Important Child Occupant Safety Trends, Indiana Between 2005 and 2010

Joseph O’Neil, MD, MPH, FAAP
Marilyn J. Bull, MD, FAAP
Department of Pediatrics, Riley Hospital for Children at Indiana University Health
Judith Talty
Automotive Safety Program, Riley Hospital for Children at Indiana University Health
James E. Slaven, MS
Department of Biostatistics, Indiana University School of Medicine

ABSTRACT – This study reviews trends, rear facing, top tether use, and seating position for children younger than 13y among motor vehicle passengers in Indiana. This is an observational, cross-sectional survey of drivers transporting children 15 years and younger and drivers collected at 25 convenience locations randomly selected in Indiana during summers 2005 through 2010. Observations were conducted by Certified Child Passenger Safety Technicians (CPST). As the driver completed a written survey collecting demographic data on the driver and children, the CPST recorded the vehicle seating location, the type of restraint, direction the car safety seat (CSS) was facing, and use of the CSS harness or safety belt as appropriate. Data was analyzed for infants younger than twelve months, children in forward facing CSS, and children < 13y. Between 2005 and 2010, 514 infants (age < 12m) were observed in motor vehicles. On average 83.5% (SD 4.8%) of the infants were rear facing. The percent of infants rear facing was 75.5% during 2005 and rose to 88.9% during 2010. Of the 442 vehicles observed with a forward facing car seat, 58% (SD 16.5%) had the top tether attached. In our sample, more than 88.7% (SD 0.8%) children < 13y were seated in a rear seat vehicle position. Driver variables affecting occupant protection are discussed. This information can be used by primary care providers and child passenger safety technicians and other child passenger safety advocates to develop counseling points and educational campaigns.