



Carseat Safety, Injury, Violence & Poison Prevention

Parents Are Misusing Car Seats - Does It Matter?

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This study confirms and extends our understanding of how care seats are used, with virtually all new parents making errors in utilizing car safety seats (CSSs). However, this isn't the outcome of greatest interest to families of young children.

Source: Hoffman BD, Gallardo AR, Carlson KF. Unsafe from the start: serious misuse of car safety seats at newborn discharge. [J Pediatr. 2016;171:48-54](#); doi:10.1016/j.jpeds.2015.11.047. See [AAP Grand Rounds commentary by Dr. Allison Black](#) (subscription required).

PICO Question: Among families with healthy newborn infants, how prevalent is car safety seat misuse, and what variables are associated with car safety seat misuse?

Question type: Descriptive

Study design: Prospective observational

This study of 291 mother-newborn infant pairs found that 95% of CSSs were misused when assessed at the time of newborn hospital discharge. This included "serious misuse" in 91%, defined by the National Highway Traffic Safety Administration as harness retainer clip not used or placed incorrectly, errors in lower anchor use (improper paths/slots, loose webbing, unbuckled), or incorrect CSS recline angle. "Critical misuse," presumably a more serious problem, occurred in 91%. Misuse was associated with mothers of color, non-English language, Medicaid insurance, and lower educational level. Clearly something is very wrong if the misuse rate is this high at the time of newborn discharge.

However, one needs to realize that errors noted on this "CSS exam" of new mothers isn't really the big picture. I scoured the article to try to understand how dangerous these errors could be. Obviously if someone places an infant in a car seat that is totally unsecured in the car, that situation would be very likely to result in injury if the car crashed. But what about those errors in placement of the harness retainer clip? How likely is that to truly threaten an infant's safety? The CSS exam score is a surrogate marker for what we really care about, which is how likely the infant will be injured in a motor vehicle accident. This latter concept has been termed a POEM, or [Patient Oriented Evidence that Matters](#). The authors of the CSS study mention that we lack information on how different types of CSS misuse might affect risk of injury. File that under the "needs more study" category.

The authors bring up another important point from this study. If car seats are so difficult to use correctly, doesn't that represent a major design flaw in the product? We need help from our engineering colleagues to come up with a redesign that makes it easier for parents to use car seats effectively.

Further Reading

- [Increased Booster Seat Use after ED Intervention](#)
- [Seat Belt Sign Indicates Pediatric Intra-abdominal Injury](#)
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