

Introduction

Consultants in Rehabilitation Medicine are those medical practitioners who most frequently provide the rehabilitation of people who have suffered major trauma. Such people may have spinal cord injury, traumatic brain injury and multiple fractures. The trauma may occur as seen as a consequence of motor vehicle crashes, falls and industrial accidents.

Spinal cord injury is caused in almost 50% of cases by motor vehicle crashes, and more than half of these crashes are associated with a high alcohol intake as well as the use of other drugs. The services of a drug and alcohol team are frequently used in the management of patients with spinal cord injury who have an associated poly-drug abuse pattern.

Up to 60% of traumatic brain injury is associated with alcohol intake.

It is more difficult to estimate how many people with multiple injuries received their injuries in association with alcohol or other drug abuse. However, it is common, particularly at inner city hospitals, to manage patients who have suffered major trauma associated with drug or alcohol abuse.

Other illnesses associated with drug and alcohol use

Alcohol abuse may result in vitamin deficiency from failure to eat. Thiamine (Vitamin B1) deficiency may result in brain, heart, and nerve damage, and resultant permanent disability.

The toxic effects of alcohol on the liver, brain, and muscle are well-known, and people with such effects present a considerable load for Australian health services.

People who inject intravenous drugs are at risk of infections of heart valves. Clots from these infected valves may block limb arteries and amputation may be required. Narcotics may cause prolonged unconsciousness and resultant damage to nerves and muscles from prolonged unrelieved body weight pressure. Glue sniffers may irreparably poison their peripheral nerves. Rehabilitation medicine consultants are all too familiar with these rarer patterns of disability caused by drug and alcohol use.

Spinal Cord Injury

In 1996/97, 276 people with traumatic spinal cord injury were admitted to spinal units in Australia. Their usual admission to an acute hospital lasts between one and three months. Their average length of stay in a rehabilitation unit is between three and six months. During this time patients are likely to undergo surgical procedures as well as require high level medical care. The cost of an acute spinal bed is approximately \$1000 per day, whilst the cost of a rehabilitation spinal bed is between \$400 and \$500 per day.

In light of the fact that most patients will spend between three and six months in a rehabilitation bed and between one to three months in an acute bed, the cost of hospitalisation is up to \$150,000.

While some people with paraplegia (paralysis of the lower limbs) and tetraplegia (paralysis of upper and lower limbs) are able to return to the workplace, their level of activity is often significantly changed. Their likelihood of regaining the same level of productivity can be significantly altered.

Most patients, once discharged from hospital, will require ongoing care in the community with respect to activities of daily living, personal hygiene and mobility. The degree of care depends on the level of their spinal cord injury. Tetraplegics have greater requirements for care than paraplegics. This assistance is provided by government, private agencies and their families, and remains life-long. As most spinal cord injuries occur in people under the age of 30, and the life expectancy is on the average normal less about 10-15%, then a person with a severe high-level spinal cord injury may require over 40 years of full-time care

Traumatic Brain Injury

According to NSW statistics, in excess of 200 patients are admitted to a metropolitan rehabilitation unit with traumatic brain injury in NSW per year. The mean length of stay varies between units, and may be between 35-65 days. Average bed costs in the Brain Injury Rehabilitation Unit at Westmead Hospital in Sydney are \$450 a day with high dependency beds costing \$1100 a day. As such the average admission for a traumatic brain injury will cost the NSW health department between \$15,750 and \$38,500.

People with a traumatic brain injury may require ongoing health services in the community. It is difficult to quantify these costs as the amount of intervention is quite varied, and depends on the severity of the injury. Some people will require life-long institutional care.

The personal and emotional costs to the family are protean. The rate of marital breakup following TBI is greater than 75%.

The losses in productivity that are caused by a person's inability to return to their pre-injury working environment are also difficult to quantify but are likely to be significant as most traumatic brain injury occur in men under the age of 30. In one study in this group, 85% were employed prior to their injury while only 34% were employed at 6 months post injury.

Interestingly, more than 30% of men with TBI continue to have high alcohol intake after their injury.

Multiple Injuries from Trauma

A common presentation to general rehabilitation units is that of young men and women who have sustained multiple injuries in motor vehicle crashes or assaults. These injuries present a myriad of variations such as fractures and crush injuries to limbs. Damage to peripheral nerves, and damage to soft tissues may result in permanent loss of use of limbs. Injuries to the soft tissues of the abdomen may also cause lasting problems. These patients often require significant periods in rehabilitation.

Conclusion

The Australasian Faculty of Rehabilitation Medicine wishes to make the point that that one of the effects of drug abuse in the community is the generation of long term disability. The costs of rehabilitation of people with severe disability are significant. The costs of supporting people with disability to live in the community can be large, and may be borne by the community for prolonged periods of time. Young men constitute the largest group of people with disability from drug and alcohol use.

ACKNOWLEDGEMENTS

This report was prepared on behalf of the AFRM by Dr Steven Faux, the Director of Rehabilitation Medicine, Sacred Heart Rehabilitation Service, with the assistance of Dr I Baguley from Westmead Brain Injury Unit.