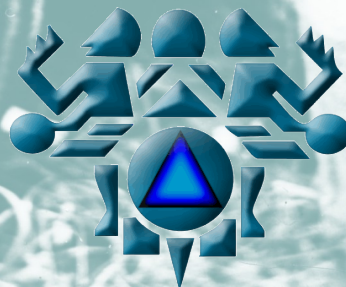
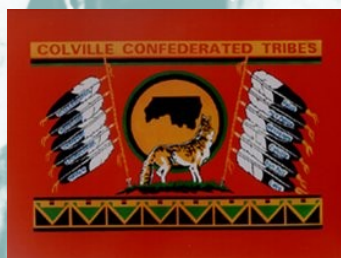


Native Children Always Ride Safe (Native CARS)

Aggregate Report 2009



Spokane Tribe



Northwest Portland Area Indian Health Board

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Suggested Citation:

Lapidus J, Lutz T, Ebel B, Bigback K, Smith N. Native Children Always Ride Safe (Native CARS): Aggregate Report. Portland, OR: Northwest Portland Area Indian Health Board, December, 2009.

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18-month old Jaci Jones getting fitted by a CPS Technician for her new toddler seat in Fort Hall, Idaho.

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Left: Four-year-old Scarlett Stagner uses a no-back booster seat. **Right:** Alice Yellowhair demonstrates how to safely secure her grandson, Eric, in a booster seat.

Background of the Project

The Native CARS study is a 5-year research study funded by the National Center on Minority Health and Health Disparities (NCMHD), and is a partnership with the NPAIHB, University of Washington, and six Northwest tribes. This partnership aims to design and evaluate interventions to improve child safety seat use in tribal communities. Six Northwest tribes that participated in the Northwest Tribal Safety Seat Project (under Dr. Francine Romero, Principal Investigator) in 2003 are participating in the current study. From the 2003 observational survey, we learned that many American Indian children age eight and under were riding either unrestrained or improperly restrained in vehicles¹.

In this study, all six participating tribes will receive an intervention. Three will receive the intervention in phase one, and the remaining three will receive the intervention in phase two. We will collaborate with the tribal communities to develop interventions using observational and formative data to assure that interventions will be meaningful and suited to each community. We will evaluate child safety seat use in the community before and after the intervention phase to see if the intervention had an impact on motor vehicle restraint use in the community.

Native CARS is lead by Principal Investigator, Dr. Jodi Lapidus who has been partnering with the NPAIHB for nine years. Also joining the study from the NPAIHB are Tam Lutz, Project Director, Nicole Smith, Biostatistician, Kristyn Bigback, Research Assistant and from University of Washington, Dr. Beth Ebel, Co-Investigator.

The purpose of this report is to describe child passenger safety restraint use prior to implementing community interventions. All six tribes participated in the observations, and can use this information to gauge improvement in child passenger safety restraint use over time.

Background on Motor Vehicle Injuries

Motor vehicle crashes are the leading cause of death for American Indian (AI) children. Proper use of age-appropriate child restraint systems can substantially reduce the number of fatal injuries; however, many AI children still ride completely unrestrained or improperly restrained when traveling. In a recent vehicle observation study in six northwestern US tribes, the majority

¹ Lapidus JA, Smith NH, Ebel BE, Romero FC. *Restraint use among northwest American Indian children traveling in motor vehicles*. Am J Public Health. 2005 Nov;95(11):1982-8. Epub 2005 Sep 29.

of AI children age eight or under rode unrestrained (41%) or improperly restrained (30%). While adult drivers in these tribes were commonly unaware of laws regarding vehicle restraints for children, they were receptive to receiving more information and training on proper use of child safety seats. One of the Healthy People 2010 injury prevention goals promotes the widespread and consistent use of child safety seats. Tribes in the Northwest have prioritized injury prevention, in particular, reducing morbidity and mortality from motor vehicles crashes among their membership.

Child Passenger Recommendations

Table 1. Child Safety Seat Information and Recommendations

| Age | Type of Seat | General Guideline |
|-----------------------|--------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Infants | Infant seats and rear-facing convertible seats | All infants should <i>always</i> ride rear-facing until they are at least 1 year of age <i>and</i> weigh at least 20 pounds. |
| Toddlers/Preschoolers | Convertible seats | It is best to ride rear-facing as long as possible. Children 1 year of age <i>and</i> at least 20 pounds can ride forward-facing. |
| School-aged children | Booster seats | Booster seats are for older children who have outgrown their forward-facing car safety seats. Children should stay in a booster seat until adult belts fit correctly (usually when a child reaches about 4' 9" in height and is between 8 and 12 years of age). |
| Older children | Seat belts | Children who have outgrown their booster seats should ride in a lap and shoulder belt in the back seat until 13 years of age. |

(Taken from the American Academy of Pediatrics (AAP) Car Safety Seats Guide for Families 2009: <http://www.aap.org/family/Carseatguide.htm#>)



Kody Gust always rides in his child safety seat.

Terminology

Infant seat – A rear-facing infant seat or a rear-facing convertible seat



Child seat – A forward-facing seat with a harness or a forward-facing convertible seat



Booster seat – a high back or no-back seat that is used with the vehicle lap/shoulder belt system



Lap/shoulder belt – the system equipped in vehicles manufactured after 1967. Also referred to as an adult seat belt



NHTSA Guidelines – National Highway Transportation Safety Administration (NHTSA) guidelines for child passenger safety. Also called American Academy of Pediatrics (AAP) guidelines, “expert guidelines,” or “Washington State Law” as all these guidelines are the same.

Tribal Child Safety Seat Programs

Confederated Tribes of the Colville Reservation

The Colville tribal police recently received funding to distribute child safety seats to families in need. Colville has also worked with WIC for many years to give rear-facing infant seats to new parents.

Confederated Tribes of Grand Ronde

Grand Ronde has employed a Child Passenger Safety (CPS) Technician on their tribal staff for many years. Tracy Biery, the CPS Technician, hosts child safety clinics, works with Head Start daily, and helps out at the Tribal Clinic and Wellness Center when needed. She has partnered with Polk County to distribute infant seats, child harness seats, and booster seats to families in need.

Klamath Tribes

After conducting the survey on child passenger safety in 2003, Klamath Tribes have been highly motivated to write grants to fund a child safety seat program at the tribe. The Klamath Tribes currently employs four of the five CPS Technicians in the county. The Klamath Tribes have a strong partnership with Klamath County, and the Tribal CPS Technicians serve the entire 6,135 square mile county. Klamath Tribes has a tribal program to distribute infant seats, child harness seats, and booster seats to families in need.

Nez Perce Tribe

Nez Perce Tribe sponsors a program that funds child passenger safety education for new parents. Parents receive an infant seat upon completion of the six class series. Nez Perce Tribe has employed a Child Passenger Safety technician in the past, but as of this writing, they do not have a CPS technician on staff.

Shoshone-Bannock Tribes

The Shoshone-Bannock Tribes have a child passenger safety program sponsored by the Tribe that distributes infant seats, child harness seats, and booster seats to families in need. The Tribe currently employs a CPS Technician.

Spokane Tribe

The Spokane Tribe was recently awarded a grant to purchase child safety seats and distribute them to families in need. The Spokane Tribe has employed a CPS technician in the past, but as of this writing, they do not have a child passenger safety expert on staff.

Please note that for all six tribal child safety seat programs, seats are only made available to parents, not to grandparents or others who care for children.

Tribal Seat Belt Laws

Tribe A

Tribe A is a land-based tribe and has a tribal code that requires child passenger restraints for children less than five years of age. As a primary law, it is enforced by tribal law enforcement officers when there is a reasonable belief that an unrestrained child in a motor vehicle is less than five years of age. If someone receives a ticket for violation of this law, they may present proof of subsequent acquisition of a child passenger restraint system within seven days to the Tribal Court, and the Tribal Court may dismiss the infraction.

Tribe B

Tribe B is a land-based tribe, and all areas observed were on the reservation. This tribe does not have a seat belt law or a child passenger safety code.

Tribe C

Tribe C is a land-based tribe, and all areas observed were on the reservation. Tribe C adopted the State law, which is a secondary law with provisions for seat belts and child safety seats. The law is enforced by tribal police.

Tribe D

Tribe E does not have reservation land, but does have two tribal centers, one in a rural area, and one in a small urban area. We conducted observations in both areas. Since neither of these areas is on tribal lands, all drivers were subject to the primary state law which has provisions for child passenger safety, including booster seats. The law is enforced by state, county, or city police.

Tribe E

Tribe E is not a land-based tribe. While the tribe has land holdings, the land is not inhabited. Tribal buildings, schools, and neighborhoods are all in areas subject to the primary state law which has provisions for child passenger safety, including booster seats. The law is enforced by state, county, or city police.

Tribe F

Tribe F is a land-based tribe with a primary seat belt law that is enforced by tribal police. There is not a tribal child passenger safety law requiring child safety seats. Drivers may be stopped and cited if a child is not using any restraint, but drivers cannot be cited for not using a child safety seat. Most observations were conducted on the reservation, but we did conduct interviews at one off-reservation site, where drivers were subject to the primary state law, which has provisions for child safety seats, including booster seats, and requires passengers age twelve and under to ride in the back seat.

State Seat Belt Laws

Washington

Seat Belt Law: All vehicle occupants must be properly restrained in all seating positions. The driver is responsible for properly securing all children under the age of 16. Passengers 16 years of age and older are responsible for themselves and may receive their own citation if they are not properly restrained. Buckling one seat belt around two people or placing the seat belt under the arm or behind the back is dangerous, can cause death or serious injury and is a violation of the law.

Child Restraint Law: Children under 13 years old are to be transported in the back seat where it is practical to do so. Children must use a child restraint up to their eighth birthday, unless they are 4'9" tall (whichever comes first). The restraint system must be used correctly according to the car seat AND vehicle manufacturer's instructions. Vehicles equipped with lap-only seat belts are exempt from the requirement to use a booster seat for a child weighing more than 40 pounds. Children eight years of age or at least 4'9" who wear a seat belt MUST use it correctly (never under the arm or behind the back) or continue to use a child restraint. Always follow the manufacturer's instructions and guidelines for both the child restraint and the vehicle.

Oregon

Seat Belt Law: Oregon law requires that all motor vehicle operators and passengers be properly secured with a safety belt or safety harness, unless all safety-belt equipped seating positions are occupied by other persons. This applies to passenger cars, pick-up trucks, motor homes, and fee-based people transport carrying fifteen or fewer persons. Limited exemptions are allowed under ORS 811.215. Vehicle owners are required to maintain belt systems in working order.

Child Restraint Law: (effective July 1, 2007) Child passengers must be restrained in approved child safety seats until they weigh forty pounds. Infants must ride rear-facing until they reach both one year of age AND twenty pounds. Children over forty pounds must use a booster seat to 4'9" tall unless they have reached age eight.

Idaho

Seat Belt Law: Idaho law requires everyone in a vehicle to wear safety restraints. Other provisions under the law include: Adult violators, 18 and older, are subject to a \$10 citation. An adult driver is ticketed for passengers younger than 18 who are not properly restrained. If the driver is younger than 18 and the driver or any occupant younger than 18 fails to wear a seat

belt, court costs are added to the fine. The \$10 fine and court costs total \$51.50. A law enforcement officer can issue a citation solely for a safety restraint violation, but there must be another violation leading to the traffic stop.

Child Restraint Law: Children under age seven riding in motor vehicles are required to be restrained in an appropriate child safety seat. Violation of the law will result in a \$69 fine to the driver. Previously, Idaho's safety seat law applied only to children up to age 4 and/or 40 pounds. There is no weight restriction on the new law. Idaho is the 29th state to adopt a booster seat law. The purpose of this legislation is to prevent further personal injury and/or death to our young children as they travel our highways.

Methods

Observation Protocol

The data collection instrument was modeled after the 2003 tool and was modified with the input from the six participating tribes. Site coordinators and secondary Native CARS staff attended an observer training in Portland where the survey instrument was field tested and modified accordingly. Site coordinators and all contracted observers attended a second observer training on site the first day of data collection at each tribe.

We allotted five days of data collection per site, though the actual time needed depended on the specific tribes chosen for the study as well as the density of traffic at the site. For the safety of data collectors, interviews were conducted during daylight hours. This is also when children were most likely to be traveling in vehicles.

In the field, NPAIHB staff, the Site Coordinator, and Community Trainees divided into teams to collect data at different sites determined by the project team. Prior to data collection, we obtained permission from the owner/manager at each site location to collect data in their parking lot. We tried to make sure to have at least one community representative with each team. Each interview took about three to five minutes. The following protocol was used:

1. Vehicles were approached when the driver and passengers were most likely to be using a seat belt –either before the passengers unbuckled their seat belts before getting out of the vehicle, or after the passengers were seated and the vehicle was ready to leave.
2. The interviewer introduced himself/herself to the driver and explained the study.
3. After ensuring confidentiality, he/she requested permission to conduct the interview and observations.

4. Upon obtaining the driver's verbal consent, the interviewer proceeded with the interview and observation.
5. Upon completion of the interview, each driver was thanked and given information on child safety seats and a token of appreciation valued at \$5.
6. If a driver refused participation *only* public information was collected – driver's gender and seat belt use.
7. The team then checked their data collection forms for completeness, returned to their original positions and awaited another target vehicle.

Study Population

Inclusion criteria:

- Vehicles arriving or leaving at sites determined by tribal site coordinator and staff containing at least one child passenger of estimated age eight and younger

Exclusion criteria:

- No child of estimated age eight years old or younger
- Vehicle was a bus, motorcycle, or commercial vehicle
- Driver refused to participate

Description of Study Population

The focus of this study was the use of child safety seats. Children from birth to age 8 or 4'9" in height are recommended and/or required by state law to use a child safety seat (including infant car seat, forward-facing harness seat, or booster seat) when traveling in a vehicle. Therefore, we targeted vehicles with child passengers age 8 years old or younger. Once a vehicle had been approached and the driver had been asked to participate, we collected data even if the child passenger was over age 8. Because children under age 13 are recommended and/or required to ride in the back seat, we also collected data on all children age 12 and younger. Descriptive information on all children is also valuable and useful for intervention design.

Our study involved a convenience sample, based on those vehicles that drove to the sites selected by the project team. We attempted to intercept every potential target vehicle, but this was dependent on the density of traffic at the specific site. Based on power calculations, we needed to observe 200 vehicles per tribal community.

Enrollment and Consent Process

Each potential interviewee was first provided with an informed consent statement. This informed consent statement explained the purpose, general content, and time commitment involved in the in-person interview and child safety seat observation. This informed consent statement provided assurances of confidentiality and demonstrated an officially signed partnership between the NPAIHB and the member tribe. Each prospective participant had the opportunity to ask any questions at that time and was directed to the toll-free telephone number of the Principal Investigator and local Site Coordinator's phone number on the informed consent statement should they have any further questions after the interview is completed. Each potential participant was informed that he or she is free to decline participation or refuse to answer specific questions or allow observations. After these steps had been taken, a verbal agreement to participate in the survey constituted an informed consent.

No personally identifying information was collected during the interviews and observations. No individual was identified or identifiable in any report based on data collected as part of this project. All data collected during this study is being held in the strictest confidence at all times by all study personnel. All datasets are stored on secure, password-protected computers accessible only by authorized staff members at the Northwest Portland Area Indian Health Board. In addition, all project staff from NPAIHB and the communities signed a confidentiality agreement prohibiting disclosure of information obtained during the interviews and vehicle observations to anyone other than study personnel, unless the information is in aggregate form so that individuals or tribes are non-identifiable.



Arletta Buckskin, Kristyn Bigback, Tam Lutz, and Krystal Buckskin conducting observations in Fort Hall, ID

Results

We surveyed 1207 vehicles containing children age eight years old or younger traveling on or near six Northwest tribal reservations in April or May, 2009, during daylight hours. A total of 88% of drivers we approached agreed to participate in the study. Of the 171 drivers who declined to participate, most said they were in a hurry or did not have enough time to complete the interview. The interviews were conducted at various sites on the reservations including daycares, elementary schools, preschools, health clinics, gas stations, grocery stores, and convenience stores.

Driver and Vehicle Characteristics

Drivers were an average of 12.1 minutes from home. Distance from home in minutes ranged from 1 to 90 minutes; half of drivers were 8 minutes from home or less. The most common vehicles surveyed were cars (46%) followed by sport utility vehicles (SUVs- 25%), trucks (17%), and vans or mini-vans (12%). Most vehicles were manufactured in the years 2000-2009 (54%). Nearly as many were manufactured between 1990-1999 (40%). The rest were manufactured in the 1980s (5%), 1970s (1%) or 1960s (3 vehicles).

We most often surveyed vehicles with only one passenger besides the driver (40%). Thirty-four percent (34%) of vehicles had two additional passengers, 17% had three, 6% had four, and 2% had five passengers besides the driver. One vehicle in the survey had a total of seven people in the vehicle, one had eight people in the vehicle, and one vehicle in the survey had a total of fourteen people in the vehicle. Nineteen vehicles (2%) had more passengers than the number seats available in the vehicle.

Over two-thirds (68%) of the drivers surveyed were women. Seventy-one percent (71%) of the surveyed drivers reported their race as American Indian while 29% reported another race. Seventy-nine percent (79%) of vehicles surveyed had at least one American Indian child passenger, while 21% did not have an American Indian child passenger. Driver age ranged from 15 years old to 82 years old and the average driver age was 34 years old.



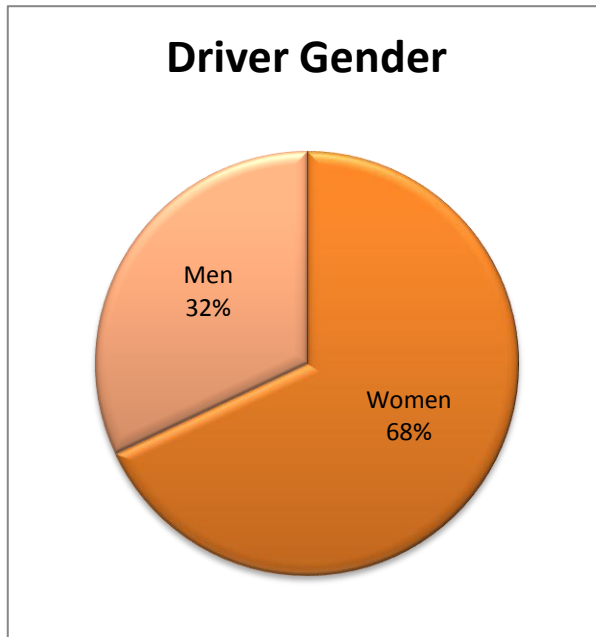


Figure 1: Over two-thirds of the participants were women, and less than one-third were men.

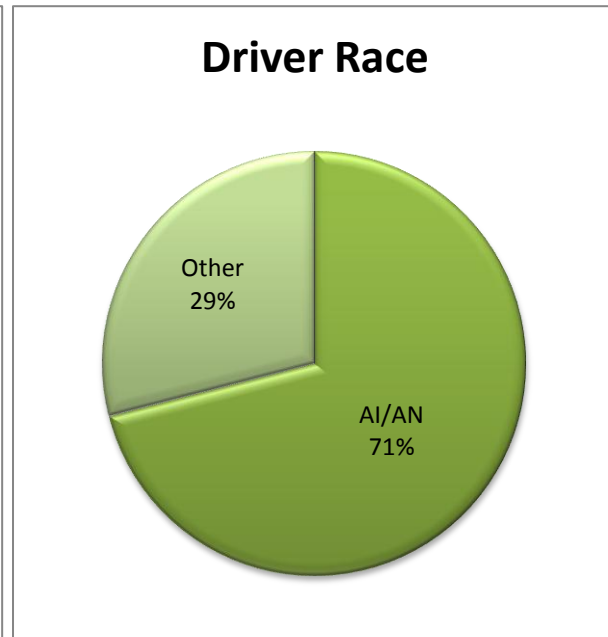


Figure 2: The majority of participants were AI/AN (71%), while 29% reported another race.

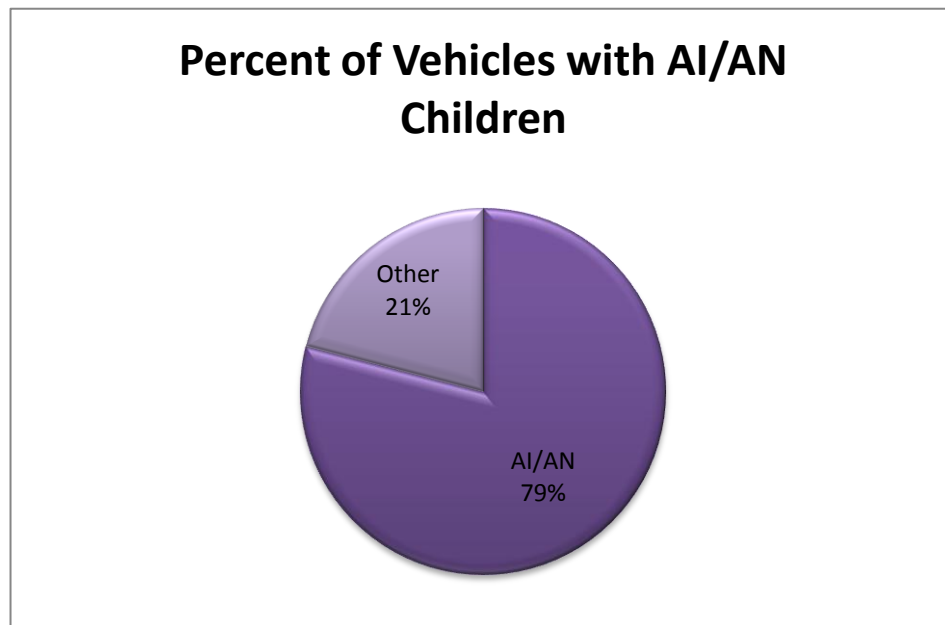


Figure 3: Seventy-nine percent (79%) of vehicles surveyed had one or more child passenger who was AI/AN.

Driver Age in Years

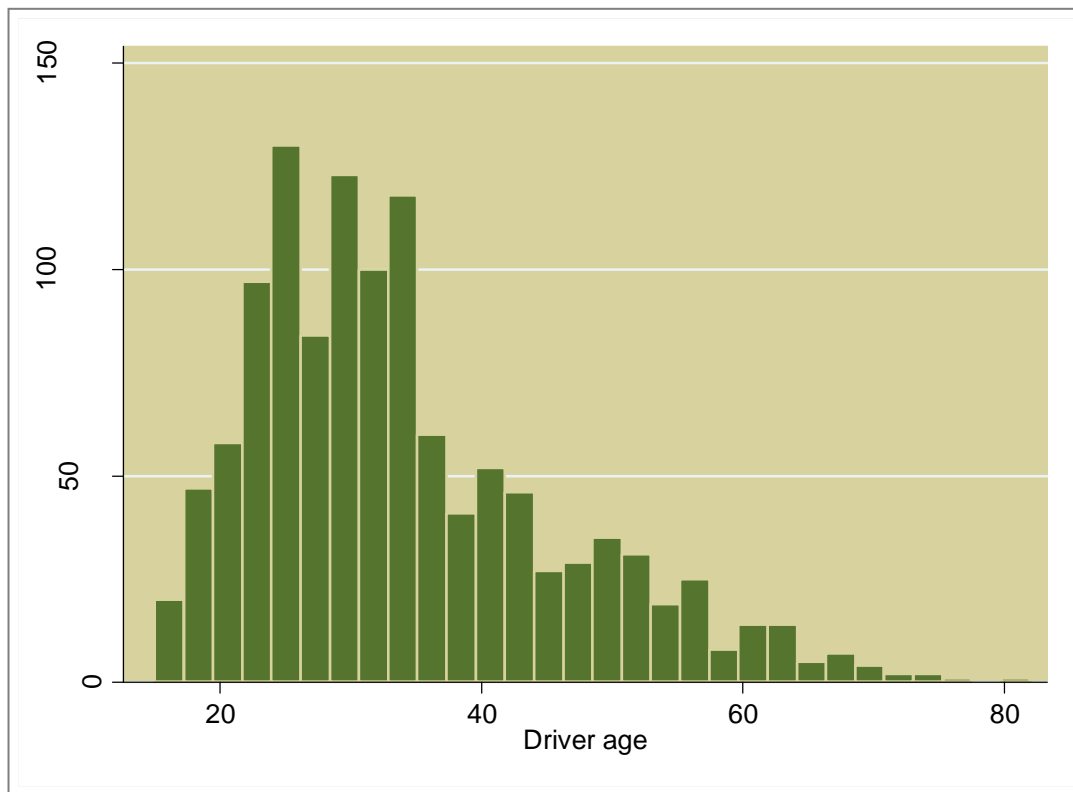


Figure 4: Most drivers in the survey were in their 20s and 30s (68%).

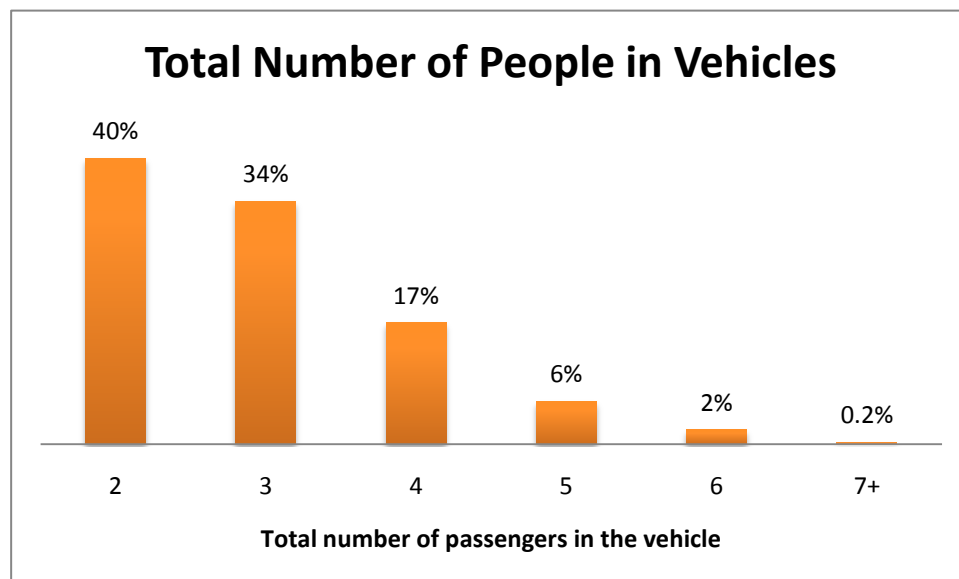


Figure 5: Forty percent of vehicles had only one passenger besides the driver. Approximately one-third of vehicles had a total of 3 people in the vehicle, 17% had 4, 6% had 5, 2% had 6, and 3 vehicles had 7 or more people in the vehicle.

Distance from Home in Minutes

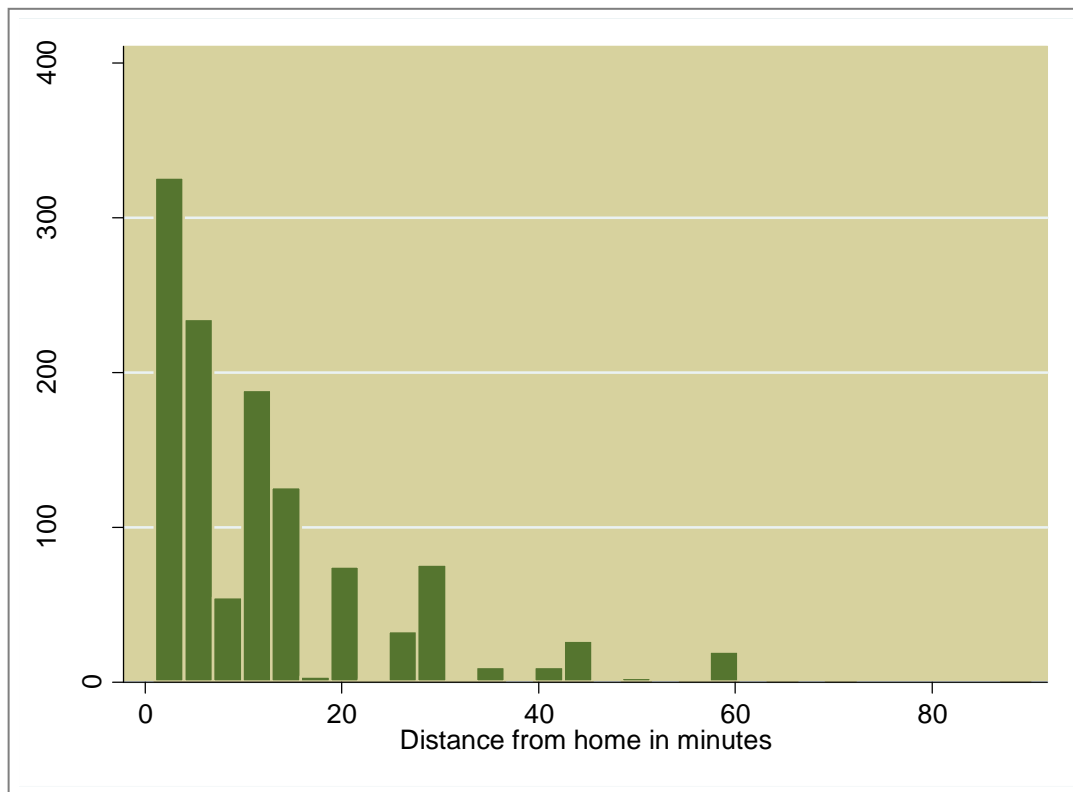


Figure 6: Half of all drivers were eight minutes from home or less.

Driver Seat Belt Use

In total, 61% of drivers wore a seat belt. Driver seat belt use varied significantly by tribe, ranging from 32% to 86% of drivers wearing seat belts. Women were significantly more likely to be wearing a seat belt than men – 64% of women were belted as compared to 53% of men. ($p < 0.001$). Seat belt use by drivers was statistically different by the type of vehicle being driven. A higher percentage of van or mini-van drivers were wearing a seat belt (71%) followed by drivers of SUVs (64%), cars (59%), and trucks (54%). Drivers who were wearing a seat belt were farther from home, on average, than drivers who were not wearing a seat belt -13.3 minutes compared to 10.3 minutes, respectively ($p < 0.001$). Drivers aged 50 or older were the most likely to wear seat belts (70%), followed by drivers in their 30s (62%), drivers in their 20s (61%), drivers in their 40s (53%), and drivers age 15-19 (48%, $p = 0.006$). Drivers who declined to participate in the survey were far less likely to be wearing a seat belt than drivers who agreed to talk to us (42% v 61%, $p < 0.001$).

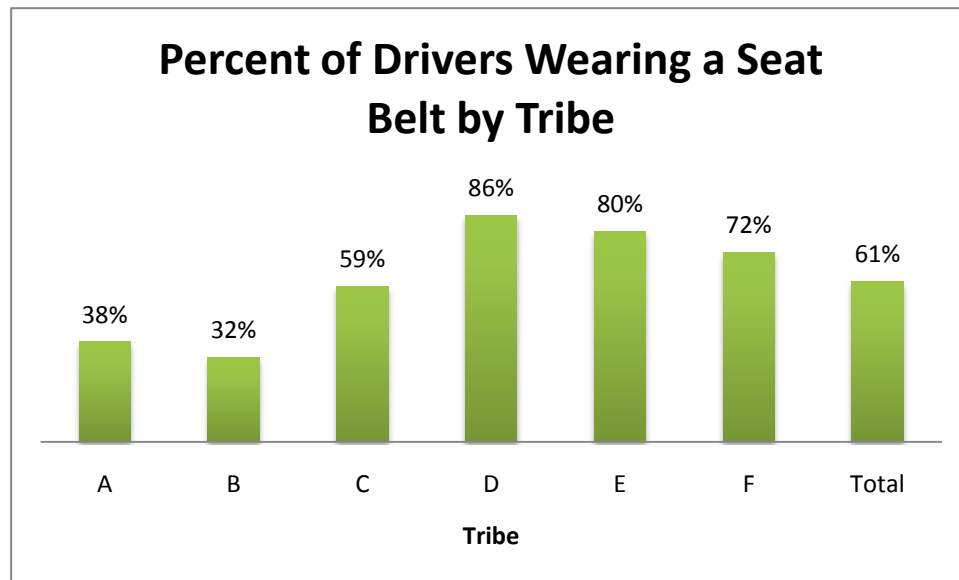


Figure 7: Sixty-one percent (61%) of drivers were wearing a seat belt. Driver seat belt use ranged from 32% to 86% by tribe.

Comparison of 2003 and 2009 Driver and Vehicle Data

In 2003, a driver had to be AI/AN or have AI/AN children in the vehicle to be eligible to complete the interview. In 2009, race was not a survey eligibility factor; however, 71% of drivers surveyed reported their race as American Indian/Native American/Tribal. We also collected additional information in 2009 on the type of vehicle being driven and whether or not there were Native children in the vehicle, which was not included in the 2003 survey. For comparison purposes, we have included some information for the Native only subset of the 2009 survey in which either the driver was Native or there was at least one Native child in the vehicle.

Driver seat belt use increased from 51% in 2003 to 61% in 2009. Driver seat belt use for the Native only group was somewhat lower (55%), but was still an improvement from 2003. There was a higher percentage of men in the 2009 survey (32%) compared to the 2003 survey (27%). The age distribution of drivers was similar in both the 2003 and 2009 surveys, as was distance from home in minutes. Only two vehicles in the survey were manufactured before 1968, when federal law mandated vehicles to be fitted with seat belts in all designated seating positions.



Table 2. Characteristics of Drivers and Vehicles on or near Six Northwest Reservations in 2003 and in 2009

| | <u>2003</u> | <u>2009</u> | <u>2009</u> <u>AI/AN Only</u> |
|-------------------------------------------------|-------------|-------------|----------------------------------|
| Number of surveys | 574 | 1207 | 956 |
| Driver race | | | |
| AI/AN | 100%* | 70.7% | 88.8% |
| Other | 0 | 29.2% | 11.2% |
| AI/AN children in car? | | | |
| Yes | ~ | 78.5% | 98.8% |
| No | ~ | 21.5% | 1.2% |
| Driving time from home in minutes (mean) | 12.0 | 12.1 | 11.2 |
| Driver age | | | |
| 14-19 | 6.4% | 5.6% | 5.8% |
| 20-29 | 37.7% | 36.3% | 35.6% |
| 30-39 | 27.1% | 31.3% | 31.9% |
| 40-49 | 15.2% | 14.1% | 14.7% |
| 50+ | 13.6% | 12.7% | 12.0% |
| Driver seat belt use | | | |
| Belted | 50.7% | 60.5% | 54.7% |
| Not belted | 48.8% | 39.5% | 45.3% |
| Driver gender | | | |
| Female | 72.6% | 68.4% | 66.9% |
| Male | 27.4% | 31.6% | 33.1% |
| Vehicle model year | | | |
| 1960-1969 | 1.0% | 0.2% | 0.2% |
| 1970-1979 | 4.4% | 1.1% | 1.3% |
| 1980 – 1989 | 17.9% | 5.3% | 4.7% |
| 1990 – 1999 | 59.5% | 39.9% | 41.0% |
| 2000 – 2009 | 17.2% | 53.5% | 52.9% |
| Vehicle type | | | |
| Car | ~ | 45.9% | 47.7% |
| SUV | ~ | 25.2% | 24.2% |
| Truck | ~ | 16.9% | 17.1% |
| Van/Minivan | ~ | 12.1% | 11.0% |

*In 2003 American Indian race was a requirement for survey eligibility

~Not included in the 2003 survey



Child Characteristics

We collected information on 1854 children age 12 and under. Although we only surveyed vehicles with at least one child passenger age 8 years old or younger, if there were children age 9-12 in the vehicle, we collected information on those children as well.

A little over half of the children were boys (51%) and 49% were girls. Most children (52%) were being driven by their mother, 22% were being driven by their father, 12% were riding with a grandparent, and 13% were riding with a neighbor, sitter, friend, or other relative.

We asked the driver to estimate the child's age and weight so we could determine how the child should optimally be restrained in the vehicle. Of the 1854 children in the survey, 9% were infants less than 1 year old, 30% were ages 1 to 3 years old, 49% were ages 4-8 years old, and 12% were ages 9-12 years old. We asked the driver if the child was 4 feet 9 inches (4'9") tall or taller since this is the recommended height for children to begin using an adult seat belt. The vast majority of the children (91%) were not tall enough to safely use adult seat belts. Of the 163 children who were reported to be 4'9" or taller, two were age 4, four were age 5, three were age 6, twelve were age 7, 30 were age 8 and the remaining 113 were age 9-12 years old. Seven percent (7%) of children weighed less than 20 pounds, 34% weighed 20-39 pounds, 47% weighed 40-79 pounds, and 12% weighed 80 pounds or more.

The majority of children (79%) were in a rear seat. A total of 382 children (21%) were sitting in the front seat which is not recommended by child safety experts. This is an improvement from 2003 when we observed 32% of children sitting in the front seat of the vehicle.

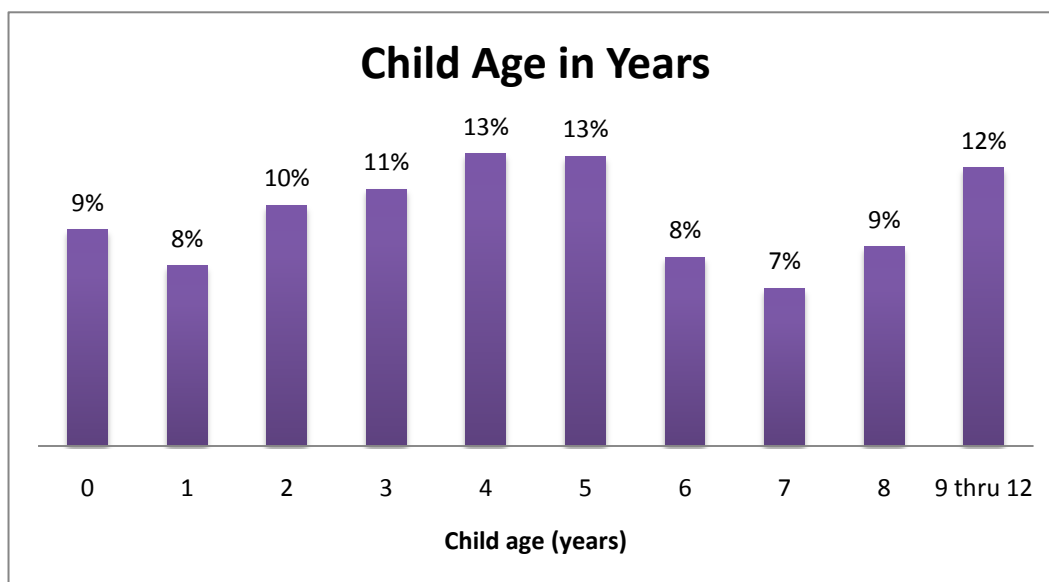


Figure 8: Nearly half of children in the survey (48%) were school age (5 through 12). One-quarter (24%) were ages 3-4, 18% were ages 1-2, and 9% were less than one year old.

Table 3. Characteristics of Children in Vehicles on or near Six Northwest Reservations in 2003 and 2009

| | <u>2003</u> | <u>2009</u> | <u>2009</u> <u>AI/AN Only</u> |
|-------------------------------------------------------|-------------|-------------|----------------------------------|
| Number of children age 12 & under | 775 | 1854 | 1450 |
| Child gender | | | |
| Male | 47.2% | 50.5% | 50.7% |
| Female | 52.3% | 49.5% | 49.1% |
| Child age | | | |
| < 1 (infant) | 11.4% | 9.4% | 8.8% |
| 1-3 | 36.1% | 29.5% | 28.1% |
| 4-8 | 52.5% | 49.0% | 50.5% |
| 9-12 | ~ | 12.1% | 12.6% |
| Child weight | | | |
| < 20 | 8.4% | 6.7% | 6.0% |
| 20-39 | 41.1% | 34.3% | 38.3% |
| 40-79 | 48.3% | 47.0% | 48.2% |
| 80+ | ~ | 12.0% | 13.5% |
| Is child 4'9" tall? | | | |
| Yes | ~ | 9.0% | 9.3% |
| No | ~ | 91.0% | 90.7% |
| Driver relationship to child | | | |
| Parent | 68.0% | 74.7% | 73.8% |
| Other | 32.0% | 25.3% | 26.2% |
| Seating location of child | | | |
| Front seat | 31.5% | 20.9% | 23.7% |
| Rear seat | 68.5% | 79.1% | 76.3% |
| Recommended restraint, based on age and weight | | | |
| Rear-facing infant seat | 11.4% | 9.7% | 9.1% |
| Forward-facing child seat | 40.8% | 24.9% | 23.0% |
| Booster seat | 47.9% | 42.7% | 43.4% |
| Adult seat belt | ~ | 22.7% | 24.5% |

~Not included in the 2003 survey



Comparison of 2003 and 2009 Child Characteristics

In 2003, we did not collect information on children older than eight years old, so the ages of children in the 2003 and 2009 survey cannot be compared directly. In the 2003 analysis, children who were eligible for an adult seat belt were excluded, so we cannot make comparisons for this group of children. In 2003, all vehicles surveyed had a Native driver, or Native children, or both, while in 2009 all races were eligible to participate in the survey. For comparison purposes, we have included some information for the AI/AN only subset of the 2009 survey in which either the driver was Native or there was at least one Native child in the vehicle.

In 2009, there was a higher percentage of children being driven by their own parents than in 2003, 75% and 68%, respectively. Fewer children were riding in the front seat in 2009 than in 2003, 21% compared to 32%. There was a higher percentage of children riding in the front seat in the AI/AN only sample (24%); however, it is still an improvement from 2003 which is a move in a positive direction since the back seat is the safest place in the vehicle.

Proper Restraint Definitions

Proper restraint status was defined according to the American Academy of Pediatrics (AAP) and National Highway Transportation Safety Administration (NHTSA) guidelines². It is also of interest to note that the Washington State law requires compliance with these guidelines. A child who should use a rear-facing infant seat was defined as any child <1 year of age or a child < 2 years old weighing less than 20 pounds (infant seat-eligible). A child between 1-4 years of age and weighing less than 40 pounds was defined as child seat-eligible. A child between 4 to 8 years old was considered booster seat-eligible, but was also considered to be properly restrained in a child harness seat since harness seats with a relatively high weight capacity are readily available. Three-year-old children weighing 40 pounds or more were also characterized as being booster seat-eligible, because many child harness seats have a top weight limit of 40 pounds, but were considered to be properly restrained in either a child harness seat or a booster seat. Children who were 4' 9" tall or 8 years old or older were considered to be big enough for the adult lap and shoulder belt. A child who was using a restraint not recommended for his/her weight and age or was using the recommended restraint incorrectly (shoulder belt behind the arm or back, for example) was classified as incorrectly restrained. Lap belts only were considered proper if that was the only restraint available in the vehicle. If the vehicle had a rear seat, a child under 13 was considered to be not properly restrained if seated in the front seat. A child that was using no restraint device was classified as improperly restrained.

² See the American Academy of Pediatrics (AAP) Car Safety Seats Guide for Families 2009: <http://www.aap.org/family/Carseatguide.htm#> Accessed November 2, 2009

Child Safety Seat Use

Twenty-nine percent (29%) of children we observed were not using any kind of seat belt or child safety seat device, which is an improvement from the 41% of children who were unrestrained in the 2003 survey. The most common restraint observed was a forward facing harness seat (24%), followed by a lap shoulder belt (18%), and a booster seat (16%). Eight percent of children (8%) were in rear-facing infant seats, 2% were using a booster seat with the shoulder belt behind the back, 2% were using a lap belt only, and 2% were using a lap shoulder belt with the shoulder belt behind the back.

We observed a significant change in the percentage of unrestrained children from 2003 to 2009, a decrease from 41% of children in 2003 to 29% in 2009. We also observed more forward facing harness seats and booster seats being used in 2009 than in 2003.

Table 4. Types and Percentages of Child Restraints Used on Six Northwest Reservations in 2003 and in 2009

| Type of restraint used | 2003 | 2009 |
|-----------------------------------|-------------|-------------|
| None | 40.7% | 29.2% |
| Rear-facing infant seat | 8.1% | 7.5% |
| Forward-facing seat with harness | 19.6% | 23.5% |
| Booster | 10.7% | 16.1% |
| Booster, incorrect belt | 1.4% | 2.2% |
| Lap shoulder belt | 11.8% | 17.7% |
| Lap belt only | 4.3% | 2.2% |
| Lap shoulder belt, incorrect belt | 3.4% | 1.7% |
| Total | 100% | 100% |

Proper Restraint Use by Children

Overall, 49% of children we observed were properly restrained – using the recommended seat based on reported age and weight or height. Infant seat eligible children had the highest percentage of proper restraint use (68%), followed by child harness seat eligible children (64%). Booster eligible children had the next highest proper restraint use (41%), and lap/shoulder belt eligible children had the lowest percent of proper use (38%). Proper restraint of children varied widely by tribe – from 23% in the lowest to 69% in the highest.



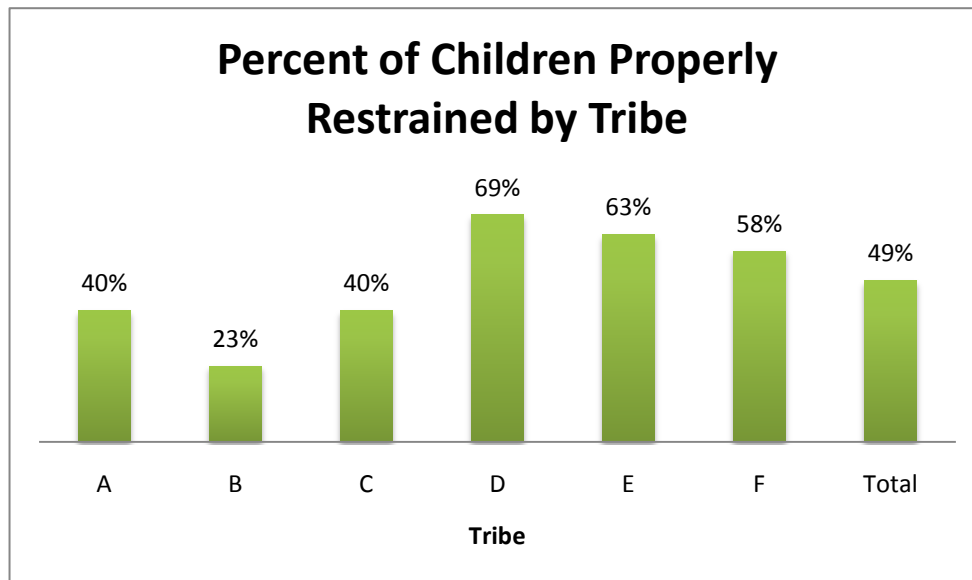
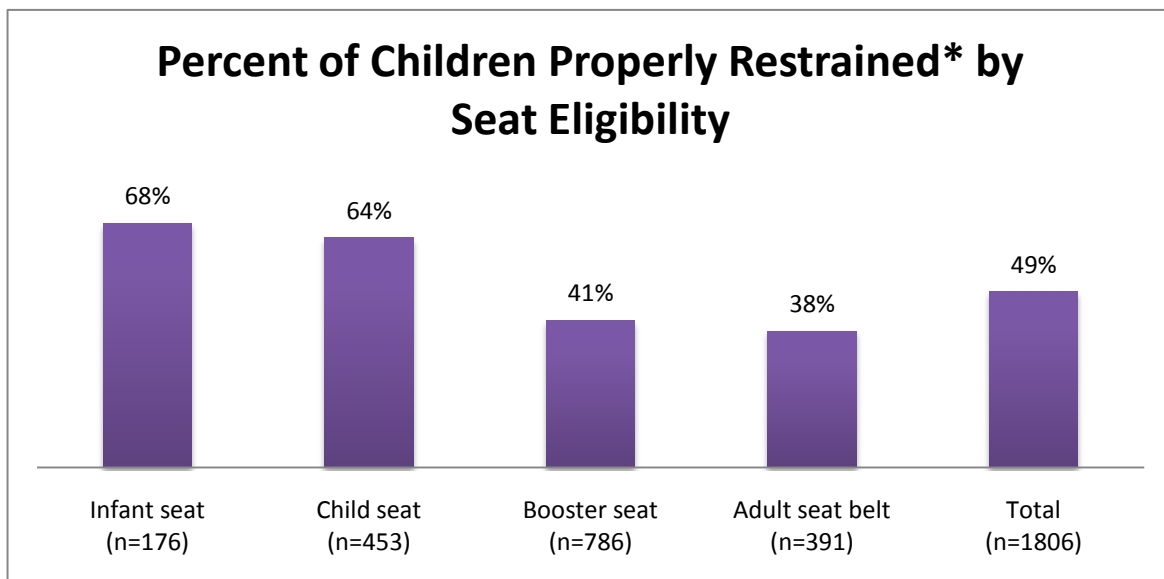


Figure 9: Proper restraint of children varied widely by tribe – from 23% in the lowest to 69% in the highest.



*Properly restrained according to National Highway Transportation Safety Administration (NHTSA) guidelines

Figure 10: Forty-nine percent (49%) of children were properly restrained in the vehicle. Infant seat eligible children had the highest percentage of proper restraint use (68%), followed by child harness seat eligible children (64%). Booster eligible children had the next highest proper restraint use (41%), and lap/shoulder belt eligible children had the lowest percent of proper use (38%).

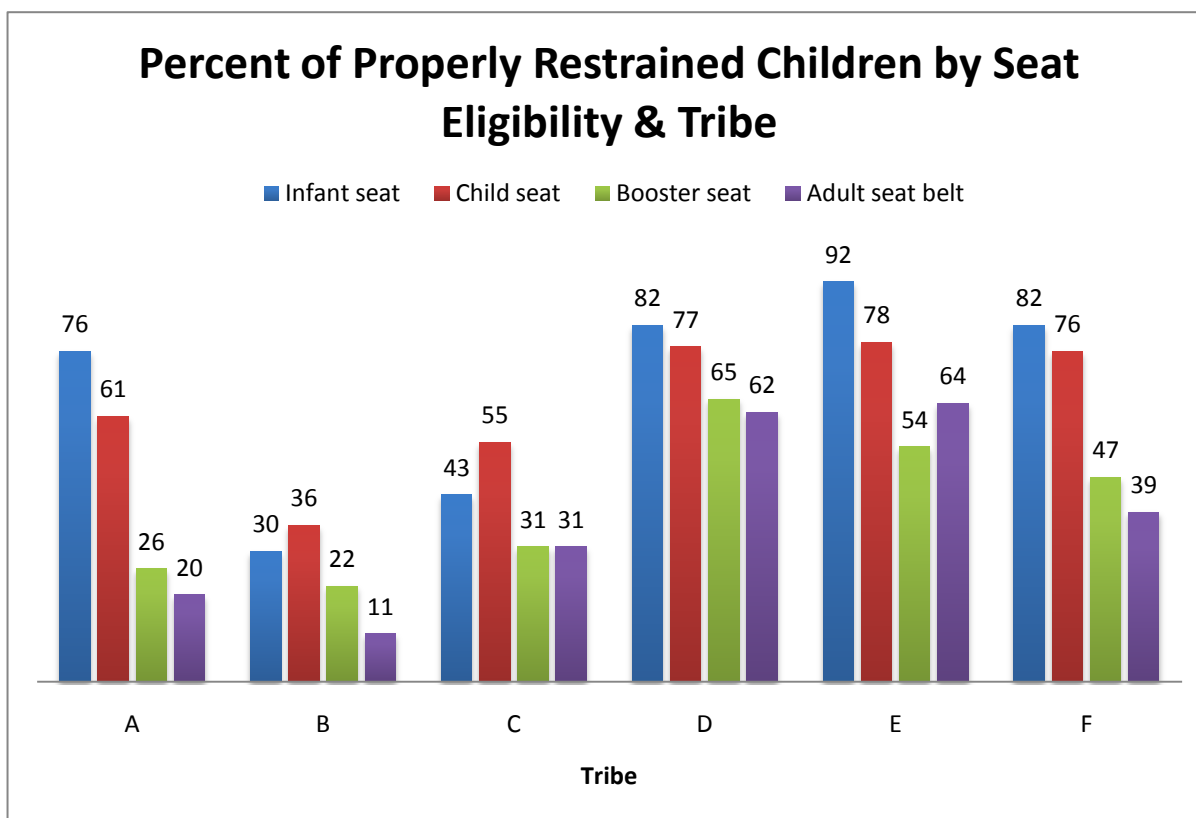


Figure 11: The percentage of properly restrained children varied by tribe. Generally, infant seat eligible children were the most likely to be properly restrained and lap/shoulder belt eligible children were the least likely to be properly restrained.

Incorrect Restraint Use

Of the 929 incorrectly restrained children in this survey, most (55%) were using no restraint at all. Of the 530 unrestrained children in the survey, 81 (15%) had an available child safety seat in the vehicle that they could have been using, but were not.

Of the 57 incorrectly restrained infant seat eligible children, 36% were unrestrained and 57% were graduated too early to a forward facing harness seat. Two infants (4%) were graduated too early to a booster seat, one was using a booster seat with an incorrect belt, and one infant was in an infant seat, but the seat was in the front when a rear seat was available.

Of 164 incorrectly restrained child seat eligible children, 53% were unrestrained, 25% were graduated too early to a booster seat, and 6% were graduated too early to a lap/shoulder belt. A few child seat eligible children (6%) were still in an infant seat when they were big enough and old enough to be in a forward facing seat. Four percent (4%) of incorrectly restrained child seat eligible children were graduated too early to booster seat with an incorrect belt, and 1%

were graduated too early to an adult seat belt and had placed the shoulder belt behind the back. Three children were in forward facing harness seats, but the seat was in the front when a rear seat was available.

Of 465 incorrectly restrained booster seat eligible children, 55% were unrestrained, 28% were graduated too early to a lap/shoulder belt, and 7% were using a booster seat but had placed the shoulder belt behind the arm. Five percent (5%) were graduated too early to a lap belt, and 2% were using a booster seat, but were sitting in the front seat when a rear seat was available. One booster seat eligible child was using a forward facing harness seat when he or she had outgrown it.

Of 244 incorrectly restrained adult seat belt eligible children, 67% were unrestrained and 27% were using a seat belt, but were seated in the front seat when a rear seat was available. Four percent (4%) were using a lap/shoulder belt, but had placed the shoulder belt behind the back. Three lap/shoulder belt eligible children were using forward facing harness seats when they had clearly outgrown the seat.

Table 5. Incorrect Restraint Use by Seat Eligibility (n=929)

| Restraint used | Seat eligibility | | | | Total (n=929) |
|------------------------------|--------------------|--------------------|----------------------|-------------------------|---------------|
| | Infant seat (n=56) | Child seat (n=164) | Booster Seat (n=465) | Adult seat belt (n=244) | |
| None | 35.7% | 53.1% | 55.0% | 67.0% | 55.4% |
| Infant seat | -- | 5.6% | 0 | 0 | 1.5% |
| Child seat | 57.1% | -- | 0.2% | 1.2% | 3.8% |
| Booster | 3.6% | 25.0% | -- | -- | 4.4% |
| Booster, incorrect belt | 1.8% | 4.3% | 6.7% | 0 | 4.0% |
| Lap shoulder belt | 0 | 6.1% | 28.0% | -- | 15.1% |
| Lap belt only | 0 | 0 | 4.7% | -- | 2.4% |
| Lap shoulder- incorrect belt | 0 | 1.2% | 4.3% | 3.7% | 3.3% |
| Correct belt, front seat | 1.8% | 1.8% | 2.2% | 27.0% | 8.5% |

Factors Related to Whether a Child was Properly Restrained

In general, as child age increased, proper restraint use decreased. Proper restraint was particularly low for six and seven year olds (24% and 23% respectively), and increased slightly once children became eligible for adult seat belts. As child age increased, the risk of riding unrestrained in the vehicle increased. Only 11% of infants were unrestrained, while 46% of 9 - 12 year-olds were unrestrained.

Proper restraint use by children was not associated with the child's gender, but driver gender was a significant factor. Women were more likely to have children properly restrained than men, with 50% of children riding with female drivers being properly restrained compared to 43% of children riding with male drivers ($p=0.007$). The child's relationship to the driver was another significant factor determining proper child restraint use. Fifty-six percent (56%) of children who were being driven by their own mother were properly restrained, while forty-six percent (46%) of children being driven by their own father were properly restrained. Thirty-eight percent (38%) of children who were being driven by their own grandparent were properly restrained, and 28% of children being driven by someone other than his or her own parent or grandparent were properly restrained ($p<0.001$).

If a child was riding in a vehicle with a driver who was wearing a seat belt, the child was much more likely to be properly restrained. Sixty-two percent (62%) of children riding with a belted driver were properly restrained, while only 26% of children riding with an unrestrained driver were properly restrained ($p<0.001$). Proper child restraint was also associated with the type of vehicle being driven. Children riding in vans or mini-vans had the highest restraint use (59%), followed by SUVs (54%), and cars (46%). Trucks had the lowest percentage of properly restrained children (35%, $p<0.001$).

Drivers of properly restrained children were younger, on average, than drivers of children who were not properly restrained. The average age someone driving a properly restrained child was 32.9 years old, while the average age of someone driving an incorrectly or unrestrained child was 35.0 years old ($p<0.001$). When drivers' ages were grouped into decades, the percent of properly restrained children decreased with each increasing decade of the driver's age, with the exception of teen drivers. Forty-eight percent of children riding with drivers age 15-19 were properly restrained. Drivers in their 20s were the most likely to have properly restrained child passengers (55%), followed by drivers in their 30s (47%), and drivers in their 40s (44%). Drivers age 50 and older were the least likely to have children properly restrained (39%, $p<0.001$).

Since only two vehicles in the survey were manufactured prior to 1968, the date when new vehicles were required to have seat belts, vehicle model year likely did not play a role in proper restraint of children. Distance from home was significantly related to proper restraint of children. Drivers of properly restrained children were, on average, farther from home (14.0 minutes) compared to drivers of incorrectly or unrestrained children (10.3 minutes, $p<0.001$).



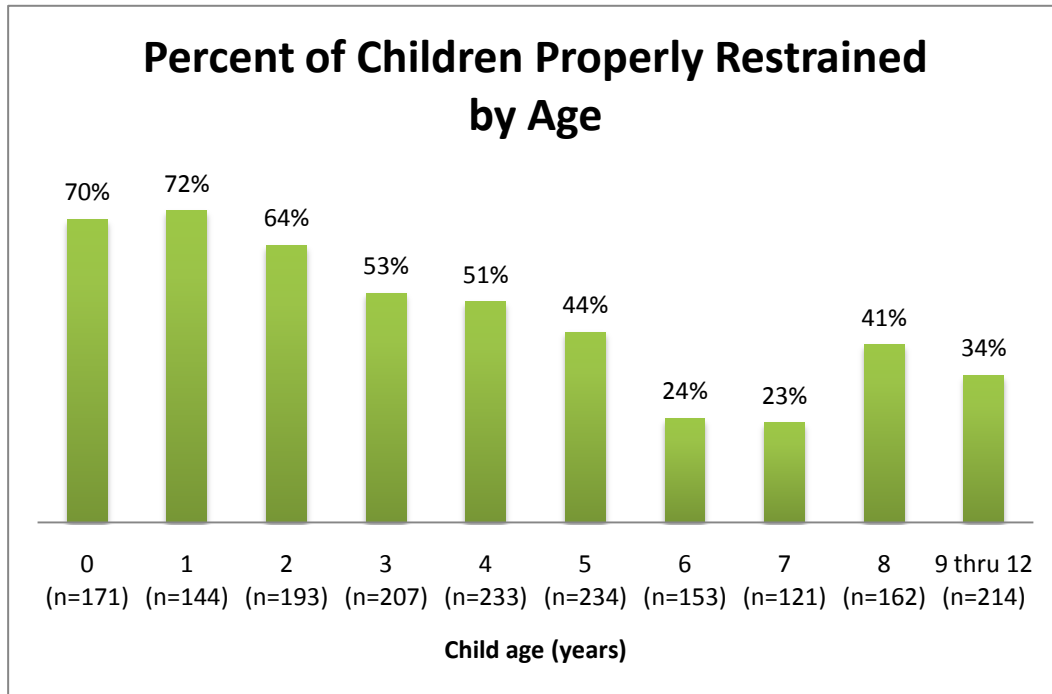


Figure 11: In general, as child age increased, proper restraint decreased.

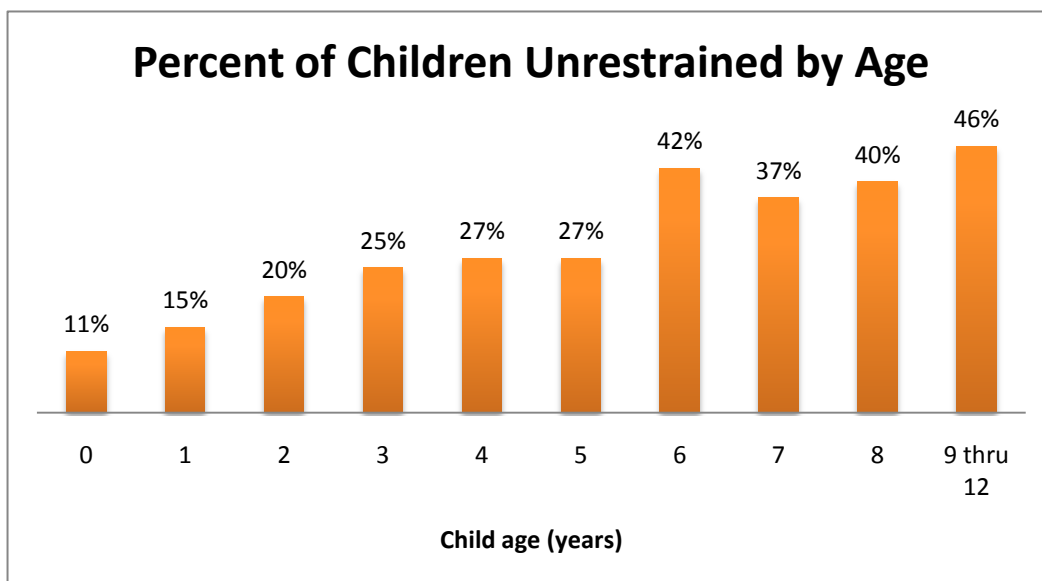


Figure 12: In general, as child age increased, the risk of riding unrestrained in the vehicle increased.

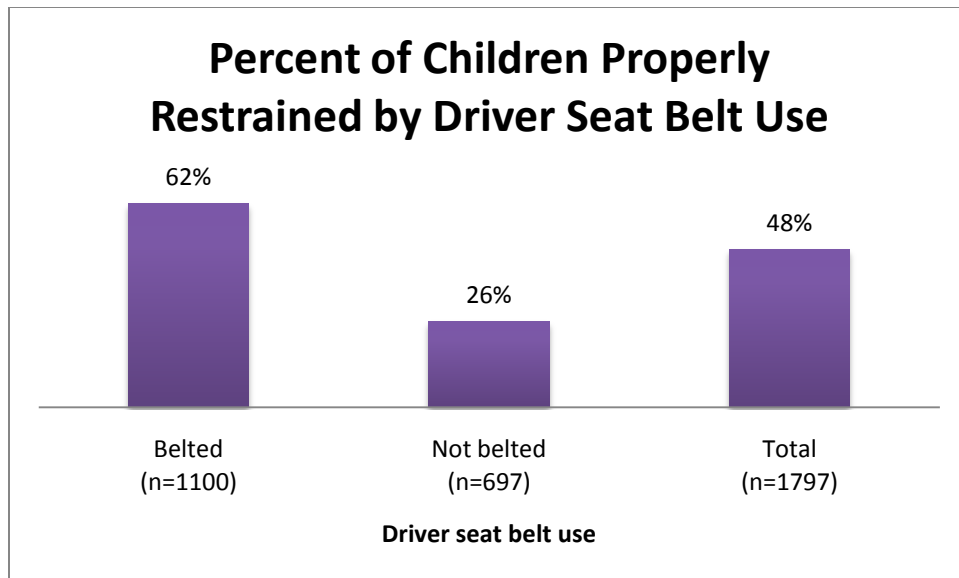


Figure 13: Sixty-two percent (62%) of children who were riding with drivers who were wearing a seat belt were properly restrained compared to only 26% of children who were riding with unrestrained drivers.

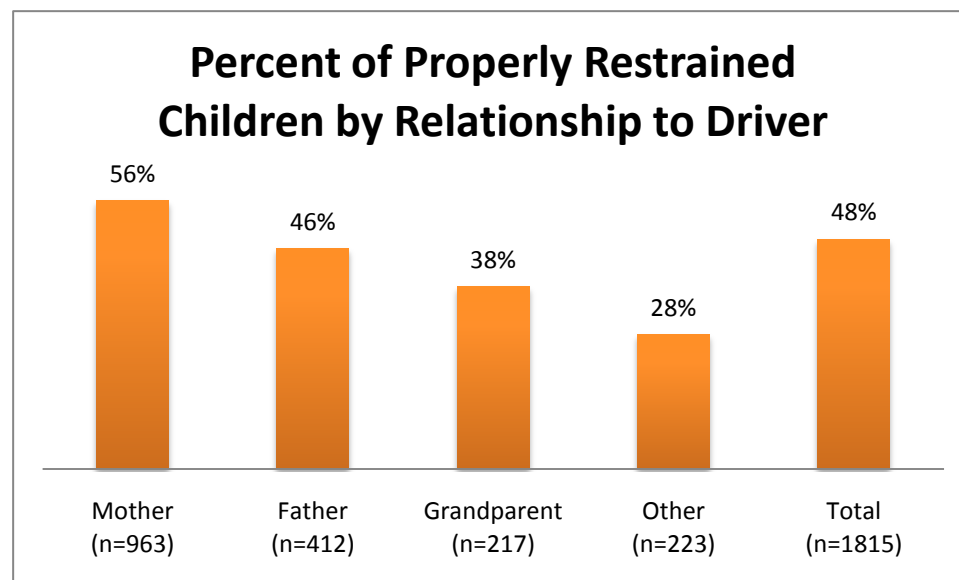


Figure 14: Children riding with their own mother had the highest percentage of proper restraint use (56%), followed by children riding with their own father (46%), or grandparent (38%). Children riding with someone other than his or her own parent or grandparent had the lowest proper restraint use (28%).

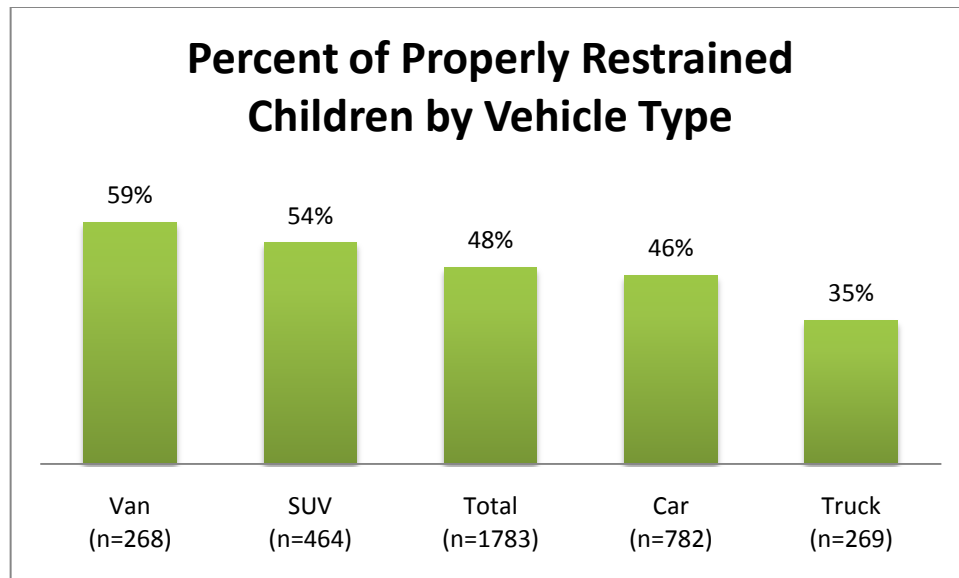


Figure 15: A higher percentage of children riding in vans were properly restrained (59%), than those in SUVs (54%), or cars (46%). Trucks had the lowest percentage of properly restrained children (35%).

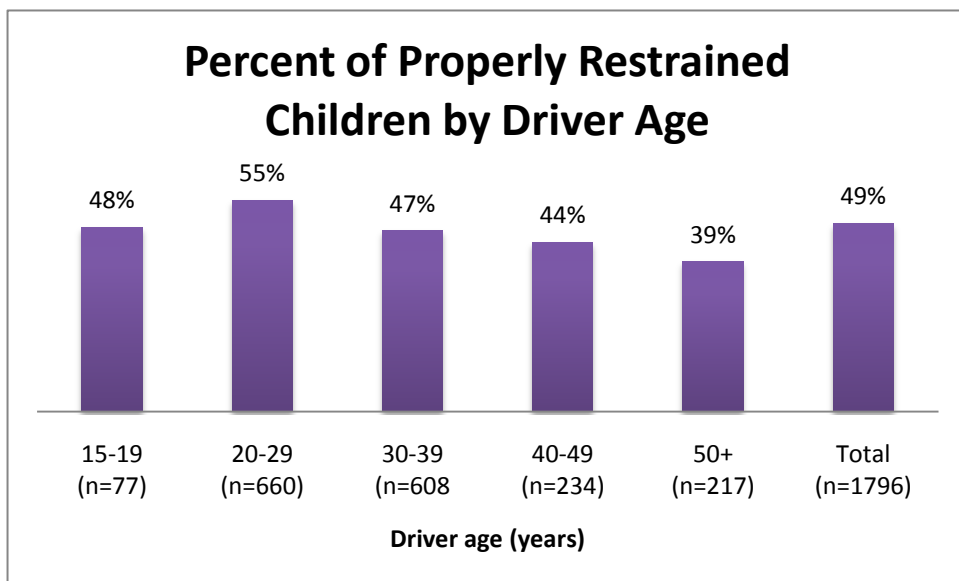


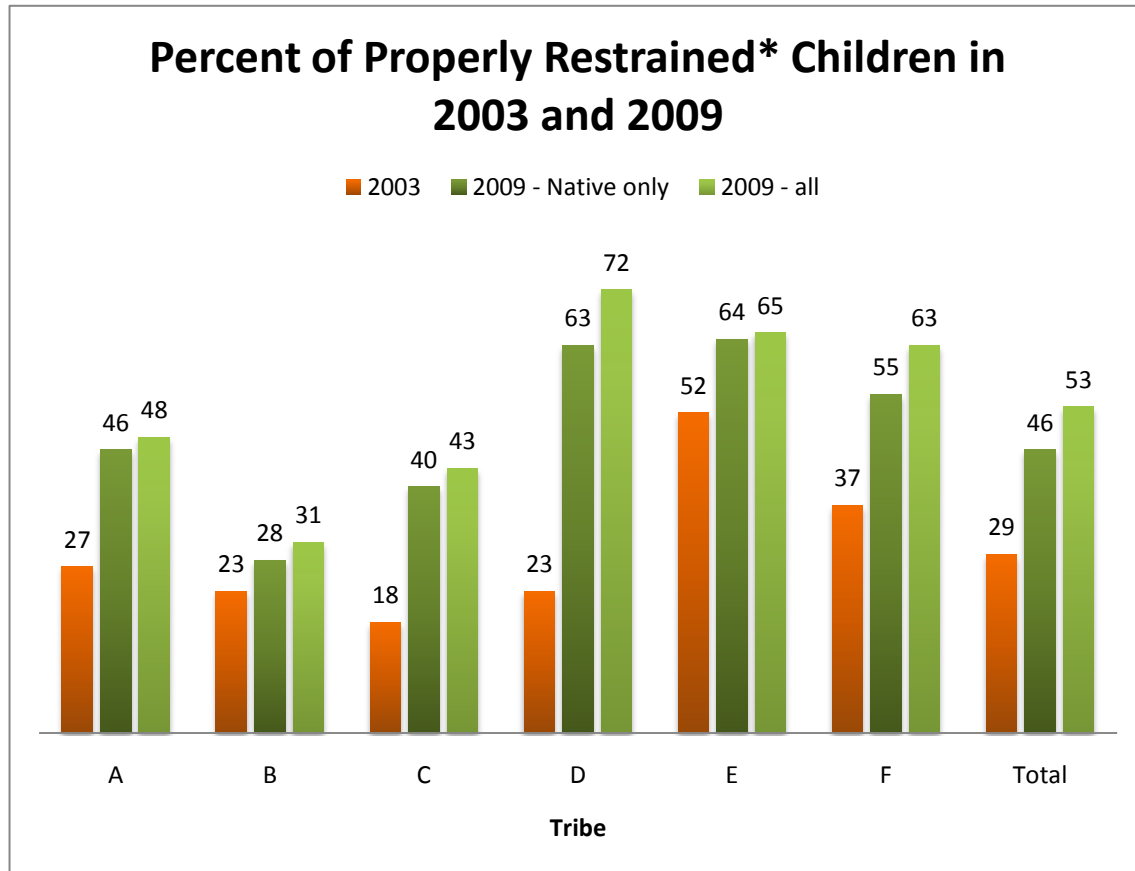
Figure 16: With the exception of teen drivers, proper restraint of children decreased with increasing driver age. Drivers in their 20s had the highest percentage of properly restrained children (55%) and drivers age 50 or older had the lowest percentage of properly restrained children (39%).

Comparison of 2003 and 2009 Proper Child Restraint Use

For comparison purposes, we assigned proper restraint use using the guidelines that were in effect in 2003. Recommendations for infant seats and child seats have not changed and eligibility for these seats was the same as described earlier in this report. Booster seat eligibility was determined by weight in 2003. Children who weighed 80 pounds or more or were eight years old or older were considered to be big enough for the adult lap and shoulder belt and were excluded from the 2003 analysis. A child who was using a restraint not recommended for his/her weight and age or was using the recommended restraint incorrectly (shoulder belt behind the arm or back, for example) was classified as incorrectly restrained. A child that was using no restraint device was classified as unrestrained. In 2003, there was no age requirement to sit in the front seat of the vehicle, so children were categorized as properly restrained if they were using the correct restraint in the front seat of the vehicle. Since adult lap/shoulder belt eligible children were excluded from the 2003 analysis, this group was also excluded from the 2009 survey analysis, in this section only, for comparison purposes. Also, since American Indian race was an eligibility requirement for the 2003 survey, we have presented select data for an AI/AN only subset of the 2009 survey.

Overall, 53% of children we observed were properly restrained – using the recommended seat based on reported age and weight, according to the 2003 definitions. The AI/AN only subset was slightly lower – 46%, but still higher than the 29% properly restrained in the 2003 survey. Proper restraint of children in 2009 ranged from 31% to 72% by tribe, and ranged from 28% to 63% by tribe in the Native only subset. Infants had the highest percentage of proper restraint use (69%; 63% for Native only), followed by child seat eligible children (64%; 60% for Native only). Booster seat eligible children had the lowest percent of proper use (43%; 36% for Native only).

There has been a significant increase in proper restraint of children since 2003. Total proper restraint use increased from 29% in 2003 to 53% in 2009 (46% for Native only). Increases were seen at every tribe in the survey, from as little as 5 percentage points to as many as 40 percentage points. The most gains were made in booster seat use – we observed an increase from 11% use in 2003 to 36% in the Native only group in 2009. The percentage of properly restrained child harness seat eligible increased from 41% in 2003 to 60% in the 2009 Native only group. We did observe a decrease in proper restraint of infant seat eligible children – babies under one year old or less than 20 pounds – in three of the participating tribes. Compared to 2003, in 2009 more babies were being prematurely graduated to forward facing harness seats when they would be optimally secured in a rear-facing seat. Adult seat belt eligible children were not included in the 2003 survey, so comparisons cannot be made for this group.



*Properly restrained according to 2003 definitions

Figure 17: Overall, proper restraint of children has increased since 2003 –from 29% to 46% (Native only) of children being properly restrained. Lap/shoulder belt eligible children were not included in the 2003 survey, so this group was also excluded from the 2009 survey for comparison purposes.



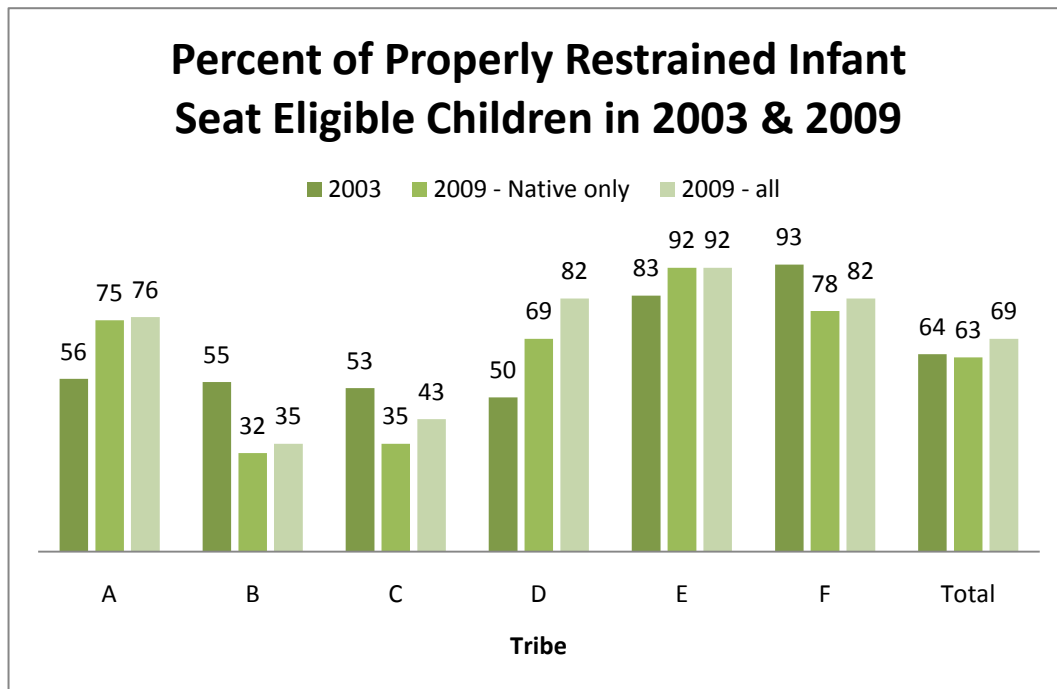


Figure 18: Overall, proper restraint of infant seat eligible children increased from 64% in 2003 to 69% in 2009, but essentially remained unchanged in the Native only group. In some tribes, proper restraint of infants decreased, mostly due to prematurely graduating infants to a forward facing harness seat.

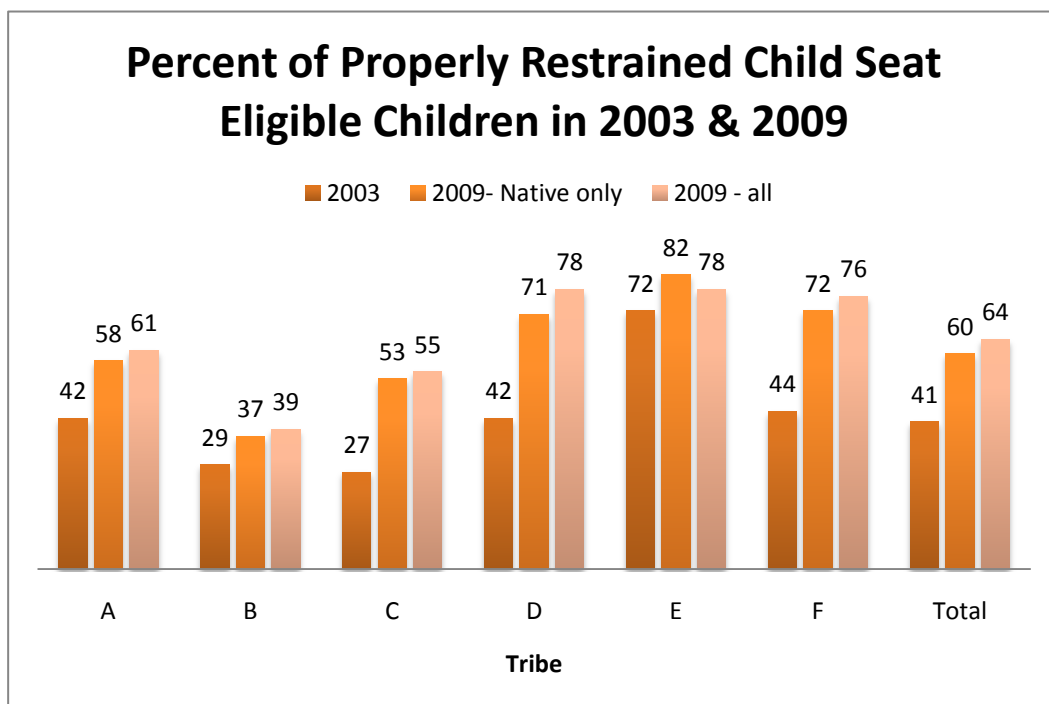


Figure 19: Proper restraint of child seat eligible children increased from 41% in 2003 to 60% in the 2009 Native only group. Proper restraint of child seat eligible children increased in every tribe from 2003 to 2009.

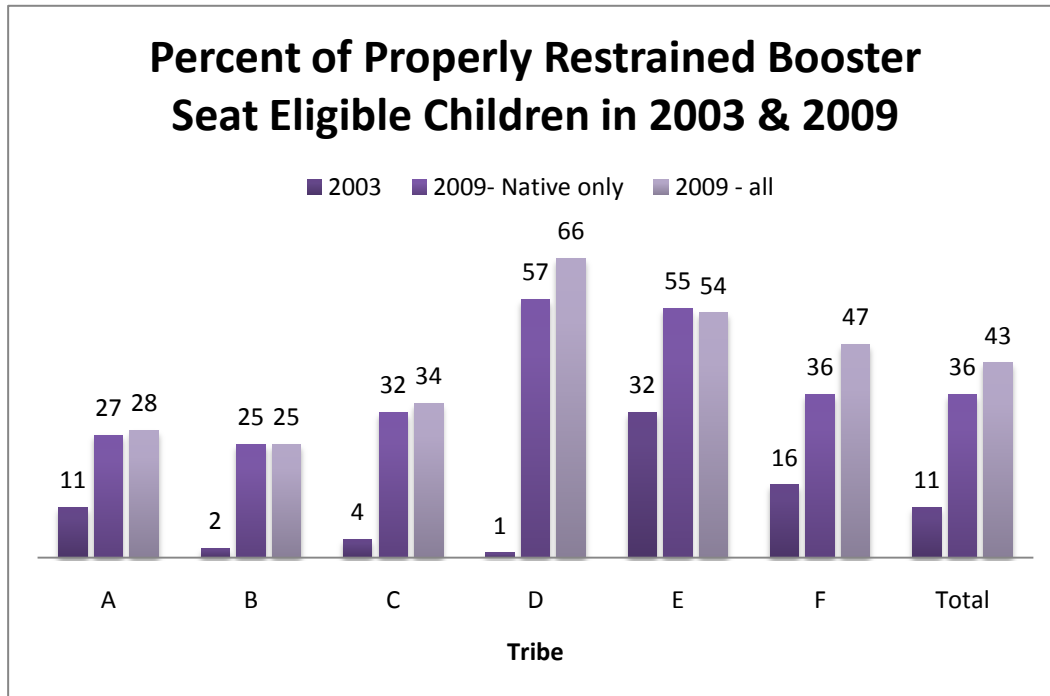


Figure 20: Booster seat use increased from 11% in 2003 to 36% in the 2009 Native only group. Every tribe saw an increase in booster seat use from 2003 to 2009, with one tribe increasing from only 1% in 2003 to 57% in 2009.

Driver Opinions

We asked all drivers at what weight they thought a child was big enough to use an adult seat belt. The most frequent response (of 1149 responses) was 60-69 pounds (21%) which is consistent with the Idaho state law, but is not the weight recommended by child passenger safety experts. The second most frequent response was 80-89 pounds (20%), which is consistent with expert recommendations. Less common responses included 50-59 pounds (15%), 70-79 pounds (13%), 40-49 pounds (11%), 100 pounds or more (11%), 90-99 pounds (7%), and less than 40 pounds (2%). Seventeen people responded that they “don’t know” what weight a child should be to graduate to an adult seat belt, and sixteen people said it “depends on height” which is consistent with expert recommendations and the Washington and Oregon state laws which require children to be in booster seats until age eight or until they reach 4’9” in height.

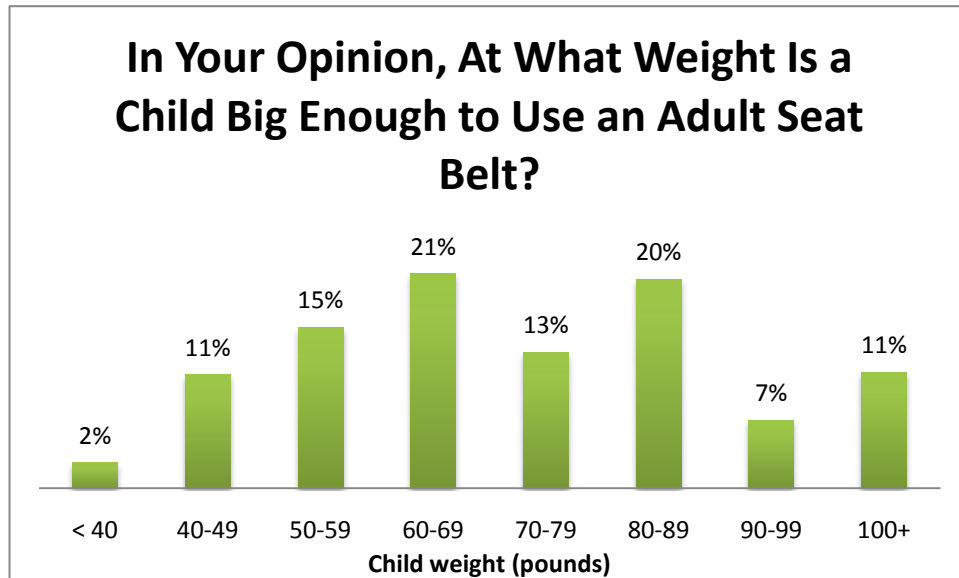


Figure 21: When asked at what weight they thought a child was big enough to use an adult seat belt, the most frequent responses from drivers was 60-69 pounds (21%) which is consistent with the Idaho state law. Twenty percent (20%) of drivers said 80-89 pounds, which consistent with expert recommendations.

We also asked drivers at what age they thought a child was old enough to use an adult seat belt. Of 1141 responses, the most common response was eight years old (20%), which is consistent with expert recommendations and the Washington and Oregon state laws which require children age eight and under to use an age and size appropriate child restraint device. The next most common response was age 10 (15%), followed by age 12 and older (15%), and age 6 or 7 (13% each). Less common responses included age 9 (8%), age 5 (7%), age 4 (4%), age 11 (3%), and age 3 or less (2%).

Some people (79 drivers) declined to say an age that a child should use an adult seat belt. Of these drivers, the most common response was that weight or height or size was more important than age (57 responses). Other responses included “Don’t know” (6 responses) and “It depends” (6 responses).



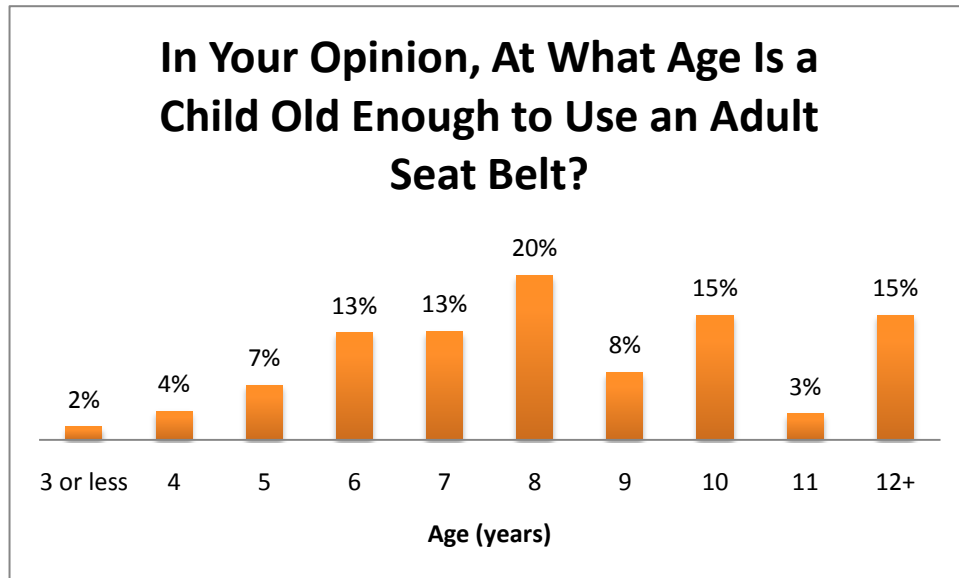


Figure 22: When we asked drivers at what age they thought a child was old enough to use an adult seat belt, the most common response was 8 years old (20%), which is consistent with expert recommendations and the Washington and Oregon state laws which require children age 8 and under to use an age and size appropriate child restraint device.

We asked drivers their opinion of what age a child is old enough to sit in the front seat, and the most common response was age 12 (29%). The next most common response was age 13 (17%), which is consistent with expert recommendations and the Washington state law, which requires children age 12 and under to ride in the back seat of the vehicle. Fifteen percent (15%) of drivers said age 10, and 9% of drivers thought a child should be age 14 or older to ride in the front seat. Less common responses included ages 8 or 9 (12%), ages 6 or 7 (7%), and ages 4 or 5 (5%). Seventeen drivers (1%) said children ages 0, 1, 2 or 3 could ride in the front seat.

Some drivers declined to say an age at which they thought a child should sit in the front seat and instead said, “It depends on whether there is an airbag” (12 responses), “Don’t know” (11 responses) or that it depended on the height or weight or size of the child (8 responses).



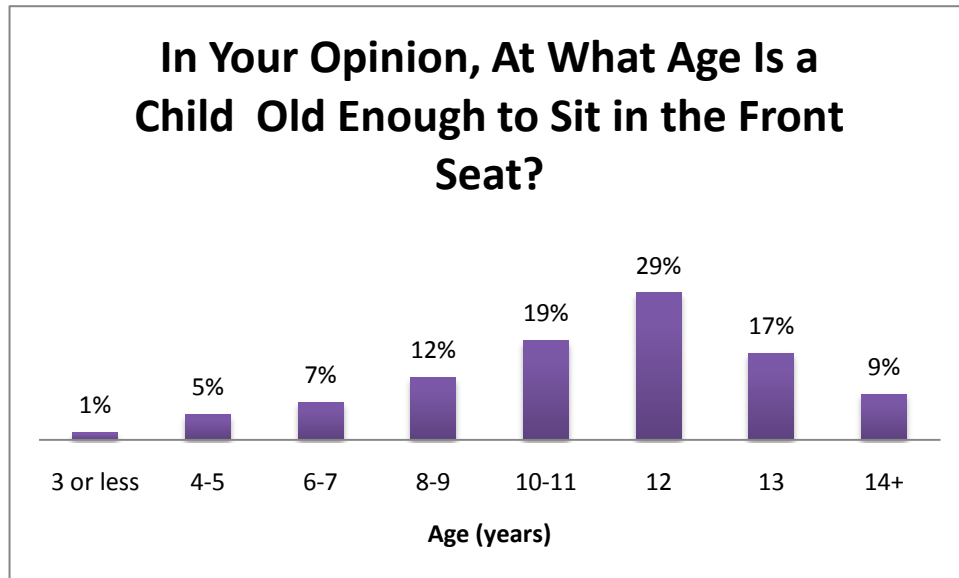


Figure 23: We asked drivers their opinion of what age a child is old enough to sit in the front seat, and the most common response was age 12 (29%). The next most common response was age 13 (17%), which is consistent with expert recommendations and the Washington state law, which requires children under age 13 to ride in the back seat of the vehicle.

If a child was using any type of child safety seat, we asked drivers why they had chosen to use a child safety seat. Drivers could give multiple responses. Overall, 747 drivers gave 835 responses. The most common response was “Safety” (403 responses), with over half of drivers citing safety as their reason for using a child safety seat. The second most common response was “It’s the law” and “To avoid a ticket” (145 responses). Fifty-five drivers said they chose a child safety seat because it was age or size appropriate or was the “Best fit” for the child. Fifty-two drivers said they don’t want their child to be hurt or “In case of crash.” Thirty-eight drivers said they “Always use” a child safety seat or that it was the family rule (e.g. “Because mom says so.”) Twenty-three drivers said they used a seat “Because we have one” or because they “Got it for free.” Twenty-one drivers said they use a child safety seat because it was “Recommended” or “Required,” and another 21 drivers said “It keeps my child still.” Other responses included “I love my child” (11 responses), “Price” (10 responses), “Comfort” or “So my child can see out the window” (10 responses), and “Convenience” (10 responses).

Additional but less frequent responses include “They work,” “My child chooses to,” “It’s a priority,” “It’s the right thing to do,” “It’s the intelligent thing to do,” “Why wouldn’t any parent use one?” “It’s common sense,” “It’s the best thing to do,” “To be responsible,” “We had enough room in the car,” “Because we went to town,” “I know about them,” and “We’re traveling a long distance.”

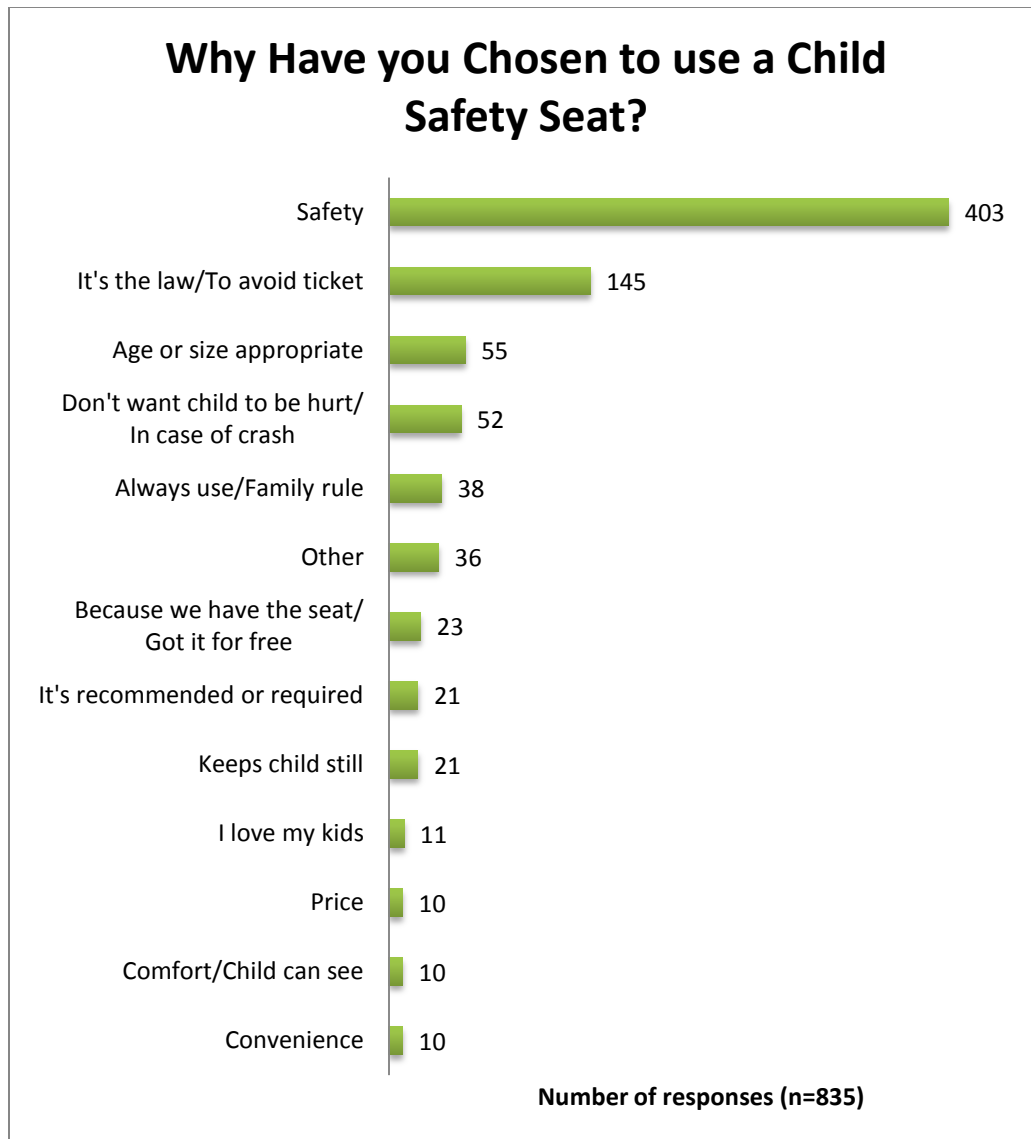


Figure 24: When asked why they had chosen to use a child safety seat, over half of drivers said “Safety.”

If a child safety seat was present in the vehicle, we asked drivers where they got the seat. The vast majority of seats (72%) were purchased new from a store. Of the 593 seats that were purchased new, 403 (68%) were purchased from Walmart. The second most frequent response was that the driver received the seat from the tribe or a tribal program (65 seats; 8%). Forty-two seats were from the drivers’ friends or family, and 37 seats were from WIC. Eighteen drivers said they “Don’t know” where they got their seat. Sixteen seats were received as a gift, and fifteen seats were given to the driver by the child’s parents. Fifteen seats were purchased secondhand, eleven seats were from Health & Human Services, four seats were from the police or fire department, and four were from a hospital.

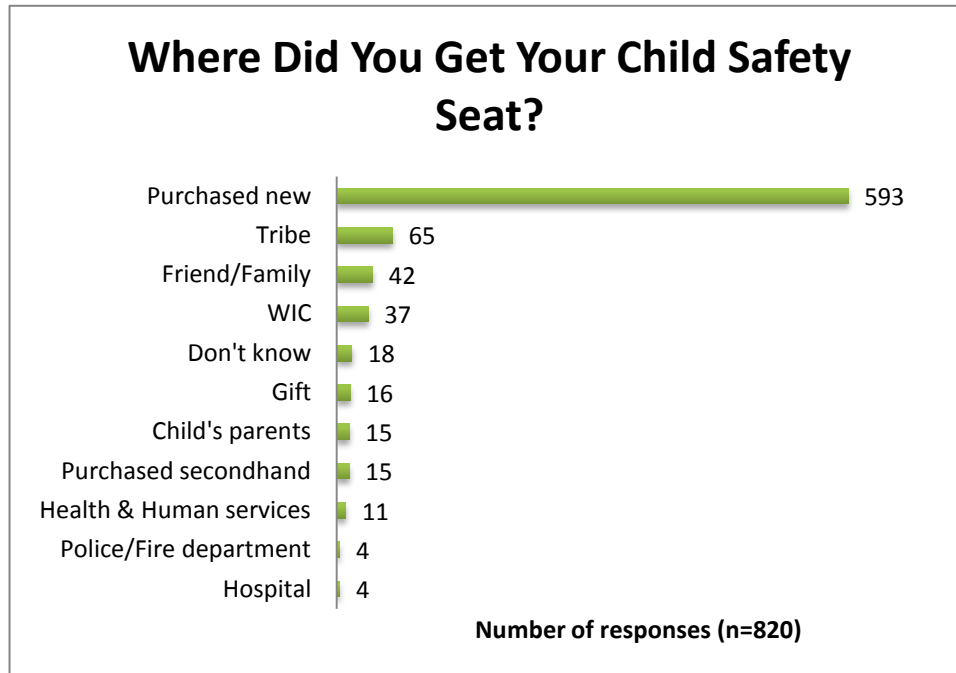


Figure 25: The vast majority of child safety seats (72%) were purchased new. Eight percent (8%) of seats were received from the tribe or from a tribal program.

If a child was seven years old or younger and not using a child safety seat, we asked drivers why they had chosen not to use a child safety seat for that trip. Drivers most commonly responded that “The seat is in another vehicle” or said that someone else had the seat (86 responses). The next most common response was that they were “Close to home” (76 responses). Forty-nine drivers said they “Don’t have one” and thirty-nine drivers thought, incorrectly, that their child was too big for a booster seat or was “Big enough” for a regular seat belt. Eighteen drivers said they weren’t using a child safety seat because they were “In a hurry,” and fifteen drivers said “Because the trip was not planned.” Thirteen drivers said their child safety seat was either lost, dirty or broken, and twelve drivers said there was no room in their vehicle for a child safety seat. Ten drivers said their child safety seat was in the trunk, and another ten drivers said they left their child safety seat at home. Nine drivers said that child safety seats were inconvenient or that their child doesn’t like the seat. Nine drivers said they “Don’t know” why they weren’t using a child safety seat, eight drivers said they had a seat but took it out of the vehicle, and eight drivers said they “Don’t want to” or their child doesn’t need a seat or “They don’t work.”

Less common responses included “This is the rez” (6 responses), “We usually use one” (5 responses), “It’s not my child” (5 responses), “I can’t afford a seat” (5 responses) and “I forgot” (4 responses). Some drivers gave other responses, including, “We just got in the vehicle” (3 responses), “No seatbelts installed in the truck” (2 responses), “Too lazy,” (2 responses) “I’m breastfeeding,” “I’m not going over 35 miles per hour,” “I don’t know where to get them,” “Because of work,” “Because my child is laying down,” “Lots of kids,” “Need new ones,” “I didn’t check,” “We missed the bus,” “The law is wrong,” “Car had a flat,” “No car,” and “I drive differently here than when I’m going to town.”

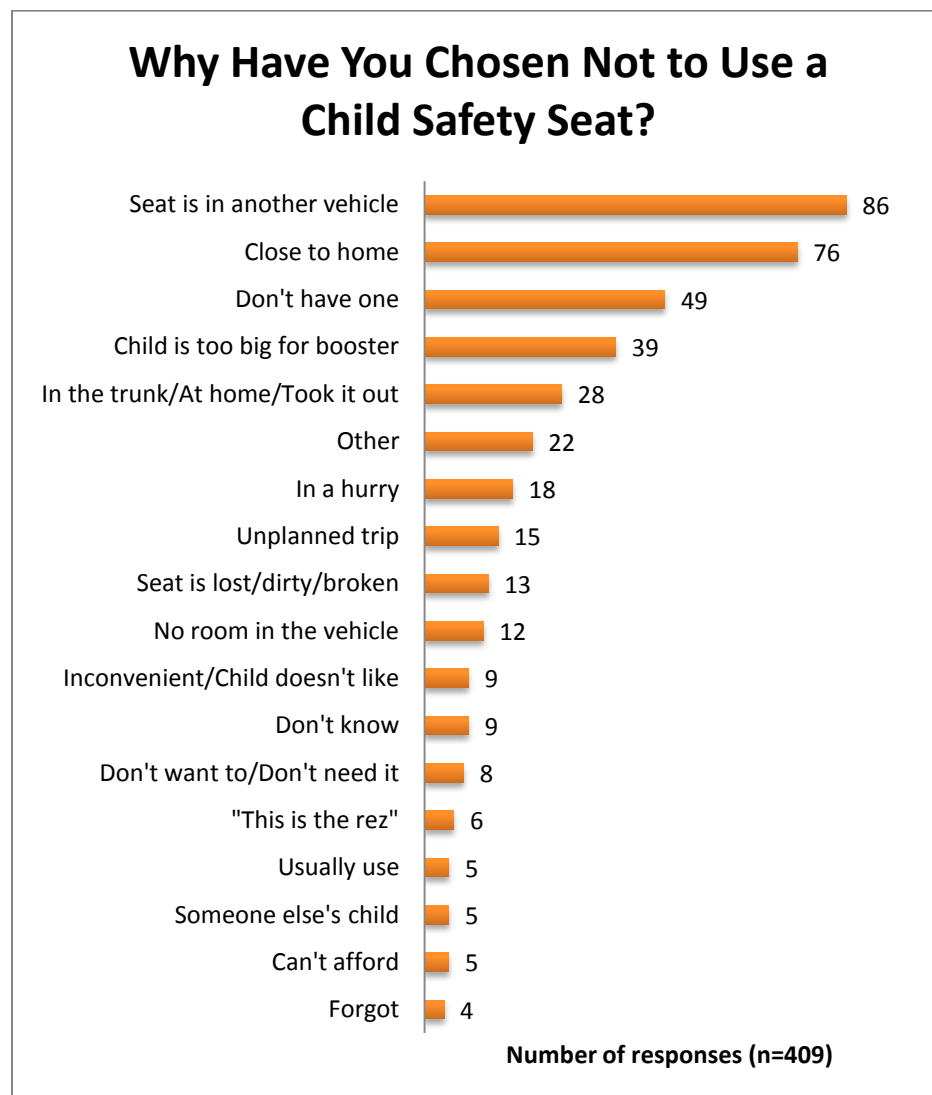


Figure 26: When asked why they had chosen not to use a child safety seat, drivers most commonly responded that “the seat is in another vehicle” or said that someone else had the seat (86 responses). The next most common response was that they were “close to home” (76 responses).

We asked all drivers where they get their information on child safety seats. Drivers could give multiple responses. Drivers most frequently said they get their information from WIC (157 responses), followed closely by “The tribe,” “Tribal Health,” or “From a Community Health Representative (CHR),” which is a health educator employed by the tribe (154 responses). The third most frequent response was “From my doctor” or “From the clinic” (123 responses). The three most common responses are likely related since all six tribes have a tribal WIC office which is often housed with Tribal Health, and many drivers who said “The clinic” were likely referring to Tribal Health, or the Indian Health Service (IHS) clinic.

Other commonly cited sources of information on child safety seats included “The internet” (101 responses), “TV” or “Radio” (94 responses), and “From the child safety seat box” or “From information that came with my child safety seat” (89 responses). Eighty-six people said they received information from their child’s school, pre-school, Head Start, or daycare. Sixty-six people said they get information from friends or family members. Sixty-four people said they received information from the police or fire department. Fifty-four drivers said they received information from “The news,” “Newspaper,” or “Magazine.” Forty-five drivers said they received information from their state health department, and another forty-five drivers said they “Don’t have information” on child safety seats. Forty-one drivers said they received information from the hospital, thirty-three said “Brochures,” “Pamphlets,” or “Flyers,” and twenty-seven said they “Don’t know” where they receive information on child safety seats. Other responses included “Everywhere” or “Common knowledge” (23 responses), “From a store” (23 responses), and from another program or agency such as the red cross, Temporary Assistance for Needy Families (TANF), or the Centers for Disease Control and Prevention (CDC; 23 responses). Some drivers said “From classes” (19 responses), “Books” (12 responses), from the Department of Motor Vehicles (DMV; 10 responses) and “From work” (8 responses).



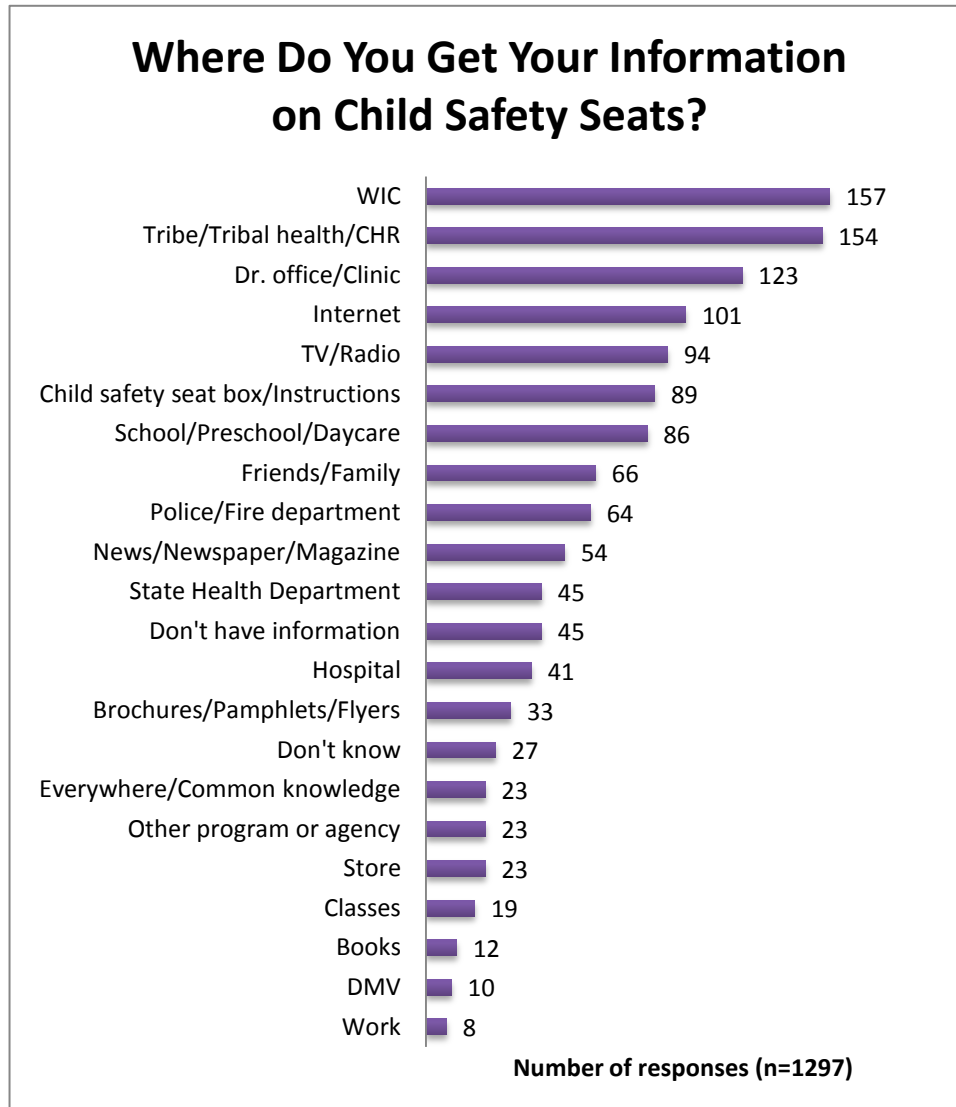


Figure 27: Drivers most commonly said they received information on child safety seats from WIC (157 responses), the tribe, Tribal Health, or from a community health representative (CHR; 154 responses), or from their doctor or clinic (123 responses).

We asked drivers if people usually wear seat belts “around here” and the most frequent response was “No” (59%). Forty-one percent (41%) of people thought people in their area wore seat belts, which is lower than the actual driver seat belt use observed in this survey (61%). Drivers in each tribe underestimated their local seat belt use. Many drivers (82) did not give a yes or no response to this question. Forty-five drivers said “Half do,” which is consistent with this observational survey. Other responses included “Don’t know” (12), and “Some do” (8).

Do People Usually Wear Seat Belts Around Here?

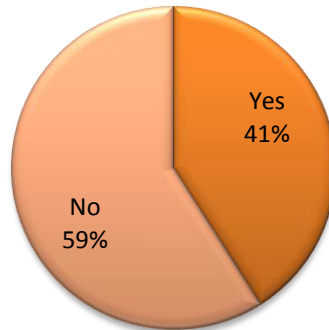


Figure 28: When asked if they thought people usually wore seat belts in their local area, most drivers (59%) said “No.”

Perceived Seat Belt Use Compared to Actual Driver Seat Belt Use by Tribe

■ % that said people usually wear seat belts ■ % of drivers wearing seat belts

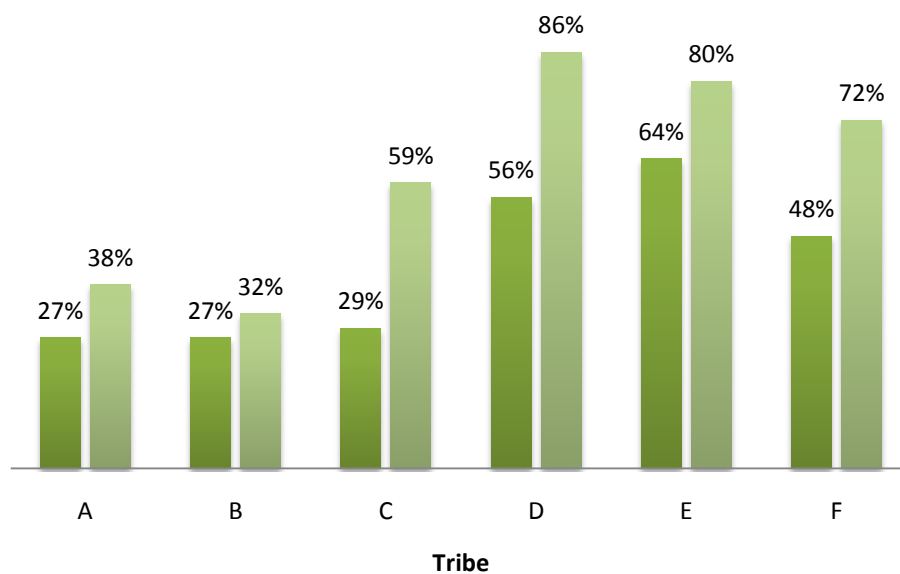


Figure 29: Perceived seat belt use in the community was consistently lower than actual seat belt use in this survey.

We asked all drivers if they knew someone who had received a ticket for not using a child safety seat for their child, and nearly two-thirds of drivers (64%) said “Yes,” while 36% said “No.” A driver’s response was related to his or her own seat belt use. Thirty-two percent (32%) of drivers who were wearing a seat belt said they knew someone who had been cited for not using a child safety seat, while 42% of drivers who were not wearing a seat belt knew someone who had received a ticket ($p < 0.001$).



Figure 30: Sixty-four percent (64%) of drivers said they knew someone who had been cited for not using a child safety seat for their child.

Next Steps

Results of the observational survey showed areas of improvement since 2003 and areas that still need progress. Overall, seat belt use by both drivers of children and children has increased since 2003. Driver seat belt use increased from 51% in 2003 to 55% in the 2009 AI/AN only group. Increases in proper child restraint were seen at every tribe in the survey, from as little as five percentage points to as many as forty percentage points. Encouragingly, booster seat use increased dramatically from 11% in 2003 to 36% in the 2009 AI/AN only group. Areas that still need improvement were also identified. Despite the increase in seat belt and safety seat use, nearly half of drivers and 29% of children continue to ride unrestrained in vehicles. Children who were at increased risk of riding unrestrained or incorrectly restrained in vehicles included children riding with an unrestrained driver, children riding with someone other than his or her own parent, children riding in areas without a child passenger safety law, children riding in

trucks, children riding with middle-aged drivers or older drivers, and six or seven year old children.

Data from this survey will serve as a baseline measure to gauge the impact of interventions being planned in the participating tribes. Along with the observational data, the six partner tribes will use qualitative formative data collected from elicitation interviews and focus groups to identify target areas which may provide opportunity for intervention.

As the survey data indicated a decline in booster seat use at age six and seven, tribes may want to consider interventions to build awareness of how to determine when a child should be graduated to an adult seat belt. Only 20% of drivers in this survey correctly thought that age eight was the appropriate age for a child to graduate to a lap/shoulder belt, while 39% of drivers thought children younger than eight years old could appropriately use an adult seat belt. Tribes may want to focus their intervention activities at places where families of six and seven year children old may frequent, such as school or afterschool programs.

With data identifying that parent drivers were the most likely to have children properly restrained, tribes may want to construct interventions that aim at changing behaviors of non-parent drivers of children. Likewise, with data indicating that drivers closer to home were less likely to have children properly restrained, interventions may include media messages that emphasize the importance of child safety seat use for every trip – especially when close to home or when the child is not riding with his or her own parents.

Considering that the data indicated that when a driver was wearing a seat belt, the child was much more likely to be properly restrained as well, tribes may consider community wide education interventions. These interventions may stress the importance of seat belt use for everyone in the vehicle, not just children.

We observed higher child safety seat use and driver seat belt use in areas with stronger seat belt and child passenger safety laws. Tribes whose members are not subject to strong seat belt or child safety seat laws may want to consider policy level interventions. Tribes may also wish to partner with tribal or local police for law enforcement or educational interventions.

This report is a very tangible product that the six partner tribes can use to address motor vehicle related morbidity and mortality in their communities. In addition to this aggregate report, a community-specific report has been shared with each tribe. The tribes now have the opportunity to utilize their data to develop innovative methods of reducing childhood motor vehicle related morbidity and mortality that are customized to the needs of their community. The NPAIHB will be able to share successful interventions with other tribes who may initiate similar activities to increase child safety seat use in their own communities.

Appendix: Data Collection Form

ASK:

In your opinion, at what **weight** is a child big enough to use an adult seat-belt?_____pounds

In your opinion, at what **age** is a child old enough to use an adult seat-belt?_____years

In your opinion, at what **age** is a child old enough to sit in the front seat? _____ years

If child is using any type of child safety seat, ask:

*Why have you chosen to use a child safety seat?

*Where did you get your seat?_____

If child is NOT using a child safety seat, ask:

*Why have you chosen not to use a child safety seat?

Where do you get your information on child safety seats?

In your opinion, do people usually wear seat belts here ?

1 Yes **2** No _____

Do you know someone who has gotten a ticket for not using a child safety seat for their child? **1** Yes **2** No

Stop time _____