

Developing New, High-Quality Major Trauma and Stroke Service in London

Response by the Spinal Injuries Association (SIA) to the consultation document published by Healthcare for London 2009

SIA makes the following recommendations:

- 1 Develop only three new trauma centres initially.
- 2 Review and increase as necessary bed capacity at receiving rehabilitation units and Spinal Cord Injury (SCI) centres to avoid bed blocking at the trauma centres.
- 3 Plan for a helipad at each site.
- 4 Establish protocols for consultation by trauma centres and A&E departments with SCI Centres before SCI treatment starts.
- 5 Designate one trauma centre for SCI patients.
- 6 Establish protocols for immediate transfer, when appropriate, of SCI patients from A&E departments and trauma centres to the SCI Centres.
- 7 Rotate with or train at SCI Centres staff for designated centre ITU and HTU.

Introduction

The Spinal Injuries Association (SIA) warmly welcomes the proposal to establish a major trauma and stroke service in London. The focus of our response is to help achieve a world class trauma service that can achieve the best outcomes for Spinal Cord Injured (SCI) people.

SIA is the leading national user-led organisation supporting the interests of circa 40,000 people in the UK who have sustained Spinal Cord Injury (SCI) and their families. SIA has a membership of over 5,000 SCI people.

SCI is a rare and complex impairment to manage. Damage to the spinal cord usually causes a permanent generalised physiological impairment and multi-system malfunction. All the systems of the body function differently to those of a non-paralysed person. Neither such abnormal physiology nor its management figure in the curriculum of medical schools in the UK or abroad. The clinical symptoms and signs of medical and surgical conditions that are taught in medical schools do not apply to patients with SCI because of the loss of feeling associated with paralysis. Thus doctors not trained at the specialist SCI Centres may have great difficulty in making an accurate diagnosis and cannot be blamed for using the same principles of management they use for non-paralysed patients. Examples of treatment issues with SCI are:

- At the acute stage SCI patients have died from intravenous over hydration because of low BP which is normal where paralysis is from the neck or upper chest down.
- The lack of feeling associated with paralysis below the neurological lesion level (point of damage to the cord) can lead to complications such as pressure sores, muscle contractures, excess spasticity, limitations of movement in joints, deep vein thrombosis, pulmonary emboli etc. These are normally preventable when managed by a trained specialist SCI team.
- Autonomic dysreflexia, a potentially life threatening condition unique to SCI people with lesions of T6 and above. It is usually misdiagnosed and incorrectly treated and can result in a stroke.

- The need to train the bowel and bladder to work safely to a new routine. The abnormal bladder and bowel functions, ineptly managed in the early stages, can later result in complications such as renal failure and a wide range of complications affecting other systems of the body.

The body and mind can adjust to the changes brought about by SCI. However, critical to achievement of optimal outcomes is the overview of the whole treatment cycle by specialist Consultants in SCI as part of a comprehensive system of management by the multi-disciplinary specialist SCI team at the SCI Centres. The UK pioneered the specialist acute and lifelong comprehensive treatment and rehabilitation of SCI people which enables each person to manage their condition and return to an active life usually as a wheelchair user in the community. There are 11 SCI Centres in the UK of which three cover the South: Duke of Cornwall Spinal Treatment Centre, Salisbury; SCI Centre RNOH, Stanmore; National Spinal Injuries Centre, Stoke Mandeville.

With the low incidence of traumatic SCI (circa 12 per million population in the UK) non-specialist hospitals rarely see a SCI patient. The 14 million population catchment area of the new London major trauma system might only average circa three traumatic SCI cases per week.

A world class major trauma service for London

For the best clinical outcomes for all patients the new approach would require the maximum concentration of specialist expertise in the least number of new trauma centres in London with the ideal being one. Whilst one trauma centre would achieve this with minimum expenditure in practice factors such as the public's desire for quick admission and being prepared for major incidents with sufficient capacity by 2010, dictate that more than one will be developed. Still SIA believes that two new centres should be the target.

In the circumstances SIA advocates restricting the current programme to three centres to provide higher quality, effective services at significantly reduced costs. SIA accepts that this approach is unlikely to be welcomed by the general public who understandably rate their closeness to a hospital above such complex issues as concentrating clinical expertise at fewer sites and the sophisticated treatments that can now be administered at the scene of an accident.

Limiting the current development to three centres by the 2010 deadline would allow time for the new model of service to bed down, its progress monitored and effectiveness evaluated. Healthcare for London would then be in a position to expand the service at the three sites or develop a new site in the light of UK experience and incorporating new internationally recognised developments as appropriate.

Of critical importance to a successful service will be seamless integrated network of ongoing liaison and support between the trauma centres and rehabilitation units or SCI Centres to ensure the swiftest possible safe transfer to the appropriate unit/centre for ongoing treatment prior to discharge into the community. This is of critical importance with SCI where the incidence of complications not associated with the original SCI are all too common in non-specialist centres and these can prolong hospitalisation or even cause permanent damage that may severely compromise the person's potential for the rest of their life.

The bed capacity of linked rehabilitation units and SCI Centres need to be accessed to ensure swift onward transfer of patients and avoid bed blocking at the trauma centres. Instances of lost beds, temporally closed beds, staff reductions plus bed blocking are known to be on record at the SCI Centres.

SIA is concerned that a helipad is not considered essential for a major trauma centre.

A single designated trauma centre for SCI treatment is best

In view of the rarity of SCI and the specialist techniques required for its management four trauma centres treating SCI patients would provide sub-optimal outcomes as a centre might see one SCI patient in two weeks. SIA therefore believes that it is imperative to designate just one London trauma centre to receive SCI patients. However, the first option for all those diagnosed as SCI after admission to all A&E departments and the trauma centres should be transfer direct to one of the three specialist Southern UK SCI Centres. Protocols must be established to govern this process.

Achieving optimal outcomes for SCI people requires the concentration of trauma specialists experienced in treating SCI people and the development of the closest communication between one SCI trauma team and the specialist SCI teams at the three SCI Centres. Some treatment decisions are not easy (such as whether a particular patient's best long term outcome would be achieved after surgical stabilisation of the spinal column or the non-surgical approach or conservative management). At one designated centre they would also be in a better position to resolve if immediate transfer to the SCI Centre is best and also if, in a particular case, transfer is still made immediately for spinal surgery at the SCI Centre. Well developed contacts by one trauma team with the SCI Centres would achieve the ideal networking approach on all aspects of the acute SCI management and the simplest pathways to expedite efficient onward transfer of their SCI patients. As well as for coordinated training activities.

Clinical advantages include one trauma team keeping up to date with the latest developments in the SCI acute management field eg pharmaceutical drug and stem cell advances that may minimise or reverse spinal cord damage. It would improve the chances for survival and best outcomes for the most complex multiply injured patients with the severest SCI damage eg Christopher Reeves. At the acute stage of SCI there are complex areas where diagnosis is difficult in paralysed patients and selecting the best course of action not straight forward. Thus specialist SCI expertise input from a SCI Centre is paramount to assist where accurate diagnosis of neurological issues is difficult, other SCI specific problems arise and to avoid complications. Examples are:

- Currently SCIs are missed where the injury site is difficult to x-ray.
- Where the spinal cord damage or the lack of nerve responses is masked by the severity of other injuries.
- Specialist chest management can reduce the need for invasive ventilation.
- Common in non-specialist SCI centres are avoidable complications, often irreversible, that prolong overall hospital length of stay and rehabilitation once transferred to the specialist SCI Centre and can cause life-long additional difficulties for the individual on return to the community.

Specialist spinal surgeons undertake sophisticated operations when necessary on newly injured SCI patients but routine should be prior consultation with a Consultant in Spinal Injuries on the best course of action as they are the experts on the likely affects of treatments on the long term outcomes for each SCI patient.

In addition to Intensive Care (ITU) beds a trauma centre receiving SCI patients needs High Dependency (HDU) beds the staff on which must include sufficient nurses, physio, OTs and other specialists trained in SCI management and/or staff on a rota from the SCI Centres. This approach has proved successful elsewhere. The key point is to provide the patient with a safe environment and avoid complications arising in the first critical days.

Post SCI major trauma

The new London Trauma Centres must provide not just for the treatment of all injured disabled people admitted but provide accessible facilities that enable disabled people who can to function on the wards independently before transfer or discharge home.

Helicopters

In order to equal other UK and world leading trauma centre services SIA believes that a London trauma centre requires a helipad and that this is essential to offer overall excellence in the treatment of SCI patients. All the site development plans should allow for a helipad, if not already available. Whilst helicopter use may be restricted eg in city centres and at night, their potential value for rapid transportation, especially over longer distances, should be maximised for accessible accident scenes and transit from outside the city.

Helicopter transit can be invaluable with SCI patients. They will be able to land close to many places where SCIs occur ie in higher speed road traffic accidents on the M25 and major arterial roads, sports injuries occurring at playing fields, school playgrounds, horse riding events, stadiums and at the scene of major incidents.

They should be used to move patients were appropriate such as:

- SCI patients from roads, parks, schools, sporting venues etc
- certain patients between the trauma centres eg SCI patients to the proposed designated SCI trauma centre
- Patients from other hospital A&E departments within and outside the M25 ring.

SIA looks forward to assisting further in the development of a world class new major trauma service for London. For example, through Spinal Cord Injury UK (SCI UK) the SIA would be pleased to arrange a meeting with representatives of the UK specialist organisations: British Association of Spinal Cord Injury Specialists (BASCIS) and Multidisciplinary Association of Spinal Cord Injury Professionals (MASCIP).

Appendices

1. A Charter for Support (a treatment protocol)
2. A Model for Spinal Cord Injury Centres

SIA Publications

Managing Spinal Cord Injury: The first 48 hours Edited Paul Harrison
Managing Spinal Cord Injury: Critical Care Edited by Paul Harrison

Other Publications

The Initial Care and Transfer of Patients with Spinal Cord Injuries
British Orthopaedic Association

For all SIA's publications and links for specialist SCI centres, organisations and publications visit SIA's website: www.spinal.co.uk

SB 17.4.09