SNAP 2.0: Enhancing Child Passenger Safety Awareness and Training in Indian Country

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Introduction

Motor vehicle crashes (MVC) are the leading cause of death for American Indian and Alaska Native (AI/AN) vehicle occupants between the ages 0-13, resulting in 151 deaths between 2004-2013[1]. Table 1 summarizes MVC occupant death rates by race and age group. AI/AN child occupants have higher death rates in all age groups when compared to US White child occupants. In fact, the death rate for AI/AN infants was more than three times greater that of whites, and for toddlers (ages 1-3), more than twice the rate.

It is widely known that car seats and seat belts are an effective approach in reducing child injuries and deaths related to MVC. According to the Centers for Disease Control and Prevention (CDC)[2]:

- Car seat use reduces the risk for death to infants (aged <1 year) by 71%; and to toddlers (aged 1–4 years) by 54% in passenger vehicles.
- Booster seat use reduces the risk for serious injury by 45% for children aged 4–8 years when compared with seat belt use alone.
- For older children and adults, seat belt use reduces the risk for death and serious injury by approximately half.

Car seat usage is low in many AI/AN communities. For example, in 2002 car seat usage rates in three northwest communities were 21%, 18%, and 12%[3]. The misuse of car seats is also an important factor in diminished crash survival. An estimated 75% of car seats are installed incorrectly.[4,5]

To address the high rate of MVC deaths among AI/AN children, the Safe Native American Passengers (SNAP) training was developed in 2003. A workgroup led by CAPT Holly Billie of the Indian Health Service (IHS) created SNAP as a way to bring culturally appropriate child passenger safety (CPS) training and awareness to tribal communities. Although Safe Kids Worldwide provides a 32-hour CPS Technician certification course, SNAP is intended to be a basic introduction to build skills and awareness related to CPS in Indian Country. SNAP is also intended to help identify candidates to become certified CPS technicians through Safe Kids Worldwide. In 2007, the SNAP curriculum was updated to include the latest National Highway Traffic Safety Administration (NHTSA) recommendations, new styles of available restraints, advancements in technology, updated language, and improved overall aesthetics.

SNAP has been a great tool, widely used throughout IHS and Indian Country. However, there were some limitations with the current version. There was no formal process for updating the technical information and no way to determine how many trainings had been provided or number of people trained. Furthermore, community feedback indicated that the requirement for an overnight stay at the training site to complete the 1.5-day curriculum was a major barrier to participation. These limitations resulted in several different versions of SNAP being used, varying in length and content.

The purpose of this project, titled SNAP 2.0, was to increase participation in SNAP; reduce the need for an overnight stay; replace multiple, unofficial SNAP curricula with a standardized curriculum; improve the overall quality of the training; update the technical information; and provide a tracking system for overall trainings and participants.

Table 1 Motor Vehicle Occupant Death Rates per 100,000 by Age Group and Race, 2004-2013

	<1	**1-3**	**4-8**	**9-13**
AI/AN	3.82	1.73	0.97	1.46
White	1.20	0.76	0.81	0.90
Ratio AI/AN: White	3.2	2.3	1.2	1.6

Methods

Initial Feedback

To obtain feedback regarding the SNAP training, we developed a survey for SNAP participants and conducted a focus group with a SNAP instructor team and organizers at one of the course sites. The participants suggested the use of

more hands-on training; and reported that the 1.5 day format made it difficult for more people to attend. During the focus group instructors identified ways to improve course modules, training guides, and the overall flow of the training.

Workgroup

The first step in updating SNAP was to form a workgroup of subject matter experts. All 9 members of the workgroup had extensive child passenger safety experience in Indian Country and had previously taught SNAP courses. The workgroup convened every three weeks between September and December 2014 using a web-based meeting and conference call system. In addition to reviewing proposed revisions regarding technical information, the workgroup also recommended revisions in the sequencing of the material in all of the course modules.

Pilot Tests

After all revisions were completed, pilot tests were conducted at four sites in Nevada (2), Arizona, and New Mexico between February and May of 2015. A total of 42 students participated in the pilot courses. Each pilot test team consisted of two instructors and at least one course observer. The observers would audit the training and provide feedback on training materials and the student and teacher guides during each pilot test. After each pilot test was completed, a debrief meeting was conducted with instructors and observers to solicit feedback on the overall course and suggestions for improvements.

Tracking and Quality Assurance

The IHS Environmental Health Support Center (EHSC) sponsors training courses on a wide variety of subjects related to the programs of the IHS Office of Environmental Health and Engineering, including injury prevention. I interviewed CAPT Richard Turner, Director of EHSC, to discuss the possibility of the EHSC managing the new SNAP curriculum. The EHSC has the ability to help limit unofficial versions of SNAP; can track the number of trainings taught and the number participants trained; and may provide evaluation of the effectiveness of SNAP. In addition, the EHSC will be able to provide professional CEUs to participants who successfully complete the course. The goal of offering CEUs is to help increase participation of professionals (police officers, fire fighters, emergency services, childcare providers, nurses, community health representatives, etc.) in SNAP.

Major Revisions

In the process of revising the training and during discussion with the workgroup, several updates were proposed and implemented in the revised SNAP training. Major changes to the curriculum included:

- Increased focus on misuse;
- More hands-on instruction;
- Creating one chapter for seat belt systems to replace three chapters;
- Addition of hands-on skills tests;
- Revised pre-/post-tests for assessment of students.

Misuse & Hands-On Instruction

Feedback from the SNAP workgroup members and the SNAP participant focus group identified the need for an increased focus on the misuse of car seats. Therefore, more hands-on training and a skills test were included, specifically geared towards the identification and correction of misuse. Misuse examples were also added throughout the modules.

Seat Belt Systems

In the previous version of SNAP, there were three chapters related to seat belt systems (Seat Belt Systems, Seat Belt Systems That Don't Pre-Crash Lock, and Lower Anchors and Tethers for Children (LATCH)). Feedback from SNAP instructors and workgroup members recommended simplifying these sections. In SNAP 2.0, the 3 chapters were simplified and combined into one chapter, emphasizing how these components are utilized to install car seats. This led to improved organization and overall student comprehension of the most difficult section of SNAP.

Skills Tests, Car Seat Check-up Event

Another major change was the addition of two skills tests at the end of the course: a car seat selection test and a misuse identification test. The car seat selection skills test includes five scenarios where participants identify the correct car seat based on the age, height, and weight of a child. This is a multiple choice test with only one correct answer for each scenario. The misuse identification skills test presents car seat installation scenarios using car seats installed in vehicles in which students have to identify misuse and determine corrective action. Pictures of each misuse example are included in a debriefing presentation that allows students to discuss and review the misuse and corrective action for each scenario. Worksheets were developed for both skills tests and are provided in the student guide.

In the previous versions of SNAP, a car seat check-up event was conducted following the course to practice skills learned in class. Participation in the check-up event was required to pass the course. During a car seat check-up event

families have their car seat(s) inspected for correct installation and are educated on the correct use of car seats under the direction of certified CPS technicians. Several car seat check-up events conducted during SNAP were poorly attended, and oftentimes no cars showed up during events. In addition, several communities lacked the resources to conduct an effective check-up event (e.g., no access to car seats to distribute to families or inadequate number of CPS technicians to participate). Because of these limitations, the car seat check-up event is now optional. However, if the community/Tribe has the resources to conduct a car seat check-up event, instructions are still included in the SNAP Teacher Guide.

Pre- and Post-Test, Chapter Review

In the previous version of SNAP, students took a pre-test at the beginning of the course, and completed post-test questions after each chapter. In order to better assess students gain in knowledge, the post-test is now administered at the end of the course. In addition, the format of the pre/post-test was updated so there is only one answer sheet which better allows for instructors to evaluate knowledge gained. In place of post-test questions after each module, a review has been incorporated at the end of each chapter to ensure students are clear on the "take home" points from each chapter. A summary form was created to collect pre- and post-test results from each SNAP training. Pre- and post-test results will be reported to the EHSC after each training and will allow the tracking of knowledge gained after completing the course. This also allows the IHS Injury Prevention Program to assess the immediate impact of SNAP.

Teaching SNAP 2.0

The newly updated SNAP curriculum received final approval by IHS Headquarters in August 2015 and is currently available to teach. SNAP 2.0 can usually be taught in 6-8 hours, depending on class size, number of instructors available, and break times. Any child passenger safety technician or instructor certified by Safe Kids is eligible to teach SNAP. For more information about SNAP, contact your Area's Injury Prevention Specialist (a list of Area Injury Prevention Specialists can be accessed at the IHS Injury Prevention website: http://www.ihs.gov/InjuryPrevention) or your local IHS Environmental Health Officer.

The IHS Environmental Health Support Center began managing SNAP in September 2015. Participants who attend a SNAP course administered by EHSC will be eligible to receive 0.625 CEU's. To schedule a course and obtain course materials, contact the EHSC Environmental Health Officer at (505) 248-4263. All SNAP instructors will need to provide proof of CPS Technician certification and a short bio to EHSC when requesting a SNAP course. SNAP trainings will be advertised on the EHSC website and a web link will be provided for students to register. SNAP instructors will provide the course evaluation and pre- and post-test summary sheet to EHSC following the course.

Next steps

An IHS Injury Prevention Specialist certified as a CPS technician should be selected in the near future to maintain and continually update SNAP. In addition to results from the pre-and post-tests, a follow-up study of SNAP participants should be conducted in order to evaluate the long-term impact and effectiveness of SNAP.

Conclusion

SNAP has been a valuable tool in Indian Country for many years. However, with ever-changing CPS laws and best practice recommendations; minimal oversight and management of the course; and several different versions being used a revision of SNAP was needed. Working with subject matter experts, a revised version of SNAP is now available with a process in place to manage and provide oversight. This will hopefully increase participation and provide a standardized CPS training course for use throughout Indian Country with the ultimate goal of reducing AI/AN MV occupant injuries and deaths. During a SNAP pilot test, a pilot test instructor eloquently summarized the ultimate goal of SNAP: "We honor and respect our children by keeping them safe".

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