

Background

Comparing trauma registry data from different countries can help to identify possible differences in epidemiology, which may help to improve the care of trauma patients.

Methods

This study directly compares the incidence, mechanisms of injuries and mortality of severe TBI based on population-based data from the two national trauma registries from New Zealand and Norway. All patients prospectively registered with severe TBI in either of the national registries for the 4-year study period were included. Patient and injury variables were described and age-adjusted incidence and mortality rates were calculated.

Results

A total of 1378 trauma patients were identified of whom 751 (54.5%) from New Zealand and 627 (45.5%) from Norway. The patient cohort from New Zealand was significantly younger (median 32 versus 53 years; $p < 0.001$) and more patients from New Zealand were injured in road traffic crashes (37% versus 13%; $p < 0.001$). The age-adjusted incidence rate of severe TBI was 3.8 per 100,000 in New Zealand and 2.9 per 100,000 in Norway. The age-adjusted mortality rates were 1.5 per 100,000 in New Zealand and 1.2 per 100,000 in Norway. The fatality rates were 38.5% in New Zealand and 34.2% in Norway ($p = 0.112$).

Conclusions

Road traffic crashes in younger patients were more common in New Zealand whereas falls in elderly patients were the main cause for severe TBI in Norway. The age-adjusted incidence and mortality rates of severe TBI among trauma patients are similar in New Zealand and Norway. The fatality rates of severe TBI are still considerable with more than one third of patients dying.