

Three Affiliated Tribes Seat Belt Primary Seat Belt Intervention Assessment

Kimberly Vachal, PhD

Upper Great Plains Transportation Institute,
North Dakota State University

Fahtima Hood

MHA Community Traffic Safety Administrator

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Overview

- Introduction
- Tribal Resolution
- Project Timeline
 - Baseline
 - Intervention
 - Evaluation
 - Feedback
- Evaluation and Results
- Future Opportunities



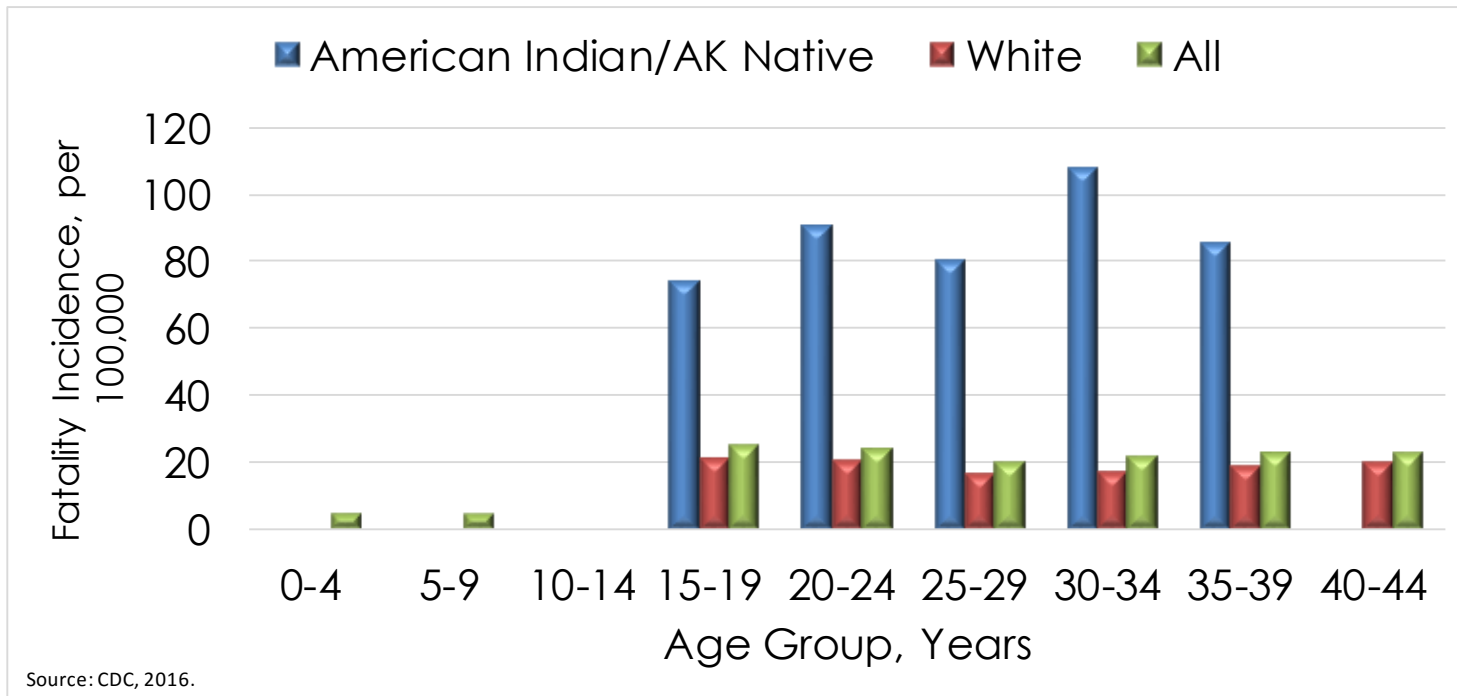
UGPTI Introduction



- Upper Great Plains Transportation Institute (UGPTI) is a Department on Campus at North Dakota State University
 - About 40 staff in an interdisciplinary program, multimodal: safety, economics, planning, policy, ITS, autonomous vehicles & transit
 - Long-term training & research initiatives with NDDOT, USDA, and USDOT
 - Masters and doctoral education program in the College of Business
- Tribal Research:
 - Tribal Crash Reporting in ND: Practices, Perceptions, and Systematic Implementation (*Underway*)
 - Three Affiliated Tribes Seat Belt Primary Seat Belt Intervention Assessment
 - Building a Sustainable GIS Framework for Supporting a Tribal Transportation Problem
 - Emergency Preparedness Handbook for Tribal Governments

Issue Identification

Tribal populations in North Dakota have a substantially higher mortality rate from traffic injuries than other residents.



Source: CDC, 2016.

The American Indian race does include Alaska natives in the description from the CDC.

Traffic Safety: Data, Data, Data...

Why?

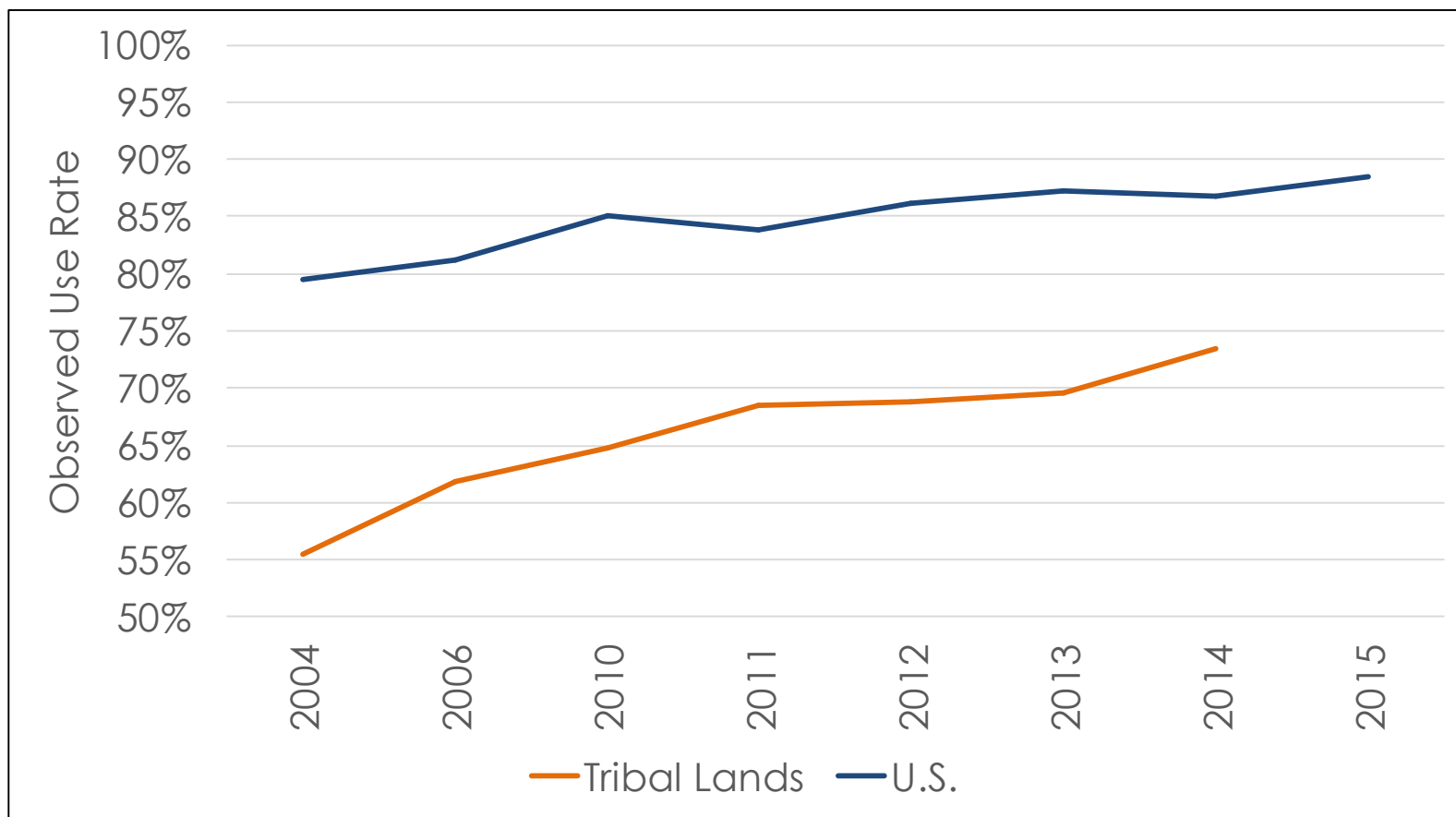
- Identify & prioritize traffic safety issues
- Localize traffic safety interventions
- Engage stakeholders
- Substantiate need and funding requests
- Monitor progress & create feedback

...Ultimately, save lives



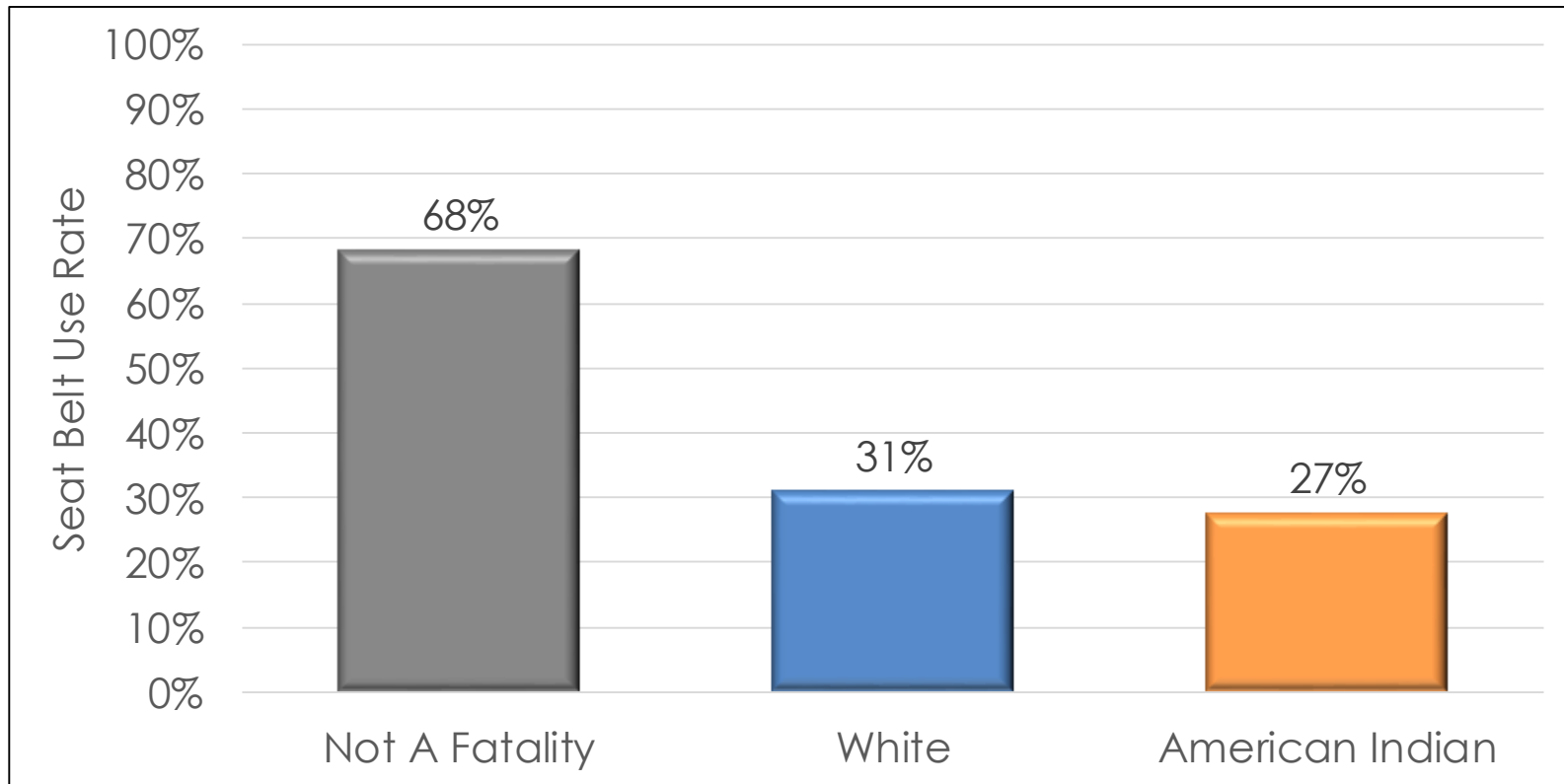
Source: MTDOT

Seat Belt Use, Observation Surveys



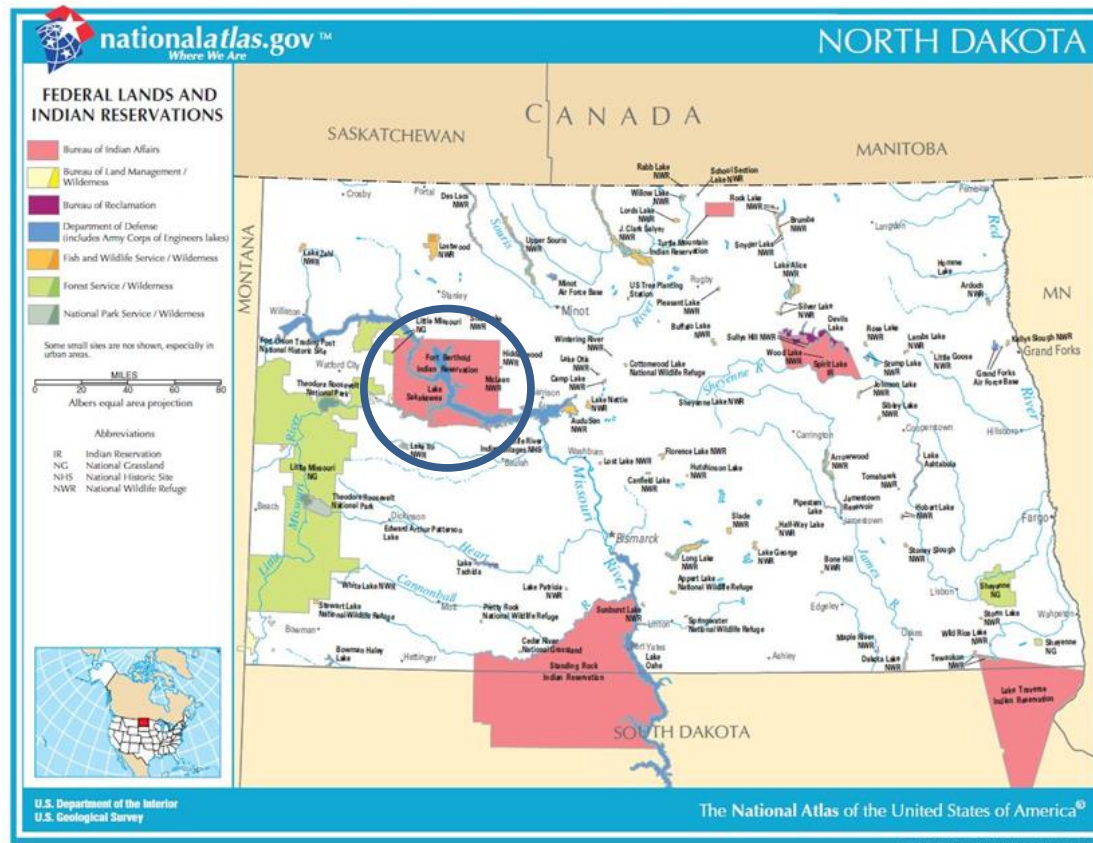
Source: U.S. Department of Interior 2015 U.S. Department of Transportation

Seat Belt Use in ND Traffic Fatalities



Source: FARS 2012-2014, U.S. Department of Transportation

Collaborative Project: Primary Seat Belt Law Evaluation



MHA Introduction

- The Three Affiliated Tribes, Mandan, Hidatsa and Arikara Nations, is located in Western North Dakota approximately 100 miles from the Montana border. Fort Berthold has a land base of approximately 1 million acres and 1,520 road miles of jurisdiction. It encompasses parts of six North Dakota Counties: Mountrail, McKenzie, Ward, McLean, Dunn and Mercer. The reservation has six distinct geographically isolated communities.
- Demographics: According to recent enrollment figures of the Three Affiliated Tribes there are 15,675 enrolled members with approximately 7,000 residing on the reservation with an additional 3,000 non-native residence and a transient population estimated at 2,000 plus individuals that are either who reside within the reservation.
- Sworn Force: The Three Affiliated Tribes Law Enforcement Services are provided by fifteen (15) Tribal police officers of which four (4) are criminal investigators; 2 are federally commissioned. This proportion makes the quota approximately 1 officer per 800 residents as opposed to 3.9 to 6.6 officers to 1,000 residents for large cities. There are 5 sworn Game and Fish Officers as well. This brings the total sworn force to 20.

ND Traffic Crashes

- Due to increased traffic associated with oil exploration in North Dakota, one person died in a traffic crash every 2.8 days compared to 2008 with one fatality every 3.5 days.
- The five-year average has seen an increase in 10 percent since 2008-2012.
- In 2015 there were 227 people involved in passenger vehicle fatal crashes, of those, 110 sustained fatal injuries, of that 110, 67 did not have restraint in use and of those 39 were partially ejected or totally ejected from their vehicles.
- MHA Nation is located in the heart of the oil activity.

Positive Driver Behavior

Three categories to help change driver behavior

1. Policy change or change in tribal traffic safety codes, regulations, sanctions and penalties.
2. Enforcement of the law(s); seat belt checkpoints.
3. Education and public information, media and training.

...MHA Nation adopted a primary seat belt law.



Resolution



- Safety Champions
- Process
- Resolution...driver and passengers of the motor vehicle operated upon a highway or other place open to general public or generally accessible to motor vehicle, including an area designated for the parking of vehicles within the Fort Berthold Reservation shall wear a properly adjusted and fastened seat belt, except that a child less than five (5) years of age shall be protected by a child restraint system as required in this code. There shall be a fine in the sum of one hundred dollars (\$100) per person for any violation of this Tribal Ordinance. [Resolution No. 15-171-LKH]
- Public Response

Tribal Commitment

- We have also adopted a work policy, 13-047-VJB entitled: “Adoption of policy requiring seatbelt use and prohibiting texting while driving in motor vehicles driven by Three Affiliated Tribes employees while on duty”
- It is imperative that tribal leaders create a pathway to deploy the leading safety strategy to save lives on MHA nation’s roadways.
- By advocating enforcement, educating tribal council, community and equipping officers to effectively enforce traffic safety laws, MHYA Nation will reap far greater life-saving outcomes.

Adoption/Enactment of Primary Offense Designation Law for Safety Belts

Pictured Fahtima Hood (Center) and officer CJ Whitman of the TAT Highway Patrol (right) were the driving force behind the passage of the new Primary Enforcement seat belt law (Resolution No. 15-171-LKH) on October 2015 and became effective January 2016. Pictured left is deputy chief Mike Lawrence. There shall be a fine in the sum of one hundred dollars (\$100) per person for any violation of this Tribal Ordinance. The Seat Belt law was created to improve public safety on its roads. (published in MHA Times)



media



Local Traffic Safety Facts

- Seat belt checkpoint- 69 cars came through, 11 vehicles had a subject with no seatbelt, 9 were cited for no seatbelt and due to primary seat belt law, two DUS's were cited as well. Checkpoint was located on BIA road 12 near highway 22 Junction.

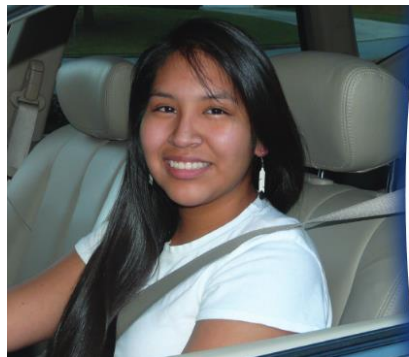


Photo Source: CDC

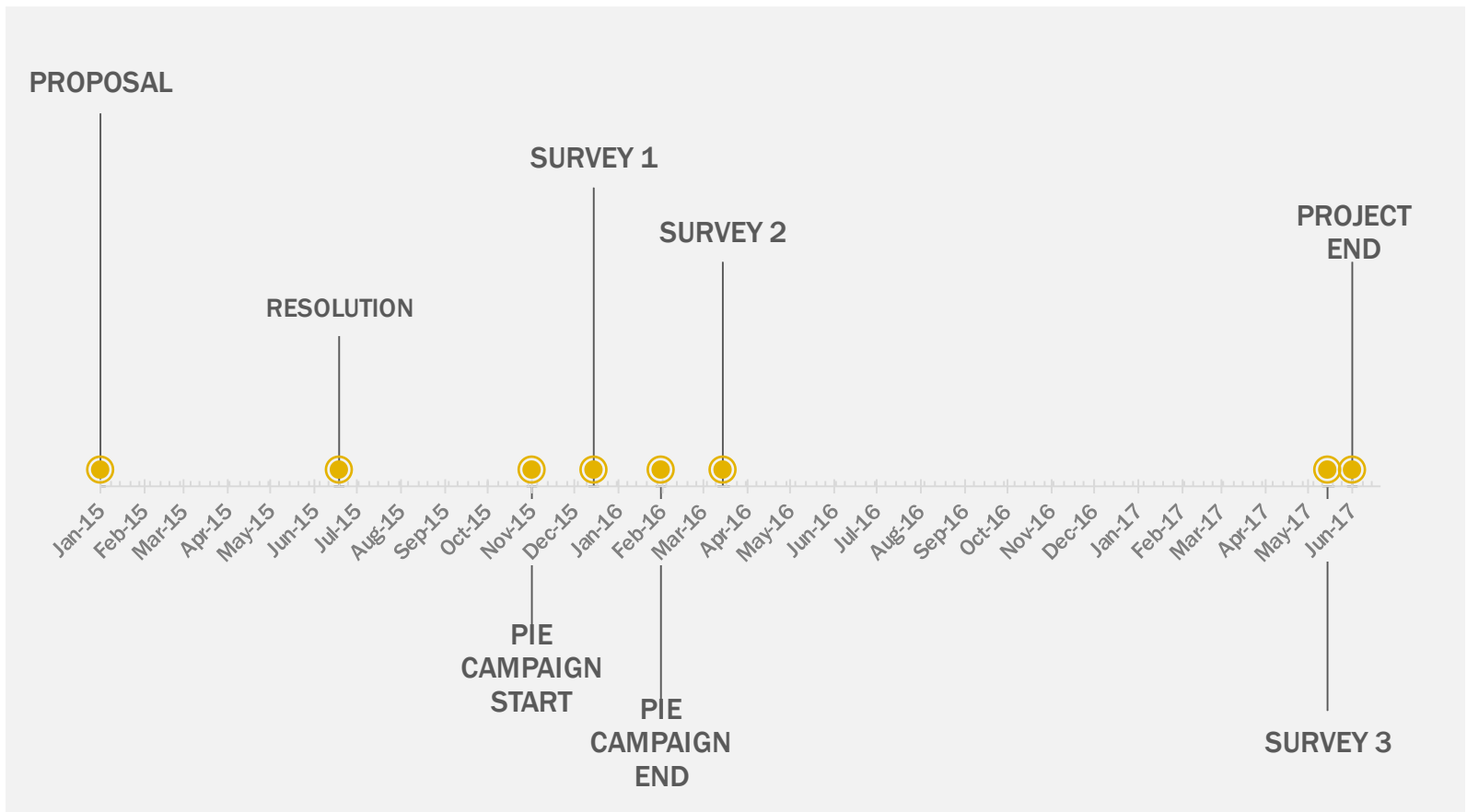


Adoption/Enactment of Primary Offense Designation Law for Safety Belts

- Three-Month Transition Period
 - Education: Public Information Campaign
 - Enforcement: Traffic Warning with Written Notice of the Law



Timeline

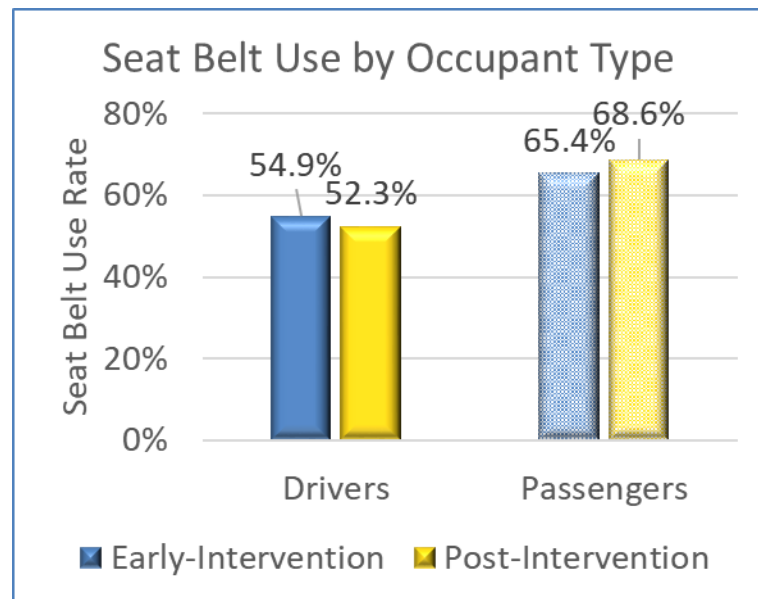


Evaluation Method=Data

- Direct observation survey was used to collect data in the early- and post-intervention phases.
 - Sites: Traffic Flow & Geographic Coverage
 - TAT Site Approval
 - Field Data: Experienced Observer
- Observation Protocol
 - Modified National Standard
 - Drivers & Right Front Seat Passengers of Vehicle Types Weighing Up to 10,000 Lbs.
 - Each site was observed for 30 to 60 minutes

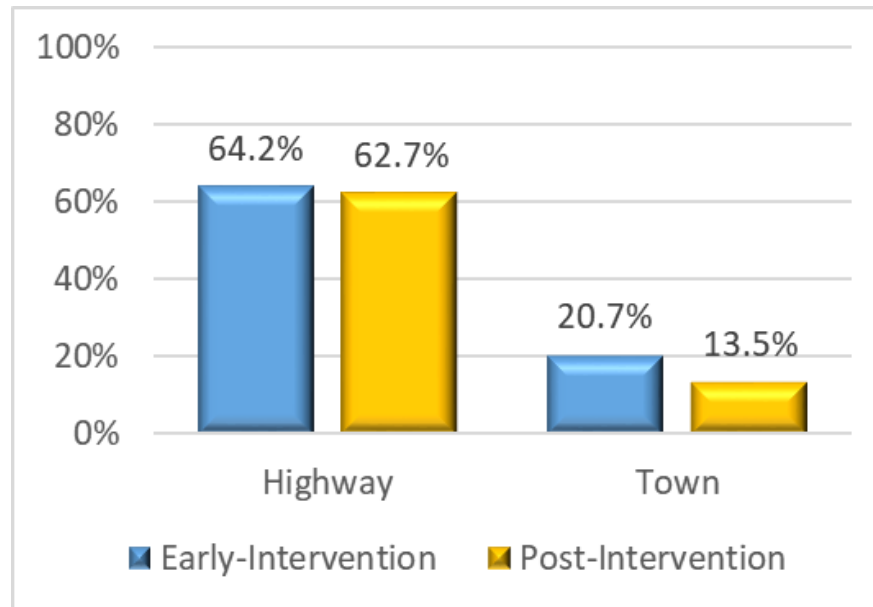
Findings

- Overall, belt use was 57.3% about a month prior to the primary seat belt law implementation, during this time period a media campaign was conducted to educate the public.
 - The seat belt use rate was 56.9% three months after the intervention.



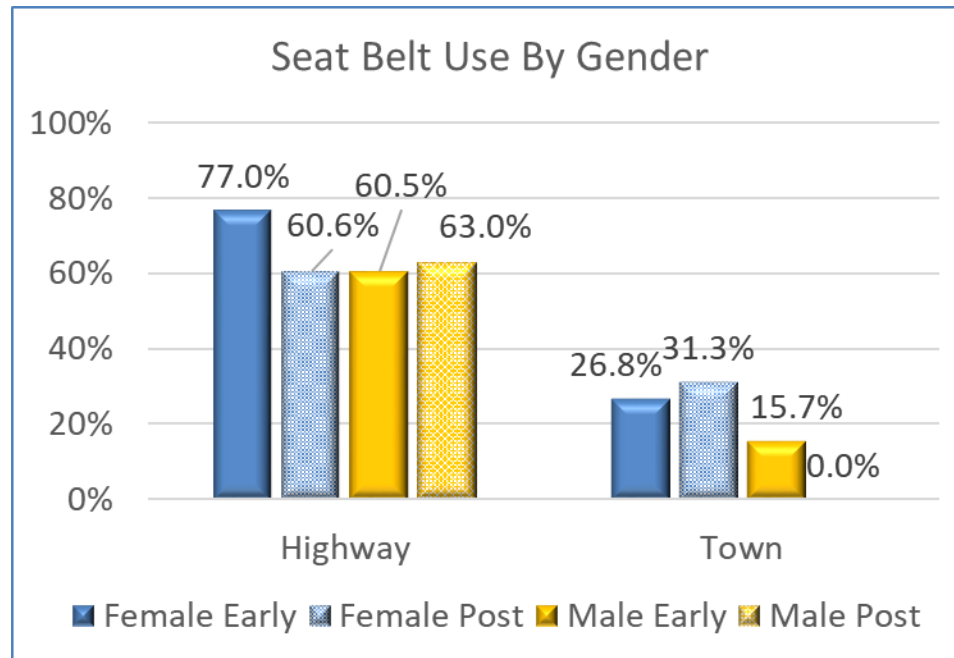
Findings (cont.)

- The higher seat belt use rates for the rural highways are consistent with other seat belt surveys.
- Rates varied substantially by gender, vehicle class, and road environment.



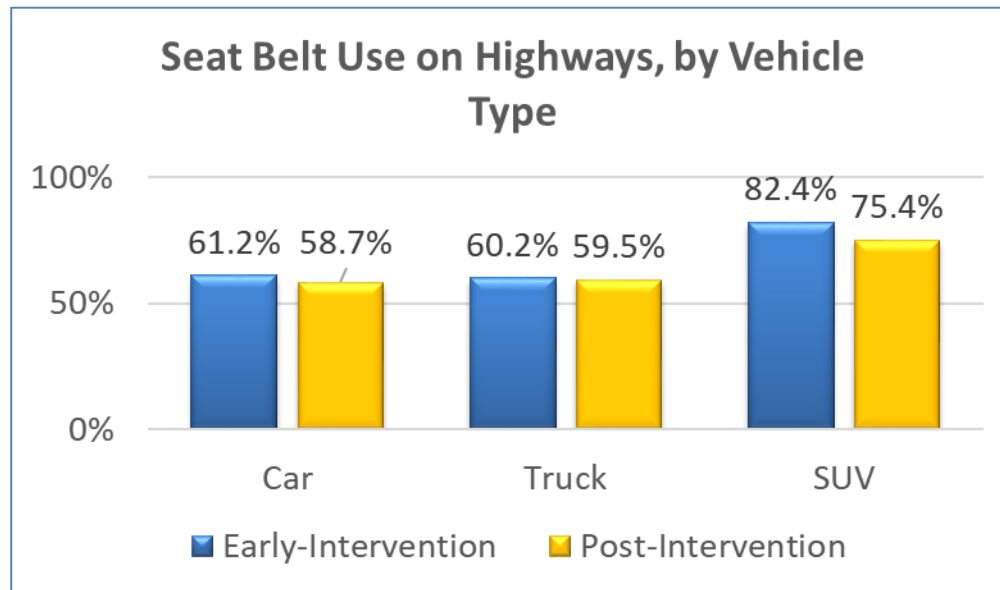
Findings (cont.)

- The highest seat belt use rate was among female car drivers in the early-intervention survey and males in the post-intervention survey.



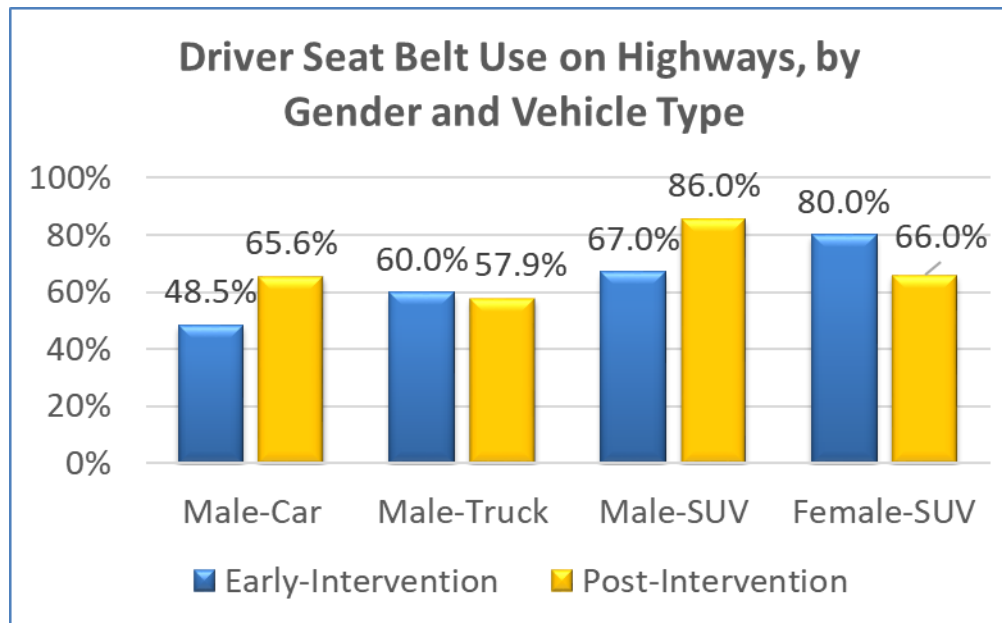
Findings (cont.)

- The highest use rate was attributed to SUV drivers at 82% and 75% in the early- and post-intervention surveys, respectively. The use rates for trucks and cars were similar at around 60% in both surveys.



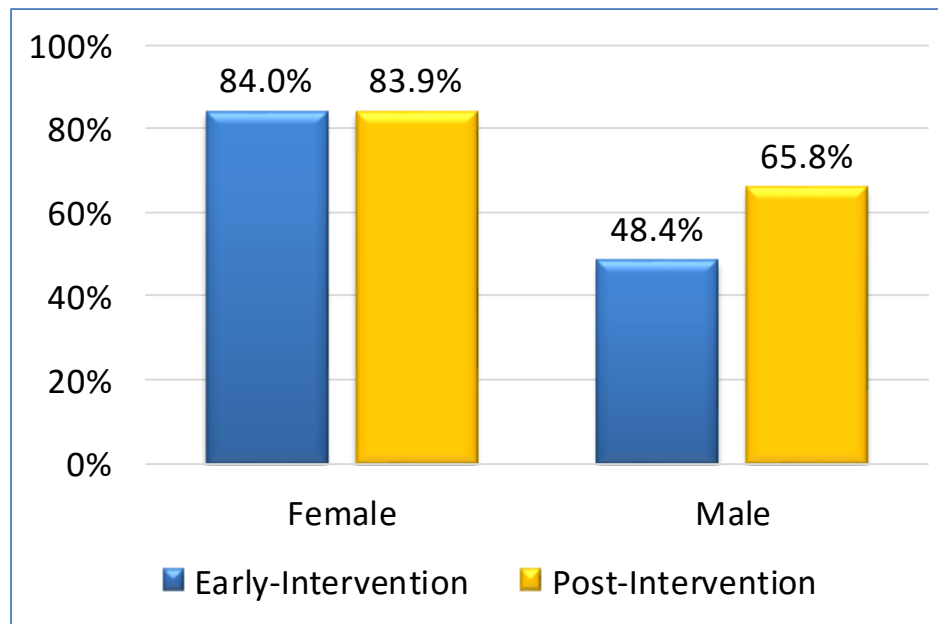
Findings (cont.)

- Use by male drivers in cars and SUVs increased while use in trucks declined slightly.
- Notable change, male SUV rate increased in the post-intervention survey while the female rate declined.



Findings (cont.)

- Female passengers have higher belt use rates. Male passenger use did increase but the change was not statistically significant.



Summary

- Seat belt use rates were likely positively impacted by a media campaign and heightened public awareness in the early-intervention phase.
- Information could not be collected pre-intervention or with regard to enforcement, it appears that many gains have been eroded based on the post-intervention survey
- Interesting that gains were sustained in the high-priority male driver group operating cars and SUVs on highways and among passengers.
- A post-post survey will be used to assess sustained/longer-term effects.

Take-Away and Tool

- Plan Ahead (if possible!)
- Identify Traffic Safety Priority(s)
- Establish Baseline Traffic Safety Metric(s)
 - R³: Reasonable, Replicable, Relevant
 - Follow Common Practices in Evaluation
- Monitor Traffic Safety Behaviors
 - Schedule
 - Accountability
- Stakeholder Feedback
- Seat Belt Survey Tool... Seat Belt Counter, Google Play
 - <http://www.ugpti.org/rtssc/resources/other.php>



Questions/Comments

fahtima.hood@mhanation.com

MHA Community Traffic Safety Administrator

New Town, ND

701.421.7668

~Buckle Up! It's the LAW~

kimberly.vachal@ndsu.edu

Senior Researcher & Program Director, PhD

North Dakota State University, Fargo ND

701.231.6425

