Arizona. ADOT analyzed 3,336 available crash reports for 2008 through 2012.

Based on the crash analysis and a review of the current tribal safety practices, the tribe established a framework that included a mission statement, crash factors, safety emphasis areas, and potential strategies.

Using the framework, the Gila River Indian Community Department of Transportation prepared a Safety Action Plan that the Tribal Council approved. The preparation of the plan provides the tribe an avenue for safety funding.

Partnerships: Gila River Indian Community transportation, health, law enforcement, emergency medical services departments, ADOT, FHWA, Tribal Technical Assistance Program (TTAP), ADHS, ADPS, Maricopa Association of Governments, IHS, and ITCA TEC

Funding: Accelerated Safety Action Program



Photo: Gila River Indian Community

Figure 9. The goals of the second workshop were to refine the plan vision, finalize the emphasis areas and discuss activities for engineering, EMS, enforcement, and education.



Photo: AZ DOT

Figure 10. During 2008-2012, 22 of the 82 fatal motor vehicle crashes on Interstate 10 occurred within the Gila River Indian Reservation.

Data Analyses

Injury surveillance is an ongoing activity of the ITCA TEC to help tribes understand the injury factors for motor vehicle crashes. The ITCA TEC, a member of the Arizona Traffic Records Coordinating Committee, has been conducting both tribal-specific and statewide injury data analyses.

Truck Tractor Crash Analysis on Tribal Lands in Arizona

Completed in 2014, it identified 1,543 truck tractor crashes during 1999 to 2006.

- 5x more lane-departure crashes than the state
- 5x more speed-related crashes than the state
- 4x more young-driver crashes than the state
- 2x more fatalities than the state
- 93% occurred on Interstates and state routes within tribal lands
- 63% were with other vehicles
- 48% of “single vehicle truck tractor” crashes happened in low light conditions



Photo: AZCENTRAL

Figure 11. The majority of truck tractor crashes are occurring on Interstate 10 within the Gila River Indian Reservation.

Partnerships: AMEC and ITCA TEC **Funding:** DHHS-OMH

Injury Data Analyses

Injury Data Analyses, using the IHS Resource and Patient Management System, was completed by the ITCA TEC in 2015. The data for the IHS Phoenix Area was examined to understand the non-fatal motor vehicle crash injury factors pertaining to the Duckwater Shoshone Tribe, Kaibab Band of Paiute Indians and TeMoak Tribe of Western Shoshone. The injury analyses have been provided to the injury coalition for each tribe. Fatal motor vehicle crash rates have been accessible through the CDC and crash factors have become available through RSAs, but the tribal-specific non-fatal injury factors have been less known.

Funding: DHHS-OMH

Crash Data Analyses

Crash Data Analyses was performed by the ITCA TEC in 2013 for the Duckwater Shoshone Tribe and TeMoak Tribe of Western Shoshone Tribe. In 2014, the crash factors were mapped by the ITCA TEC ARC Geographic Information System Fellow, which resulted in visual injury prevention resources for the tribes, including the Kaibab Band of Paiute Indians and ITCA TEC.

Funding: DHHS-IHS

Technical Assistance and Training

Tribal Safety Planning Workshop

Tribal Safety Planning Workshop, in June 2012, was conducted for Tribes in Arizona by the TTAP at Colorado State University and the ITCA TEC. Since the TTP 2% safety set-aside had just been established in MAP-21, the TTAP and ITCA TEC introduced safety planning and guidance on safety resources, and promoted tribal participation in the state process to update the Arizona Strategic Highway Safety Plan.

Partnerships: TTAP, FHWA, ADHS, and ITCA TEC **Funding:** 1. TTAP 2. DHHS-OMH

Traffic Incident Management

Traffic Incident Management (TIM) training and outreach with tribes is ongoing for the ITCA TEC. TIM is a FHWA safety priority to promote responder safety and prevent secondary motor vehicle crashes. In 2013, the ITCA TEC conducted, with the Hualapai Police Department and the ADPS, the initial tribal TIM training in Arizona. The tribe invited the county sheriffs and regional ADPS to train along with their police, fish and game, transportation, and emergency medical services personnel. In 2014, the ITCA TEC and ADPS conducted training with the Fort McDowell Yavapai Nation, Hopi Tribe, and San Carlos Apache Tribe. After receiving ITCA TEC information on TIM, the Duckwater tribal police participated in Nevada TIM training. The ITCA TEC is participating on the Arizona TIM Working Group initiated by the ADHS to coordinate training in Arizona and in 2015, the ITCA emergency response staff was certified to teach TIM. The ITCA TEC is working to complete TIM training in 2015 with three additional tribes.

Partnerships: Tribes, ADPS, ADHS, and ITCA TEC **Funding:** DHHS-OMH

Share the Road Training

Share the Road training for tribes is being promoted by the ITCA TEC. The ADPS and trucking association in Arizona devised the curriculum on driving strategies near commercial vehicles. Since fatal truck tractor crashes on tribal lands in Arizona were two times greater than the state during 1999 to 2006, the ITCA TEC is collaborating with the ADPS to deliver the training to Tribes in Arizona. In 2014, the Salt River Pima Maricopa Indian Community Police Department hosted the pilot training for tribal police, transportation, public works, and injury prevention.

Partnerships: Tribes, ADPS, Walmart, and ITCA TEC **Funding:** DHHS-OMH

Bike Traffic Skills Training

Bike traffic skills training, facilitated by Licensed Certified Instructors with the League of American Bicyclists, will be an original approach with four tribes in May and June, 2015. During SAFETEA-LU, the ITCA was recruited for the National Center for Safe Routes to School National Review Group and has continued to promote tribal Safe Routes to School planning, and infrastructure and educational projects.

The ITCA TEC's first youth bike traffic skills training will involve the Duckwater Shoshone Tribe, Hualapai Tribe, Kaibab Band of Paiute Indians, and TeMoak Tribe of Western Shoshone. The ITCA TEC is pursuing opportunities that blend transportation safety and injury prevention with public health, such as active healthy living.

For the Hualapai Tribe, bike safety issues were documented in a RSA report, and the Hualapai School Route Travel Plan developed under the ADOT Safe Routes to School program.

Partnerships: Hualapai Tribe, injury coalitions for Duckwater Shoshone Tribe, Kaibab Band of Paiute Indians, and TeMoak Tribe of Western Shoshone, MG Tech LLC, and ITCA TEC

Funding: DHHS-OMH



Photo: ITCA TEC

Figure 12. Staff experienced “blind spots” while in the vehicle driver seat of a truck tractor.



Photo: AZ DOT

Figure 13. The existing bike rack design is not user-friendly for students at a public school on the Hualapai Reservation.