ENA Topic Brief

Child Vehicle Restraint Systems (Safety Seats): When to Reuse and When to Dispose

Purpose
Motor vehicle collisions continue to be a major cause of pediatric injury resulting in the need for emergency care across the nation, and remain the leading cause of death in children. Emergency nurses can play an integral advocacy role by knowing state child safety seat guidelines and participating in local injury prevention programs to increase awareness about child vehicle restraint systems. The purpose of this topic brief is to provide current guidelines and information on the reuse and disposal of child safety seats. This is vital information when discharging families following a motor vehicle collision involving a child restrained in a vehicle safety device.

Overview
All 50 states now have laws requiring the use of child restraint systems in motor vehicles, in most cases for children aged 5 years or less, although several states have raised the requirement to require child restraints for children up to 8 years of age.1

The majority of these local, state, national, and international initiatives focus on the importance of proper installation and use of a child safety restraint system. Little information about their reuse or safe disposal is available to caregivers and healthcare providers.3 Increasing awareness of established guidelines by including material covering state laws and recommendations as part of routine discharge instruction will allow emergency nurses to provide more complete information to patients and their families.

Reuse of Child Safety Seats
While most car seat manufacturers recommend replacement of child safety seats after a motor vehicle collision, the National Highway Traffic Safety Administration (NHTSA) has developed a position statement to assist caregivers and healthcare providers in determining when it is safe to reuse child safety seats. This statement is based on research by the Insurance Institute for Highway Safety (IIHS) and the Insurance Corporation of British Columbia. These studies found child safety seats can withstand minor collision impacts with no documented degradation in subsequent performance and were deemed to be in compliance with standards for use.6

Key Information

- Motor vehicle collisions are the leading cause of death in children.1
- Child restraints reduce the likelihood of a fatal collision by approximately 70% for infants and between 54% and 80% for young children.2,3
- All states have child passenger restraint laws requiring car seat or booster seat use for children aged 5 and under.1
- Information regarding safety seat reuse and proper disposal is not readily available to caregivers.
- Only 41% of pediatric emergency physicians could list the guidelines for car safety seat replacement.4
- Each year, more than 130,000 children younger than 13 are treated in U.S. emergency departments for injuries related to motor vehicle collisions.
- There are significant opportunities for emergency departments to educate parents on the benefits of child safety seats5 and their safe reuse and disposal.
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NHTSA Position: Child Restraint Reuse after Minor Collisions

NHTSA recommends that child safety seats do not automatically need to be replaced following a minor collision. Minor collisions are those that meet ALL of the following criteria:

- The vehicle was able to be driven away from the collision site;
- The vehicle door nearest the safety seat was undamaged;
- There were no injuries to any of the vehicle occupants;
- The air bags (if present) did not deploy; AND
- There is no visible damage to the safety seat.

NHTSA Position: Child Restraint Reuse after Moderate/Severe Collisions

NHTSA recommends that child safety seats be replaced following a moderate or severe collision in order to ensure a continued high level of crash protection for child passengers. Moderate or severe collisions are those which fail to meet some or all of the above criteria for a minor collision. Following these guidelines will ensure that potentially damaged child safety seats are replaced appropriately and that seats that are still safe to use can remain in use.

Disposal of Child Safety Seats Following Motor Vehicle Collision

Appropriate disposal of damaged or expired child safety seats should make the seat unusable until it is destroyed or recycled. Current practice for disposal involves cutting, removing, and discarding the safety webbing, buckles, and cushioning separately from the seat itself. Ideally, child safety seats ready for recycling are clearly marked as unusable and collected at a secure centralized location to limit the likelihood they will be used again by being resold or given away. Emergency nurses are in a position to make an impact by working with local disposal companies, to assure child safety seats are destroyed and the plastic recycled.

Conclusion

Understanding these recommendations, emergency nurses can participate in the development of injury-prevention programs, child safety seat disposal guidelines, loaner programs, and other low-cost purchase programs to promote information on proper installation, use, and reuse of child safety seats. Facilities across the globe have partnered with community organizations, hospital foundations, private donors, and secured grant funding to successfully develop these programs in their communities.

Tools and Resources


Definitions of Terms

Collision: A road vehicle incident, in which the first harmful event is the impact of a vehicle in-transport with another vehicle, other property, or pedestrians.

NHTSA: National Highway Traffic Safety Administration that was established by the Highway Safety Act of 1970 and is dedicated to achieving the highest standards of excellence in motor vehicle and highway safety. The organization works daily to help prevent crashes and their attendant costs, both human and financial.

Child Vehicle Restraint Devices: Specially designed seats, which vary according to a child’s age and weight, to protect children from injury or death during a motor vehicle collision.

Child Safety Seat Guidelines: Recommendations based upon a child’s age and/or weight for the type and positioning of a child safety seat in a motor vehicle.

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References


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