

## SPLINTERS & FRAGMENTS

### Is safe storage of firearms possible?

Safe storage of guns is something of a contradiction in terms, given the evidence that their mere presence in a home increases the risk of being used for suicide by a family member (*JAMA* 1991;266:2989–95). This study of all US states, including 12 which had firearms storage laws during at least one year of the 16 year study period, sought to determine whether legal requirements for storage were associated with reduced firearms mortality among children younger than 15 years (*JAMA* 1997;278:1084–6). Unintentional shooting deaths, the primary objective of the laws, were 23% lower than expected in the 12 states, and modest but non-significant declines were also noted in homicide and suicide deaths. The authors estimate that 39 deaths were prevented in the states with safe storage laws and that 216 deaths could have been prevented had similar laws been adopted nationwide.

### Is safe motor vehicle transport possible?

Four items focus on different aspects of motor vehicle travel. A Scottish study reveals a new finding: that drivers with more than five demerit points on their licences were five times more likely ( $p < 0.001$ ) to have had a motor vehicle crash in which a child was injured than drivers with unblemished driver records (*Archives of Disease in Childhood* 1997;77:335–8). Other factors associated with child passenger injury were travelling between midday and 6 am, length of journey and, curiously, the driver being in full time employment (each  $p < 0.01$ ). Two articles deal with different aspects of injuries from airbags. Although most front seat passengers are safer in crashes where airbags are fitted, more children are being killed than are being protected, with a 34% increased risk of death from frontal crashes, even those of low impact (*JAMA* 1997;278:1437–9). Among other recommendations, the authors counsel that child passengers under 10 years of age should travel in the back seat, a recommendation reinforced by the third article (*JAMA* 1997;278:1418–25). On the basis of increasing cost effectiveness of front passenger airbags, a mandatory policy that saves ten adult lives for each child that is killed may need re-viewing. Part of that review could include examination of the Canadian, European and Australian systems of restraint fitting with top tether straps referred to in the final item (*Pediatrics in Review* 1997;18:413–22) with a view to international harmonisation of standards. This



excellent review of child passenger protection details aspects of development related to car seats, restraints and built-in protection, standards for restraint systems, US child restraint laws, case studies illustrating improper use and an algorithm for selection of appropriate restraints, including those for children with special needs (see picture of child with congenital dysplasia of the hip in modified car restraint).

### Determination of injury risk

A Tennessee study differentiated children into “high risk” and “low risk” groups, based on maternal education, age,

and number of children in the family, and applied the criteria to 1259 children aged 0–4 years who died of injuries between 1978 and 1995. Prior research had shown children in the highest risk groups (28% of the population) accounted for almost half of the deaths with rates of 48.9 per 100 000 child years *v* 16.8 deaths/100 000 for low risk groups. Children in both low risk and high risk groups experienced modest declines in rates over time, attributable to the decline in passenger deaths. Apart from a decline in motor vehicle deaths, however, there were no reductions for any type of injury for high risk children over time. Instead, an alarming increase in the 1992–95 period from 45.9/100 000 to 64.0/100 000 from asphyxiation and intentional injuries further increased the disparity (*Archives of Pediatrics and Adolescent Medicine* 1997;151:1216–9).

### Flame burns

The United States Consumer Product Safety Commission permitted a relaxation in the strict standards for children’s nightwear in 1997—sleepwear for infants under 9 months of age and close fitting nightwear for sizes 0–14 are no longer required to meet the flammability standard, nor are warning labels required. Fewer parents are choosing traditional nightwear and children are wearing loose fitting cotton T-shirts as nightwear. The concern is that the number of children who are fatally burned wearing these garments is three times the number burned wearing traditional nightwear, and the authors believe that parents are unaware of the impact of the regulatory changes (*Journal of Burn Care and Rehabilitation* 1997;18:469–74). Another risk situation for children occurs during outdoor activities involving cooking and camping when children are burned falling into fire pits, throwing flammable substances onto fires, placing their hands on hot objects near fires, walking or falling into extinguished embers, and upsetting insect repellent candles and lanterns inside tents. The one fatality in this Boston study was of a 2 year old caught in a tent fire. The Shriners Burns Institute group acted by preparing warning fliers for distribution to campers in national and state parks (*Journal of Burn Care and Rehabilitation* 1997;18:369–71).

### Adolescents are different, but why?

We all know that adolescents adopt risk taking behaviours as part of normal development but how far can risk taking go before it becomes unacceptable? One study of over 1000 adolescents aged 14–18 years found a significant relationship between risk taking and self reported injury; the strongest predictor for injury was having a friend injured the same way (*Journal of Pediatric Psychology* 1997;22:513–31). The US national longitudinal study on adolescent health found that school and family social settings are most critical in adolescence, and that protective factors include adolescents’ perceptions of caring by and connectedness to others. If parents provide homes without easy access to guns, alcohol, tobacco and illicit substances, give their adolescents time (both to monitor activities and to engender a sense of belonging), adolescents are less likely to engage in self harming behaviours such as suicide, interpersonal violence, and substance abuse. Fatigue and excessive income from working more than 20 hours per week can impact on adolescents’ levels of emotional distress, substance use and sexual experimentation (*JAMA* 1997;278:823–32).

JAN SHIELD

Royal Children’s Hospital Safety Centre, Melbourne