Injury to the spinal cord has devastating physical consequences, resulting in impairments of mobility and independence. The autonomic consequences are equally devastating. Impaired bladder function can predispose to urinary tract infection and loss of renal function. Weakness of the muscles of respiration can impair breathing capacity and the ability to cough. The loss of sensation over bony prominences in weight-bearing areas of the body can result in the development of pressure necrosis of the skin. Modern rehabilitation efforts have been directed to the prevention of these complications with improved management of the urinary tract and respiratory function. Patients are taught how to avoid pressure sores and to use specialized wheelchair cushions that avoid focusing pressure over the bony prominences of the pelvis.¹

The result of our efforts in medical rehabilitation has been to improve the prospects of long-term survival after spinal cord injury. Spinal cord trauma is most common in young people ages 16 to 30. After vocational rehabilitation, many of these survivors become employed and they seek life insurance and health insurance coverage. Therefore, a review of mortality experience of people who survive for more than one year after injury would be helpful in the underwriting of insurance for spinal cord-injured individuals.

A recent study² by Whiteneck and his co-workers focused on mortality and survival experiences of over 800 people injured in 1943 to 1970 who survived through their first year after spinal cord injury. The study population received their initial care at either Stoke Mandeville Hospital in Aylesbury, England, or Regional Spinal Cord Injury Centre in Southport, England. Survivors were interviewed and comprehensively examined. When death had occurred, medical records, autopsy reports, and death certificates were reviewed to determine cause of death. This complex project was supported by a grant from the National Institute of Disability and Rehabilitation Research and was done in collaboration with the two centers in England.

The median survival time was 32 years. The percentage surviving at 10 years was 85%, 71% at 20 years, 53% at 30 years, and 35% at 40 years. Survival of persons with quadriplegia averaged 29 years, compared to 32 years for persons with paraplegia. Those with complete motor and sensory loss had a median survival time of 30 years, while those with some residual motor and sensory function averaged 34 years. Age at the time of injury played a great role. Those who were injured under age 30 survived an average of 43 years while those who were over age 50 at the time of their injury survived an average of 11 years. Furthermore, the era of care data demonstrated that the mortality rate was 1.7 times higher for persons injured in the 1940s compared to the 1960s.

Compared to non-spinal cord-injured statistics, the mortality rates are higher after spinal cord injury. However, Whiteneck found that the mortality ratio of persons with spinal cord injury compared to the general population actually decreases with age. When comparing causes of death, renal failure and respiratory problems were much more common in the spinal cord population while cardiovascular deaths were only slightly higher and neoplasms were similar when compared to the general population. Deaths from renal failure have actually declined in more recently rehabilitated patients because of improved bladder management techniques.

Dr. Whiteneck’s study will eventually be published in detail. However, some conclusions deserve early mention. This retrospective work confirms the work of others that many individuals with spinal cord injury survive for many years. Study of more recently injured people shows that the trend is toward longer and healthier survival.

In conclusion, as individuals with spinal cord injury are becoming employed and seeking life and health insurance coverage, the insurance industry must review and expand its underwriting policies. The recent Americans with Disabilities Act legislates that all persons with disabilities have rights to access employment and transportation with reasonable accommodations. However, access to health and life insurance has not yet been mandated. It seems prudent that the insurance industry should anticipate the needs of these individuals for insurance products with fair underwriting practices. Certainly we can anticipate that persons with disability, including spinal cord injury, comprise a growing population of consumers of goods and services and as employment increases, buying power will also increase.

REFERENCES
