A 4-year review of severe pediatric trauma in eastern Ontario: a descriptive analysis.

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Adolescent
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Athletic Injuries - epidemiology - etiology - prevention & control
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Child, Preschool
Craniocerebral Trauma - epidemiology - etiology - prevention & control
Female
Hospitals, Pediatric - statistics & numerical data
Humans
Infant
Infant, Newborn
Male
Ontario - epidemiology
Retrospective Studies
Sex Distribution
Time Factors
Trauma Centers - statistics & numerical data
Trauma Severity Indices
Wounds and Injuries - epidemiology - etiology - prevention & control
Abstract:
The objective of this study was to describe a population of children admitted to a tertiary care pediatric hospital with severe trauma to identify key areas for injury prevention research, and programming.

Retrospective chart review conducted on all children 0-17 years admitted to the Children’s Hospital of Eastern Ontario (CHEO) between April 1, 1996, and March 31, 2000, following acute trauma. Each record was reviewed and assigned an ISS using the AIS 1990 revision. All cases with an ISS > 11 were included in the study.

There were 2610 trauma cases admitted to CHEO over the study period. Of these, 237 (9.1%) had severe trauma (ISS > 11). Sixty-two percent were male. Twenty-nine percent were between the ages of 10 and 14 years, 27% between 5 and 9 years, 16% between 15 and 17 years, 15% between 1 and 4 years, and 13% less than 1 year old. The most common mechanisms of injury were due to motor vehicle traffic (39%), falls (24%), child abuse (8%), and sports (5%). Of those resulting from motor vehicle traffic, 53 (57%) were occupants, 22 (24%) were pedestrians, and 18 (19%) were cyclists. When combining traffic and nontraffic mechanisms, 26 (11% of all severe trauma cases) occurred as a result of cycling incidents. The most severe injury in 65% of patients was to the head and neck body region.

Research efforts and activities to prevent severe pediatric trauma in our region should focus on road safety, protection from head injuries, avoidance of falls, and prevention of child abuse.

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Acceptability and concurrent validity of measures to predict older driver involvement in motor vehicle crashes: an Emergency Department pilot case-control study.

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Older drivers have one of the highest motor vehicle crash (MVC) rates per kilometer driven, largely due to the functional effects of the accumulation, and progression of age-associated medical conditions that eventually impact on fitness-to-drive. Consequently, physicians in many jurisdictions are legally mandated to report to licensing authorities patients who are judged to be medically at risk for MVCs. Unfortunately, physicians lack evidence-based tools to assess the fitness-to-drive of their older patients. This paper reports on a pilot study that examines the acceptability and association with MVC of components of a comprehensive clinical assessment battery.

To evaluate the acceptability to participants of components of a comprehensive assessment battery, and to explore potential predictors of MVC that can be employed in front-line clinical settings.

Case-control study of 10 older drivers presenting to a tertiary care hospital emergency department after involvement in an MVC and 20 age-matched controls.

The measures tested were generally found to be acceptable to participants. Positive associations (p
This paper describes some of the main findings from two separate studies on accident prediction models for urban junctions and urban road links described in [Uheldsmodel for bygader-Del1: Modeller for 3-og 4-benede kryds. Notat 22, The Danish Road Directorate, 1995; Uheldsmodel for bygader- Del2: Modeller for straekninger. Notat 59, The Danish Road Directorate, 1998] (Greibe and Hemdorff, 1995, 1988). The main objective for the studies was to establish simple, practicable accident models that can predict the expected number of accidents at urban junctions and road links as accurately as possible. The models can be used to identify factors affecting road safety and in relation to 'black spot' identification and network safety analysis undertaken by local road authorities. The accident prediction models are based on data from 1036 junctions and 142 km road links in urban areas. Generalised linear modelling techniques were used to relate accident frequencies to explanatory variables. The estimated accident prediction models for road links were capable of describing more than 60% of the systematic variation ('percentage-explained' value) while the models for junctions had lower values. This indicates that modelling accidents for road links is less complicated than for junctions, probably due to a more uniform accident pattern and a simpler traffic flow exposure or due to lack of adequate explanatory variables for junctions. Explanatory variables describing road design and road geometry proved to be significant for road link models but less important in junction models. The most powerful variable for all models was motor vehicle traffic flow.
[Accident prevention has been beneficial. A historical reflection and current update].
https://arctichealth.org/en/permalink/ahliterature203189
Author: U. Björnstig
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Accidents, Home - prevention & control - statistics & numerical data - trends
Accidents, Occupational - prevention & control - statistics & numerical data - trends
Accidents, Traffic - prevention & control - statistics & numerical data - trends
History, 19th Century
History, 20th Century
Humans
Sweden - epidemiology
Wounds and Injuries - epidemiology - history - prevention & control
PubMed ID: 9951233 View in PubMed

[Accident research ought to be given priority].
https://arctichealth.org/en/permalink/ahliterature232446
Author: K. Solheim
Source: Tidsskr Nor Laegeforen. 1988 Sep 30;108(27):2241
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Keywords: Accidents, Traffic - prevention & control - statistics & numerical data
Humans
Norway
Research
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The objective of this paper was to identify the most dangerous segments of the Icelandic road system in terms of the number of accidents per km and the rate of accidents per million km travelled. First to identify the segments where the number of accidents is highest and where the risk of the individual traveller is the greatest. Second to evaluate if the association between the number and the rate of accidents is positive or negative. Third to identify the road segments that are the most dangerous in the sense of many accidents and great risk to individual travellers.

Main roads outside urban centers were divided into 45 segments that were on average 78 km in length. Infrequently travelled roads and roads within urban centers were omitted. Information on the length of roads, traffic density and number of accidents was used to calculate the number of accidents per km and the rate of accidents per million km travelled. The correlation between the number and rate of accidents was calculated and the most dangerous road segments were identified by the average rank order on both dimensions.

Most accidents per km occurred on the main roads to and from the capital region, but also east towards Hvolsvöllur, north towards Akureyri and in the Mideast region of the country. The rate of accidents per million km travelled was highest in the northeast region, in northern Snæfellsnes and in the Westfjords. The most dangerous roads on both dimensions were in Mideast, northern Westfjords, in the north between Blönduós and Akureyri and in northern Snæfellsnes.

Most accidents per km occurred on roads with a low accident rate per million km travelled. It is therefore possible to reduce accidents the most by increasing road safety where it is already the greatest but that would however increase inequalities in road safety. Policy development in transportation is therefore in part a question of priorities in healthcare. Individual equality in safety and health are not always fully compatible with economic concerns and the interests of the majority.
[Accidents, suicide or cry for help? 173 fatal cases on the railroads during 1990-95]

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Author: M. Frisk
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Adolescent
Adult
Aged
Female
Forensic Psychiatry
Humans
Male
Middle Aged
Railroads
Risk factors
Suicide, Attempted - prevention & control - statistics & numerical data
Sweden - epidemiology
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This study was designed to estimate the frequency of head injuries and selected manifestations of craniocerebral traumas in children and adolescents with a fatal combined blunt trauma. It included 289 cases of death from a combined blunt trauma (101 original observations and data of 188 archival documents). The victims were categorized into 3 age groups. One group was comprised of cases from 0 to 3 years of life, group 2 included children aged from 4 to 11 years, and group 3 those at the age from 12 to 18 years. The age was shown to significantly influence both the frequency of head injuries and their severity. The maximum values of the two variables were recorded in the youngest age group. The frequency of head injuries and the number of selected manifestations of the craniocerebral trauma decreased with age.
Aggravating and mitigating factors associated with cyclist injury severity in Denmark.

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Head Protective Devices - statistics & numerical data
Humans
Logistic Models
Male
Middle Aged
Safety
Trauma Severity Indices
Young Adult

Abstract: Denmark is one of the leading cycling nations, where cycling trips constitute a large share of the total trips, and cycling safety assumes a top priority position in the agenda of policy makers. The current study sheds light on the aggravating and mitigating factors associated with cyclist injury severity on Danish roads by examining a comprehensive set of accidents involving a cyclist and a collision partner between 2007 and 2011.

This study estimates a generalized ordered logit model of the severity of cyclist injuries because of its ability to accommodate the ordered-response nature of severity while relaxing the proportional odds assumption.

Model estimates show that cyclist fragility (children under 10 years old and elderly cyclists over 60 years of age) and cyclist intoxication are aggravating individual factors, while helmet use is a mitigating factor. Speed limits above 70-80 km/h, slippery road surface, and location of the crash on road sections are aggravating infrastructure factors, while the availability of cycling paths and dense urban development are mitigating factors. Heavy vehicle involvement and conflicts between cyclists going straight or turning left and other vehicles going straight are aggravating vehicle involvement factors. Practical applications: The results are discussed in the context of applied policies, engineering, and traffic management solutions for bicycle safety in Denmark.

PubMed ID: 25142363 View in PubMed ☰
Abstract: In less than 5 years, the first wave of baby boomers will begin turning 65, with the last wave of boomers entering their senior years in January 2029. Currently, boomers make up a significant percentage of the population in Canada, the United States, and other developed countries. The baby boom generation has had a profound impact on our society over the last six decades, and this large cohort will continue to exert its influence for several decades to come. Central to this article is the rapid growth in the number of persons 65 years of age and older, beginning in 2011, with a corresponding increase in the number of older drivers. The demographic shift has important implications for licensing authorities, the regulatory bodies charged with licensing and 'fitness to drive' decisions.

The objectives of this paper are to summarize the published scientific literature on licensing policies and procedures currently in use for older drivers, discuss their limitations, and provide recommendations for meeting the upcoming challenges of an aging baby boomer population of drivers.

Online searches were conducted using the following databases: PsycINFO, MEDLINE, Scopus, and TRIS. Google and Google Scholar also were searched for scientific articles. References identified from database and online searches were examined for relevant articles.

A number of studies have investigated the utility of different licensing policies and procedures for identifying older drivers who may be at risk for impaired driving performance. Overall, results suggest that current policies and procedures are ineffective in identifying high-risk older drivers. The results also emphasize the need for a different approach for the identification of high risk older drivers by licensing agencies. Recommendations to assist with that goal are provided.

The aging of the baby boomer population, combined with the projected high crash rates for this cohort of drivers as it moves through the senior years, underscores the need for cost-effective, accurate, and efficient methods for identifying and assessing the subgroup of older drivers whose driving has declined to an unsafe level. That subgroup consists of individuals with medical conditions (and treatments) affecting driving performance. The demographic shift has been a blessing for licensing authorities in that it has created awareness of the need for a reexamination of licensing policies and procedures designed to identify those older drivers who may no longer be safe to drive. If that awareness becomes translated into effective policies and procedures that appropriately target the medically at-risk/impaired older driver rather than the older driver per se, the result will be an increase in the safety and mobility of the older driving population and increased public safety overall. However, a continued focus on older drivers rather than medically at-risk drivers will result in a costly, ineffective, and overburdened system.

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