

Evidence-based Recommendations for Car Seat, Booster Seat and Seat Belt Use for Children

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Introduction

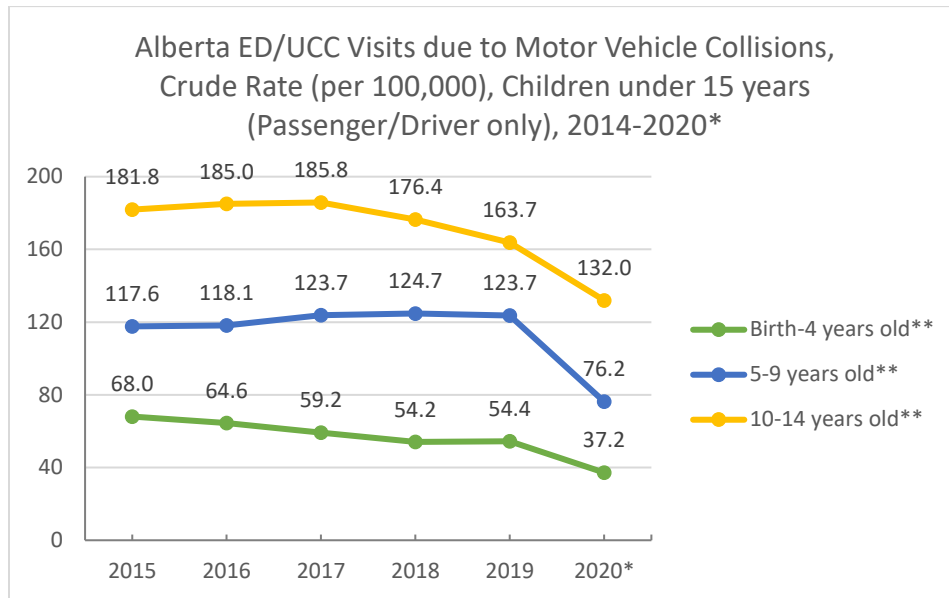
The Recommendations for Car Seat, Booster Seat and Seat Belt Use for Children came out in 2017 (see [Appendix A](#)). The related [Car Seat and Booster Seat YES Test resources](#) (2017) give parents and caregivers useful information on when and how to choose and use rear-facing car seats, forward-facing car seats, booster seats and seat belts for child passengers. AHS Provincial Injury Prevention (PIP) reviews program resources regularly. A 2021-22 review of the statements of key injury prevention, pediatric medicine and traffic safety organizations regarding the use of car seats, booster seats and seat belts for children found an important change in the recommendations for the use of rear-facing car seats since 2017.

This report will highlight the most recent data on injuries to child passengers in motor vehicle collisions, review the best practices for child passenger safety, and propose updated safety recommendations for motor vehicle passengers under 15 years of age.

Injuries to Children as Passengers in Motor Vehicle Collisions in Alberta

Injuries to children and youth (≤ 19 years) as passengers in motor vehicle crashes decreased significantly across Canada between 2006 and 2012 (Fridman et al., 2018). The AHS Injury Surveillance Dashboard tracks the numbers and rates of Emergency Department & Urgent Care Centre (ED/UCC) visits and hospitalizations in Alberta. Figure 1 shows the change in the crude rates of ED/UCC visits for injuries to child occupants in motor vehicle collisions in Alberta between 2015 and 2020. Figure 2 illustrates the rates of hospitalization of child passengers for the same period. Hospitalization rates are typically much lower than ED/UCC visit rates and often reflect injury that is more serious.

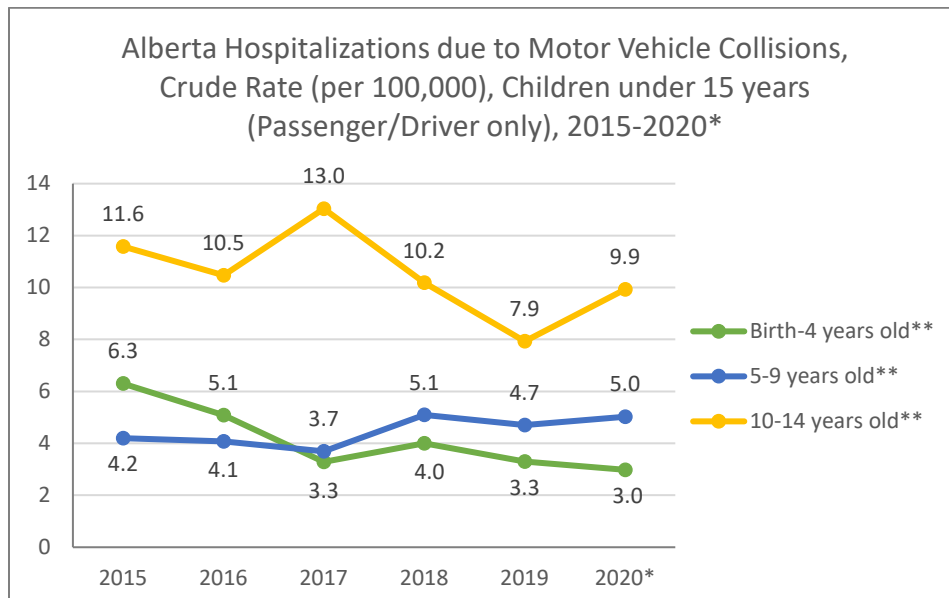
Figure 1: Alberta ED/UCC Visits due to Motor Vehicle Collisions, Crude Rate (per 100,000), Children under 15 years (Passenger/Driver only), 2015-2020*



*COVID-19 pandemic

**Ages: "Birth-4 years old" = up to and including the day before the 5th birthday; "5-9 years old" = up to and including the day before the 10th birthday; "10-14 years old" = up to and including the day before the 15th birthday.

Figure 2: Alberta Hospitalizations due to Motor Vehicle Collisions, Crude Rate (per 100,000), Children under 15 years (Passenger/Driver only), 2015-2020*



*COVID-19 pandemic

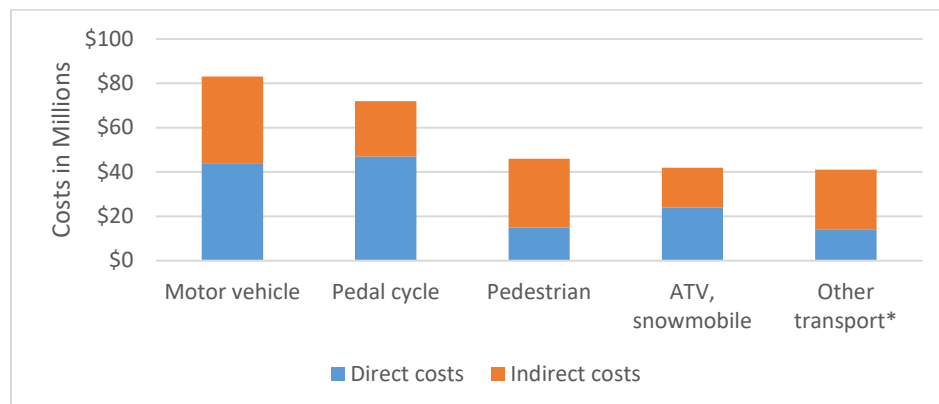
**Ages: "Birth-4 years old" = up to and including the day before the 5th birthday; "5-9 years old" = up to and including the day before the 10th birthday; "10-14 years old" = up to and including the day before the 15th birthday.

As 2020 was the first year of the COVID-19 pandemic, the decreased rates of ED/UCC visits for injuries to child passengers in Alberta in 2020 could be because of fewer vehicles on the roads due to pandemic restrictions. *Figures 1 and 2* illustrate an overall decrease over time of the rates of injury to child passengers from birth to four years of age (up until the day before the 5th birthday) in Alberta. Of concern, the rate of hospitalizations for child passengers five to nine years of age increased between 2015 and 2020. This could mean that children that age are more seriously hurt in crash situations and thus require admission to hospital for treatment. Five to nine year olds are children who are often too big for a forward-facing car seat with a harness, but too small for an adult seat belt. These children are safest riding in a booster seat because the booster seat boosts them up so the adult seat belt fits them correctly.

The Costs of Transport Incidents

Falls and transport incidents had the highest total costs of injury for Canadians in 2018 (Parachute Canada, 2021). For children under 15 years in Canada, of all the types of transport incidents, motor vehicle-related injuries had the highest total costs, exceeding \$83 million CAD in 2018.

Figure 3: Total Costs in Millions by Type of Cost, Transport Incidents, Children (0-14 years), both sexes, Canada, 2018



*Other transport includes railway, air and water transport, industrial vehicles and unknown.

A Review of Best Practice Recommendations

The Safe System Approach

In 2021, the World Health Organization (WHO) and United Nations General Assembly released the Global Plan for a Decade of Action for Road Safety, 2021-2030. The target is to reduce road traffic deaths and injuries by at least 50% by 2030. The Global Plan calls on governments and stakeholders who influence road safety to take a new path that recognizes road transport as a complex system and prioritizes the safety of all road users. This Safe System approach puts

peoples' safety at the center in the interactions of three components: humans, vehicles, and the road infrastructure. It prioritizes safe mobility as a human right (WHO, 2021).

Vision Zero is a safe systems initiative underway in various Alberta locations. "Vision Zero is a strategy to eliminate all traffic fatalities and severe injuries, while increasing safe, healthy, equitable mobility for all" (Vision Zero Network, n.d.). Alberta locations that have adopted Vision Zero include the cities of Edmonton (2015), St. Albert (2018), Calgary (2018) and Ft. Saskatchewan (2019). Both Vision Zero and the Global Plan address the safety of all users of the road transport system; they emphasize that **no one** should be killed or seriously injured on the road. Occupant protection (safety belts and child-restraint systems) is included in the safe systems approach as part of both vehicle safety and safe road use. The Global Plan identifies the enactment and enforcement of legislation mandating the use of protective equipment, including child car seats and booster seats, as a recommended action to ensure safe road use (WHO, 2021).

The Use of Car Seats, Booster Seats and Seat Belts for Children

In 2022, PIP conducted an environmental scan of five prominent injury prevention, pediatric medicine and traffic safety organizations to compile best practice recommendations for the use of car seats, booster seats and seat belts for children. PIP reviewed the websites of the Canadian Paediatric Society (CPS), Transport Canada (TC), Parachute Canada, Child Safety Link (CSL) and the American Academy of Pediatrics (AAP). PIP compared the recommendations of each organization with the 2017 AHS Recommendations for Car Seats, Booster Seats and Seat Belts for Children (see [Appendix B](#)).

Although the wording varies, there is consistency on most aspects of the recommendations of the CPS (2020), TC (2019), Parachute Canada (2021), CSL (2021) and the AAP (2018, 2021). Of note, the AAP published a technical report late in 2018 that included a change to their best practice recommendation for the use of rear-facing car safety seats. Citing the retraction of a published study and further analysis of injury data, the 2018 AAP technical report removed "at least 2 years of age" as a criterion for moving a child from a rear-facing to a forward-facing seat. AAP's best practice recommendation stated, "All infants and toddlers should ride in a rear-facing car safety seat as long as possible, until they reach the highest weight or height allowed by the seat's manufacturer" (AAP, 2018). AAP revised their guideline in 2021 to say, "All infants and toddlers should ride in a rear-facing seat until they reach the highest weight or height allowed by their car safety seat manufacturer." The removal of "at least 2 years of age" criterion by AAP played a role the revisions to AHS wording for recommended car seat use.

Improving the Safety of Passengers Who Are Five to Nine Years of Age

The increase in the rate of hospitalizations of child passengers in Alberta who are five to nine years old ([Figure 2](#)) is a concern. **Alberta is the only province in Canada that does not have booster seat legislation to protect children who weigh more than 18 kg (40 lbs.) after they have outgrown a forward-facing car seat** (see [Appendix C](#)). This constitutes a wide gap between safety practices in Alberta and best practices in child passenger safety.

A 2019 survey on child passenger restraint use completed by 4,026 Alberta parents/caregivers who had driven 7,134 children under the age of 13 in the previous six months highlighted gaps in knowledge and practice of booster seat use. Respondents expressed uncertainty about booster seat use in Alberta. They requested increased education on when to use a booster seat and when to transition to a seat belt. Survey respondents also requested that adherence to child occupant restraint legislation be supported by enforcement (AHS, 2019).

A literature review conducted by PIP in 2014 found numerous studies that showed significant improvement in booster seat use and decreased injury rates in jurisdictions with booster seat legislation (AHS, 2014). A subsequent rapid review in 2022 found additional evidence for the effectiveness of booster seat legislation with a focus on older child passengers:

- Booster seat legislation in British Columbia was associated with a 10.8% reduction in the rate of injuries to children between 4 and 8 years old within four years (Brubacher et al., 2016).
- Laws in the United States with higher age requirements for mandatory child safety seat use were effective in increasing the age of children in safety seats (Jones & Ziebarth, 2017).
- The use of a booster seat for older children (between 8 and 12 years old) was associated with a 19% reduction in the odds of experiencing any injury in a motor vehicle crash relative to using a seat belt alone (Anderson et al., 2017).
- An Alberta study using police collision report data from Edmonton and Calgary found that child passengers between four and 8 years old restrained with a seat belt had higher odds of injury compared to those in a booster seat, particularly in certain types of crashes (Pitt et al., 2021). The authors concluded that the introduction of booster seat legislation in Alberta could lower the injury rates for children between four and 8 years old, increase booster seat use, and reduce the number of children sitting in the front seat.
- A 2016 Alberta study on booster seat use also concluded that enacting booster seat legislation in the province would be an important step for safety, emphasizing that messages need to educate drivers about when to transition kids from booster seats to seat belts, and to keep passengers under 9 years out of the front seat (Golonka et al., 2016).
- A systematic review to describe associations between child passenger safety legislation and safety outcomes found that legislation appears to be positively associated with both the use of child restraints and with fewer injuries and deaths to child passengers (Sartin et al., 2021). The authors cautioned that legislation may have nuanced, potentially negative effects among at-risk populations such as those with less formal education, lower incomes, and ethnic/racial minorities. They suggest tailored and effective messaging when introducing legislation to reach at-risk populations, including information in multiple languages and using a variety of platforms (e.g. online, paper, in person).
- The introduction of child passenger safety legislation in Israel in 2004 reduced yearly traffic injury and death rates for children aged 0-4 years and 5-9 years (Nazif-Muniz et al., 2018). The authors point to timely and repetitive awareness campaigns that stress the need to properly install and use each of the safety seat types (car seat, booster seat) as key to maintaining the effectiveness of legislation over time.

Evidence-based Recommendations for Car Seat, Booster Seat and Seat Belt Use for Children

Based on this review of injury data, costs and best practices, these are the recommendations to improve the safety of children travelling as passengers in motor vehicles in Alberta:

1. Seating location of children in the vehicle

- Children under the age of 13 are safest in the back seat.

2. Car seats, rear-facing

- A rear-facing seat provides the best protection for a child's head, neck and spine in a sudden stop or crash.
- Infants and young children are safest riding in a rear-facing car seat until they reach the maximum height or weight limit for rear-facing use allowed by the seat's manufacturer.
- When your baby outgrows their infant seat, move them into a larger rear-facing seat.
- Your child is safest riding rear facing until 2, 3 or even 4 years old.

3. Car seats, forward-facing

- When a child outgrows their larger rear-facing car seat (by height or weight), they should move into a forward-facing car seat with a harness.
- Use a forward-facing car seat with a harness until your child reaches that seat's maximum height or weight limit.

4. Booster seats

- When a child outgrows their forward-facing car seat with a harness (by height or weight), they should move to a booster seat.
- A child is safest in a booster seat until they reach the maximum height or weight limit of the booster seat.
- Use a booster seat until the vehicle lap and shoulder seat belt fits properly (see recommendation 5); this is typically when your child is 145 cm (4 ft. 9 in.) tall and between 8 and 12 years of age.

5. Seat belts

Children can usually use a seat belt when they are at least 145 cm (4 ft. 9 in.) tall, because:

- Their knees will bend comfortably at the edge of the seat when sitting all the way back,
- The lap belt will stay low and snug across their hip bones,
- The shoulder belt will cross the chest and stay between their neck and shoulder, and
- They can likely sit like this for the whole trip without slouching.

6. Reduce health inequities in child passenger safety

- Develop tailored and effective messaging in consultation with communities to reach at-risk populations, including information in multiple languages and using a variety of formats.

- Consider timely and repetitive awareness campaigns that stress the need to properly install and use each of the safety seat types (car seat, booster seat).
- Enhance the economic and social circumstances across Alberta to:
 - Facilitate access to correct car seat information in a language and format that parents/caregivers understand.
 - Improve the availability of safe, affordable car seats and booster seats in communities across the province.

Possible Next Steps to Improve Child Passenger Safety in Alberta

1. Advocate for provincial booster seat legislation to protect the safety of children up to 145 cm (4'9") tall or 9 years of age.
 - Key leaders/stakeholders and members of the public should advocate for the introduction of booster seat legislation in Alberta.
 - Legislation would likely include revisions to the Alberta Traffic Safety Act, Vehicle Equipment Regulation (Part 5 Occupant Restraint Systems) to add a requirement for booster seat use that aligns with best practices in child passenger safety.
2. Revise and update existing car seat, booster seat and other child seat resources, in collaboration with Zones and key stakeholders.
 - Develop tailored and effective messaging, in consultation with communities, to reach parents/caregivers, including at-risk populations.
 - Provide messages in a suitable variety of languages and formats.
3. Share these recommendations and resources with health, childcare, injury prevention and traffic safety partners across the province.
 - Encourage stakeholders to consider timely and repetitive initiatives to promote the proper installation and use each of the car seat types (rear-facing and forward-facing car seats, booster seats).
4. Continue to raise awareness and educate parents/caregivers across the province of the correct use of car seats, booster seats and seat belts for children.
 - Continue to include information on car seats and booster seats in pre-natal, post-partum and well child public health materials.
 - Support AHS staff who have contact with young families to learn the key messages for child passenger safety.
 - Consider timely and repetitive awareness campaigns that stress the need to properly install and use each of the safety seat types (car seat, booster seat).

Conclusion

Injuries to children as passengers in motor vehicles continue to decrease in Alberta and elsewhere. Correct restraint of children under 15 in car seats, booster seats and/or seat belts helps keep them safe should a crash occur. The choice of the correct safety seat depends on the child's size (height and weight) and the maximum height and weight limits of their car seat or booster seat. These Recommendations provide parents and caregivers, health professionals and all Albertans with guidance for how to keep their young passengers safe when riding in a motor vehicle. Particular attention is needed to ensure that children who outgrow a forward-facing car seat with a harness move to a booster seat until they are at least 145 cm (4' 9") tall and between 8 and 12 years of age.

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Appendix A - 2017 Recommendations for Car Seat, Booster Seat and Seat Belt Use for Children

1. Seating location of children in the vehicle
 - Children under the age of 13 are safest in the back seat.
2. Car seats, rear-facing
 - A child is safest staying rear-facing until he/she is at least 2 years of age or reaches the maximum height or weight limit of the rear-facing seat, as stated by the manufacturer.
 - A rear-facing seat provides the best protection for a child's head, neck and spine in a sudden stop or crash.
 - Many rear-facing car seats are designed with higher weight and height limits beyond 2 years of age, these models are preferred.
3. Car seats, forward-facing
 - Once a child is at least 2 years of age or reaches the maximum height or weight limit of their rear-facing car seat, as stated by the manufacturer, he/she can move into a forward-facing car seat.
 - Use a forward-facing car seat until the child reaches the maximum height or weight limit of that seat, as stated by the manufacturer.
4. Booster seats
 - Once a child reaches the maximum height or weight limit of their forward-facing car seat, as stated by the manufacturer, he/she can move into a booster seat.
 - A child is safest in a booster seat until he/she reaches the maximum height or weight limit of that seat, as stated by the manufacturer.
 - A child is ready to exit his/her booster seat when the vehicle seat belt fits properly (see recommendation 5); this is typically when a child is 145 cm (4'9") tall and between 8 and 12 years of age.
5. Seat belts

Children can safely use a seat belt when

 - They are at least 145 cm (4 feet 9 inches) tall.
 - Their knees bend comfortably at the edge of the seat when sitting all the way back.
 - The lap belt stays low and snug across the hip bones.
 - The shoulder belt crosses the chest and stays between your child's neck and shoulder.
 - They can sit like this for the whole trip without slouching.
 - Until your child can meet all 5 steps, continue using a booster seat on every ride.

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Appendix B -

Review of Best Practice Child Restraint Use Recommendations, 2022

Rear-facing Car Seats

Organization (website)	Recommendation	Comparison to 2017 AHS
Canadian Paediatric Society https://caringforkids.cps.ca/handouts/safety-and-injury-prevention/car_seat_safety	<p>All infants must use a rear-facing car seat. A rear-facing seat provides the best protection for your child's head, neck, and spine in a sudden stop or crash. Once your baby outgrows the infant seat, use a larger, rear-facing seat. As long as your child still fits within the manufacturer's weight and height limits, they are safest using a rear-facing seat until 2, 3, or even 4 years old.</p>	<p>Uses the term 'infant seat' and 'larger, rear-facing seat' for rear-facing seats that are combined with another stage. Recommends rear-facing "until 2, 3 or even 4 years old." AHS stated at least 2 years of age.</p>
Transport Canada (TC) https://tc.canada.ca/en/road-transportation/child-car-seat-safety/choosing-child-car-seat-booster-seat#_The_four_stages	<p>Infants and young children ride facing the rear in an infant seat with a detachable base or in a convertible seat. This helps protect their head, neck and back throughout the journey, during sudden stops or in a crash. All child car seats have a recommended recline angle based on the weight of your child. For example, newborns and premature babies need to be tilted back more than older babies. This helps support the head and helps to keep their airway open. Keep your child seated rear-facing until they reach the child car seat's weight or height limits.</p>	<p>TC does not indicate an age while AHS stated at least 2 years of age.</p>
Parachute https://parachute.ca/en/injury-topic/car-seats/choosing-the-right-car-seat/	<p>Infant and rear-facing seat Use from birth to seat height or weight limit.</p> <ul style="list-style-type: none"> Canadian law requires that newborns and infants use a rear-facing car seat. Infants must use rear-facing car seats until they are at least one year of age and weigh at least 10 kg (22lbs.). Keep your child rear-facing for as long as they still fit the larger, rear-facing seat. Your child is safest riding rear facing until two, three or even four years old, as long as they still fit within the height and weight limits for the seat. The rear-facing position is safest and many manufacturers are now making car seats that fit heavier and taller children. 	<p>Parachute states, "Your child is safest riding rear facing until two, three or even four years old, as long as they still fit within the height and weight limits for the seat." AHS stated at least 2 years of age.</p>
Child Safety Link (CSL) Nova Scotia https://childsafetylink.ca/car-seat-safety and https://childsafetylink.ca/sites/default/files/2022-06/2021%20CSL%20English%20postcard.pdf	<p>Rear-facing car seats A rear-facing seat gives the best protection for your child's head, neck, and spine in a sudden stop or crash. Your child is safest riding rear-facing until 2, 3, or even 4 years old. Keep your child rear facing as long as they still fit within the height and weight limits for their larger, rear-facing seat. Read your vehicle manual and follow the instructions for your seat.</p>	<p>CSL has a separate entry for infant (rear-facing only) seats. Uses the term 'infant seat' for rear-facing only and 'larger, rear-facing seat' for rear-facing seats that are combined with another stage. Recommends rear-facing "until 2, 3 or even 4 years old." AHS stated at least 2 years of age.</p>
American Academy of Pediatrics (AAP) https://www.healthychildren.org/English/safety-prevention/on-the-go/Pages/Car-Safety-Seats-Information-for-Families.aspx	<p>All infants and toddlers should ride in a rear-facing seat until they reach the highest weight or height allowed by their car safety seat manufacturer. Most convertible seats have limits that will allow children to ride rear facing for 2 years or more (2022).</p>	<p>AHS' 2017 rear-facing wording was consistent AAP at that time (rear-facing until at least 2 years of age or...). AAP published new wording in 2018, and further revised wording on their 'for families' site in 2021.</p>

Forward-facing Car Seats

Organization (website)	Recommendation	Comparison to 2017 AHS
Canadian Paediatric Society https://caringforkids.cps.ca/handouts/safety-and-injury-prevention/car_seat_safety	<p>Once your child has outgrown the larger rear-facing car seat – and is at least 2 years old – they can move to a forward-facing car seat with a 5- point harness.</p> <p>Keep your child in a 5-point harness until they weigh at least 18 kg (40 lb.) and can sit straight and tall without moving out of position or unbuckling. This may be at 4, 5, or even 6 years old. If your child outgrows the seat before they can sit correctly, you may need a 5- point harness that will hold a taller, heavier child.</p>	<p>Criteria for graduation from forward-facing seat differs. TC says 18 kg (40 lb.) plus age and other criteria, AHS said until maximum weight or height of forward-facing seat.</p>
Transport Canada (TC) https://tc.canada.ca/en/road-transportation/child-car-seat-safety/choosing-child-car-seat-booster-seat#_The_four_stages	<p>Children who have outgrown their rear-facing seat and weigh at least 10 kg (22 lb) may ride facing the front in a child car seat. These child car seats have a built-in harness designed to keep your child safe throughout the journey, during sudden stops or a crash. Use a forward-facing seat until your child reaches the maximum weight or height limits for the child car seat. Some forward-facing seats are made for children who weigh up to 30 kg (65 lb.).</p>	<p>TC does not indicate an age to start using a forward-facing seat, while AHS stated at least 2 years of age.</p>
Parachute https://parachute.ca/en/injury-topic/car-seats/choosing-the-right-car-seat/	<p>Forward-facing seat</p> <p>Use after child grows out of rear-facing seat to at least 18 kg (40 lbs.) and is at least 2 years old.</p> <ul style="list-style-type: none"> • Use a forward-facing car seat with a five-point harness until their height or weight exceeds the restrictions for the model they are using: this may be at 4, 5, or even 6 years old. • Then either purchase another forward-facing seat designed for larger children or move to a booster seat. • Forward-facing car seats use a tether strap to prevent the top of the car seat from moving forward too much during a collision. • Choose a forward-facing car seat that fits a higher range of height and weight so that a child can use it for longer. 	<p>Parachute indicates a forward-facing seat after a child grows out of the rear-facing seat to at least 18 kg (40 lbs.) and is at least 2 years old. AHS said until maximum weight or height of forward-facing seat.</p> <p>Email sent to Parachute May 26, 2022 to clarify age reference. Reply received on June 27, 2022 states, “We will remove the age mention and align with Transport Canada’s current recommendations.”</p>
Child Safety Link (CSL) Nova Scotia https://childsafetylink.ca/car-seat-safety and https://childsafetylink.ca/sites/default/files/2022-06/2021%20CSL%20English%20postcard.pdf	<p>Forward-facing car seats</p> <p>A forward-facing seat uses a five-point harness to spread the force of a sudden stop or crash over the strongest parts of your child’s body. Keep your child in a five-point harness until they weigh at least 18kg (40 pounds). Always remember to read your vehicle manual and follow the instructions for your seat.</p>	<p>CSL doesn't indicate an age to start using a forward-facing seat, while AHS stated at least 2 years of age</p>
American Academy of Pediatrics (AAP) https://www.healthychildren.org/English/safety-prevention/on-the-go/Pages/Car-Safety-Seats-Information-for-Families.aspx	<p>Children who have outgrown the rear-facing weight or height limit for their convertible safety seat should use a forward-facing seat with a harness for as long as possible, up to the highest weight or height allowed by their car safety seat manufacturer. Many seats can accommodate children up to 65 pounds or more.</p>	<p>AAP uses 'should,' AHS used 'can'; AAP gives consistent criteria for transitions (outgrow highest weight or height limit allowed by car safety seat manufacturer). AAP uses phrase 'as long as possible' for forward-facing, although not for rear-facing (a change from Nov 2021).</p>

Booster Seats

Organization (website)	Recommendation	Comparison to 2017 AHS
Canadian Paediatric Society https://caringforkids.cps.ca/handouts/safety-and-injury-prevention/car_seat_safety	<p>When your child is at least 18 kg (40 lb.) and at least 4 years old, and has outgrown their forward-facing car seat with a 5-point harness, they may be ready to move to a belt-positioning booster seat. To safely use a booster seat, your child must be able to sit correctly. Keep your child in a booster seat until they safely fit the adult seat belt. For most children, this will be between 9 and 12 years old.</p>	<p>Criteria for graduation from forward-facing seat differs. CPS says 18 kg (40 lb.) plus age and other criteria, AHS said until maximum weight or height of forward-facing seat. CPS uses term 'belt-positioning booster seat.' CPS does not refer to weight or height limit of booster seat as graduation criteria.</p>
Transport Canada (TC) https://tc.canada.ca/en/road-transportation/child-car-seat-safety/choosing-child-car-seat-booster-seat#_The_four_stages	<p>Booster seats are designed for children who have outgrown their forward-facing seat and weigh at least 18 kg (40 lb). A booster seat helps children sit comfortably by raising them up so they can sit up against the seatback with their knees bent over the edge of the booster or vehicle seat. Even if a booster seat meets Canadian regulations, the booster seat you choose needs to fit your child, and your vehicle.</p>	<p>TC outlines weight of at least 18kg (40 lbs.) to move to booster. AHS stated to use forward-facing car seat to the manufacturer's maximum weight or height limit.</p>
Parachute https://parachute.ca/en/injury-topic/car-seats/choosing-the-right-car-seat/	<p>Booster seat Use from when a child is a minimum of 18 kg (40 lbs.) to 145 cm tall (4 ft., 9 in) and is at least 4 years old.</p>	<p>Parachute suggests a min. of 18 kg (40 lbs.) to get into a booster and 145 cm tall (4ft, 9in) to graduate to a seat belt. AHS suggested using the manufacturer's weight or height limits to decide.</p>
Child Safety Link (CSL) Nova Scotia https://childsafetylink.ca/car-seat-safety	<p>Booster Seat</p> <ul style="list-style-type: none"> • A booster seat lifts the child up so that the adult seat belt fits across the strongest bones. • Your child must weigh at least 18 kg (40 pounds) to use a booster seat. • Your child must be able to sit straight and tall without moving around or unbuckling. • Use a booster seat until your child is at least 145 cm (4 feet 9 inches) tall and fits the seat belt correctly. 	<p>Criteria for graduation from forward-facing seat differs from AHS, CSL has no reference to weight or height of forward-facing seat. CSL says 18 kg (40 lb.) plus age and other criteria, CSL does not refer to weight or height limit of booster seat as graduation criteria.</p>
American Academy of Pediatrics (AAP) https://www.healthychildren.org/English/safety-prevention/on-the-go/Pages/Car-Safety-Seats-Information-for-Families.aspx	<p>All children whose weight or height exceeds the forward-facing limit for their car safety seat should use a belt-positioning booster seat until the vehicle seat belt fits properly, typically when they have reached 4 feet 9 inches in height and are 8 to 12 years of age. All children younger than 13 years should ride in the back seat.</p>	<p>AAP says 'should use a belt-positioning booster seat'; AHS says 'can move into a booster seat.' Content is similar but AHS used more words.</p>

Seat Belts

Organization (website)	Recommendation	Comparison to 2017 AHS
Canadian Paediatric Society https://caringforkids.cps.ca/handouts/safety-and-injury-prevention/car_seat_safety	<p>Once your child is at least 145 cm (4' 9") tall, they may be ready to start using an adult seat belt. In order to fit safely:</p> <ul style="list-style-type: none"> Your child's knees must bend comfortably at the edge of the vehicle seat when sitting all the way back. The lap belt must stay low and snug across your child's hips. The shoulder belt must cross the chest and stay between the neck and shoulder. <p>If your child cannot sit like this for the whole trip without slouching, continue to use a booster seat.</p>	Consistent.
Transport Canada (TC) https://tc.canada.ca/en/road-transportation/child-car-seat-safety/choosing-child-car-seat-booster-seat#_The_four_stages	<p>The vehicle seat belt should only be used alone when children have outgrown their booster seats. Before you transition to this important stage make sure the seat belt fits your child. The minimum age, weight and height limits vary from one province to another.</p>	Consistent.
Parachute https://parachute.ca/en/injury-topic/car-seats/choosing-the-right-car-seat/	<p>Seatbelt alone</p> <p>Use when a child is taller than 145 cm (4 ft. 9 in). Seatbelts are designed for adult bodies. For this reason, it is important that parents check where the lap and shoulder belts rest on their older child's body.</p> <p>Do this five-step test to see if your child is ready to move from a booster seat to a seat belt:</p> <ul style="list-style-type: none"> The child can sit all the way back against the back of the vehicle seat. The knees bend comfortably over the edge of the vehicle seat without slouching. The lap belt fits low and snug across the hips and doesn't ride up on the stomach. The shoulder belt goes across the chest bone and the middle of the shoulder, <i>not</i> touching the neck and <i>never</i> behind the back. The child can sit properly for the entire trip. 	Consistent.
Child Safety Link (CSL) Nova Scotia https://childsafetylink.ca/car-seat-safety	<p>Can your child safely use a seat belt?</p> <ul style="list-style-type: none"> Is your child at least 145 cm (4 feet 9 inches) tall? Do your child's knees bend comfortably at the edge of the seat when they are sitting all the way back? Does the lap belt stay low and snug across the hip bones? Does the shoulder belt cross the chest and stay between your child's neck and shoulder? Can your child sit like this for the whole trip without slouching? <p>Until your child can meet all 5 steps, keep using a booster seat on every ride.</p>	Consistent.
American Academy of Pediatrics (AAP) https://www.healthychildren.org/English/safety-prevention/on-the-go/Pages/Car-Safety-Seats-Information-for-Families.aspx	<p>When children are old enough and large enough for the vehicle seat belt to fit them correctly, they should always use lap and shoulder seat belts for the best protection. All children younger than 13 years should ride in the back seat.</p>	Consistent.

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Appendix C – Booster Seat Legislation in Canada, February 2022

Province	Booster Seat Legislation
British Columbia	Children must ride in a booster seat until they are a minimum of 4 feet, 9 inches (145 cm) tall, or a minimum of 9 years old.
Alberta	No provincial law.
Saskatchewan	Children must ride in a booster seat until they are a minimum of 4 feet, 9 inches (145 cm) tall and 80 pounds (36 kg), or a minimum of 7 years old.
Manitoba	Children must ride in a booster seat until they are a minimum of 4 feet, 9 inches (145 cm) tall and a minimum of 80 pounds (36 kg), or a minimum of 9 years old.
Ontario	Children must ride in a booster seat until they are a minimum of 4 feet, 9 inches (145 cm) tall, or a minimum of 80 pounds (36 kg), or a minimum of 8 years old.
Quebec	Children must ride in the appropriate car seat or booster seat until they are a minimum of 4 feet, 9 inches (145 cm) tall or a minimum of 9 years old. The car seat or booster seat must, in accordance with the manufacturer's instructions, be suitable for the child's height and weight and be securely attached to the vehicle.
New Brunswick	Children must ride in a properly secured, appropriate car seat or booster seat until they are a minimum of 4 feet, 9 inches (145 cm) tall, or a minimum of 80 pounds (36 kg), or a minimum of 9 years old.
Nova Scotia	Children must ride in a booster seat when they are a minimum of 40 pounds (18 kg) until they are a minimum of 4 feet, 9 inches (145 cm) tall, or a minimum of 9 years old.
Prince Edward Island	Children must ride in a booster seat if they are over 40 pounds (18 kg). The child must continue to use a booster seat until they are 4 feet, 9 inches (145 cm) tall, or a minimum of 10 years old.
Newfoundland and Labrador	Children must ride in a booster seat until they are a minimum of 4 feet, 9 inches (145 cm) tall, or a minimum of 80 pounds (36 kg), or a minimum of 8 years old.
Yukon	Child must weigh over 22 kg (48 lb.). A booster seat is required until at least 145 cm (4'9") or 45 kg (100 lb.), whichever comes first.
Northwest Territories	No provincial/territorial law.
Nunavut	No provincial/territorial law.

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