



Northern England
Strategic Clinical Networks

North East Vascular Services Case for Change

Author: Elizabeth Morris, Network Delivery Manager, Northern Clinical Network.

Clinical advice provided by: Professor Gerard Stansby, Chair of the Vascular Advisory Group.

Data analysis: Linda Wintersgill, Information and Audit Manager, Northern Clinical Network



HS England “High quality care for all, now and for future generations.” the NHS belongs to us all

CONTENTS

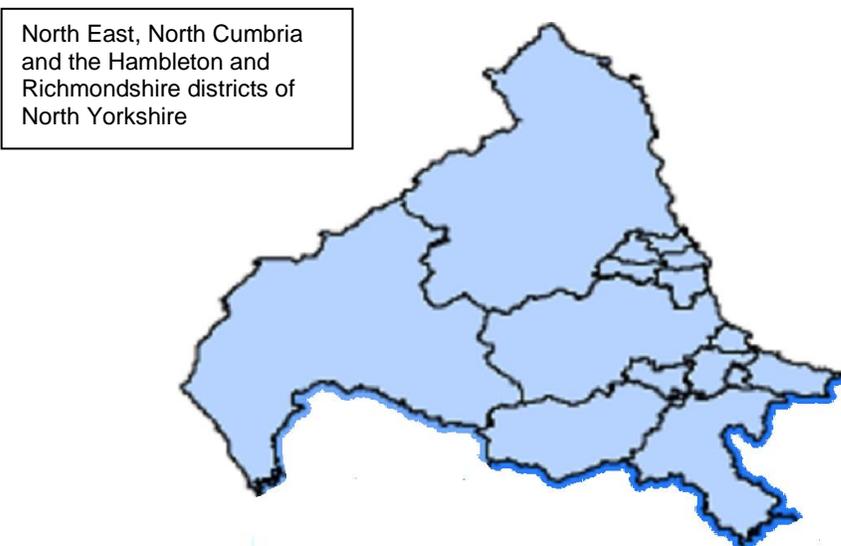
1.	Introduction	
	1.1 Geographical Area	3
	1.2 The Nature of Vascular	4
	1.3 Local Context	4
2.	Drivers for Change	
	2.1 Evidence Base	5
	2.2 The Vascular Society of Great Britain and Ireland	6
	2.3 The National Abdominal Aortic Aneurysm Screening Programme (NAAASP)	7
	2.4 NHS Service Specification and Standard Contract for Specialised Vascular Services (Adult)	8
3.	North of England Cardiovascular Network (NECVN) Vascular Strategy, 2010 - 2013	9
4.	Current Provision of Vascular Services in the North East	10
5.	Progress to Date	11
6.	How Services Compare to Requirements	14
7.	Other Key Issues	16
8.	Risks	16
9.	Recommendations	16
10.	Summary	17
11.	References	18
	Appendices	

1. Introduction

This Case for Change focuses on the North East Vascular Services and how the implementation of evidence based standards will require a change in how and where services are provided, in order to deliver a sustainable quality service and ensure patient safety.

The document also presents the local discussions that have taken place, including agreements that have been reached to date. In conclusion, based upon the current information recommendations have been made on the way forward.

1.1 Geographical Area



The map above shows the geographical area covered by the Northern England Strategic Clinical Network (NESCEN) which was established on the 1st April 2013.

It should be noted that this report refers to the North East and Hambleton and Richmondshire districts of North Yorkshire services but does not include North Cumbria. This is due to the fact that prior to April 2013, North Cumbria was part of the Lancashire and Cumbria Network. In 2012, following a rationalisation of centres the vascular unit at North Cumbria University Hospital, Carlisle emerged as one of the three successful bids to host a vascular centre in Cumbria. This decision was subsequently endorsed by the Secretary of State.

Following the NHS reorganisation in 2013, the North Cumbria area became part of the NESCEN. As part of these new arrangements, discussions have commenced between the North Cumbria and North East vascular surgeons in order to reach an agreement on joint working. Further details of the progress on the North Cumbria vascular services model will be presented in a separate report.

1.2 The Nature of Vascular Services

Vascular services deal with disorders of the arteries, veins and lymphatics. Atherosclerosis (arterial disease) may affect any vascular territory in the body. When blood flow to the brain or the heart is affected then the patient's secondary care is mainly under stroke services or cardiology. However, for most other territories, the care of the patient falls under the vascular teams which consist of vascular surgeons and associated professionals such as interventional radiologists, usually in the context of a vascular unit. As well as dealing with problems of blocked or narrowed arteries vascular surgeons also deal with the care of patients with aneurysms (abnormally dilated arteries) and disorders of the veins including varicose veins, venous leg ulcers and Deep Vein Thrombosis.

Historically, the UK does not compare well internationally for certain vascular procedures. The UK has had until recently the highest mortality rates in Western Europe following elective abdominal aortic aneurysm surgery and has been among the slowest nations to uptake of new endovascular technology. There are also significant gaps in the provision of emergency vascular interventional radiology services across the NHS.

Up to 50% of vascular patients present as emergency or urgent referrals and, given the complexity of acute presenting conditions, emergency vascular services are primarily consultant delivered. The out of hours workload is therefore more onerous than in many other surgical specialties and the ability to provide an on call rota at consultant level is a critical feature for a viable vascular unit.

Treatment options for arterial surgery are evolving as new technologies are introduced. Interventional radiology for vascular disease involves a range of minimally invasive image guided techniques for stenting and repair of vessels. Interventional radiology is a developing specialism and the services offered vary greatly from hospital to hospital. Most sites offer some interventional radiology procedures, but the range of procedures offered and the degree to which interventional radiology is used at each site varies significantly. It is important to note that interventional radiology provides services to specialties other than vascular services including renal, liver and gastrointestinal surgery.

1.3 Local Context

The prevalence of vascular disease increases with age. The complexity, outcome and costs of vascular intervention are also age-dependant. As average life expectancy continues to rise nationally, this factor alone suggests that demand for vascular services is likely to continue to increase with time.

The total population of the North East is approximately 3 million and has a combination of rural and urban areas, with high levels of deprivation in some areas. A breakdown of population estimates can be found in Appendix 1.

In addition, regarding health and lifestyle factors, there is a clear indication that prevention, screening and early intervention has a direct link to the need for non-elective vascular procedures. The Table in Appendix 2 illustrates the North East prevalence in all these conditions is higher than the National average, all of which contribute to the burden of Vascular Services.

Vascular disease is the major cause of morbidity in diabetic patients and the risk of disease progression is higher. It is likely that the great increase in the number of patients with diabetes will have the greatest impact on vascular services. Lack of exercise and poor diet are all associated with the increasing incidents of Type 2 diabetes. The epidemic of obesity is again likely to have an impact on the prevalence of diabetes in the next decade.

2. Drivers for Change

There are a number of clinical and policy drivers included in this section that have prompted the strategic review of Vascular Services. Primarily, they cover the increasing evidence of the link between surgical volumes and patient outcomes for complex arterial surgery especially abdominal aortic aneurysms (AAA), plus the changes in technology – including minimally invasive endovascular surgery and increasing reliance upon interventional radiology support.

2.1 Evidence Base

- 2.1.1 The publication of UK mortality rates following AAA surgery highlighted that the UK has had the highest AAA mortality rates for elective surgery in Europe and more recently has been shown to have higher mortality for ruptured aneurysm than in the US. (Karthikesalingam, et al. 2014).
- 2.1.2 The publication of a report of the National Confidential Enquiry into Patient Outcome and Death (NCEPOD) 2005 into AAA recommended reducing the number of surgeons and anaesthetists involved to reduce low-volume surgeons and centres. The overall mortality rate for elective surgery was 6.2%, which has also prompted a reorganisation of vascular services for emergency and elective care to optimise outcomes for patients.
- 2.1.3 The Vascular Society of Great Britain and Ireland (VSGBI) Quality Improvement Framework (QIF) for AAA states that all organisations participating in the AAA screening programmes must sign up to the AAA QIF, which states 24/7 on site cover should be available for vascular surgery and radiology. The VSGBI QIF (2011) stated that centres required a minimum of 32 AAA repairs per year¹.

¹ Note: the specialist commissioning guide for vascular services 2013 now states a minimum of 50 elective AAA cases per year.

2.2 The Vascular Society of Great Britain and Ireland Relevant Documents

The VSGBI is committed to driving down the mortality of patients undergoing vascular procedures in the UK and Ireland, ensuring that patients have access to both elective and emergency care throughout the United Kingdom. Vascular surgery is now a separate subspecialty distinct from general surgery. As far back as 1998 the VSGBI published the Provision of Vascular Services in which it recommended that coalescence of adjacent vascular services onto a single site was the optimal model for service delivery.

Subsequently updated in 2012 the VSGBI Provision of Services for Patients with Vascular Disease report in Appendix 3, acknowledged that there had been considerable change in the structure of vascular services. The report also highlighted that in some areas there had been consolidation onto one single site, and in other areas clinical networks had formed in response to the need to provide comprehensive emergency cover.

The report stated that it was no longer acceptable to provide elective or emergency vascular cover outside a fully centralised service, or a formalised modern clinical network with a designated single site for all arterial interventions providing a 24/7 on-site service. For this reason, current strategies for the provision of vascular care require that all arterial interventions are performed on a larger volume hospital site, with intervention provided at these hospitals by vascular surgeons and interventional radiologists from both the central and network hospital sites. This allows for 24/7 patient care and the expeditious treatment of any complications which may occur.

The VSGBI 2012 document included detailed information on what the society considers to make up the components of a vascular service. This includes how weekly job plans for a clinical vascular surgical specialist team need to include sufficient outpatient clinics, all day operating lists (endovascular if indicated) and lists for day surgery, renal access or endovascular where training has included endovascular work as a special interest. The report also states that, where emergency assessment and treatment are necessary, this should be available at a recognised vascular unit within one hour of travel.

It is recognised that, as the complexity of vascular surgical interventions increases, the requirement for the service to be delivered by fully accredited surgical specialists with relevant training will also increase. The European Working Time Regulations (EWTR) requires a maximum 48 hour working week, which also has an impact on the delivery of vascular service. Therefore, in 2012 the VSGBI stated that an optimal vascular service requires at least six vascular surgeons and a similar number of colleagues offering endovascular intervention. The exact numbers being dependent upon the population size.

The VSGBI recommended that vascular on call rotas should be no more onerous than 1 in 6 and, where clinical services covered a population in excess of 1 million people, that the emergency rota should be no more than 1 in 8.

The VSGBI promotes the Case for Clinical Networking to High Volume Arterial Hospitals and recommends that units with fewer than four surgeons should no longer be performing arterial surgery and should merge, or collaborate in a modern clinical network to achieve 24/7 emergency cover. The VSGBI suggests that networks should designate a single centre to provide all elective and emergency arterial intervention.

It is also envisaged that separate specialty status will lead to a reduction in the number of UK Vascular Surgeons, both at Consultant and trainee level. Vascular surgery is likely to become more Consultant delivered with lesser trainee input in service delivery. As a consequence Consultants will need to work within larger groups to make this possible.

In addition, the VSGBI recommends that a hospital with a vascular service needs a minimum of one vascular surgical specialist per 150,000 population, with an equivalent number of interventional radiologists to provide emergency care. However, the VSGBI also points out that this recommendation represents a minimum estimate and that these figures do not take into account the increasing workload in recent years, and the reduction in the amount of time that junior staff working on full shift rotas have available for service activity on the wards, in theatre and in outpatients.

To support the VSGBI 2012 Provision of Vascular Services document the VSGBI has recently published a service specification for non-arterial centres in the vascular network. (Appendix 4). The purpose of this document is to provide recommendations on the provision of services in a non-arterial (NA) Centre. There is no single model that describes how vascular services should be provided at (NA) centres as this will be subject to local factors such as geography and pre-existing service configuration, but there are number of key factors to consider which will be common to all. These include provision of outpatient clinics, timely review of inpatient referrals, day-case lists and supporting allied specialties such as Diabetic Foot Services. Specific recommendations for the care of urgent diabetic foot problems and critically ischaemic limbs at the NA centre have been incorporated into this guidance.

2.3 The National Abdominal Aortic Aneurysm Screening Program (NAAASP)

Another major driver for change has been the formation of the National Abdominal Aortic Aneurysm Screening Programme (NAAASP). Implementation of this programme began in England in Spring 2009 and was extended to the whole of England in March 2013. The North East programme was established in 2010. This service required the formation of local screening units based on a minimum population of 800,000. This has resulted in a move towards the delivery of a service within larger volume units who can demonstrate low elective aortic aneurysm mortality rates, thus reducing the number of small independent

vascular units. The NAAASP requires that cases for AAA surgery can only be referred on to accredited vascular units.

2.4 NHS Service Specification and Standard Contract for Specialised Vascular Services (Adult)

The 2013/14 NHS Standard Contract for Specialised Vascular Services (Adult) in Appendix 5, recognises that over the last few years there have been a number of changes in the structure of vascular services which will start to influence and improve quality, efficiency and clinical outcomes. However, the document reiterates that further restructuring will be required to deliver high quality services on an equitable basis.

The service specification is written in the light of the recommendations and published evidence of the Department of Health (DH), the VSGBI, the Royal College of Radiologists (RCR), NECPOD report, and relevant NICE Guidance. It also states that accredited units should perform at least 50 and ideally greater than 60 elective and emergency AAA repairs. It also contains standards for mortality rates for AAA and other procedures such as carotid endarterectomy.

Key statements are:

“In-patient arterial surgery and vascular interventional radiology will be available 24/7 within the arterial centre with a vascular on call rota for vascular emergencies covered by on site vascular surgeons and vascular interventional radiologists to ensure immediate access for emergency procedures and post-operative care. In practice that means a vascular medical team of a minimum of 6 vascular surgeons and 6 vascular interventional radiologists to ensure comprehensive out of hours emergency cover.”

“Each surgeon will need to have an appropriate arterial workload (e.g. in the region of 10 AAA emergency and elective procedures per surgeon per year and commensurate numbers of lower limb and carotid procedures), which will necessitate an appropriate catchment area to generate sufficient case volume. A minimum population of 800,000 would be appropriate but for a world class service a larger catchment area will be required.”

“A 24/7 vascular interventional radiology rota may need to be organised on a network wide basis to ensure that interventional radiology services for other specialties, in local hospitals, are not destabilised. All participants in the rota must have the appropriate skills and competencies to undertake the full range of vascular interventional radiological procedures. Emergency access to vascular interventional radiology must be within 1 hour from initial consultation to intervention.”

NHS England Specialised Commissioning in this region is to continue with the existing commissioning arrangements for vascular services for 2014/15 under derogation where required. This will allow for a decision to be made in the North East on how vascular services will be provided in the future.

As part of the Specialised Commissioning compliance assessment for Vascular Services there are three key requirements that each Trust has been self-assessed against. NHS England Specialised Commissioning Team currently holds records of the compliance of each Trust.

3 North of England Cardiovascular Network (NECVN) Vascular Strategy, 2010 – 2013

In 2010 the North of England Cardiovascular Network published a Vascular Strategy, 2010 – 2013, which included a vision for vascular services and specific objectives. These objectives were based on the VSGBI Provision of Vascular Services 2009 and commissioning process for local screening programmes in NAAASP.

The strategy stated that patient care should be focused around teams of 6- 10 vascular surgeons caring for a population of 600,000-800,000 patients as a minimum. On the basis of these figures the strategy recommended that three to four vascular units were needed for the North East.

The recommendations were that smaller units needed to collaborate with colleagues either to become the intervention centre or designate the intervention centre in another hospital in the network. It was also stated that essential co-dependency with other services including trauma, cardiac surgery, diabetes care and renal medicine will need to be considered in deciding the positioning of these units.

The strategy highlighted the list of advantages of centralisation of services:

- Improved inpatient facilities including imaging
- Enable compliant vascular surgical on call rotas
- Enable compliant vascular radiology on call rotas
- Focus vascular anaesthesia support/expertise
- Focus vascular nursing and allied professional support/expertise
- Provide critical care support
- Facilitate essential interactions with other services.
- Focus postgraduate training

The NECVN Vascular Strategy, 2010 – 2013 also recognised that, in order for such a vision to be implemented in the North East, significant reorganisation of existing services needed to occur. The strategy highlighted the following actions would be required:

- Increased capacity at the intervention centres of theatre and radiology sessions, anaesthetic support, ward and office space and nursing staff.
- Precise arrangements for covering other specialities, for example general surgery, at the sites without primary vascular surgery.

4. Current Provision of Vascular Services in the North East

At present, the following Trusts offer a full vascular service in the North East

- City Hospital Sunderland NHS Foundation Trust
- County Durham and Darlington NHS Foundation Trust
- South Tees Hospital NHS Foundation Trust
- The Newcastle Hospitals NHS Foundation Trust

The caseload figures below have been calculated using data from the National Vascular Registry, 2014, Report on Surgical Outcomes Consultant-level Statistics. A further breakdown of the figures can be found in Appendix 6 and 7.

South Tees NHS Hospital Foundation Trust

An established vascular surgery network exists locally (Tees Valley Vascular Service) and was centralised at JCUH since 2002 with hub & spoke service including University Hospital of North Tees, University Hospital of Hartlepool and Friarage Hospital, Northallerton. Services are provided on the James Cook University Hospital (JCUH) site for the population of Middlesbrough, Stockton, Hartlepool, Redcar & Cleveland, and parts of Darlington, Easington, Sedgefield and North Yorkshire & York.

Population: 710,100 Vascular Surgeons: 5 Vascular Interventional Radiologists: to be confirmed AAA Repairs: 46 (average cases per year) CEA: 70 (average cases per year)
--

County Durham and Darlington NHS Foundation Trust (CDDFT) and Gateshead Health NHS Foundation Trust (GHFT)

All CDDFT based arterial activity is centralised at UHND. Vascular out-patients services are provided at Darlington Memorial Hospital, Bishop Auckland, Chester-Le-Street and Shotley Bridge, In-patient arterial services are no longer available on the Darlington site. Since November 2012 all Queen Elizabeth Hospital (QEH) and CDDFT emergency vascular and elective/emergency AAA activity has been centralised to UHND 24/7.

Population: 761,400 Number of vascular surgeons: 8 (Durham and Gateshead) Vascular Interventional Radiologists: to be confirmed AAA Repairs: 42 (average cases per year) CEA: 62 CDDFT, 32 Gateshead (average cases per year)

City Hospitals Sunderland NHS Foundation Trust (CHS)

All emergency and elective arterial surgery is provided as a centralised service at Sunderland for the population of Sunderland and South Tyneside. 5 consultants deliver an emergency and elective service to City Hospitals Sunderland (CHS) and South Tyneside based at CHS. CHS has had a 'Hub and Spoke' relationship with STFT for over 10 years modelled on the Vascular Society description of a centralised vascular service. Patients are seen in clinics and investigated as much as is possible, only coming to CHS for their operative or complex endovascular intervention. Ward referrals and emergency patients are catered for through robust protocols. This service has been built on the experience of the past 10 years producing robust outcomes with adequate governance arrangements and communication with STFT. CHS are about to take this to the next level, incorporating STFT into our Foot Protection Team for diabetics and Acute Stoke Referral service

Population: 495,400 Vascular Surgeons: 5 Vascular Interventional Radiologists: to be confirmed AAA Repairs: 33 (average cases per year) CEA: 43 (average cases per year)
--

The Newcastle Upon Tyne Hospitals NHS Foundation Trust

The Northern Vascular Centre is based at the Freeman Hospital. Provides the primary vascular surgical service for all patients from Newcastle, North Tyneside and Northumberland.

Population: 796,500 Vascular Surgeons: 6 Vascular Interventional Radiologists: to be confirmed AAA Repairs: 86(average cases per year) CEA: 77 (average cases per

5. Summary of Progress to Date

This section describes the series of meetings and subsequent agreements that have been reached to date.

July 2011

A meeting of the region's vascular surgeons was held in Durham in July 2011. Representatives from all five Trusts (six sites) were present. At that meeting it was unanimously agreed that the vascular surgeons as a group would wish to work with commissioners and Trusts towards rationalisation and planning a vascular surgery service that was sustainable for the future and fit for purpose. The group welcomed the opportunity to be involved with initiating and shaping these discussions originally offered by Professor Singleton, Medical Director for the old Strategic Health Authority (SHA). The group recognised increasing pressure based on quality issues and the AAA screening programme requirements. The group recognised the advantages of centralisation would include:

- Improved inpatient facilities including vascular imaging once these are focused into a smaller number of sites.
- Enable compliant vascular surgical on call rotas at consultant and junior level.
- Enable compliant vascular/interventional radiology on call rotas.
- Focus vascular anaesthesia support/expertise.
- Provide critical care support including renal support.
- Facilitate essential interactions with other services.
- Focus postgraduate training as vascular surgery moves to subspecialty status.

It was agreed that if a "three unit" North East Vascular Unit model was supported, that surgeons from Durham/Darlington and Sunderland would be prepared to meet to discuss whether, in the future, a merged unit could be developed with the potential for joint on call rotas to facilitate.

September 2011

In September 2011 all County Durham and Darlington Foundation Trust catchment AAA and emergency vascular surgery (24/7) was centralised at the University Hospital North Durham with re-arrangement of job plans, on-call arrangements, emergency pathways and theatre schedules to facilitate service change.

January 2012

In January 2012 following discussions between Gateshead Health NHS Foundation Trust and County Durham and Darlington Acute Hospitals NHS Foundation Trust, an enhanced and more collaborative services model was implemented for a staged progression to full UHND centralisation. Initially, all vascular emergency admissions in the CDDFT and QEH catchment were to be admitted to UHND out-of-hours. Spoke hospitals (DMH and QEH) would continue to have an on-site presence to cover daytime emergencies, in-house

referral and support services. The combined vascular service was formalised at the time as the 'North-East Central Vascular Unit'.

The service also includes a Patient Transfer Protocol that was supported by all internal service departments (e.g. Anaesthetics, Radiology, Intensive Care, General Surgery and the Accident and Emergency Departments) together with written confirmation from the North East Ambulance Service (NEAS).

The change in services included all Gateshead elective AAA activity (open & EVAR being transferred to UHND. Pre-operative and post-operative care takes place wherever possible in Gateshead. The Trusts reported that since November 2012 all emergency AAA and emergency activity for CDDFT and QE catchment area had been performed at UHND 24/7. A formal Service Level Agreement has been in agreement for the described working pattern between CDDFT and GHFT since November 2012.

March 2012

On the 30 March 2012 at the Northern Vascular Group meeting Professor Stephen Singleton, Medical Director NHS North East, highlighted the regional strategy for vascular services North-East. He tasked the members present to come to a rational coherent solution by October 2012 and at the latest January, 2013 that would see the start of the process.

May 2012

In May 2012 the NECVN carried out an information gathering exercise to establish the current level of services within each Trust. The responses were collated and summarised by the network. This document highlighted that the vascular surgeons had met and agreed based on the VSGBI document that the five centres should reduce to three centres. As the two trauma centres in the region are located in South Tees Acute Hospitals NHS Foundation Trust and The Newcastle Upon Tyne Hospitals NHS Foundation Trust, it was confirmed that they both require vascular services. Therefore, CDDFT and CHSFT were reported as being in discussion about the site choice for the third centre.

2003

In 2003 City Hospital Sunderland NHS Foundation Trust established an outreach service at South Tyneside District General.

November 2013

In November 2013 the Northern England Strategic Clinical Network facilitated a meeting between the Sunderland and Durham/Gateshead vascular surgeons. This meeting was chaired by Professor Stansby, Chair of the Vascular Advisory Group and well attended and productive. The group agreed that in principle a

three centre model would be their preferred option. It was noted that as a group they were unable to agree the location of the third site but would work with either site solution. A series of action points was also agreed at the meeting.

September 2014

A statement was made by the Northern Renal Advisory Group outlining their clinical views regarding the reconfiguration of vascular services across the North East. This letter has been formally responded to by the Vascular Advisory Group ensuring renal services clinicians that the provision of renal support will be considered as part of this work going forward and in the event of an independent review taking place.

November 2014

In November 2014 the VSGBI produced guidelines for the provision of services in non-arterial centres to support the VSGBI 2012 document and specialised commissioning service level agreement.

6. How Services Compare to Requirements

This section evaluates the current services against the key recommendations below:

- Minimum population of 800,000
- Minimum of 6 vascular surgeons
- Minimum of 6 interventional radiologists
- Minimum of 50 AAA repairs per year

Although further clarification is still required regarding numbers of vascular interventional radiologists, first indications are that only Newcastle Vascular Services meet all of the requirements, however, due to the fact that South Tees is a designated Trauma Centre, commissioning will require James Cook University Hospital to maintain their Vascular Services Unit².

Neither Sunderland nor the combined Durham/Gateshead unit currently meets the requirements to deliver independent services but a combined unit might do so. Initial scoping shows that both Trusts have made considerable investment in their theatre facilities to bring them up to the required standard and both have similar overall workloads, staffing numbers and clinical results. Other deciding factors that could be considered in siting a joint unit are travel times and renal support services.

² All major trauma units require support from a vascular surgical unit as part of their commissioning requirements. The NE has 2 major trauma units in Newcastle and Middlesbrough.

A potential commissioner Vascular Compliance Matrix is attached in Appendix 8 that could be used to provide further clarification on specific service provision.

Travel Times

The Provision of Services for Patients with Vascular Disease, 2012 states that 'when emergency assessment and treatment are necessary, this should be available within one hour of travel from a recognised vascular unit in most locations in the UK.

Detailed correlation between population and travel time needs to be carried out as part of the commissioning process. Initial analysis of the 60 minute drive time boundaries for all four existing units is given in appendices 9, 10, 11, 12:-

Figure 1 James Cook University Hospital drive time

Figure 2 University Hospital of North Durham drive time

Figure 3 Sunderland Royal Hospital drive time

Figure 4 Freeman Hospital, Newcastle

Renal Support Service

With regard to the VSGBI requirement for vascular services to have the support of renal services the 2012 document states that 'There is a critical care facility with ability to undertake mechanical ventilation and renal support, and with 24/7 on-site anaesthetic cover' (p. 42). Similarly, the NHS Standard Contract for Vascular Services refers to renal support as 'Intensive Treatment Unit (ITU) and High Dependency Unit (HDU) – Facilities with full renal support must be available on-site to support the vascular service' (p. 10)

In addition, advice has been taken at a national level from the Clinical Reference Group and Vascular Society and they have confirmed that there is no absolute requirement for co-location within a network of the renal and vascular units. If required renal access surgery could be provided as an outreach service to a non-arterial centre and would not necessarily involve transferring any patients.

Sunderland has comprehensive renal services on site and Durham would need to provide renal support via their Critical Care Unit.

As described in Section 5 in September 2014 the Northern Renal Advisory Group highlighted a number of issues they felt needed to be considered as part of the reconfiguration of vascular services.

Patient, Carer and Public Opinion

The work and discussions that have taken place so far have not included gaining patient, carer or public opinion. To ensure this gap is addressed and in line with NHS England's Transforming Participation in Health and Care, 2013, patient,

carer and public engagement will need to form part of the commissioning process.

7. Other Key issues.

It is important to be clear that not all vascular services will be withdrawn from a hospital not designated the vascular centre (or “Hub”). As mentioned previously a service specification for non-arterial centres has been developed by the vascular clinical reference group. The principle underpinning this is that hospitals which are not designated as arterial centres will still have preserved vascular surgery input for clinics, ward rounds and the provision of input to other patients in that centre such as those with diabetic foot problems. All major vascular operating and emergency admissions will take place in the hub hospitals, however investigations and outpatient clinics can be commissioned to occur in the non-arterial centre as well as some radiological interventions and venous procedures – this has important implications in limiting potential travel issues for patients after reorganisation and protecting other services.

8. Risks

There are a number of risks to the reconfiguration of services, including:

- Concerns on the part of hospitals losing vascular surgery workload and income and insufficient capacity on a single site to manage the increase in workload.
- Possibly reluctance of surgeons to move sites and the requirement to reorganise job plans and contracts.
- Potential shortage of trained interventional radiologists to support a rota irrespective of site.
- Destabilisation of current providers through shifts in activity.
- Creation of a two-tier service, with patients living further away from large centres failing to access care.
- Impact and cost implication of transferring patients.

9. Recommendations

This report confirms the need for change and is supported by substantial clinical evidence. To take this work forward a decision needs to be taken on the following options.

Option 1 – Following a consultation a decision is made on the third centre being based either at Sunderland or Durham.

Option 2 – An Independent Review is carried out on the North East Vascular Services.

10. Summary

This report demonstrates there is a strong case to remodel vascular services to fewer more specialised centres or networks providing high quality vascular services. This involves the delivery of services by both vascular surgeons and vascular interventional radiologists.

The vascular surgeons across the North East recognise there is an increasing pressure based on quality issues and the AAA Screening Programme requirements and support the principle of reorganisation of services.

There has already been an enhanced and collaborative service model implemented between Gateshead Health NHS Foundation Trust and County Durham and Darlington NHS Foundation Trust. Since November 2012 all Queen Elizabeth Hospital (QEH) and CDDFT emergency vascular and elective/emergency AAA activity has been centralised to UHND 24/7. The combined vascular services was formalised at the time by UHND as the 'North East Central Vascular Unit', reducing the number of vascular centres in the North East (excluding North Cumbria) to four.

In principle the North East vascular surgeons have agreed that the most appropriate model for the North East is to have a maximum of three centres. Several discussions between the Durham/Gateshead and Sunderland vascular surgeon have taken place, which has resulted in gaining agreement on working collaboratively. However, to progress with these changes requires a decision to be made on the way forward.

11. References

Karthikesalingam, A., Holt, P.J., Vidal-Diez, A., Ozdemir, B.A., Poloniecki, J.D., Hinchliffe, R.J., Thompson, M.M., 2014, *Mortality from ruptured abdominal aortic aneurysms: clinical lessons from a comparison of outcomes in England and the USA*. The Lancet, Volume 383, Issue 9921, Pages 963 - 969, 15 March 2014. [http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(14\)60109-4/abstract](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(14)60109-4/abstract)

National Confidential Enquiry into Patient Outcome and Death (NCEPOD), 2005, *Abdominal Aortic Aneurysm: A Service in Need of Surgery*.

NHS Commissioning Board, NHS England. 2013, *NHS Standard Contract for Specialised Vascular Services (Adult), 2013/14*, <http://www.commissioningboard.nhs.uk/files/2013/01/crg-guide.pdf>

North of England Cardiovascular Network, 2010, *Vascular Services Strategy, 2010 – 13*.

Royal College of Surgeons of England and Vascular Society of Great Britain and Ireland, National Vascular Registry, 2013. *Report on Surgical Outcomes Consultant-level Statistics*

SHAPE <http://shape.dh.gov.uk/index.asp>

The Vascular Society of Great Britain and Ireland, 2011, *Framework for improving the results of elective AAA repair*. <http://www.vascularsociety.org.uk/library/vascular-society-publications.html>

The Vascular Society of Great Britain and Ireland, 2012, *The Provision of Services for Patients with Vascular Disease, 2012*. <http://www.vascularsociety.org.uk/library/vascular-society-publications.html>

The Vascular Society of Great Britain and Ireland, 2011. *National Abdominal Aortic Aneurysm Quality Improvement Programme, (AAAQIP) Interim Report*.

Appendix 1

Clinical Commissioning Group (CCG) Catchment Population		Trust
Area	Population ⁴	
Co Durham (excluding Easington 60%)	455,500	University Hospital North Durham
Sunderland	275,300	Sunderland Royal Hospital
Easington (60%) ⁵	71,900	
Northumberland	316,300	Wansbeck General Hospital
North Tyneside	201,200	North Tyneside General Hospital
		Hexham General Hospital
Cumbria (Adjusted for North Cumbria)	329,300	West Cumberland Hospital, Whitehaven
		Cumberland Infirmary Carlisle
Gateshead	200,300	Queen Elizabeth Hospital, Gateshead
Newcastle	279,000	Royal Victoria Infirmary, Newcastle
		Freeman Hospital, Newcastle (FRH)
South Tyneside	148,200	South Tyneside General Hospital
Darlington	105,600	Bishop Auckland General Hospital
		Darlington Memorial Hospital
Stockton on Tees	191,300	University Hospital of North Tees
Hartlepool	92,600	University Hospital of Hartlepool
South Tees	273,500	James Cook University Hospital
North Yorkshire & York	152,700	Friarage Hospital

⁴ Source - CCG populations based on 2011 Census Populations

⁵ Easington 60:40 split figures as used in previous Cancer Network pathway work

Prevalence Rates

		Number of Practices	Sum of List Sizes (All Ages)	Coronary Heart Disease Prevalence (%)	Stroke or Transient Ischaemic Attacks (TIA) Prevalence (%)	Hypertension Prevalence (%)	Atrial Fibrillation Prevalence (%)	Diabetes Mellitus (Diabetes) Prevalence (%) Ages 17+	Chronic Kidney Disease Prevalence (%) Ages 18+	Obesity Prevalence (%) Ages 16+	Estimated Smoking Prevalence (%) Ages 16+
01H	NHS CUMBRIA CCG	82	524,145	4.8	2.3	15.4	1.9	6.1	5.1	11.6	18.5
00C	NHS DARLINGTON CCG	12	106,334	4.0	2.0	14.8	1.7	6.7	4.6	13.5	23.3
00D	NHS DURHAM DALES, EASINGTON AND SEDGFIELD CCG	41	287,872	5.3	2.3	16.6	1.8	7.0	4.8	15.4	20.9
00F	NHS GATESHEAD CCG	34	206,317	4.3	2.1	16.2	1.7	6.3	5.7	13.9	21.3
00K	NHS HARTLEPOOL AND STOCKTON-ON-TEES CCG	40	291,123	4.2	2.0	15.0	1.8	5.8	4.3	13.1	20.7
00G	NHS NEWCASTLE NORTH AND EAST CCG	18	156,001	2.9	1.6	11.2	1.1	4.5	5.3	9.5	23.6
00H	NHS NEWCASTLE WEST CCG	18	132,239	3.9	2.1	13.8	1.4	6.7	6.8	13.4	23.6
00J	NHS NORTH DURHAM CCG	31	250,298	4.6	2.1	15.3	1.6	6.5	4.8	13.7	20.9
99C	NHS NORTH TYNESIDE CCG	29	215,344	4.5	2.4	15.4	1.7	6.4	5.9	12.4	22.6
00L	NHS NORTHUMBERLAND CCG	46	321,731	4.9	2.4	17.1	2.0	6.8	6.4	13.7	16.7
00M	NHS SOUTH TEES CCG	49	290,888	4.3	2.0	14.8	1.6	6.2	4.2	12.9	23.2
00N	NHS SOUTH TYNESIDE CCG	29	154,490	4.9	2.3	16.1	1.7	6.9	2.2	15.0	21.6
00P	NHS SUNDERLAND CCG	53	283,910	5.0	2.2	16.6	1.7	6.3	3.9	14.3	22.2
03D	NHS HAMBLETON, RICHMONDSHIRE AND WHITBY CCG	22	142,072	4.2	2.3	15.6	2.2	5.5	3.7	10.2	16.8

Source – QOF 2012/13 except for Smoking Prevalence taken from Respiratory Profiles, Public Health England 2014

The Provision of Services
for Patients with Vascular Disease
2012

WWW.VASCULARSOCIETY.ORG.UK



*All patients with vascular
disease should have 24/7
access to a specialist vascular
team in all parts of
the UK*



**The Provision of Services
For Patients with Vascular Disease
2014**



WWW.VASCULARSOCIETY.ORG.UK





A04/S/a

**2013/14 NHS STANDARD CONTRACT
FOR SPECIALISED VASCULAR SERVICES (ADULTS)**

PARTICULARS, SCHEDULE 2- THE SERVICES, A- SERVICE SPECIFICATIONS

Service Specification No.	A04/S/a
Service	Specialised Vascular Services (Adults)
Commissioner Lead	
Provider Lead	
Period	12 months
Date of Review	

<p>1. Population Needs</p>
<p>1.1 National/local context and evidence base</p> <p>National Context</p> <p>Vascular disease relates to disorders of the arteries, veins and lymphatics. Conditions requiring specialised vascular care include: lower limb ischaemia; abdominal aortic aneurysm (AAA); stroke prevention (carotid artery intervention); venous access for haemodialysis; suprarenal and thoraco- abdominal aneurysms; thoracic aortic aneurysms; aortic dissections; mesenteric artery disease; renovascular disease; arterial/graft infections; vascular trauma; upper limb vascular occlusions; vascular malformations and carotid body tumours.</p> <p>The scope of the specialised service includes deep vein reconstruction and thrombolysis for deep vein thrombosis (DVT) but excludes varicose veins and inferior vena cava (IVC) filter insertion.</p> <p>The prevalence of vascular disease increases with age. Average life expectancy continues to rise especially in males. This suggests that demand for vascular services is likely to increase over time. There are currently an estimated 3m people with diabetes mellitus in England, and prevalence is increasing. Vascular disease is the major cause of morbidity in diabetes and the risks of disease progression are higher, with an epidemic of diabetic foot disease expected in the next decade.</p> <p>Smoking is a major cause of vascular disease and over 80% of vascular patients are</p>

Vascular Services Quality Improvement Programme
Individual Surgeon Outcomes for Vascular Surgeons 2014

Results for elective AAA repair performed between 1 January 2009 and 31 December 2013 (5 years)

Surgeon	No. of Procedures			
	City Hospitals Sunderland NHS Foundation Trust	County Durham and Darlington NHS Foundation Trust	Newcastle Upon Tyne NHS Foundation Trust	South Tees Hospitals NHS Foundation Trust
Consultant A	*	28 2 open, 26 EVAR	104 39 open, 65 EVAR	*
Consultant B	15 2 open, 13 EVAR	38 15 open, 23 EVAR	78 29 open, 49 EVAR	53 13 open, 40 EVAR
Consultant C	*	26 24 open, 2 EVAR	46 22 open, 24 EVAR	33 7 open, 26 EVAR
Consultant D	133 2 open, 131 EVAR	46 23 open, 23 EVAR	21 3 open, 18 EVAR	21 6 open, 15 EVAR
Consultant E	8 8 open, 0 EVAR	43 9 open, 34 EVAR	108 33 open, 75 EVAR	73 19 open, 54 EVAR
Consultant F		24 23 open, 1EVAR		*
Consultant G		16 16 open, 0 EVAR		
Consultant H		42 29 open, 13 EVAR		
TOTAL	163	208	428	230
Average Case per Year	33	42	86	46

*Indicates 5 or fewer cases

XXXXXXXXXX NHS FOUNDATION TRUST
Compliance Matrix in response to NHS Commissioning Board Specialist Service Specification:
Specification A04/S/a – Specialised Vascular Services (Adults)

1. Population Needs				
Para. Ref.	Section	Sub-section Heading	Your Response	Detailed Explanation and Supporting Information
1.1	National/local context and evidence base			Information only, no response required
2. Scope				
Para. Ref.	Section	Sub-section Heading	Your Response	Detailed Explanation and Supporting Information
2.1	Aims and Objectives of service			Information only, no response required
2.2	Service description/care pathway	Service description/care pathway		
		Service Model		
		Vascular networks		
		Specialised Vascular Team		
		Infrastructure/Facilities		
		Care Pathways		

		Highly Specialised Interventions		
2.3	Population covered	Information only, no response required		
2.4	Any acceptance and exclusion criteria	Acceptance criteria		
2.5	Inter-dependencies with other services	Co-located services		
		Interdependent services		
		Related services		
3. Applicable Service Standards				
3.1		Applicable national standards		
		Core standards		
4. Key service Outcomes				
4.1		Abdominal Aortic Aneurysm		
		Carotid intervention		
		Peripheral Arterial Disease – Lower Limb Bypass (PAD)		
		Lower Limb Amputation		

Appendix A – The Provision of Vascular Interventional Radiology Services to Patients at Non Arterial Hospitals within a Vascular Network		
Sub-section Heading	Your Response	Detailed Explanation and Supporting Information
What constitutes an MDT?		
What sorts of patients are suitable for peripheral angioplasty or stenting at non-arterial sites?		
What sorts of workloads are appropriate to maintain skills?		
How do we measure competency?		
Should a surgeon be present on site if intervention is being carried out?		
What should the transfer arrangements be if patients require emergency surgical intervention?		

Definition of responses required

CATEGORY	REQUIRED RESPONSE	DEFINITION
Required	COMPLY :	The Respondent fully complies with the Service Specification. A detailed explanation should be written with clear reference made to any attachments provided.
	DO NOT COMPLY :	The Respondent is unable to comply with the Service Specification. A detailed explanation should be written with clear reference made to any attachments provided.
	COMPLY EXCEPT :	The Respondent complies with the requirements of the Service Specification, but not in the manner prescribed within the Service Specification. A detailed explanation should be written with clear reference made to any attachments provided.
For Information	NOTED :	Description or explanation which should be noted but does not require any qualification or evidence. Response should be “noted” to confirm that respondent has read and understood the information.

Figure 1 shows 60 minute drive time for James Cook University Hospital

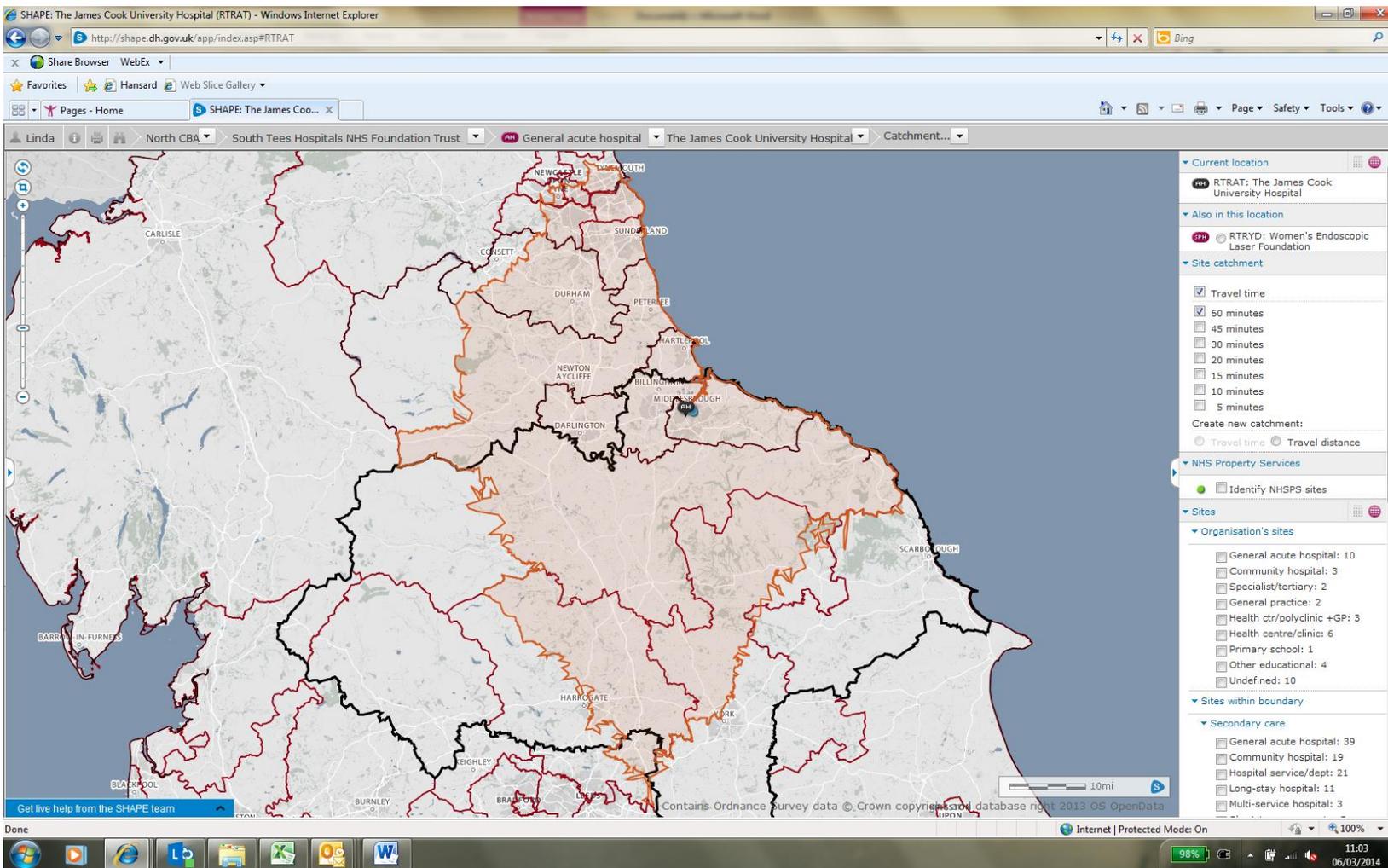


Figure 2 shows 60 minute drive time for University Hospital of North Durham

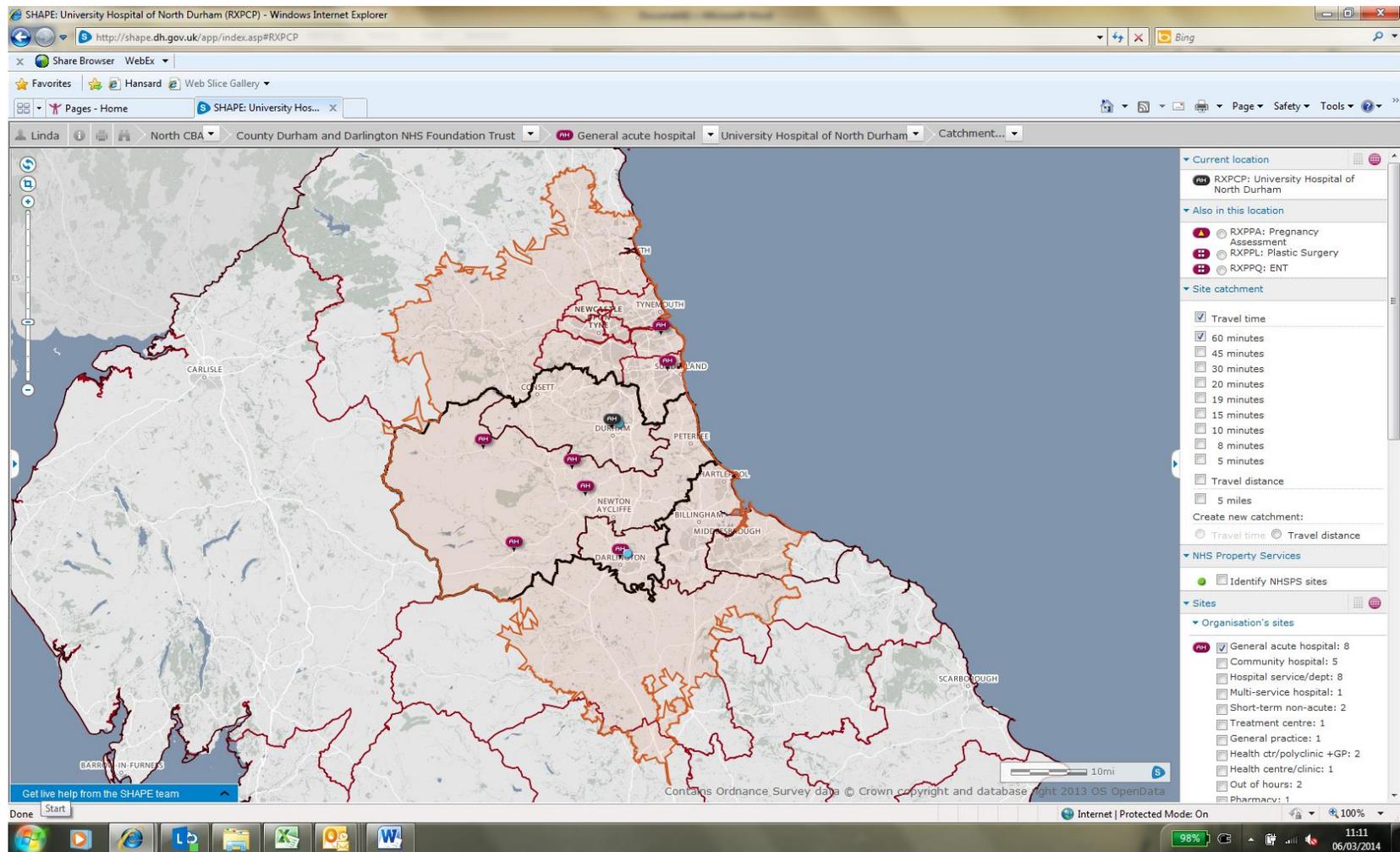


Figure 3 shows 60 minute drive time for Sunderland Royal Hospital

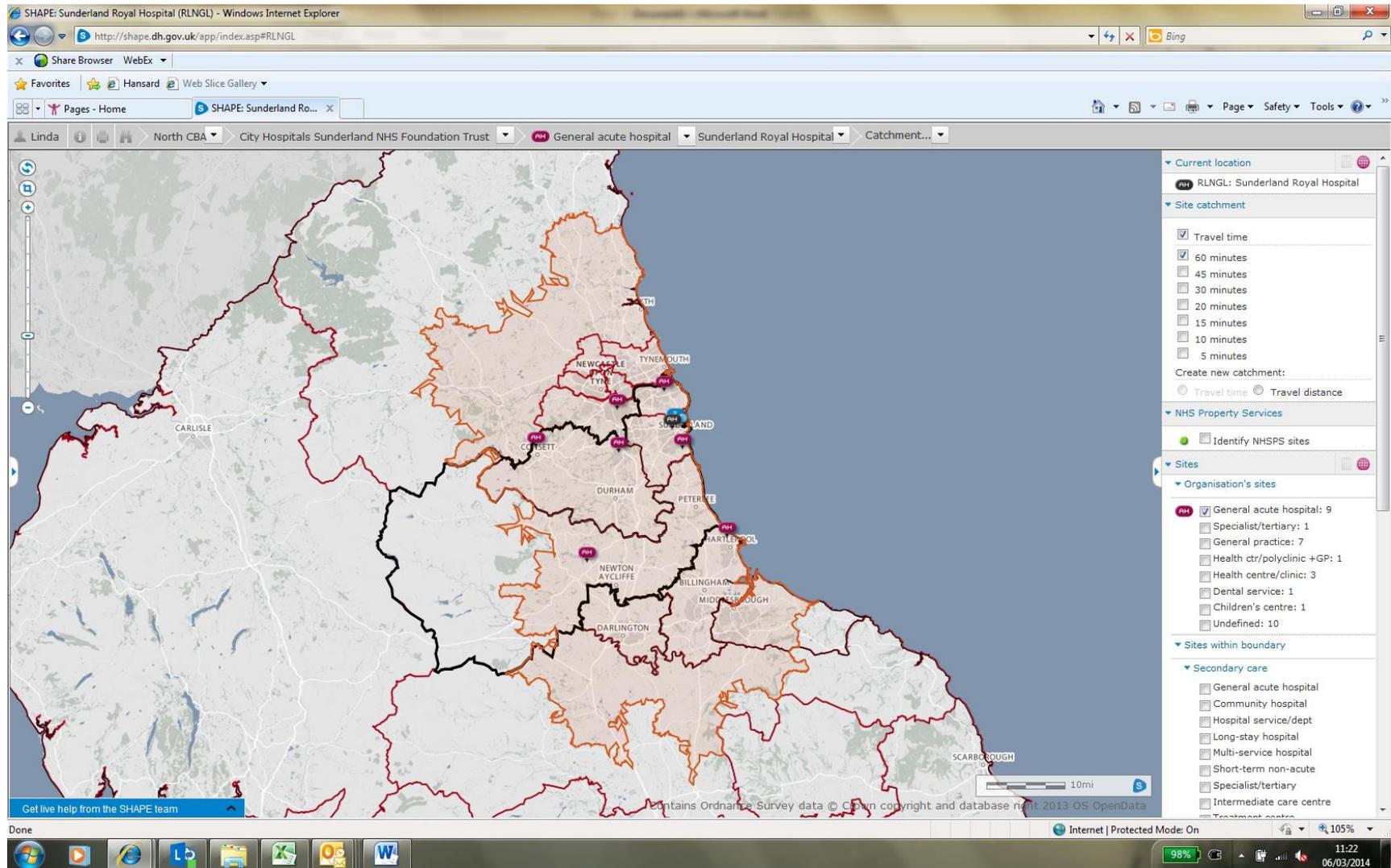


Figure 4 shows 60-minute drive time from Freeman Hospital Newcastle Upon Tyne

