# Native CARS



#### A Community Based Participatory Research Success Story

Native Research Network Conference Phoenix, AZ - June 2, 2014

# Native CARS: Early Beginnings

- Early 2000s
  - Motor vehicle crashes affecting Northwest tribal communities
  - National data demonstrating that AI/AN children more likely to die in motor vehicle crashes
    - Explained by low usage rates of child safety seats?
  - NPAIHB tribal prioritize *injury prevention*, including injury from motor vehicle crashes
  - Child passenger restraint use assessment methodology developed

1. Social Assessment

# Child Passenger Restraint Recommendations



National Highway Traffic Safety Administration

# Native CARS: Early Beginnings - 2

- 2003 survey in 6 Northwest tribes
  - Funded through Native American Research Centers for Health (NARCH)
  - Age and size-appropriate child safety seat use ranged from 25% - 55% by tribe
  - *Infants more likely to be properly restrained* vs. older children
  - Data presented to tribes, NPAIHB delegates, IHS, and others.

<u>Assessment</u>

2. Epidemiological Assessment

– Published article AJPH, 2005

# Native CARS: Early Beginnings - 3

- Tribes utilized local and aggregate data to support their activities and initiatives
- Promise of interventions
  - Data was compelling -- clearly a need to expand existing efforts to improve child safety seat use
    - 11% of children age 4-8 were properly restrained
  - NPAIHB and six tribes were awarded funding to develop and test tribal interventions *Native CARS*
    - National Institute of Minority Health and Health Disparities, CBPR Intervention Phase Award (2008)



## Native CARS: Overall Goal

Design, implement and test effectiveness of tribal interventions to *improve the use of* child safety seats among AI/AN children via community-based participatory research (CBPR)



# Native CARS: Specific Aims

- Determine the *knowledge of AI community members* about child safety seats
- Determine *barriers and facilitators* that effect consistent and appropriate use
- Work with six tribes to determine effective methods to increase child safety seat use, and *develop tailored community interventions*
- Implement and evaluate tribal interventions

# Native CARS: Study Design

#### Six tribes

- 2 each in Idaho, Oregon, and Washington
- All tribes developed and implemented their own multi-faceted interventions
  - Staggered implementation
  - Controlled community trial
- Vehicle observation surveys at 3 time points – 2009, 2011 and 2013

#### **Native CARS: Intervention Timeline** Vehicle Observations Vehicle Observations Vehicle vations Round 1 **Maintenance** Intervention **Usual Activities** Intervention Round 2 2009 2011 2013

# <u>All</u> Facets of the Study are Community Driven



# Improving Child Passenger Restraint



### **Developing data-driven Interventions**



2. Epidemiological, Behavioral, Environmental Assessment

3. Educational and Ecological Assessment

4. Policy assessment

## Why Tribe-Specific Data?

- Need to identify appropriate approach
  - Do we need to *build awareness*?
  - Should we add to existing *health or safety practices*?
  - Is the community ripe for *policy change*?
- Need to understand *community practices*, norms, beliefs, *strengths, barriers*
- Need to know which children are at highest risk
- Need to know if what tribes were doing at the start of Native CARS intervention addresses issues suggested by vehicle observation data
  - Do people *need child safety seats*?
  - Is current information *reaching drivers* ?

### **Quantitative Data**

- Establish prevalence of proper child safety seat use
  - Update the 2003 results with vehicle observation data collected at start of the intervention period (2009)
  - Modified and improved upon earlier observation methodology
- Identify risk factors for improper and unrestraint
- Data collection elements included:
  - Driver seat belt use, race, age
  - Child's age, weight, whether they were 4'9"
  - Child's restraint, seat position (front/back)
  - Child's relationship to driver
  - Minutes from home, type of vehicle, # of passengers

### **Vehicle Observation Survey**











### **Qualitative Data**

- Helped explain and *elaborate on quantitative data* 
  - Gave us "the why" for some of the vehicle observation results
- Examined some results in more detail
- Established *internal/external facilitators* and *barriers* to child safety seat use
- Described *family or social norms* that might be influencing restraint behaviors
- Provided evidence of consistent use or improper use of child safety seats
- Suggested intervention strategies

### **Qualitative Methods**

- Site coordinators used screener to recruit purposeful samples of parents of children 0-8 years
  - Age of child
  - Parental use of child safety seats
  - Gender
  - Smaller subset of professionals who have contact with target population
- Semi-structured one-on-one interviews
  - Reveal factors relevant to child safety seat use
  - Relay personal experience, tell "their story"



# Baseline Proper Restraint by Tribe 2009



## **Risk for Inadequate Restraint**

- Booster seat age
- Weak or no law
- Unrestrained driver
- Not with own parent
- Close to home



#### **Emergent Themes of Qualitative Data: Norms**

#### • Knowledge

"From a societal standpoint I think they occurred because people realized that **too many young children were being injured by the seatbelts themselves**. While the seatbelts were a good idea, for an infant or for a very small child, in an impact the seatbelt was probably causing internal injuries of some sort."

#### Watching over/protecting "community's children"

"We are extended family and you look out for everyone ... "

"I know that culturally that *children are the tribes biggest asset* and ..., you know raising a healthy generation and the generation is going to be the tribe of the future in strong way."

#### Lack of Family Enforcement

"They lack a discipline with their children. I believe that *parents should be more assertive* in their rules and stuff like that with their kids."

"They're probably not going to-unless they change, you know what I mean, because children do what they learn. And if the parents are relaxed, the child will probably be relaxed. Unless something changes that for them."

#### • Tribal Sovereignty

"I know that I'm not always right. I think it our sovereignty, our rights on our reservation **not to have to on the rez if we didn't want to.** I always say it's my native right, I don't have to use a seatbelt on the rez, but the kids do."

#### **Emergent Themes of Qualitative Data: Barriers**

#### Nonparent drivers

-"...Many kids have 10-12 people who are authorized to pick them up."

-"My mom, she's kind of older and if she'll just drive around the houses, like the property, she'll tend to just *let the kids stand up* and stuff."

#### Local/Short/Hurried trips

-"Just going to store."

-"I think just because it's *quicker not to have to use them*, it's quicker and easier in just getting in and go."

#### • On reservation vs. off-reservation

"A lot of what you hear out here is, Oh, *this is a reservation, we don't need to wear a seatbelt.*"

#### • Lack of Laws or Law Enforcement

-"But if they was to meet one of our tribal officers on the road and the officer seen that kids aren't in their seats, *I don't think that they would get stopped*. I don't think anything would happen."

#### **Emergent Themes of Qualitative Data: Facilitators**

#### Laws/fines and law enforcement

-"Because we *didn't want a ticket*. Last year after 2 tickets I really started paying attention..."

-"Like I just know that *if we were to get stopped that there is a fine* if the kids aren't in their seatbelts. So when we leave the reservation they're in their seatbelts."

#### • Consistent routines

-"I tell them to put it on and they do. They jump in and buckle up. It is just a habit."

-"I don't go nowhere until she buckles her in. The car will sit there."

#### Accident Experience

-"Honestly, what works for me for anything is other people's experience. An example I guess which seems kind of bad but well this happened to so and so because they didn't follow the rules or the laws or the weight limits and everything, to lead by example I guess. Like this kid got hurt or this parent was in trouble, you know that kind of story, some example story and then it's not hard, it's not hard at all."

#### Child Influence

"He gets into his booster in the back seat and buckles in. He won't even, if I start the car and start backing out and he's not ready, he'll say, 'Dad I'm not ready yet."

"And you know what? I was one of them people. I didn't wear my seatbelt. *I put my kids in a carseat, but I didn't wear my seatbelt*. And my youngest kid, he was the one that was the one, "Put your seatbelt on, put you seatbelt on, put your seatbelt on." *He was the one trying to tell me*."

"Last year after 2 tickets I really started paying attention..."

"If they go with grandma they may have to use regular seat belts." "We are extended family and you make sure you look out for everyone..." "I tell them to put it on and they do. They jump in and buckle up. It is just a habit."

Risk of riding		95%
improperly	Relative	Confidence
restrained	Risk	Interval
Booster seat age (vs. infants)	1.80	1.43, 2.27
Veak or no law (vs. NHTSA guidelines)	1.66	1.05, 2.64
Unrestrained driver (vs. restrained driver)	1.46	1.32, 1.62
Not with own parent (vs. with parent)	1.29	1.19, 1.41
Close to home (vs. >5 minutes away)	1.16	1.06, 1.27

"My 6year-old is too old for a seat."

"Sense of safety on the rez, things don't happen."

"Going a short distance, I might just put kid on my lap, so I can hurry up and get there."

### **Community Interventions**

- Community-based
  - Impact community as a whole
  - Addresses specific sub population
- Tribally led
  - Informed by community data
  - Developed by community
    - Site Coordinator, their supervisors, advisory members
    - Focus Groups
  - Implemented by community



5. Implementation

# **Community intervention Process**

- Review observation and elicitation data
  - Associations with use and non use
  - Barriers
  - Facilitators
  - Community strengths



#### Issue + Approach + Audience+ Collaborators = Intervention

- Determine what are the main issues
- Determine your best approach
- Determine who is your audience
- Scan community for collaborators and resources

5. Implementation

Approach	Description	Intervention Examples
Awareness	Determine what issue you would like to address with your intervention action as determined from your observations and elicitation interviews.	Media (PSAs, billboards, newspapers, posters) Press Releases Informal Messaging (Facebook)
Health Education	Strives to educate the public about causes, signs, symptoms, strategies, etc., of targeted public health issues.	Classroom instruction Educational handouts Education Demonstrations
Behavior Change	Foster behavior change interventions that strive to create a physical environment that supports, promotes, and encourages the healthy behaviors that address the issues.	Supportive social networks Resources that support behavior Talking Circle, Support Groups
PH and Safety Practice	Fosters health or safety promotion by supporting existing tribal or community health programs and providing support to enhance existing programs at the community level	Support tribal programs to train and maintain CPS Techs Work with providers to assure that prenatals have car seats
Policy/Envir onment	establish and enforce supportive practices, policies, and/or laws that promote healthy behaviors and discourage unhealthy choices.	Enact tribal policy & resolutions Mandating specific programs CSS Checkpoints

# **Sample Interventions**

### What the data said

#### Tribe 1

- Low recognition of CSS recommendations
- Low CSS use, low proper use
- Drivers unaware of current tribal law or did not see it enforced
- Interview participants had a sense of safety on reservation

#### Tribe 2

- Higher risk for improper restraint for drivers on reservation
- Booster seat aged children at higher risk
- Most drivers observed indicated they supported an updated law
- Recognition of CSS recommendations
- Many Interview participants indicated it would take a law to change behaviors

### What was the intervention focus?

#### Tribe 1

- Building general awareness of recommendations and law through local media and aiming to present restraint use as the norm
- Building community resource people trained and certified in passenger safety
- Providing child passenger restraint education

#### Tribe 2

- Building awareness of intent to enforce law and booster seat recommendations
- Developing an updated law and order code, fee schedule, diversion class for 1<sup>st</sup> offense
- Building community resource people trained and certified in passenger safety
- Providing child passenger restraint education

### **Community Intervention Process**

- Review observation and elicitation data
  - Associations with use and non use
  - Barriers
  - Facilitators
  - Community strengths



**Issue + Approach + Audience+ Collaborators = Intervention** 

- Determine what are the main issues
- Determine your best approach
- Determine who is your audience
- Scan community for collaborators and resources
- Develop intervention plans with budget
- Determine evaluation measures
- Solicit review and input from focus group

# Examples of Focus Group and Site Staff Refinement of Media Campaign

### **Developing Media Materials**



# Native Children Always Ride Safe



# **Grandparents &** grandchildren always ride safe. Shoshone-Bannock Tribes



Northwest Portland Area Indian Health Board







#### We all care for the future generation.

Life is complicated and sometimes children have to ride in vehicles with grandmas and grandpas, aunts, uncles or friends. But it is important that they are in child seats even when with other drivers. No matter who they're riding with, all children from birth to 8 should ride in a child safety seat appropriate for their age and height. If your child spends a lot of time riding with another driver, it's a great idea to have an additional child seat for the other driver's car to make keeping your child safe easy and convenient.

Colville Confederated Tribes



### **Developing Media Materials**



Tare adjuscing will, sed diam nocumny ninh di eulamod tincidunt ut laorest dolore magna e alquam reat solutguil. di Ut wisi anam ad minim veniam, quis nost di nut averd tritice utivincorper suscip lobortis di nial ut alour maan at tuato solio digetasim is

Das auten vol sum teina dolor in rib hen rant, viel ikum dolore ei chat nutr teicho coss quat, viel ikum dolore ei chat nutr teicho do ret vero ensi et accumsan et iusto obto ret grassim qui blandti pres sent luppinum zan elent augue aute dolore to teisget nulle citis veet accumsan usto obto nt digni.
# Native Children Always Ride Safe



# **Protect Our Children. Use Child Safety Seats.**

#### **Nez Perce Tribe**







#### Safety first, they're yours, mine ours.

At tribes, we look out for each other. Watching out for all children is a strong tradition that has kept our communities strong. Be a role model by always keeping ANY child riding with you in a child seat or booster seat appropriate for their age and size, and encourage your friends and family members to do the same.







#### **Developing Media Materials** No Go!





Duts autien vol eium taluee dator in nto h de erit in volgetalen vell ease naiseto or equari. Val ittera datoe au fron nais talotto at vero eros et accumaan et unto odio a dignissim qui blan fit pres esti kapitaria a delenta augus duts odoro la fongat mut facila veet accumaa usto odio et digmi

# **Television and Radio PSAs**

- Several tribes developed PSAs as part of their media campaigns
  - Based on tribe-specific qualitative and quantitative data
  - Refined by focus groups
- Sample Native CARS video



- Other examples can be found at:
  - <u>www.npaihb.org/epicenter/project/native\_cars\_psa</u>



# **Evaluation**

#### Did it work?

6. Process Evaluation

7. Impact Evaluation



# **Process Evaluation**

- 22 CPS techs trained
- 46 car seat check events held
- 71 car seat classes,
  364 participants
- 905 seats distributed



# **Process Evaluation**

- Media developed
  - 7 billboards
  - 28 posters
  - 8 PSAs
- 46 public presentations 1488 attendees
- 20 modified SNAP trainings, 134 participants



# **Impact Evaluation**

- Did Awareness Increase?
  - 77% 87% of Native drivers reported seeing at least one of the Native CARS media materials
  - Awareness of a tribal law
  - Awareness of techs, car seat availability



# **Impact Evaluation**

- Did opinions change?
  - Drivers who thought kids 7 & under could safely use seat belt
    - 2009: **43%**
    - 2011: **26%**
- Did reported reasons for not using a seat change?
- Did we observe seats from a tribal program?



**Did proper restraint increase?** 

### **Did proper restraint increase?**



# Did intervention tribes increase more than control tribes?



# Did intervention tribes increase more than control tribes?



Age-adjusted relative increase in odds of proper restraint between 2009 & 2011 in intervention and control tribes





### **Proper Restraint, 3 Time Points**



#### **Unrestrained, 3 Time Points**



# Properly restrained kids by age & year

**2009 2011 2013** 



Child age (years)

#### Unrestrained kids by age & year

**2009 2011 2013** 



# Did we reach our intended audience?

% properly restrained children by race



# Did risk factors change over time?

# % properly restrained children by driver relationship to child





# Did risk factors change over time?

#### % properly restrained children by locality of trip



# So, what if it doesn't work?

Percent of properly restrained children by age & year, Tribe E

■ 2009 ■ 2011 ■ 2013



# **Future Evaluation?**

- Ultimate outcome
- Did motor vehicle fatalities decrease?
- Did motor vehicle *injuries decrease*?
- FARS data, rare events (luckily)



# Conclusion





# **Colville Native CARS**

# Native Children Always Ride Safe



# Protect Our Children. Use Child Safety Seats.

**Colville Confederated** 

Tribes





# The Confederated Tribes of the Colville Indian Reservation



# Fatal crashes on Colville Reservation, 2001-2009



# Percent of Properly Restrained Children by District, 2009



# Proper Restraint at Colville, 2009



# **Risks for Improper Restraint**

- Booster-seat age kids (age 4-7)
- Kids traveling close to home
- Kids riding in trucks
- On reservation



# **Community Context**

- Drivers knew kids should be in boosters until age 8 and in the back seat until age 13
  - Washington state law
- Previous tribal outreach had been successful
  - Booster seat distribution
  - CPS tech doing community education

# Interventions

- CPS tech outreach
  - 4 Child passenger safety techs trained
  - 8 Car seat clinics
  - 20 modified SNAP trainings
  - 234 seats distributed at car seat clinics and SNAP classes
- Public Awareness Campaign
  - Grocery totes, Posters
  - PSAs (2), Billboards
  - Facebook



# Law and Order Code

- Two year process
  - Draft law
  - Public hearings
  - Diversion program
  - Police officer training
- Law passed Aug 2011
  - Safety seat until age 8
  - <13 in back seat</p>

Enacted Tribal Law
8-3-13 Child Passenger Restraints – Use Required
(a) Whenever a child who is less than sixteen years of age is being transported in a motor vehicle that is in operation and equipped with a safety belt system in a passenger seating position, the driver of the vehicle shall keep the child properly restrained as follows:
(1) A child must be restrained in a child restraint system, if the passenger seating position is equipped with a safety belt system that allows sufficient space for proper installation until the child is eight years old, unless the child is four feet nine inches or taller.
(2) The child restraint system must comply with the standards of the United States Department of Transportation; and is determined to be appropriate for the child's individual height, weight, age and must be secured in the vehicle in accordance with both the instructions of the vehicle manufacturer and the car seat manufacturer.
(3) A child who is eight years of age or older or four feet nine inches or taller shall be properly restrained with the motor vehicle's safety belt system properly adjusted and fastened around the child's body.
(4) The driver of a vehicle transporting a child who is under thirteen years old shall transport the child in the back seat positions in the vehicle where it is practical to do so.
(b) Enforcement of subsection CTC § 3-3-13 (a) is subject to a visual inspection by law enforcement to determine if the child restraint system in use is appropriate for the child's individual height, weight, and age. The visual inspection for usage of a child restraint system must ensure that the child restraint system is being used accordance with instructions of the vehicle and the child restraint manufacturers. The driver of a vehicle transporting a child who is under thirteen years old shall transport the child in the back seat positions in the vehicle where practical to do so.
(1) The requirements of subsection CTC § 3-3-13 (a) do not apply in any seating position where there is only a lap belt available and the child weighs more than forty pounds.
(2) A person violating subsection CTC § 3-3-13 (a) may be issued a notice of traffic infraction. If the person to whom the notice was issued presents proof of acquisition of an approved, non-expired child passenger restraint system or a child booster seat, and the person hgs not previously had a violation of this section dismissed, the jurisdiction shall dismiss the notice of traffic infraction.
(3) Failure to comply with the requirements of this section shall not constitute negligence by a parent or legal guardian. Failure to use a child restraint system shall not be admissible as evidence of negligence in any civil action.
(Amended 8/25/11, Codified 8/4/11, Resolution 2011-570)

## **Radio PSAs**







# **Police Officer Training**

- Basic Overview of Child Passenger Safety
- Integration of Driving Opinion/OBS Data
- Motor Accident & Fatality Data
  - Challenges to Crash Survival
- Best Practices & Tough Choices
  - Cradleboard & Cultural Preservation
- NHTSA Standards
- Child Restraint Systems Overview
- State/Tribal Law & Role of Law Enforcement
  - Law Enforcement Manual
#### **Did Proper Restraint Increase?**

Colville child restraint status by year

**2009 2011 2013** 



# Did child safety seat use increase on the Colville Reservation?



#### Making a Difference



#### Challenges

- Large area to cover
- Keeping techs motivated
- Choosing the right people for the media images
- Enforcement of law
- Funding/staff



#### What made it work?

#### Collaboration

- Tribal health
- Police
- Target Zero
- WA State Traffic
  Safety
- Safety Restraint coalition



#### Next Steps at Colville

- Revise law enforcement manual
  - Officers recognize current recommendations
  - Quickly identify gross misuse
  - Increase officer confidence to enforce law
  - Improve consistent enforcement of law
  - Provide perception to community that law will be enforced
- Elders only car seat classes



#### Native CARS: Summary, Next Steps and Future Directions

#### Native CARS: CBPR Success

- Native CARS tribes carried out interventions that improved child passenger restraint use
  - Focused on interventions that strengthened community and enhanced tribal capacity
  - Promote long-term sustainability
- The tenets of CBPR were absolutely essential to the success of the program
  - The value of community knowledge and input
- Site coordinators broadened their own skill sets -*"local experts"*



## Native CARS: Dissemination Phase Goals

- Demonstrate that Native CARS interventions can be *translated to other tribes*.
- Use the <u>Native CARS Atlas</u> as a blueprint to address child passenger safety concerns in tribal communities
- *Reduce the number of fatalities and injuries* from motor vehicle crashes among tribal children



## Native CARS: Dissemination Phase Specific Aims

- Develop the <u>Native CARS Atlas</u>, an online toolkit for tribes interested in implementing and evaluating evidence-based interventions to improve child passenger restraint.
- Facilitate the use of the <u>Native CARS Atlas</u> in the six tribes that participated in the original initiative.
- Use the <u>Native CARS Atlas</u> to assist at least 6 new tribes with demonstrated readiness to implement interventions to improve child passenger restraint use in their communities.

#### Native CARS: Dissemination Phase

- The *Native CARS Atlas* will be a child safety seat resource developed by tribes for tribes and will include tools and guides for:
- Subjecting vehicle observation online at a sessing community reaching be online on the sessing community reaching be online on the sessing community of the sessing community of the sessing community of the sessing of the session of the s Zevelopment and police officer
  - ining a child safety seat distribution program
  - Media materials, both ready to print and ready to customize



#### **Native CARS: References**

- Lapidus JA, Smith NH, Ebel B, Romero FC. *Restraint Use Among Northwest American Indian Children Traveling in Motor Vehicles*. Am J Publ Hlth. 2005 Nov; 95(11): 1982– 1988.
- Lapidus JA, Smith NH, Lutz T, Ebel B, Native CARS Study Group. Trends and correlates of child passenger restraint use in 6 Northwest tribes: the Native Children Always Ride Safe (Native CARS) project. Am J Publ Hlth. 2013 Feb; 103(2): 355-61.
- Smith NH, Lutz TL, Lapidus JA. Improving Data on Child Passenger Safety: Survey Methods from the "Native Children Always Ride Safe" (Native CARS) study. IHS Provider [In Press]

#### Native CARS: Acknowledgements

- NPAIHB tribal delegates
- NW NARCH leadership
  - Early work funded via NIH grant # U269400013
- Site coordinators !!!!
- Vehicle survey data collectors
- Native CARS Study Group
- Members of participating tribes



- Intervention and Dissemination Phases funded via
  - National Institute of Minority Health and Health Disparities, grant # R24MD002763

## Native CARS



#### Thank you for this opportunity to speak with you today! For more info: <u>nativecars@npaihb.org</u>