Motor vehicle occupant protection: have we become too complacent?

Recently, one of the trauma surgeons at the hospital mentioned to me the difficulty he and his wife were having in finding a child seat restraint for their newborn which would fit in their car. He had searched widely for information, actually took a class on child occupant safety, and still was puzzled about how to get the device to fit correctly. It struck me that if this surgeon, who also has a master's degree in public health, and his pediatrician wife were having such difficulty protecting their child in a motor vehicle, imagine the difficulty that the average parent has in properly using a car seat. In the US, there are 100 models of car seats and 900 different models of cars on the road in which to put them. No wonder the average consumer is frustrated!

Unfortunately, I believe we have become complacent about motor vehicle occupant safety for children and adolescents. Twenty years ago, occupant safety for children was one of the few successful interventions to prevent injuries. Our attention today has partly shifted to other problems and their solutions: bike helmets, smoke detectors, pool fencing, and tap water temperature reduction. However, throughout the world, more children and adolescents die from motor vehicle occupant injuries than from any other injury cause. In this context, there are a number of issues that I believe warrant our attention.

Child occupant restraint devices

In many developed countries, use of child occupant restraint devices for infants and toddlers is common. However, misuse is also common—in some surveys as many as 80% of devices are not used correctly. This week US President Bill Clinton announced that, by 1999, there will be a universal system in US cars to easily and uniformly attach child restraint devices to the back seat of cars. This is a large step forward, although it is unclear what the implications will be for the European and Asian market. Given the time lag to implementation and the slow turnover of cars, it will be more than a decade before most children are protected by such action. We, therefore, must renew our efforts to promote proper use of child restraint devices through a combination of legislation and new, innovative, educational programs.

Beyond the car seat

The protection of infants and young children in cars is relatively good compared to the current state of affairs for older, preschool, and school aged children. Children graduating out of car seats cannot be safely restrained with lap belts or lap-shoulder harnesses. Once or twice a month, a child is admitted to our trauma center with seat belt related injuries to the spine and/or abdomen. Lap belts alone allow the child to flex forward injuring the spine and place the full force of the deceleration on the belt and abdomen. Shoulder harnesses simply don’t fit children under 8 to 10 years, and many parents often unsafely place the shoulder harness behind the child. Young children should be placed in booster seats that will allow them to use the shoulder strap; older children can use shoulder strap positioning devices to bring the strap down below the child’s neck. Few parents, however, use these devices.

Airbags

For many years, I spoke about airbags as an example of an effective passive prevention strategy. Reality has now hit. In the US, over 30 children have been killed by passenger side airbags. Data from the National Highway Traffic Safety Administration clearly show that airbags kill more children under the age of 12 riding in the front seat than they save. Manufacturers are scrambling to get regulations changed and allow airbags to be disconnected, while they try to develop devices that explode with less force yet still saving lives. As child safety advocates, we must make our voice heard, that is, that testing of these new devices include infant and child-sized dummies. We must also work with parents to educate them that the rear seat is the safest place for children—even if it is equipped only with lap belts.

It’s clear to me that we need to get busy in a number of different arenas. New, as well as perhaps some of the old, approaches to increasing proper use of child occupant restraints, booster seats, and seat belts must be developed, implemented, evaluated, and disseminated. We should advocate for legislation to insure that all children are restrained. Finally, we need to advocate that manufacturers and regulators consider the safety of children as well as adults traveling in cars. The frustrating problem of incompatibility between seat belts and car seats, the lack of shoulder harnesses that are adjustable to a child’s height and the lethal nature of airbags for children under age 13, all reflect the low priority children receive by the automotive industry. Children neither vote nor buy cars. If we don’t advocate for them, who will?

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