

Booster Seat Planning Guide



**Centers for Disease
Control and Prevention**
National Center for Injury
Prevention and Control

Booster Seat Planning Guide

By

Bethany A. West, MPH

Leslie L. Dorigo, MA

Kelly A. Mattick, MPH

Merissa A. Yellman, MPH

CAPT Erin K. Sauber-Schatz, PhD, MPH

Division of Injury Prevention,
National Center for Injury Prevention and Control,
Centers for Disease Control and Prevention,
Atlanta, Georgia

ACKNOWLEDGEMENTS

We acknowledge and appreciate the important contributions of MiChel'le Hull, MPH; CDR Jason Hymer, REHS, MPH; Ann Dellinger, PhD, MPH; and our colleagues at Brunet-García for preparing and organizing the contents of this guide.

SUGGESTED CITATION: West BA, Dorigo LL, Mattick KA, Yellman MA, Sauber-Schatz EK. *Booster Seat Planning Guide*. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention; 2021. Available at https://www.cdc.gov/transportationsafety/child_passenger_safety/boosterguide.html

CDC developed the *Booster Seat Planning Guide* to assist States, Tribes, Localities, and Territories (STLTs) with assessing, planning, and implementing improved booster seat laws to reduce crash injuries and deaths among children.

The guide begins with an overview of the public health problem of motor vehicle crashes involving children and how crash injuries and deaths can be prevented. Next, the guide takes a step-by-step approach to help develop a tailored plan to prevent crash injuries and deaths among children in your STLTs. Finally, after working through the steps, you will end with an action plan and communication strategy. The guide also includes a brief list of resources, training aids, and links to technical assistance.



Contents:

Overview	8
1. Learn About Your STLT's Booster Seat Law	15
2. Find Motor Vehicle Crash Data Available for Your STLT	19
3. Create and Strengthen Partnerships to Improve Booster Seat Safety	25
4. Formulate Your Action Plan	34
5. Develop a Communication Plan for Action	36
Appendix	39





Overview

Motor vehicle crashes are a leading cause of death among children in the United States.¹

More than 600 children age 12 and younger are killed each year as passengers in motor vehicle crashes² and more than 91,000 are injured.¹ Deaths and injuries can be prevented in motor vehicle crashes with proper restraint use.

There are several stages of proper restraint use for children³ that change as they grow:

- **Stage 1:** Rear-facing car seat
- **Stage 2:** Forward-facing car seat
- **Stage 3:** Belt-positioning booster seat
- **Stage 4:** The vehicle's seat belt

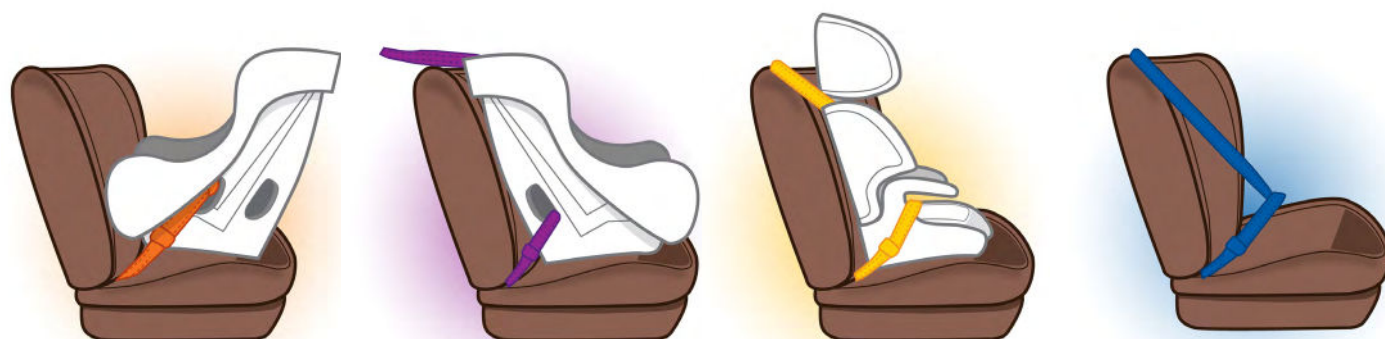


As age increases, proper restraint use decreases.

For example, about 8% of infants under age 1 were not properly restrained with a rear-facing car seat compared with more than 30% of booster seat-aged children not properly restrained with a booster seat.⁴

Stages of Proper Restraint Use for Children

Using the correct car seat or booster seat can be a lifesaver.



REAR-FACING CAR SEAT	FORWARD-FACING CAR SEAT	BOOSTER SEAT	SEAT BELT
Birth until age 2–4	After outgrowing rear-facing car seat and until at least age 5	After outgrowing forward-facing car seat and until seat belt fits properly	When seat belt fits properly without a booster seat
Buckle children in a rear-facing car seat with a harness until they reach the maximum weight or height limit of their car seat. Keep children rear-facing as long as possible. Never place a rear-facing car seat in the front seat. Front passenger air bags can injure or kill young children in a crash.	When children outgrow their rear-facing car seat, they should be buckled in a forward-facing car seat with a harness until they reach the maximum weight or height limit of their car seat.	When children outgrow their forward-facing car seat, they should be buckled in a booster seat until the seat belt fits properly without a booster seat. Proper seat belt fit usually occurs when children are age 9–12.	Children no longer need to use a booster seat when the seat belt fits them properly. A seat belt fits properly when the lap belt is across the upper thighs (not the stomach) and the shoulder belt is across the center of the shoulder and chest (not on the neck/face or off the shoulder).

Keep children age 12 and younger properly buckled in the back seat.

*Recommended age ranges for each seat type vary to account for differences in child growth and weight/height limits of car seats and booster seats. Use the car seat or booster seat manual to check for important information about installation, the seat weight and height limits, and proper seat use.

Child passenger safety recommendations: American Academy of Pediatrics (AAP) 2018.

www.cdc.gov/transportationsafety/child_passenger_safety



Booster seat use reduces the risk for serious injury by 45% when compared with seat belt use alone.⁵

To help prevent injury and death, booster seats should be used until proper seat belt fit can be achieved.

Booster seats help ensure proper seat belt fit

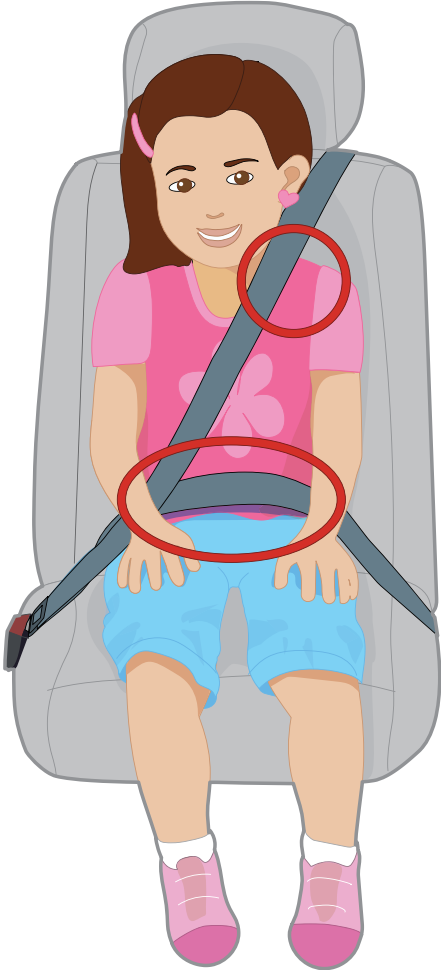
Booster seats are an important stage of child passenger safety because they elevate and position a child so that the seat belt's lap and shoulder belts fit properly. When a car crash happens, properly fitting seat belts distribute the crash forces onto the skeleton, like the shoulder and hip bones, instead of the soft tissues, such as the stomach or neck. This helps to prevent injuries including spine and brain injuries. Booster seat use reduces the risk for serious injury by 45% when compared with seat belt use alone.⁵

Proper seat belt fit occurs when the lap belt is across the upper thighs, not the stomach, and when the shoulder belt is across the center of the shoulder and chest, not on the neck/face or off the shoulder. This typically does not occur until children are age 9–12. Booster seats should be used until proper seat belt fit can be achieved to help prevent injury and death.

Unfortunately, transitioning too soon from a booster seat to a seat belt remains common.^{4,6} This is often referred to as “premature graduation,” and it puts children at greater risk for injuries.^{3,7} One type of injury associated with premature graduation is called “seat belt syndrome.” This is a pattern of abdomen and spine injuries that can occur during crashes when seat belts are used prematurely.^{8,9}

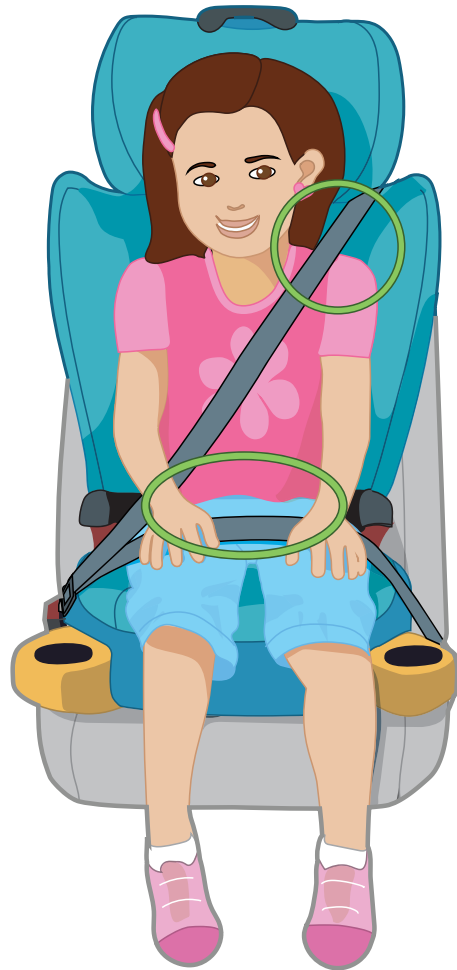
Booster seats make seat belts fit better.

BAD Seat Belt Fit:



- ✗ The shoulder belt is across the neck or face; or too far out on the shoulder.
- ✗ The lap belt is across the stomach.

GOOD Seat Belt Fit with Booster Seat:



- ✓ The shoulder belt is across the middle of the chest and shoulder.
- ✓ The lap belt is across the upper thighs.

Always properly buckle children age 12 and younger in the back seat!



Increasing booster seat use

Research has shown the most effective strategy to increase booster seat use is through updating, implementing, and enforcing state child restraint laws¹⁰ with booster seat provisions.^{11–15} These are commonly known as “booster seat laws.” In addition to increasing booster seat use, booster seat laws also reduce motor vehicle-related injuries and deaths in children under age 9 who are covered by these laws.^{11, 12, 16}

Most state laws do not align with best practice recommendations despite demonstrated effectiveness.¹⁷ As of December 2021, only four states require children to use booster seats until at least age 9: Louisiana, Tennessee, Washington, and Wyoming.¹⁷ Increasing the number of STLTs with booster seat laws that cover children until at least age 9 will increase booster seat use and help protect more children from a leading cause of injury and death.

In addition to increasing booster seat use, booster seat laws also reduce motor vehicle-related injuries and deaths in children under age 9 who are covered by these laws.^{11, 12, 16}

Success Stories

- The rate of children using car seats and booster seats increased nearly three-fold in five states that increased the booster seat age requirement to 7 or 8 years. The rate of children who sustained fatal or incapacitating injuries decreased by 17% in these states.¹¹
- Children age 4–8 in states with booster seat laws were over four times as likely to be using age-appropriate restraints and were 20% less likely to die than children in states without booster seat laws.¹²
- In Milwaukee County, Wisconsin, observed booster seat use among children age 4–7 increased by 19 percentage points after booster seat laws were implemented.¹³
- A study among children involved in crashes found that restrained children were 66% more likely to be buckled in appropriate restraints if their state law followed best practice recommendations.¹⁴
- The death rate among 7-year-olds was 25% lower for the children in states with booster seat laws compared with states without booster seat laws.¹⁶

Previous studies have demonstrated the effectiveness of booster seat use at reducing the risk for serious injury⁵ and the effectiveness of booster seat laws at increasing use and decreasing injuries and deaths.^{11–16}

Based on this collective evidence, CDC developed the *Booster Seat Planning Guide* to assist STLTs with assessing, planning, and implementing improved booster seat laws to reduce crash injuries and deaths among children under age 9.



Studies from other countries have also demonstrated the effectiveness of booster seat laws.

For example, in Canada:

Provinces with booster seat laws had significantly higher observed booster seat use among children age 4–8 years than provinces without booster seat laws.¹⁸

British Columbia's booster seat law was passed in 2008 and covered children under age 9. It was associated with an 11% reduction in the monthly motor vehicle crash injury rate among children age 4–8 years, compared with children age 9–14 years.¹⁹

The guide outlines five steps to develop an action plan to move booster seat safety forward, including:

- 1. Learning about your STLT's booster seat law**

- 2. Learning about which motor vehicle data are available**

- 3. Creating and strengthening partnerships**

- 4. Forming an action plan**

- 5. Developing a communication plan**

Each step in the guide contains an introduction with helpful resources in the beginning and a series of assessment questions at the end that STLTs can use to assess strengths, weaknesses, and opportunities in their policies and programs focused on booster seat use. These questions will help identify action steps for developing an overall plan to increase booster seat use in the STLT. Website links throughout the guide can be used to find more information from CDC websites or external sources.

The guide is designed to be adaptable and flexible to accommodate the unique needs of STLTs. You may choose to complete steps in a different order and/or may need to revisit some steps more than once as the plan progresses. Some STLTs might want to focus more attention on some areas of the guide than others.





1. Learn About Your STLT's Booster Seat Law

Introduction

Having a booster seat law that covers child passengers until at least age 9 is one of the most effective strategies for increasing booster seat use and reducing motor vehicle-related injuries and deaths among children.¹¹⁻¹⁶ Gathering information about your STLT's booster seat law is the first step in preparing your plan. This information will help you assess your STLT's baseline and your unique needs and opportunities.

Sources of Information

You can find up-to-date information and details about your STLT's booster seat law at:

1. Insurance Institute for Highway Safety's [Seat belt and child seat laws by state](#) webpage
2. Governors Highway Safety Association's [Child Passenger Safety](#) webpage
3. STLT's [Department of Transportation](#) website
4. STLT's [Highway Safety Office](#)
5. [Safe Kids' Child Safety Laws by State](#) webpage
6. You can also search for scientific studies about child restraint laws on [pubmed.gov](#).

When researching, try using keywords such as:

- child passenger safety
- booster seat law
- booster seat
- motor vehicle crash + children
- motor vehicle injury + children
- child restraint

Assess

Use this list to determine the parameters of your STLT's booster seat law.

1 Booster seat law features

- Until what age are children required to be in a booster seat?
- Is the law based on age alone or does it also include language about child's height or other requirements?
- At what age are children permitted to use a seat belt without a booster seat?
- Are children required to be in the back seat?
If so, until what age?
- What are the penalties for violating these laws?
- Does the law include a primary enforcement feature which permits law enforcement officers to stop vehicles solely for a booster seat or car seat violation?
- Are there any other details or exceptions in your STLT's booster seat law that are important to know (e.g., weight requirements for booster seat use)?

2 Booster seat law history

- When was the booster seat law first passed and/or when did it go into effect?
- Has the booster seat law been updated or changed since it was first established?
 - If yes, what changes have been made?
 - If no, does the current booster seat law have gaps compared to current evidence of [best practice](#)?
- Which stakeholders or partners were involved in past booster seat efforts?

3 Booster seat law evaluation and research

- Has the booster seat law been evaluated for safety benefits?
 - If so, what were the results?
 - Are there studies in neighboring or similar STLTs that would be useful for comparison?
 - Do those STLTs have data to document booster seat law effectiveness?
- Are there any studies about awareness of or compliance with the booster seat law among parents and/or caregivers in your STLT?
 - If so, what have these studies found?
 - Are there studies in neighboring or similar STLTs that would be useful for comparison?
- How have parents, caregivers, and other stakeholders reacted to the booster seat law?
 - Are there any scientific data, reports, or studies to document public reaction?

4 Policy and enforcement considerations

- Are there policy gaps and/or other policy considerations that should be kept in mind?
- Are current booster seat laws enforced?
 - How many citations were issued in the past year?

5 Planning for improvements

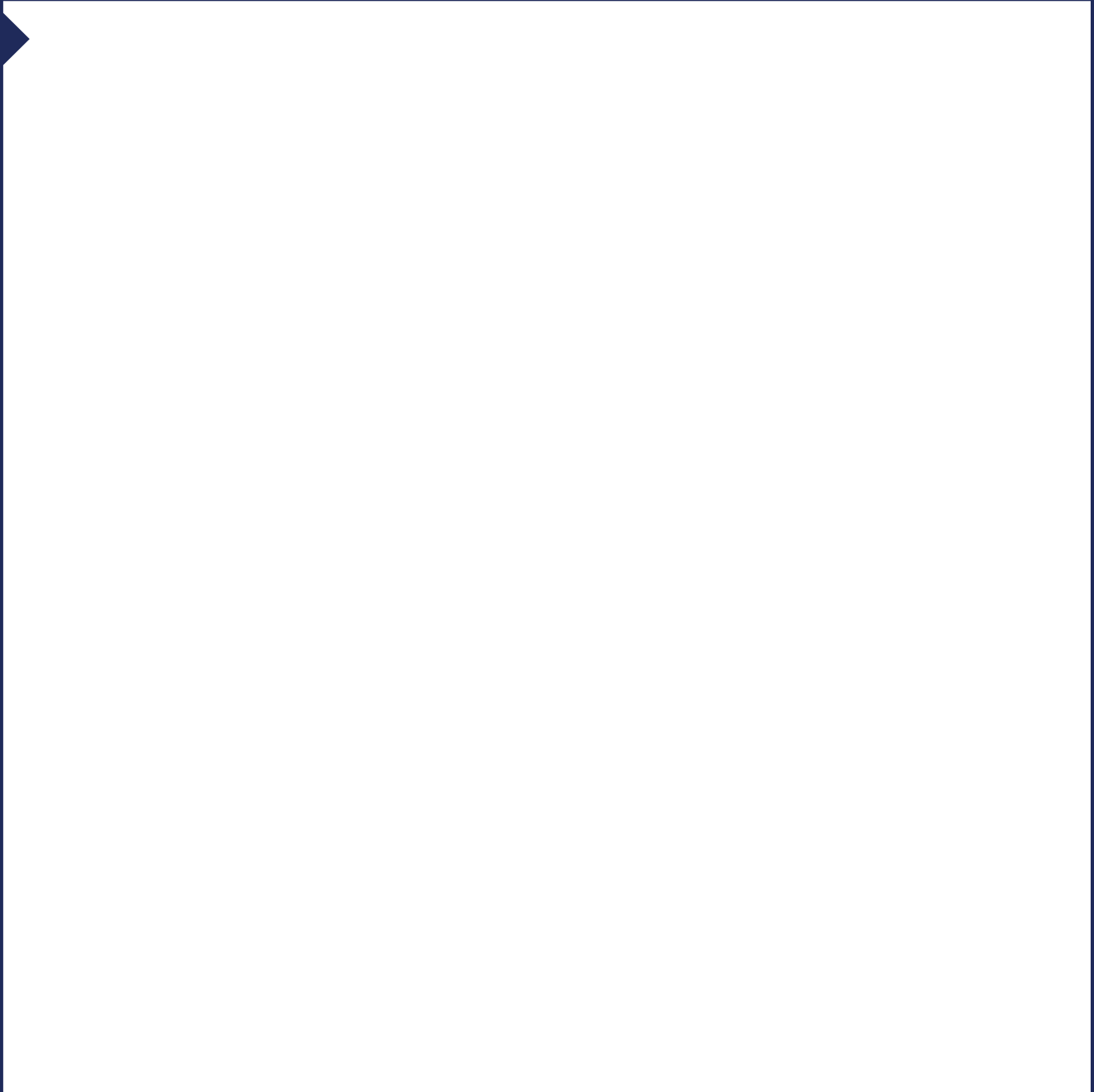
- Could a potential booster seat law be written to cover children until at least age 9 and/or include other requirements such as primary enforcement, seating position, etc.?¹¹⁻¹⁶
 - Could improvements to the booster seat law also require children to be buckled in the back seat until 13 years of age?^{3,7,20}
 - In addition to extending the ages covered in the booster seat law, could the law include mandating use of federally approved booster seats and not exceeding the manufacturer's weight/height limits?
 - How would a new booster seat law or changes to the law be enforced?
 - Could there be plans for enhanced enforcement campaigns?
 - Would additional training for law enforcement officers be needed?
 - Could there be provisions and/or assistance for certain populations?
 - Families with lower incomes?
 - Children with special transportation needs?
 - Emergencies?
- Could there be provisions for what to do in unique situations?
 - Taxis, ride share vehicles, or rental cars?
 - Carpooling?
 - Emergencies?
 - Older car models that do not have lap and shoulder seat belts in all seating positions in the back seat?
 - Could there be provisions to promote booster seat distribution over penalties?
 - Could your STLT provide a booster seat and education/support rather than penalties?
 - Could your STLT waive/reimburse the fine/penalty for violations for families that subsequently purchase a booster seat and present evidence of that purchase?
 - Could there be "Good Samaritan" provisions to the law to limit liability for [Child Passenger Safety Technicians](#)? Good Samaritan laws have been passed in some states to protect groups and individuals from liability claims when they offer inspections and instruction on how to properly install and use booster seats.

**ACTION
STEP**

▶ Background

Identify which of these questions you need to answer to gather background information about booster seat laws in your STL.

Write your ideas below and then continue to the next section. You will have an opportunity to synthesize the ideas from this step with the other action steps in the guide to create an overall strategy in the fourth section of the planning guide.





2. Find Motor Vehicle Crash Data for Your STLT

Introduction

Having data on crash injuries and deaths among children will support improvements to your STLT's booster seat law. Data about motor vehicle crash injuries and deaths that are specific to your STLT provide valuable context that can also be compared to neighboring STLTs or the nation. Data can help identify ways in which booster seat laws could be modified to be more effective at saving lives and preventing injuries in your STLT.

Additionally, data about current restraint practices and/or perceptions and knowledge of booster seat safety can help STLTs better understand the local context and focus strategies that are likely to fit the needs of the community. These data may already be available, or it might be worth conducting local surveys to learn more.



Data are important for identifying, monitoring, and evaluating strategies to help demonstrate what works.

Motor vehicle crash data can reveal patterns related to:

- the number of child passengers
- age of child passengers
- types of restraint used
- seating positions

Sources of Information

Federal data sources provide national and state-level motor vehicle crash data.

- CDC's [Web-based Injury Statistics Query and Reporting System \(WISQARS\)](#)

An interactive, online database that provides national and state-level fatality and cost of injury data, as well as national-level nonfatal injury data from emergency departments. For example, users could find the number of motor vehicle occupant deaths among children age 5–8 or 9 years in a state.

- CDC's [Wide-ranging Online Data for Epidemiologic Research \(WONDER\)](#)

A menu-driven system that allows users to query public health data (e.g., mortality and population data).

- National Highway Traffic Safety Administration's [National Center for Statistics and Analysis \(NCSA\)](#)

NCSA is responsible for providing a wide range of analytical and statistical support to the National Highway Traffic Safety Administration (NHTSA) and the highway safety community.

NCSA has numerous data [resources](#) including:

- **Fatality Analysis Reporting System (FARS)** is a census of all crashes on U.S. public roadways involving one or more deaths occurring within 30 days of the crash. FARS also includes police-reported crash characteristics (e.g., seating position, whether occupant was using a booster seat or seat belt, day and time of crash).
- **General Estimates System (GES)** data come from a nationally representative sample of police-reported crashes of all severities (minor to fatal).
- **Fatality and Injury Reporting System Tool (FIRST)** is a tool that lets users build queries about fatal (FARS data) and injury crashes (GES/Crash Report Sampling System data).
- **National Survey of the Use of Booster Seats (NSUBS)** provides national-level estimates of restraint use for all child occupants age ≤12 years in the United States, with the primary purpose of estimating booster seat use among children age 4–7 years. [Find NSUBS publications here.](#)

Fatal and nonfatal motor vehicle crash data might be available for your STLT through some of the following sources:

1. STLT [Departments of Transportation](#)
2. State [Highway Safety Offices](#)
3. State departments of public safety
4. State and local [health departments](#)
5. Emergency medical services data
6. Hospital data (e.g., emergency department, outpatient, inpatient, trauma registries)
7. STLT [Child Death Review teams](#)
8. Colleges/universities
9. Nonprofit or nongovernmental organizations
10. Insurance organizations
11. State Office of the Medical Investigator, Medical Examiner, or Coroner
12. Tribal or Bureau of Indian Affairs (BIA) Law Enforcement
13. Tribal Transportation Safety Plans



Additionally, you may want to know the number of children living in your STLT who are most directly affected by booster seat laws. This is typically children age 5–8 or 9 years.

Population data may be available at the following national data sources:

- [United States Census Bureau](#)
- CDC's [WONDER](#)
- Other STLT entities such as state and local [health departments](#)



Assess

1 Data

- What data have you used or can you use to examine motor vehicle crash deaths and injuries among children age 5–8 or 9 years in your STLT?
 - What have you learned or what can you learn from these data (such as the number of crashes involving children age 5–8 or 9 years in your STLT, the number and rate of motor vehicle crash injuries, hospitalizations, and deaths among children age 5–8 or 9 years in your STLT)?
 - How have you or how can you use this information? For example, can you compare leading causes of injury or death among children age 5–8 or 9 years in your STLT, and can you educate decision makers on the public health issue using STLT data?
 - What do these data suggest as possible opportunities for improvements in booster seat safety in your STLT?

2 Unanswered questions

- What are the most important unanswered questions about booster seat safety in your STLT?
- What data are needed to answer these questions?
 - Do you have data about motor vehicle crash deaths, motor vehicle crash injuries, child restraint practices in your STLT, and perceptions/opinions of booster seat safety?
- How can you access existing data and/or collect data that you need to answer these questions?

3 Neighboring STLTs

- Do neighboring STLTs have data that could be helpful to you?

4 Data collected in your STLT

- Have survey data about booster seat use already been collected in your STLT?
 - If yes, what did you learn from these data?
 - If no, what could you learn from these data if they were collected?
 - How have you or can you use this information?
- Are you able to collect data about child restraint practices in your STLT if data are not already available? If so, how?
 - For example, how many children age 5–8 or 9 are properly restrained?
 - How many children are improperly restrained? For example, children 6 years of age using only a seat belt.
 - How many children travel completely unrestrained?

- Are you able to collect public perception data on booster seat use and reasons why parents/caregivers are not using booster seats for their children, if it is not already available? If so, how?
 - Is this something that you would want to do periodically as the effort progresses to document changes in perception (among the general public and/or decision makers)?
 - What are perceived barriers and facilitators to booster seat use?
 - How can you address barriers and facilitators to booster seat use?
- Are the reasons why parents/caregivers are not using booster seats for their children well understood?
 - Lack of knowledge about injury consequences and/or the law?
 - Gaps in who is covered by the law? For example are there certain categories of children or ages not required to use booster seats?
 - Inconvenience?
 - Inability to afford a booster seat?
 - Carpooling?

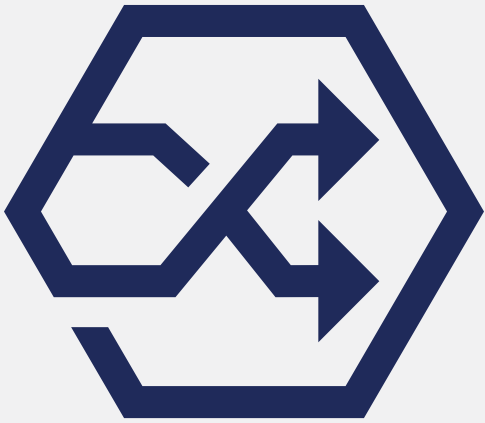
5 Assistance with data analysis

- Are there researchers or other individuals at local colleges/universities, academic medical centers, health departments, hospitals, and/or other organizations that you could partner with to assist with data analysis?

ACTION STEP **Data**

Identify which of these questions you need to answer so that you have the best available data for planning booster seat law improvements in your STLT.

Write your ideas below and then continue to the next section. You will have an opportunity to synthesize the ideas from this step with the other action steps in the guide to create an overall strategy in the fourth section of the planning guide.



3. Create and Strengthen Partnerships to Improve Booster Seat Safety

Improving booster seat safety requires strong, collaborative partnerships with many diverse groups with a vested interest in child passenger safety, such as:

- Other STLT agencies
- Nongovernmental organizations
- Experts in traffic safety
- Communication, social, and print media
- Outreach and education
- Funding
- Data collection and analysis

Introduction

Efforts to improve booster seat safety require strong, collaborative partnerships with many diverse groups with a vested interest in child passenger safety. Creating these partnerships is an important step in the planning process. Partnerships will benefit from uniting behind a consistent message that is data driven and coupled with personal stories.

Successfully uniting these efforts and partnerships often requires a well-established and cohesive [Core Working Group](#) with strong leadership capabilities that can organize and direct the process.

The Core Working Group is typically responsible for implementing actions on behalf of the partnership and can dedicate substantial time to managing the effort and moving it forward.

Core Working Group

Successful Core Working Groups are composed of the roles listed below.

1. Leader

- Can devote a significant amount of time to the day-to-day management of the partnership
- Is organized and communicates effectively
- Has expertise or knowledge about child passenger safety
- Can help the group come to consensus and make decisions
- Can effectively delegate tasks
- Is energetic, enthusiastic, motivational, and positive-minded
- Listens and considers all issues from the wide range of stakeholders and community groups

2. Certified [Child Passenger Safety Technician or Instructor](#)

- Has training, technical expertise, and field experience in child passenger safety—particularly in education and installation of child restraints. Ideally has several years of experience

3. Booster Seat Expert

- Has training, technical expertise, and field experience in child passenger safety. Could be an additional certified [Child Passenger Safety Technician or Instructor](#)
- Has scientific/research expertise in child passenger safety and in collecting, analyzing, and interpreting related data

4. Booster Seat Champion

- Often has a personal story or can find and partner with someone who does
 - Can seek out families who are willing to put a face to the issue and perhaps tell their story with either a good or bad crash outcome. This reinforces and personalizes the data. The combination of data with a relatable, illustrative story can be very powerful.
- Can push ideas forward
- Is persuasive
- Is especially motivated to improve booster seat safety
- Often can mobilize resources or other forms of support



These roles are not meant to be mutually exclusive—many core members may be able to represent several of the roles and take on multiple responsibilities.

Likewise, the Core Working Group can have many members covering the same role.

What is important for success is that each of these roles is represented in the [Core Working Group](#).

5. Partners and community collaborators from diverse backgrounds who are passionate about booster seat safety and represent the characteristics of the population in your STLT

- Very helpful to have “nontraditional” partners outside of the typical traffic safety/public health field such as businesses that serve parents/caregivers or children, parent teacher associations, fire departments, academic institutions, etc.

6. Additional members who:

- Believe they can make a difference
- Have patience, persistence, and a high level of motivation

7. Media connections and social media expertise

- Ideally connected to several media outlets such as newspaper, radio, TV, internet, or social media
- Has ability to craft the message and package material for the media,²¹ or is connected to someone who has expertise
- Has social media expertise to disseminate messages to a wide array of audiences, such as parents, caregivers, schools, and legislators, or is connected to someone who has expertise

8. Collaborations with coalitions

- Connections with other traffic safety coalitions
- Connections with other coalitions, such as local children’s hospital coalitions that are outside of traffic safety but interested in child wellbeing

9. Tribal community members

- Will your partnership include Tribal communities or consortium? If so, include a Tribal community member as part of the core working group



► Create a Booster Seat Safety Partnership Matrix

The Core Working Group will create a booster seat safety partnership matrix.

Partnerships are crucial to executing a well-established, cohesive, large scale effort to improve booster seat safety in your STLT. Partnerships must be formed, fostered, and effectively utilized to be truly beneficial. You and your working group will be able to strategically strengthen your STLT's booster seat policy in an effective and efficient manner by collaborating with the right people and organizations. Expanding your network will garner additional support and resources.

The **Booster Seat Safety Partnership Matrix** below can help document a new booster seat safety partnership and/or assess the strengths, weaknesses, and needs of an existing group.

- **In the left column**, you will find examples of potential partners who STLTs have utilized in the past when they enhanced their booster seat laws. Partnerships **do not** require all these members. This list is intended only as a starting point for you to consider which partnerships would be beneficial to your working group. There also may be partnership members that are not listed that would be important in your STLT.
- **The second row** lists general categories of skills or expertise your working group may need.
- **The third row** lists examples of specific capabilities that your working group may need.
- **First**, place a check in the cells of the matrix to inventory your current partnership's members and capabilities. **Then**, consider which capabilities you are missing and which additional members you want to recruit to create the strongest possible partnerships.



Please note that this list is not exhaustive.

The matrix includes ideas and examples of partners, skills/expertise, and capabilities that have been important for successful traffic safety partnerships in the past.

BOOSTER
SEAT SAFETY
PARTNERSHIP
MATRIX:

Core Working Group

PARTNER'S ROLE/RESPONSIBILITIES/SKILLS

	DATA		COMMUNITY EFFORTS		COMMUNICATION EFFORTS		COALITION COLLABORATION		LEGISLATIVE EXPERTISE		OTHER	
	Collecting data	Analyzing and interpreting data	Learning about the community's perception of booster seat safety and providing further education on the topic	Working with key stake-holders	Writing and/or creating print materials, website content, and/or social media	Working with the media and/or the public	Organizing and leading the coalition	Managing partnership meetings	Knowledge about the legislative process	Educating decision makers	Contributing resources (time, money, in-kind, etc.)	Other:
GOVERNMENT												
TRAFFIC SAFETY (OR GENERAL CHILD SAFETY) ORGANIZATIONS												
LAW ENFORCEMENT												

- State and/or Regional Departments of [Transportation](#)
- State [Highway Safety Offices](#)
- State Departments of Public Safety
- [Health Departments](#)
- Regional NHTSA Office Representatives
- STLT Decision Makers/Leaders
- Other:
- [Safe Kids Worldwide and/or your Local Safe Kids Coalitions](#)
- [National Child Passenger Safety Board](#)
- [Governors Highway Safety Association](#)
- Regional AAA Office
- Other:
- [State Police/State Highway Patrol](#)
- Local Police Departments
- Sheriff's Departments
- Other:

BOOSTER SEAT SAFETY PARTNERSHIP MATRIX:

Core Working Group

PARTNER'S ROLE/RESPONSIBILITIES/SKILLS

	DATA		COMMUNITY EFFORTS		COMMUNICATION EFFORTS		COALITION COLLABORATION		LEGISLATIVE EXPERTISE		OTHER	
	Collecting data	Analyzing and interpreting data	Learning about the community's perception of booster seat safety and providing further education on the topic	Working with key stakeholders	Writing and/or creating print materials, website content, and/or social media	Working with the media and/or the public	Organizing and leading the coalition	Managing partnership meetings	Knowledge about the legislative process	Educating decision makers	Contributing resources (time, money, in-kind, etc.)	Other:
HEALTH CARE												
EMERGENCY RESPONSE												
RESEARCH												
SCHOOLS/EDUCATION/EXTRACURRICULARS												
BUSINESSES												
OTHER												

POTENTIAL PARTNERS

[Individual/Local Chapters of the American Academy of Pediatrics](#) or the [American Academy of Family Physicians](#)

[State Hospital Associations](#) and/or [Local/Regional Hospital Associations](#)

Other:

Emergency Medical Services

Fire Departments/Other Fire Safety Entities/Organizations

Other:

Colleges/Universities

[Injury Control Research Centers](#)

Other:

School Board Members

Elementary Schools

Parent Teacher Associations

Other:

Businesses that Serve Parents and/or Children

Newspaper, Radio, TV, Internet, and/or Other Media Outlets/Media Organizations

Other:

Other:

Assess

1 Does a partnership (or multiple partnerships) already exist in your STLT that can focus on booster seat safety and/or booster seat laws?

- If yes:
 - Which partners are currently represented?
 - What additional partners would be interested, should be involved, and need to be recruited?
- If no, how can you form this group?
 - Which partners would need to be represented?
 - What partners would be interested, should be involved, and need to be recruited?
 - What will be the roles of each partner or member?
 - What core group will be primarily responsible for doing the work?
 - Who will lead the effort?
 - Who will recruit other needed members/partners?

2 What does the partnership need to succeed?

How will the partnership function?

3 Does your partnership have the expertise, resources, and other capabilities it may need?

- What knowledge, expertise, capabilities, and skills does each partner bring?
- What gaps exist?
Are there additional expertise, capabilities, and skills needed?
If so, how can these be acquired?

4 Would the partnership benefit from additional training?

Training could be conducted by members themselves if they have particular experience or expertise, or potentially outside trainers could be brought in.

5 If you are going to be working with other cultural groups, then use **cultural competence** to ensure effective communication.

- Will your partnership include Tribal communities or consortium? If so, see section below on Tribal cultural competence.

Tribal Cultural Competence

When working with American Indian and Alaska Native people (Tribal communities), it is important to have active intentions. It is your responsibility to practice active learning and positive communication. When local, state, or federal programs plan to work with a Tribal community, Tribal cultural competence is essential to ensure active learning and communication.

- **Learn more about the Tribe(s) you will be working with**
 - Review the Tribal community's website:
 - Explore resources/programs available in the community.
 - Review the Tribe's Directory for contact information (if available).
 - Research the Tribe's history, government structure/leadership, jurisdiction, cultural activities, traffic safety codes, and review their Tribal operations.
- **Understand diversity exists among Tribal communities**
 - There are 574+ federally recognized Tribes in the United States, and several other Tribes that do not have federal recognition.
 - Language, operations, services, ceremonies, and government structures differ greatly from community to community.
 - Programs designed and implemented at the local or state level may not work as planned in Tribal communities. Best practices and programs can be tailored locally for Tribal communities through active communication and planning.

If you plan to work with Tribal communities, the National Indian Health Board offers a free online [Working with Tribes Training for local, state, and federal officials interested in partnering with Tribes](#). The Substance Abuse and Mental Health Services Administration has developed the [American Indian and Alaska Native Culture Card](#) that offers basic guidance to enhance Tribal cultural competence.



This information provides you a brief introduction to the Tribal community and prepares you for initial outreach to the community.

It is important to first research and understand the community you are working with in order to establish an active partnership.

**ACTION
STEP**

► Partnership

Identify which of these questions you need to answer to improve your current partnership or form a new partnership to support booster seat laws in your STL.

Write your ideas below and then continue to the next section. You will have an opportunity to synthesize the ideas from this step with the other action steps in the guide to create an overall strategy in the fourth section of the planning guide.



4. Formulate Your Action Plan

Introduction

It is now time to bring together information from the previous three steps to formulate your action plan! Your plan should include any additional tasks necessary to develop a comprehensive strategy for your STLT, in addition to incorporating components from the prior steps in the guide.

Be sure to keep track of your efforts as you move forward with your plan. You can use this to develop a list of lessons learned, best practices, and challenges faced, which can be beneficial for future efforts in your organization and other STLTs.

Assess

1 What changes are needed to improve booster seat safety in your STLT?

2 What steps are needed to implement changes to improve booster seat safety in your STLT?

- Who will you engage and when can this be completed?

3 How will you monitor progress to ensure that your partnership is on track with the plan?

- How will you make mid-course adjustments if they are needed?

Identify the steps your partnership will undertake. Consider using this template to list each step, who is responsible, and a projected completion date.

What is the main goal or objective to improve booster seat safety in your STLT:

What are the main steps your partnership needs to undertake to make progress towards this goal?	Who will do this?	When can this be completed?	Resources needed?
1)			
2)			
3)			
4)			
5)			
6)			
7)			
8)			
9)			
10)			



5. Develop a Communication Plan for Action

Introduction

A [communication and education plan](#) should be developed for how the partnership will educate key audiences about the benefits of improving your booster seat law.

Your communications plan may include steps for developing print and/or online materials, working with media outlets, creating and posting on social media, and identifying parents/caregivers, health care providers, and other community members who can provide personal stories of their experience with booster seats and the importance of child passenger safety.

Message [framing](#), a communication strategy for building support for evidence-based solutions, may be particularly useful in communication planning. The goal when it comes to outreach and education is ensuring that your message is heard by the people you need to hear it and that it compels them to follow through on your cue to action. It is a good idea to have your communication specialist involved in your workgroup from the very beginning.



In your communication plan, be sure to identify the:

- “What”
- “Why”
- “Who”
- “How”

Assess

1 Which specific audiences do you want to reach, and how will you reach them?

Examples of audiences could include stakeholders/ organizations responsible for decision-making, parents/caregivers, law enforcement, media, educators, etc.

- What do audiences currently think about the status of child passenger safety in your STLT?
- What STLT and traditional media channels can you use to reach your audience? Examples include newspapers, radio, television, newsletters or e-newsletters, school newspapers, websites, blogs, social media outlets, listservs, etc. You want to place your messages in channels or places that people are already using for child health information.
- Could you use common places people go to distribute print or electronic material? For example, day cares, pediatrician offices, urgent cares, children's hospitals?
- Are you considering the full spectrum of diversity of people who live in your STLT?
 - Do you have channels to reach groups identified as having higher rates of crash injuries and deaths? (e.g., [low literacy materials](#), information in other languages)

2 How will you educate those in your STLT about the strength of the evidence for extending ages covered by booster seat laws to save lives?

- What educational materials will you need? (e.g., print materials, videos, radio spots, social media posts, blog posts).
 - Are there existing materials that can be leveraged? Do new materials need to be created?
- Would visual demonstrations be beneficial?
- What about personal anecdotes/stories by families/friends of crash victims and/or survivors?

3 How can message framing be used to enhance understanding and support for improving child passenger safety?

- How can the data you previously collected be used to frame the message?
- How have others used framing in messaging to improve understanding and support for traffic injury prevention initiatives?

- How can you learn more about this approach and/or acquire expert assistance in this area of communication science?

4 How can you frame discussion about booster seat laws as a proven strategy to improve child passenger safety?

What do you know about the main barriers that have prevented progress in the past?

5 Have there been any recent high-profile events you can use to bring more attention to the continued need to protect child passengers?

For example, a recent crash, updated booster seat legislation in neighboring STLTs and resulting impact, new data, etc.

**ACTION
STEP**

Communication

Identify what can you do to educate decision makers, opinion leaders, and the general public about how improving booster seat laws can increase booster seat use and reduce injuries and deaths in your STLT. Write your ideas below.

Appendix: Resources

Links to Training Aids

- **American Academy of Pediatrics Child Passenger Safety Policy Statement:**
<https://pediatrics.aappublications.org/content/142/5/e20182460>
- **American Academy of Pediatrics Child Passenger Safety Technical Report:**
<https://pediatrics.aappublications.org/content/142/5/e20182461>
- **Safe Kids Worldwide: Child Passenger Safety AdvoKit**
www.safekids.org/sites/default/files/documents/cps_advokit_2021_update_final.pdf
- **The Children’s Hospital of Philadelphia: Car Seat Safety for Kids Website**
contains links to videos and instructional materials: www.chop.edu/carseat/
- **The Children’s Hospital of Philadelphia** has created a series of 37 educational illustrations, with descriptions in both English and Spanish, to help demonstrate proper restraint use for a variety of ages, sizes, vehicle types, and restraint types:
<https://injury.research.chop.edu/child-passenger-safety-tools>
- **The Washington State Booster Seat Coalition** has a resource available online entitled “Choosing a Campaign Message” that provides simple steps and clear messaging for developing your plan:
<http://depts.washington.edu/booster/pdf/manual/extra/message.pdf>
- **Aspen Institute’s Continuous Progress Advocacy Tools** provide a step-by-step roadmap for planning advocacy efforts and conducting evaluations before, during, and after a campaign:
www.aspeninstitute.org/programs/aspen-planning-and-evaluation-program/tools/
- **Guide for the 2020 National Child Passenger Safety Technician Certification Training:**
www.cpsboard.org/technician-resources/
- **Tribal Injury Prevention Resource Center Fact Sheets:** www.thetiprc.com/fact-sheets
- **Albuquerque Area Southwest Tribal Epidemiology Center Fact Sheets:**
www.aastec.net/reports-pubs/
- **National Conference of State Legislatures:** [Traffic Safety Review – Seat Belts and Child Passenger Safety](http://www.ncsl.org/legislatures/traffic-safety-review-seat-belts-and-child-passenger-safety)

Appendix: Resources (cont'd.)

Links to Technical Assistance

The following national organizations have expertise in updating STLT booster seat laws and can either connect you to their local chapters or address your questions directly.

- **Safe Kids Worldwide:** www.safekids.org/our-work/public-policy/
- **Advocates for Highway and Auto Safety:** www.saferoads.org/
- **American Academy of Pediatrics:** www.services.aap.org/en/advocacy/
- **Council of State Governments:** www.csg.org
- **National Conference of State Legislatures:** www.ncsl.org
- **National Child Passenger Safety Board:** www.cpsboard.org
- **American Automobile Association (AAA):** www.AAA.com/SafeSeats
- **National Governors Association:** www.nga.org
- **Tribal Injury Prevention Resource Center:** www.thetiprc.com

In addition, the Centers for Disease Control and Prevention, National Center for Injury Prevention and Control, provides additional resources in the area of [Child Passenger Safety](#).

Appendix: References

1. Centers for Disease Control and Prevention (CDC). Web-based Injury Statistics Query and Reporting System [online]. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention; 2020. Available at <http://www.cdc.gov/injury/wisqars>
2. National Highway Traffic Safety Administration (NHTSA). Traffic Safety Facts, 2019 Data: Children. Washington, DC: U.S. Department of Transportation, National Highway Traffic Safety Administration; 2021. Available at <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813122>
3. Durbin DR, Hoffman BD, Council on Injury, Violence, and Poison Prevention. [Technical Report – Child Passenger Safety](#). *Pediatrics*. 2018;142(5):e20182461. doi:10.1542/peds.2018-2461
4. Enriquez, J. National Highway Traffic Safety Administration (NHTSA). The 2019 National Survey of the Use of Booster Seats (Report No. DOT HS 813 033). U.S. Department of Transportation, National Highway Traffic Safety Administration; May 2021. Available at <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813033>
5. Arbogast KB, Jermakian JS, Kallan MJ, Durbin DR. [Effectiveness of Belt Positioning Booster Seats: An Updated Assessment](#). *Pediatrics*. 2009;124(5):1281–1286. doi:10.1542/peds.2009-0908
6. Privette F, Nwosu A, Pope CN, Yang J, Pressley JC, Zhu M. [Factors Associated With Child Restraint Use in Motor Vehicle Crashes](#). *Clin Pediatr (Phila)*. 2018;57(12):1423–1431. doi:10.1177/0009922818786002
7. Durbin DR, Hoffman BD, Council on Injury, Violence, and Poison Prevention. [Policy Statement – Child Passenger Safety](#). *Pediatrics*. 2018;142(5):e20182460. doi:10.1542/peds.2018-2460
8. Durbin DR, Arbogast KB, Moll EK. [Seat belt syndrome in children: A case report and review of the literature](#). *Pediatr Emerg Care*. 2001;17(6):474–477. doi:10.1097/00006565-200112000-00021
9. Szadkowski MA, Bolte RG. [Seatbelt Syndrome in Children](#). *Pediatr Emerg Care*. 2017;33(2):120–125. doi:10.1097/PEC.0000000000001027
10. Zaza S, Sleet DA, Thompson RS, Sosin DM, Bolen JC; Task Force on Community Preventive Services. [Reviews of evidence regarding interventions to increase use of child safety seats](#). *Am J Prev Med*. 2001;21(4 Suppl):31–47. doi:10.1016/s0749-3797(01)00377-4
11. Eichelberger AH, Chouinard AO, Jermakian JS. [Effects of Booster Seat Laws on Injury Risk Among Children in Crashes](#). *Traffic Inj Prev*. 2012;13(6):631–639. doi:10.1080/15389588.2012.660663
12. Farmer P, Howard A, Rothman L, Macpherson A. [Booster seat laws and child fatalities: a case-control study](#). *Inj Prev*. 2009;15(5):348–350. doi:10.1136/ip.2008.021204
13. Brixey SN, Corden TE, Guse CE, Layde PM. [Booster seat legislation: does it work for all children?](#) *Inj Prev*. 2011;17(4):233–237. doi:10.1136/ip.2010.029835

Appendix: References (cont'd.)

14. Benedetti M, Klinich KD, Manary MA, Flannagan CA. [Predictors of restraint use among child occupants](#). *Traffic Inj Prev*. 2017;18(8):866–869. doi:10.1080/15389588.2017.1318209
15. Venkatraman V, Richard CM, Magee K, Johnson K. National Highway Traffic Safety Administration (NHTSA). Countermeasures That Work: A Highway Safety Countermeasure Guide for State Highway Safety Offices, 10th Edition, 2020 (Report No. DOT HS 813 097). U.S. Department of Transportation, National Highway Traffic Safety Administration; July 2021. Available at https://www.nhtsa.gov/sites/nhtsa.gov/files/2021-09/15100_Countermeasures10th_080621_v5_tag.pdf
16. Mannix R, Fleegler E, Meehan WP III, Schutzman SA, Hennelly K, Nigrovic L, Lee LK. [Booster Seat Laws and Fatalities in Children 4 to 7 Years of Age](#). *Pediatrics*. 2012;130(6):996–1002. doi:10.1542/peds.2012-1058
17. Insurance Institute for Highway Safety/Highway Loss Data Institute. Seat Belt and Child Seat Laws by State. Arlington, VA: Insurance Institute for Highway Safety/Highway Loss Data Institute; 2021. Available at <https://www.iihs.org/topics/seat-belts/seat-belt-law-table>
18. Snowdon A, Rothman L, Slater M, Kolga C, Hussein A, Boase P, Howard A. [A comparison of booster seat use in Canadian provinces with and without legislation](#). *Inj Prev*. 2009;15(4):230–233. doi:10.1136/ip.2008.020537
19. Brubacher JR, Desapriya E, Erdelyi S, Chan H. [The impact of child safety restraint legislation on child injuries in police-reported motor vehicle collisions in British Columbia: An interrupted time series analysis](#). *Paediatr Child Health*. 2016;21(4):e27–e31. doi:10.1093/pch/21.4.e27
20. Bauer M, Hines L, Pawlowski E, Luo J, Scott A, Garnett M, Uriell M, Pressley JC. [Using Crash Outcome Data Evaluation System \(CODES\) to examine injury in front vs. rear-seated infants and children involved in a motor vehicle crash in New York State](#). *Inj Epidemiol*. 2021;8(1):32. doi:10.1186/s40621-021-00328-8
21. Will KE, Decina LE, Maple EL, Perkins AM. [Examining the relative effectiveness of different message framing strategies for child passenger safety: Recommendations for increased comprehension and compliance](#). *Accid Anal Prev*. 2015;79:170–181. doi:10.1016/j.aap.2015.03.008

For more information please contact

Centers for Disease Control and Prevention

1600 Clifton Road NE, Atlanta, GA 30329

800-CDC-INFO (232-4636) | 888-232-6348

Contact CDC-INFO: www.cdc.gov/dcs/contactus/form

Web: www.cdc.gov/transportationsafety/

Publication date: December 2021



**Centers for Disease
Control and Prevention**
National Center for Injury
Prevention and Control