

REGIONAL REPORTS

Child safety on farms in Northern Ireland

Farm related accidents are the third greatest cause of child accident fatalities in Northern Ireland after road traffic accidents and house fires, which is not surprising given the rural nature of the province. The Rural Development Council for Northern Ireland provided the Child Accident Prevention Trust with funding to examine some issues regarding children's safety on farms. Through focus groups and a series of questionnaires with children (aged 10–18 years), their parents and some professional workers, we built up a fairly comprehensive picture of hazards in the rural environment.

Aspects of local farms which parents felt posed particular problems included open slurry pits and lagoons, keys being left in tractors, heavy goods vehicles in farmyards which have poor view at ground level, children's access to machinery, silo pits, and derelict buildings. However, for all the parents, general road safety issues in the countryside caused more concern than the possibility of an injury on their own farm.

Only 7.8% of the children (33 out of 423) recalled having had an accident on the farm with half of these children resident on farms. Although injuries recalled were slightly higher in the girls than to boys (54% and 42% respectively), boys were much more likely to have an injury which involved the use of tractors and machinery. Children consistently mentioned heavy machinery, bulls, slurry pits, and lagoons as the main causes of farm injuries, in that order of priority. More than half (59%) thought that farm accidents were more likely than accidents in other occupations. Two reasons why they felt that accidents happen to young people are because "they mess about and try to be cool" or "being left to do something alone". The children chose the use of TV as the priority method of preventing farm accidents, followed closely by classes in school time, and parents setting good examples.

A comprehensive checklist was produced as part of the study which farmer's wives felt would be a new and useful way to educate farming families about potential hazards on their farms. This will require modification in order to make it more suitable for specific types of farming, as a generic checklist will have items not appropriate to all farms.

An overwhelming majority (94%) of the children who did not live on farms had visited a farm, often staying over with school friends. Also, 26% of the boys who did not live on farms often worked on them. A recommendation of the report was the development of school based curriculum materials to include all children in the educational process, and not just those living on farms.

There was great discrepancy between children, parents, and professional workers with regard to the appropriate age at which children could be allowed to do a range of tasks. For example, in the task of cleaning cowsheds, boys said 9 years, girls 11, fathers 11, mothers 12, and professionals 14. This aspect of the study raises the question "Are

professional workers deliberately advising a high age in order to cover themselves from any potential liability, rather than seeking out sound information on the elements of risk in certain tasks?" One parent stated that we need to "educate adults not to allow children to do jobs which are really too difficult". As children will continue to undertake tasks on the family farm, further work in risk assessment is needed if we are to be able to advise on appropriateness of tasks.

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Major study on cost of Australian injury

The first detailed study on the cost of injury within Australia has been carried out by researchers at the Monash University Accident Research Centre. The study, supported by the Department of Health, was made for the State of Victoria and was directed at broadly describing the epidemiology of injury at all levels of severity and to provide an estimate of the total lifetime cost of injury to the Victorian community for injury cases occurring in 1993/94.

Broadly, the implication of the research is that the cost of injury to the state was equivalent to about half the state health budget.

While methodological choices have some impact on the results and the detail available is constrained by the level at which the analysis was carried out, nevertheless the report has interest for those with a specific interest in child injury.

For children under 5 years the direct cost of treatment was found to constitute 60% of the lifetime cost of injury, the morbidity cost 30%, and the mortality cost 11% while for children aged 5 to 14 years they were 46%, 45%, and 10%.

While the direct cost per injured child is about 20% higher less for children 5 to 14 years than for those aged under 5, the morbidity and mortality costs are substantially higher (55% and 75%). Because the differentials in cost are significant, especially in relation to death, they outweigh the fact that the rate of injury is higher for the younger age group and the total cost of injury for the older age group is double that for the younger (\$160m compared with \$77m).

There is also a gender difference in costs. Girls have a slightly higher average cost of death (10%) than boys, the average morbidity costs are broadly similar, and boys have a slightly higher average costs of direct treatment than girls. The slightly higher average cost of treating boys for injury combined with a substantially higher rate of injury result in the total cost of injury for boys being 40% above that for girls in children under 5 and 66% higher in children aged 5 to 14 years.

For specific causes of injury and death the top five most costly among children under 5 were: falls (\$22m); poisoning (\$12m); fire, flames, and burns (\$8m); hit, struck, or crush injury (\$7m); and motor vehicle traffic (\$4m). For children aged 5 to 14 years the top five most costly causes of injury and death were: falls (\$66m); hit, struck, crushed (\$18m); motor vehicle traffic (\$18m); other transport (\$17m); and cutting, piercing injury (\$8m).

The discussion on the implications of the distribution of costs, particularly in priorities for prevention and the detailed tables concerning the incidence and pattern of injury and of costs are likely to be of wide interest.

The Cost of Injury to Victoria by Wendy Watson and Joan Ozanne-Smith, Report No 124, Monash University Accident Research Centre, Wellington Road Clayton, Victoria 3168, Australia (fax: +61 3 9905 4363).

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LETTER TO THE EDITOR

A review of risk factors for child pedestrian injuries: are they modifiable?

EDITOR,—My attention has been drawn to above article by Wazana *et al.*¹ I was disappointed to find that only the MEDLINE database had been searched for what was effectively an area of transport related accident research. Though I note that the authors acknowledged this limitation and sought to augment their search by searching through the references of retrieved articles, I believe many relevant articles were probably not retrieved that would have been had one of the most relevant databases for the subject area, namely the International Road Research Documentation (IRRD) database been consulted in addition to MEDLINE. A search by one of the Transport Research Laboratory (TRL) information scientists retrieved some 140 references from a similar 10 year section of the English language part of the IRRD database. Further references in French or German could have been retrieved from the publicly available versions of IRRD (online via the STN host or as part of the SilverPlatter Transport CD-ROM).

I hope other researchers in this field will take note and utilise the massive information resource that IRRD comprises (as well as abstracts of published information, summaries of ongoing research are also included). IRRD centres throughout the world such as TRL in the UK will be pleased to assist researchers by either carrying out searches of IRRD for them or helping them to access the online or CD-ROM versions of the database.

For further information of services TRL can provide see our web site at <http://www.trl.co.uk> and for information about the online version of the IRRD database see <http://www.fiz-karlsruhe.de> or for information about the Transport CD-ROM see <http://www.silverplatter.com>

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1 Wazana A, Krueger P, Raina P, *et al.* A review of risk factors for child pedestrian injuries: are they modifiable? *Inj Prev* 1997;3:295–304.