

Child Passenger Safety: Electronic Submissions of Car Seat Inspections

Location: Indiana

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Category: **Cutting Edge Practice**

BACKGROUND

According to Indiana law, children from birth to age 8 are required to ride in child restraints. All passengers in vehicles that have seatbelts must use them while in forward motion. The law also states that all children between 8 and 16 years old must use seat belts. According to the Indiana State Department of Health Epidemiology Resource Center Data Analysis Team, in 2016 there were 16 deaths due to motor vehicle injuries for Indiana residents aged 1-14 years. The rate was 1.3 per 100,000 population (the rate is unstable because there were fewer than 20 deaths). Additionally, in 2016, there were 195 hospitalizations in children 0-14 years old due to motor vehicle accidents, resulting in an incident rate of 14.94 per 100,000.

Currently, Indiana has three main organizations who educate and enforce child passenger safety: Indiana Criminal Justice Institute (ICJI); Automotive Safety Program (ASP), and Indiana State Department of Health, Division of Trauma and Injury Prevention (ISDH). Beginning in 2016, ICJI manages a mobile application that permanent fitting stations use to input Child Passenger Safety Check Up forms. ICJI developed the application to completely mirror the data collection methods from the current Child Passenger Safety Check Up form. This has enabled for ICJI to receive data more quickly from fitting stations, have better data quality (due to automatic skip patterns) and publish data more quickly for grant reporting as well as collaborative partnerships, such as the Child Safety Collaborative Innovation and Improvement Network (CS CoIIN). The ultimate goal is for Indiana to have completely paperless data entry to maximize data quality and reporting for ICJI.

PROGRAM OBJECTIVES

By May 2018, we will reduce deaths, hospitalizations and emergency department (ED) visits resulting from a motor vehicle crash in which the victim was an

TITLE V/MCH BLOCK GRANT MEASURES ADDRESSED

#07: Rate of hospitalization for non-fatal injury per 100,000 children ages 0 through 9 and adolescents 10 through 19

of a vehicle and between the ages of 0 and 14. Our goals are to: 1. Decrease the child passenger mortality rate by 4.17% relative to the state/jurisdiction baseline; 2. Decrease the rate of child passenger-related hospitalizations by 4.17% relative to the state/jurisdiction baseline; and 3. Decrease the rate of child passenger-related ED visits by 4.17% relative to the state/jurisdiction-baseline.

TARGET POPULATION SERVED

The target population is all Hoosier children aged 0-14, as well as parents, caregivers, and child care professionals.

PROGRAM ACTIVITIES

Through participation in the CS CoIIN, the ISDH, ICJI, and ASP provided child safety seat inspection stations with tablets, and coordinators were trained in the use of an app. The app makes it possible to submit inspection forms to a database with the push of a button. Use of the app also enables more accurate data reporting and targeting of specific populations/regions based on the data.

When first beginning the Child Safety CoIIN in 2016, there were 96 total fitting stations throughout Indiana. Currently, have 121 fitting stations. The goal is for each fitting station to have at least one tablet; however, it was quickly apparent that fitting stations with satellite locations need more than one tablet, whereas some fitting stations are still using only paper forms. Although the initial shipment of 120 tablets have already been distributed, ICJI is currently in the process of ordering more, which will double the original 120 tablets.

Each permanent fitting station is required to submit an activity report as well as the Child Passenger Safety Check

Up forms each month and then entered into a statewide database. Prior to using the mobile app, many submitted forms were not entered into the database due to low staffing and lack of time. This resulted in inaccuracy of data reporting. For example, although a fitting station could see its reporting in numbers, ICJI could not analyze demographical data with each checkup, including race/ethnicity, income range, and educational level of each parent or caregiver. Usage of the tablet has been key in getting accurate information from the data to see who our targeted population really is.

The tablet has received positive feedback from Child Passenger Safety Technicians (CPSTs) throughout the state. The automatic skip patterns have saved huge amounts of time when filling out the Check Up forms. The Check Up forms have 97 unique questions (ranging from demographical data to information on the child safety seat before and after the appointment). To navigate the form correctly and timely, one must be very familiar with the form. The saved time lets technicians have more interaction with the parent.

The app also enables the CPST to have all the paperwork in one location, minimizing responsibility of the technician to carry all copies of each form. Because they can submit the form at the press of a button, this has allowed for more timely reporting and eliminated the risk of misplacing paperwork before inputting it into the system.

PROGRAM OUTCOMES/EVALUATION DATA

Outcome data is primarily pulled from hospital discharge datasets, trauma registries and mortality data. Projected evaluation data includes lowering the rate of ED/trauma center visits by 4.17% by May 2020. As far as programming data, the goal is for all permanent fitting stations to have 100% paperless data entry from the tablet.

PROGRAM COST

The program costs have all been associated with the development of the app and the cost of 240 tablets. Both may vary by vendor and app developers.

ASSETS AND CHALLENGES

Assets thus far have resulted from improved data quality as well as a significant reduction in staff time and data reporting. Reporting can be submitted monthly at the press of a button, and statisticians at ICJI can pull and analyze the data immediately. Collecting demographic data also has resulted in us being able to target specific populations, such as Booster Bash Events for children in the booster seat age (ages 4-8) within low-income communities. Challenges have

been a lack of willingness to change from the paper copy of the form to an electronic app.

LESSONS LEARNED

Working with private entities to create and publish the app and understanding the boundaries and expectations of funding via taxpayer dollars have provided many opportunities to learn new lessons. Other lessons learned have resulted from gaining buy-in from experienced technicians who were at first reluctant to switch to an electronic data collection application.

FUTURE STEPS

Future steps include options to accommodate a limited number of CPSTs to continue to do their own paper copies of the form; however, they would be fully responsible for inputting the data online to a website that directly compiles the same data from the app and the online website. This will enable uniform data collection methods while allowing CPSTs to continue using the method of collection they prefer.

COLLABORATIONS

The app development, implementation and follow-up activity and reporting have been ongoing, primarily lead by ICJI, ASP and IN3. The fitting stations that have been utilizing the app have varied from fire/EMS departments, police stations, trauma centers, obstetrician units, primary care, early childhood development organizations, child advocacy centers to local and county health departments.

PEER REVIEW AND REPLICATION

N/A

RESOURCES PROVIDED

The Automotive Safety Program:
<http://www.preventinjury.org/>

Indiana Criminal Justice Institute:
<http://www.in.gov/cji/2383.htm>

Indiana State Department of Health:
<https://www.in.gov/isdh/19537.htm>

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