

The Neurosurgery Service for Scotland

1 Introduction

This paper uses as a basis the papers and discussion of the Neurosciences Action Team.

It assumes the need to change, drawn from the work of the Review of Neurosurgery in Scotland carried out by Sir David Carter and the work led by Professor Graham Teasdale.

The question is to what extent does the neurosurgical service in Scotland need to change to be sustainable in the long term.

The key elements of this question currently rest around the requirements of working time regulations and subspecialisation to support a comprehensive neurosurgical service with the interrelationships that has with teaching, training and research.

2 Minimum change

The minimum change assumed is the development of an integrated service across the current 4 centres and with district general hospital and primary and community services. Also the development of “national” specialisms, first suggested in Sir David Carter’s report.

An integrated service would be based on agreed patient pathways, protocols and explicit standards providing consistent, equitable care, wherever and whenever a patient requires the service.

It would be planned and commissioned on an all-Scotland basis, with decisions on investment in major staff, equipment and facilities resources being taken on this basis. It would be a virtual single service delivered on a number of sites. Within this service managed clinical networks for specific areas, eg diseases, client groups, would be established.

National subspecialisation, as has already taken place in some areas, should be continued on an ongoing development basis, initial areas could include acoustic neuroma, epilepsy, functional surgery, cerebrovascular surgery. This principle should include paediatric neurosurgery which should be co-located with adult neurosurgery and provided by clinicians with specialist paediatric skills and experience in a paediatric environment. Adolescents should be given the choice of care in the paediatric or adult neurosurgical service.

3 Levels of service

The service would be integrated through definition and support to local care at various levels by development of referral protocols, pathways and support to education and training of local staff. The levels are described in appendix 1

and are N1-N4 as per Elizabeth Preston's paper to 17 December 2004 meeting.

The disposition of services at levels N3 and N4 require further clarification. These levels comprise the single service which will be provided over a number of locations. The number of locations and what is to be provided at each of those locations are not yet defined.

Appendix 2 sets out a proposal for configuration of the service at levels N3 and N4.

4 Other Factors

Other elements of the integrated service would include:

- Continued involvement of patients, carers in the development of the service, both MCNs and the single service
- Improved communication and information flow between the specialist centres (levels N3&N4) and local services
- Improved transfer of patients between the levels of care including transport arrangements "in" and "out" of the levels.
- Agreement of a mechanism for the collection and review of information and data, including
 - core national dataset
 - agreed clinical audit programme
 - contribution to other audits
 - performance against national and other agreed targets
- Agreement to review and, where agreed, adopt specific standards for the service
- Development of telemedicine to support local care, eg local diagnostics with remote interpretation
- The service would relate to academic institutions as a single service to support teaching, training and research activities

Appendix 1

Integrated Neurosurgical Services for Scotland

Level N 1

- simple tests
- referrals
- decision support
- pre-admission clinics
- local neurology

This could be centred CHP's, Minor Injury Units or GP practices. Direct referrals to Level N3 or N4 care

The community based services will have access to neurological teams facilitating access and re-access when needed supported by nurse led clinics and rehabilitation facilities.

Level N 2

- Basic resuscitation & emergency management
- CT/MRI with image transfer
- Rehabilitation
- Stroke medicine
- General neurology

This could be centred on a small District General Hospital which will be supported by neurologically trained accident emergency and resuscitation staff as well as specialist outreach and follow up clinics with rapid access to deal with the urgent Neurological referrals.

Level N 3

Level N 2 care +

- Planned minor surgery eg peripheral nerve, muscle biopsy, simple spinal surgery
- CT / MRI
- Neurophysiology - linked to N4 centre
- Rehabilitation
- Local orthopaedic service
- Out patient neurosurgery
- Post operative care for neurosurgery (supported by education and training from N4)
- General ICU

This could be centred on a larger District General Hospital which will be supported by Neurologically trained accident emergency and resuscitation staff as well as specialist outreach and follow up clinics with rapid access to deal with the urgent Neurological referrals. Neurosurgical procedures such as peripheral nerve surgery, simple spinal surgery should be undertaken – this will be supported by the local orthopaedic service for immediate management issues and referral to N4 if necessary.

Level N 4

Level N 3 care +

- Complex medical and surgical management
- CT/MRI/CTA/MRA
- Interventional neuroradiology
- Neuro Critical Care
- Planned major complex surgery
- Emergency surgery
- Neurophysiology
- Paediatric neurosurgery

Co located with all major specialities of a teaching hospital