

Lancashire and South Cumbria Provider Collaborative

Vascular Network Programme

Why we need to change Vascular Services in Lancashire, South Cumbria & Wigan

CONTENTS

Contents	2
0. Purpose of the Document	3
1. Executive Summary	4
2. Health and Wellbeing in Lancashire & South Cumbria	7
3. Introduction to the Vascular Specialty	10
3.1 Clinical Interdependencies	11
4. A National View of Vascular Services	12
4.1 Notable Developments in Vascular Services	12
4.2 National Strategic Context	12
4.3 Benefits from Clinical Networks	13
5. A Vision for Local Change	14
5.1 The Vision	14
5.2 The Local Case for Change	15
5.3 Service Review: Initiation of the Vascular Network Programme	15
6. Drivers For Change In Detail	16
6.1 Centres Not Working Within Recommended Network Configuration	16
6.2 Below Knee: Above Knee Ratio Targets	20
6.3 Trust Catchment Populations	21
6.4 Repatriation and Rehabilitation Challenges	21
6.5 Network Hospital Site Variation	23
7. Risks Associated with Doing Nothing	28
8. The Future Model Of Care	31
8.1 Local Structure	31
8.2 Commitment to Take Notice of Engagement	32
9. Key Benefits of the Future Model	33

0. PURPOSE OF THE DOCUMENT

The *Why we need to change Vascular Services in Lancashire and South Cumbria* document is a 'case for change'. The content within this document have been prepared by the Vascular Network Programme Team, in consultation with the Lancashire, South Cumbria and Wigan (LSC&W) Vascular Network Board members, NHS Provider Trust representatives and in collaboration with L&SC Integrated Care Board commissioners and NHS England Specialised Commissioning.

Governance Background

A Vascular Steering Group was established in early 2018 in response to provider organisations identifying the service as one of a number of fragile services within L&SC.

The programme was temporarily paused in March 2020 during the COVID-19 pandemic response by the Steering Group, in collaboration with the Provider Collaborative Board. The programme was subsequently resumed in February 2022 through the Vascular Network Board.

This document has been shared with Vascular Network Board members for feedback during July and August 2023 and signed off having been approved by the September 2023 Board. The document was also presented at the September 2023 PCB Clinical Programme Board.

Purpose

The purpose of this case for change document is to collate and communicate evidence to demonstrate the reasons for a change in the Vascular surgical services in LSC&W and the risks of doing nothing.

This will help stakeholders clearly understand the what-, the why-, and the how of the programme of work. This document sets out the:

- L&SC population health.
- what Vascular services are and their provision at the main Trusts
- national strategic case for change.
- local drivers for change to Vascular surgery in Lancashire, South Cumbria, & Wigan.
- risks if no changes are made.
- high level proposed changes to the Vascular surgical service.
- benefits from making the proposed changes.

The 'case for change' is a fundamental foundation step in the proposal for service change, aligning with the formal NHS England assurance process stages to enable major clinical service change.

Wider Provider Collaborative Board (PCB) Work

The Vascular Surgery Network programme is one of a number of programmes within a portfolio held by the PCB and considered a priority for implementation by the L&SC ICB. These live programmes include the establishment of clinical networks for Head & Neck Cancer, Urology Cancer, and Cardiac services.

1. EXECUTIVE SUMMARY

This document presents a robust case for the reconfiguration of adult Vascular Surgery services across Lancashire, South Cumbria, and Wigan (LSC&W) in order to ensure the sustainable provision of acute and emergency vascular services into the future.

The current configuration of NHS Trusts providing vascular services in LSC&W was commissioned back in 2013. There are currently two 'Vascular Centres':

- Lancashire Teaching Hospitals NHS Foundation Trust (LTHT) provides vascular services to Central and West Lancashire, South Cumbria, and Wigan populations,
- East Lancashire Hospital Trust (ELHT) provides vascular services to its East Lancashire population.

The central case for change is that the current dual-site model of hospital services provided by two Vascular Centres at ELHT and LTHT does not, and cannot, meet the national specification.

The Vascular Society for Great Britain and Ireland, Getting it Right First Time (GiRFT), and NHS England all recommend that vascular services be organised such that anyone with vascular disease should have equal access to treatment across a population area. The national *Provision of Services for People with Vascular Disease* (2021) guidance also states that 'eight hundred thousand people [is] the established minimum population for UK Vascular networks'. Having two Vascular Centres (and ELHT serving a population of only 550,000) is not compliant with these stated recommendations.

Transformation of Vascular Surgery services across LSC&W is required to co-locate adult acute and emergency vascular services onto a single hospital site within a proposed Arterial Centre, hand-in-hand with the local provision of standardised patient care at Network Hospital sites across LSC&W. This proposed change will enable patient treatment to be provided by specialists with the expertise and experience in a single Arterial Centre, within a collaborative LSC&W Vascular Network.

Both Vascular Centres provide safe, quality services to their patient cohorts. Although, not unlike other vascular services in England, there are some performance and compliance issues that the two Trusts are challenged with and looking to address. There is recognition that patient outcomes are better for vascular surgery when performed in high volume centres by specialist multi-disciplinary teams.

Treating major and complex vascular cases in one network centre will deliver a workforce who have experience in treating such high volumes. Establishing a single network service and Arterial Centre will lead to a workforce that can provide 24/7 emergency, urgent and elective work as required, effectively providing safe, timely and quality care for patients. The reconfiguration will inevitably lead to better training opportunities for Vascular surgeons, Interventional Radiologists, and other staff, therefore ensuring sustainability of the vascular service in LSC&W.

The future demand upon NHS vascular service provision will likely increase and be a factor for any future reconfiguration of services. Patient referral counts for Vascular services have increased from 2019/20 to 2022/23 for both LTHT (+6.8%) and ELHT (+18.3%). However, changes to the demography of L&SC will also impact Vascular services significantly.

Predictions from the Office for National Statistics show a growing L&SC population (+4.8% by 2023 and +21% by 2040) and an increasingly ageing patient group as well. Projections suggest a 26% increase in the population size for those aged 65 years or more by 2040. Local Trust data advises that 66% of admitted vascular Patients are aged 65 years or older, a cohort that generally is at greater risk of having multiple comorbidities and more complex health needs.

By 2040 those aged 65-years and over are predicted to account for 72% of the Vascular surgical admissions. The associated health issues for this age group typically include Hypertension and Diabetes. Trends in the prevalence of both Diabetes and Hypertension in L&SC (according to Public Health England) show year-on-year increases (with the 20/21 prevalence of Diabetes at 7.4% of the population and Hypertension in 15.5% of the population).

Damage to the vascular system and the need for subsequent Vascular surgery can occur when these diseases are poorly managed. Such poor management is exacerbated and impacted by physical inactivity and obesity, for example. Both circumstances are associated with deprivation, and data is presented that Northwest England has some of the most deprived areas in the UK (e.g. 13% of people live in fuel poverty and the percentage of children living in poverty can be as high as 38% in some districts of L&SC).

Both Trusts report the risk of difficulty recruiting to meet the medical rotas at the two sites. With limitations to workforce (and also bed and theatre capacity, together with limited Interventional Radiology facilities) national targets may not be achieved. For example, both Trusts are struggling to achieve the Commissioning for Quality and Innovation framework (CQUIN) target (patients with lower limb ischaemia receiving revascularisation within five days) with current resource issues.

Therapy services who support patient rehabilitation and repatriation have also flagged significant risks from being overstretched and not having sufficient resource capacity to adequately support Patients following Vascular surgery. The creation of a single service provides an opportunity to improve repatriation from the Arterial Centre site to partner hospitals based on agreed pathways.

Through reconfiguration there is a much better chance that the Trusts will be able to support the increased future demand from Patients. Without transformation the risk to the service and patient care from increased patient numbers and health complexities will be greatly exacerbated.

The proposed model of care for the future provision of Vascular surgical services is consistent with the model that has been recommended by NHS England, GiRFT and the Vascular Society of Great Britain and Ireland. The provision of high-quality and efficient services through standardised, network care pathways is also a key strategic priority for the L&SC Integrated Care Board.

Reassuringly, in those areas of the NHS where clinical networks have been in place since the process started more than 15 years ago, there is also evidence that the process is cost effective by avoiding replication of expensive technology and staff on multiple levels. Consolidating system-wide resources will deliver improved quality and financial outcomes.

By centralising services the population supported by a single Arterial Centre and partner Network Hospitals achieves a size well above the recommended 800k – at over 2 million. Bringing services and personnel together, and standardising pathways and practices, will cease variation in access and health care provision across the network. Services will be provided locally at Network hospital sites from Barrow through to Wigan, including outpatient visits, venous disease treatments, and angioplasties for example, all based on agreed pathways.

Overall, the clinical benefits for LSC&W through the establishment of a Vascular Network and its population could be immense. Through better collaboration the workforce will be more integrated and resilient - absorbing surges in demand, be able to work in partnership, communicating best practice and sharing new skills more easily. There will be opportunities for better recruitment and retention, leading to a more sustainable workforce and one which can develop specialist expertise associated with centres of excellence.

2. HEALTH AND WELLBEING IN LANCASHIRE & SOUTH CUMBRIA

The 1.8 million people who live in Lancashire and South Cumbria have very different needs, opportunities, assets, views, and experiences.



The more we learn about our residents the more it is realised that they have different day to day lives, different factors contributing to their health and wellbeing and unfortunately even different life expectancies.



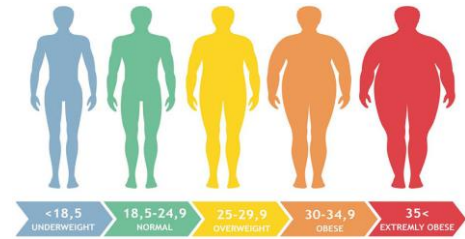
There are many challenges that our population faces.

Nearly a third of those residents live in some of the most deprived areas across England. 13% of people living in L&SC live in fuel poverty, unable to afford to adequately heat their homes, higher than the national average of 10.6%.

A significant proportion of children experience adverse living conditions leading to significant variation in their development and school readiness. The percentage of children living in poverty ranges from 12% to as high as 38% in L&SC, the national average is 30%.

Life expectancy in LS&C is lower than the national average. There is a significant level of unwarranted variation in the number of years people can expect to live a healthy life across Lancashire and South Cumbria. Healthy life expectancy and disability-free life expectancy is predicted to be less than the expected state pension age of 68 years for children born today. In some neighbourhoods, the average healthy life expectancy is as low 46.5 years.

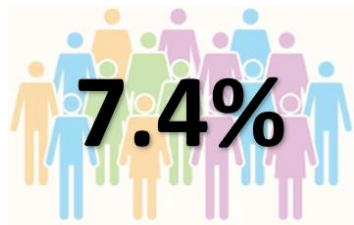
Research suggests that around only a fifth of adults are meeting the recommended levels of physical activity. This is even less in some children with just 15% of young people aged 15 in Lancashire meeting recommended levels of physical activity, 14.1% in Blackpool and 12.4% in Blackburn with Darwen.



Of the 1.8 million in L&SC over 21,000 people have five or more long-term health conditions. The main causes of ill-health include cancer, cardiovascular and respiratory conditions. Data suggests that approximately 40% of all ill-health in LS&C is due to smoking, physical inactivity, obesity, and substance misuse. The percentage of adults who smoke in L&SC (18.5%) is above the national average for England (at 17.2%).

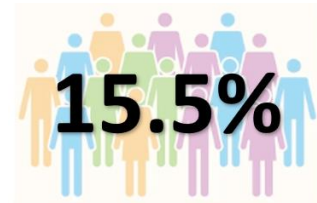
Two of those long-term health conditions are Diabetes and Hypertension. Damage to the Vascular system and the need for subsequent Vascular surgery can occur when such diseases are poorly managed.

Trends in the prevalence of both Diabetes and Hypertension in L&SC (according to Public Health England) show year-on year increases. Between 2010/11 & 2020/21 L&SC population prevalence rates for Diabetes increased by 1.3% (to 7.4% of the population in 20/21) and Hypertension increased by 1.2% (to 15.5% of the population in 20/21).



Lack of exercise and poor diet (often linked to the level of deprivation of the area that a person lives in) are all associated with an increasing incidence of Type 2 Diabetes. Increases in the prevalence of obesity in the LSC population will likely have the biggest impact on the prevalence of diabetes in the next decade (11.7% of L&SC adults aged over 18 years were deemed obese from data collected in 2019/20, above the English average of 10.5%).

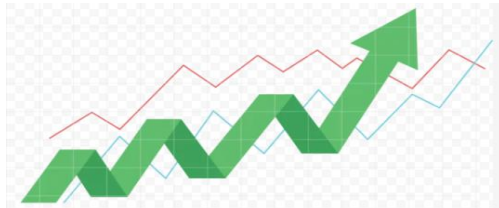
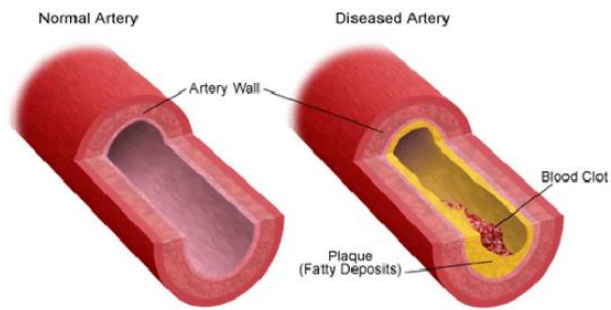
HYPERTENSION



Factors related to obesity do contribute to the development of hyperlipidaemia and hypertension, both strong risk factors for vascular disease. Childhood obesity has also been linked to the development of diabetes and hypertension in later life.

It is also unfortunate that evidence not only suggests inadequate disease self-management in Patients with Diabetes during the COVID-pandemic response, but that the incidence rates of Type 1 Diabetes in children and adolescents were higher after the start of the COVID-19 pandemic than before.

Vascular disease is the major cause of ill health in Diabetes and the risks of vascular disease getting worse are higher in those Patients with Diabetes. It is likely that the great increase in the number of Patients with diabetes over the next decade will have the biggest impact on Vascular services. Many of these Patients present as an emergency and are at high risk of amputation. Prompt treatment of an infected diabetic foot can reduce the risk of a subsequent amputation.



Increasing age is also associated with an increasing risk of Diabetes and hypertension. Although all population projections are subject to uncertainty, the Office of National Statistics (ONS) predicts that the population of the UK is projected to increase over the coming years.

The change in the L&SC population size overall (all age groups) is proposed to be 4.8% by 2030 and over 21% by 2040 according to the ONS. However, the analysis also suggests a disproportionate growth in the number of older people. The projections suggest a 26% increase in the population size for those aged 65 years or more in 2040 (compared to a decrease of 1.5% in the 2040 population of those aged between 15 and 64 years).

Using the data from the Provider Trusts' (2019/20) of all the Patients admitted for Vascular surgery, 66% are aged 65 years or over. This age group are generally at greater risk of having multiple comorbidities and more complex health needs. By 2040 those aged 65-years and over are predicted to account for 72% of the Vascular surgical admissions.



The NHS Lancashire and South Cumbria Integrated Care System is undertaking a great deal of engagement and work to support its communities (as described in the recent publication *Our NHS Joint Forward Plan for 2023 Onwards*).

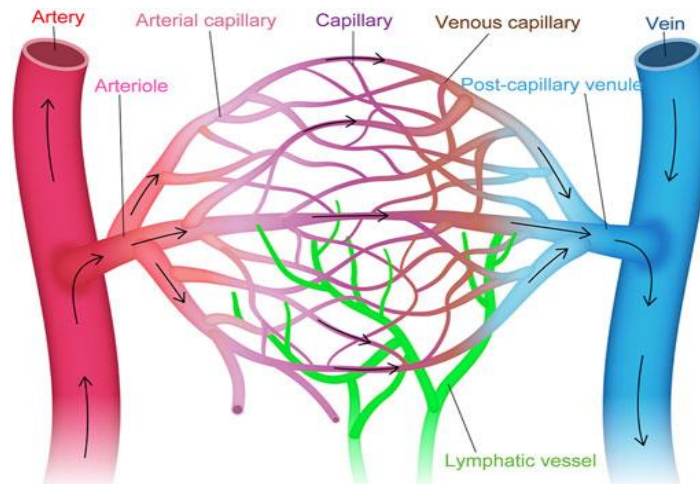
However, as described further in this document without change the current and predicted trends in disease prevalence, population health, levels of deprivation, and an ageing population suggest that the detrimental impact on Vascular services could be significant.

3. INTRODUCTION TO THE VASCULAR SPECIALTY

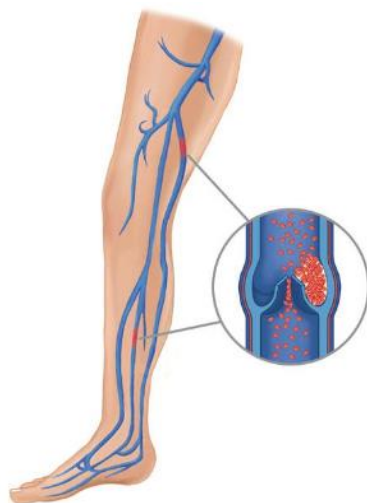
Vascular surgery covers a range of surgical procedures undertaken on veins and the lymphatic system – but the most important part of the vascular surgeon’s work is to reconstruct, unblock or bypass arteries.

In undertaking these precision procedures, vascular surgeons restore blood flow to organs of the body helping to reduce sudden death, preventing strokes, restoring movement, and reducing the risk of amputation.

Simplified image of the main components of an animal’s vascular system – showing arteries that generally bring oxygen rich blood from the lungs via the heart to organs of the body, and veins with blood in need of oxygen to the lungs.



In many cases, when first diagnosed, blocked, or narrowed arteries are treated with medication; surgery only takes place when blood flow is dangerously restricted. As such vascular surgery is predominantly an urgent/emergency response service and must be organised so that Patients can get timely access to effective care.



Deep Vein Thrombosis

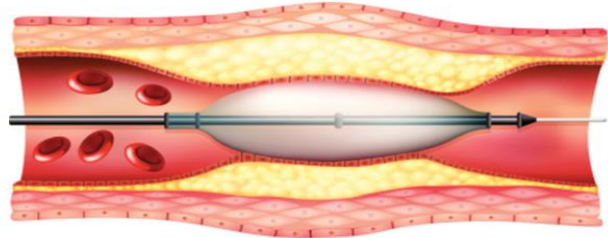
The majority of Patients receiving vascular surgery are often very frail, with the surgery urgently needed to repair an aneurysm, improve blood flow to an organ (e.g. the brain) to prevent a stroke, or to a limb to avoid the need to amputate.

Compared to some other surgical disciplines, there is little room for delay to surgery, as whenever major surgery to arteries is required, there is always a risk to life or limb.

Vascular surgeons also provide expert advice and care for Patients of other major specialties e.g. trauma, neurosurgery, cardiac surgery, dermatology, clinical laboratory services, nephrology, plastic surgery, and other disciplines.

Some procedures are led or overseen by Vascular Interventional Radiologists – crucial in increasing the availability of vascular procedures. Interventional Radiology can be divided into different subgroups, including:

- Vascular Intervention (Arterial) – procedures involving the arteries throughout the body such as angioplasty (balloon dilatation of narrowed blood vessels – as shown in this image to the right) or embolisation (blocking off blood vessels to tumours or when someone is bleeding internally).
- Vascular Intervention (Venous) – procedures involving the veins such as inserting lines into veins, inserting filters to prevent clot travelling around the body or using devices to suck clot out of blocked veins (thrombectomy).
- Non-vascular Intervention – procedures not involving the blood vessels such as unblocking kidneys (nephrostomy) or the liver.



Overall, the vascular service comprises the following elements:

- Diagnosis and assessment of vascular disease (including the input of the Vascular Laboratory and diagnostic imaging).
- Outpatient management of Patients with peripheral arterial disease.
- Inpatient spells, emergency, and elective activity.
- Day case activity.
- Outpatient follow-up of Patients receiving vascular surgery/endovascular interventions.
- Rehabilitation services (particularly for post amputation care).



That service is provided by a specialist Vascular Team which comprises Vascular Surgeons, Vascular Interventional Radiologists, Vascular Anaesthetists, Vascular Scientists, Vascular Specialist Nurses, Podiatrists, Radiographers, Physiotherapists, ward Nurses, theatre staff and rehabilitation specialists.

3.1 Clinical Interdependencies

Vascular Surgery cannot be seen in isolation. Although the absolute co-dependencies of any complex surgical procedures are primarily related to the availability of critical care and diagnostic imaging and intervention, with support from specialised anaesthesia for example, there are other significant considerations.

The service has links to a wide range of other clinical specialties and services, whether in support to or requiring support from. The service works in an integrated fashion with diabetic, renal and stroke medicine and major non-vascular surgery. And links with other networks and screening programmes include the Cardiac/Stroke and Renal Networks.

Any changes to services will take into account all such interconnectedness and the importance of clinical services working in a much wider environment.

4. A NATIONAL VIEW OF VASCULAR SERVICES

4.1 Notable Developments in Vascular Services

Across the UK, vascular services have undergone notable change in recent years.

Vascular surgical services have evolved into a predominantly urgent care service (according to the national Getting it Right First Time GIRFT programme (GiRFT). Advances in technology and treatments have increased the options for vascular Patients with specialist resources being required, For example, previous 'open' surgery techniques can now be carried out through minimally invasive procedures (which are though technically more complex). England is also seeing an increasingly ageing population, a growing incidence of diabetes, and an increasing complexity of both patient comorbidity (two or more health conditions at the same time) and an increased necessity for intervention. Better outcomes have also been recorded from earlier service delivery, and nationally recommended timescales for interventions have been reduced.

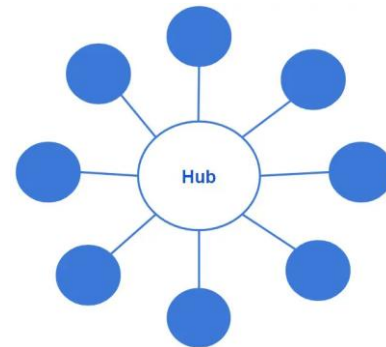
There is also the increasing positive reliance on Vascular Interventional Radiology as the optimal intervention to arrest procedures such as acute haemorrhage (bleeding), rather than the historical open surgery options (particularly relevant in major trauma, pelvic/post-partum [obstetric] bleeding and gastrointestinal haemorrhage). In fact after the development of specialist hybrid theatres, complex aortic artery interventions increasingly cross the boundaries between vascular surgery, Vascular Interventional Radiology, and Cardiothoracic surgery.

4.2 National Strategic Context

Evidence has been growing for more than a decade that vascular surgical units that carry out high volumes of specialised procedures have better patient outcomes.

In line with this evidence, the Vascular Society of Great Britain and Ireland published recommended standards (most recently in 2021 through *The Provision of Services for Patients with Vascular Disease*) that include vascular services being organised into what has previously been called 'hub and spoke' networks.

This network configuration ensures that Patients have local access to a vascular specialists in all areas of the network, but that emergency and complex arterial work is centralised into fewer centres of excellence, known as 'Arterial Centres'.



NHS England also published a national specification (2013) requiring specialist commissioned vascular services to be organised into networks with dedicated high volume Arterial Centres. The key requirements of NHS England's service specification for Vascular Networks are that:

- They serve a minimum population of 800,000 to generate the required volume of procedures at the arterial centre.
- They have a single central hospital providing arterial surgery and complex endovascular interventions – in this document called the 'Arterial Centre'.
- Each high volume arterial hospital should:

- Provide 24-hour access to specialist care including vascular surgeons, interventional radiologists, and specialist nurses, including sustainable on call rotas of 1:6 or greater.
- Have at least one endovascular (hybrid) theatre.
- Have specialist clinicians undertaking adequate volumes of core index procedures to ensure consistent safe quality care i.e. a minimum of:
 - 60 AAA (abdominal aortic aneurysm) per annum
 - 40 carotid procedures per annum
- Submit cases to the National Vascular Registry (NVR) and publish their outcomes.
- The other Network Hospitals will continue to provide outpatient clinics and diagnostics; renal access; varicose vein procedures; review of in-patient vascular referrals; and rehabilitation.
- Patients should travel to the Arterial Centre only for specific arterial and complex endovascular interventions. The pre- and post- procedure care related to these interventions should be delivered, whenever possible, at the Network Hospital local to them.



NHS Improvement's national Getting It Right First Time (GiRFT) is a programme of work designed to improve the treatment and care of Patients through in-depth reviews of services, benchmarking, and the presentation of evidence backed by data to support transformation.

GiRFT has also made similar pivotal recommendations for vascular services. The National Specialty Report on Vascular Surgery (published by Professor Michael Horrocks, 2018) set out seventeen recommendations to improve the delivery of vascular surgery in the NHS in England.

The recommendations (developed from visits to all 70 NHS English trusts that conduct vascular surgery) focused primarily on the way that vascular surgery is organised and delivered. The central goal was to enable Patients to receive urgent surgery sooner - which, it was suggested, would deliver better surgical outcomes for seriously ill Patients, reduce length of stay, cut re-admissions, and make better use of scarce surgical resources. The report calculated that 100 additional lives a year could be saved by creating vascular networks across the NHS.

Central to this case for change, it recommended that all vascular surgical units operate within a 'Network Model', as defined by the national service specification, emulating the most advanced network models that exist currently.

Any proposed change to the services in L&SC must meet or exceed the standards published by:

- NHS England - *Service Specification 170004/S. Specialised Vascular Services (Adults)* (2016).
- Vascular Society of Great Britain & Northern Ireland – *The Provision of Services for People with Vascular Disease* (2021).
- British Society of Interventional Radiology (BSIR) - *Provision of Interventional Radiology services* (2014).

4.3 Benefits from Clinical Networks

In summary, at a high level there is no doubt that Clinical Networks provide access to countless opportunities for both clinicians and Patients, allowing them to communicate, interact and collaborate with each other to enhance services and improve health outcomes.

Broadly, clinical networks provide a structure for clinicians to work more closely across institutional and professional boundaries and allow for continuous working relationships and the flow of knowledge about best practice between individuals and organisations, improving the quality of and access to care.

As has already been mentioned the bringing high volumes of specialised vascular procedures together into one space provides better patient outcomes, reduces length of stay in hospital, and results in fewer re-admissions after surgery. GiRFT has even calculated that the NHS could save over 100 additional lives a year by creating vascular networks.

5. A VISION FOR LOCAL CHANGE

In 2018 the NHS Lancashire and South Cumbria Health and Care Partnership developed a vision for vascular services, for the people it provides care for, and the staff who provide that service.

5.1 The Vision

Places the Patients' health & well-being at its centre.

Implements a model of care that:

- is safe, efficient & sustainable,
- reduces variation in access,
- improves patient diagnosis & treatment,
- improves mortality and morbidity,
- is consistent with national guidance & best practice.

This programme vision was part of a wider review of services and the development of local drivers for change across a number of clinical services in Lancashire and South Cumbria. It fully aligns with the L&SC Integrated Care Strategy and Vision that states:

“We want people in Lancashire and South Cumbria to live longer, healthier, happier lives than they currently do”

The priorities of the L&SC Integrated Care Strategy include:

Living Well *tackling inequalities in mental and physical health,*

Ageing Well *supporting people to stay well in their homes ... and more joined up care, and*

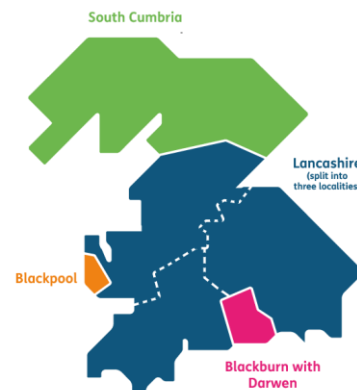
Working Well *supporting a healthy and stable workforce.*

All of these are key drivers in the Vascular Network Programme. The following sections describe the local review and analysis for Vascular surgery services and the drivers for changing the then service structure (mindful of the national requirements).

5.2 The Local Case for Change

Lancashire and South Cumbria (L&SC) Health and Care Partnership covers a large and complex geography with many NHS Providers that until recently had worked collaboratively only on discrete pieces of work, driven by a shared ambition to do the very best for Patients, its staff, and the local communities.

Collaboration during the COVID-19 pandemic response demonstrated what could be done together at scale and as a result the acute Trust Boards decided to form a 'Provider Collaborative' to enable more consistent closer working.



Formalised in July 2020 the L&SC Provider Collaborative Board (PCB) consists of all NHS Trust Chief Executives and Chairs with a set of seven collective priorities that included: a joint clinical vision, centred around network-service delivery, delivering robust and resilient services for the population.

By collaborating and working across single, larger, more resilient teams, the intention is that L&SC will be able to standardise service quality and ensure more effective leverage within the various transformational programmes across the system. A network approach will also give opportunities to develop specialist expertise associated with centres of excellence while continuing to delivery local services. Benefits from such a networked approach, include:

- offering system-wide resources to deliver improved quality and financial outcomes while still maintaining L&SC-wide access to services.
- creating resilience which allows organisations and staff to withstand greater stresses than they could if working on their own in isolation.
- improving patient care by offering better access to services which are better coordinated and offer consistent support and advice.
- offering a more attractive working environment across a range of different domains, meaning that the system is better able to recruit into vacancies and retain staff.

These principles fully align with the Lancashire and South Cumbria Integrated Care Board (ICB) plans published in 2023 as an overview of the local health care system (*Turning Challenges into Opportunities*). This document covers the need for service improvements and support to the workforce.

5.3 Service Review: Initiation of the Vascular Network Programme

The Lancashire and South Cumbria Integrated Care System (ICS) undertook a wide ranging review with local communities and NHS provider organisations to prioritise which clinical services were considered fragile and potentially required transformation.

Vascular surgical services were one of those services identified by the Chief Executive Officers of the four acute Provider organisations as 'clinically fragile'.

L&SC NHS Providers and Commissioners came together in July 2018 to discuss the vascular service at the time and identified key areas where there was underperformance against the national clinical standards and recommendations.

A summary of these 'drivers for change' from that meeting (in no particular order) are shown below (and explored in greater depth in the following sections):

- the centres are not working within recommended network configuration.
- neither Vascular Centre is achieving Below Knee: Above Knee ratio target.
- the population size of ELHT does not meet minimum requirements ($\geq 800k$).
- repatriation and rehabilitation services are challenged across the region.
- variation in services provided at the local sites.

6. DRIVERS FOR CHANGE IN DETAIL

6.1 Centres Not Working Within Recommended Network Configuration

Current Services in Lancashire, South Cumbria, and Wigan

The current vascular service structure was commissioned in 2013 following the Cardiac and Stroke Network review of vascular services which started in 2011¹.

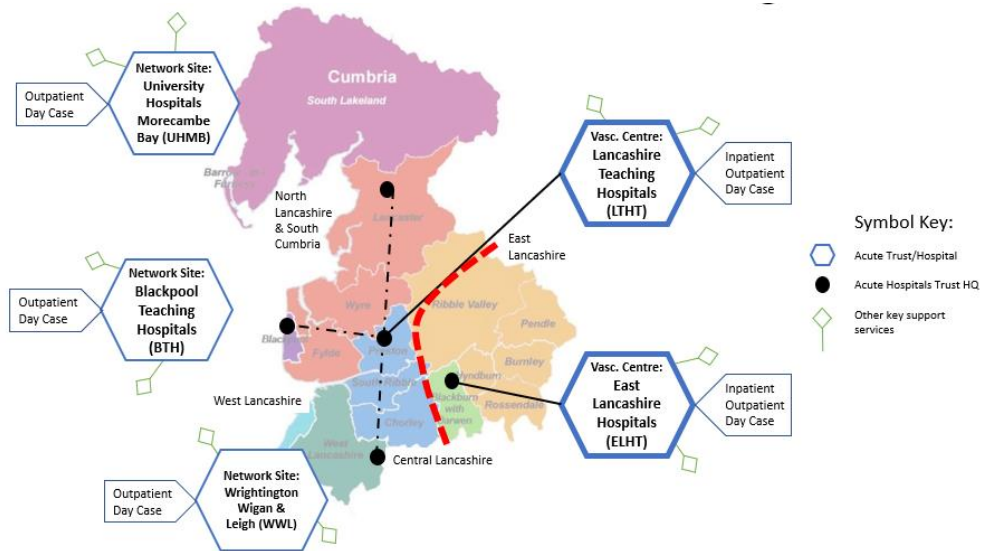
Lancashire Teaching Hospital NHS Foundation Trust (LTHT) and East Lancashire Hospital NHS Trust (ELHT) provide vascular inpatient and outpatient services for L&SC (as Vascular Centres).

Following the reconfiguration of services in 2013 LTHT provides vascular services to Central and West Lancashire, South Cumbria, and Wigan. Inpatient surgery is carried out at Royal Preston Hospital (RPH) with outpatient and day case services provided at Blackpool Teaching Hospital NHS Foundation Trust (BTH), University Hospital Morecombe Bay NHS Foundation Trust (UHMB) and Wroughtington, Wigan and Leigh NHS Foundation Trust (WWL).

ELHT provides vascular services to East Lancashire and whilst providing some community based services it is not part of a network, nor does it currently partner with another acute trust.

¹ Improving Vascular Services: A Case for Centralisation of Vascular Services in Lancashire and Cumbria, authored by Natalie Park. http://www.csnlc.nhs.uk/uploads/files/FINALmodel_may2011.pdf

In summary, current vascular services across Lancashire, South Cumbria and Wigan can be described visually in the following diagram with the services stemming from either LTHT or ELHT:








The 2013 reconfiguration of services that saw LTHT commissioned to provide vascular services to BTH, WWL and UHMBT does not meet the national standard specification. However, at a wider L&SC perspective this framework of services (with ELHT hosting services separately to a 550,000 population) does not meet the recommended clinical network structure that has been given in national guidance from NHSE and GiRFT, or indeed locally from the recent service reviews, nor the L&SC ICB Strategy.

In its response to the NHS Joint Forward Plan the NHS in Lancashire and South Cumbria has committed to working with health and care partners on a number of priorities. These include changing how organisations work together and how the NHS provides services ensuring care moves closer to home wherever possible, strengthening primary and community care and integrating health and care services. The ICB aims to standardise, network, and improve our pathways of care. This programme supports those priorities.

Table 6.1 Information on the L&SC Trusts

Trust²	East Lancashire Hospitals NHS Trust	Lancashire Teaching Hospitals NHS Foundation Trust	Blackpool Teaching Hospitals NHS Foundation Trust	University Hospitals of Morecambe Bay NHS Foundation Trust	Wrightington, Wigan, & Leigh Teaching Hospitals NHS Foundation Trust
Estate	<p>There are two acute hospital sites, Royal Blackburn Hospital & Burnley General Hospital providing the main support to vascular surgery services. There are three community hospital sites: Accrington Victoria Hospital; Clitheroe Community Hospital & Pendle Community Hospital.</p> <p>The trust also provides services from community sites across East Lancs.</p>	<p>There are two acute hospitals delivering acute services which include vascular services: Royal Preston Hospital (the Trust Headquarters) & Chorley & South Ribble Hospital, plus a Specialist Mobility & Rehabilitation Centre.</p>	<p>Blackpool Teaching Hospitals NHS Foundation Trust (BTH) comprises Blackpool Victoria Hospital (Trust Headquarters) & two smaller community hospitals.</p> <p>BTH is also one of four tertiary cardiac centres in the Northwest of England providing specialist cardiac services to heart Patients from Lancashire & South Cumbria.</p> <p>The Trust also provides a wide range of community health services to the 445,000 residents of Blackpool, Fylde, Wyre & North Lancashire.</p>	<p>University Hospitals of Morecambe Bay NHS Foundation Trust (UHMBT) operates from three main hospitals: Furness General Hospital (FGH) in Barrow, the Royal Lancaster Infirmary (RLI), & Westmorland General Hospital (WGH) in Kendal, as well as a number of community health care premises.</p>	<p>Wrightington, Wigan & Leigh Teaching Hospitals NHS Foundation Trust (WWL) provides acute clinical services from five main sites: Royal Albert Edward Infirmary, Wrightington Hospital, Leigh Infirmary, Thomas Linacre Centre & Boston House. It also has a number of community services across a range of locations within the borough. Wigan, town & metropolitan borough is classed as part of the metropolitan county of Greater Manchester.</p> <p>Other specialist services are provided to a wider regional & catchment by WWL.</p>

² <https://www.cqc.org.uk/>

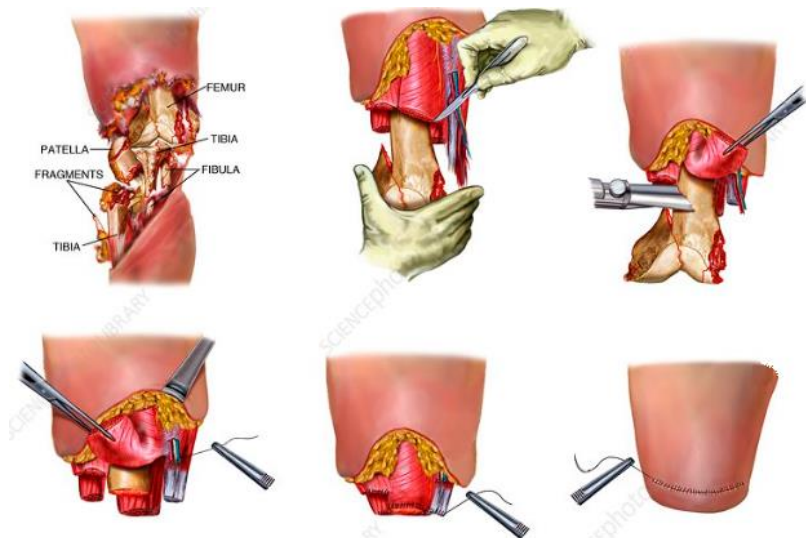
Trust ²	East Lancashire Hospitals NHS Trust	Lancashire Teaching Hospitals NHS Foundation Trust	Blackpool Teaching Hospitals NHS Foundation Trust	University Hospitals of Morecambe Bay NHS Foundation Trust	Wrightington, Wigan, & Leigh Teaching Hospitals NHS Foundation Trust
Vascular Services	<p>Provides routine & complex elective & emergency vascular surgery interventions & diagnostics, including arterial & carotid artery surgery (endarterectomy), leg ulcer repair, general vascular surgery, abdominal aortic aneurysm (AAA) repair & treatment for varicose veins.</p> <p>The Trust provides regional specialist care for hepatobiliary, head & neck & urological cancer services.</p>	<p>Provides routine & complex elective & emergency vascular surgery interventions & diagnostics, including arterial & carotid artery surgery leg ulcer repair, general vascular surgery, abdominal aortic aneurysm (AAA) repair & treatment for varicose veins.</p> <p>The Trust is also a regional specialist centre for services such as cancer, disablement (e.g. artificial limbs & wheelchairs), major trauma, neurosurgery & neurology, & also for renal disease.</p>	<p>Routine day case & outpatient vascular services are provided to the local patient population by LTHT at Blackpool Victoria Hospital. BTH Patients are provided complex elective & emergency vascular surgery & interventions at Royal Preston Hospital.</p> <p>The Trust provides tertiary cardiac, haematology & adult cystic fibrosis regional services, & hosts the National artificial eye service, which provides services across England.</p>	<p>Routine day case & outpatient vascular services are provided to the local patient population by LTHT at UHMBT. Local UHMBT Patients are provided complex elective & emergency vascular surgery & interventions at Royal Preston Hospital (LTHT).</p>	<p>Routine day case & outpatient vascular services are provided to the local patient population by LTHT at WWL sites. Local WWL Patients are provided complex elective & emergency vascular surgery & interventions at Royal Preston Hospital (LTHT).</p>
Population Served	<p>Serves a population of approximately 550,000 across East Lancashire & Blackburn with Darwen & a range of specialised services to an estimated 1.5 million Patients in L&SC.</p> <p> 550k</p>	<p>Serves an estimated population of 390,000 people in the Preston & Chorley areas & a range of specialised services to an estimated 1.5 million Patients in L&SC.</p> <p> 1.5m</p>	<p>Serves a population of approximately 330,000 residents across Blackpool & the Fylde coast & a range of specialised services to an estimated 1.5 million Patients in L&SC.</p> <p> 330k</p>	<p>Provides services The acute trust serves a population of approximately 352,000 residents across South Cumbria.</p> <p> 352k</p>	<p>The acute trust serves a local population of 326,000 (a Lancashire & Greater Manchester footprint). Specialist orthopaedics services are provided to a wider regional, national & international population.</p> <p> 326k</p>

6.2 Below Knee: Above Knee Ratio Targets

Within the national vascular quality standards there is reference to the major amputation of lower limbs resulting from Peripheral Arterial Disease (PAD). Considerable effort is made to preserve limbs during medical, endovascular, and open surgical interventions. However, lower extremity amputation remains one of the most common vascular surgical procedures. Severe PAD accounts for the majority of Patients requiring major lower limb amputations.

The level of amputation is mainly dictated by the extent of the disease. A below-knee amputation (BKA) is a trans-tibial amputation that involves removing the foot, ankle joint, and distal tibia and fibula bones with related soft tissue structures. BKA is typically used once the needed level for amputation extends beyond the ankle.

An above-knee amputation (AKA) is often the next level of amputation (as shown in the images right) in the presence of more proximal disease or failed wound healing from a BKA.



In general, a BKA is much preferred over an AKA, as the former has better rehabilitation and functional outcomes for the patient, and a reduced physiological and psychological impact.

According to the Vascular Services Quality Improvement Programme (VSQIP), hospitals should aim to have an AKA to BKA ratio below 1.0. During 2017-2019, the national ratio was 0.93 (but it varied greatly across the country). The table below shows that neither acute trust is achieving the recommended ratio, with both ELHT and LTHT above 1.0 in the most recent VSQIP Annual Report (2022) data publications.

Table 6.2 LTHT and ELHT Above Knee: Below Knee Amputation Ratio

Organisation (Org. Code)	Above Knee (AKA) to Below Knee Amputation (BKA) Ratio		
	2015-2017 ³	2017-2019 ⁴	2021 ⁵
ELHT (RXR)	1.05	1.33	1.63
LTHT (RXN)	1.79	1.17	1.73
National	-	0.93	1.00

³ <https://www.vsqip.org.uk/reports/2018-annual-report/>

⁴ <https://www.vsqip.org.uk/reports/2020-annual-report/>

⁵ <https://www.vsqip.org.uk/reports/2022-annual-report/>

6.3 Trust Catchment Populations

The *Provision of Services for People with Vascular Disease* (published in 2021 by the Vascular Society)⁶ is a guidance document that aims to assist commissioners, providers, and clinicians to deliver the ambition of world class care for Patients with vascular disease.

POVS advocates the GiRFT recommendation of a ‘hub and spoke’ model and provides a framework for delivering regional vascular networks. The guidance states that *eight hundred thousand people has become the established minimum population for UK Vascular networks* (aligned to figure from the AAA screening programme and based on the number of Patients needed to provide a comprehensive emergency service, maintain competence among vascular specialists and nursing staff; the most efficient use of specialist equipment, staff and facilities, and improvement in patient outcome associated with increased caseload)⁷.



Across most of the UK, a network population size of greater than 1.2 million people is needed to provide the volume of potential aortic cases to drive better outcomes. LTHT provides district general hospital services to 390,000 people in Preston and Chorley. Following the 2013 reconfiguration it also provides vascular services to Blackpool (BTH), South Cumbria (UHMBT) and Wigan (WWL) – an additional 1m people across those catchment areas of Lancashire and South Cumbria (above the recommended 1.2m).

ELHT serves a population of 550,000 across East Lancashire and Blackburn with Darwen, which on its own is well below the recommended 1.2m population.

ELHT	LTHT	BTH	UHMBT	WWL
550k	390k	330k	352k	326k

An Arterial Central across Lancashire and South Cumbria alone would cover around 1.7 million people (the estimated population of L&SC), plus the potential population within the WWL catchment area (estimate at 326,000) – an approximate total of 2 million people.

6.4 Repatriation and Rehabilitation Challenges

Most vascular surgical Patients are fit to be discharged from hospital relatively soon after treatment with minimal issues for a safe repatriation. A follow up outpatient appointment at the Patients’ local hospital with their vascular specialist should enable a satisfactory episode of care.

⁶ https://www.Vascularsociety.org.uk/_userfiles/pages/files/Resources/FINAL%20POVS.pdf

⁷ [specialised-Vascular-services-service-specification-adults.pdf](https://www.specialised-Vascular-services-service-specification-adults.pdf) (england.nhs.uk)

A not insignificant proportion, however, will require prolonged rehabilitation and/or attention to social issues (e.g. following an amputation).



The preferred solution, wherever possible, is for more complex cases to be repatriated directly to either intermediate or community care without the need for repatriation to a local hospital.

If repatriation is deemed the most appropriate course of action then it is usual that care be transferred to an appropriate non-vascular specialist e.g. Stroke, Care of Elderly, General Surgery, etc.

ELHT and LTHT both have Therapists working as part of a larger surgical team, covering six ward areas and in the region of 130 beds. ELHT have a weekend service, for which the rota utilises therapists from all specialties, resulting in potentially less specialist input over a weekend (LTHT do not have a 7-day provision). ELHT have a small pre-operative service (LTHT do not have this option).

The LTHT Therapy service on the 33-bedded vascular ward receives between 550-650 referrals per year. Since 2019 the service has assessed and rehabilitated an average of 152 major amputation Patients each year. The ELHT Therapy service receives on average 390 referrals per year, 36 of these being major amputations (through the 18-bed vascular ward at Royal Blackburn Hospital).

Patient discharge from acute settings can be highly complex given the nature of vascular surgery. There are various discharge pathways for both Trusts, which can be complicated, with varying processes and referral routes (that can be highly time consuming for clinicians).

Across L&SC there are no formal repatriation agreements for vascular Patients, further adding to the discharge complexities and negatively impacting length of stay.



There are varying degrees of rehabilitation service offers across the system, creating inequalities for Patients. Rehabilitation is further complicated by not having repatriation agreements and no direct referrals from LTHT to some settings, meaning some Patients experience significant delays in accessing rehabilitation. There is a similar picture for community and outpatient therapy services, while a lack of standardisation and access is creating inequalities and increasing the long term burden on health and social care. Other key issues include:

- Access to equipment. Delays to provision are experienced, with limited bariatric equipment available and delivery unavailable to LTHT from some regional stores.
- Increasing complexity of Patients. A greater patient acuity requires more therapy time and a greater number and diversity of therapists per intervention.
- Estate: Currently LTHT has an aging estate and small bed spaces, with no clinical therapy ward space. Both Trusts have limited access to outpatient gyms and specialist equipment.

Both Trusts are working on improvement projects and have identified future aspirations for their services. There are projects of work that will commence to improve inequalities for Patients across L&SC, including repatriation agreements, standardised rehabilitation offers and referral process.

6.5 Network Hospital Site Variation

Guidance from the Vascular Society states that:

a Vascular Network should provide equity of access to specialist vascular care irrespective of where a person lives, or the hospital to which they first present.

maintaining access to a vascular service close to where people live is central to the success of the network.



The guidance also goes on to say in outline that each hospital trust within the network should provide for the Vascular service:



- Outpatient clinic rooms with appropriate staff
- Diagnostic imaging
- Day case lists
- Interventional radiology facilities
- Diabetic footcare services
- Work up for intervention (cardiology, respiratory and renal)

As has been identified in previous sections although quality vascular services are provided at the Vascular Centres and partner Hospitals within Lancashire, South Cumbria, and Wigan, too many examples exist of underperformance and improvements being required to give parity of access and continuing high quality care to Patients across the geography.

The Model Health System⁸ is an evidence based improvement tool that highlights variation across health and care systems in order to provide opportunities to improve patient outcomes.



It provides benchmarked data and insights across the care pathways to identify opportunities for improvement. The following charts and data include a number of procedure areas for the two Vascular Centres that the Model Hospital has flagged where opportunities can be made to improve upon care (when benchmarked again national peer care organisations).

Table 6.5.1 The data below (from 20/21) identifies that both Trusts are underperforming compared to their peers in respect of the average length of stay for open infra-renal AAA repairs (ELHT in particular). It suggests that on average Patients at ELHT stay in hospital over 15 days longer than at peer hospitals for this procedure.

Trust	Reporting Date	Value	Notes	Provider Median	Ranked Provider Chart	LTHT	ELHT
Average length of stay (days) for open infra-renal abdominal aortic aneurysm (AAA) repairs (12m to quarter end).							
ELHT	20/21 Q3	25.7 days	In quartile 4 - Highest 25% [red]	10.9 days			
LTHT	20/21 Q3	11.7 days	In quartile 3 - Mid-High 25% [amber / red]	10.9 days			

⁸ <https://model.nhs.uk/home>

Table 6.5.2 The next data table below (20/21) highlights the LTHT percentage of emergency patient readmissions (within 30 days) following a supra-renal AAA repair compared to its peer group. Although patient numbers are small, it suggests that more Patients return to hospital (on average over an additional 11% of Patients) at LTHT than at its peers after this procedure.

Trust	Reporting Date	Value	Notes	Provider Median	Ranked Provider Chart	LTHT
Percentage emergency patient readmission within 30 days following a supra-renal abdominal aortic aneurysm (AAA) repair (12mths to quarter end).						
LTHT	20/21 Q3	22.2%	In quartile 4 - Highest 25% [red]	11.7%		

Table 6.5.3 Similarly the next data table below (20/21) highlights nearly 3% of Patients at LTHT returning for an admission for another vascular procedure within 30 days of carotid endarterectomy surgery compared to its peer group (which has none). Again it should be noted that patient numbers are likely small which may be an artefact contributing to LTHT being an outlier.

Trust	Reporting Date	Value	Notes	Provider Median	Ranked Provider Chart	LTHT
Percentage return admission for another vascular procedure within 30 days following carotid endarterectomy (12m to quarter end).						
LTHT	20/21 Q3	2.8%	In quartile 4 - Highest 25% [red]	0%		

Table 6.5.4 The average length of stay following an emergency admission is shown in the following data (from March 2023). It identifies that both Trusts are underperforming compared to their peers. It suggests that Patients stay in LTHT for around 6 more days following an emergency admission compared to the Trust’s peers.

Trust	Reporting Date	Value	Notes	Provider Median	Ranked Provider Chart	ELHT	LTHT
Average length of stay (days) for emergency admissions (rolling 6 months).							
ELHT	March '23	16.0 days	In quartile 3 – Mid-high 25% [amber/red]	14.2 days			
LTHT	March '23	20.1 days	In quartile 4 - Highest 25% [red]	14.2 days			

Table 6.5.5 Finally, ELHT and LTHT show differences in performance against their peer group when the average length of stay for planned major amputations for lower limb vascular disease is analysed. It suggests that Patients stay in LTHT for 6 more days following such major surgery compared to the Trust’s’ peers.

Trust	Reporting Date	Value	Notes	Provider Median	Ranked Provider Chart	ELHT	LTHT
Average length of stay (days) for elective major amputations for lower limb vascular disease (12m to quarter end).							
ELHT	March '23	14.2 days	In quartile 2 – Mid-low 25% [amber/green]	14.7 days			
LTHT	March '23	20.8 days	In quartile 3 – Mid-high 25% [amber/red]	14.7 days			

NHS Trusts are also mandated to publish data against the national quality standards, The table below shows the status of vascular services in LTHT and ELHT against the key metrics that have been shown to deliver improved outcomes and meet national requirements. A number of the metrics to not meet national clinical standards.

Table 6.5.6 LTHT and ELHT Performance Against National Standards

Key Metrics	LTHT	ELHT	Comments
24/7 access to specialist care including vascular surgeons, interventional radiologists, and specialist nurses, including sustainable on call rotas of 1:6 or greater	Yes	Yes	Data May 2023
6 Vascular Surgeons.	Yes	Yes	Data May 2023
Consultant on call rota (1:6)	1:11	1:6	Data May 2023
On call Vascular Interventional Radiology	Yes (1:10)	Yes (1:8)	Data May 2023
At least one endovascular theatre	Yes	No*	* Currently being commissioned
Have specialist clinicians undertaking adequate volumes of core index procedures to ensure consistent safe quality care ⁹	No	No	Data 2021
<ul style="list-style-type: none"> o a minimum of 60 AAA procedures (total of open and endovascular including symptomatic/ruptured) per annum 	89	26	Data 2021
<ul style="list-style-type: none"> o of which open AAA repair for intact aneurysm is 13 or more 	25 Open, 64 EVAR	9 Open, 17 EVAR	Data 2021
<ul style="list-style-type: none"> o a minimum of 35 carotid procedures pa 	77	37	Data 2021
Submit cases to the National Vascular Registry (NVR) publishing outcomes	Yes	Yes	Data May 2023
Above Knee (AKA) to Below Knee Amputation (BKA) ratio	1.73	1.63	Data 2021
Part of a comprehensive Vascular Network	Yes	No	Current
Risk adjusted survival rates; AAA (NVR data) ⁸	98.7%	96%	Data 2019-21

⁹ <https://www.vsqip.org.uk/surgeon-outcomes>

7. RISKS ASSOCIATED WITH DOING NOTHING

Maintaining vascular services across the five hospital sites has become more challenging in the past three years, for example with difficulties from recruiting and retaining staff, and the impact that this has upon sustaining adequate rotas.

This paper has demonstrated evidence to suggest that changes to vascular services are needed to meet national standards and also to support the continued provision of high quality care. If change is not implemented there are risks to the safety and the sustainability of vascular services in LSC&W.

Table 7.1 below shows the risks of failing to take action to change the current position.

In summary, there is a risk that if the vascular inpatient services remain unchanged, Patients will continue to receive variable care, with surgeons who are unlikely to meet the national minimum count for procedures per annum and continue to have underperformance in some service areas. This would ultimately affect the quality of care for Patients



Table 7.1 Risk Assessment for Doing Nothing

Key Risk Description (associated with doing nothing)	Cause/Current position	Consequence	Level	Mitigating Actions
Consistent, high quality patient care and treatment at risk.	LTHT is working within the recommended network configuration - ELHT is not.	At times Patients do not receive a consistently high-quality service with variable access across the designate LSC&W Network.	High	Establishment of the preferred networked model of care with one Arterial Centre and Network Hospitals
Care pathways and treatment practices varying across LSC&W puts consistent, high quality patient care at risk	There is limited formal collaboration and standardisation of care pathways between ELHT and LTHT service providers.	Patients experience variation in service provision at the Network Hospital sites.	High	An established network model of care with agreed standardised care pathways and treatment practices.
Joint working with other services remains challenging which puts timely, high quality patient care at risk.	Repatriation and rehabilitation services are challenged across the region, with limited formal commissioned pathways for Patients to be referred and care provided.	Length of stay for Patients at Trusts following operations remains disproportionately high. Poor pathway links with community providers increases the patient repatriation time following surgery (increasing the risk to patient care and reducing the availability of acute beds).	High	An established network model of care with partner organisations and services working jointly would optimise care, prevent amputation, standardise methods and promote best practice across the clinical teams.
Risk that underperformance against key standards may impact upon consistent, high quality patient care	LSC treatment waiting times have been significantly above the 18 week waiting time target. Limitations in workforce, bed and theatre capacity, and IR facilities.	Neither centre is achieving Below Knee (BKA): Above Knee (AKA) amputation ratio target. Not achieving the March-22 CQUIN national target: Revascularisation for Patients with lower limb ischaemia (treatment <5 days from non-elective admission).	Medium	An established Arterial Centre and model of care with staff centralised to provide services would optimise care, standardise methods and promote best practice across the clinical teams.
Risk that mortality and morbidity rates do not improve	The current service configuration makes it difficult to make improvements to survival rates following hospitalisation.	Reducing the number of deaths is challenging given the relatively low volumes of procedures undertaken by some surgeons.	High	Establishing an Arterial Centre and model of care that centralises surgery would optimise care and promote best practice, increasing opportunities

Key Risk Description (associated with doing nothing)	Cause/Current position	Consequence	Level	Mitigating Actions
				for surgeons to train, experience new techniques and undertaken national standard procedure counts.
Risk that the fragility of the workforce does not improve and that the lack of sustainable workforce numbers, capacity and skillsets may impact upon the provision of consistent, high quality patient care	<p>Workforce, recruitment, and retention issues are the responsibility of the individual providers (often with intra-Trust competition).</p> <p>The thin spread of the specialist workforce (Consultant surgeons, IR Consultants, and specialist nurses, and the wider multi-disciplinary team) across the patch creates sustainability issues.</p>	Evidence suggests that consultants performing more procedures have better outcomes. It is challenging to recruit and retain high quality specialist staff across the two Vascular Centres performing lower average numbers than elsewhere in the country. Without a single LSC&W network staff are more incentivised to seek employment at larger networks in Manchester, and Cheshire.	High	Establishing an Arterial Centre that centralises surgery promote best practice and gives consultants opportunities to perform more procedures. Vacancies are more likely to be filled and staff retention would improve with a single LSC&W network and Arterial Centre.
Risk to a consistently well staff on-call rota	The specialist workforce (Consultant surgeons, IR Consultants, and specialist nurses, and the wider multi-disciplinary team) across the patch is spread thin and creates sustainability issues.	There are continuing challenges at the hospital sites for maintaining 24/7 on-site vascular surgery and interventional radiology on-call rota staffed by the right number of staff.	Medium	Establishing an Arterial Centre provides resilience and sustainable numbers to maintain staff rotas.

8. THE FUTURE MODEL OF CARE

8.1 Local Structure

As the National NHS England Specialised Vascular Service Specification¹⁰ states: *Vascular services are commissioned to provide diagnostics and treatment for vascular disease. The principal specialities involved are vascular surgery and vascular interventional radiology.*

The proposed new model of care for LSC&W will continue to provide Patients with all of the essential service elements identified within the national specification document.



A network of collaborating acute trusts across LSC&W will work together to deliver comprehensive patient care pathways, centralising some services where necessary, and continuing to provide other services equally in local hospital settings where appropriate and safe to do so.

The recommended model of care option will see the Vascular Network integrate all elective and emergency vascular care within a single, centralised Arterial Centre, as part of a clinical network of the following Trusts:

- Blackpool Teaching Hospitals NHS Foundation Trust (BTH)
- East Lancashire Hospitals Trust (ELHT)
- Lancashire Teaching Hospital NHS Foundation Trust (LTHT)
- University Hospitals of Morecambe Bay NHS Foundation Trust (UHMB)
- Wrightington, Wigan and Leigh Foundation Trust (WWL)

Clear pathways will be in place across the Vascular Network to ensure Patients receive a seamless and timely service. The Arterial Centre, through the integrated network of partner hospitals, will be responsible for coordinating vascular care across the region, ensuring good communications, and maximising the delivery of care at all hospital sites. All Patients with vascular disease or vascular complications cared for outside of the main Arterial Centre must have access to the same high quality of care and the same opportunities and choices of care as those Patients who are in the arterial centre hospital. In summary the Network Model can be briefly described as:

- A single commissioned provision of networked vascular services in LSC&W
- A single network team, governance and organisational structure delivering vascular services across LSC&W
- A Vascular Network with one Arterial Centre site
- Surgical & emergency vascular Patients admitted to a single Arterial Centre
- Parity of service provided at each Networked hospital that complies with national service specification standards (with as much of the patient pathway held locally)

¹⁰ <https://www.england.nhs.uk/wp-content/uploads/2017/06/specialised-Vascular-services-service-specification-adults.pdf>

Table 8.1 High Level Vascular Services and the Organisations Delivering Them.

LSC&W Vascular Network Site	Service Description
Arterial Centre	<ul style="list-style-type: none"> - 24/7 consultant-led Vascular Team managing all acute elective and emergency vascular surgery on site. - Interventional Radiology service supporting both vascular and non-vascular services. - Employs and hosts consultant surgeons for the LSC&W Vascular Network and is responsible for delivering care in the Networked hospital sites. - Comprehensive vascular diagnostic, outpatient, and ambulatory care services for the local population - Post-surgical care until the patient is fit to either return home or be transferred for rehabilitation closer to home.
Networked Hospital sites	<ul style="list-style-type: none"> - Comprehensive vascular diagnostic, outpatient, and ambulatory care services for the local population (delivered by consultants employed by LSC&W Vascular Network) - Direct contact links to the Arterial Centre for 24/7 support for vascular advice and patient management - Weekday on-site presence of specialist vascular medical and nursing staff to support repatriated Patients and other acute hospital specialties. - Interventional Radiology service supporting non-vascular services. - Day case vascular surgery (delivered by consultants employed by LSC&W Vascular Network) - Additional ad-hoc vascular consultant support on site where required (e.g. for individual complex surgical cases in other specialities)

8.2 Commitment to Take Notice of Engagement

The Health and Care Act (2022)¹¹ sets out statutory duties for NHS bodies such as L&SC ICB relating to public involvement. Public involvement and listening to all of the communities that make up L&SC is an essential part of making sure effective and efficient health and care services are delivered.

Reaching out, listening to, involving, and empowering the communities of L&SC is a fundamental part of the programme's preparatory and implementation delivery work. Patients, carers, family members and the public, will be directly involved in engagement activities (such as feedback forums and surveys) to fully demonstrate that local residents and communities are equal partners in the co-production of health care services.

¹¹ <https://www.legislation.gov.uk/ukpga/2022/31/contents/enacted>

9. KEY BENEFITS OF THE FUTURE MODEL

It is not anticipated that delivering the core recommendations of the national vascular service specification and the GiRFT programme recommendations (i.e. a network model of vascular services in LSC&W) will see any degradation to the existing services.



However, there are expected to be significant associated improvements in quality of patient care as a result of the model's implementation, particularly through the consolidation of surgical services onto a centre host site.

Although some services and staff may experience a change in the location in which they work and deliver patient care, without vascular surgery service reconfiguration there are ongoing risks to the provision of high quality patient care and treatment. Care pathways and treatment practices will vary across LSC&W and the risk from a fragile and thinly spread workforce will not improve.

The benefits of the service reconfiguration will be evidenced over time through better collaboration and networking, and for example by a reduction in unwarranted variation of service deliver, and consistent achievement of clinical and quality standards (which underpin the delivery of the best patient experience).

Collaboration of the Providers across LSC&W, rather than competition, will facilitate the equitable implementation of new technologies, techniques, treatments, and innovations, while consolidation the surgical workforce will improve resilience and a capacity to absorb increased patient demand (without negatively impacting on the quality of care).

Improved coordination between Providers, with consistent advice, care, and prevention, will also see a timelier percolation of information and resources across the network allowing ideas to spread and for feedback to be generated and acted upon more rapidly. Collecting and reporting performance in a singular fashion will also help enable quality improvement of the LSC&W Vascular Network.

From a quality perspective, the case for change is a signal of the Provider Collaborative's ambition to develop the capability to meet and surpass good standards of care and create the opportunity to move to 'best in class' for services and pathways. This will help to address the inequality of outcomes for Patients living in different areas of LSC&W.

The following table lists key benefits that the model of care will enable.

Table 9.1 Benefits of a Vascular Clinical Network

Key Benefit Description	Main Beneficiaries (Recipient/Stakeholder)	Benefit Type	Key Performance Indicator (Measurement Source)	Benefit Target
Reduced variation in patient waiting/access times	Patients, carers, and family.	Quality of Patient care.	National guidelines state that no patient will wait more than 18 weeks from referral to initial treatment (RTT) other than for medical reasons. (Provider/NHSE)	92% of patients
Improved performance against core quality metrics (procedures undertaken and outcomes)	Patients, carers, and family. Vascular workforce	Quality of Patient care. Skilled & resilience workforce	Abdominal Aortic Aneurysms (AAA) repairs per year Number of carotid procedures per annum Carotid endarterectomies procedures undertaken pa. Lower Limb Peripheral Arterial Disease (PAD). Timely intervention to improve Above Knee (AKA) to Below Knee Amputation (BKA) ratio. Lower Limb amputation outcome: Rate of amputation revision to higher level (Provider/National Vascular Registry)	> 60 pa > 40 pa => 35 pa < 1.00 < 10% of patients
Improved performance against core quality metrics (patient outcomes)	Patients, carers, and family.	Quality of Patient care.	Abdominal Aortic Aneurysms - mortality in hospital - mortality (all causes) at 1 year following repair Carotid Endarterectomies - mortality 30 days after surgery - stroke rate 30 days after surgery Lower Limb Peripheral Arterial Disease (PAD) - mortality 30 days after surgery (Provider/National Vascular Registry)	(% patients) =< 3.5% =< 15% < 1% < 2% < 5%

Key Benefit Description	Main Beneficiaries (Recipient/Stakeholder)	Benefit Type	Key Performance Indicator (Measurement Source)	Benefit Target
Improved performance against core quality metrics (timely treatment)	Patients, carers, and family. Vascular workforce	Quality of Patient care. More economical use of capacity.	Abdominal Aortic Aneurysms - time to treat of those listed, % surgery within 56 days. Revascularisation for Patients with lower limb ischaemia (treatment <5 days from non-elective admission) - PSS Mar-22 CQUIN. Carotid Endarterectomies - Delay from symptom to treatment for suitable Patients (Provider/National Vascular Registry)	=> 80% of patients < 5 days <7 days
Reducing length of stay for Patients undergoing Vascular surgery.	Patients, carers, and family. Vascular workforce	Quality of Patient care. More economical use of capacity.	Reducing length of stay, for example: - elective Abdominal Aortic Aneurysms (AAA) repair - major amputations for lower limb vascular disease - following emergency admission (Provider/Model Hospital)	< 7 days < 14.7 days < 14.2 days
Equitable and standardised Vascular services across Lancashire, South Cumbria, and Wigan.	Patients, carers, and family.	Quality of Patient experience	Equitable and standardised services for all Patients across LSC&W (Patients being seen closer to home as appropriate to their intervention) Timely and equitable access to Vascular services. (Providers/Patient Feedback)	To be detailed

