

A POPULATION-BASED ASSESSMENT OF MAJOR TRAUMA IN A LARGE CANADIAN REGION

Morad Hameed, Kevin Laupland, John Kortbeek, Christi Findlay
ICU Trauma Services, Foothills Medical Centre, Calgary, Alberta, Canada

Background: The epidemiology of major trauma has not been well defined using population-based methodologies.

Methods: Population-based surveillance for major traumatic injury in adult residents of the Calgary Health Region over three years.

Results: 1475 victims of major trauma were identified (69.5 per 100,000/year). Males were at significantly higher risk as compared to females [104.5 vs. 35.2 per 100,000; relative risk (RR)= 3.0, 95% confidence interval (CI); 2.64, 3.35], as were urban as compared to rural residents (70.7 vs. 49.0 per 100,000, RR=1.4, 95% CI; 1.11, 1.91). A strikingly high incidence rate of major trauma was observed among those \geq 85 years old at 242.3 per 100,000/year; elderly males were at 16.8 (95% CI; 11.04, 24.79) fold higher risk than young females. The majority were unintentional (53.9 per 100,000/year). Traumatic suicide, assault, and homicide occurred at annualized rates of 8.5, 4.8, and 1.6 per 100,000, respectively. Motor vehicle related injuries (39%), falls or jumps (33%), and being struck by an object or animal (10%) were responsible for the majority of traumas. Firearm injuries were relatively uncommon (2.0 per 100,000/year). The annual mortality rate was 20.0 per 100,000.

Interpretation: This study provides important information for setting healthcare funding priorities and devising preventive strategies and demonstrates that the epidemiology of major trauma in Canada differs substantially from the neighboring United States.

Key Words: population-based, surveillance, trauma, epidemiology