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Your Ref:
Our Ref:
GT/YM

2nd October 2003

Dr M Armstrong
Chief Medical Officer
St Andrew's House
Edinburgh

Mac
Dear Dr Armstrong

I am enclosing a report on views about the future arrangements for provision of Neurosurgery in Scotland. The papers are relatively thick because I felt it appropriate at this stage to compile a reasonably complete set of relevant information and statements.

In practice, the message is simple. Opinions in Neurosurgery have altered radically since the time of the second 'Carter' Report. There is now a substantial majority of opinion in favour of planning for a move from the current 4 centre provision to a much more restricted arrangement, with the most popular option for the long-term a single centre site, combining adult and Paediatric Neurosurgery, perhaps in a new location somewhere in the centre of Scotland.

I recognise that this is the beginning rather than the end of the debate but hope that what the work over the last year has done has been to achieve a clear mandate, from a professional, Neurosurgical perspective, for the extensive work that will now be necessary to provide safe and a high standard of Neurosurgery for Scotland in the future.

I am optimistic that the climate now prevailing in Neurosurgery is of a creative, view towards the future. Over the last 3 years we have made progress in establishing co-operation and collaboration between the units with clear practical results. Thus, there has been a productive review of the different specialties within Neurosurgery leading to the consensus about arrangements for adults, (with the exception of functional Neurosurgery where further progress depends upon involvement of other specialities such as Neurology and issues of investment). There has been a particular advance in achieving the common view about how developments in interventional Neuroradiology should be applied in the treatment of patients with subarachnoid haemorrhage in Scotland. The multicentre survey of Neurosurgical infection has commenced successfully. The Neurosurgical component of the Scottish Audit of Surgical Mortality has been modified and regained confidence and participation. Inter-centre collaboration on a project to enhance reliability of coding promises to provide much more valid and secure data for future work.

I greatly enjoyed the privilege of being your Neurosurgical Advisor and shall watch with interest the developments that now lie to be taken forward by others.

With kind regards.

Yours sincerely

Graham M Teasdale
Professor of Neurosurgery

Planning for the Future Provision of Neurosurgical Services in Scotland

The Neurosurgical Viewpoint

Report to the Chief Medical Officer, August 2003

Introduction

This report is provided in response to the request, in October 2002, of the Chief Medical Officer for an ascertainment of the views of Scottish Neurosurgery on arrangements for the future provision of Neurosurgical services. Previous reports had recommended continuation of provision from the current four sites in Aberdeen, Dundee, Edinburgh and Glasgow, although with some degree of specialisation between centres. This further work was stimulated by the recognition of new factors influencing service provision and hence the need to take a longer-term perspective.

The report is based upon discussions at meetings open to all Scottish Neurosurgeons on 1st November 2002 and 19th June 2003 (appendix A & B) and findings of two surveys. The discussions were informed by the activities of a Working Group composed of Professor G Teasdale, Professor I Whittle, Mr W Taylor, Mr E Ballantyne, Mr D Currie, Mr E Fouyas, and a discussion document drafted by Professor I Whittle (Appendix C). The survey assessed Consultant Neurosurgeons viewpoints about 1) the relative importance of different factors in the assessment of provision of and location of (adult) Neurosurgical services and, 2) the feasibility of achieving the various aims in the provision of services through different options for numbers and locations of units.

Although the discussions were focused on services for adults, the Neurosurgical group were aware that a separate, multidisciplinary group had considered Neurosurgical services for children.

Factors Driving Change

Factors that are recognised to have increased in importance since the previous reports, and which can be foreseen to influence Neurosurgical service provision include:

- Changes in medical working practices that will result from the implementation of the 'Junior Doctors Hours Agreement' and European Working Time Directive.
- Medical Manpower considerations.
- Training requirements
- Treatment advances and sub specialisation including the increasing evidence for some diseases of a relationship between specialisation, higher volume and improved outcome
- Manpower shortages in 'support specialities' such as Neuroanaesthesia, Neuro Critical Care, Neuroradiology and Neuropathology and Nursing
- The introduction of new contracts for Consultant staff

The implications of the foregoing factors for the provision of services have been widely and deeply discussed in a number of reports from within British Neurosurgery:

- i Factors likely to affect the location and provision of future Neurosurgical services in the UK. D Hardy, British Journal of Neurosurgery 2003; 17: 8-14.
- ii The Working Time Directive: Potential Impact on a Neurosurgical Centre's Medical Manpower and Service Delivery for 2004. MDM Shaw, British Journal of Neurosurgery 2002; 16: 6-9.
- iii Junior Doctors Hours, The Working Time Directive, Implications for Training and the Provision of Service for Neurosurgery Discussion Paper. AJW Steers, DJ Hardy, The Society of British Neurological Surgeons 2001.
- iv SBNS Response to 'Unfinished Business' Proposals for the Form of the Senior House Officer Grade. The Society of British Neurological Surgeons 2003.
- v Keeping the NHS Local – New Direction of Travel, SBNS Response 2003.

Copies of these documents are attached.

Responses to Change

Potential responses that have been identified include:

1. Provision of care for specific disorders through Managed Clinical Networks
2. Role replacement
3. Reconfiguration of services with provision from fewer and/or different locations.

Managed Clinical Networks

A long tradition of informal networking in Neurosurgery in Scotland has been given powerful recent impetus in regard to the management of subarachnoid haemorrhage. Although a proposal to establish a national service for the interventional treatment of this condition was not successful, work is underway, supported with funding from the Scottish Executive, to institute a formal Managed Clinical Network, subscribed to by each of the existing four centres and applicable to patients throughout Scotland.

Role Replacement

Although staff such as Nurse Practitioners and Surgeons Assistants can replace some of the roles of junior medical staff, they cannot replace Consultants and are drawn from professions within which there is already a shortage of supplies.

Service Reconfiguration

The implication of the various foregoing factors for service configuration has resulted in reappraisal of the minimum catchment population needed to sustain a viable Neurosurgical Unit. In Safe Neurosurgery 2000 this was stated to be in the order of one to one and a half million, it is now considered to have risen to a minimum of two million to two million five hundred thousand. The minimum staffing for a unit is nine Consultants, eight intermediate trainees, and eight or nine SHO or equivalent grades. The consequence is a need to close smaller units and develop a smaller number of very large units (Hardy 2003).

The need to consider the provision of Surgical Services of high quality in the perspective of political considerations and the proposals in consultation papers such as 'Keeping the NHS Local – A New Direction of Travel' has been considered by the Senate of Surgery in its recommendation for significant reconfiguration of services and adoption of new approaches to Surgical and Accident & Emergency Care. (VI Reconfiguration of Surgical and Accident Emergency Services in the UK, Senate of Surgery of Great Britain & Ireland, 2003).

Options for Neurosurgical Service Provision in Scotland

The range of options that it was considered relevant to consider was:

1. Continuation of the provision of service from the four current sites
2. Provision of services from three sites
3. Provision of services from two sites
4. Provision of services from one of the existing four sites
5. Provision of services from a new single site, located to take into account, amongst other factors, geographical considerations.

Opinions of Scottish Neurosurgeons on Service Configuration

In order to assess the views of Scottish Neurosurgeons on the complex interactions between different aspects of service provision, their importance, and the potential for provision of each, via the five foregoing options, two separate surveys were conducted, each using a structured questionnaire.

The Importance of Different Factors

Responders were asked to rate (between one and ten), the importance, of seventeen different aspects of service provision. Responses were received from twelve Consultants. The aim was to produce an overall rank ordering of importance, therefore responses were analysed simply by calculation, of an average rating for each factor. It was, however, evident from the spread of scores that there was some divergence of opinions about specific factors (Appendix D)

The results indicated that six factors could be regarded as having relatively high importance:

- Co-location of Neuroscience specialities
- Co-location of Paediatric Neurosurgery
- Achievement of high standards of delivery and care
- Feasibility of 24 hour a day, 7 day week two level Neurosurgical cover (ie Consultant and intermediate grade)
- Training opportunities
- Provision of Acute Neurosurgical Services

Five factors could be regarded as having moderately high importance:

- Volume of work to support sub specialisation
- Concentration of expensive technologies
- Provision of elective Neurosurgical services
- University research
- Geography/access

Other factors although, each considered important by one or more respondents, overall were rated of lesser importance:

- Co-location of adult general services
- Co-location of general paediatrics
- NHS research and development
- Co-location of Neurorehabilitation
- Undergraduate teaching
- Co-location of A&E services

This information was used in the construction of the questionnaire for the second survey.

Feasibility of Achieving Services Aims to Additional Options for Numbers and Locations of a Unit

The questionnaire requested the responders to rate, between 1 (low) and 5 (high) the feasibility of achievement of nine of the factors rated of moderate or very high importance. (Considerations regarding concentration of expensive technology and access were considered to be self-evident and mutually cancelling out).

Replies received from all but one Consultant. Detailed results are presented in Appendix B. An overall preference for provision for a single centre, on a new central location was indicated by a number of aspects of the findings:

- For each one of the nine factors where feasibility was rated high (5), this was more often through provision from a new single centre than any other option.
- A new single centre option was very predominantly rated to be highly likely to achieve service aims for each of the nine factors.
- Provision from one of the existing sites was also rated to be highly likely to achieve service aims but not so often as on a new location.
- Summation across all factors showed that provision from a single new centre was rated to be highly likely to achieve service aims in 68% of responses. Provision from one of the existing centres was rated to be highly likely to achieve those aims in 56% of assessment. Conversely, continued provision from each of the existing four centres was considered to be highly likely to achieve aims in only between 7% and 13% of the assessments.
- Almost half of the assessments (47%) indicated a low likelihood achieving service aims from the existing four centres.

Summary

The two surveys were conducted by somewhat simple 'rough and ready' methods, and undue emphasis should not be placed upon points of detail. Nevertheless, compilation with the extracts from specific comments (Appendix F) they do portray Neurosurgical opinion in Scotland in much greater depth and breadth than ever before. Their findings make it clear, that although there is, some variation between individual Neurosurgeons and concerning different factors, there is now a strong, perhaps even overwhelming majority view that the present arrangements for provision of adult Neurosurgical services in Scotland in not an appropriate basis for future planning. This rejection of the 'status quo' represents a very substantial shift in opinion from that pertaining during the preparation of the previous Reports. Although there may be a debate about the extent to which this reflects differences in the approaches to the work or changes in circumstances, there is now a clear weight of opinion that future planning for Neurosurgical services for adults in Scotland should incorporate very substantial changes in service configuration.

It may be noted that the predominant preference for provision of services for adults from a single centre mirrors the conclusion that it is understood was reached in the review of Paediatric Neurosurgical services. Indeed, and in accord with this, the factors considered most important in planning for adult Neurosurgical services were the co-location of other Neuroscience specialities.

Conclusion

The outcome of this work should not be seen as an end in itself but instead perhaps as the beginning of the process of future planning. Continuation of the process clearly will require input from a wide spectrum of interests and 'stakeholders' and will involve much more detailed analysis and deliberation. Nevertheless, the preference expressed amongst Scottish Neurosurgery, for future planning to be based upon the concept of a single, integrated centre for Neurosurgery and other Neurosciences, on a new site in Scotland, is a clear indication of the willingness in the profession to conceive of radical and imaginative solutions in the interests of the provision of high quality Neurosurgical services to patients throughout Scotland.