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Accidental injury, risk-taking behaviour and social circumstances in which young people live

In 2007, the Institute of Education at the University of London published findings of a systematic review of the research evidence relating to unintentional injury, risk-taking behaviour and the social circumstances in which young people (aged 12 to 24) live. It contributes a new perspective to the evidence base on risk-taking and injury by assessing the extent to which risk-taking contributes to unintentional injury.

The overarching review question, which was answered in different ways by the different types of evidence in the review, was: What are the relationships between unintentional injury, risk-taking behaviour and the social circumstances in which young people live?

They searched fifteen electronic databases, searched ten key journals by hand, scanned reference lists, contacted key informants and organizations, and searched websites for research to include in the review. After examining the research in detail and assessing it for relevance and quality, the review's conclusions are based on 84 studies.

The research fell into four main areas: drugs, alcohol, transport and sport. This article focuses on the findings for transport and bicycle helmets.

Transport

Young 'risky' drivers were more likely to think they would have a crash, but were also less worried about this than 'safe' drivers. Some young people expressed a fatalistic view of the chances of having a collision, and some of those that had been involved in crashes stated that it had not really affected their driving behaviour. 'Risky' driving was seen as enjoyable and not considered to be the same as driving unsafely. However, different drivers had different perceptions of what a 'good driver' was, with 'safe' drivers emphasizing safety and 'unsafe' drivers emphasizing driver skills.

The presence or absence of other people in the vehicle influenced driving behaviour. Some passengers (e.g. parents) tend to reduce risky driving, whereas others (e.g. peers) might encourage more risky driving. Young men were more likely to take risks than young women. Young people stated that they judge the degree of acceptable risk depending on the situation. Young people said they were more likely to drive riskily when driving alone or late at night when the roads are quieter than during the day, and less riskily when they were responsible for others in the car. Some young people felt they 'grew out' of risky driving as they got older with more expensive cars and family responsibilities. They also said that the social expectation that they would drive riskily made it more likely that they would do so.

There is a large evidence base of systematic reviews that look at interventions designed to reduce traffic injuries. Legislation on the wearing of motorcycle helmets has been found to be effective, as has legislation and enforcement on reducing drink-driving. Raising the minimum driving age and introducing graduated licensing schemes for young people have also been shown to be effective in reducing collisions. Curfew laws, which restrict the times during which new drivers can drive, also reduce collisions. Seat belt campaigns have led to behaviour change and consequential reductions in injuries.

Interventions based on models of behaviour change to reduce drink-driving are ineffective or have a negative effect. Combining different approaches has more effect than using a single approach. Education or skills training has either negative or no effects on driver behaviour and subsequent collisions, possibly because these approaches lead to overconfidence or early licensing. The effectiveness of pedestrian education is not proven. Environmental modification

Updates, news and resources

Congratulations to Dr. Linda Carroll!

The Centre would like to congratulate Dr. Linda Carroll, an ACICR associate, on the successful completion of the Task Force on Neck Pain and its Associated Disorders. The findings are published in a special supplement of *Spine*. For more information visit www.spinejournal.com.

SIEC Alert

The latest SIEC Alert, Men and Suicide: Part II Encouraging Help-Seeking and the Promise of Social Support, has been released. SIEC Alerts are available for download on the Centre for Suicide Prevention website at www.suicideinfo.ca.

Injury Prevention in Older Drivers

The Canadian Association of Occupational Therapists has launched a National Blueprint for Injury Prevention in Older Drivers Project in an effort to prevent injury by promoting safety among older drivers. It notes that seniors are the fastest growing segment of the driving population, yet have much higher crash rates than middle-aged drivers. The year-long project is funded by the Public Health Agency of Canada. For more information go to www.caot.ca/default.asp?pageid=2190.

Accidental injury, risk-taking behaviour and social circumstances in which young people lives

(continued from page 1)

and the enforcement of speed limits may be more effective at pedestrian injury prevention.

Bicycle helmets

Studies about young peoples' views and experiences showed that they did not think that cycling-related injuries would happen to them. Cycling conditions (e.g. at night or in bad weather) affected their perceptions of risk and some young people believed that helmets were only needed for certain types of journeys. The fact that risk perceptions differed for different types of journeys did not predict the wearing of helmets, only the intention to wear one. Young people who 'could never forgive themselves' if they had an injury which a helmet could have prevented were more likely to wear one.

Young people differed in their perceptions about the protection offered by helmets, with some feeling that the head was not the part of the body most likely to be injured in a cycling incident. Beliefs about the safety offered by helmets do not necessarily predict whether a young person is likely to wear one.

Critical incidents whether to the young person or to someone known to them, were reported to change behaviour, but only in the short-term. Teenagers in one study were more likely to wear a helmet if they were engaged in more risky cycling, whereas another study came to the opposite conclusion. Most young people did not feel that wearing a helmet affected the way they cycled, though some expressed concern about the possibility that motorists would think helmeted cyclists were less vulnerable and so drive more dangerously around them.

Peers tended to be a negative influence on the wearing of cycle helmets due to concerns about being teased, particularly when first starting to wear one. Parents were often a positive influence, and some young people felt legislation would also make them more likely to wear helmets. Young people also mentioned that cheaper and more attractive helmets would make them more inviting to wear.

Education interventions through a single medium were not effective at increasing the wearing of cycle helmets, but multifaceted interventions were effective. Education interventions targeting small groups had mixed effects, with some studies reporting positive results and others finding no effect.

Acknowledging that the price of helmets can be a disincentive, particularly for disadvantaged children, some interventions which provided subsidized or free helmets did increase helmet use. There was conflicting evidence about the relative effectiveness of providing free and subsidized helmets. There is some evidence to suggest that promotional campaigns have more effect in high income areas, and also that younger children were more likely than teenagers to change their behaviour (especially girls). There is also some evidence to suggest that community-based interventions are more effective than interventions based in the school.

Most primary research on helmet wearing focused on younger children, rather than young people up to the age of 24. Strategies targeted at the older age group may therefore need to be developed and tested.

While the topic areas in this study cover most of the causes of accidental injury among young people, there is little evidence that consistently links individual risk-taking with accidental injury. This suggests that a move away from individual behavioural explanations towards a focus on structures and material resources is likely to be a much more productive approach to understanding patterns of accidental injury among young people.

Taken from: Thomas J, Kavanagh J, Tucker H, Burchett H, Tripney J, Oakley A. (2007). Accidental injury, risk-taking behaviour and the social circumstances in which young people live: a systematic review. London: EPPI-Centre, Social Science Research Unit, Institute of Education, University of London.

Available at <http://eppi.ioe.ac.uk/cms/Default.aspx?tabid=1911>.

Mark your calendars!

The Stollery Children's Hospital is pleased to announce 'C.R.A.S.H. – Critical Risk And Safe Habits', the 2nd Annual Child Health Injury Symposium on May 29, 2008. This education day, being held in conjunction with the 8th Annual Trauma Symposium on May 30, will provide continuing education for urban and rural healthcare personnel who care for the injured pediatric patient.

Using All Terrain and Motor Vehicle Injury as a platform, the education sessions will focus on assessment and management throughout the continuum from prevention to rehabilitation. The day will also feature reflections of those who have personally experienced the continuum of care as a result of a traumatic injury.

Transporting infants and children with special needs in personal vehicles

In a crash, the proper use of infant or child car seats can reduce the risk of death by 71% and the risk of injury by 67%. Like any child, infants and children with special healthcare needs must be provided with appropriate protection in vehicles. Transport Canada recently released best practices for healthcare practitioners information on issues relating to transporting infants and children with special needs in personal vehicles.

This resource should be used in consultation with families and health professionals who are very familiar with the child's condition and their physical or behavioural challenges. The guide provides information on the legislative and regulatory requirements for the safe transportation of children. It also includes a description of the types of children's

Registration: \$50 (includes continental breakfast, lunch, and refreshments)

Location: Bernard Snell Hall, University of Alberta Hospital, Edmonton

Time: Thursday, May 29, 8:00 a.m. to 4:00 p.m.

Symposium materials will be posted as they are available through Kidsafe Connection at www.capitalhealth.ca/kidsafe.

For more information contact Kathy Holgate at (780) 407-6800/(780) 407-7250 or kathy.holgate@capitalhealth.ca.

restraint systems currently available in Canada, including conventional car seats, production restraint systems for persons with special needs, and custom restraint systems for persons with special needs.

Children with special needs include infants and children with short-term and long-term physical, developmental, or severe behavioural health conditions (e.g. autism). In some cases, a conventional car seat may remain the appropriate choice of product; while in other cases, a conventional car seat could aggravate a pre-existing health condition or would not offer the best protection in a crash.

To access the full report, visit www.tc.gc.ca/roadsafety/tp/TP14772/pdf/tp14772e.pdf.

Canadian Falls Prevention Curriculum©

ACICR is pleased to announce that the Canadian Falls Prevention Curriculum© (CFPC) is now available for delivery. This curriculum is a unique initiative aimed at providing health professionals and community practitioners with proven methods of preventing falls among seniors. Using a Public Health Approach, the course examines the complex interaction of health determinants that affect the risk of falls among older

Canadians. Attending the CFPC will enable participants to create connections between community and institutional settings within their region and with the broader falls and injury prevention stakeholders locally and across Canada. Workshops are currently being planned for Edmonton and Calgary. For more information contact Lynda McPhee at lynda.mcphee@ualberta.ca.

CALENDAR

Volunteer Week

April 27 - May 3, 2008
Wild Rose Foundation
Phone: (780) 422-2247
Website: www.wildrosefoundation.ca/volunteerweek/default.aspx

2008 Western Conference on Safety: Workplace Occupational Health and Safety

May 5 & 6, 2008
Hyatt Regency
Vancouver, BC
Phone: (604) 233-1842
Email: registration@pacificsafetycenter.com
Website: www.pacificsafetycenter.com

Mental Health Mechanics: Tools for the Trade Conference

May 7 & 8, 2008
Medicine Hat College
Medicine Hat, AB
Phone: (403) 529-3844
Website: www.ser.cmha.ab.ca

17th Annual Motorcycle Awareness Ride

May 25, 2008
Deerfoot Mall
Calgary, AB
Website: www.motorcycleawarenessride.com

2nd Annual Child Health Injury Symposium

May 29, 2008
Bernard Snell Hall, University of Alberta
Edmonton, AB
Phone: (780) 407-6800 or (780) 407-7250
Website: www.capitalhealth.ca/kidsafe

13th Injury in Alberta Conference

November 18-20, 2008
Edmonton, AB
Phone: (780) 492-6019
Email: acicr@ualberta.ca
Website: www.acicr.ualberta.ca

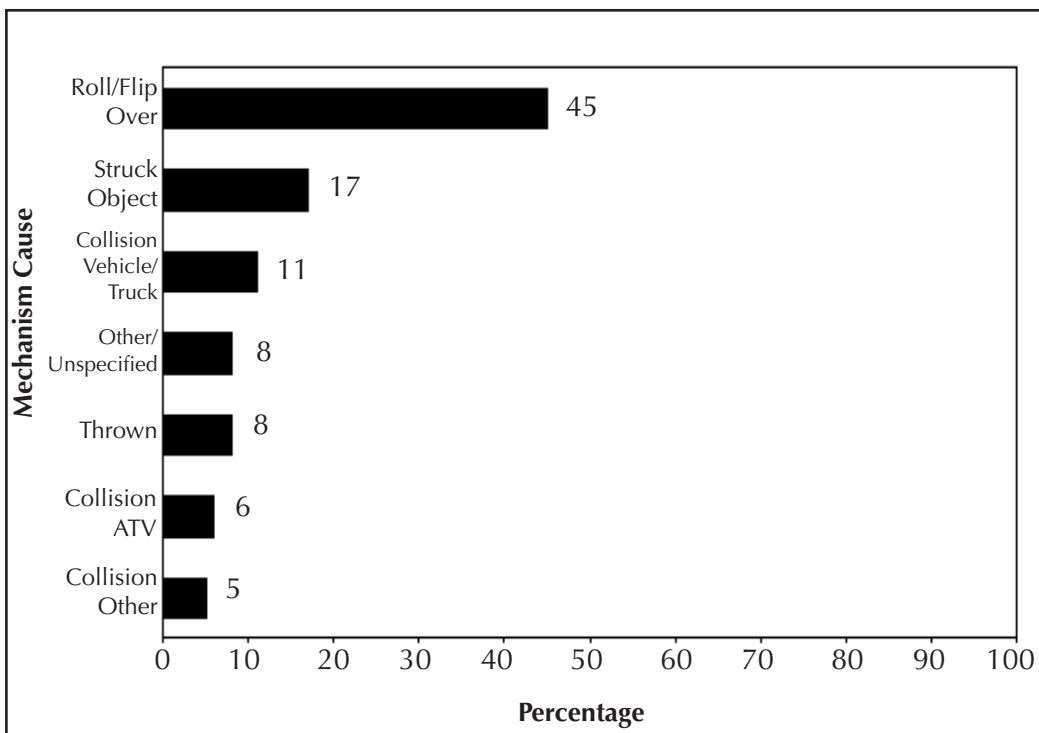
Deaths

Over the 5 year period between January 1, 2002 and December 31, 2006 there were:

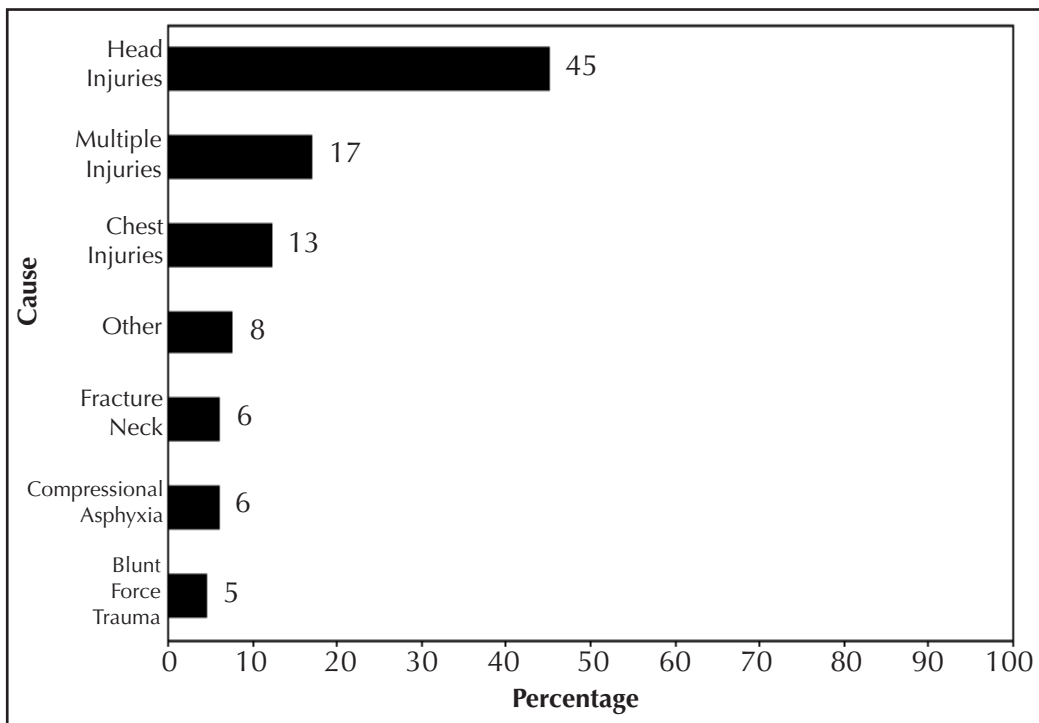
- 64 all terrain vehicle (ATV)-related deaths.
- 91 per cent (58 deaths) of the deceased were males.
- Males 16 to 24 years of age had the highest number of deaths with 17 deaths over the 5 year period.
- May and September had the highest number of ATV-related deaths with 11 and 10 respectively.
- 86 per cent (55 deaths) of the deceased were drivers of the ATV.
- 50 per cent (32 deaths) of the deaths occurred in a field/bush area, 41 per cent on a highway/road and 9 per cent of the deaths occurred on a farm.
- The leading mechanism of ATV-related injury death was as a result of a roll/flip over, accounting for 45 per cent of the deaths (29 deaths). This was followed by being struck by an object with 17 per cent of the deaths (11 deaths). The most common object was struck a tree which accounted for 72 per cent (8 deaths).
- Head injuries were the leading cause of death accounting for 45 per cent (29 deaths) of the ATV-related deaths. Of those who died as a result of a head injury, 82 per cent (24 deceased) were not wearing a helmet.
- Of all the deceased, 86 per cent had been tested for alcohol consumption. Of those tested, 58 per cent tested positive for alcohol and of those who tested positive, 81 per cent tested over the legal limit of 80 mg of alcohol in 100 ml of blood (0.08%).

ATV-related deaths, Alberta, 2002-2006

ATV-related deaths by mechanism cause, Alberta, 2002-2006



ATV-related deaths by cause, Alberta, 2002-2006



Source: Office of the Chief Medical Examiner, Alberta Justice, database, unpublished.

For additional ATV-related death, hospital admission and emergency department visit data please go to the ACICR website at www.acicr.ualberta.ca.