

## **Rural General Hospital Surgery**

### **Workshop 12<sup>th</sup> June 2007 Report**

#### **Executive Summary**

The report sets out the policy context for the Remote and Rural Project of the Scottish Executive Health Department (SEHD) against the backdrop of Delivering for Health.

It explains the underlying principles and emerging models of the Rural General Hospital and attempts to define the core surgical services and the precise role for surgery in the Rural General Hospital (RGH) setting. This role is underpinned by the recent Needs Assessment recently carried out by the North of Scotland Public Health Network. The group work discussed the various emerging models and configuration of the RGH concept, where it fits into the integrated spectrum of care and what surgical procedures are appropriate to be carried out in this setting, articulating some of the implications for the NHS in Remote & Rural Scotland. Key principles which underpin the surgical service are the robust clinical governance systems, availability of competent multi-professional teams, appropriate back-up facilities such as the ability to provide high dependency care for patients, formalised care pathways and protocols, and access to advice from specialists within tertiary centres. The surgical service in the RGH should be an integral part of the integrated continuum of care encompassing the Community Hospital, the RGH, the DGH and the tertiary centre as part of a formal, specified and integrated network.

The future role and shape of surgery in the RGH is to provide elective outpatient, in-patient and day case services and a 24 hour emergency service, acting as a part of a regional network of surgical services, within the following agreed boundaries.

24 hour surgical services should provide local assessment, triage, resuscitation stabilisation of emergency surgical and trauma patients followed by admission and surgical intervention if appropriate and transfer when necessary in collaboration with the relevant receiving hospital. In addition, due to the specific risk factors, island surgical services should provide an emergency Caesarean Section service as a minimum. Procedures which would be included within the emergency workload are: appendicectomy, endoscopy (including of injection of varices), evacuation of retained products of conception, lacerations, manipulation of simple bone fractures and joint dislocations, repair of perforated ulcer, repair of haemorrhage (including splenectomy), resection and anastomosis of bowel, ruptured ectopic pregnancy

surgery, chest drain, and drainage of pericardium injury (for cardiac tamponade) plus suturing of penetrating injury.

The key role of the surgical service in the RGH is the provision of planned surgery, primarily on a day case basis for the local community. The RGH surgeon should also provide outreach day case surgery in Community Hospitals where those exist. Surgery which should be provided on a planned care basis by surgeons local to the RGH is: biopsy of lesions, cholecystectomy and/or exploration of common bile duct, circumcision, endoscopy, nail bed procedures, repair of rectal prolapse, peri-anal procedures, resection and anastomosis of bowel, resection of prostate gland, simple undescended testes repair and scrotal surgery including vasectomy, and varicose veins surgery.

Where breast surgery is to be carried out within an RGH, it should be concentrated into the workload of one surgeon, and that surgeon should become part of a formal network with either a DGH or a tertiary centre.

Services which should be provided on a visiting basis are those of ophthalmology, Ear Nose and Throat, Urology, Gynaecology and Orthopaedics. It is recognised, however, that some surgeons within the RGH will already have received the necessary training and have the team competences to provide some of the visiting services listed (for example, orthopaedics and urology).

Surgical services which should not be provided within the RGH include surgery on children under the age of 5 years, neurosurgery (such as emergency Burr Holes) , operations on the neck and chest (other than emergency tracheostomy), stomach and rectum operations, liver, vascular, ovarian, vaginal or penile operative procedures (with the exception of circumcision).

Where there is a proposal to provide local surgery which is not included within the boundaries outlined above, there should be formalised governance processes which would include the demonstration of local health need, team competences, outcomes demonstrated to be at least as good as other centres and approval by the local NHS Board and the Regional Surgical Service Network.

The workforce which is necessary to deliver the service outlined above is a team-based competency approach. The specific medical workforce required is three general surgeons, supported by their anaesthetic, and acute medicine colleagues.

## **Introduction**

The work of the Remote and Rural Project has reached a stage whereby an Interim Report has been drafted and submitted to the Scottish Executive Health Department (SEHD). The report sets out emerging models for remote and rural healthcare along with a supporting infrastructure. 28 commitments have been made and a number of next steps identified as necessary before the final report is produced.

One of those next steps is to determine the future role and shape of surgery within the Rural General Hospital (RGH). The Remote and Rural Steering Group felt that a workshop should be held involving all of the rural surgeons and other stakeholders such as those from District General Hospitals (DGH) and tertiary centres, along with representatives from the Medical Colleges and service delivery. This workshop would be facilitated by the North of Scotland Public Health Network (NoSPHN) as the discussion on the day would be based on the Needs Assessment on the RGHs undertaken by the Network<sup>1</sup>.

The workshop was held in the Centre for Health Sciences in Inverness, with videoconferencing facilities available. The format for the afternoon was scene setting, followed by a presentation outlining policy context followed by a further presentation detailing the NoSPHN Needs Assessment. Participants were then split into discussion groups which had a facilitator and a scribe.

## **Scene Setting**

Dr Bashford, Medical Director, NHS Highland, opened the workshop and set the scene indicating the purpose of the workshop is to gain consensus on the role and shape of surgery within the RGH. It is recognised that there are unique issues for individual RGHs which have to be resolved locally against a pan-Health Board and national context. However, our challenge today is to define core surgical services which will be common to all RGHs, agree governance arrangements and be explicit in policy terms. It is for individual NHS Boards to determine the level of service over and above the core which may be delivered in their own area. Later on that day Dr Bashford recognised the fact that healthcare in remote and rural

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<sup>1</sup> (2007) *Rural General Hospitals Needs Assessment* March 2007 NoSPHN

areas generates passionate responses and widely divergent views around service configuration and delivery. The role of the project is to bring those divergent views closer together to identify areas of commonality and core service, so that policy can be developed and the collective voice of remote and rural is stronger. He went on to emphasise that is imperative that we focus on developing consensus in order to produce policy outcomes appropriate and agreed by stakeholders.

## Policy Context

Dr Annie Ingram, Regional Director of Planning and Workforce for the North of Scotland, and Project Director of the Remote and Rural workstream set out the workshop in context of the Project and its work to date. She went on to inform the group that the Remote and Rural workstream is a national project stemming from Delivering for Health<sup>2</sup>. The Project Team is tasked with developing a policy context for sustainable healthcare in remote and rural areas. The Project was specifically asked to define the role and function of a RGH.

Six Rural General Hospitals are identified in the National Framework for Service Change (NFSC)<sup>3</sup> and these are:

- Gilbert Bain Hospital, Lerwick;
- Balfour Hospital, Kirkwall;
- Western Isles Hospital, Stornoway;
- Caithness General Hospital, Wick;
- Belford Hospital, Fort William; and
- Lorn and the Isles Hospital, Oban.

There is a debate as to whether some hospitals which are currently categorised as community hospitals should possibly be defined as RGHs. These are Stranraer, Lochgilphead, Campbeltown, and Broadford. It has been agreed that the Project should concentrate on defining the RGH and once defined the other hospitals can compare themselves against the agreed definition. Dr Ingram explained that the current difference between these hospitals is that the RGH provides an emergency surgical service.

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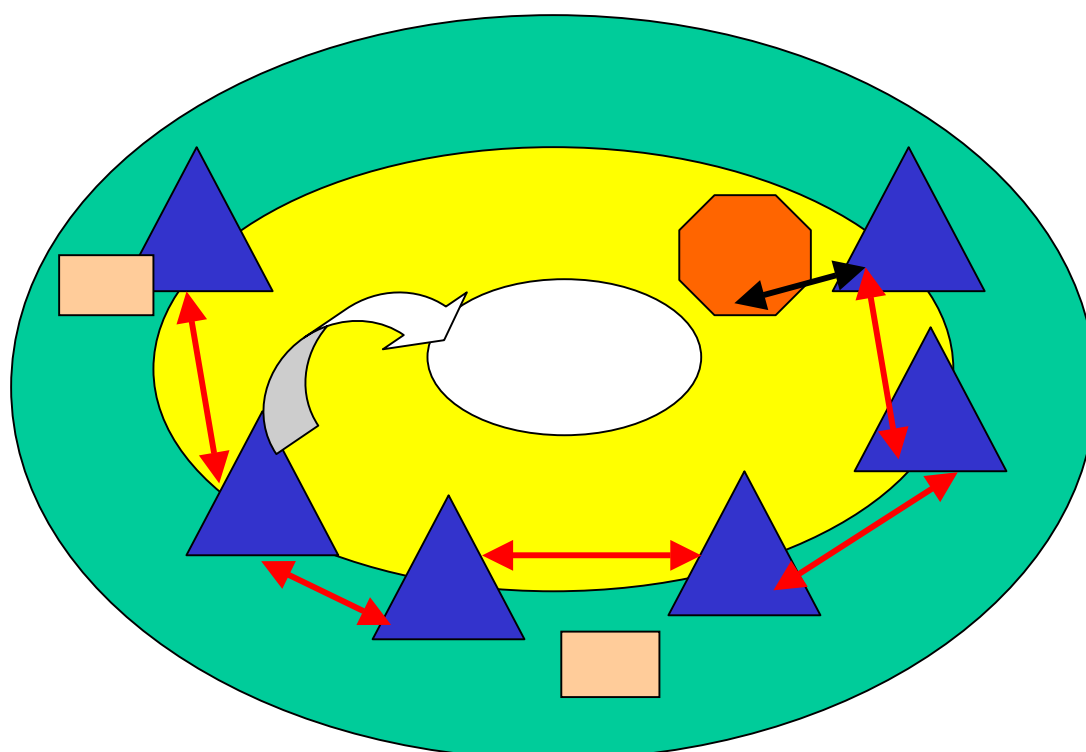
<sup>2</sup> (2005) *Delivering for Health*, Oct 2005 SEHD

<sup>3</sup> The full Action Team Report, supporting the NFSC "Rural Access Action Team: Final Report" can be accessed at ([www.show.scot.nhs.uk/SEHD/NationalFramework](http://www.show.scot.nhs.uk/SEHD/NationalFramework))

## Remote and Rural Healthcare - The Emerging Model

This project was established to develop a Strategy for sustainable healthcare within remote and rural Scotland. This Report considers a number of aspects of Remote and Rural healthcare, including the integration between different aspects of care and the following model summarises the system of care that should exist or may need to be developed.

Figure 1: Model of remote and Rural Healthcare



Delivering for Health identified that the majority of care can be provided within local communities, with only a minority of cases requiring further referral outwith that community. Within the remote and rural communities of Scotland, there are only a limited number of health and social care professionals, whose skills and expertise need to be shared if these communities are to have local access to the widest spectrum of care. The development of Extended Community Care Teams (ECCT) will ensure that a robust system of locally available services is both available and sustainable.

All remote and rural areas will also have access to intermediate care services, some within a Community Hospital (CH) and others delivered within a patient's home. Some communities will also have a Community Hospital and others will have a Rural General Hospital (RGH), and these RGHs may fulfil the Community Hospital role as well as the RGH role, or they may be separate.

## **The Rural General Hospital**

14 Focus Groups and a number of workshops led to a review of the definition of the RGH contained within the NFSC. This revised definition seeks to describe the service that should be provided within an RGH:

“The RGH undertakes management of acute medical and surgical emergencies and is the emergency centre for the community including the place of safety for mental health emergencies. It is characterised by more advanced levels of diagnostic services than a Community Hospital and will provide a range of outpatient, day-case, inpatient and rehabilitation services.”

The focus groups and events have sought to further define the role and function of the RGH in a number of ways including:

- Agreement of a range of underlying principles common to all RGHs;
- Triangulation of activity data over a 10 year period, to determine how RGH's are actually used;
- Development of a menu of core services;
- Refinement of the list of services identified in the original Rural Access Team Report<sup>4</sup>; and
- Needs Assessment.

For the purposes of today's workshop, Dr Ingram outlined the underlying principles and informed participants that Dr Eric Bajjal, Chair of the NoSPHN would present the findings of the RGH Needs Assessment.

### **Underlying Principles**

All Rural General Hospitals should have:

- A defined range of Core Services;
- Standard protocols for procedures and transfers;
- Formal explicit links with other centres, developed through multi-disciplinary networks;
- Access to a standard range of diagnostics – some locally provided, some distant;

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<sup>4</sup> (2005) “The National Framework for Service Change in NHS Scotland, Rural Access Action Team, Final Report, Annex 2: List of conditions to be managed in a Rural General Hospital” Scottish Executive, [www.show.scot.nhs/sehd/nationalframework](http://www.show.scot.nhs/sehd/nationalframework)

- Practitioners who are competent to deliver the level of care required – not necessarily consultant led in every discipline;
- Appropriate training programmes;
- Skills update and mentoring should be supported by larger centres; and
- Transfer from local services should be directly to definitive care, where it is possible to determine this.

Dr Ingram concluded her presentation by asking “what should the RGH do?”. She went on to say that the purpose of today’s meeting is to define the role and shape of surgery within the RGH, so that this can be incorporated into the Final Report which will inform government policy for remote and rural areas.

## **RGH Needs Assessment**

Dr Eric Bajjal, Consultant in Public Health Medicine, NHS Highland and Clinical Lead of the NoSPHN presented the findings of the rapid appraisal of the current use of hospital services by the catchment populations of rural general hospitals to determine the relevance to the emerging model of a rural general hospital.

### **Rationale**

The assessment described a model for the RGH within the context of non-standardised hospital-based activity. This does not allow for consideration of the degree to which local populations health needs are currently being met. However, hospital activity can be analysed to give standardised rates which allow for structure as well as size differences in populations. On this basis, hospital utilisation by catchment populations around RGHs can be compared with the national average without such bias (rural populations tend to be more elderly). In addition to comparative local population intervention rates, the degree to which the overall hospital utilisation rates of local populations are being met by the uptake of the local RGH services can be assessed.

### **Main Findings**

These findings are based on 4 years of hospital data SMR01 (2002/03-2005/06 inclusive).

1. There were large variations in the local population intervention rates between hospitals ranging from 7% to 300% of the national average.
2. There were large variations also in the total catchment population's hospital activity taken up at the RGHs ranging from 0% to 98% which shows that the type of activity undertaken in one RGH may not be carried out locally in another.
3. High emergency and elective intervention rates were experienced by some catchment populations; conversely, for some populations both elective and emergency interventions were relatively low when considered against the Scottish average. In yet others, only the elective intervention rates were high.
4. With one exception, surgical day case activity was significantly higher than the national average, whilst again with one exception, medical day case activity was significantly lower.
5. All catchment populations were associated with significantly higher elective surgical rates for cancer patients and for 4 out of 6 hospitals, this was predominantly taken up locally.

The implications of these findings apply locally to individual RGHs and potentially, generically to all RGHs.

### **Local Implications**

The reason for some of the variations found are thought to arise due to differences in patient pathways. For example, low medical day case rates but high elective medical in-patient rates for the island hospitals, where travel times are such that an overnight admission is more feasible than a procedure on a day case basis. Another example may be the relatively high elective surgical in-patient rates for patients with cancer, where local practices differ from the specialised centres in terms of not providing a one-stop service. Other variants possibly need more investigation such as the almost universally high surgical day case rates. However, these variations should be looked at to confirm or otherwise, the local understanding of the patient pathways.

### **Generic Implications**

The variations that have been revealed between individual RGHs in respect of the population intervention rates and ratios of local to out of areas uptake, may very well reinforce the need to standardise the service provision by adoption of one RGH model. They may also mean that one model does not fit all situations and it is important that there is an understanding of why these variations exist. If, for instance, some of these are as a result of lack of qualified,

supported, competent clinicians, then imposition of one model for all rural populations is not likely to be effective without support to change patient pathways. Clinical cost-effectiveness issues should also be taken into account and any changes to current patient pathways subject to clinical governance arrangements such as audit activity. These changes will not just impact on the RGH, but also on the District General Hospitals (DGH) and Regional Centres, particularly in terms of professional support, communication and effective network working.

## **Group Discussions**

Participants were then split into discussion groups which had a facilitator and a scribe. The groups were given questions to use as the basis for their discussions. The feedback is detailed as follows under each question posed.

## **Surgical Models**

During this process different models of hospital service have been proposed ranging from triage and transfer, with only visiting elective surgical services; limited local surgery, including immediate response in emergency situations, with visiting elective services; to a wider range of local surgery dealing with the majority of straightforward procedures, transferring only those patients who need access to specialist services and a more limited range of visiting services. The Interim Report identified the need to define the precise role for surgery.

Data suggests that the bulk of surgical work is elective, primarily day surgery, with much less emergency surgical interventions. This suggests that a key role for the RGH should be the provision of elective surgery, primarily day surgery, for the local community.

The majority of participants broadly agreed with the emerging model for remote and rural healthcare but there needed to be a clearer description of the surgical service. Some participants felt strongly that the need to provide locally based emergency surgery needs to be reinforced as locally available emergency services were of equal importance, particularly in the island setting, to having a range of elective services.

**What should be done on an elective basis in an RGH?** (drawn from the Vikings Surgeon's Procedures List seen in Appendix 1).

The discussion focused around the criteria for procedures that should be done in an RGH, both elective and emergency. There was general agreement that it is possible to have a consensus on a core list of what procedures should be undertaken on an elective basis in an RGH. Most participants felt that within each RGH there should be an agreement of what they should and should not provide and that this needs to be supported by formal clinical governance procedures. Attendees also stressed the need to recognise that there should be sufficient complexity in what is provided to attract surgeons into remote and rural positions.

The core activity would be determined by what is available. Limiting factors include competencies and other resources. There was general agreement that facilities would need to include beds that could be stepped-up to HDU level for short periods, anaesthetics, general medical cover and appropriately trained multi-disciplinary team. In terms of safety, the perception of acceptable risk is dependent on the support facilities available. Transport, and therefore patient convenience, remains a major issue for remote and rural health, however the service would still have to be cost-effective.

There is little evidence to demonstrate that the volumes and outcomes relationship is relevant to the majority of activity within the RGH. Any core list should be underpinned by the following principles:

- Training pathways for rural surgeons should reflect the general nature of the surgical service that needs to be provided, this may include training across surgical disciplines eg general surgery, orthopaedics, and urology;
- Multi-disciplinary team support including anaesthetic cover, general medical cover, nursing and AHP skills;
- Comprehensive patient and clinical risk assessment; and
- Availability of local resources (e.g. equipment).

Participants felt, that once agreed, the core list of procedures could be utilised as an essential guide for appointment, in that it identifies some of the key skills of surgeons to work in the RGH, and is also a means of meeting the requirement of informing the population of the services available to them according to national policy.

There was general agreement on the majority of elective procedures which should be carried out in the RGH, as detailed in the Viking Surgeon's Survey. The exceptions to these as listed under the heading of 'what should not be done in the RGH'. The issue of breast surgery however raised most controversy. Some participants strongly felt that this service must be

provided locally as it forms a large portion of RGH surgical activity. The conclusion reached was where breast surgery is carried out within an RGH, it should be concentrated into the workload of one surgeon, and that surgeon should become part of a formal network with either a District General Hospital (DGH) or a tertiary centre.

### **What procedures should definitely NOT be undertaken in an RGH?**

There was a general view that no elective surgery should be carried out on children under the age of 5 within an RGH.

In terms of adult patients, whilst there were some differences of opinion, the majority of participants agreed that the following procedures should not be undertaken in the RGH.

- Neurosurgery (for example, emergency Burr Holes)
- Dental extractions (except when necessary after trauma)
- Operations on the pharynx, larynx and trachea (other than emergency tracheostomy)
- Thyroidectomy
- Parathyroidectomy
- Excision of pituitary gland
- Cardiac Surgery
- Opening of chest
- Gastrectomy
- Ovarian procedures
- Penile or Vaginal operative procedures (with the exception of circumcision)
- Pan procto-colectomy
- Excision of rectum and like operations
- Liver resection
- Biliary procedures (other than the exploration of Common Bile Duct)
- Vascular procedures (other than varicose veins)
- Open biopsy/excision of muscle tumour
- Operations on tendons other than simple extensor tendon repair

### **For procedures where there is disparity of views ie that are in the “grey “ area, what evidence is there as to where they should be done?**

Volumes and outcomes relationships were quoted as relevant to the decision-making process, but that the evidence was not absolute. The core list of procedures should be reviewed

every 3-5 years through the RGH Network, and could be expanded depending on population needs, through a local governance approval process.

There was consensus that for work to be done outside of an agreed core, it would need to:

- Be a responsive to local health needs rather than demand;
- Part of team delivery, for example delivered by a local multi-disciplinary team within the RGH and/or as part of an networked service with a DGH/tertiary centre; and
- Outcomes demonstrated to be at least as good as other centres.

There was also broad agreement that any proposed new procedures must go through local (and network) governance procedures for ratification prior to formalisation.

### **Which surgical procedures would require HDU beds within an RGH and is it appropriate to have High Dependency (HDU) beds in an RGH?**

The group felt that it is appropriate to have the capacity to pull together skills necessary to provide local high dependency care for short term periods, either as 24-48 hour post operative care delivery, or less than 24 hour care prior to transfer of the patient. The rationale for this is that this is a requirement to adhere to certain Scottish Intercollegiate Guidelines (SIGN) and because it might prevent the need to transfer, but that it depended on patient risk assessment, co-morbidity, availability of resources, such as staff. Examples where HDU care is required would be for the following procedures:

- All resections, laparotomy for perforated ulcer, duodenal ulcer bleeding, chest trauma (blunt), triple trauma;
- Criteria for assessment – assessing potential need for ventilation and team elements (i.e. wider team support required – high dependency and ward nursing).

### **Should a Caesarean Section Service be provided? Elective and/or Emergency? If so by whom?**

The majority view was that there is a need for a caesarean section service on the islands to support a community midwifery maternity service because of their specific geographical risk factors. The feedback was that this could be safely provided by the general surgeons. There was no consensus around the provision of an elective caesarean section service, although some expressed the view that it may be better to provide a caesarean section service for both elective and emergency procedures for the purposes of skills maintenance.

## **Which other procedures could be undertaken in an RGH by a visiting specialist, which would add value to the local service?**

The consensus view was that there is definitely a role for visiting specialists. Areas which participants felt should be provided on a visiting basis were:

- Ear Nose and Throat (ENT)
- Ophthalmology
- Urology (if not already provided by the general surgeons)
- Orthopaedics
- Gynaecology

It was felt that there was also a role for what was described as 'collaborative' surgery, with joint operating lists by visiting specialists and local surgeon. Examples of gynaecology and breast surgery were provided. The skills of the wider team would also have to be taken into consideration if this option were followed.

## **Emergency Surgical Workload**

The majority of participants felt that emergency services should be an essential component of surgery in the RGHs and that this remains the principle 'raison d'être' for having surgery in the RGH. These resources are then in place to support an elective workload.

This view was not unanimous, however and some attendees felt that there was a marked difference between the emergency services required on the island RGHs as compared to the mainland. Different island geography posed increasing levels of risk. For example, Shetland has a significantly higher incidence of airport closure<sup>5</sup>, and length of time of closure due to bad weather than Orkney or the Western Isles.

Transfer of patients was discussed, with the group agreeing that the weather is a major factor on the islands. Helicopters are far more susceptible to poor weather than fixed wing aircraft, and this makes the capacity to intervene necessary.

As a minimum the emergency surgical service should provide triage, resuscitation, diagnosis, stabilisation, admission if appropriate and transfer if necessary, recognising that transfer may

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<sup>5</sup> (2007) 'Data on H&I Airport Closures', unpublished. Highlands and Islands Airport Authority

not happen immediately and a short period of admission may be required. This has implications for the core competencies of the multi-disciplinary team. The majority felt that a consultant surgeon continues to be needed to manage the uncertainty which accompanies an emergency patient admission, supported by physicians and anaesthetists in a symbiotic arrangement, although there was a view that a resident surgeon is not required on all sites. In terms of triage, participants felt that the areas of focus were:

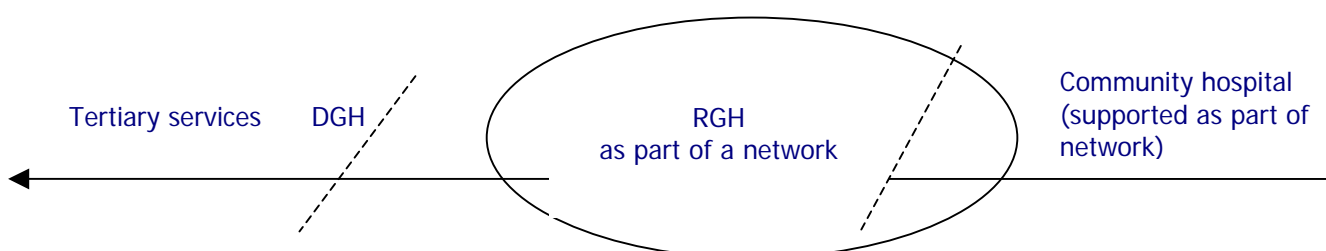
- Life saving – the RGH needs to manage life threatening situations including certain obstetric emergencies. On the islands, maternity services would be significantly compromised and possibly could not be provided unless there was 24hr surgical cover.
- Time critical – there are some emergencies where time is the critical factor and staff within the RGH must have the competence to manage these at least in the initial phase.
- Expertise to identify what must be transferred on and when.
- Transport - the augmentation of rapid transfer to the DGH or tertiary centre from RGH with agreed pathways and necessity for SAS to be involved.

In relation to specific procedures to be undertaken, there was general agreement with the list in the Viking Surgeon's Survey, with the exceptions already listed under the section 'what should not be done in the RGH'.

The patient with a fractured neck of femur was discussed, and it was felt that as long as there is the competency and proper equipment available, then this should be operated upon locally

### **How do these proposals relate to community hospitals? What are the main differences between the Community Hospital and the RGH in surgical care?**

One group described the RGH as being part of a continuum of care as depicted in the model below.



Participants felt that the main differences between RGHs and community hospitals in surgical care were:

- RGHs perform emergency procedures while community hospitals perform only elective procedures. Community hospitals only occasionally offer A & E services, led by GPwSI and in some places GP with a degree of anaesthetic training;
- The surgical procedures in community hospitals are performed largely by GPs and some by visiting surgeons and anaesthetists;
- Community hospitals perform mainly day case surgery; and
- Community hospitals do not have locally resident specialist surgeons.

On the other hand, RGH consultants can provide visiting outpatient and day case surgical services to Community Hospitals, as is the case in Skye and Golspie.

### **How do the proposals relate to DGHs/Tertiary Centres? What are the perspectives/ expectations among these clinicians?**

There was strong support for formalised networks and integrated working rather than informal "grace-and-favour" type arrangements. The views were that there were systems and processes which such a formalised network would provide and these included protocols and guidelines, governance arrangements, peer group support and education, research, skills update and access to expert clinical advice either face to face or by e-health means.

Investment in infrastructure, such as advanced electronic communication including investment in robust Information Technology would be essential for these networks to function effectively.

Mainly, current arrangements with DGHs/tertiary centres are informal. The larger centres accept referrals and offer visiting services, but generally there is little in the way of understanding of local geography and communication is dependant upon the relationships between centres. There is no sense of ownership in either direction.

There is support for RGH consultants visiting the DGH, but the occurrence of this is rare. The logistics of implementing such a system would need to take account of overall management of patients and further modelling work would be required.

There is a need for a Health Board and region-wide approach to service planning, provision and clinical governance.

### **What is the workforce model which would support this level of service?**

15.4% of activity is categorised as an emergency admission and this also shows that endoscopic procedures are by the far the most common. Excluding the endoscopic procedures, the remaining surgical activity equates to 1.7 procedures per week in total over the full 24 hour period. This suggests that out of hours activity will be an even lower proportion of the total surgical workload. Given the limited emergency activity out of hours, participants were asked to consider what cover is required to manage surgical emergencies and how can the risks be minimised?

The majority of participants felt notwithstanding the low activity, there was still a need for a surgeon 24/7 and in order to ensure a workable rota and work/life balance three rural general surgeons would be required (although it is recognised that the model in Orkney has only two surgeons and appears to work well). These would be part of the wider medical team which is symbiotic and includes anaesthetics and general medicine. For example, groups discussed how the absence of a surgeon could impact on medical admissions. For instance a medical admission of haematemesis should only be safely be made with the assurance that there was a surgeon who could intervene if need be.

### **What services should be nurse-led?**

Participants felt that there are a number of services which could be nurse led such as urological assessment, clinics, pre-operative assessment and post-operative support, accident and emergency, tissue viability, minor surgical procedures, chemotherapy, renal dialysis, and colorectal screening.

**What are the governance processes necessary to underpin this allocation of case mix?** e.g. formalised care pathways which include protocols for specialist supported clinical decision making, audit.

The vast majority of attendees felt that there was a need to formalise governance mechanisms. In terms of care pathways and protocols, participants felt that these should be the same as elsewhere in the country because the standards should be the same.

Processes for governance could be developed through the formalised vertical networks with larger centres, and through lateral networks between RGHs, with robust links into local NHS Board governance arrangements.

## Conclusions

The future role and shape of surgery in the RGH is to provide elective outpatient, in-patient and day case services and a 24 hour emergency service within the agreed list of procedures. There will be no elective surgery carried out on children under the age of 5 within an RGH.

As a minimum, an emergency caesarean section service should also be provided on the islands. There should be the capability and the capacity to create a team which can deliver high dependency care where it is appropriate to do so. The RGH should be seen as part of a continuum of care, from primary to tertiary care. The RGH surgeon should provide support to the community hospital. There should be formalised networks established between the DGH and or tertiary centre and the RGH to support locally available services, and address the wider governance issues. Visiting surgical services to the RGH are to be encouraged, particularly in the areas of ENT, Ophthalmology, Urology, Gynaecology and Orthopaedics.

The workforce required to deliver this service is three consultant rural general surgeons supported by their medical colleagues in anaesthetics and medicine and by the wider multi-disciplinary team. The role for GPwSI in anaesthetics and surgery needs to be explored, whilst the concept of dual accreditation in medicine appears to have general acceptance, although there was concern regarding the attractiveness of this training option. There is support for nurse-led services in Accident and Emergency, pre-operative assessment, urological assessment, colorectal screening, tissue viability, minor surgical procedures, chemotherapy and renal dialysis.

Formalised governance mechanisms need to be put in place. Care pathways and protocols should be developed. Processes for governance should be developed through the formalised

vertical networks with larger centres, and through lateral networks between RGHs, with robust links into local NHS Board governance arrangements.

The outcomes of this workshop have been approved by the Remote and Rural Steering Group in August 2007. The findings of this report will now be incorporated into the final report of the remote and rural project which will be presented to the SEHD for consideration in September 2007.

## APPENDIX I

### Viking Surgeons Survey on Procedures to be undertaken in RGH

Specialty	Procedure	Done by RGH Surgeon	Not to be done in RGH	Agree
Neurosurgery	All	None	All	13
Endocrine	Pituitary	None	All	15
	Thyroid	Excision of thyroglossal cyst Excision simple thyroid cyst	Thyroidectomy (partial or total)	12
	Parathyroid	None	All	15
	Other endocrine	None	All	14
Breast	Mastectomy	Yes - without reconstruction	Reconstructive	15
	Biopsy	Yes		14
	Abscess drainage	Yes		15
	Nipple operations	None	All	10
	Duct operations	Simple duct excision	Complex duct excision	10
Ophthalmology	Suture of simple eyelid/eyebrow cuts	Yes		14
	All other procedures	None	All or visiting surgeon	15
Ear	Simple foreign body removal	Yes		15
	Simple suture of pinna	Yes		15
	All other procedures	None	All or Visiting surgeons	12
Nose and nasal sinuses	Simple foreign body removal	Yes		15
	Simple suture of nasal wounds	Yes		15
	Arrest of epistaxis by packing	Yes		15
	All other procedures	None	All or Visiting surgeons	15
Pharynx, larynx and trachea	Tracheostomy	Yes		14
	All other procedures	None	All	14
Mouth	Excision of Lip lesion	Yes		14
	Suture of lip laceration	Yes		14
	All other lip procedures	None	All	14
	Teeth extraction	Only when necessary after	Extractions only by dentist	15

		trauma		
	All other procedures	None	All or visiting surgeon	14
	Suture of tongue laceration	Yes		15
	All other procedures	None	All	14
	Drainage of peritonsillar abscess	Some		14
	All other tonsil procedures	None	All or visiting surgeon	14
	Removal of salivary gland calculus	Some		13
	All other salivary gland procedures	None		12
Oesophagus	Oesophagoscopy	Yes		14
	Injection of oesophageal varices	Yes		14
	All other oesophageal procedures	None	All	11
Stomach	Gastroscopy	Yes		15
	Insertion gastrostomy	Yes		15
	Repair perforated ulcer	Yes		15
	Arresting haemorrhage from ulcer	Yes		15
	Gastrojejunostomy	Yes		15
	Pyloroplasty	Yes		14
	Partial gastrectomy	Some		14
	All other gastric procedures	None	All	10
Duodenum	Duodenoscopy	Yes		15
	Repair perforated ulcer	Yes		15
	All other duodenal procedures	None	All	12
Jejunum/ileum	Jejunostomy	Yes		15
	Resection and anastomosis	Yes		15
	Excision Meckel's diverticulum	Yes		15
	Repair of perforation	Yes		15
Appendix	Appendicectomy	Yes		15
Colon	Colonoscopy +/- polypectomy	Yes		15
	Resection and anastomosis of colon	Yes		14
	Colotomy	Yes		15
	Formation of colostomy	Yes	All	14
	Pan proctocolectomy	None		12
Rectum	Abdominal operation for prolapse	Some		13
	Other prolapse operations	None	All	10
	Transanal excision of rectal lesions	Some		15
	Other rectal procedures	None	All	13
Anus and perianal region	Simple excision of anal/perianal lesions	Yes		15

	Haemorrhoid procedures	Yes		15
	Anal fissure procedures	Yes		14
	Fistula in ano	Most		14
	Perianal/ischiorectal abscess drainage	Yes		15
	Pilonidal sinus procedures	Yes		15
	Other anal/perianal procedures	None	All	13
Liver	Intraoperative liver biopsy	Yes		14
	Packing of liver to arrest haemorrhage	Yes		15

Gall bladder	Cholecystectomy	Yes		15
	Cholecystostomy	Yes		15
	Cholecystjejunostomy	Yes		15
Bile ducts	Exploration of common bile duct	Yes		15
	All other bile duct procedures	None	All	14
Pancreas	Intraoperative pancreatic biopsy	Some		15
	All other pancreatic procedures	None	All	14
Spleen	Splenectomy (total or partial)	Yes		15
	Splenic repair	Yes		15
Heart	Drainage of pericardium (tamponade)	Yes		15
	Suture penetrating injury	Yes		14
	All other cardiac procedures	None	All	15
Arteries and veins	Arrest of bleeding from any extracranial artery or vein	Yes		15
	All other procedures on major arteries or veins	None	All	13
	Primary varicose vein procedures	Yes		15
	Recurrent varicose vein procedures	Some		14
Kidney/ureter	All procedures	None	All	12
Bladder	Suprapubic and urethral catheterisation	Yes		15
	Diagnostic cystoscopy	Yes		15
	Therapeutic cystoscopy	Some		15
	Traumatic bladder rupture	Some		13
Prostate	Transrectal biopsy	Yes		12
	All other prostate procedures	None		12
Urethra	Simple dilatation	Yes		14
	All other urethral procedures	None		12
Scrotum and testis	Complex undescended testis	None	All	15
	All other scrotal procedures	Yes		15
Spermatic cord	Vasectomy	Yes		15

	All other spermatic cord procedures	None	All	12
Penis	Circumcision	Yes		15
	Dorsal slit of prepuce	Yes		15
	All other penile procedures	None	All	15
Vagina	All procedures	None	All or gynaecologist	13
Uterus	Caesarian section	Yes		14
	Manual removal of placenta	Yes		14
	Evacuation retained products of conception	Yes		14
	All other uterine procedures	None	All or gynaecologist	12
Fallopian tube	Ruptured ectopic	Yes		15
	All other fallopian tube procedures	None	All or gynaecologist	15
Ovary	Ruptured or torted ovarian cyst	Yes		15
	Other ovarian operations	None	All or gynaecologist	14
Skin	Lacerations without skin loss	Yes		15
	Lacerations with skin loss	Some		15
	Biopsy/excision of skin lesions	Yes		15
	Simple skin grafting	Yes		15
	Excision subcutaneous lesions	Most		15
	All other skin procedures	None	All	13
	All nail or nail bed procedures	Yes		15
Chest wall	Insertion of chest drain	Yes		15
	Thoracotomy	Yes		13
	All other procedures on chest wall, pleura and diaphragm	None	All	13
Abdominal wall repairs	Closure of gastroschisis	None	All	15
	All operations on hernias of abdominal wall	Yes		15
Peritoneum	Open drainage of intra-abdominal abscesses	Yes		15
	Laparotomy	Yes		15
	Division of bands/adhesions	Yes		15
	Laparoscopy	Yes		15
	Other procedures involving peritoneum	None	All	13
Tendons	Simple extensor tendon repair	Yes		15
	Excision of ganglion	Yes		15
	All other tendon operations	None	All or Orthopaedic surgeon	14
Muscle	Excision intramuscular lipoma	Yes		15
	Open biopsy/ excision of muscle tumour	Some		14

Lymph nodes	Excision biopsy or excision of lymph node	Most		15
	Other lymph node or lymph duct procedures	None		14
Other	Branchial cyst excision	Most		12
	Branchial fistula or cystic hygroma excision	None	All	14
Bones and joints of skull and spine	All procedures	None	All	15
Other bones and joints	Primary reduction and external immobilisation of simple long bone fractures	Yes		15
	Reduction of joint dislocation	Most		15
	Joint replacement	None	All or Orthopaedic surgeon	14
	Removal of metal ware	Some		15
	All other orthopaedic procedures	None	All or Orthopaedic surgeon	10
	Fractured neck of femur surgery	Some		15

**Participants**

<b>Name</b>	<b>Title</b>	<b>Organisation</b>
Dr Allan Henderson	GP and representing Dr Jespersen	NHS Highland
Dr Andrew Hothersall	Consultant Anaesthetist	NHS Western Isles
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Mr David Sedgwick	Consultant General Surgeon	NHS Highland
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Mr John Duncan	Consultant General Surgeon	NHS Highland
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**List of Apologies**

Dr Ken McLay	Medical Director Acute Division	NHS Grampian
Dr Ken Proctor	Associate Medical Director	NHS Highland
Dr Pauline Strachan	Associate Medical Director	NHS Grampian
Dr Roelf Dijkhuizen	Medical Director	NHS Grampian
Dr Susan Jappy	Assistant Director of Public Health	NHS Grampian
Dr Susan Vaughan	Epidemiologist	NHS Highland
Mr Andy Fuller	Divisional Manager	Scottish Ambulance Service
Mr Jan Szczepanski	Consultant General Surgeon	NHS Highland

Mr John McGregor  
Dr Sarah Taylor  
(failed v/c)  
Dr Sheila Scott  
Mr Nick Browne

Royal College of Surgeons  
Director of Public Health  
Director of Public Health and Planning  
SEHD – seconded to Western Isles

NHS Ayrshire and Arran  
NHS Shetland  
NHS Western Isles  
NHS Western Isles