

INCIDENCE OF TRAUMATIC SPINAL CORD INJURY IN OLMSTED COUNTY RESIDENTS FROM 1980-2009

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BACKGROUND AND PURPOSE:

National incidence rates of traumatic spinal cord injury (tSCI) are compiled yearly; however, data breakdown by geographical region is not as readily available. The purpose of this study is to evaluate the incidence of tSCI in Olmsted County, Minnesota from 1980 to 2009.

SUBJECTS: The Rochester Epidemiology Project (REP) was used to identify a population-based cohort of Olmsted County residents that likely experienced tSCI between 1980 and 2009.

METHODS AND MATERIALS: Researchers reviewed the REP Browser database and medical records of the cohort to confirm tSCI. For those with confirmed tSCI, injury type was classified using the International Standards for Neurological Classification of Spinal Cord Injury. Age and gender were also recorded.

ANALYSES: Average yearly incidence rate for tSCI was estimated across the study period. Demographic data is provided as median and range or count and percentage.

RESULTS: Of the 604 individuals with a diagnosis code for tSCI, 59 were confirmed to have tSCI. The average yearly incidence rate ranged from 15 to 19 cases per one million. The median age at injury was 32 years (range: 18-84) and 46 (78%) were male. The majority of injuries were classified as incomplete tetraplegia (26, 44.1%) followed by 13 (22%) with incomplete paraplegia, 10 (16.9%) with complete paraplegia, 9 (15.3%) with complete tetraplegia, and 1 (1.7%) with tetraplegia but completeness unknown.

CONCLUSIONS: Olmsted County has a lower incidence rate of tSCI than the 2009 national average of 40 per one million. The proportion of males and relative distribution of injury classification is comparable to national statistics.

IMPLICATIONS: The rural composition of Olmsted County may contribute to why its incidence of tSCI is lower than the national average. As a result, Olmsted County physical therapists may be less likely to see patients with tSCIs than if they worked in other geographical locations.