



A systematic review of brain injury epidemiology in Europe.

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Abstract: Background. The world's literature on traumatic brain injury (TBI) grows annually including new reports on epidemiologic findings from many regions. With the wide variety of reports emphasizing various factors it is useful to compile these findings, hence the objective of this report. Thus, we describe epidemiological factors from European studies largely published in the last 20 years. Method. The Medline was searched for TBI related articles from about 1980 to 2003 including terms such as "epidemiology", "head injury", "brain injury" and others. From the research reports identified, we checked references for additional relevant reports and from those reports we abstracted data on TBI incidence, severity, external cause, gender, mortality, prevalence, cost and related factors. Results. Twenty three European reports met inclusion criteria and included findings from national studies from Denmark, Sweden, Finland, Portugal, Germany, and from regions within Norway, Sweden, Italy, Switzerland, Spain, Denmark, Ireland, the U.K. and France. An aggregate hospitalized plus fatal TBI incidence rate of about 235 per 100,000 was derived. Prevalence rate data were not reported from any European country. An average mortality rate of about 15 per 100,000 and case fatality rate of about 11 per 100 were derived. The TBI severity ratio of hospitalized patients was about 22:1.5:1 for mild vs. moderate vs. severe cases, respectively. The percentages of TBI from external causes varied considerably and several reports reported an association of alcohol use with TBI. Outcome or disability findings were mixed and inconsistent. Interpretation. It was difficult to reach a consensus on all epidemiological findings across the 23 published European studies because of critical differences in methods employed across the reports. We highly recommend the development of research guidelines to standardize definitional, case finding, and data reporting parameters to help establish a more precise description and hence utility of the epidemiology of TBI in Europe.

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