

**Before the Council of the District of Columbia
Committee on Transportation and the Environment
B22-0661 the Rear-Facing Car Seat Safety Amendment Act of 2018
July 6, 2018
Sadiqa Kendi, M.D., FAAP
Children's National Health System, Emergency Department
Medical Director, Safe Kids Worldwide**

Madame Chairwoman and distinguished members of the Transportation and Environment Subcommittee. Thank you for the opportunity to speak in favor of B22-0661. This legislation will prevent severe injuries and death to our kids.

Let me tell you about myself. I am an attending pediatrician in the Emergency Department of Children's National Health System. I am in the process of forming a Safety Center at Children's National, and I work with Safe Kids DC to prevent injuries in District of Columbia children. I am a parent of a 2 year and 3-month old girl who is still in a rear-facing car seat. She will be rear-facing until her seat's limit of 40 pounds or 40 inches.

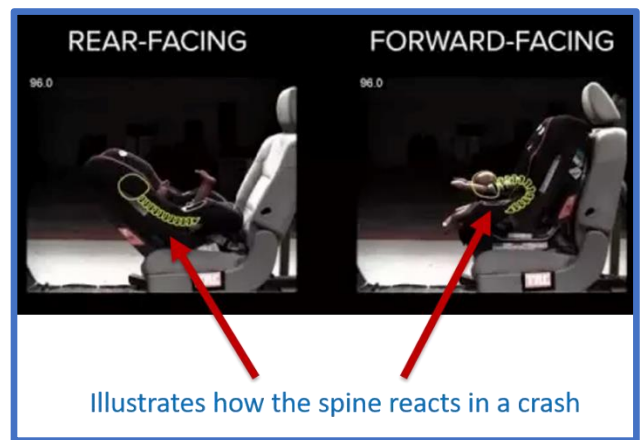
I speak today in honor of my sister, Nairobi Verdell Tucker, who was killed in a car crash in which she was inappropriately restrained. She was just a few months older than my daughter is now.

Working in an urban hospital emergency department, you don't have to look far to know the compelling impact of car crashes on our children. We see it every day, and too often, the crashes end in tragedy. The data are clear: motor vehicle crashes are the leading cause of death for children ages 1-14 years.¹ What compounds the intensity of the tragedies is the fact that they are preventable, simply by using a car seat, correctly installed and used every time. When installed and used correctly, child safety seats decrease the risk of a fatal injury by 71 percent among infants, 54 percent among toddlers and 45 percent among children ages 4 to 8.^{2 3}

Today, we are discussing why it is so important to place a child in a rear-facing car seat for as long as possible. It comes down to physics and physiology.

First, there's the architecture of an infant and toddler's body, their anatomical and physiological make-up. An infant is born with a larger head compared to the rest of their body, and at the same time, their necks and spines are still developing and therefore at increased risk in a crash.

Allow me to quote a scenario from a colleague who is a child passenger safety leader with the American Academy of Pediatrics, Dr. Benjamin Hoffman. He asks you to think about a 10-pound bowling ball which is dropped from a third story window. It hits the ground with 330 pounds of momentum. Would anyone here dare try to catch that bowling ball? He predicts, and I agree, that no one would be willing to catch that bowling ball, because the energy of the ball would be transferred to the person catching it, resulting in severe



injuries.” Then, he asks you to replace the bowling ball with a 10-pound baby travelling in a car at 30 MPH. In a car crash, that 10-pound infant can produce 450 pounds of momentum.⁴

Serious injury is prevented by placing that child in a rear facing car seat, where the energy from the crash will be tempered by the seat in three very important ways:

1. The crash forces are spread over parts of the body that can support it, specifically the entire backside of the child.
2. The most vulnerable parts of a child’s body—the head, neck and spinal cord—are more precisely protected. This effect holds with all types of crashes, be they forward, rear-end, side impactor, or a roll-over.
3. The car safety seat itself absorbs much of the crash forces, prolonging the period of deceleration, thus decreasing the amount of force transmitted to the child’s body.

People ask, do we need a law to do this? I believe the answer is “yes” and thus the work of the members introducing B22-0661 is indispensable. Parents look to the laws of their states to align their behavior. Changes in car seat laws create a new wave of awareness. In addition, conservative estimates from NHTSA tells us that an estimated 46 percent of car seats are installed incorrectly.⁵ There are other studies which show that the car seat misuse rate is larger. One study reported that serious car safety seat misuse occurred for 91% of all infants.⁶ In a crash, a child who is unrestrained is at serious risk. According to the U.S. Centers for Disease Control and Prevention, 34% of child occupant deaths involved children entirely unrestrained.⁷

In the U.S., we have a 40-year tradition of passing state child passenger safety laws since the very first was passed in 1978 in Tennessee.⁸ We have been updating the laws and guidelines based on science. If you look at the pace of laws passed, you see the extraordinary reduction in child motor vehicle fatalities. Between 1994 and 2016, there has been a 51 percent decrease in the number of MVC occupant deaths and a 55 percent reduction in the fatality rate.¹

Thus far, eleven states have updated their laws to be consistent with the new guideline set by the American Academy of Pediatrics in 2011.⁹ As an emergency department pediatrician practicing in the District of Columbia, I will be proud to see us become number 12. Thank you for your time, and for your commitment to the children of DC.

Contact: Anthony Green, Director, Public Policy, Safe Kids Worldwide, 202.662.0606, agreen@safekids.org

¹ National Highway Traffic Safety Administration, NCSA Data Resource Website. Fatality Analysis Reporting System Encyclopedia (FARS). Washington, D.C. Accessed: March 15, 2018. Available from: <https://www.nhtsa.gov/researchdata/fatality-analysis-reporting-system-fars> [Search criteria: Person type 1,2,9; Injury severity 4; Ages 0-19 years; Years 1994-2016]

-
- ² Kahane CJ. Lives saved by vehicle safety technologies and associated Federal Motor Vehicle Safety Standards (FMVSS), 1960 to 2012—Passenger cars and LTVs—With review of 26 FMVSS and the effectiveness of their associated safety technologies in reducing fatalities, injuries, and crashes. January 2015. Report No.:DOT HS 812 069. Washington, D.C.: National Highway Traffic Safety Administration. Accessed May 2, 2017. Available from: <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812069>.
- ³ Arbogast, K. B., Jermakian, J. S., Kallan, M. J., & Durbin, D. R. (2009). Effectiveness in belt positioning booster seats: An updated assessment. *Pediatrics*, 124(5). 1281-1286. Available at <https://www.ncbi.nlm.nih.gov/pubmed/19841126>
- ⁴ Benjamin Hoffman, MD FAAP CPST-1, Testimony to Oregon House Committee on Early Childhood and Family, support of HB2643, rear-facing car seat legislation, February 11, 2017. Available at <https://olis.leg.state.or.us/liz/2017R1/Downloads/CommitteeMeetingDocument/98854>
- ⁵ Greenwell, N. K. (2015). Results of the National Child Restraint Use Special Study. *National Highway Traffic Safety Administration*. Available at <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812142>
- ⁶ Hoffman B, Gallardo A, Carlson K. "Unsafe from the Start: Serious Misuse of Car Safety Seats at Newborn Discharge." *The Journal of Pediatrics*, 2015; DOI: [10.1016/j.jpeds.2015.11.047](https://doi.org/10.1016/j.jpeds.2015.11.047) Available at <https://www.sciencedaily.com/releases/2015/12/151218084323.htm>
- ⁷ Morbidity and Mortality Report, Centers for Disease Control and Prevention, September 2016. Available at <https://www.cdc.gov/mmwr/volumes/65/wr/mm6536a6.htm>.
- ⁸ Stewart, D. D. (2009). More than Forty Years of Progress for Child Passenger Protection. *Safe Ride News*. Available at <http://saferidenews.com/srndnn/LinkClick.aspx?fileticket=NIPfcugNL1U%3D&tabid=375>
- ⁹ American Academy of Pediatrics. (2011). Technical Report—Child Passenger Safety. *Pediatrics*. Available at http://pediatrics.aappublications.org/content/pediatrics/early/2011/03/21/peds.2011-0215.full.pdf?panels_ajax_tab_tab=jnl_aap_top_topics&panels_ajax_tab_trigger=