

# Booster Seat Use in the USA: Breakthroughs and Barriers

September 2024



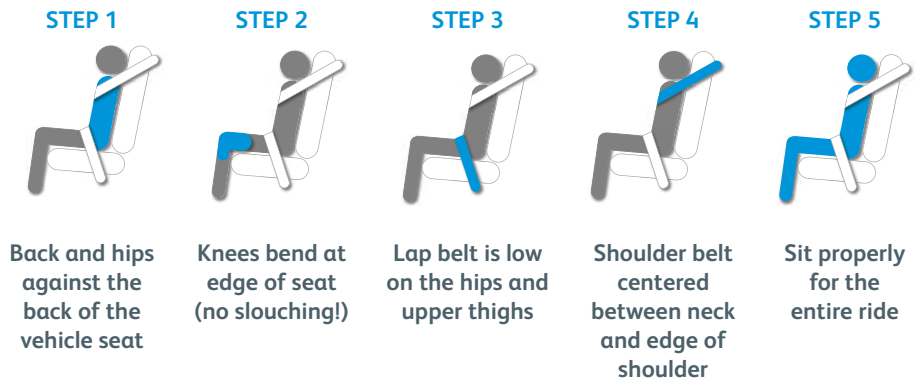
# What to Know about Booster Seats

Booster seats protect children who are too big for a car seat but too small for seat belt use alone.



Seat belts should fit children low over the hips or upper thighs (not over the belly) and cross the center of the shoulder (not touching the neck). **Seat belts used alone (without a booster seat) typically don't fit children properly until they are at least 4'9" tall.**<sup>1</sup>

## Seat Belt Fit Test

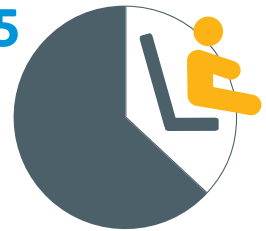


Motor vehicle crashes are the **second-leading cause of death** for children 4 to 10 years old.<sup>2</sup>



**344** children this age died in motor vehicle crashes in 2022.<sup>3</sup>

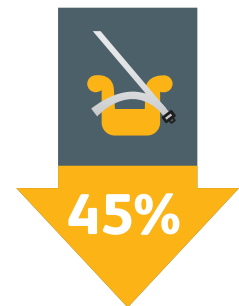
Nearly **2 out of 5** of these children were riding without a restraint that could have saved their lives.<sup>3</sup>



Although seat belts alone are safer than no restraint at all, children who should be in booster seats but wear only seat belts are at risk of **severe abdominal, head and spinal injuries** in the event of a crash.



Booster seats can **reduce the risk** of serious injury by 45 percent compared to seat belts alone.<sup>4</sup>





Safe Kids Worldwide surveyed 3,026 parents of 4- to 10-year olds. The study found **3 out of 4** caregivers do not know that a child should be at least 4'9" to ride in a car using a seat belt alone without a booster seat.



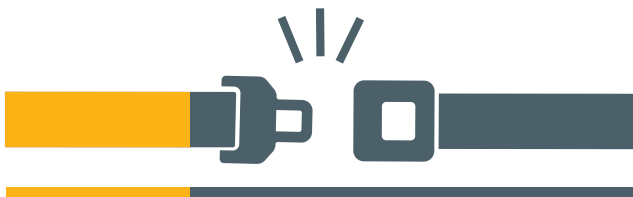
The study revealed **4 out of 5** caregivers moved their child from a booster seat to a seat belt alone before their child was big enough.



**30 percent** of caregivers who drive carpools admitted they do not always follow the rules, letting children ride without seat belts and without the car seat or booster seat they would normally use.



**51 percent** of caregivers reported that their children's school drop-off and pick-up policies require children to enter and exit their vehicle quickly and without assistance.



**29 percent** of caregivers reported unsafe behaviors as a direct result of school drop-off policies – such as unbuckling before reaching the destination or transitioning too early to a booster seat or seat belt alone.

**Buckle up every ride, every time, in the right seat.**

**REMEMBER: A child needs to be at least 4'9" tall and fit properly in the seat to ride with just a seat belt.**



## Executive Summary

Appropriately restraining children in vehicles can protect them against one of the leading causes of child death and injury. Children need to use different restraint types as their bodies grow and change. Parents and caregivers often focus heavily on car seat selection and use for newborns and infants, but may not always sustain the same level of awareness as their child ages.

Unfortunately, crash data show that children are being killed in motor vehicle crashes at frequencies similar to those of a decade ago.<sup>3</sup> A total of 344 children ages 4 to 10 years died in motor vehicle crashes in 2022, approximately 42 percent of whom were unrestrained.<sup>3</sup> Booster seats, which reduce the risk of serious injury by 45 percent compared to seat belts alone, are critical for children in this age group who have outgrown their forward facing car seat with a harness but are not yet big enough to use a seat belt alone.<sup>4</sup> Children are generally not big enough to properly fit a seat belt alone until they are 4'9" or taller<sup>1</sup> – and the average child does not reach this height until after their 11th birthday.<sup>5</sup>

With the support of Chevy, Safe Kids Worldwide collaborated with researchers at The Ohio State University to survey 3,026 parents and caregivers (referred to collectively as “caregivers”) with children ages 4 to 10 years. They were asked how their child rides in a car, what factors led them to use a booster seat or seat belt alone, and other vehicle-related habits.

The survey results demonstrate some improvements compared to a similar survey conducted in 2014. Parents reported more children in the 4- to 10-year-old age group riding in harnessed restraints and booster seats compared to 2014. Higher rates of caregivers reported that they had attended a seat check with a Child Passenger Safety Technician or CPST (45 percent of current caregivers compared to only 25 percent surveyed in 2014). Evidence in this survey and other research demonstrates the effectiveness of this method of education.<sup>6,7</sup>

However, caregivers in 2024 were still engaging in unsafe behaviors. Four percent of children were riding unrestrained, with the highest proportion in the 8- to 10-year-old range. Nearly 2 out of 5 caregivers reported using a method of restraint that was not appropriate for the weight and/or height of their child. Only 1 in 4 caregivers knew that 4'9" was the height at which children can typically ride safely in a seat belt alone. One in 5 caregivers admitted that their child does not always ride in the rear seat of the vehicle and fewer than 1 in 5 accurately knew their state's booster seat laws. Caregivers self-reported habits often clashed with their state's laws. Often, school drop-off policies encouraged unsafe behaviors.

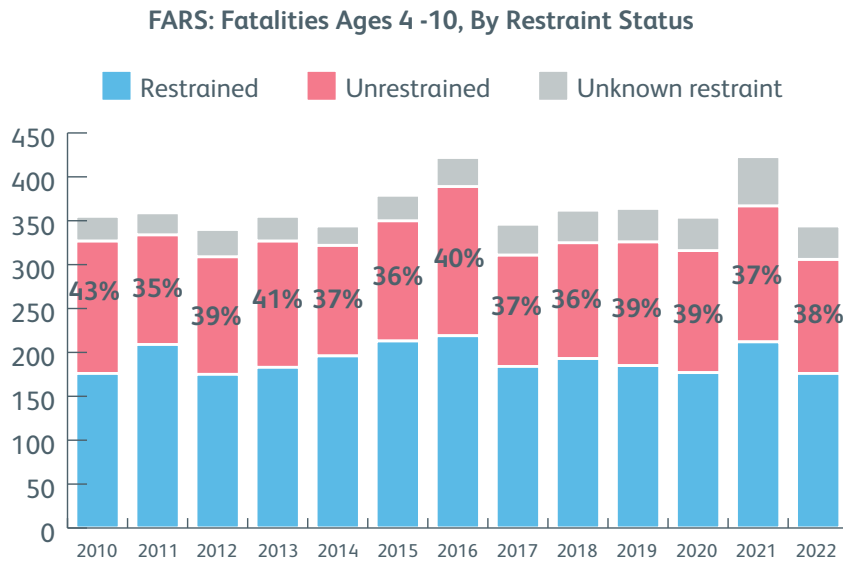
The goal of this report is to explore trends, celebrate progress, and identify areas that still need improvement in child passenger safety. We highlight themes in the data that might support the development of targeted interventions for populations who have not yet been effectively influenced by education nor reached by critical resources.

# 1. Children in Motor Vehicle Crashes – What the Data Tell Us

Motor vehicle crashes were the second-leading cause of death for children ages 4 to 10 years in 2022, surpassed only by cancer.<sup>2</sup> A total of 344 children ages 4 to 10 years died in motor vehicle crashes in 2022, at least 38 percent of whom were unrestrained.<sup>3</sup> Observations suggest that usually around 2 to 8 percent of all children are unrestrained during normal driving.<sup>8,9</sup> Thus, a disproportionately high number of unrestrained children are represented in the fatality totals. Seat belts alone and booster seats are effective at reducing the risk of death and injury for pediatric occupants.<sup>4,10,11</sup>

Unfortunately, child fatality totals and the percentage of unrestrained fatalities in motor vehicle crashes have not decreased over the past decade.

**Figure 1: Pediatric motor vehicle fatalities have not decreased over the past twelve years, nor has the rate of unrestrained fatalities.**



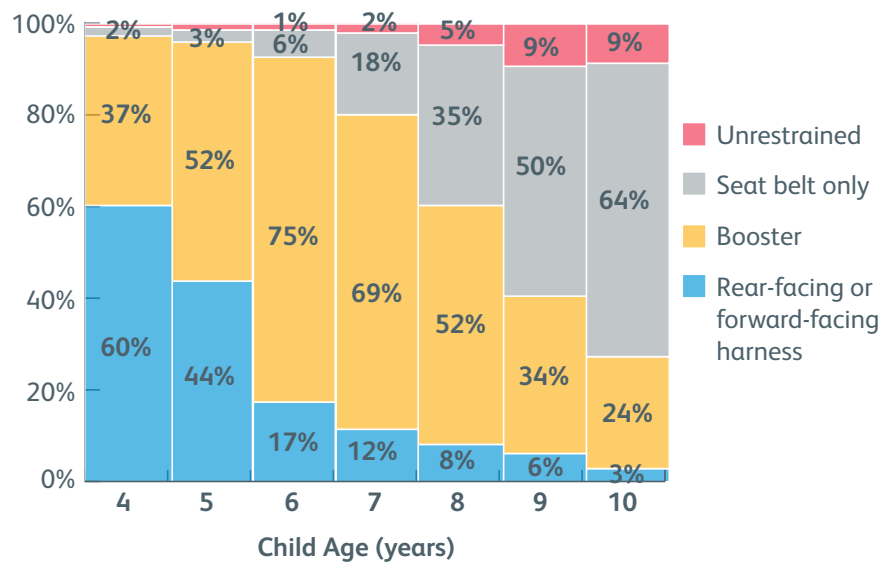
## 2. How Are Children Riding in Cars?

Safe Kids Worldwide surveyed 3,026 parents and/or caregivers (referred to collectively as “caregivers”) with children ages 4 to 10 years. The survey asked about how their child rides in a car, what factors lead them to use a booster seat or seat belt alone, and other vehicle-related habits.

Overall, 21 percent of caregivers reported that their child currently rides in a rear-facing (RF) or forward-facing (FF) harness child restraint system (CRS), 49 percent that their child rides in a high-back or backless booster seat, 26 percent that their child uses the seat belt alone, and 4 percent indicated their child rides unrestrained.

Type of restraint use varied by child. Most of the 4-year-olds (60 percent) were riding in RF or FF harnesses. Reported booster seat use peaked at age 6 with 75 percent of 6-year-olds in booster seats. The use of seat belt alone increased from 2 percent of 4-year-olds to 64 percent of 10-year-olds. The rate of riding unrestrained also steadily increased with increasing age, from just 0.5 percent of 4-year-olds to 9 percent of 10-year-olds.

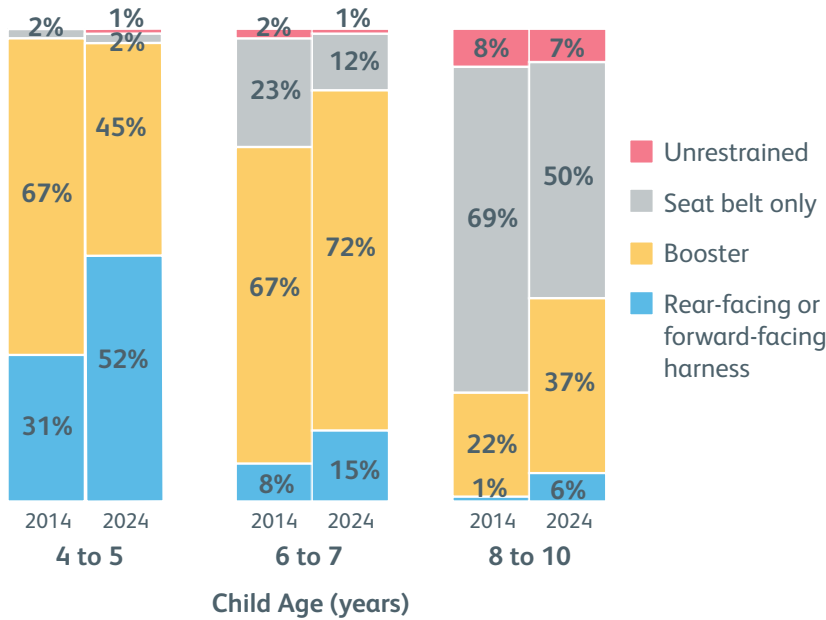
**Figure 2: Older children were more likely to be unrestrained than younger children.**



Compared to 2014 data, caregivers in 2024 reported keeping their children in each type of restraint for longer before transitioning them to the next type.<sup>1,2</sup> In 2024, 52 percent of 4- to 5-year olds were riding in a harnessed seat, up from 31 percent in 2014. Fewer 6- to 7-year olds were riding in the seat belt alone compared to 2014 (12 percent vs. 24 percent, respectively). Encouragingly, these children were using both harnessed seats and booster seats at higher rates than 10 years ago. In 2024, 37 percent of 8- to 10-year-olds were riding in booster seats, up from 22 percent in 2014.

However, the rate of unrestrained children in 2024 was similar to that of 2014 across each age group, and older children continued to be more likely to be unrestrained than younger children. Caregivers who were significantly more likely to have unrestrained children were those who had never attended a car seat check and those who have older children ages 11 to 18 years.

**Figure 3: Compared to 2014, children in 2024 were more likely to have stayed in harnessed seats and booster seats until they are older. Unfortunately, the rate of unrestrained children has not changed over the past decade.**



The American Academy of Pediatrics recommends that all children under the age of 13 ride in the rear seat.<sup>1</sup> In the current survey, only 8 in 10 caregivers reported that their 4- to 10-year old child always rides in the rear seat. The most common reasons for riding in the front seat included going on short trips or when the car was too full. Caregivers who said their children do not always ride in the rear row were significantly more likely to be male, have older children ages 11- to 18-years, be a primary parent, have higher household incomes, and have a college degree. Older children were more likely to ride in the front seat than younger children.

*Different types of unsafe behavior were associated with different groups of caregivers. Intervention efforts should ensure that the appropriate populations are being targeted.*







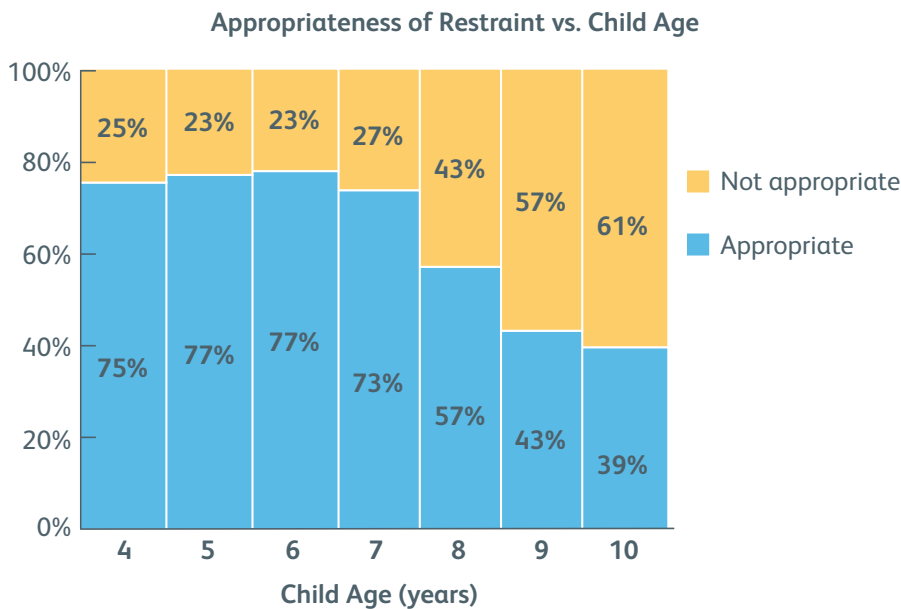
### 3. Appropriateness of restraint based on child height/weight

Each child’s reported method of restraint was defined as “appropriate” or “not appropriate” based on manufacturers’ typical height and weight limits for RF/FF harnesses and booster seats and best practice guidelines for seat belt use alone.<sup>1,13</sup> Appropriate use was defined as follows for each type of restraint:

- RF or FF harness seat: Height less than 57 inches (4’9”) and weight less than 80 lbs.
- Booster seat: Height greater than 38 inches (3’2”) and weight greater than 40 lbs.
- Seat belt alone: Height greater than 57 inches (4’9”); weight unrestricted.

Children who did not fall into these criteria were defined as “Not appropriate” restraint. The criteria will not always reflect best practice for all children, but agreement with most manufacturers’ height and weight limits for each stage served as a fair basis for the sample population.

**Figure 4: Older children in this age group, especially 8- to 10- year olds were more likely to be riding in an inappropriate type of restraint according to their height and weight compared to younger children.**



Overall, based on caregiver report of height, weight, and current type of restraint, 63 percent of the children were appropriately restrained. Younger children were significantly more likely to ride in appropriate restraints compared to older children. Primary caregivers were significantly more likely to appropriately restrain their children compared to other caregivers.

Caregivers who also had older children ages 11- to 18-years were significantly less likely to have their younger children (ages 4- to 10-years) appropriately restrained. This result was surprising. When asked to identify their number one reason for transitioning their child from a FF harness to a booster seat, more caregivers with older children said their state law (13 percent with older kids

vs. 10 percent without older kids) and their partner's opinion (7 percent vs. 4 percent) compared to caregivers without older children. Fewer caregivers who also had older children cited child height/weight (42 percent with older children vs. 46 percent without older children). Considering the transition from booster seat to seat belt alone, more caregivers with older children said their child's age was their number one reason for transitioning (12 percent with older children vs. 7 percent without older children). Fewer caregivers with older kids cited their pediatrician's recommendation (10 percent with older children vs. 13 percent without older children), seat manufacturer's recommendations (1 percent with older children vs. 3 percent without older children), and child's comfort (6 percent with older children vs. 8 percent without older children).

It appears that higher reliance on children's ages and/or state laws (which sometimes lag behind best practice) might have influenced caregivers with older children to rush the transitions of their younger children. Caregivers without older children seemed more likely to rely on pediatricians' advice and child seat manufacturers' guidelines, which might better reflect safer practices.

Caregivers with higher levels of education and higher household incomes were significantly more likely to have their children appropriately restrained compared to those with lower levels of education and income. Published literature was used to identify racial and ethnic groups who are at higher risk of pediatric traffic fatalities. It was determined that families who identify as Black/African American, American Indian/Alaska Native, and Hispanic/Latino are at higher risk of pediatric traffic deaths compared to families of White, Asian, Native Hawaiian/Pacific Islander or non-Hispanic/Latino backgrounds.<sup>10,14</sup> When examining the survey results through this lens, caregivers in the racial/ethnic groups at higher risk were significantly less likely to have their child in an appropriate restraint compared to caregivers in groups at lower risk.

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*These results highlight the need for more targeted intervention efforts for populations that have been underserved, particularly racial and ethnic minorities and lower socioeconomic groups. Caregivers of older children and non-parent caregivers might also benefit from targeted education regarding which type of restraint is most appropriate for their child.*

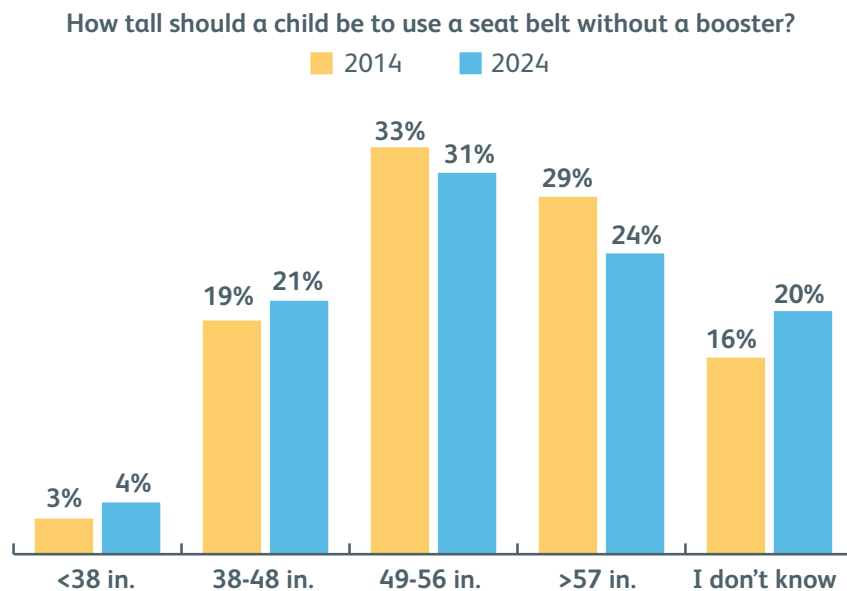
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#### **4. When Do Caregivers Move Kids from a Booster Seat to a Seat Belt Alone?**

In 2014, 29 percent of caregivers correctly answered that 4'9" inches is typically the height at which children may be able to safely use the seat belt alone. In 2024, only 24 percent of caregivers answered this question correctly. Despite this milestone being included in best practice guidelines for many years, most of the caregivers in 2024 were not aware of it. This finding highlights the need for targeted education for caregivers of children who are near the stage of booster seat to seat belt alone transition. This group is underrepresented at typical car seat checks (see page 14).<sup>15,16</sup> It may be that alternate interventions, such as school-based campaigns, would be more effective for reaching caregivers of this age group.

The caregivers who did know that 4'9" is the typical height in 2024 were significantly more likely to be female, to not have older children ages 11- to 18-years, to have their child currently appropriately restrained, and to have their child currently in a RF/FF harness seat or booster seat compared to the seat belt alone or being unrestrained. Of the caregivers who answered this question correctly, 81 percent currently had their child appropriately restrained, compared to 57 percent of those who answered the question incorrectly.

**Figure 5: Only about 1 in 4 caregivers knew that children should be at least 4'9" (57") to ride in a seat belt without a booster seat in 2024.**

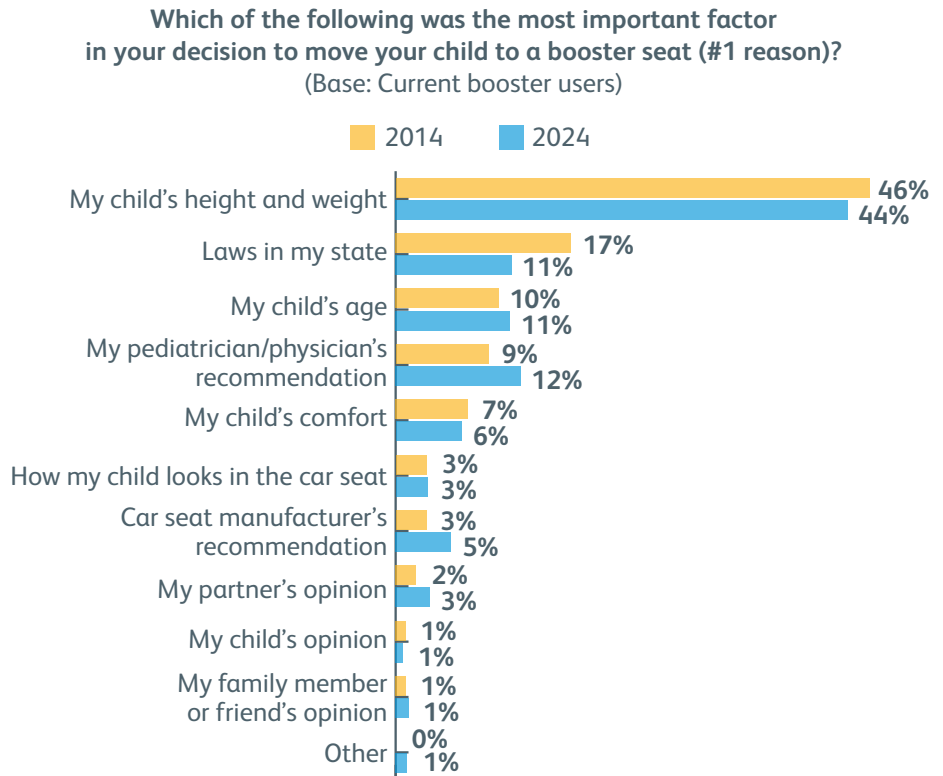


When examining caregivers whose child previously used a booster seat (1,473 respondents), 44 percent said the top reason they transitioned their child from their booster seat to a seat belt alone was because of the child's height and weight. The next most common reasons were their pediatrician's/physician's recommendation (12 percent), the child's age (11 percent), and state laws (11 percent).

Compared to 2014, fewer caregivers cited their state laws as their top reason for the transition (17 percent vs to 11 percent). State laws sometimes lag behind best practice recommendations, and caregivers were often not accurately aware of what their state laws require (see page 14). Slightly more caregivers cited their pediatrician's/physician's recommendation in 2024 compared to 2014 (12 percent vs 9 percent). It can be challenging for medical providers to keep up-to-date on best practice recommendations for all age groups and to find time to discuss these topics in depth with caregivers during patient visits. A viable alternative might be for physicians to encourage patients to attend local car seat check events or inspection stations to receive personalized education directly from a CPST.

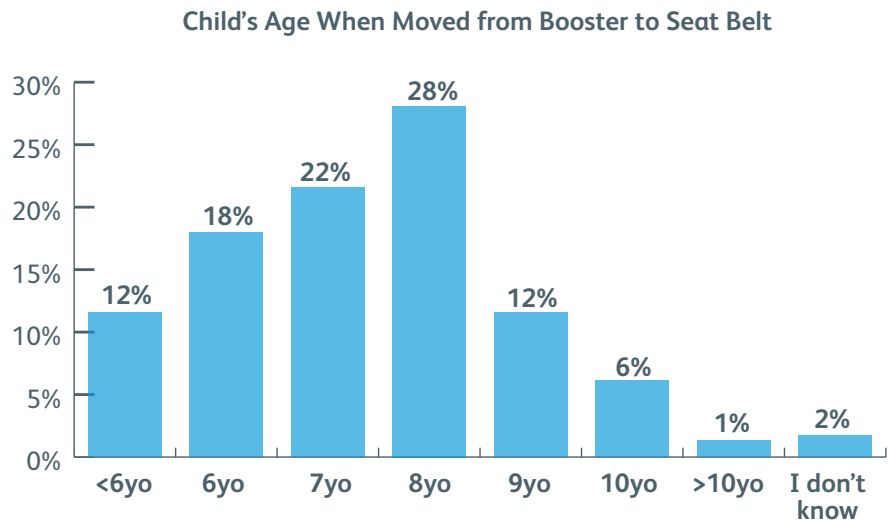


**Figure 6:** Less than half of caregivers used their child’s height and weight as the most important factor in deciding when to move their child to a booster seat.



751 children in the current sample had already transitioned from booster seat to seat belt alone. The most common age to make the transition was age 8-years (28 percent). Unfortunately, many children transitioned to a seat belt alone at younger ages (51 percent before age 8 years) and only 1 percent kept using their booster seat beyond the age of 10 years. An average-sized child does not reach a height of 4'9" until about age 11, so it is likely that most children transitioned to a seat belt alone before reaching the recommended height milestone.<sup>5</sup>

**Figure 7:** About half of parents reported they transitioned their child from a booster seat to a seat belt alone before age 8 years.



## 5. Carpooling: Bending the Rules

Caregivers reported carpooling more frequently in 2024: 58 percent reported that their child rides with a driver other than themselves at least 1 day per week, up from 38 percent in 2014.

Caregivers who reported using carpooling/other drivers more often (at least 1 day per week) were significantly more likely to be male, have older kids ages 11- to 18-years, be non-primary caregivers, not appropriately restrain their children in their own vehicle, have their child in a booster seat, seat belt, or unrestrained (compared to FF/RF harness), have had their car seat checked by an expert, be Hispanic/Latino, and be from a racial/ethnic group at higher risk. Frequency of carpooling was not associated with household income, level of education, or child age.

Unfortunately, 26 percent of the caregivers who reported carpooling said they “rarely” or “never” talk to the other driver about the type of restraint their child used in the other driver’s vehicle. Caregivers who communicated less often with other driver(s) about child restraints were significantly more likely to have their children restrained improperly in their own vehicles.

When riding with other drivers:

- 80 percent of children used the same type of restraint as they do in their main caregiver’s vehicle
- 8 percent of children rode with a less safe method of restraint (i.e., step down in safety)
- 8 percent of children rode with a more safe method of restraint (i.e., step up in safety)
- 5 percent rode with unknown methods of restraint.

Other studies have documented that child restraint usage is particularly poor in hired rideshare vehicles.<sup>17,18</sup> Specific challenges in the rideshare environment include logistical/installation challenges of CRS, disagreement over whether the driver should provide a CRS, and inconsistencies in state laws requiring CRS in rideshares and/or taxis.<sup>17-19</sup> In the current study, caregivers mostly reported their children rides with other family members or close friends – perhaps avoiding some of the challenges associated with hired rideshares. Additionally, respondents were required to have access to their own vehicle and drive their child frequently to participate, so our sample might be missing families who rely heavily on rideshares to meet their basic transportation needs.

Thirty percent of caregivers who drive carools admitted they do not always follow the rules, letting children ride without seat belts and without the car seat or booster seat they would normally use. Eighty percent of caregivers reported they have noticed that other drivers do not always follow the rules when driving children. Caregivers who reported noticing other drivers bending the rules were more likely to inappropriately restrain their own children in their own vehicles. This association suggests that some caregivers use the world around them to develop their own self-standard on which they base their own behavior.



## 6. Booster Seat Laws

Caregivers from states that require higher ages for the booster seat to seat belt alone transition had significantly better rates of appropriate restraint use compared to caregivers from states that allow the transition at lower ages.

However, only 65 percent of caregivers were aware that their state had any booster seat laws in place. Only 29 percent of those could accurately report the minimum age at which their state's law allows a child to ride without a booster seat (i.e., only 18 percent of the total sample of caregivers accurately knew their own state's booster seat law). Nineteen percent underestimated the age when a child could ride without a booster seat according to their state law, while 52 percent overestimated the age. Caregivers who overestimated their state law's age were significantly more likely to have their children appropriately restrained compared to those who underestimated their law's age.

Of the caregivers who had already transitioned their child from a booster seat to a seat belt alone, only 14 percent transitioned later than when they thought they were required to do so by law. Forty percent transitioned at the age they thought the law required, and 46 percent transitioned their child at a younger age than that. In other words, nearly 1 in 2 caregivers apparently chose to disregard the law and transitioned their child to a seat belt alone at a younger age. Caregivers who made this choice were more likely to be part of racial/ethnic groups at higher risk and have lower education levels. They were also more likely to cite their child's age and comfort as the number one reason they transitioned from a booster seat to a seat belt alone. Caregivers who followed what they believed their state's law was cited the state's laws more often as their number one reason for the transition. More study is needed to understand what motivates caregivers to make early transitions, specifically how state laws and education/awareness efforts surrounding the introduction of new laws affect the decision-making process for caregivers of various backgrounds.

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*State laws are effective in reducing inappropriate restraint rates and pediatric traffic injury rates, but it can be challenging for state legislatures to keep pace with updates to best-practice recommendations. Some states are successfully doing so: Minnesota, Delaware, Maryland, and Hawaii have recently updated their CRS and/or booster laws to better align with the latest recommendations. More states should consider similar updates to reduce caregiver confusion.*

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## 7. Seat Check Attendance

Attendance at car seat checks is more common now than 10 years ago: 45 percent of caregivers in 2024 indicated they have attended a seat check compared to only 25 percent in 2014. Caregivers reporting attendance at a seat check were significantly more likely to have been previously involved in a serious crash, be from a racial/ethnic group at higher risk, have older children ages 11- to 18-years, and have a college degree.

Of concern, 7 percent of caregivers indicated that they did not know that seat check services existed. This suggests that some families are still not being reached with effective messaging promoting this service or are living in places where services do not currently exist. Caregivers who were unaware of seat check services were significantly more likely to have never been in a serious crash, be from a racial/ethnic group at higher risk, have a household income under \$125,000, and not have a college degree. These groups should be targeted for seat check resources and education in the future.

Caregivers who had their seat checked by an expert (CPST) were significantly more likely to have their children appropriately restrained compared to those who had not received these services (67 percent appropriate vs. 60 percent inappropriate). Previous research has shown that seat checks are an effective form of education.<sup>6,7</sup> Caregivers are more likely to attend when they have young children in RF CRS as opposed to older children in FF CRS or booster seats.<sup>15,16</sup> Our data reflect the effectiveness of seat checks in improving appropriate restraint rates; however, we still found high rates of inappropriate use among families who had previously attended seat checks. This highlights the need for caregivers to return for additional seat checks as their child grows in order to ensure that they are using appropriate milestones for the transitions from FF CRS to booster seat and booster seat to seat belt alone.



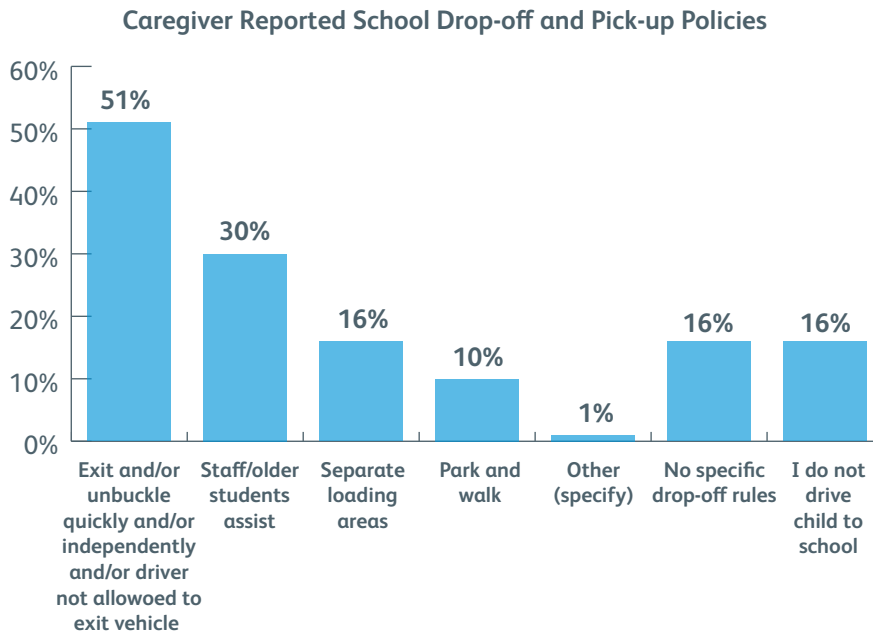
## 8. The Influence of School Drop-Off and Pick-Up Policies

National data suggest that approximately 57 percent of families routinely use a personal vehicle to transport their children to/from school – a percentage that has held steady for the past decade and a half.<sup>22</sup> We therefore explored the effect of school drop-off and pick-up policies on caregivers' decisions about restraint behaviors. Fifty-one percent of caregivers reported their school's policy required children to enter/exit the vehicle quickly or without the caregivers' help. These policies appeared to encourage unsafe behaviors such as allowing the child to unbuckle while driving through the parking lot (11 percent), driving on public roads near the school (5 percent), or during the whole ride to school (5 percent). Additionally, 13 percent of caregivers reported transitioning their child to the next restraint stage sooner than they otherwise would have done in order to make school drop-offs and pick-ups easier. For example, a caregiver might have transitioned their child to a booster seat early because most children cannot independently unbuckle from a five-point harness seat. This practice would potentially lower the level of protection for the child during all trips in the vehicle, not just trips to and from school.

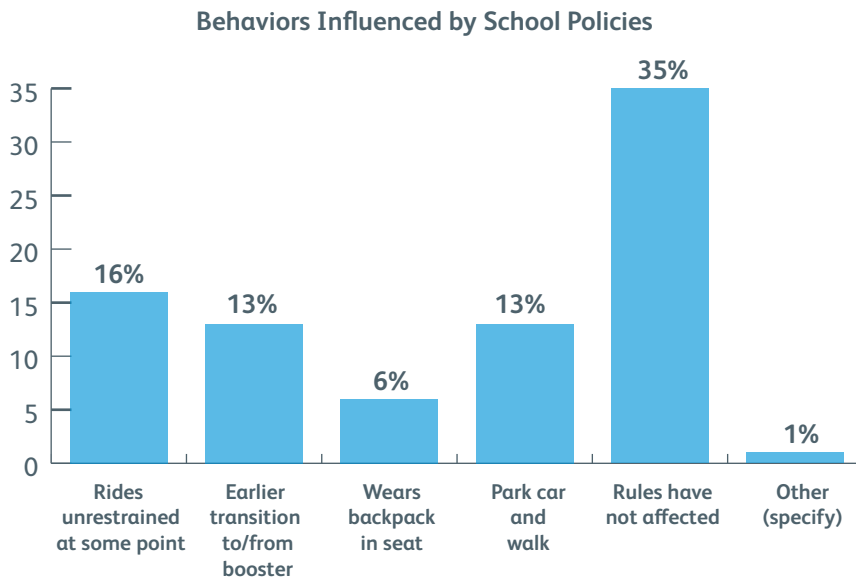
Some caregivers also reported policies or practices to alleviate these challenges. Thirty percent of caregivers reported that the school provided staff or older students to assist younger children in getting into or out of their vehicle and 16 percent reported separate loading/unloading areas for families who need more time to unbuckle. Thirteen percent of caregivers reported parking their vehicle and walking their child to the door to avoid the drop-off/pick-up line. However, this practice might increase pedestrian traffic which carries a different type of risk.

These exploratory data suggest that school drop-off and pick-up policies can significantly influence how families are restraining their children within their vehicle. With school zones often being a starting point for municipal-level Vision Zero or Safe Systems initiatives, providing model layouts and policies to implement around drop-off/pick-up zones could improve safety for passengers and vulnerable road users. Further research is needed to identify strategies that will meet the needs of all road users.

**Figure 8:** School drop-off and pick-up policies often require children to enter and exit the vehicle quickly and without assistance from the driver.



**Figure 9:** Many caregivers reported that their children are engaging in unsafe practices in order to comply more easily with school drop-off and pick-up policies.





## 9. Public Policy for Child Passenger Safety

Smart public policy can reduce the rates of death and injury for children in motor vehicle crashes. The results from this survey revealed several key themes:



- **Positive trends in the past ten years.** Children in 2024 were using harnessed restraints and booster seats for longer periods of time than they did in 2014. Caregivers also reported attending seat checks at higher rates than ten years ago. Several state legislatures have updated their child passenger safety laws to better reflect best practice.
- **Unrestrained children remain a concern.** Approximately 4 percent of caregivers in the current study reported their child routinely rides unrestrained, yet about 2 in 5 children killed in crashes where restraint status is known are unrestrained. In other words, unrestrained children are disproportionately represented in fatal crashes – highlighting the extreme risk associated with not buckling up. These findings are similar to those reported 10 years ago. The 2024 results suggest that children ages 8- to 10-years are at higher risk of riding unrestrained compared to younger children. Children who had older siblings also appeared to be at higher risk of riding unrestrained. We need further research to understand why this rate has not improved over time, how to better identify and reach groups at higher risk and what messaging will resonate with them.
- **One message will not fit all.** Different populations engaged in different types of high-risk behaviors. For example, caregivers who have lower levels of education, lower household incomes, come from certain racial/ethnic backgrounds, and are non-primary parents were more likely to use inappropriate types of restraints for their child passengers. However caregivers who allowed younger children to ride in the front seat were more likely to be male, primary parents, and have high incomes and/or high levels of education. Targeted messaging campaigns are needed to ensure that we are reaching groups at risk with the appropriate messaging.
- **Seat checks should include older kids.** Our data consistently showed poorer restraint practices for older children in the 8- to 10-year age range. Seat check event data show that caregivers of infants and younger children are the primary attendees while caregivers of older children are missing out on this important resource. Targeted seat check events and resources addressing booster seat and seat belt alone aged children might combat this disparity. Community-based settings such as schools or pediatrician offices might help to bridge this gap in connectivity.
- **State laws are not reaching everyone.** Previous research has found that legislation is generally effective in improving outcomes for child passengers. However, our study revealed that a significant proportion of caregivers were not accurately aware of their states' laws or chose to disregard what they believe the laws stipulate. Increased alignment between legislation, current best practice and related messaging may help caregiver understanding of laws and increase compliance.
- **Encourage consistent practices for non-traditional rides.** Our data suggest that non-traditional caregivers and carpool drivers might be more relaxed about restraint practices compared to the primary caregivers in the child's normal vehicle. Similar laxity in restraint practices have been reported for children in rideshare vehicles.<sup>17,18</sup> Families need stronger reminders to “Buckle up every ride, every time, in the right seat.”

- **School policies may impact safe behavior.** While further research is needed, our data suggest that some school policies are resulting in increased unsafe restraint behavior. Developing model school zone layouts and policies that address this issue may help school boards increase transportation related safety for their students.

## 10. Booster Seats and Seat Belt Use Alone – Ensuring a Good Fit

Older kids are weighed and measured less often than babies, so check your child’s growth a few times per year. Generally, kids need to use a booster seat until they are about 4’9” tall. Many children will not reach this height until age 11 or later.

When using a booster seat, make sure the lap belt fits low across the hips (not over top of the belly). Usually the belt should route underneath the arm rests of the booster seat – check your booster seat manufacturer’s instructions to ensure you have got the belt routed properly. This will help it fit more safely on your child. The shoulder belt should lay across the middle of the shoulder, not across your child’s neck. Again, check the booster seat manufacturer’s instructions to make sure the shoulder belt is properly routed through any belt guides that are built into the booster seat.

When transitioning to a seat belt alone, use the **Seat Belt Fit Test** to ensure good belt fit. If any of the five steps cannot be met, then your child should stay in a booster seat to ensure optimal safety.

STEP 1



Back and hips against the back of the vehicle seat

STEP 2



Knees bend at edge of seat (no slouching!)

STEP 3



Lap belt is low on the hips and upper thighs

STEP 4



Shoulder belt centered between neck and edge of shoulder

STEP 5



Sit properly for the entire ride



## 11. Methodology

The online survey was completed by 3,026 adults who self-identified as the parent or primary caregiver of a child between the ages of 4 and 10 years. A minimum sample of 413 respondents was collected for each year of age discussed. Respondents verified that they typically drive their child in a car/truck/van at least twice per week. The survey included several validity checks, and only participants who passed all validity checks were included in the final dataset. The survey was fielded from March 21 – April 2, 2024.

Most online samples are not projectable according to strict sampling theory, which states that in order for a sample to be projectable to a population it must be a random sample of that population; that is, one in which all members of the population have a known and non-zero probability of selection. Therefore, in a strict sense, no estimate of theoretical sampling error can be calculated for most online samples. Having said that, online samples, if recruited, managed and selected correctly, can effectively reflect a known universe.

For practical purposes, the margin of error for the total sample size of this study (3,026 respondents) is 2 percent at a 95 percent confidence level. This means that if this study was repeated using the same parameters, 19 times out of 20 (or 95 percent of the time) we would expect to get a result within +/- 2 percent of the results we have here.

For the analyses presented here, Pearson’s chi square test (with alpha level set to 0.05) was used to evaluate the differences between categorical data and only statistically significant findings were reported.

### Description of Respondents

	2024		2014	
	Total (n=3,026)	Percent (%)	Total (n=1,000)	Percent (%)
<b>CHILD AGE</b>				
4	413	13.6		
5	421	13.9		
6	432	14.3		
7	425	14.0		
8	456	15.1		
9	438	14.5		
10	440	14.5		
<b>CAREGIVER SEX</b>				
Female	1,547	51.1	810	81
Male	1,465	48.4	190	19
Transgender or non-binary	12	0.4		
<b>CAREGIVER TYPE</b>				
Mother	1449	47.9		
Father	1389	45.9		
Grandparent	80	2.6		
Step-parent	83	2.7		
Nanny/Babysitter	8	0.3		
Other	17	0.6		

	2024		2014	
	Total (n=3,026)	Percent (%)	Total (n=1,000)	Percent (%)
<b>CAREGIVER EDUCATION</b>				
Less than high school	83	2.7	10	1
High school diploma/GED	829	27.4	510	51
Some college	797	26.3		
College degree	885	29.3	480	48
Graduate degree	432	14.3		
<b>CAREGIVER INCOME</b>				
<\$25k	402	13.3	120	12
\$25-\$35k	400	13.2	340	34
\$35-\$50k	417	13.8		
\$50-\$75k	586	19.4	380	38
\$75-\$100k	459	15.2		
\$100-\$125k	299	9.9	160	16
\$125-\$150k	181	6.0		
>\$150k	282	9.3		
<b>CAREGIVER RACE</b>				
American Indian or Alaska Native	50	1.7		
Asian	97	3.2		
Black or African American	477	15.8	90	9
Caucasian/White	2195	72.5	690	69
Multiracial	131	4.3		
Native Hawaiian/Other Pacific Islander	8	0.3		
Other	68	2.3	80	8
<b>CAREGIVER ETHNICITY</b>				
Hispanic or Latino	423	14.0	140	14
Not Hispanic or Latino	2,603	86.0	860	86
<b>HAVE OLDER CHILDREN (age 11 to 18)</b>				
Yes	1,659	54.8	480	48
No	1,367	45.2	520	52
<b>EVER BEEN IN A SERIOUS CRASH</b>				
Yes	1018	33.6		
No	2007	66.4		
<b>EVER HAD CHILD'S SEAT CHECKED BY EXPERT</b>				
Yes	1356	44.8		
No	1453	48.0		
I did not know this service exists	216	7.1		





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