MODULE 8 • Children in Rear-Facing Car Seats

Module Agenda: 130 Minutes

Topic	Suggested Timing
1. Introduction	2
2. Why Children Should Travel Rear-Facing • Video: Why Children Should Travel Rear-Facing	10
3. Types of Rear-Facing Car Seats • Practice Activity: Identify Rear-Facing Car Seats	15
4. 5 Steps For Rear-Facing Car Seat Use • Video: Install a Rear-Facing Car Seat • Practice Activity: Select and Install Rear-Facing Car Seats	75
5. Best Practices and Caregiver Choices • Progress Check: Explain Best Practices About Rear-Facing Car Seats	10
6. Rear-Facing Car Seat Errors and Consequences • Progress Check: Identify Rear-Facing Car Seat Errors and Consequences	10
7. Progress Check and Summary	8
TOTAL	130 Minutes

Module Purpose

The purpose of this module is to learn about selection, direction, location, installation, and harnessing rear-facing car seats. Participants will also learn how to communicate best practices, as well as identify rear-facing car seat errors and consequences.

Module Objectives

- Describe why children should travel rear-facing.
- Identify types of rear-facing car seats.
- Apply 5 steps for rear-facing car seat use.
- Explain best practices and caregiver choices about rear-facing car seats.
- Identify rear-facing car seat errors and consequences.

Special Media, Materials, and Resources

- Car seat instructions – (if unavailable, download from manufacturer websites)
- Infant dolls
- Rear-facing-only car seat with 3-point and 5-point harness/removable base
- Convertible car seat
- Harness adjusters: metal slide, strap adjuster, A-lock, automatic lock, metal rod

Special Media, Materials, and Resources (continued)

- Rear-facing car seat with rigid lower anchor connectors
- Rear-facing car seat with flexible lower anchor connectors
- Rear-facing car seat with tether (if possible)
- Rear-facing car seat with load leg (if possible)
- Non-regulated products (i.e. additional padding)
- Recall List (NHTSA website at www.nhtsa.gov)
- Seat belt simulation/demonstration seat
- CPS Check Form (Instructor DVD)
- Rolled towel or foam pool noodle
- Dolls for each team and vehicles for installation
- Rear-Facing Quotables: Guiding Parents to Keep Children Rear-Facing Longer (NCPSB website at www.cpsboard.org)

Video Titles and Times

- Why Children Should Travel Rear-Facing, 3:53 minutes (PPT 8-4)
- Install a Rear-Facing Car Seat, 3:19 minutes (PPT 8-15)

Activities

- Practice Activity: Identify Rear-Facing Car Seats
- Practice Activity: Select and Install Rear-Facing Car Seats
- Progress Check: Explain Best Practices About Rear-Facing Car Seats
- Progress Check: Identify Rear-Facing Car Seat Use Errors and Consequences
- Final Progress Check

Preparation

- Review Rear-Facing Quotables: Guiding Parents to Keep Children Rear-Facing Longer located on the NCPSB website at www.cpsboard.org.
- Prepare for the practice activities and progress checks in this module.
- Collect all the car seats and other items noted in the Special Media, Materials, and Resources list for the practice activities.
- Identify vehicles with two types of seat belt lower anchor systems for the first practice activity on selecting and installing rear-facing car seats:
  - Lap-belt-only
  - Lap-and-shoulder belt
  - Lower anchors
- Be prepared to discuss which car seat serves each child's (doll's) height and weight for the Select and Install Rear-Facing Car Seats practice activity. Have the following "child cards" available:
  - 18-month-old/29 inches/28 pounds
  - 7-day-old/21 inches/10 pounds
  - 14-month-old/25 inches/19 pounds
  - 3-day-old/19 inches/4 pounds
  - 7-month-old/27 inches/24 pounds
  - 2-year-old/29 inches/26 pounds
  - 10-month-old/27 inches /26 pounds
  - 3-month-old/23 inches/18 pounds

What To Do	Talking Points • Activity Directions & Summaries

1. Introduction

Display PPT 8-1.

Present module purpose.

The purpose of this module is to learn about selection, direction, location, installation, and harnessing rear-facing car seats. You will also learn how to communicate best practices, as well as identify rear-facing car seat errors and consequences.

Display PPT 8-2.

Present module objectives.

As a result of this module, you will be able to:

- Describe why children should travel rear-facing.
- Identify types of rear-facing car seats.
- Apply 5 steps for rear-facing car seat use.
- Explain best practices and caregiver choices about rear-facing car seats.
- Identify rear-facing car seat errors and consequences.

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2. Why Children Should Travel Rear-Facing

Reference TG page 8-1.

Display PPT 8-3.

Introduce why children should travel rear-facing.

Children's bodies change as they grow. Different types of car seats and booster seats are made to support the child's growth.

Remember that NHTSA recommends children remain in rear-facing car seats for **AS LONG AS POSSIBLE** and until they reach the top height or weight limit allowed by the car seat manufacturer.

Display PPT 8-4.

Introduce Why Children Should Travel Rear-Facing video (3:53 minutes).

This video provides the rationale for why children should travel rear-facing.

- Watch carefully for information to emphasize with caregivers about the importance of keeping children rear-facing.
- Take notes in your TG as you watch the video.

What To Do	Talking Points • Activity Directions & Summaries
Play Why Children Should Travel Rear-Facing video.	
Ask question and respond to comments.	***Q. What new facts did you learn about why children should travel rear-facing?***
Emphasize points from video.	Emphasize the following points if they do not come up in the discussion. • Rear-facing-only seats are engineered to distribute the forces of a crash across the entire head and body of an infant and young child. The harnesses are attached snugly to keep the child from sliding up the back of the seat and from flying out of the seat in a crash. • A rear-facing car seat supports the entire head, neck, and back of a child in a frontal crash. The car seat cradles and moves with the child. It is the shell of the car seat itself that absorbs the forces. • Children in the second year of life are five times less likely to die or be seriously injured in a crash if restrained rear-facing compared to forward-facing. • When working with caregivers, it is critical that they understand the reasons why children are safer when traveling rear-facing in vehicles. Tell participants that a summary of this information is located on page 8-2 in their TGs.
[INSTRUCTOR NOTE]	[Refer to *Rear-Facing Quotables: Guiding Parents to Keep Children Rear-Facing Longer* on the NCPSB website for information CPS Technicians can use in the field to communicate with caregivers about keeping children rear-facing longer.]

3. Types of Rear-Facing Car Seats

Reference TG page 8-3.

Display PPT 8-5.

Introduce types of car seats.

There are two main types of rear-facing car seats.

What To Do	Talking Points • Activity Directions & Summaries
	• **Rear-facing-only** car seat that may have a 3-point or 5-point harness. Some models have a detachable base that can be used with or without the base. Other models can only be used with the base. • **Rear-facing convertible** car seats have a 5-point harness.
 Conduct practice activity and debrief.	Now you will work in a small group to practice identifying types of rear-facing car seats. 1. Work with your small group to examine your assigned car seat. 2. Answer the questions in the TGs about your assigned car seat.
[INSTRUCTOR NOTE]	[Divide the class into small groups. Provide each group with a different rear-facing car seat. Give small groups 5 to 8 minutes to answer the questions. 1. What type of car seat is it? 2. What type of harness is attached? 3. What are the minimum and maximum height and weight limits for a child using this car seat? Have one person from each group provide their answers to the class stating the type of car seat, describing the harness system and showing the label, and stating the minimum and maximum height and weight limits for the child.]
 **Display PPT 8-6.**  **Reference TG page 8-4.**	
 Review rear-facing-only car seats.	Let's discuss rear-facing-only car seats. • Always check the car seat label for the starting weight. Some car seats are labeled as "birth" and others are labeled for a specific weight. • In general, the top of the child's head should be well contained within the shell and at least 1 inch from top of shell. Some manufacturer instructions state otherwise so be sure to check the car seat manual.

- The harness needs to be snug and hold the child down in the seat so he or she does not slide up in a crash and suffer ejection from the car. Harnesses should be at or below the child's shoulders unless the manufacturer instructions state otherwise.

- Caregivers should **NEVER** use the rear-facing seat above the height or weight limits designated by the manufacturer. Once a child outgrows the rear-facing-only car seat, he or she should move to a rear-facing convertible seat with rear-facing height and weight limits. This information may be difficult to determine by simply checking labels. Check the manual for more complete information.

Display PPT 8-7.

Review rear-facing convertible car seats.

Let's discuss rear-facing convertible car seats.

- Many new convertible car seats are approved for rear-facing use up to 40+ pound children. Some seats exceed these weights and should be considered for children whose weight and/or height have exceeded the limits of the rear-facing-only car seat.

- Children commonly sit with their legs crossed or resting on the back of the vehicle seat. As stated in the video, the risk of injury to legs in a crash is low and injuries to the lower extremities are usually less severe with fewer long-term complications (AAP Technical Report, March 2011).

- Although older children with poor head control and other children with special needs are within height and weight requirements of a car seat, they benefit from staying rear-facing as long as possible. In a crash, all children are safer rear-facing as long as their car seat allows.

[INSTRUCTOR NOTE]

[Briefly highlight the Tips for Discussing Rear-Facing Car Seats and Car Seats and Safe Sleeping Practices in the TG on pages 8-4 and 8-5.

ASTM International, formerly known as the American Society for Testing and Materials (ASTM) has approved a new warning label addressing car seat and sleeping hazards. Participants can learn more about this topic on http://www.cpsc.gov.]

Ask question and respond to comments.

Q. What questions do you have about types of rear-facing car seats?

4. 5 Steps for Rear-Facing Car Seat Use

Reference TG page 8-4.

Display PPT 8-8.

Review 5 steps for car seat use.

Let's apply 5 steps for car seat use to rear-facing car seats.

1. Selection: Choose the right car seat.
2. Direction: Face the car seat the right way in the vehicle.
3. Location: Install the car seat in an appropriate location in the vehicle.
4. Installation: Secure the car seat to the vehicle in the right way.
5. Harnessing: Place the child correctly in the car seat.

Display PPT 8-9.

Review car seat selection.

1. Selection: Choose the Right Car Seat

- Select the one that is right for the child's height, weight, developmental levels, **AND** that a caregiver can use correctly.
- Select a car seat with an adjustable harness height to offer options for a rapidly growing infant.
- Some seats have multiple positions for crotch straps for better fit as a child grows. Caregivers should refer to the manufacturer instructions for proper placement.

Reference TG page 8-5.

Display PPT 8-10.

Review car seat direction.

2. Direction: Face the Car Seat the Right Way

- An infant under the age of 1 should **ALWAYS** ride in a rear-facing car seat.

- A child should remain in a rear-facing car seat **AS LONG AS POSSIBLE**. The child should remain in a rear-facing car seat until he or she reaches the top height or weight limit allowed by the car seat manufacturer. Once a child outgrows a rear-facing only seat, they can transfer to a rear-facing convertible until they reach the maximum height or weight for that seat.

Display PPT 8-11.

Review car seat location.

3. Location: Install the Car Seat in an Appropriate Location in the Vehicle

- Although there may be many seating positions in a vehicle, not all may be suitable for installing a car seat. The car seat manufacturer instructions and/or the vehicle owner's manual may not allow the use of the center rear seating position.

- Always ask, "Who rides in this vehicle? Where will each person sit?"

- **NEVER** place a rear-facing car seat in the front vehicle seat if the passenger frontal air bag is turned on in the vehicle. If it is necessary to place a forward-facing child in the front seat, be sure the air bag is turned off in the vehicle.

Ask question and respond to comments.

Q. Why do you think caregivers put children in the front seat?

A. Some reasons include:

- Caregivers want to provide care, such as a pacifier, bottle, or a comforting touch.

- Many caregivers place children where they can observe them when no other caregiver is in the vehicle. Even with older children, the driver often wants to talk with or entertain the child.

- In some cases, riding in the front seat has been used as a reward for good behavior.

Display PPT 8-12.

Review car seat installation.

4. Installation: Secure the Car Seat to the Vehicle in the Right Way

- The rear-facing car seat spreads crash forces along the entire head, neck, and back. The correct angle helps keep the airway open. If the car seat is installed too upright, the child's head may flop forward and cut off his/her air supply.

- Know the car seat recline angle, use the recline indicator and adjuster, and adjust to accommodate the seat and vehicle slope.

Reference TG page 8-6.

Display PPT 8-13.

Recline Angle

- Caregivers should recline the rear-facing car seat according to manufacturer instructions.

- If permitted by the manufacturer, as the child ages and gains better head control, he or she may sit more upright.

Recline Angle Indicator

- The recline angle indicator is part of the car seat and should be used as indicated by the manufacturer.

[INSTRUCTOR NOTE]

[Show a variety of car seats with different recline indicators, including one that states it is level to the ground. Inform participants to also look to be sure angle is correct as some indicators may not give a true reading.]

Recline Adjuster

- The vehicle must be on a level surface when checking the car seat angle.

- Many rear-facing car seats have an adjustable base or foot that is used to correct the angle.

- For car seats that do not have an adjustable base, a firm, lightweight object such as a tightly rolled towel or pool noodle can be placed at the vehicle seat crack or bight if permitted by the car seat manufacturer. This:

  – Is helpful when car seats are used on vehicle seats that are not as flat as those used in the testing laboratory.

– Installation method may be useful when using a carrier without the base.

- Unless the car seat manufacturer indicates otherwise, a rule of thumb is to use either the adjustable base or foot or firm lightweight object – but **NOT** both. The car seat has most likely **NOT** been tested this way.

[INSTRUCTOR NOTE]

[Where possible, teach this section on recline adjusters in vehicles. If not feasible, use a demonstration seat for this demonstration.]

Seat Slope

- A steep angle may cause the child to ride too upright. Maintain the correct recline angle

Display PPT 8-14.

Seat Belt or Lower Anchors

- Car seats can be installed with a seat belt or with lower anchor connectors – usually **NOT** both. While the systems are different, they are equally safe.

- Most car seats have **NOT** been tested with both systems used together. Some manufacturers allow this now, so always be sure to read both the vehicle and car seat instructions for help.

Reference TG page 8-7.

Display PPT 8-15.

Introduce Install a Rear-Facing Car Seat video (3:19 minutes).

This video, Install a Rear-Facing Car Seat, shows the steps for installing a rear-facing-only car seat with a seat belt. The steps are the same for a convertible rear-facing car seat with a seat belt.

- Watch carefully for the installation steps.
- Take notes in your TG as you watch the video.

Play Install a Rear-Facing Car Seat video.

[INSTRUCTOR NOTE]

[Using a vehicle seat or a Dial-a-Belt seat, demonstrate to the class how to attach a car seat tightly to a vehicle seat.

Review how to reduce the risk of entanglement from unused seat belts when installed with LATCH.

What To Do	Talking Points • Activity Directions & Summaries
	CPS Technicians should educate the caregiver to evaluate and note unused seat belts that may be within reach of a child. If possible, switch the retractor to the automatic locking mode to lock the unused seat belt against the seat back. Always refer to vehicle and car seat owner's manuals to see if this is allowable. Briefly review the Special Considerations for Rear-Facing Car Seats on page 8-7 in TGs. Encourage participants to suspend their judgment when interacting with a caregiver and approach the error as a mistake that anyone can make.]
Reference TG page 8-8.	
Continue to review car seat installation.	**Space requirements** Check the following to see if the car seat fits in the vehicle. • Do the contours of the vehicle seat permit the car seat to stay level? • Is there enough space for the car seat to allow for the correct angle? • Does at least 80 percent of the car seat base (footprint) fit on the vehicle seat? Many manufacturers say that no more than 20 percent of the car seat can hang over the front edge of the vehicle seat. Some models require that 100 percent of the footprint fit on the vehicle seat. Use the 80/20 as a rule of thumb **UNLESS** the car seat manufacturer says differently. • Does the seat belt/lower anchor connector allow for a tight installation?
Reference TG page 8-9.	
Display PPT 8-16.	
Review common car seat installation errors.	Common rear-facing installation errors include: • A seat belt or lower anchor connector that is too loose or not locked. • A rear-facing-only car seat that is facing forward. • The seat belt or lower anchor connectors routed incorrectly. • An incorrect recline angle especially for an infant.

- Using two seat belts, or using a seat belt and lower anchor connectors together (must be allowed by **BOTH** the vehicle and car seat manufacturer).

Display PPT 8-17.

- Incorrect use of lower anchor connectors and tethers.
- Not using the appropriate tether anchor or using a tether when it should not be used most convertible car seats do not tether when rear-facing).
- The locking clip installed incorrectly.
- The carrying handle not used in the approved position for vehicle travel.

[INSTRUCTOR NOTE]

[The use of tethers on rear-facing car seats, while common in Australia and Sweden, is uncommon in the United States.

A rear-facing car seat should never be tethered unless recommended by the car seat manufacturer and allowed by the vehicle manufacturer. Several products have optional tethers in the rear-facing position.

Several new rear-facing seats have a load leg or foot prop that extends from the front of the base to the floor supporting the seat. These seats are tested according to FMVSS without the leg and with the leg in place. Use this product as directed by the car seat manufacturer instructions.

Explain some special factors to consider for rear-facing car seats: width of car seat, vehicle seat shape, seat belt anchor points that may be too close together or have buckles forward of the seat bight or crack, size of vehicle, 2-door vehicles, small interiors, etc.

Remind participants to check the car seat instructions if the car seat base hangs over the edge of the vehicle seat.]

Review car seat harnessing.

5. Harnessing: Place the Child Correctly in the Car Seat

There are four steps for correctly placing a child in a car seat.

1. Place the child all the way back in the car seat.

2. Place the harness straps at or below the child's shoulders, according to manufacturer instructions, and buckle at the crotch.

  - The harness holds the child down low in the car seat so he/she does not slide up and out of the car seat in a crash.

  - The crotch strap keeps the child from moving forward. Adjust the crotch strap if needed to get it as close to the child as possible.

3. Tighten harness straps snugly.

  - NHTSA requires car seat manufacturers to state in the instructions: **"A snug strap should NOT allow any slack. It lies in a relatively straight line without sagging. It does not press on the child's flesh or push the child's body into an un-natural position."**

  - You should **NOT** be able to pinch excess webbing at the shoulder or hips once the harness is buckled. This is called the pinch test (see photograph on TG 8-9).

4. Place the harness retainer clip at armpit level.

In addition:

- Only place blankets around the child after the harness is snug and secure. Unapproved padding placed behind or under the child or under harnesses can compress in a crash and create slack in the harness. Only items approved or manufactured by the car seat company for a particular model car seat are acceptable.

- Nothing should be placed under the child or between the child and the harness except for the use of a rolled towel or blanket at the crotch strap, if allowed by the manufacturer.

- Use only harness comfort covers or head padding the manufacturer has included with the car seat or that the manufacturer sells separately for the specific car seat.

- Harness hardware can include manual adjusters, "A-locks" (adjuster device on front of many seats), or metal harness adjusters).

- Make sure to follow manufacturer recommendations on approved positions for carry handles on rear-facing-only seats.

What To Do	Talking Points • Activity Directions & Summaries
Reference TG page 8-11.	
Display PPT 8-18.	
Review common car seat harnessing errors.	Common car seat harnessing errors include a: • Harness not used and the child is just sitting in the car seat. • Harness straps are too loose. • Retainer clip is not at armpit level. • Harness routed through the wrong slots. **NOTE:** Harness may look as though it is properly routed through the padding, but it may not be routed correctly through the shell. Both areas must be checked. • Harness not doubled-back through buckle type metal adjuster, if it requires the double-back to secure the harness. • Harness is twisted.
Display PPT 8-19.	• Harness is not placed on the child correctly. • Harness is frayed or damaged. • Metal adjuster not flush with the slot or out of position. • Crotch strap that is adjusted too long. • Harness not at or below shoulder. • Crotch strap that is not through the slot closest to the child. • Harness is incorrectly routed.
Reference TG page 8-8.	
[INSTRUCTOR NOTE]	[Briefly review the tips for discussing how to install rear-facing car seats located in the TG. • Tell caregivers that since not every car seat will fit into every vehicle, they can ask the retail store to allow trying out a car seat in their vehicle in the store parking lot. • Many caregivers who mistakenly test their rear-facing car seat near the child's head (instead of near the belt path) think the car seat is not installed properly because it moves more when tested at this point.

- To reduce risk of entanglement from unused seat belts, educate caregivers to evaluate and note unused seat belts that may be within reach of a child.

- If possible, switch the retractor to automatic locking mode to lock the unused seat belt against the back seat. Refer to vehicle and car seat owner's manuals for guidance.]

Ask question and respond to comments.

Q. What questions do you have about the 5 steps for rear-facing car seat use?

Reference TG page 8-11.

Display PPT 8-20.

Review seats for children with special needs.

Let's review some AAP recommendations for small and premature children.

The American Academy of Pediatrics (AAP) recommends that all children born before 37 weeks (more than three weeks early) be monitored before they leave the hospital for possible breathing problems or slowing of the heart rate when sitting in a semi-reclined position.

The physician will determine if the child can use a rear-facing-only car seat or should ride lying on their stomach or on their back in a car bed.

NOTE: Some very small children do not have respiratory problems but still may require special consideration.

[INSTRUCTOR NOTE]

[Car seats for children with special needs are generally more expensive and may be more difficult to find and use. Use the car seat instruction manual to see if there are specific requirements for installation and use with the child

While the CPS Technician cannot determine whether a child should be in a special car seat, it is important for them to have a basic understanding of situations or conditions that may require specialized adaptive car seats as well as conventional car seats.]

Reference TG page 8-12.

Display PPT 8-21.

What To Do	Talking Points • Activity Directions & Summaries
Review how to fit small and prematurely born infants in car seats.	Special car seats may be needed for children who are very small or have special physical or developmental needs. • Use a rear-facing car seat with small internal harness dimensions. • Use a car seat designed for the child's low weight. • Center the child in a car seat with rolled receiving blankets and a crotch roll, if necessary.
Display PPT 8-22.	
Review how to fit children in car beds.	Car beds are used for children who are small, premature, or medically fragile and need to ride flat as directed by a doctor. • Secure the child in the car bed with the internal harness or bunting. • Place the child's head toward the center of the vehicle – **NOT** next to the door. • Use the seat belt to anchor the car bed lengthwise on the vehicle seat.
Display PPT 8-23.	
Review how to fit children who have breathing problems in seats.	Breathing problems or other medical conditions may require the child to lie flat or use a non-conventional car seat. • A semi-reclined position of the car seat could make breathing problems worse. • Children may need to travel with secured special medical equipment such as apnea monitors, ventilators, and oxygen tanks which must be safely restrained during transport. To secure equipment: – Place it on the vehicle floor and wedge it with pillows or foam. – Hold it in place by seat belts not in use, if possible. – Monitors and oxygen tanks may be stored under the front seat in some vehicles. Check the vehicle manufacturer instructions.

– Carriers for restraining monitors, ventilators, and oxygen are also available.

Reference TG page 8-13.

Conduct practice activity and debrief.

Now that you have learned about the 5 steps for rear-facing car seats, you will select and install car seats by a child's age, height, and weight. A child (card with age, height, and weight) will be assigned to your team.

1. Select an appropriate car seat for your child.

2. Using a doll, adjust harness to fit your child.

3. Install a rear-facing-only car seat with and without a base and a rear-facing convertible car seat in a vehicle using a lap-belt-only, lap-and-shoulder belt, and lower anchors, where applicable. Make your car seat selections based on the child's age, height, and weight.

4. Repeat the car seat selection, harness adjustment, and three installations for the type of car seat (rear-facing-only or rear-facing convertible) not chosen the first time.

5. Document how the belt locks in the chart located in your TG.

[INSTRUCTOR NOTE]

[Direct participants to the vehicles with three types of seat belt systems – lap-belt-only (optional), lap-and-shoulder belt, and lower anchors.

This activity will take up to 30 minutes.

Participants will use the following materials for this practice activity:

- Rear-facing-only and convertible car seats for each team

- Vehicles for installation as well as a doll for each team. Be prepared to discuss and know which car seat serves each "child's" height and weight. Have the following "child cards" available:

  – 18-month-old/29 inches/28 pounds
  – 7-day-old/21 inches/10 pounds
  – 14-month-old/25 inches/19 pounds
  – 3-day-old/19 inches/4 pounds

– 7-month-old/27 inches/24 pounds
– 2-year-old/29 inches/26 pounds
– 10-month-old/27 inches /26 pounds
– 3-month-old/23 inches/18 pounds

Walk around and provide feedback on their selections and installations. Sign off on TG worksheets to indicate you have checked their work.]

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5. Best Practices and Caregiver Choices

Reference TG page 8-14.

Reinforce how to to explain best practices to caregivers.

There are key questions to answer related to rear-facing car seats.

Display PPT 8-24 and 8-25.

[INSTRUCTOR NOTE]

[Review the key questions related to rear-facing car seats.]

Let's review what we learned in Module 8 through a discussion of best practices. Remember that caregiver choices are issues that may not have a clear answer on the safest way to transport a child. Caregivers will then have to decide among the options you provide.

1. Take a few minutes to respond to the questions to prepare for conversations you will have with caregivers about rear-facing car seats.
2. Write down responses in your TG.

[INSTRUCTOR NOTE]

[Give participants a few minutes to answer the questions. Debrief the questions as a large group.]

1. I have two children. Which child should go in the middle of the back seat?

   Answer: The caregiver must decide. The caregiver may not want the children sitting too close together and may place both children in the outboard positions with no one in the middle. The vehicle may not be able to handle two child safety seats next to each other.

2. Can I leave the handle up and dangle toys from the car seat to keep my child happy?

   Answer: Check the car seat instructions. Some car seat manufacturers may require keeping the handle in the "down" position. Check instructions about adding non-regulated products to the car seat. If the toys are manufacturer approved, they are safe to use.

3. Should I use the lower anchors or the seat belt? Which is safer?

   Answer: Both installation systems can provide safety. The choice should depend on the particular car seat available for installation and the design of the seat belt system in the vehicle. Which car seat system does the caregiver feel more comfortable using? Installing the car seat with more than one system might put stress on the car seat in a crash and may hurt its performance.

4. Should I use a tether on my rear-facing convertible seat?

   Answer: A rear-facing car seat should never be tethered unless recommended by the manufacturer.

5. I want to see my child. When can I turn him around?

   Answer: NHTSA (and the AAP) recommends that a child should remain in rear-facing car seats **AS LONG AS POSSIBLE**. The child should remain in a rear-facing car seat until he or she reaches the top height or weight limit allowed by the car seat manufacturer.

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6. Rear-Facing Car Seat Errors and Consequences

Reference TG page 8-15.

[INSTRUCTOR NOTE]

[This progress check can be facilitated as a small group or pairs activity.]

Conduct progress check.

Let's apply what you have learned about children in rear-facing car seats.

1. Examine each photograph to determine if the rear-facing car seat is fitted properly.

2. If not fitted properly, identify the error along with the consequences for the child.

[INSTRUCTOR NOTE]

[Give participants a couple minutes to identify the error in each photograph.

Display the photographs as you debrief the progress check. As you display each photograph, ask participants to identify the error and what they think the consequences might be for the child.

Make the following points if they do not come up in the discussion. Encourage participants to write down the correct answers in their TGs.]

Display PPT 8-26.

Debrief the progress check.

Photograph #1

Answer:

- Error: The child is forward-facing and should be rear-facing, the retainer clip is too low and should be at armpit level, and the harnesses are too high.

- Consequences: Infants must be rear-facing due to their fragile heads, necks, and spines. In a crash, a rear-facing seat helps protect the head, neck, and spine. With a retainer clip that is too low, the child can come out of the harness or the hard, plastic retainer clip can cause internal damage. Harnesses that are too high on a rear-facing seat can cause the child to come up and out of the seat.

Display PPT 8-27.

Photograph #2

Answer:

- Error: The seat belt is not tight and harness is routed incorrectly and is too high.

- Consequences: If the seat belt is too loose, the car seat could have too much movement and more crash forces. If the harness is too high for rear-facing, there can be extra slack in the harness and it might not hold the child correctly. Additional crash forces could be transferred to the body.

Display PPT 8-28.

Photograph #3

Answer:

- Error: A locking clip is being incorrectly used on a lower anchor connector.

- Consequences: The car seat was not crash tested this way and this practice does not follow manufacturer instructions. We do not know what will happen.

[INSTRUCTOR NOTE]

[Remind participants how a locking clip is used – to lock the belt system instead before a crash happens. It locks the belt system into a fixed length at the lap belt so the car seat is in the correct position. Lower anchors are designed to lock the car seat instead of the seat belt system so a locking clip is not needed.]

Reference TG page 8-16.

Display PPT 8-29.

Photograph #4

Answer:

- Error: There are non-regulated harness covers. The harnesses appear to be loose and too high on the infant.

- Consequences: Adding extra padding to car seats or harnesses not tested with the seat can cause it to not perform in a crash. The car seat can also prevent the retainer clip from being positioned properly.

[INSTRUCTOR NOTE]

[Remind participants that retainer clips are used to pre-position the harness over the child's shoulders prior to the crash, keeping the harness in the correct position.]

Display PPT 8-30.

Photograph #5

Answer:

- Error: The child is bundled up, adding bulk under the harness, the harnesses are loose, and the retainer clip is too low.

- Consequences. The harnesses may appear snug when putting the child in the car seat, but the excessive padding can compress during a crash causing the harness to loosen and allowing the child to be ejected. Loose harnesses and a low retainer clip can result in more movement and higher crash forces. The child could come out of the car seat.

7. Progress Check and Summary

Reference TG page 8-17.

Conduct progress check.

Let's review what we learned in Module 8 through a final progress check. Write down correct responses in your TG.

1. How do you determine which harness slot or slots may be used for a rear-facing child?

   Answer: Harness straps are generally placed at or below a child's shoulders unless manufacturer instructions state otherwise.

2. What factors do you check to be sure a child is properly secured with a rear-facing car seat?

   Answer: The child must meet the height and weight requirements of the car seat. The car seat must be reclined according to the manufacturer instructions. Harness straps must be at or below the child's shoulders unless otherwise stated by the manufacturer with the retainer clip at armpit level. Harness straps should be snug.

3. What are the two places where you will find accurate information regarding correct seat belt placement?

   Answer: Locate the belt path arrow or label on the car seat for correct belt path use. Follow the car seat manufacturer instructions.

4. How do you test the tightness of a rear-facing car seat?

   Answer: To test for tightness, grip the car seat at the belt path and pull on the car seat. There should be no more than 1 inch of side-to-side or forward movement at the belt path.

What To Do	Talking Points • Activity Directions & Summaries
[INSTRUCTOR NOTE]	[Ask for two volunteers to install a rear-facing car seat. Have the pair explain what they are doing during the installation. The pair can ask for assistance from other participants if needed.]
 Ask for questions.	***Q. What remaining questions do you have about rear-facing car seats?***
 Conclude module.	We've covered the types of rear-facing car seats and how to correctly select, direct, locate, install, and harness them. Now let's learn about forward-facing car seats and apply the same steps.

Quiz #2 on Modules 6 to 8

INTRODUCTION

Quiz #2 addresses knowledge taught in Modules 6 to 8.

Time for Completion

The time limit for Quiz #2 is 30 minutes followed by a 15-minute class review.

ADMINISTRATION GUIDELINES

1. Have a quiz reading room ready. Offer to read the quiz to participants, encouraging them to take advantage of the option. This is not just for participants where English is not their primary language. Adult learners may score better having the quiz read to them while they read it themselves.
2. Review the instructions for Quiz #2 with the class prior to conducting it (below).
3. Collect the answer sheets and immediately score them in a private area. Do not announce scores or share them with any other participant.
4. The scoring Instructor must write the correct answer next to any incorrect answer in blue or red ink — **never pencil.**
5. Participants may keep their quizzes when they turn in their answer sheets for reference during the review. Collect all quizzes immediately following the review.
6. Instruct participants to clear their desks of writing materials prior to the review to prevent the copying of answer keys.
7. Review the correct answers for questions participants marked incorrectly.
8. In cases where a second version of a quiz is used, read both the questions being reviewed as well as the answer since the order of the questions and/or the answers differ between the two versions of each quiz.

PARTICIPANT INSTRUCTIONS

1. You have **30 minutes** to complete and turn in this quiz. Answers will be reviewed in class after the Instructors have scored all quizzes.
2. Review each question and write the correct answer on the answer sheet provided.
   - Remember to mark all answers on the answer sheet. We can only accept answers written on the answer sheet.
   - Each question is worth **2 points** with a total of **30 possible points**.
3. We encourage you to use your Technician Guide as a resource.
4. Let an instructor know if you would like the test read to you. Many adult learners benefit from having quizzes read to them.