Tidsskriftet
DEN NORSKE LEGEFORENING

A national spinal cord injury registry as a quality improvement tool

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A spinal cord injury registry has been shown to constitute a useful tool for raising the quality of the treatment provided to patients with a spinal cord injury.

There are relatively few spinal cord injuries in Norway, with approximately 120 new patients each year. However, these patients face a number of health challenges, both during the acute stage and later in life (1).

Spinal cord injuries (SCI) can occur at all levels of the spinal column, and the level at which the injury occurs determines what bodily functions will be affected. Most spinal cord injuries cause paralysis and loss of sensation distal to the level of injury, with reduced bladder, bowel and sexual function.

There are three specialist departments for rehabilitation and follow-up of patients with

spinal cord injury in Norway. The departments are located at Sunnaas Hospital, Haukeland University Hospital and St. Olavs hospital, Trondheim University Hospital.

The Norwegian Spinal Cord Injury Registry (NorSCIR) has been in operation since 2011 and was approved as a national medical quality registry by the Ministry of Health and Care Services in the autumn of 2012. Collection of national data establishes an important basis for developing preventive measures and good patient pathways. The Norwegian Spinal Cord Injury Registry records data on incidence, medical treatment, rehabilitation and follow-up of persons with spinal cord injury. Patient-reported data on quality of life and satisfaction with daily functioning are also included.

Data from the registry for the period 2012–16 show that nearly one-half (47 %) of the traumatic injuries are caused by falls. The most frequent occurrences were observed in the age group 60–74 years (2). There is a tendency for traumatic spinal cord injuries to occur more frequently during the spring and summer months (2). 41 % of the injuries and accidents occur during weekends (2). This may be important information for planning of hospital schedules. Patients with non-traumatic spinal cord injuries are significantly older, have fewer neurological outcomes and shorter hospitalisation periods when compared to patients with traumatic spinal cord injuries (3).

During the rehabilitation period an examination and classification of the spinal cord injury should be performed in accordance with the established international ISNCSCI (International Standards for Neurological Classification of Spinal Cord Injury) guidelines (4–6).

The registry has facilitated active information exchange between SCI health care professionals. The results of the registry have been used to discuss existing routines. In 2014, the registry revealed that in many cases a neurological classification had not been performed (1). The specialist community therefore selected neurological classification as a relevant quality improvement project.

The registry has facilitated active information exchange between SCI health care professionals

The objective of the quality improvement project was to establish common routines for performance of neurological classification of spinal cord injuries. The project established an interdisciplinary network that included all the three hospitals involved in treatment of patients with spinal cord injuries. This learning network has agreed on a common procedure for neurological classification of injuries. The purpose of the procedure is to ensure high quality in the examination process, including documentation. It also encompasses a training package for recently employed healthcare personnel (7). To help ensure a permanent improvement from the project, the registry has prepared a report which is sent to the hospitals on a monthly basis. The report will provide an updated status for the proportion of examinations performed upon admission and discharge at any one time. Results from the registry show a clear increase in the number of examinations performed from 2014 to 2017. In 2014, a total of 74 % were examined at discharge, whereas in 2017 this figure had increased to 87 % (1).

This project is a good example of how a national medical registry can be used as a tool for quality improvement, for the benefit of both patient treatment and SCI health care professionals (8).

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Published: 23 September 2019. Tidsskr Nor Legeforen. DOI: 10.4045/tidsskr.19.0431
Received 21.6.2019, first revision submitted 13.8.2019, accepted 15.8.2019.