Introduction

Demographic Considerations is one of nine emphasis areas of the North Carolina Strategic Highway Safety Plan. Currently, this emphasis area focuses on crashes involving younger drivers, older drivers, Native Americans, and Hispanics. However, the intention of this emphasis area is to be responsive to demographic considerations, which may change as the State's population changes. This emphasis area can also help to inform the strategies and actions in the other emphasis areas.

State of the Problem

Older Drivers

The population of the US is aging as the baby boomer generation reaches retirement age. In North Carolina, the growth of the over-65 population is compounded by the attractiveness of the State as a retirement destination. North Carolina has the third-highest rate of in-migration in the country, and the average age of people moving to the State is 50 years old. Because of these trends, addressing the needs of older drivers will be important for North Carolina's future.

For reasons of health or comfort, some older drivers experience a loss in the ability or desire to drive as they age. The key issue, however, is not age but ability. Not all older drivers will see any degradation in driving ability or comfort level with driving; nor will a loss of ability or comfort level be felt at the same rate or to the same degree for all older drivers. Although many older drivers will continue to drive and not experience any problems or difficulties, older drivers are overrepresented in angle crashes that frequently occur at intersections involving drivers attempting a turning movement.

Younger Drivers

Younger drivers are another important group in North Carolina that has unique characteristics. Crash rates for new drivers are highest during the first month after a teen obtains a license that permits unsupervised driving. Crash risk then declines sharply for the next six months. Even after several years of driving, teen crash risk remains higher than for adult drivers.[1] New drivers typically master the physical control of a vehicle quickly, but experience and knowledge of how to react in specific situations—the cognitive aspects of driving—take a much longer time to develop.

Table B-1 shows the numbers of crashes, injury crashes, serious injuries, and fatalities for crashes involving older (over 65) and younger (ages 16 – 19) drivers from the five-year period from 2009 – 2013. Younger drivers are overrepresented in fixed object crashes, crashes along curve segments, and crashes involving speeding. These types of crashes reflect the inexperience of this demographic and the less developed decision-making skills for handling common driving situations.

Native Americans and Hispanics

Accurate crash data are essential to gain insight on trends and patterns and to establish effective countermeasures. Yet, the availability of accurate crash data presents one of the biggest challenges to reducing crashes involving Native Americans.

Table B-1: *North Carolina Crash Trends for Older Drivers (65+) and Younger Drivers (16-19) (2009 – 2013).*

		2009	2010	2011	2012	2013
Crashes	Older Drivers (65+)	26,597	28,855	28,715	31,008	32,540
	Younger Drivers (16-19)	37,215	34,807	33,055	32,875	33,264
Injury Crashes	Older Drivers (65+)	9,504	10,061	10,115	10,717	11,004
	Younger Drivers (16-19)	13,214	12,045	11,463	11,668	11,215
Serious Injuries	Older Drivers (65+)	295	272	367	314	330
	Younger Drivers (16-19)	392	372	309	333	255
Fatalities	Older Drivers (65+)	215	237	212	218	254
	Younger Drivers (16-19)	174	166	145	120	111

Many tribes do not report crash data through the North Carolina Division of Motor Vehicles (NCDMV) crash database, making it impossible to quantify the frequency of the crashes and develop possible solutions. Sovereignty concerns may create an obstacle for some tribes to participate in the NCDMV crash reporting system. Consequently, the incidence of fatalities and serious injuries of Native Americans in North Carolina is likely underreported.

The available crash data show that Native Americans and Hispanics are overrepresented in crashes involving alcohol. Furthermore, Native Americans are overrepresented in crashes where no restraint was used. To a degree, alcohol and restraint use are challenges generally associated with rural areas.

Figure B-2 displays fatal crashes involving alcohol for older drivers, younger drivers, Native Americans, and Hispanics.
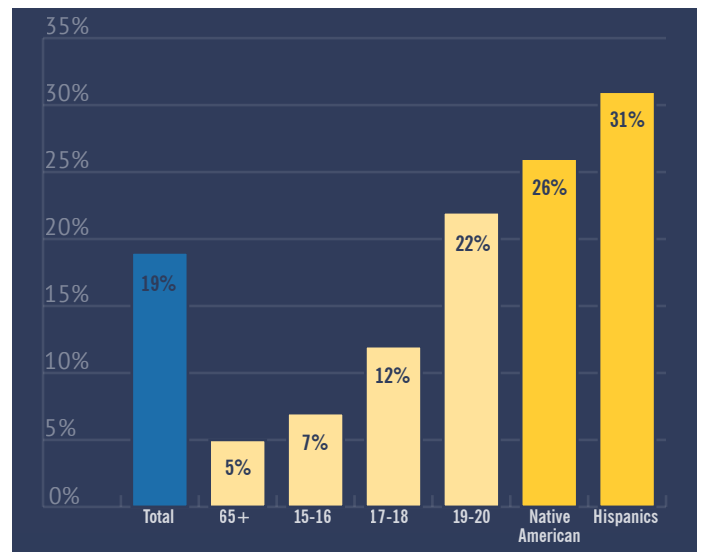
Figure B-2: *Fatal Crashes with an Alcohol-Involved Driver for Select Demographic Groups Compared to All North Carolina Drivers.*

Emphasis Area Goal

The goal for this emphasis area is to address demographic considerations in highway safety efforts. The focus of this emphasis area is the reduction of fatalities and serious injuries for two

demographic groups in particular—older drivers and younger drivers.

In 2013, there were 254 fatalities and 330 serious injuries from crashes involving older drivers (age 65 and older) in North Carolina. In 2013, there were 111 fatalities and 255 serious injuries from crashes involving younger drivers (ages 16 – 19) in North Carolina.

Strategies and Supporting Actions

The following strategies are needed to achieve the goals of the Demographic Considerations emphasis area. Listed below each strategy are several recommended actions to support it, as well as one or more North Carolina agencies identified as having a potentially significant role in its implementation and the current status of the action.

Strategy 1

Encourage the use of roadway design practices and traffic control devices that are better suited to accommodate the needs of older drivers and older pedestrians.

This may include larger and brighter signs, improved sign placement, higher retroreflective pavement markings, more wayfinding signs, shorter crossing distances, signalized crossings, pedestrian-friendly signal timing, etc.

Supporting Actions

1. Partner with AARP and FHWA for assistance identifying and promoting the use of design practices and traffic control devices that are better suited to the needs of older drivers and pedestrians.
Potential Implementing Agencies: NCDOT
Status: Needed

2. Identify concentrations of older driver populations and locations of crashes involving older drivers for potential application of targeted strategies.
Potential Implementing Agencies: NCDOT
Status: Needed

3. Prioritize and implement design practices and traffic control devices to accommodate older drivers and older pedestrians.
Potential Implementing Agencies: NCDOT
Status: Needed

Strategy 2

Adopt or develop a set of programs to help older drivers to decide whether to continue driving, and identify adequate alternatives to driving.

Supporting Actions

1. Expand doctor education efforts on how to have the conversation with older drivers on whether to stop driving. "We Need to Talk" program is an example.
Potential Implementing Agencies: NC DHHS, AARP
Status: Ongoing

2. Provide resources and guidance to older drivers at time of license recertification.
Potential Implementing Agencies: NCDMV
Status: Needed

3. Reach out to faith-based organizations on how to have the conversation with elderly members regarding driving and what resources are available as alternatives.
Potential Implementing Agencies: AARP
Status: Ongoing

Strategy 3

Improve driver education courses included in high school curricula by improving the content and the delivery.

Younger drivers are by definition inexperienced drivers, so ensuring their proper training is critical for their safety and the safety of all road users. North Carolina's Driver Education Program administered by the Department of Public Instruction is the primary mechanism for young drivers in the State to receive formal training. A 2014 report to the Joint Legislative Program Evaluation Oversight Committee found that statewide performance measures for driver education and a data-driven outcome monitoring system for student drivers completing driver education would be beneficial for assessing possible program changes that may be needed. An established monitoring system can develop a system of feedback to improve the curriculum and provide consistent delivery for training the State's youngest drivers. NHTSA will be conducting an assessment of the program in 2015 as part of their Driver Education Program Technical Assessment Process. The assessment will note where improvements can be made to strengthen the program.

The funding mechanism for the Driver Education Program, which has received State funding historically, has experienced some adjustments over the past four years. A small parent fee of $45.00 was added in 2011 and has increased to a maximum of $65.00 in 2014. Senate Bill 744 directs that the funding for driver education will no longer come from the Highway Fund, but instead from funds available to local education agencies starting on July 1, 2015. The State will have to determine in the 2015 budget if it plans to continue to fund the program and identify alternative funding sources if the Highway Fund is not used. A likely consequence is that families in most jurisdictions will be required to pay a substantially larger fee for driver education. The impact of this on the participation rate of young drivers or their decision to seek a driver license before 18 years of age is not known but should be monitored as it relates to young driver crashes. For example, crashes may decrease for drivers ages 16 and 17 as licensure rates decline for these ages, but crashes may increase for drivers 18 years and older because of a potential rise in the number of individuals who postpone their licensure.

Supporting Actions

1. Conduct discussion of annual review of the standardized curriculum.
Potential Implementing Agencies: NCDPI, Driver Education Advisory Committee, State Board of Education
Status: Needed

2. Advance programs that improve teacher training to ensure that educators are well versed in the material and effective teaching strategies.
Potential Implementing Agencies: NCDPI
Status: Ongoing

3. Implement program improvements based on the upcoming NHTSA Assessment.
Potential Implementing Agencies: NCDPI
Status: Needed

4. Establish a system to evaluate and monitor the performance of drivers completing the driver education program to provide a feedback loop to improve the curriculum and consistent delivery of the training.
Potential Implementing Agencies: TRCC
Status: Needed

5. Determine if the pending change in funding of driver education has an impact on young driver licensure and crashes.
Potential Implementing Agencies: NCDPI
Status: Needed

Strategy 4

Investigate the effectiveness of programs, policies, and strategies that have been employed across the US to address teen driver training that could also be used in North Carolina to reduce teen crashes.

Supporting Actions

1. Identify and implement programs that are proven effective at reducing young driver crashes.
Potential Implementing Agencies: NCDPI
Status: Needed

2. Provide better access to simulator training programs and driving simulators that are demonstrated effective at improving hazard recognition skills among young drivers.
Potential Implementing Agencies: NCDPI
Status: Needed

3. Include smart phone apps and other technologies designed to assist supervisors, as well as technologies that help parents monitor teens once they begin driving unsupervised.

Potential Implementing Agencies: NCDPI, NCDOT
Status: Needed

4. Research programs and countermeasures that have shown promise around the country and partner with local school districts to launch pilot programs in North Carolina to test the effectiveness of these programs.
Potential Implementing Agencies: HSRC, ITRE
Status: Needed

Strategy 5

Continue engaging and informing North Carolina's diverse population on issues of traffic safety.

Supporting Actions

1. Support the Nuestra Seguridad initiative, the Hispanic Highway Safety Education Campaign.
Potential Implementing Agencies: NCDOT
Status: Ongoing

2. Reach out to organizations (e.g., tribal groups, non-profits) representing demographic groups to provide education on relevant traffic-related issues and concerns.
Potential Implementing Agencies: NCDOT
Status: Needed

Strategy 6

Improve electronic crash data collection and dissemination.

Supporting Actions

1. Continue expanding e-data to all police departments within the State.
Potential Implementing Agencies: NCDMV
Status: Ongoing

2. Work with tribal groups to integrate crash reporting into the NCDMV system to better understand resources needed by tribal governments. Ensure that crash reporting will not threaten tribal sovereignty.
Potential Implementing Agencies: NCDMV
Status: Needed

3. Provide training to law enforcement on demographic issues to ensure proper recording at the scene of the crash.
Potential Implementing Agencies:
NCSHP, Law enforcement
Status: Needed

4. Improve geocoding of crashes to allow governmental organizations to better understand the spatial relationships of crashes within their jurisdiction.
Potential Implementing Agencies:
NCSHP, Law enforcement
Status: Needed

Strategy 7

Support lifelong driver education.

Supporting Actions

1. Educate the public, regardless of age, on changes to the driving environment (e.g., regulations, emerging issues).
Potential Implementing Agencies: NCDMV, NCDPI
Status: Needed

2. Educate the driving public on new traffic control devices (such as flashing yellow arrow signals) or new technologies before the devices or technologies are implemented on North Carolina roadways.

Potential Implementing Agencies: NCDMV, NCDPI
Status: Needed

Working Group Members

The working group for this emphasis area includes the following representatives from nine agencies committed to achieving the goals of this Action Plan:

- Kelsie Ballance, North Carolina Indian Economic Development Initiative
- Paul Black, French Broad River Metropolitan Planning Organization
- Lauren Blackburn, North Carolina Department of Transportation
- Julian Council, North Carolina Division of Motor Vehicles
- Reginald Flythe, North Carolina Department of Public Instruction
- Arthur Goodwin, UNC Highway Safety Research Center
- Bradley Hibbs, Federal Highway Administration North Carolina Division
- Suzanne LaFollette-Black, AARP
- Chris Oliver, North Carolina Department of Transportation
- Renee Roach, North Carolina Department of Transportation
- Connie Sessoms, Jr., Driver Education Advisory Committee

Supporting Material

- AARP Livability Fact Sheet, Modern Roundabouts. http://bit.ly/1u1ZC6w
- AARP Livability Communities, Dangerously Incomplete Streets. http://bit.ly/1wUz5Ul

- NHTSA Uniform Guidelines for State Highway Safety Programs – Driver Education. http://bit.ly/1wUyYrO

- North Carolina Driver Education Strategic Plan, June 2012. http://bit.ly/17DOJh6

- Performance Measurement and Monitoring Would Strengthen Accountability of North Carolina's Driver Education Program, March 19, 2014. Final Report to the Joint Legislative Program Evaluation Oversight Committee. Report Number 2014-02.

References

1: Foss, Martell, Goodwin & O'Brien (2011). "Measuring Changes in Teenage Driver Crashes During the Early Months of Driving." Washington, DC: AAA Foundation for Traffic Safety. Available at: http://bit.ly/1DDquN4