



UMEÅ UNIVERSITET

Umeå University Medical Dissertations, New Series No 2131

Injuries are not accidents!

An emergency-department population-based epidemiological study of injuries with special reference to trauma recidivism, hip fractures and geriatric falls

Fredrik Röding

Akademisk avhandling

som med vederbörligt tillstånd av Rektor vid Umeå universitet för avläggande av medicine doktorexamen framläggs till offentligt försvar fredagen den 28 maj, kl. 13:00, lokal: Universitetsledningshuset, triple helix och via zoom meeting ID 687 3603 1313

Avhandlingen kommer att försvaras på svenska.

Fakultetsopponent: Professor Sari Ponzer,
Department of Clinical Science and Education, KI SÖS, Karolinska Institutet,
Stockholm, Sweden

.

Department of Surgical and Perioperative Sciences

Organization
Umeå University
Department of Surgical and
Perioperative Sciences

Document type
Doctoral thesis

Date of publication
7 May 2021

Author
Fredrik Röding

Title
Injuries are not accidents! An emergency-department population-based
epidemiological study of injuries with special reference to
trauma recidivism, hip fractures and geriatric falls

Abstract

Injury is a major public health problem. In rich countries fall injures now kill more people than all other injury mechanisms together, because of global ageing and large-scale sustainable injury prevention programs for all other injury mechanisms but falls. Injuries from falls in the young are often trivial, but in old people falls may have devastating consequences.

We used the Umeå Injury Database, 1993 – 2014, 220,014 injury events attended to by the emergency department: *e.g.*, type of injury, localization, mechanism, activity and severity. Logistic regression was used to evaluate injury trends, Cox regression for associations between injury type, severity and recidivism.

Fractures were responsible for $\frac{1}{4}$ of all injuries and for $\frac{3}{4}$ of trauma inpatient days. Fractures and contusions became more common with increasing age while sprains and wounds decreased with age. Injuries due to fall increased during the study period.

Recurrent injuries accounted for some 40%, mostly in young men and in old women. Prior fractures and sprains were strongest predictors for recurrent serious injuries.

The hip fracture incidence fell for the most important age/sex groups during the 22-year period, but the total number increased with 3.5%, due to an increasing elderly population. 40% of all hip fracture patients had sustained a previous injury. Multiple previous injuries also increase the risk of future hip fracture. No less than 12% hip fracture patients suffered a new one. With age, injury pattern changed, with more lower extremity fractures that also were more proximally located. Soft tissue injuries to the head/face also increased, also indicating that the ability to reduce and spread the impact of the kinetic energy is a key factor in geriatric trauma, in addition to tissue strength

The most common, expensive and devastating injury mechanism, falls, are still outrageously neglected, especially concerning injury prevention, which has been so successful in reducing road traffic- and workplace-related deaths. Why? A common misconception is the primitive belief is that fall injuries are fated and therefore inevitable. There are also few economic and legal drivers to prevent falls, especially recurrent ones. Another reason is that GDPR has prohibited the injury database. Statistics on fall injuries are necessary for targeting preventive interventions. Without spying, no clue. On-line feedback of official statistics should be used to monitor the results. There are no technical, just legal hurdles. The Swedish parliament has since 1997 flagged a zero vision for road traffic injuries; in 2015 the government also launched a more modest goal for a 50% reduction of falls in the elderly. So far, nothing has happened...

Keywords

Injury, epidemiology, trauma, recidivism, hip fracture, falls

Language
English

ISBN
ISBN: 978-91-7855-525-3 (print)
ISBN: 978-91-7855-526-0 (pdf)

ISSN
ISSN: 0346-6612
New series No 2131

Number of pages
41 + 5 papers

