

## Injuries from Falls among Veterans with Spinal Cord Injury (SCI)

Little is known about the incidence and risk factors for injury from falls in the population seated in wheelchairs. These issues were examined in a cohort study of 702 veterans with SCI. Eligible subjects had a SCI and required a wheelchair for mobility. Baseline data were collected on demographic, health, physical environment, and wheelchair traits. Telephone interviews were conducted over a 12-month period to identify wheelchair falls and their outcome. Wheelchair falls occurred when the user dropped to the ground, unintentionally, or where both the wheelchair and the user tipped over. Injuries from falls were based upon self-report. At baseline, 96% of the participants were male with a mean age of  $55 \pm 13$  years. Subjects had a SCI for  $21 \pm 13$  years. The level of SCI was cervical injury (47%), thoracic injury (46%), and lumbar injury (7%).

Overall, 553 wheelchair falls among 204 persons were identified. 164 of the falls resulted in injury (among 95 persons). Factors related to wheelchair fall injuries were medical (history of arthritis, psychiatric disorders, spasticity, and pain), substance abuse, prior falls, not wearing a seat belt, and an uneven surface in the home. In a multivariate model, a history of a prior fall (odds ratio (OR): 7.55, 95% CI (3.69-15.46)), an inaccessible home entrance (OR: 2.45, 95% CI (1.38-4.33)), and the presence of arthritis (OR: 2.23, 95% CI (1.34-3.70)) remained significant.

Wheelchair fall injuries are frequent, affecting 14% of the wheelchair cohort annually, and are largely due to a prior history of falls.