Kent and Medway Vascular Surgical Services Review: Medium term Solution

Pre-Consultation Business Case

Purpose of the document

This Pre-Consultation Business Case (PCBC) has been prepared by NHS England Specialised Commissioning in collaboration with Kent and Medway Clinical Commissioning Group for approval by NHS England and Improvement assurance ahead of any formal public engagement or consultation on the proposals recommended in the PCBC can begin.

The PCBC sets out:

- the case for change in Kent and Medway vascular services
- a medium term proposal for change intended for public consultation in 2021
- other options for change that were evaluated
- how and why the chosen medium term proposal was selected
- plans for implementing the proposal

The long-term future of vascular services in Kent and Medway will (including the permanent site for the vascular main arterial centre) be determined by the East Kent Transformation Programme, which is designing changes to acute NHS services in the region. This long-term programme, which will be subject to a separate consultation process, is unlikely to be delivered within the next 8 to 10 years. The current case for change in Kent and Medway vascular services requires earlier changes to how those services are delivered, hence the proposal for the medium-term recommended in this PCBC.

The immediate aim of the medium-term proposal is to enable Kent and Medway vascular services:

- to become operationally sustainable
- to be better able to improve outcomes for patients, and
- to deliver services in line with national requirements

The PCBC's recommended medium-term proposal could go live in early 2022 and be in place for 5 to 7 years or more, depending on the progress of the East Kent Transformation Programme.

Scope of the Kent and Medway Vascular Reconfiguration programme

The scope of the programme includes emergencies and planned inpatient specialised vascular treatment, and excludes varicose vein surgery, heart disease, heart surgery or the management of the common types of stroke. It includes patients treated within Medway Foundation Trust, Maidstone Hospital and East Kent University Hospitals Foundation Trust. In relation to specialised inpatient vascular treatment. It does not propose any change to outpatient, diagnostic and day case provision across Kent & Medway. The public consultation on this medium-term proposal will therefore cover vascular inpatient services only.

Glossary

Abbreviations	
A&E	Accident and Emergency
AAA	Abdominal Aortic Aneursym
AAA/CE	Abdominal Aortic Aneursym / Carotid Endarterectomy
ACC	Adult Critical Care
AfC	Agenda for Change
ASGBI	Association of Surgeons of Great Britain and Ireland
BAME	Black, Asian and Minority Ethnicities
C-Arm	used for vascular procedures
CCG	Clinical Commissioning Group
CEO	Chief Executive Officer
CRG	Clinical Reference Group
CRTC	Commissioning, Recovery & Transformation Committee
EK	East Kent
EKHUFT	East Kent Hospitals University NHS Foundation Trust
FYFV	Five Year Forward View
GIRFT	Getting it right first time
GPs	General Practitioners
HASC	Health and Adult Social Care
HCAs	Healthcare Assistants
HDU	High Dependency Unit
HOSC	Health Overview and Scrutiny Committee
HR	Human Resources
ICS	Integrated Care System
ICT	Information Communication Technology
IR	Interventional Radiology
IT	Information Technology
ITU	Intensive Care Unit
JHOSC	Joint Health Overview and Scrutiny Committee
K&CH	Kent and Canterbury Hospital
K&M	Kent and Medway
K&M CCG	Kent and Medway Clinical Commissioning Group
LD	Learning Development
MDTs	Multi-disciplinary teams
MFT	Medway NHS Foundation Trust
MH	Mental Health
MMH	Medway Maritime Hospital
MP	Members of Parliament

MS Teams	Microsoft Teams
MTW	Maidstone and Tunbridge Wells NHS Trust
NHS	National Health Service
NHSE&I	NHS England and Improvement
NHSE SE	NHS England South East
NVR	National Vascular Registry
OD	Organisational development
OP	Outpatients
OP FA	Outpatient First Appointment
OP FU	Outpatients Follow Up
PCBC	Pre-Consultation Business Case
PMO	Programme Management Office
QEQMH	Queen Elizabeth The Queen Mother Hospital
RAG	Red Amber Green (Risk rating system)
SE	South East
SEC	South East Coast
SECAMB	South East Coast Ambulance NHS Foundation Trust
SHDU	Specialist High Dependency Unit
SMT	Senior Management Team
SRO	Senior Responsible Officer
STP	Sustainability and Transformation Partnerships
SWCSU	South West Commissioning Support Unit
TIAs	Transient Ischaemic Attacks
TUPE	Transfer of Undertakings (Protection of Employment)
VAT	Value Added Tax
VCS	Voluntary & Community Sector
VS	Vascular Society
WCAG	Web content accessibility Guidelines
WHH	William Harvey Hospital
Alternative definitions	
Used in the PCBC	**Used in the public consultation document**
Arterial Centre	Inpatient vascular Centre
Non arterial centre/ No arterial spoke	Network hospital
'Hub and Spoke'	Vascular Centre and network hospitals

Executive summary

Introduction

Vascular disease affects veins and arteries. It can cause blood clots, artery blockages and bleeds which can lead to strokes, amputations of limbs and conditions that might threaten life if left untreated.

Vascular services are a specialised area of healthcare. Evidence shows that vascular patients benefit from the organisation of vascular services into large centres covering a population big enough to generate significant volumes of activity in all areas of service, with a full complement of staff able to deliver services 24 hours a day, 365 days of the year. Vascular surgery is mostly an urgent service, so it must also be organised to ensure that patients can get timely access to effective care. In England, this is achieved through integrated vascular networks, which ensure 24/7 consultant level cover for all services.

Vascular surgeons also provide expert advice and care for patients of other specialties. For example, they provide advice to diabetic foot services, support vascular access, especially for renal patients, and surgical support to stem bleeding complications.

National standards for vascular networks

Evidence has been growing for more than a decade that vascular services doing higher volumes of specialised procedures have better patient outcomes[1]. In line with this growing body of evidence, the Vascular Society of Great Britain has recommended since 2012 that vascular services should be organised into 'hub and spoke' networks. These ensure that patients have local access to a vascular specialist in all areas of the network, but that emergency and arterial work is centralised into fewer arterial centres of excellence[2]. NHS England also requires specialised commissioned vascular services to be organised into networks with dedicated high volume arterial centres[3].

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 (hub) hospital providing arterial surgery and complex** endovascular interventions. 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**

[1] See for example Holt P, et al (a), Meta-analysis and systematic review of the relationship between volume and outcome in abdominal aortic aneurysm surgery. Br J Surg. 2007;94(4):395-403 or Phillips P et al, Systematic review of carotid artery procedures and the volume–outcome relationship in Europe. Br. J. Surg. 2017; 104: 1273-1283 or Moxey PW et al. Volume-Outcome Relationships in Lower Extremity Arterial Bypass Surgery, Ann Surg 2012;256:1102-7

[2] The Provision of Services for Patients with Vascular Disease 2012, Vascular Society of Great Britain and Ireland, https://www.vascularsociety.org.uk/_userfiles/pages/files/Document%20Library/Provision-of-Services-for-Patients-with-Vascular-Disease.pdf

[3] National Service Specification, A04 Specialised Vascular Services (Adult), NHS England, https://www.england.nhs.uk/wp-content/uploads/2017/06/specialised-vascular-services-service-specification-adults.pdf

- Have at least one **endovascular (hybrid) theatre**
- Have specialist clinicians undertaking adequate volumes of core index procedures to ensure consistent safe quality care: a **minimum of 60 AAA and 40 carotid procedures per annum**. Each surgeon should undertake at least 10 AAA procedures per annum.
- **Submit cases to the National Vascular Registry** (NVR) and publish their outcomes

- The other network hospitals 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 local non-arterial centre.

The case for change in Kent and Medway

There are two inpatient arterial centres in Kent and Medway, one at Medway Maritime hospital (part of Medway NHS Foundation Trust - MFT) and the other at Kent and Canterbury hospital (part of East Kent Hospitals University NHS Foundation Trust - EKHUFT). The Kent and Medway Vascular review carried out by NHS England Specialised Commissioning in 2014 (see appendix 13) identified that these two providers of specialised vascular inpatient care were unable to deliver against either the national vascular service specification above or the guidelines from the national Vascular Society for Great Britain and Ireland. Specifically, neither trust was able to meet the required standards on:

- size of population to treat
- numbers of core index procedures carried out
- numbers of staff, particularly consultants, needed to provide 24/7 on site vascular surgery and to staff interventional radiology on-call rotas with clinicians who had the opportunity to undertake the required minimum numbers of interventions.

The review developed a case for change and an initial options appraisal, drawing on its engagement work. It recommended commissioning a single dedicated specialist vascular service for Kent and Medway comprising one arterial centre (the hub) and a number of non-arterial centres (the spokes).

Further work was then undertaken to consider the options for specialist vascular services in the future and consider how these options would address the issues identified in the case for change, looking to ensure the people of Kent and Medway were able to access high quality, safe and sustainable specialist vascular services. An options appraisal exercise was carried out by the local Kent & Medway Clinical Reference Group in 2016 which started with a long list of seven potential options, of which only two were taken forward when considered against the standards outlined above and the case for change.

In 2016, this options appraisal was presented to the Kent & Medway Joint Overview and Scrutiny Committee (JOSC). Further engagement was then undertaken to consider and discuss the recommended service model with stakeholders including clinicians, patients, carers and other interested parties.

It was subsequently agreed that the permanent location of the main hub for Kent and Medway should be determined through the East Kent Transformation programme. However, this major programme, which is designing changes to a wide range of acute NHS services in east Kent, is unlikely to be completed within the next 8 to 10 years. The specialist vascular hub has a number of interdependencies with other services, and therefore needs to be considered within this overarching transformation programme to ensure the longer-term provision of specialist vascular services is located in the optimal place.

A further options appraisal was therefore carried out in 2019 by NHS England & Improvement to consider how to provide a safe and sustainable vascular service in the medium term until the service to be determined by the East Kent Transformation programme could be implemented.

The 2019 options appraisal recommended that the medium-term location for the single hub for specialised inpatient vascular surgery should be on the Kent & Canterbury site of EKHUFT.

The main reasons for recommending this option were:

i. It was assessed as having the best capacity and clinical ability to deliver the level of service required by national standards with minimum disruption

ii. It required no significant capital investment, since the current capacity at the Kent and Canterbury site in terms of both beds and ITU space would be sufficient.

iii. It is likely to minimise any impact of emergency vascular care on the existing A&E pressures due to the ambulance service being able to direct vascular emergencies directly to the hub

iv. current outcome data indicate the service based at Kent and Canterbury delivers better patient outcomes

v. it avoids the the time and cost of the reconfiguration of ITU at Medway hospital which would be needed if the medium term solution were located at MFT

This recommendation was agreed by both Kent & Medway CCG and NHS England Specialised Commissioning to move forward with to public consultation/ wider engagement as required prior to implementation.

Impact of the Pandemic on the Kent & Medway Vascular Reconfiguration Programme

The global COVID-19 pandemic impacted on all NHS services and change programmes, including the Kent & Medway Vascular Reconfiguration Programme, which was paused in March 2020 given the need to focus all available resource on the pandemic response.

In January 2020, MFT implemented an emergency move of all elective and non-elective AAA surgery[4] (a core vascular service) from Medway Hospital to Kent and Canterbury Hospital. This was because the staffing was challenged and so they were unable to provide the on-call cover required to support the emergency AAA procedures. This move was supported by the NHS England and Kent & Medway CCG governance groups to ensure the immediate viability of the service and minimise patient impact through not being able to access a critical service in a timely manner.

Whilst this change ensured that the AAA service was more stable, the provision of the remaining vascular services at Medway hospital became increasingly challenged by a shortage of consultant staff. In January 2021, the service was further challenged by staff isolation and absences caused by the COVID-19 pandemic. At the request of NHS England Specialised Commissioning, EKHUFT began providing additional on-call consultant support to Medway Hospital so the hospital can maintain a 24/7 vascular service.

[4] AAA surgery refers to open surgery to treat an abdominal aortic aneurysm (AAA). This can be treated electively where the swelling of the aorta is identified prior to any rupture, or as an emergency where the aortic aneurysum bursts which is a life threatening event (Abdominal aortic aneurysm - NHS (www.nhs.uk)).

When work on the Kent and Medway Vascular Reconfiguration Programme could be resumed in 2021, the Vascular Programme Oversight Group was stood up to provide oversight of the Kent & Medway Vascular Reconfiguration programme. This group took over from the Kent & Medway Assurance Board that was previously in post given the progress to date on getting the option and model agreed and a move in focus to consultation and implementation. The K&M Vascular Programme Oversight Group includes executives from the three trusts, NHS England and Kent & Medway CCG, agreed to 'refresh' both of the decisions around the medium-term solution, namely the decision taken in 2016 that shortlisted two options as potentially suitable to be the single arterial centre in Kent and Medway and the 2019 decision to locate the single arterial centre at Kent and Canterbury for the medium term. The reasons for this review were:

- five and two years had passed since the assessments underlying these decisions
- vascular services had been changed significantly during that time, particularly by the two temporary service changes made in 2020 and 2021 that remain in place, namely the move of all AAA surgery from Medway to Canterbury, and additional on-call consutant support provided by EKHUFT to Medway.

The 'refresh' of the two earlier options appraisals was carried out in September 2021 (see Appendix 26a) supported by both NHS England Specialised Commissioning and Kent & Medway CCG. The panel consisted of clinical representation from EKHUFT, MFT and Maidstone & Tunbridge Well NHS Trust; NHS England representation from the Quality, Finance and Specialised Commissioning directorates including a Medical Director for NHS England; and Kent & Medway CCG director and programme leads. Independent advice from the national Clinical Reference Group for Vascular Services Chair was sought, and Healthwatch representation for Kent & Medway attending the option panel meeting to provide oversight of the process. Subsequent to the panel meeting, further engagement has been undertaken with the South East Coast Ambulance (SECAMB) service to confirm their support of the preferred option and discuss any implementation issues that may need consideration.

The refresh panel was given updated information on the options against the previously agreed criteria and independently re-scored them. The scores were then compiled and discussed at a panel meeting, which agreed final scores. The panel's scoring reconfirmed the previous recommendations in establishing a single arterial centre site in Kent and Medway and locating that centre at Kent and Canterbury hospital was the right medium-term option for the region's vascular service. Accordingly, it is this preferred medium-term option that is recommended for implementation in this PCBC.

Under the preferred medium-term option:

- Kent and Canterbury Hospital becomes the single arterial hub within Kent and Medway
- The Kent and Medway Vascular service continues to link with the South East Thames vascular network hosted by and centred on the vascular centre at Guy's and St Thomas' NHS Foundation Trust, London.
- Comprehensive outpatient, diagnostic and ambulatory vascular services continue to be provided at the other spoke hospitals in Kent and Medway but consultant cover for these services is provided by EKHUFT.

Stakeholder engagement

Since 2015, there has been extensive engagement with patient groups, staff and other key stakeholders on changes to vascular services. Feedback received from each stakeholder event listed below has informed development of the future service at each stage of its design:

- **July 2015:** 10 listening events across Kent and Medway, where 64 people attended, to discuss and develop the Case for Change
- **February 2016:** A deliberative all-day workshop where 13 patients and their carers attended, during which clinicians, patients and public reviewed and discussed the developing clinical model in detail
- **February 2017:** two workshop events held at the Canterbury and Medway hospital sites, where 100 people attended, to further explore and develop the clinical model and review the range of possible sites for future vascular services
- **August 2017:** two workshops, where 28 people attended, to test and review the evaluation criteria for selecting the best future sites
- **September 2019:** two workshops where 12 people attended, and two interviews, to update on the detailed work conducted in 2018 and gain further feedback on patient experience, proposed plans, clinical recommendations and outline next stages

Engagement with stakeholders identified that the key needs for consideration when developing the future vascular services were for:

- ***high quality service provision***, to attract and retain ***high calibre staff with specialist skills***
- the ***capacity to deliver the service 24/7***, safely and in a timely manner, particularly in an emergency
- ***travel times, transport networks and parking*** to be taken into account when deciding the locality of the arterial hub
- ***improved referral times and access*** with smoother access/appointment systems for elective care and consistent adherence to referral standards (for example, two weeks from diagnosis to consultant appointment)
- ***reduced and standardised waiting times*** for test results and scans
- ***local services*** that reflect local needs, demographics and population growth, to provide the ***right aftercare*** as close to home as possible
- ***easier, more timely access*** to outpatient services, provided in a conducive environment, with appropriate resources
- ***greater collaboration, coordination and communication*** between services and disciplines to ensure a streamlined, consistent care pathway
- ***education for GPs and other professionals*** so they are more aware of and can more quickly detect vascular disease
- a ***contact number and name*** for patients so they have easier access to and advice from the service
- ***increased use of technology*** to provide better patient experience, avoid travel and keep people at home and for sharing information across all the relevant services
- ***greater involvement*** of patients and their families in care decisions and support for patients making choices;
- ***discharge plans*** to be agreed with patients and family carers before discharge, with ***tailor-made, timely follow up***
- ***easily accessible and understandable information*** – verbal, written and electronic – for patients, family and carers, including clear explanations of planned treatment, what is available in the community and other ongoing support

- greater focus on ***prevention*** to highlight the risks of certain behaviours/conditions and ***early intervention*** to support better patient outcomes
- ***widespread advertising, provision of general information and other means of raising awareness*** of vascular conditions, screening and access to services, to ensure early diagnosis and equitable access to services
- the proposed vascular changes to fit within local ***future NHS plans*** and take other service changes into account, for example, changes at hospitals providing different specialties and the potential for multiple hospital transfers for some patients to meet their different health care needs.

As well as extensive stakeholder engagement from 2015 onwards, NHS England Specialised Commissioning and Kent & Medway CCG have an ongoing commitment to continue engaging with patients, their families and other interested parties as the proposed medium-term solution is put in place in Kent and Medway.

Expected benefits and impacts of implementing the preferred option

Analysis of the projected impacts of implementing the preferred option identified, alongside its expected benefits, some potentially challenging effects on services and patients and on other providers. Where necessary, action is planned to mitigate these.

For services, the main challenges lie in deploying the staff needed to operate the preferred option and ensuring the required theatre, bed and critical care capacity at Kent and Canterbury.

Accordingly, additional staff, theatre capacity and bed capacity have already been planned at Kent and Canterbury hospital. Plans include additional consultants to support rotas at Medway hospital, as well as an ongoing programme for interventional radiologists from Medway at Kent and Canterbury to ensure they can maintain their vascular skills.

Travel time analysis and evidence from other vascular networks around the country has been used to assess the likely impact of travel time changes for patients, which was often raised as a concern in patient engagement. The analysis shows that the travel time changes for the majority of vascular patients in the region will be minimal and was outweighed by the benefit to patients of the centralised arterial centre. The engagement work to date shows that whilst some patients are concerned about travel times and travel impacts, patients and the public recognised the benefits of consolidating the specialist inpatient provision to a single site to increase the quality of the service and improve the clinical outcomes in a more sustainable way.

Regarding travel impacts on other providers, potential effects on Southeast Coast Ambulance Service (SECAMB), and G4S have been identified. Work has been carried out to mitigate these impacts, including an agreement from the commissioners to provide additional funding for SECAMB on a recurrent basis, and non-recurrent funding to other impacted providers to support the transition.

Financial impacts: cost and affordability

The financial case identifies the affordability of Kent and Canterbury Hospital becoming the single arterial hub (the preferred option) as the medium-term site for vascular services in Kent and Medway. It sets out the financial implications for activity, funding, and workforce of the preferred option compared to the baseline and 'do nothing'.

The baseline has been set against the 2019/20 data, as this is considered the most comprehensive and reliable data given the impact the pandemic has had on services in 2020/21.

Using the 2019/20 baseline is consistent across the NHS for the purposes of planning and service recovery post pandemic.

'Do nothing option'.

This option maintains the current level of services at both sites (Medway Hospital and Kent & Canterbury Hospital). MFT is currently losing substantive staff within vascular services, who need to be replaced to maintain a safe service. Due to recruitment timelines and national issues recruiting into some of these specialist roles, the trust will need to use temporary staff to deliver a service. This 'do nothing' option increases pay costs supporting vascular services in Kent and Medway by an additional £394k recurrent costs (associated with the premium costs associated with agency/ bank/ locum staff), with no corresponding improvement in patient care.

There are no capital expenditure costs associated with implementing either the 'do nothing' or the preferred option.

Preferred option.

The preferred option would see all vascular activity managed and reported by EKHUFT. This will result in a total provider income movement of £3,025k from MFT to EKHUFT. The financial risk assessment in section 6.4.4 details the stranded costs identified and mitigated because of this income movement from one trust to another.

Table 1 below illustrates the recurrent and non-recurrent forecast implications for the preferred option.

							Incremental Change		
Recurrent and Non-recurrent	Baseline			Preferred Option			Preferred Option		
System impact	Comm*	Providers	Total	Comm*	Providers	Total	Comm*	Providers	Net chg
Income and Expenditure	£'000	£'000	£'000	£'000	£'000	£'000	£'000	£'000	£'000
Income	0	3,025	3,025	0	3,859	3,859	0	(834)	(834)
2019/20 baseline		*3,025*	*3,025*		*3,025*	*3,025*	*0*	*0*	*0*
Tariff impact			*0*		*367*	*367*	*0*	*(367)*	*(367)*
Recurrent transport costs			*0*		*125*	*125*	*0*	*(125)*	*(125)*
Non-recurrent investment			*0*		*342*	*342*	*0*	*(342)*	*(342)*
Expenditure	(3,025)	(2,901)	(5,926)	(3,859)	(3,859)	(7,718)	467	958	1,425
2019/20 baseline	*(3,025)*	*(2,901)*	*(5,926)*	*(3,025)*	*(2,764)*	*(5,789)*	*0*	*(137)*	*(137)*
Tariff impact			*0*		*(367)*	*(367)*	*0*	*367*	*367*
Recurrent transport costs			*0*	*(125)*	*(125)*	*(250)*	*125*	*125*	*250*
Non-recurrent investment			*0*	*(342)*	*(342)*	*(684)*	*342*	*342*	*684*
EKHUFT contribution			*0*		*(261)*	*(261)*	*0*	*261*	*261*
Contribution to Overheads	(3,025)	124	(2,901)	(3,859)	0	(3,859)	467	124	591
Adjustment for Blended price				(367)	367				

Table 1: Summary including the non-recurrent forecast financial implications for the preferred option[5]

The overall impact of the preferred option costs the commissioners an additional £467k per annum (£125k recurrent and £342k non-recurrent) and the providers a total reduction in contribution to overheads of £124k (non-recurrent).

The preferred option has a system cost neutral impact shift of resource between provider and commissioner due to the 'blended price' contract arrangement between MFT and K&M CCG.

[5] Note Comm' refers to Commissioners and includes NHS England Specialised Commissioning and Kent & Medway CCG commissioning.

The movement of activity from MFT to EKHUFT presents an income from activity change of £367k when priced at national tariffs.

The MFT contract has been agreed with a 2 year 'blended' price for 2019/20 and 2020/21. A blended price will include an agreed combination of fixed payments and outcomes-based payments paid to providers from commissioners. A blended price will enable risk share of excess costs being paid by both the commissioner and the provider and is used to incentivise innovation and cost reduction in services. The income currently paid to MFT for vascular activity is £367k less than the equivalent tariff price that would be paid to EKHUFT. The tariff price is solely outcomes-based.

Patients requiring inpatient services from the Medway and Maidstone areas would need to be transported to the proposed medium-term site in Canterbury under this option. South East Coast Ambulance (SECAMB) has provided an indicative price of £125k for the cost of additional patient transfers.

EKHUFT have forecast an achievable service contribution of £261k under the preferred option. The trust will utilise this funding to offset an investment requirement of £603k to support vascular service enhancement pay costs. Commissioners have agreed to fund the remaining £342k. Both the trust and the commissioners have factored this into their financial planning processes pending the outcome of the public consultation.

The £124k provider change reflects the impact of the income reduction to MFT for a vascular blended price issue. This is cost neutral and affordable for MFT as it will be offset against other service contracts provided by the trust and form part of continuous commissioner and provider contractual discussions.

The requirement of additional funding from Kent and Medway CCG and NHS England Specialised Commissioning to support the move to a safe, sustainable service and to mitigate financial risk across the system has been agreed between organisational stakeholders as part of the system business case approval process.

Table 2 below illustrates the funding agreement by commissioner recurrently and non-recurrently.

Proposal finances			
Cost Description	Commissioners		
	CCG	Spec Comm	Total
	£'000	£'000	£'000
Patient Travel - SECAMB	125	0	125
Total Recurrent Funding	125	0	125
Service investment	171	171	342
Total Non-Recurrent Funding	171	171	342
Total	296	171	467

Table 2: Commissioner agreed funding in support of the preferred option

These costs have been derived from 2019/20 baseline data. The funding identified in Table 2 has been approved by the Kent and Medway CCG and NHS England Specialised Commissioning Finance and Performance Committees.

Letters of support have been authorised by organisational stakeholders to illustrate the joint ownership and responsibility outlined in the system business case and this PCBC. These can be found on Appendices A-D.

The financial case has concluded that the preferred option:

- has assessed and mitigated financial risks where reasonably possible
- recurrent costs are affordable and supported by commissioners and providers within Kent and Medway
- non-recurrent investment funds are considered reasonable and supported by commissioners and providers within Kent and Medway
- non-recurrent investment funds will be purposefully evaluated and form part of contractual discussions in the medium to longer term between commissioners and EKHUFT

All income and expenditure identified as part of the preferred option will form part of formal contracting discussions between commissioners and providers following the outcome of the public consultation.

Plans for consultation

In accordance with the duties of commissioners under section 13Q of the NHS Act 2006, we propose to undertake formal consultation with the public and service users about the medium-term solution (see Appendix 21) to test our proposals and understand how we could further improve them.

Public consultation will begin once all processes required to assure the PCBC have been completed and necessary preparations made. We have developed a detailed consultation plan that aims to reach different audiences using a range of methods so people across the region can give their views and raise concerns. Their feedback will inform implementation decisions. A full version of the consultation document can be found at appendix 20.

When the consultation closes, its feedback will be analysed, and a report produced providing:

- a summary of the responses and major themes raised during the consultation
- an overview of the consultation process and activities and
- suggestions on how to address any concerns that people raise.

This report will be published on the Kent and Medway CCG's website and NHS England and Improvement's engagement website.

Assurance of the proposed option

East Kent Hospitals University NHS Foundation Trust, Medway NHS Foundation Trust, Maidstone and Tunbridge Wells NHS Trust, Kent and Medway NHS CCG and NHS England Specialised Commissioning have all agreed the business case for the reconfiguration of vascular surgical services in Kent and Medway. These organisations have also all agreed the preferred option. Kent and Medway CCG and NHS England Specialised Commissioning have agreed to meet the additional revenue costs of implementing the preferred option. In the light of those agreements, this PCBC has been prepared by Kent and Medway Clinical Commissioning Group and NHS England Specialised Commissioning South East which is now submitted for review and assurance through the NHS England and Improvement service change processes.

Once NHS England and Improvement have agreed the proposals in this PCBC, the document will be formally presented to the Kent & Medway JHOSC to agree the details of the public

consultation. Following public consultation, a finalised business case will be presented to the stakeholders for agreement prior to implementation.

The stakeholder approvals required are:

- Programme Oversight Group/Steering group
- EKHUFT board
- MFT board
- NHS England Specialised Commissioning
- Kent and Medway CCG
- NHS England and Improvement Assurance process (currently at stage 2)
- Kent and Medway Joint Health Overview and Scrutiny Committee

The current programme of supporting works at EKHUFT and related activity at MFT show that the earliest the proposed medium-term solution for Kent and Medway vascular services could go live is in early 2022. The actual date depends on when the proposed solution gets the necessary national assurance panel approvals and public consultation is completed without further impact of future waves of the global pandemic. A draft implementation plan will be developed at risk prior to the outcome of the public consultation to enable rapid finalisation and implementation of the medium-term solution to support services across Kent & Medway.

1. Introduction

Vascular disease affects veins and arteries. It may cause blood clots, artery blockages and bleeds which can lead to strokes, amputations of limbs and conditions that might threaten life if left untreated.

Vascular disorders can reduce the amount of blood reaching the limbs, brain or other organs, causing for example, severe pain on walking or strokes. Additionally, vascular abnormalities can cause sudden, life threatening, blood loss if abnormally enlarged arteries burst.

Vascular services are a specialised area of healthcare. Evidence shows they benefit from organisation into large centres covering a population big enough for there to be significant volumes of activity in all areas of service, with a full complement of staff able to deliver services 24 hours a day, 365 days of the year.

Specialised vascular services are types of treatment for:

- aortic aneurysms – a bulge in the artery wall that can rupture (treatment may be planned or as an emergency)
- carotid artery disease, which can lead to stroke
- arterial blockages, which can put limbs at risk.

The types of treatment that might be required include:

- complex and potentially high risk bypass surgery to the neck, abdomen or limbs
- balloon or stent treatment to narrowed or blocked arteries
- blood clot dissolving treatments to the limbs
- stent grafts of varying complexity to treat aneurysms.

Vascular surgery is predominantly an urgent service and must be organised so patients can get timely access to effective care. In England this is achieved through integrated vascular networks, which ensure 24/7 consultant level cover for all services.

Vascular surgeons also provide expert advice and care for patients of other specialties. For example, they provide advice to diabetic foot services, support vascular access, especially for renal patients, and surgical support to stem bleeding complications. In Kent and Medway, a broad range of vascular activity is currently commissioned by both NHS England Specialised Commissioning and the Clinical Commissioning Group (CCG). In respect of inpatient vascular surgery, Specialised Commissioning is the lead commissioner supported formally by the Kent and Medway CCG. The two organisations work closely together to support the delivery of safe vascular services in Kent and Medway.

2. The Case for Change

2.1. Evidence based model of care for vascular networks

Evidence has been growing for more than a decade that vascular services doing higher volumes of specialised procedures have better patient outcomes[6]. In line with this growing body of evidence, the Vascular Society of Great Britain has recommended since 2012 that vascular services should be organised into 'hub and spoke' networks. These ensure that patients have local access to a vascular specialist in all areas of the network but that emergency and arterial work is centralised into fewer arterial centres of excellence.[7] NHS England also requires specialist commissioned vascular services to be organised into networks with dedicated high volume arterial centres.[8]

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.
- Thy have **a single (hub) hospital providing arterial surgery and complex** endovascular interventions. 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: a **minimum of 60 AAA and 40 carotid procedures per annum**. Each surgeon should undertake at least 10 AAA procedures per annum.
  - **Submit cases to the National Vascular Registry** (NVR) and publish their outcomes
- The other network hospitals 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 local non-arterial centre.

A report by the Getting it Right First Time (GIRFT) programme published in 2018 calculated that the NHS could save over 100 additional lives a year by creating vascular networks across the NHS in England. This would enable more patients to receive life-saving urgent surgery sooner, by delivering improved early decision making capacity and access to diagnostics, allowing early treatment prioritised by a degree of urgency, which improves patient outcomes.

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[6] See for example Holt P, et al (a), Meta-analysis and systematic review of the relationship between volume and outcome in abdominal aortic aneurysm surgery. Br J Surg. 2007;94(4):395-403 or Phillips P et al, Systematic review of carotid artery procedures and the volume–outcome relationship in Europe. Br. J. Surg. 2017; 104: 1273-1283 or Moxey PW et al. Volume-Outcome Relationships in Lower Extremity Arterial Bypass Surgery, Ann Surg 2012;256:1102-7

[7] The Provision of Services for Patients with Vascular Disease 2012, Vascular Society of Great Britain and Ireland, https://www.vascularsociety.org.uk/_userfiles/pages/files/Document%20Library/Provision-of-Services-for-Patients-with-Vascular-Disease.pdf

[8] National Service Specification, A04 Specialised Vascular Services (Adult), NHS England, https://www.england.nhs.uk/wp-content/uploads/2017/06/specialised-vascular-services-service-specification-adults.pdf

The GIRFT vascular surgery national report sets out how implementing the model would help to reduce the likelihood of life-threatening strokes, transient ischaemic attacks (TIAs), aortic aneurysm ruptures and arterial blockages. The report shows that many patients with potentially fatal conditions can wait far too long before they see a consultant vascular surgeon. It also demonstrates great variation in provision of care across the country, which does not need to be the case. GIRFT recommendations reinforce the case for reconfiguring vascular services into networks with high volume regional central units (the arterial hubs), and the model the Vascular Society has recommended for many years. This would improve patients' access to specialists, improve patient outcomes, and reduce costs in health and social care.

The full GIRFT vascular surgery national report is provided at Appendix 25.

2.2. Current services in Kent and Medway

Vascular surgical services in Kent and Medway are currently provided by two NHS Trusts: Medway Foundation NHS Trust and East Kent Hospitals University NHS Foundation Trust. Over the past few years, they have been working together as an informal Kent & Medway Vascular Network in line with national recommendations. However, inpatient vascular surgical services continue to be delivered from more than one site. A clinical lead has been formally appointed in October 2021 to provide leadership and clinical engagement in the development of a Kent & Medway vascular network in line with GIRFT recommendations.

- Medway Hospital provides inpatient vascular surgical services (although in 2020 it temporarily stopped providing Abdominal Aortic Aneursym elective and emergency services), day case vascular surgery, diagnostics for vascular conditions and vascular outpatient services. Medway NHS Foundation Trust also provides outpatient vascular services and some vascular diagnostic services at Maidstone Hospital, Maidstone. The Trust also provides occasional vascular outpatient clinics at Sheppey Hospital.

- East Kent Hospitals University NHS Foundation Trust provides inpatient vascular surgical services, which have been centralised at the Kent and Canterbury Hospital in Canterbury since 2005. The inpatient service sits alongside outpatient vascular services and vascular diagnostic services. Kent and Canterbury Hospital is also the centre for the Kent Abdominal Aortic Aneurysm (AAA) service. The Trust also provides vascular outpatient services at the William Harvey Hospital in Ashford (WHH), Queen Elizabeth The Queen Mother Hospital in Margate (QEQMH) and Buckland Hospital in Dover.

Most people from the west of the county – Tonbridge, Tunbridge Wells, Sevenoaks, Dartford, Gravesham and Swanley – receive their vascular care in London, predominantly at St Thomas' Hospital. Visiting specialists from St Thomas' Hospital carry out some day surgery and outpatient vascular care at other hospitals in Kent and Medway (Tunbridge Wells Hospital and Darent Valley Hospital). Figure 1 shows the current arrangement of vascular services across Kent & Medway.

Figure 1 shows the current vascular service by hospital site.

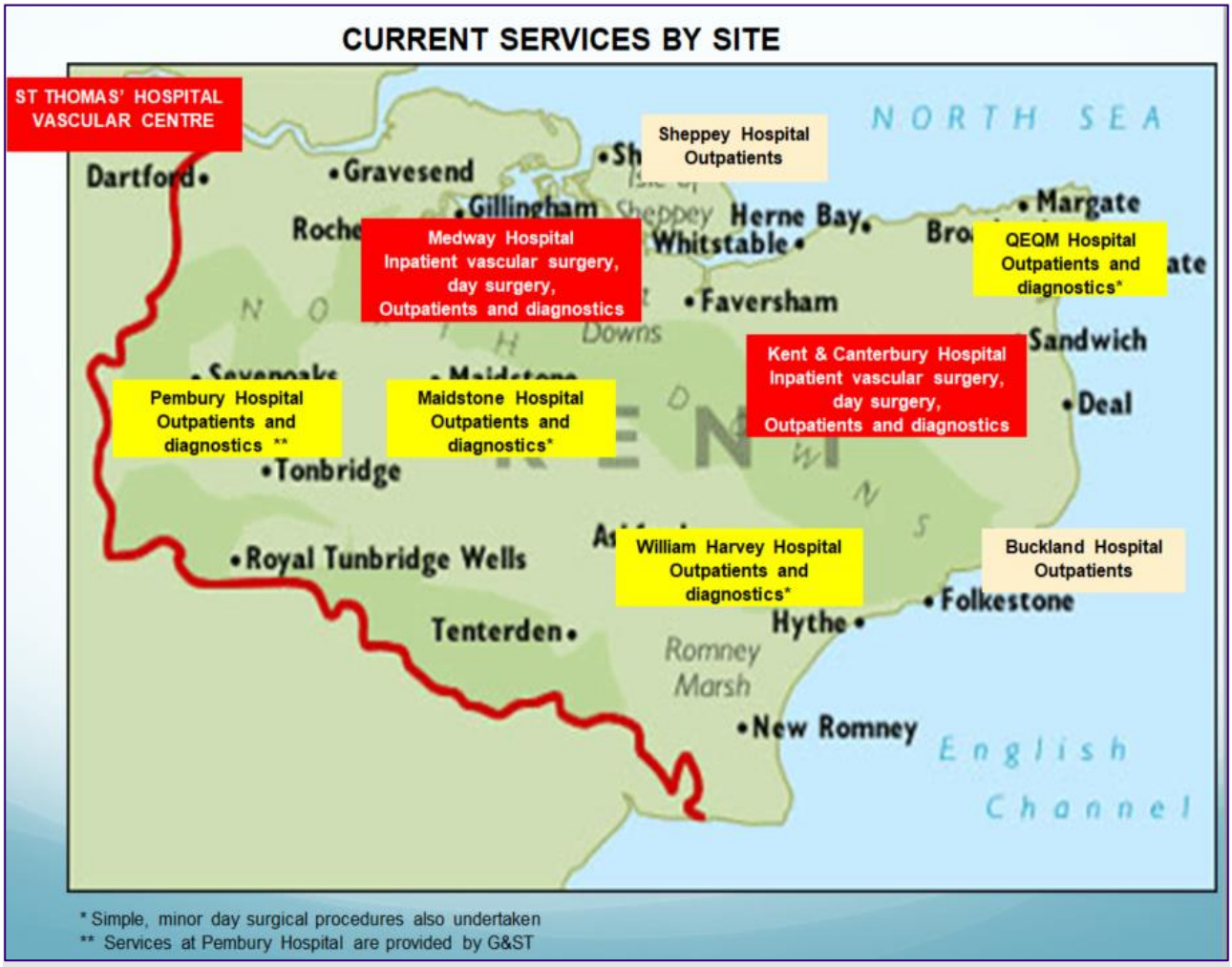
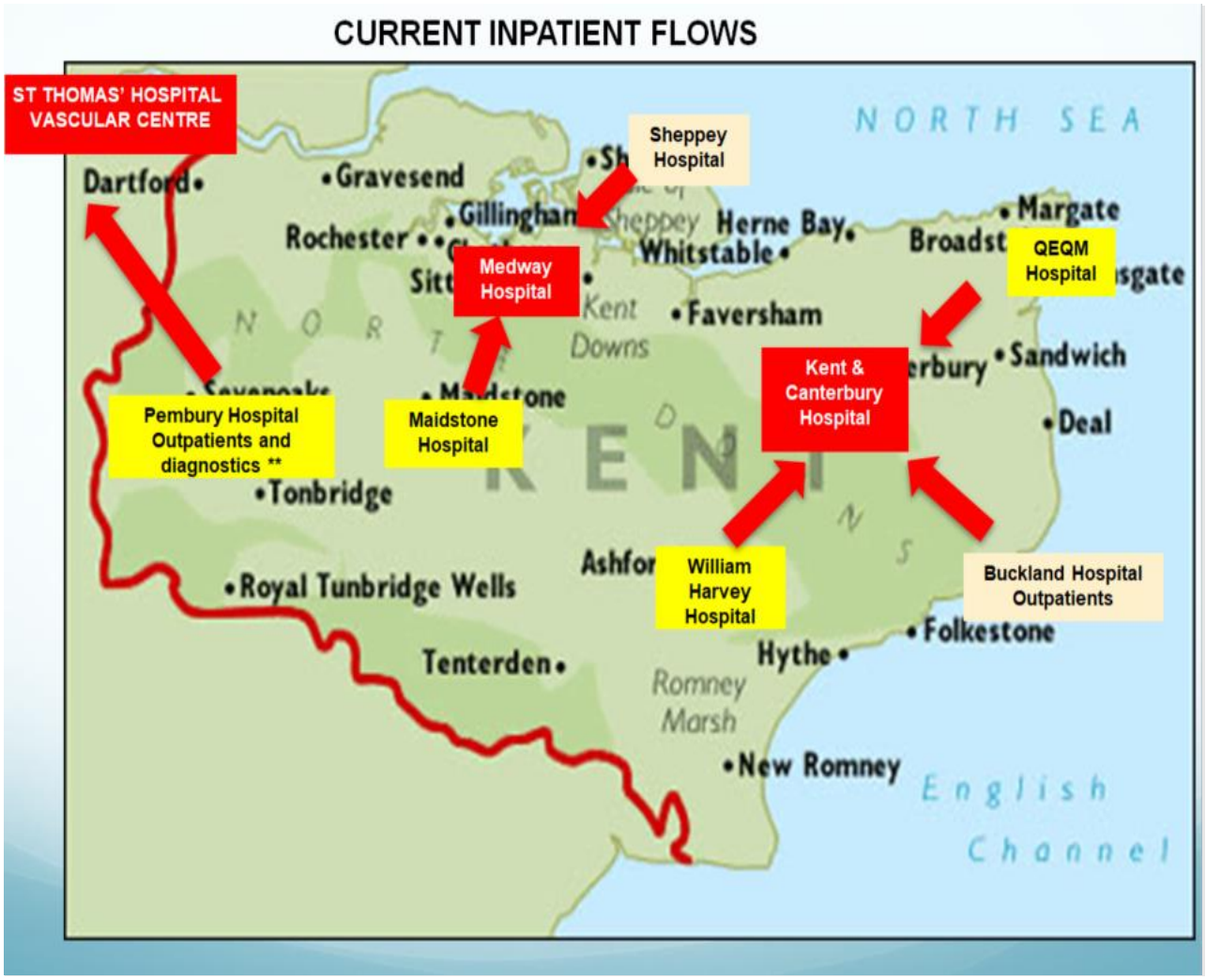


Figure 2 shows current inpatient flows for vascular surgical services by hospital site



This PCBC proposes changes to inpatient vascular surgery only, not to other vascular services. So, the proposed changes will affect only the inpatient flows shown in Figure 2.

In the 19/20 baseline information, 265 patients went to Medway Hospital from Maidstone, Gillingham and Sheppey to undergo 374 inpatient vascular procedures. Kent and Canterbury Hospital performed 827 inpatient vascular procedures on patients who came to the hospital from the whole of East Kent.

2.3. How the current inpatient centres perform against the national standards

Table 3 shows the status of vascular services in Kent and Medway against the key metrics that have been shown to deliver improved outcomes and meet national requirements listed in Section 2.1 above.

Key Metrics	Medway FT	East Kent Hospitals	St Thomas Hospital	Comments
Planning population currently served (minimum population for specialised vascular service is 800,000)	505,569	682,106	450,687 from Kent[9]	Kent Population treated in London: 450,687
24/7 access to specialist care including vascular surgeons, interventional radiologists and specialist nurses, including sustainable on call rotas of 1:6 or greater	No	No	Yes	
6 vascular surgeons. On call rota (1:6)	No 1:4*	No 1:5*	Yes 1:10	*includes locum cover
On call VascularInterventional radiology	Yes	Yes	Yes	
At least one endovascular theatre	Yes	Yes	Yes	
Have specialist clinicians undertaking adequate volumes of core index procedures to ensure consistent safe quality care: a minimum of 60 AAA and 40 carotid procedures per annum. Each surgeon should undertake at least 10 AAA procedures per annum.	No	Yes	Yes	
Submit cases to the National Vascular Registry (NVR) and publish their outcomes	Yes	Yes	Yes	
Part of a comprehensive vascular network	No*	No*	Yes	Kent and Medway vascular network operating informally since 2019
Risk adjusted Mortality rates; AAA/CE (NVR data, September 15)	4.6%/ 4.0%	1.1%/ 1.0%	0.6%/ 3.5%	All within national tolerance

Table 3: Current status of Vascular Surgical Services that treat Kent & Medway patients.

[9] (plus additional South London)

The GIRFT (Getting it Right First Time) Team have been working closely with EKHUFT and MFT for a number of years to support improvements to services at both Trusts. Professor Mike Horrocks, Lead for Vascular Surgery at GIRFT has also been a longstanding member of the Kent and Medway Vascular Surgery Programme Assurance Board.

In 2018, the GIRFT Vascular Surgery visit's observation notes stated,

> *"Both departments (EKHUFT and MFT) operate as individual hubs. Some joint MDT activity is in place and the start of some clinical governance activity, but the network is not comprehensive and no service network is formalised. Clinical service delivery behaves as two hubs and there is no shared management. NHS England (NHSE SE Medical Director James Thallon) recently, with Specialised Commissioning, made a recommendation to all vascular clinicians in EKHUFT and Medway that moves to formalise and consolidate a network must be implemented and that the service must now move to a single hub."*

2.4. Risks associated with doing nothing

There are risks to the safety and the sustainability of vascular services in Kent and Medway if no changes are made.

Maintaining services across two sites has become more challenging in the past three years and the highest risk services have had to be centralised on a temporary basis (see Section 3.8 for details).

Kent and Medway are unable to progress improvements in vascular treatment such as:

- Providing early intervention and treatment to achieve regional reductions in the incidence of stroke due to carotid artery disease
- Reducing leg amputation due to peripheral arterial disease
- Providing appropriate support to other services to control vascular bleeding and manage vascular complications

Table 4 below shows the risks of failing to take action now to change the current position.

In summary, if the vascular inpatient service remains unchanged, patients will continue receiving variable care with surgeons who are unlikely to meet the national minimum number of procedures. This would ultimately affect the quality of care for patients.

Risks associated with doing nothing	Current position
Patients continue not to receive a high-quality service at times	There is no single arterial centre for Kent & Medway currently and at times patients do not receive a consistently high-quality service with access to the most modern techniques
Mortality and Morbidity rates do not improve	The way the services are currently configured 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
Joint working with other services remains challenging	Working jointly with the diabetic and podiatry services to optimise care, minimise tissue loss, prevent amputation, standardise methods and promote best practice across the clinical teams would continue to be challenging. This means that opportunities to reduce length of stay for patients and improving pathway links with community providers to support timely repatriation of patients (from the hub to the spoke) following surgery would continue to be missed.
Specialist workforce remains too thinly spread	The thin spread of the specialist workforce (Consultant surgeons, IR Consultants and specialist nurses and the wider multi-disciplinary team) across the county creates sustainability issues, because of the evidence that consultants performing more procedures have better outcomes. It is challenging to recruit and retain high quality specialist staff across two centres performing lower average numbers than elsewhere in the country.
Wider workforce does not include all the necessary skillsets for a full service	Similar challenges exist with the wider workforce. Staff managing patients with vascular disease include vascular surgeons, interventional radiologists, specialist nurses, vascular scientists, diabetes specialists, stroke physicians, cardiac surgeons, orthopaedic surgeons, and emergency medicine amongst other specialties. All are needed to provide a comprehensive multi-disciplinary service
On-call rota insufficiently staffed	Maintaining the status quo means that having 24/7 on site vascular surgery and interventional radiology on-call rota staffed by the right number of staff continues to be extremely challenging

Table 4: Risks associated with the do nothing option.

3. Options Appraisal

Since 2014 there has been a series of reviews of vascular services in Kent and Medway, proposals for change and some temporary service changes culminating in this PCBC. The sequence of preceding events is set out in figure 3 below and explained in this chapter.

3.1. Background

The Kent and Medway Vascular review in 2014 identified a number of issues with the existing service. It developed a case for change that was agreed by the Kent & Medway Vascular Reconfiguration Programme Assurance Board, the Kent & Medway Joint Overview and Scrutiny Committee (JHOSC) and through the public engagement undertaken as part of the review. The Case for Change, published in 2015, set out why specialist vascular services for people in Kent and Medway were being reviewed, in line with the national specification and standards. This is included as Appendix 13. The Case for Change was reviewed by the South East Clinical Senate in June 2015, to check the plans were clinically sound and would improve outcomes for patients. The Senate made a number of recommendations[10] which were considered in the next stage of development.

The review identified that the two providers of specialised vascular inpatient care in the Kent region, East Kent Hospital Foundation NHS Trust and Medway Foundation NHS Trust, were unable to deliver against either the national specialised vascular service specification or the guidelines from the national Vascular Society for Great Britain and Ireland. Specifically, neither trust was able to meet the required standards on:

- size of population to treat
- number of core index procedures
- numbers of staff, particularly consultants, to provide 24/7 on site vascular surgery and to staff interventional radiology on-call rotas with clinicians who could undertake the required minimum numbers of interventions.

[10] SECS Report http://www.secsenate.nhs.uk/files/7214/4118/1211/SE_SECS_Kent_and_Medway_Vascular_Surgery_Services_Review_Report_June_2015.pdf

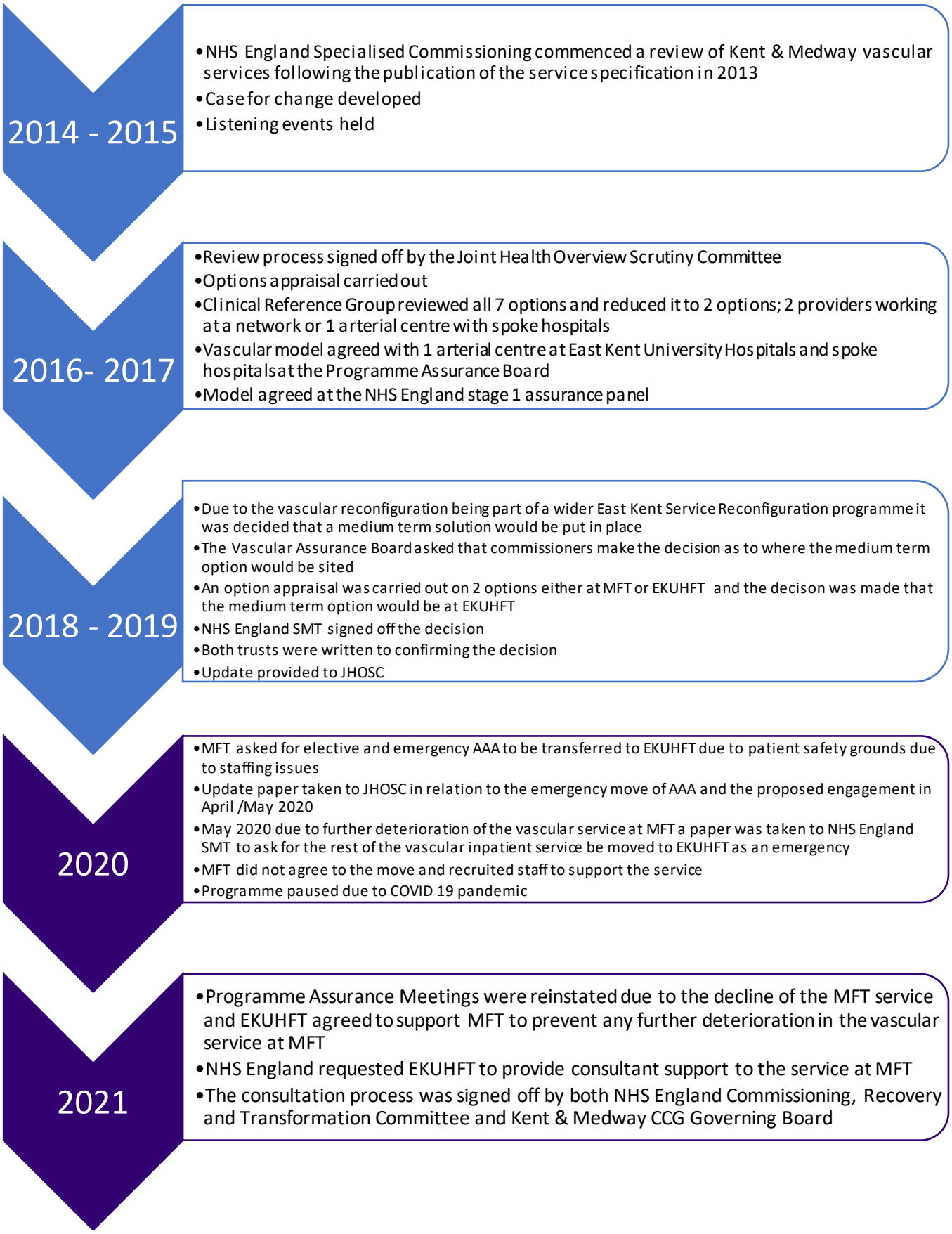


Figure 3: Summary of the proposals for change and temporary service changes for inpatient vascular services in Kent & Medway

The review did more work to identify the options for changing specialist vascular services and consider how these options would address the issues identified in the case for change so people of Kent and Medway could be sure of accessing high quality, safe and sustainable specialist vascular services. The local Kent & Medway Clinical Reference Group carried out an options appraisal. It started with a long list of seven potential options (shown in Table 5), of which only two were considered plausible when considered against the standards outlined above and the case for change:

Option	Outcome
1 (No change) - Two arterial hub sites in Kent and Medway, retaining flows into London	Not taken forward
2 – No arterial hub sites in Kent and Medway, with all inpatient flow into a London provider	Not taken forward
3 – Two arterial hub sites in Kent and Medway, removing any patient flows into London	Not taken forward
4 – One arterial hub site in Kent and Medway, removing patient flows into London	Not taken forward
5 – One arterial hub site in Kent and Medway, retaining patient flows into London	Taken forward for consideration
6 – Two networked arterial hub sites in Kent and Medway, removing patient flows into London	Not taken forward
7 – Two networked arterial hub sites in Kent and Medway, retaining patient flows into London	Taken forward for consideration

Table 5: Potential Options considered in the original Kent & Medway Vascular Review (2014)

These two options (Option 5 and Option 7) were further assessed in 2016 by the Clinical Reference Group. They concluded that Option 7

- would not deliver the required volume of activity at the two arterial centres,
- would not deliver the national specification in a sustainable manner; and
- might require closure of inpatient support at one site during certain periods, potentially leaving post-surgical patients without consultant cover.

Option 5 was the only option able to deliver the requirements of the national specification. Further engagement was undertaken on the Option 5 service model with clinicians, patients, carers and other interested parties representing the population of Kent and Medway.

The Kent & Medway Clinical Reference Group presented the options appraisal, together with the results of the engagement, to the JHOSC and recommended that a single dedicated specialist vascular service (Option 5) was commissioned for Kent and Medway. (See appendices 3 - 6).

Commissioners then worked with EKHUFT and MFT to create an Integrated Vascular Network which would support the recommended clinical model of a single arterial centre (hub) supported by multi-site non-arterial centres (spokes). These spokes would enable patient access to outpatient and some diagnostic services, to meet the needs of local communities. The network

would have one of the non-arterial spokes be able to provide day surgery in addition to the other spoke functions to support enhanced access for non-complex day case interventions.

Having a single arterial hub would address the issues identified in the 2014 case for change by consolidating activity across the region in one centre, which could then support a workforce able to deliver a 24/7 service. It could also ensure all clinicians maintained the required minimum activity levels. These two related factors would improve outcomes for patients.

Work continued in 2017 and 2018 to consider sites for the agreed clinical model (supported by further engagement work as shown in Appendix 22). Clinical pathways and further details of how the model of care would need to be implemented and supported by the network across Kent and Medway were developed with clinical representatives from the vascular service (these can be seen in appendix 18 and 19).

3.2. Longer Term solution

As this work was progressing, it was agreed by the Programme Assurance Board that the permanent location of the main arterial centre (the hub) for Kent and Medway should be determined through the East Kent Transformation programme. This programme is considering the provision of a wide range of services across the East Kent area, linked to potential large-scale capital investment in a new hospital for the region. The specialist vascular hub for the region will have a number of interdependencies with other services, so it needs to be considered within this overarching transformation programme to make sure longer-term provision of specialist vascular services is located in the best place. However, the East Kent Transformation Programme is unlikely to be delivered within the next eight to ten years.

Meanwhile, the Kent and Medway vascular services were asked by the Programme Assurance Board to support a joined-up service, initially via an informal network arrangement. This entailed the two inpatient services in Kent and Medway operating as a single team with a single surgical consultant on call rota and aligned multidisciplinary teams (MDTs). Its aim was to ensure improved and consistent outcomes for all Kent and Medway patients. Progress was made with aligned MDTs, but it was not possible to deliver a single on call rota due to difficulties in attracting staff to the services. These difficulties stemmed from continuing uncertainty about where the specialist service would finally be located.

Patient outcomes over this period did not improve and the ongoing sustainability of services at both sites remained in question. This situation called for a medium-term solution to be identified while the East Kent Transformation Programme progressed.

3.3. Medium term Solution Requirement

In 2019 it was identified that a medium-term solution was required due to the length of time it would take to complete the East Kent Transformation Programme. As the Kent & Medway Vascular Review had been completed and programme closed, a new programme was set up to consider the medium-term solutions with a Programme Oversight Group established to provide governance. See section 8.1 for further detail on the revised programme governance.

The A paper was presented by the Kent & Medway Vascular Reconfiguration Programme to the JHOSC (See Appendix 11) showing why a medium-term solution was needed to ensure the safety and sustainability of the service.

In 2019, NHS England & Improvement identified and appraised options for a medium-term solution that would deliver a safe and sustainable specialist vascular service while the East Kent Transformation Programme progressed.

Further engagement with patients and their families was undertaken via a mixture of online surveys and face to face events. The aims were to learn more from their experiences of accessing care, gain feedback on the options being considered, and inform the appraisal process. These activities also provided an opportunity to re-engage with patients and their families, update them on the current situation, re-assess patients' priorities and check whether these were reflected in the emerging model.

This engagement confirmed that the priorities for patients and their families were:

- Access to high quality, 24/7 specialist services which are appropriately staffed by clinicians with the right specialist skills
- Greater collaboration and coordination across the network to streamline service and reduce waiting times
- Use of technology and access to advice and guidance to facilitate patients having greater involvement in their care
- More timely access to outpatient services locally, that reflect the local needs including aftercare

Patients and families engaged with also said they wanted:

- Travel times and transport networks to be taken into account when deciding the location of the medium term inpatient vascular centre (hub)
- The change to fit with local future plans
- Better education of GPs, with a greater focus on prevention and access to information
- Greater involvement of patients and their families in care decisions, with patients supported to make informed choices.

3.4. Medium-term Options

A further options appraisal was carried out in 2019 by NHS England Specialised Commissioning to consider how to provide a safe and sustainable vascular service in the medium term until the service to be determined by the East Kent Transformation programme could be implemented.

Working with the existing vascular inpatient service providers and the CCG, four of the original seven options were identified as being feasible for consideration of the medium-term solution.

The four medium-term options identified for further appraisal were:

1) (No change) - Two arterial hub sites in Kent and Medway, retaining flows into London
5) One arterial hub site in Kent and Medway, retaining patient flows into London
    a. Medium Term Site at Kent and Canterbury Hospital
    b. Medium Term Site at Medway Hospital
7) Two networked arterial hub sites in Kent and Medway with an established shared on call rota, retaining patient flows into London

The other options were identified as not being suitable for a medium term solution:

2) No arterial hub sites in Kent and Medway, with all inpatient flow into a London provider was deemed as unacceptable due to the excessive travel times this would entail for patients across a large area of Kent & Medway

3) Two arterial hub sites in Kent & Medway, removing any patient flows into London, as pathways to London need to be retained for highly specialised procedures and for some areas of Kent this is their nearest provider.
4) One arterial hub site in Kent & Medway, removing patient flows into London for the reasons set out above.

6) Two networked arterial hub sites in Kent and Medway, removing patient flows into London for the reasons set out above.

A tabletop exercise was undertaken to assess these options, with consideration given to:

- The key issues identified in the case for change from the original Kent and Medway Vascular Review
- The feedback from patients and their families on the priorities for service provision and decision making
- Provider engagement
- Feedback from the GIRFT review of vascular services (which recommended a single arterial site for Kent and Medway supported by a robust vascular network)
- The likely success of implementing approaches required to support each option (e.g. ability to attract staff and establishing of a shared/ single on-call rota)
- Additional constraints such as the potential lack of capital funding to implement a medium term solution

The 2019 options appraisal recommended that the medium-term location for the single hub for specialised inpatient vascular surgery should be on the Kent & Canterbury site of EKHUFT.

The main reasons for recommending this option were:

i. It was assessed as having the best capacity and clinical ability to deliver the level of service required by national standards with minimum disruption

ii. It required no significant capital investment, since the current capacity at the Kent and Canterbury site in terms of both beds and ITU space would be sufficient.

iii. It is likely to minimise any impact of emergency vascular care on the existing A&E pressures due to the ambulance service being able to direct vascular emergencies directly to the hub

iv. current outcome data indicate the service based at Kent and Canterbury delivers better patient outcomes

v. it avoids the the time and cost of the reconfiguration of ITU at Medway hospital which would be needed if the medium term solution were located at MFT

Option 1 and 7 were not supported as they would not adequately address the sustainability of the service in the medium-term, or the issues raised in the GIRFT review of services while the outcome of the East Kent Transformation Programme remained unknown.

The options were assessed against six key criteria:

- Quality (including outcomes and GIRFT recommendations)
- Finance (potential investment required to deliver)
- Workforce (ability to deliver)
- Facilities (requirements for theatre, ward and critical care space)
- Impact on delivery of Interventional Radiology services
- Delivery against the national service specification

3.5. Key Lines of Enquiry pursued and information used to appraise the medium term options

Clinical interdependencies with other key services were assessed for each of the single site options, along with financial impact on providers of the options, their, workforce implications and their feasibility.

Each trust was asked for information about their ability to deliver the total Kent and Medway activity within their site required by each option, with consideration given to theatre, ITU and inpatient capacity alongside the need for any additional financial investment. The responses were considered alongside the GIRFT report recommendations (2018) and appraisal of the work undertaken to date to support both services.

A review of travel time analysis undertaken for the site option development in 2017 (see appendix 23) demonstrated that most patients would be able to access a single specialist vascular inpatient services for the region within 60 minutes at the Kent & Canterbury or the William Harvey Hospital site. Ninety-five percent of patients would be able to access the service within 60 minutes if it was sited at Medway. The analysis showed that some patients currently accessing their local services would experience an increase in their travel times. However, evidence suggests that in an emergency (taking a ruptured AAA as the most urgent vascular emergency), access to a specialist centre within 60 minutes travel time would lead to better outcomes for patients than if they went to a closer local service that did not have 24/7 consultant vascular surgeon/ interventional radiology.

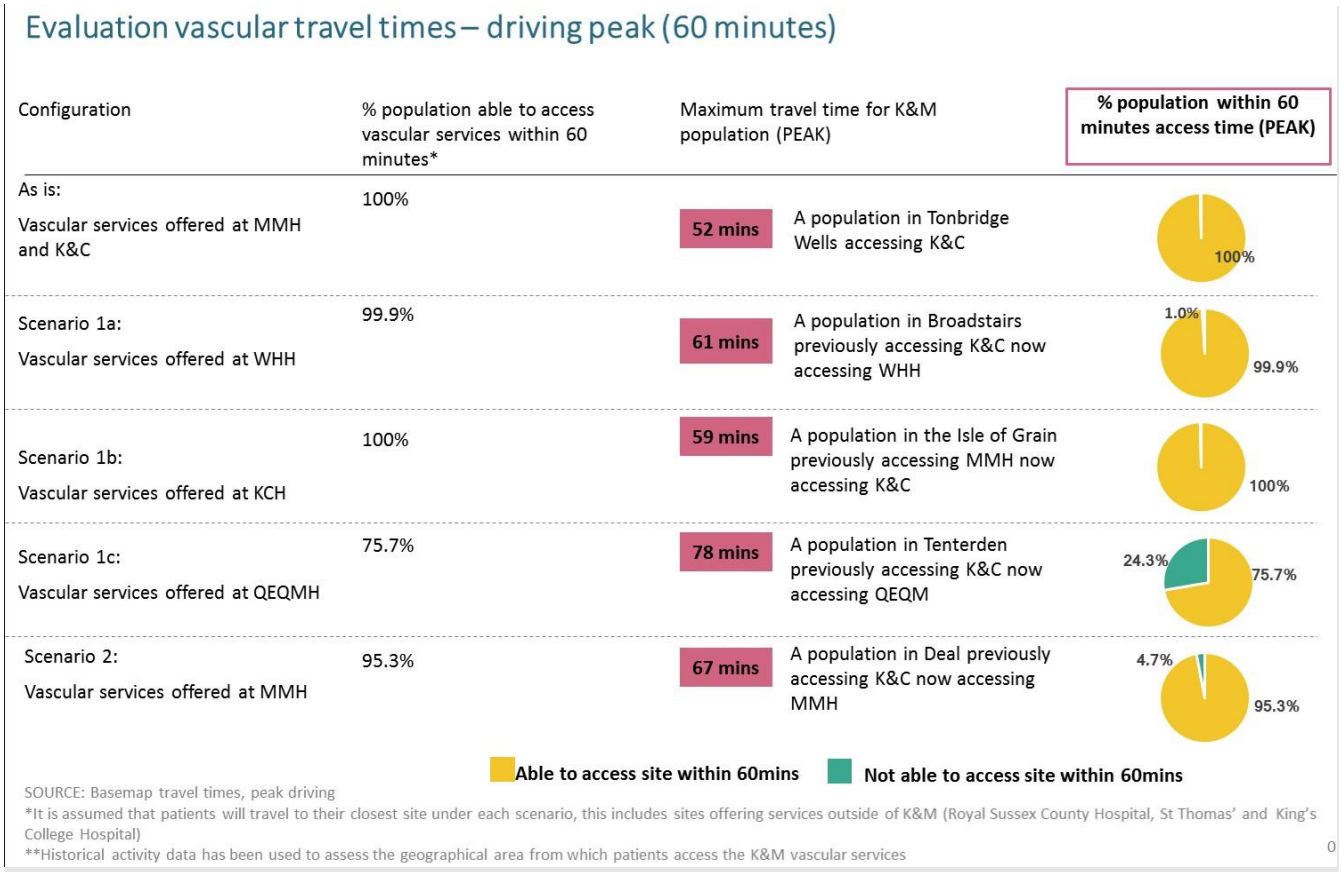


Figure 4: Travel time analysis – car journeys (2017)

The local emergency ambulance provider, SECAMB, already has protocols in place to identify the most appropriate site for patients and would be able to transfer patients to either site. This could be supported further through use of telemedicine to support emergency response crews to access specialist opinion during the initial assessment of the patient, ensuring that the patients most likely to need emergency arterial vascular intervention are identified and taken to the most appropriate centre first, without the need to go via a nearer A&E for specialist assessment prior to onward transfer to the arterial hub. This approach has already been trialled in stroke patients within the South East region and will be considered further by the Kent & Medway Vascular Network and South East commissioners to support services across the region.

Table 6 below summarises the information used to assess each option against the six criteria.

Table 6: Assessment of the four identified options against the agreed assessment criteria (2019)

Assessment Criteria	Option 1 (no change)	Option 7 (as is plus single on-call rota)	Option A (previously Option 5A - arterial hub at Kent and Canterbury)	Option B (previously Option 5B - arterial hub at MFT)
Quality (including outcomes and GIRFT recommendations)	No Change Risk of deterioration	Will not address volumes issue across consultants as on call only covers on call Clinical risk of post-operative pts not being covered by an on-call consultant on site The Vascular Society only support this model in exceptional circumstances	Provides the opportunity to improve outcomes and address GIRFT recommendations Current outcomes are more positive on the Kent and Canterbury site	Provides the opportunity to improve outcomes and address GIRFT recommendations Review of the rehabilitation pathway would support a reduction in length of stay Current outcomes issue may have some relation to patient type
Finance (potential investment required to deliver)	Nil	Increase in travel costs only	Minimal equipment costs	Circa £60k for ERB £195k for mobile C-Arm and X-ray table plus monitors and VAT is circa £306k
Workforce (ability to deliver)	Workforce gap remains Risk of loss of staff during the medium term phase Possible recruitment blight	Workforce gap remains as only covering on call; would reduce availability of the on-call consultant on one site Likely to be difficult to recruit to – possible recruitment blight	There is a risk that MFT staff would not move to the Kent and Canterbury site; they would support an on-call rota at this site but remain concerned re the lack of adjacency to an A&E department EKHUFT have determined that with the 4 consultant posts and 2 additional staff (pending recruitment) supporting the rota from November 2021 they could manage the activity. They may have some increased non-consultant staffing requirements, but these are minimal and not identified as an issue	EKHUFT have not asked staff if they would be prepared to move but this is a risk Additional 5.2 WTE

	Option 1 (no change)	Option 7 (as is plus single on-call rota)	Option A (previously Option 5A - arterial hub at Kent and Canterbury)	Option B (previously Option 5B - arterial hub at MFT)
Facilities (requirements for theatre, ward and critical care space)	Nil	Nil	EKHUFT will have adequate theatre space and ITU capacity. EKHUFT have a dedicated ward with current flex in the occupancy level to meet the total K&M activity. There may be some small additional equipment requirements	No dedicated vascular ward currently but this could be developed (at no extra cost) An enhanced recovery bay is being considered to enable step down from SHDU with a cost of circa £60k Theatre space is a key issue for MFT and there are proposals for how this could be addressed which includes investment into a mobile C-Arm and X-ray table
Impact on delivery of Interventional Radiology services	No change	A single vascular IR rota will be required to run in parallel with the surgical rota; impact on non-vascular activity (i.e. 68% of IR activity at MFT)	Non-vascular IR risk to be mitigated at the MFT site. EKHUFT are currently recruiting additional IR consultants and have a dual qualified surgical consultant available and have assessed that they would be able to operate a K&M IR vascular rota, whilst also maintaining the EK provision of non-vascular IR	Non-vascular IR risk to be mitigated at the Kent and Canterbury site and protocols for QEQM and WHH to be adapted
Delivery against the national service specification	Non-compliance	May be compliant if staffing supports the model and collectively deliver the required volumes. Concerns re sustainability of this support Would not deliver the VS recommendations IR rota needs to be considered This option was NOT supported by the original review option appraisal of clinical models due to clinical safety and sustainability	Should achieve compliance if staffing levels can be delivered IR rota needs to be considered	Should achieve compliance if staffing levels can be delivered IR rota needs to be considered

Table 6 continued: Assessment of the four identified options against the agreed assessment criteria (2019)

3.6. Outcome of the Medium term Options Appraisal

The options appraisal recommended a single arterial hub for specialised inpatient vascular surgery located on the Kent & Canterbury site of EKHUFT (Option A).

The key reasons for recommending this option were:

- It was assessed as having the best capacity and clinical ability to meet national service requirements with minimum disruption. A key consideration was that the Kent and Canterbury site currently has sufficient beds and ITU capacity so implementing this option would need no significant capital investment.
- It was likely to minimise any impact of emergency vascular care on the existing A&E pressures as patients with a known vascular emergency would be able to taken directly to the vascular centre for treatment instead of going to A&E first
- Current data indicated the service based at Kent and Canterbury delivered better patient outcomes
- It avoided the time and cost of reconfiguring ITU and ward capacity at MFT, which would be necessary if the arterial centre was located there.

This option was recognised as not fully meeting the service specification requirements around clinical interdependency, namely alignment with a major emergency centre, as the Kent and Canterbury site does not have a consultant-led emergency department. However, the panel (which included the Regional Medical Director from NHS England) concluded there are other vascular arterial hubs located on sites without an emergency department which have been able to meet the required quality standards through robust patient pathways and support from a consultant led emergency department operated by the same trust (which would apply in this instance as EKHUFT have an emergency department at the William Harvey Hospital and Queen Elizabeth The Queen Mother Hospital sites).

Additionally, as the Kent and Canterbury vascular service is already provided in a hospital without an emergency department but their clinical outcomes are recognised as good under the current specialist inpatient vascular service arrangements, it was felt that this co-location should not be a determining factor for the medium-term solution but that it should remain a determining factor for the longer-term solution.

3.7. Risk Assessment of Preferred Option

To make sure any risks associated with the preferred option were considered, an initial risk assessment was undertaken by the Programme. The results are shown in Table 7 below along with proposed mitigations. If the public consultation identifies further risks, the Kent & Medway Vascular Review Programme will consider these as they are identified and develop mitigations.

EKHUFT produced a business case outlining the viability of the medium-term proposal, including implementation plans with a timetable for delivery and detailed assessment of risks and benefits. The business case (appendix 27) was reviewed and amended by the Finance Task & Finish group within the Kent & Medway Vascular Reconfiguration Programme and signed off by the Programme Oversight Group in Dec 2020 ahead of formal engagement with the JHOSC to consider any public consultation requirements.

The business case was signed off by all regional organisations affected by the proposed medium-term solution, namely:

- EKHUFT
- MFT
- MTW
- Kent and Medway CCG
- NHS England South East Regional Specialised Commissioning Directorate

Risk	Initial mitigation
Staff unwilling to move to the preferred site	• Assess ability of existing networks to facilitate effective transfer of clinical staff between service locations • Assess risk and ability of preferred site to manage activity safely with existing staff • Assess ability to recruit additional staff externally for the medium term solution
Inability to deliver both a vascular and non-vascular IR rota	• Assess risk for vascular and non-vascular patients • Assess ability to deliver activity from within the preferred site IR establishment • Put in place agreed clinical protocols for urgent and emergency IR and surgical access on the non-arterial site
Cohesion of the network and robustness of joint working across the arterial and non-arterial site	• OD plan for the network including engagement work commissioned
Challenge on any medium term move by key stakeholders	• Clarify the need for a medium-term solution • Clarify this is a medium term move and that a separate consultation on a long-term solution will be undertaken within the East Kent Transformation Programme. • Engage with the JHOSC and key stakeholders before consultation and implementation

Table 7: Risks and mitigations identified of the preferred option (2019)

3.8. Changes to vascular services in Kent and Medway in 2020 and 2021

Before formal consultation of the decision described above had started, MFT made an emergency move at the start of January 2020 of all elective and non-elective AAA surgery to Kent and Canterbury Hospital due to a shortage of consultant staff. These measures helped to stabilise the vascular surgical services at MFT and ensured the safety of the most high-risk surgical patients. This emergency arrangement remains in place whilst the medium-term solution is agreed and implemented to prevent potential multiple moves of the service unnecessarily.

The COVID-19 pandemic meant further work on progressing the Kent and Medway Vascular Reconfiguration Programme was paused for the rest of 2020. In January 2021 MFT vascular

services were further challenged by staff isolation and absences due to the COVID-19 pandemic. At the request of NHS England Specialised Commissioning, EKHUFT has been providing additional on-call consultant support to allow a 24/7 presence to be maintained at MFT.

Since then, the informal Kent and Medway vascular network has been operating more closely in line with the national recommendations, albeit as a result of temporary emergency measures and with some inpatient procedures continuing on more than one site. The safety of the services across Kent and Medway is being monitored by the Kent & Medway Vascular Reconfiguration Programme Oversight Group and will continue to be monitored by them while public consultation on the proposals in this PCBC takes place. If further emergency moves are required to protect patients, these will be carried out separately to the consultation (although would be subject to separate consultation if these were to be made permanent).

3.9. Refresh of the preferred option

When the Kent & Medway Vascular Reconfiguration Programme was restarted in 2021, it was suggested that an options appraisal refresh process should be carried out, since it was five and two years respectively since the original assessments on which the decision on the medium-term option was based had taken place. These were the decisions that a single arterial centre in Kent and Medway was the preferred model (2016) and the preferred medium-term location for the single arterial centre was Kent and Canterbury (2019). The Programme Oversight Group acknowledged that vascular services had made significant changes in the intervening period, particularly the emergency service changes made 2020 and 2021.

The refresh process reviewed both earlier decisions. The process entailed providing a revised options appraisal pack was provided to a stakeholder panel. The panel first assessed whether any of the original longlisted options (or any new options) should be reconsidered. They then assessed the two shortlisted options against the previously identified criteria against updated information. The full options appraisal pack is provided as Appendix 26a.

The refresh panel concluded that there were no new options to consider and that the original two shortlisted options were the correct ones to review again. Option A was to centralise the arterial hub for the medium term at Kent & Canterbury and Option B was to centralise the arterial hub for the medium term at Medway.

The key criteria against which these two options were assessed were those used in the original options appraisal, as set out in table 8 below.

Panel members independently scored the two shortlisted options. These scores were anonymised and compiled into a single document which was jointly reviewed, discussed and agreed by the Refresh Panel on 28 September 2021.

As in the previous options appraisal, there were no major differences in the scores of the two shortlisted options in the domains of quality of care for all, access to care for all and research and education. However, there were changes in their relative position since 2019 in the domains of affordability and value for money, workforce and deliverability. In particular, locating the medium-term centre at MFT (Option B) would now require a significant financial capital outlay and would cause more disruption to staff and patients than previously.

Domain	Criteria
Quality of care for all	Clinical effectiveness and responsiveness
	Patient experience
	Clinical co-dependencies
	Clinical outcomes
	Safety
Access to care for all	Distance and time to access services
	Service operating hours
	Patient choice
Affordability and value for money	Profit/Loss
	Affordability to commissioners
	Capital cost to the system
	Meet license conditions
Workforce	Scale of impact
	Sustainability
	Impact on local workforce
Deliverability	Expected time to deliver
	Co-dependencies with other strategies
Research and Education	Disruption to education & research
	Support current & future education & research delivery

Table 8: Domains and Criteria used in the Options Appraisal Refresh (2021).

The members of the Options Appraisal Refresh Panel comprised:

- Medical Director for Commissioning, NHS England representing Specialised Commissioning*
- Chief Medical Officer, East Kent Hospitals NHS Foundation Trust
- Chief Medical Officer, Medway Foundation Trust
- Chief Medical Officer, Maidstone and Tunbridge Wells NHS Foundation Trust
- Executive Director, Kent and Medway CCG
- Head of Quality, SE Specialised Commissioning
- Director of Commissioning Finance, SE Specialised Commissioning*
- Medical Director Systems Improvement, NHS England, SE Region
- Manager, Healthwatch Kent (non-voting)

The starred members were unable to attend the meeting on 28 September but submitted their scores beforehand. Their scores agreed with the conclusion reached in the meeting. The representative from Healthwatch Kent attended the meeting but decided not to provide individual scores on the basis that some of the domains required more specialist knowledge, as well as to retain a degree of impartiality when providing assurance about the options appraisal process. NHS England had also invited the current Chair of the national Vascular Clinical Reference Group (CRG), a Professor of Vascular Surgery, to join the panel. The professor was unable to attend the meeting and decided not to provide scores for the panel

on the basis that they had not been involved in the programme before this stage and therefore had limited knowledge of the programme to date (the previous national CRG chair had been involved), as well as wanting to remain impartial when working with the Kent & Medway Vascular Network to ensure compliance with national standards. NHS England regional team met with the national Vascular CRG chair twice before the options refresh panel meeting to ensure that any key considerations from a national perspective were understood and fed into the refresh panel discussions. The Chair confirmed their agreement that the preferred option was the better one and committed to working with providers and commissioners across the Kent & Medway system on implementation of the preferred solution.

The anonymised scores submitted by the panel are shown in appendix 26b. Initially, individual scores where compiled so the most frequent score was given against each criterion. These were then RAG rated:

- at least 6 out of the 8 scores were the same = Green
- at least 4 out if the 8 scores were the same, or a difference of more than 1 between scorers = Amber
- less than 4 out of the 8 scores were the same = Red

The results of this approach are shown in Table 9 below. It was agreed in the meeting that only those with an Amber or Red RAG rating would be discussed, recognising there were no Red RAG rated criterion. In the panel meeting, all members of the panel confirmed that a single arterial hub was still the best option for Kent & Medway, and that there were no additional options to consider above the Medway and Kent & Canterbury hospitals sites that should be considered.

The panel agreed that the scores rated Green, where there was consensus on the correct score, would be immediately agreed. They then discussed the Amber scores, where there was not a consensus on the correct score.

Key points from the panel discussion are highlighted below:

- **Quality of Care for All:** Agreed that there were no significant differential between the two options and either option would result in improved quality of care.

- **Patient Experience:** 6 out of 8 agreed but one member scored 2 and one scored 0. The panel discuss the reason for differing views may be because it depended whether number of patients impacted was considered, as per free text comments. All members agreed score of 1.

- **Distance and Time to Access Services:** An updated travel time analysis for 2021 had been mapped and presented to the panel for consideration. 5 panel members felt there would be no difference between the two options, but 3 scored a slight preference towards the Kent & Cantebury option. The panel recognised that there would be a very small number of patients who would not be covered by the one-hour travel time and discussed if there would be a risk of increased number of patients going into London for treatment. It was agreed that this was not a signficant risk, and that to mitigate it the Kent & Medway Vascular Network would work with stakeholders to ensure the local pathways were embedded and appropriately followed.The panel also wanted to ensure that SECAMB were involved in these discussions to ensure that they supported the

proposal and that any impacts on their service had been considered[11]. All members agreed the score of 0 against this criterion.

- **Patient Choice:** The score on patient choice came to 0.5, because four panel members scored 0 and four panel members scored 1. The panel decided this didn't fulfil the agreed methodology of giving final scores of 0, 1 or 2 for all options. The panel reflected that much of the specialsit arterial surgery was emergency work, where there is not the same opportunities for patient choice. It was therefore agreed a final score of 0 as patient choice was not felt to reflect a difference between the two options and that the majority of patients were emergency patients.

- **Affordability to commissioners:** The panel discussed that market forces factor was the main differential between the two options and that this should not be a factor in decision making in what is the best option for clinical care. All members agreed to score 0.

- **Capital costs:** The panel were provided with high level indicative costs for the refurbishment and new build requirements to provide the service at both sites (only the Medway site required investment), and agreed that due to the current impact of the pandemic on buidling and estate costs (causing them to significantly fluctuate), this level of costs were sufficient for this stage in the process. The panel agreed that this was a differential bewteen the two options given the scale of capital investment required to centralise the service at Medway and therefore agreed a score of 2 for this criterion.

- **Workforce:** The sustainability of workforce was scores as 0 from all bar 1 panel member, with the free text comment referencing the long-term strategic alignment of this reconfiguration which was agreed to be a different criterion, so a score of 0 was agreed.

- **Co-dependencies with other strategies:** There was a broader spread of scores associated with this criterion (four members scored 2, three scored 1 and one scored 0), however it was recognised that these scores did not have a material impact on the overall outcome of this options refresh. Looking at total scores for this criterion showed a total score of 13 points for the Kent & Canterbury option and 2 points for the Medway option, therefore it was a differential criterion. All members therefore agreed to score 2.

- **Disruption to education and research:** 5 of the 8 panel members scored this criterion as 0, with 3 scoring as 1. Panel discussion reflects that if services were centralised to Medway there would be some short-term disruption around education and trainig because of the moving of doctors in training, but the paned did not feel that in the long

[11] A meeting with SECAMB has been held subsequent to the Options Appraisal Refresh Panel, with SECAMB confirming ongoing support for there being a single site having previously supported this with the additional costs this change in pathway being included in the finanical assessment of the proposal. SECAMB also raised some further areas for consideration to support implementation that will be considered as part of the implementation planning after the public consultation is completed.

term this would be an issue and therefore not a signficant differential. Looking at the overall scores for each of the options against this criteria showed overall scores of 11 and 10, therefore it was agreed that this was not a differential criterion and scored at 0.

The panel also reviewed an alternative way of calculating the total scores for each option, which added up the total points given by panel members to each option, as opposed to just reviewing the average differential scores between the two options. The panel were reassured that using this method gave a similar pattern of scores in favour of Option A. The two completed scoring methodologies from the panel are shown in Table 9 below.

The refresh panel concluded the meeting by agreeing that the previously preferred option, comprising (a) having a centralised arterial site in Kent and Medway and (b) locating the arterial centre for the medium term at Kent and Canterbury Hospital, remained the right one.

Following the panel, a further check of the scoring against the two methodologies was undertaken and highlighted an error in the transcribing individual scores. This meant that two of the criteria had been RAG rated Green instead of Amber, and therefore had not been discussed in the panel meeting. These were the Co-dependencies and Clinical Outcomes criteria in the Quality of Care for all domain. Both criteria had a consensus between 5 of the 8 panel members, and both had been scored as 0 as not felt to be significantly differentiating. The panel were sent information on the error and the comments received from both criteria as below:

- **Co-dependencies:** it was noted by one panel member that whilst neither site meets all the co-dependencies set out in the service specification, the East Kent option does meet them within the trust (and therefore has access to the relevant specialists). The longer-term solution for East Kent will seek to address this.

- **Clinical outcomes:** the free text comments from the panel members highlighted that outcomes at either site were below average/ not materially different, but that consolidating the service onto one site would enable improvements in clinical outcomes therefore it was not a differential between the providers.

The panel agreed via email correspondence that they were happy for the scoring of 0 to remain in place for each of these criteria and that a further panel meeting to discuss these was not required.

The outcome of the options appraisal refresh panel was presented to the two relevant commissioning bodies who both approved it in principle and are taking it through their relevant governance boards for formal ratification (which will be completed prior to the stage 2 assurance panel on 1st November 2021).

Table 9: Results from the options refresh panel discussions

					COMBINED RAW SCORES		COMBINED AVERAGES (rounded up)			
Domain	**Criteria**	**Average compiled score in favour of Option A**	**Alternative scores**	**RAG rating**	**Option A**	**Option B**	**Option A**	**Option B**	**Difference**	**Agreed score following panel discussion on 28/9**
Quality of care for all	Clinical effectiveness and responsiveness	**0**	One 1		8	7	1	1	0	0
	Patient experience	**1**	One 2 and Three 0		12	6	2	1	1	1
	Clinical co-dependencies	**0**	Three 1s	*	14	12	2	2	0	0
	Clinical outcomes	**0**	Three 1s	*	13	10	2	1	0	0
	Safety	**0**	One 1		9	8	1	1	0	0
Access to care for all	Distance and time to access services	**0**	Three 1s		13	12	2	2	0	0
	Service operating hours	**0**			15	15	2	2	0	0
	Patient choice	**1**	Five 1s Three 0s		14	9	2	1	1	0
Affordability and value for money	Profit/Loss	**1**	One 0		10	5	1	1	1	1
	Affordability to commissioners	**0**	Three 1s		11	8	1	1	0	0
	Capital cost to the system	**2**	Three 1s		15	2	2	0	2	2
	Meet license conditions	**0**			6	6	1	1	0	0
Workforce	Scale of impact	**1**	Two 0s		11	5	1	1	1	1
	Sustainability	**0**	One 2		15	13	2	2	0	0
	Impact on local workforce	**1**	One 0 One 2		12	4	2	1	1	1
Deliverability	Expected time to deliver	**1**	Two 2s		13	3	2	0	1	1
	Co-dependencies with other strategies	**2**	Three 1s, One 0		13	2	2	0	1	2
Research and Education	Disruption to education & research	**0**	Four 1s		12	10	2	1	0	0
	Support current & future education & research delive	**0**			13	13	2	2	0	0
	Totals:	**10**	Range 8 - 16							
				TOTALS	**229**	**150**	**29**	**19**	**10**	**9**

3.10. Description of the preferred medium term option (Option A)

In the preferred medium term option (Option A), Kent and Canterbury Hospital becomes the single arterial hub within Kent and Medway. The Kent and Medway vascular network will link with the South East Thames vascular network hosted by and centred on the vascular centre at Guy's and St Thomas' NHS Foundation Trust, London. The geographical patient pathway links that currently exist between Guy's and St Thomas' NHS Foundation Trust and patients in the Dartford and Tunbridge Wells localities will be preserved.

The Guy's and St Thomas' NHS Foundation Trust vascular centre will continue to be the tertiary referral centre that the Kent and Medway vascular network will link with, where required, for the delivery of the most complex specialised vascular care that is not provided by the Kent based arterial hub.

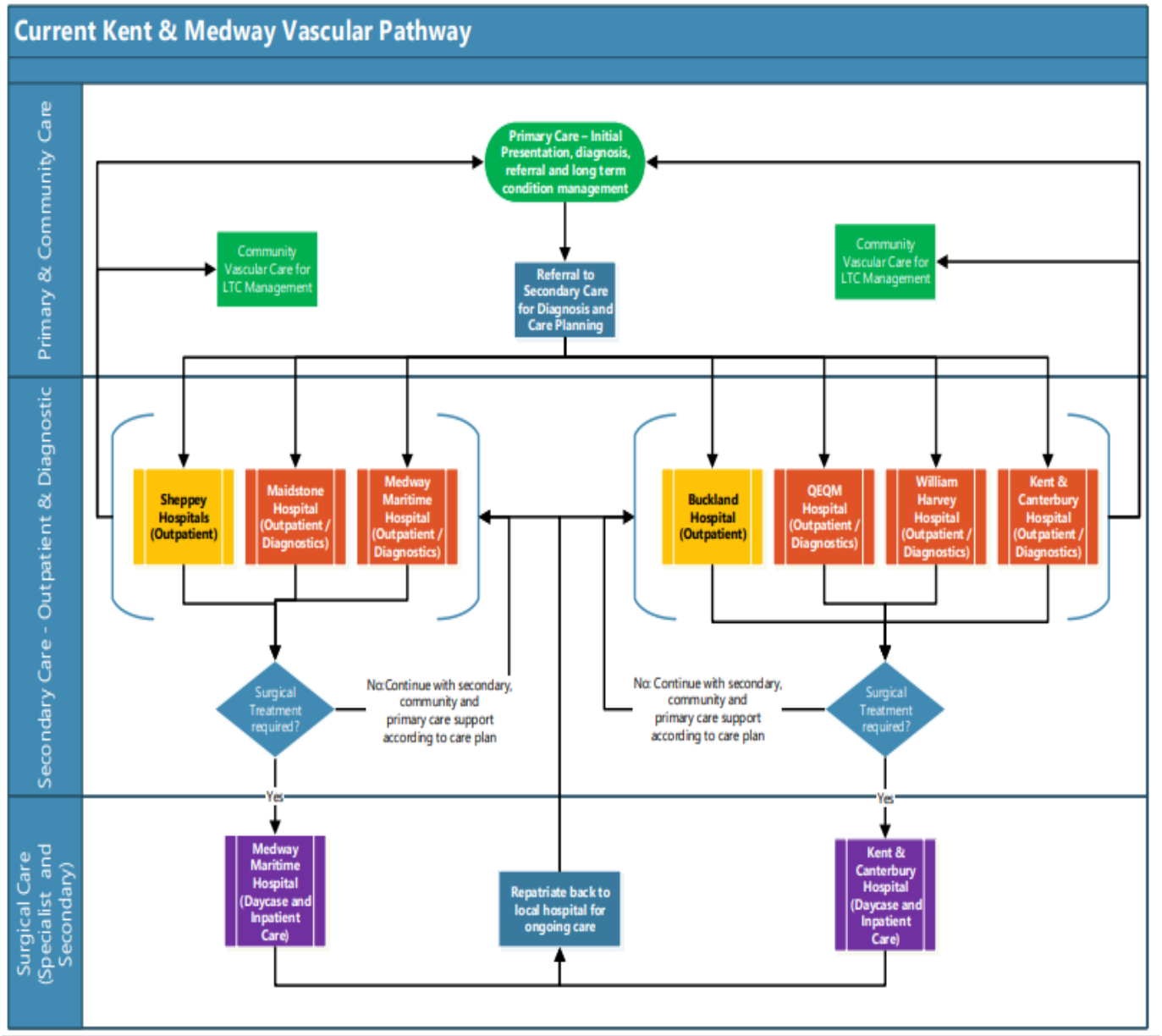
The operating model and the patient pathways have been agreed by the Kent & Medway Vascular Reconfiguration Programme Oversight Group and the Clinical Reference Group. These can be found at Appendices 18 and 19.

Table 10 below shows which services will be provided at each of the main providers in Kent and Medway.

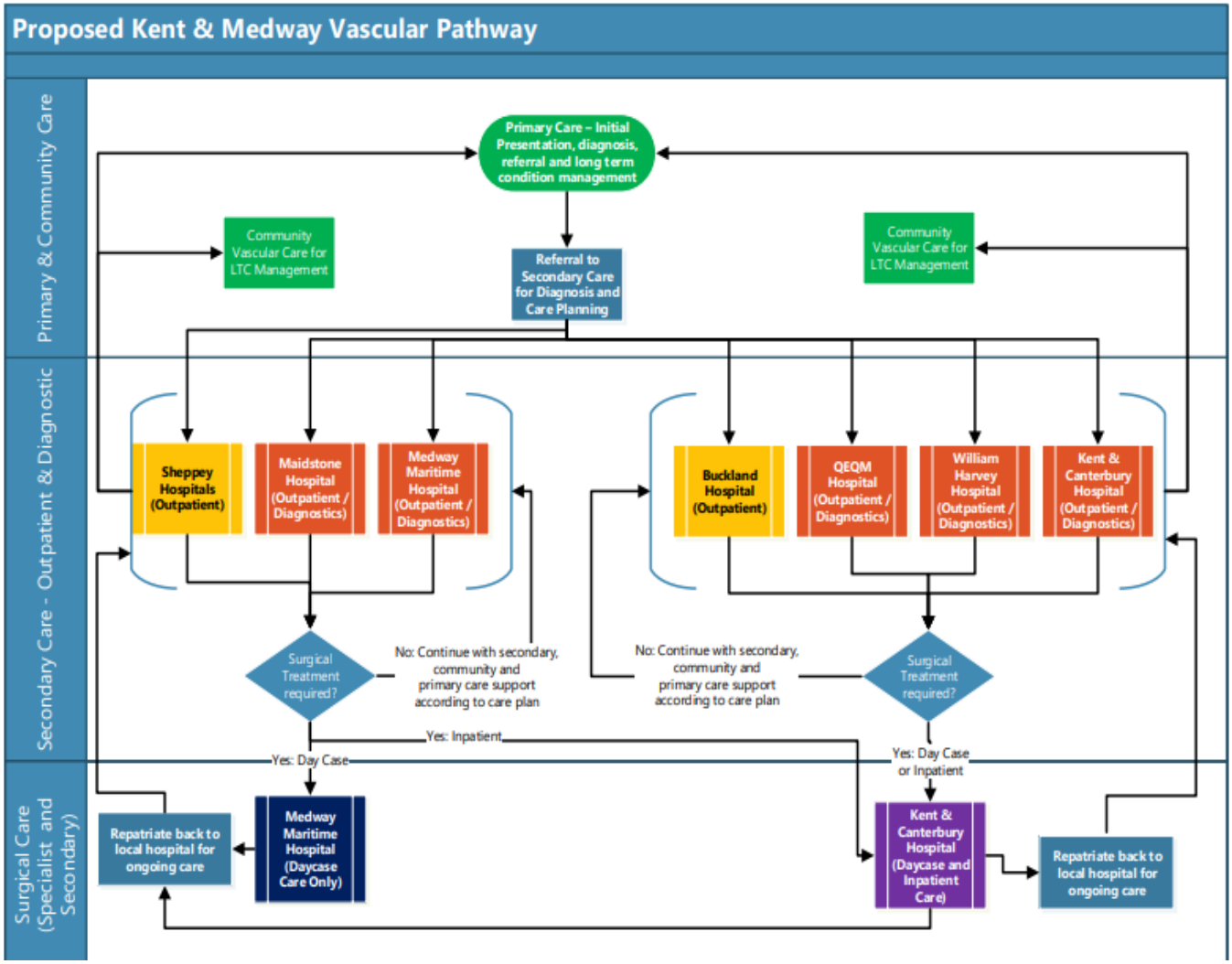
Hospital	Service description
Kent and Canterbury Hospital	• 24/7 consultant led vascular team managing all acute elective and emergency vascular surgery on site • Interventional Radiology service supporting both vascular and non-vascular services • Employs and hosts consultant surgeons for the Kent and Medway vascular network and is responsible for delivering care in the non-arterial spoke hospitals • Comprehensive vascular diagnostic, outpatient and ambulatory care services for the local population • Post-surgical care until patient is fit to either return home or be transferred for rehabilitation closer to their home
Medway Hospital	• Comprehensive vascular diagnostic, outpatient and ambulatory care services for the local population (delivered by consultants employed by EKHUFT) • Interventional Radiology service supporting non-vascular services • Day case vascular surgery (delivered by consultants employed by EKHUFT) • Weekday on-site presence of specialist vascular medical and nursing staff to support repatriated patients and other acute hospital specialties • Direct contact links to the arterial vascular centre for 24/7 support for vascular advice and patient management • Additional ad-hoc vascular consultant support on site where required (e.g. for individual complex surgical cases in other specialities)
All other hospitals (including Maidstone Hospital, Sheppey Hospital, William Harvey Hospital, Queen ElizabethThe Queen Mother Hospital and Dover Hospital)	• Comprehensive vascular diagnostic, outpatient and ambulatory care services for the local population (delivered by consultants employed by EKHUFT) • Direct contact links to the arterial vascular 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 • Additional ad-hoc vascular consultant support on site where required (e.g. for individual complex surgical cases in other specialities)

Table 10: Description of Vascular Services across Kent & Medway

The models below show the patient pathway for the current model of care and the proposed medium term model of care for planned and emergency activity. Patients will be referred into their local vascular service for outpatient and day case services and will be referred to the main arterial hub at Kent & Canterbury Hospital if an inpatient spell is required. Patients will then be repatriated back to their local hospital for ongoing care or discharged home as appropriate. For more detailed treatment information for specific conditions please refer to Appendix 18.

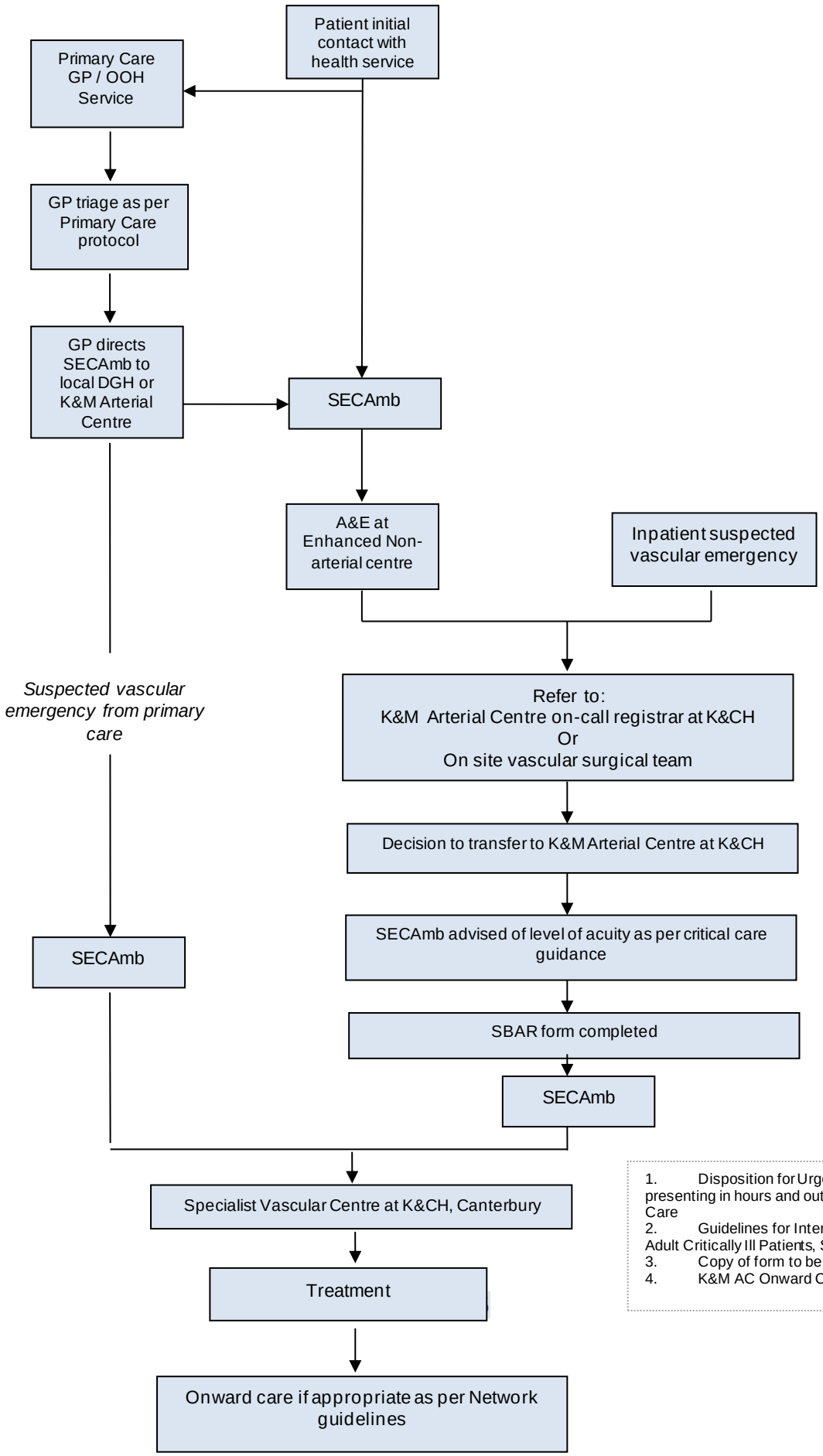


Current model of care



Proposed future model of care

The following flowchart outlines the emergency referral process within the proposed future model of care:



4. Stakeholder engagement

Extensive stakeholder engagement on proposed changes to Kent and Medway vascular services has taken place since 2015, at each stage of the process described in Section 3. Engagement events included dedicated discussions at the following stages:

- Developing the case for change in 2015
- Testing the proposed network model with a single arterial centre in 2016 and 2017
- Feedback on the preferred medium term option (arterial centre at Kent and Canterbury) in 2019

At each stage, patient and public feedback has been broadly supportive of the proposed model and changes. Specific feedback has been used to inform the options appraisal process (both in agreeing to one arterial centre and in agreeing the preferred location for the medium-term option) and to identify issues that may need to be considered and mitigated if the preferred option is implemented. The level of engagement work and supportive nature of the feedback received from patients and the public to date will be considered when agreeing the consultation window with the Kent & Medway JHOSC.

A summary of each of the engagement events is provided below.

4.1. Developing the Case for Change – 2015

The Case for Change, published in 2015, set out why specialist vascular services for people in Kent and Medway were being reviewed, in line with the national specification and standards. This is included as Appendix 13. A series of 10 listening events were held across Kent and Medway in July and August 2015, to gain people's views on the developing Case for Change and proposals.

The findings, along with the Case for Change, were presented to Medway Health and Adult Social Care Overview and Scrutiny Committee (HASC) in August 2015 (Appendix 1) and to Kent Health Overview and Scrutiny Committee (HOSC) in October 2015 (Appendix 2). Both Committees deemed the proposals to be a substantial variation of service and a Joint HOSC (JHOSC) was established. Regular presentations and discussions have been undertaken with JHOSC throughout the review and members have been invited to the engagement events.

4.2. Kent and Medway engagement and listening events - 2015

Ten public 'listening' events were held across Kent and Medway in July/August 2015, to share and develop the case for change with the public, patients and carers and elicit their views on the proposals and what they would want from the future service. 64 people took part in the discussions, including people who had used vascular services, family members, interested members of the public, clinicians, CCG lay representative and commissioners.

Overall, the participants reported a positive experience of vascular services, in Kent and Medway and in London. Concerns were raised regarding the speed of referral and diagnostic tests, the effectiveness of screening, the lack of co-ordination between locations, services, providers and population growth.

The attendees recognised the case for change. Participants felt that having access to a specialist vascular team or centre was most important and reassuring in a life-threatening situation and having good access to such a service in Kent and Medway was vital.

Their priorities for vascular inpatient services were:

- The ability to ***make choices*** and good information to help make the right choice
- ***Information and communication***, particularly for anxious family and carers
- The need for ***high calibre staff with specialist skills*** and capacity to deliver the service 24/7. A strong, consultant team with the relevant support staff
- The ***best treatment*** possible as ***quickly*** as possible
- ***Speedy access in an emergency*** situation
- ***Smooth access for elective care*** – improved appointment systems
- The need for ***support***, particularly following amputations, and to know what assistance is available including ***care in the wider community***
- ***More joined up working*** between services and disciplines, including ***improving the ability to recognise*** vascular disease.

When developing the options and recommendations for future vascular services, patients, carers and the public highlighted the importance of considering:

- ***Workforce*** and the possibility of attracting the best specialists to Kent
- Speed of ***access*** to and ***availability*** of specialist care
- The specific needs of ***local populations***
- Patient/clinical ***choice***
- Potential ***population growth*** in Kent and Medway, particularly in Dartford
- ***Transport*** networks
- ***Prevention*** – the need to highlight the risks of certain behaviours/conditions

4.3. Deliberative Event: testing the model – February 2016

A deliberative, all-day workshop was held in Maidstone on 23 February attended by 13 patients alongside partners and carers. This group had 'lived experiences' of existing services and were well placed to interrogate the proposed model and provide insight into how it might impact on patient experience. The event also involved members of the public, voluntary sector representatives, Kent's Health Overview and Scrutiny Committee, Kent and Medway vascular clinicians, the NHS England programme Lead and Medical Director and a leading vascular surgeon representing the vascular society.

A key message was that a specialist 24/7 service is vitally important and must remain in Kent and Medway.

Whilst there was some support in principle for the changes, concerns were expressed about:

- Outpatient facilities and delays in follow up
- Travel, transport and parking
- Keeping friends and family in the loop
- Primary and community care professionals' awareness of vascular symptoms
- GP referrals and early intervention
- Prevention

Participants provided the following key feedback points and recommendations:

- Improve dialogue and communication between vascular specialists, primary and community care
- Provide patients with clear information and explanation about what to expect, why things are happening and who they will be seeing
- Improve screening provision, preventative and early intervention to support better patient outcomes
- Establish minimum standards specifically for vascular referral such as two weeks from diagnosis to consultant appointment
- Better appointment booking system required along with clarity about what each appointment is for and which staff patients are seeing. Send appointment reminders
- Consultations should be in confidential environments at all times, but include family members if required
- Discharge arrangements need to be consistently clear with plans put in place that are explained to patients and their carers
- Tailor-made follow up arrangements that manage expectations, support patients seeking assurance and provide clinical input at the time patients need it
- A named specialist nurse with contact number should be provided
- Increased use of technology might support better patient experience, avoid travel and keep people at home more

A report of the event is at Appendix 7.

Two events were held in February 2017; one in Canterbury and one in Medway to update participants on review activity to date, present a broad outline of the recommended future model and the proposed network arrangement between east Kent Hospitals and Medway Foundation Trusts and gain participants' views on the proposed way forward. Participants were asked to provide their feedback on the perceived benefits and challenges of locating the single Arterial Centre in either one of three East Kent hospitals or Medway hospital.

The Programme Assurance Board then identified two possible site options for delivering the clinical model.

Two patient and public events were held in August 2017 to update and involve participants in the plans, and to test the six evaluation criteria and consider whether anything needed to be added, from a patient/family carer perspective.

An informal JHOSC committee meeting was held in August 2017 to advise the JHOSC of progress and a formal update was provided in December 2017 (Appendix 8), outlining the full review process to date and stating that the initial findings of the Kent and Medway network options appraisal indicated that the arterial centre would be best placed in East Kent, with an enhanced non-arterial centre in Medway.

4.4. Engagement events: future model and possible sites – February 2017

In January 2017 over 200 invitations were sent to patients inviting them to attend one of two engagement events being held on 7 and 8 February 2017, to update participants on review activity to date, present a broad outline of the recommended future model and the proposed network arrangement between East Kent Hospitals and Medway Foundation Trusts and gain

participants' views. Each of the hospitals hosted one of the events. The full report is at Appendix 9.

50 people took part: 15 at Medway; 35 at Canterbury. Participants included patients, relatives and families, voluntary and provider organisations, clinicians and commissioners. Three JHOSC members attended the Medway session, as independent observers.

A briefing document was created, outlining the purpose of the review, the case for change and the process to date. This was sent out to participants in advance of the sessions so they could familiarise themselves with the content and process of the review.

Participants at both events supported the model of care presented to them and said they believed it would be positively welcomed by all vascular patients and families. Although participants expressed an interest in the single arterial site being local to them there was consensus that people would be prepared to travel to get the best possible care 'as long as it stayed in Kent and Medway'.

Medway participants saw this as an opportunity to ensure better patient outcomes, as well as being a more attractive and innovative place to work, so a positive move for recruiting staff to the area. Canterbury participants saw it as an opportunity to improve care for patients, attract and recruit staff and build on education and expertise.

Both groups saw access, travel, transport, capacity and recruitment as key challenges which needed to be considered when deciding where the one site would be located.

The key issues and concerns, reflected in both events, mirror those reflected in the previous patient and public engagement events, namely:

- To have good – friendly, understandable - ***information and communication*** available for both patients and families
- ***Capacity*** to ensure care is provided in a safe and timely manner
- To have ***specialist staff available 24/7***, with speedy access in an emergency; with high quality support staff; ***recruitment and retention*** essential
- ***Improve referral time***, to avoid emergencies
- ***Greater collaboration between all services;*** greater understanding of vascular conditions across services
- ***One IT system***/systems talking to each other
- ***Travel and transport*** to be considered when deciding where the centre will be
- Willingness to travel further for high quality, best possible inpatient care, with best patient outcomes ***as long as it remains in Kent and Medway***
- ***Support for relatives and carers*** is vital to support best health outcomes
- Best possible ***follow up care, close to home***
- ***Awareness-raising*** and ***prevention***
- Needs to fit with the ***wider health and care plans***

Participants at both events considered each of the four possible hospital sites in turn. Table 11 below summarises their feedback.

Table 11: Stakeholder Feedback on the Site Options for the Surgical Centre (2017)

Potential hospital site for arterial centre	Medway participant views	Canterbury participant views
1. Single Arterial Centre at Medway Maritime Hospital	*Medway* participants preferred Medway Maritime Hospital – local, better access for some and an established vascular centre – but they also recognised key challenges such as travel and access generally for this site, particularly in an emergency.	*Canterbury* participants identified Medway as having some potential benefits for becoming the Centre - already has vascular and the relevant support services - however there were concerns about access (transport, parking), facilities, capacity and the Hospital's reputation.
2. Single Arterial Centre at Kent and Canterbury Hospital	*Medway* participants recognised the potential for Kent and Canterbury Hospital to be the centre – accessible, good public transport and already has the service – but again there were concerns about transport and access for people in remote areas.	*Canterbury* participants saw Kent and Canterbury Hospital as a strong option - a positive reputation, central, good transport links and support services, links with university -but there were concerns about traffic, particularly in an emergency, no emergency services on the site and potentially increased pressure on staff and facilities.
3. Single Arterial Centre at William Harvey Hospital	*Medway* participants recognised that Ashford is geographically central and a good place to get to in an emergency but there were mixed views about access and travel and concerns that it does not have specialised vascular services now.	*Canterbury* participants identified that Ashford had several benefits - good reputation and travel links, central location, emergency and specialist services - however there were concerns that it does not have specialist vascular services currently, traffic and transport issues and distance from Medway and North Kent.

4. Single Arterial Centre at Queen Elizabeth the Queen Mother Hospital	*Medway* participants identified travel as an issue for the Queen Elizabeth Hospital and its ability to take on the additional services, although expansion could be a benefit.	*Canterbury* participants identified that, while the staff have a good reputation and there is good public transport, access issues - parking, summer traffic -were significant and the hospital is in an isolated area and in special measures.

4.5. Engagement events: update and testing the criteria – August 2017

A further two patient and public events were held in Gillingham and Ashford in August 2017, to update and involve participants in the plans for future vascular services and test the six evaluation criteria developed to assess which of the available options would have the best outcomes for patients

28 people took part across the two events, including vascular patients, family members, JHOSC members, the Programme Director and lead clinicians and commissioners.

A key element of each of the sessions was facilitated table discussions. These allowed participants to look at each of the criteria in turn, consider whether there was anything they did not understand in the statements and questions making up the criteria, and whether there was anything missing from their perspective.

Overall, there was consensus among patients and family members, across both events, that the proposed network model made sense to them. However, while the Kent & Medway Vascular Network was being established and a medium term option was being considered, this should not allow the final option to be determined 'by stealth'.

There was also broad agreement that the evaluation criteria were the right ones and that there was a significant level of inter-dependence between them. There was concern, however, about the language used, as there were many words and phrases participants did not understand or found ambiguous. They asked that a lay person's version be created, using plain language, showing the links to the existing terminology within the evaluation criteria proposed.

The engagement report for these events can be found at Appendix 10. Table 12 shows the key themes that emerged against each of the criteria (reflecting both events).

Evaluation Criteria	Key Themes
Quality of Care	• Need to focus on patient experience elements: e.g. how quickly seen, treating with respect, family needs met, cleanliness, food & drink. • Blue light times need to be from first call to receiving treatment. • Availability of follow-up/ rehabilitation services • Continuity/ consistency of care • Robust communication systems/ IT
Access	• Travel Times • Parking: fees, arrangements for long periods, availability • Explicit consideration of access issues for people with protected characteristics
Affordability/ Value for Money	• Has to be linked to quality criteria
Staffing	• Retaining staff (risk of losing to London/ private sector) • Assess each option from administrative staff through to clinicians • Incentives • Access impact on whole family • Look at longer-term staffing issues/ sustainability; retirement • Evidence of future workforce planning • Evidence of staff engagement
Deliverability	• Quickest, feasible option to deliver this model is the main factor • Impact of other dependencies – STP; time it will take for new build/ adaptations • Clear description of degree of structural changes and impact on time • Time not as critical as quality of services
Research & Education	• Robust, sustainable access to training • Evidence of potential for research

Table 12: Key themes identified against the criteria from the engagement reports.

4.6. Engagement activity – September 2019

An online survey was created and made available on the NHS England Specialised Commissioning South East website to capture patient and family feedback on their most recent experiences of vascular services and their views on the proposed model of care. The survey closed on 30 September 2019. Despite it being advertised widely across Kent and Medway, there were no responses.

In September 2019, over 200 letters were sent out inviting patients and their families to three events being held in Maidstone, Medway and Canterbury twelve patients and family members attended two sessions in Maidstone and Medway. Due to the low uptake for the event in Canterbury (two people) this event changed to individual interviews.

Participants were presented with the reasons for the review (the case for change), the new model of care and how this would be delivered. All participants were extremely positive about their experiences as inpatients at both Medway and Canterbury. A small number reported having excellent aftercare but more people recounted negative experiences, including

difficulty getting aftercare; long waits in outpatients, in a very poor environment; lack of aftercare support, leaving one person having to provide stoma care for her husband.

Other negative experiences included:

- difficulty getting referred into the vascular team
- lack of or no information about decisions made about care
- poor patient information
- waits for scan results
- lack of communication between services and with patient
- no contact number for patient to link with the team

In relation to the specific proposals, whist there was some agreement for the need to consolidate specialist resources, concerns included:

- the impact on travel, traffic, transport and parking
- increased pressure on existing beds
- the impact of the increase in housing, population and subsequent demand
- the impact of hospitals providing different specialties and the potential for multiple transfers between hospitals for someone with several conditions
- the impact on workforce and potential loss of expertise

The following areas were suggested for consideration in the next stage of developing the future site:

- Improve the referral process, so referrals take place and are more timely
- Provide 24/7 care and access to specialists
- Deliver the right aftercare, as close to home as possible, including transfer to local hospital if further inpatient care needed and professional support in the person's home
- Provide the right support and infrastructure at each of the key localities, to ensure equity of care
- Improve outpatient care facilities and timings
- Create a full discharge plan before discharge and shared with GP and patient
- Build stronger communication and links between all care providers
- Give clear, understandable information to the patient
- Provide a specific contact number for easier access into and advice from the service
- Develop one common IT system, so all services can share information
- Advertise widely and provide general information and awareness raising of vascular conditions, screening and access to services, to ensure early diagnosis and equitable access to services
- Focus on prevention: raise awareness of risk factors, such as smoking/obesity, to reduce demand
- Educate GPs so they are more aware of vascular conditions
- Signpost to other relevant services, such as exercise classes
- Ensure the proposed vascular changes fit within local future NHS plans

5. Expected impacts of implementing the preferred option

Analysis of the projected impacts of implementing of the preferred option identified, alongside the benefits, some potentially challenging effects on services, patients and other providers. Where necessary, action is planned to mitigate these as described in this section.

The key impacts identified fall into three categories:

- Service impacts: changes in workforce and increases in theatre, bed and critical care capacity needed at Kent and Canterbury
- Patient impacts: travel time changes
- Impacts on other providers

5.1. Service impacts: Workforce

There are significant expected workforce benefits associated with implementing the medium-term solution, particularly the creation of a sustainable specialist clinical team that can recruit and retain key staff. However, there will be short-term challenges associated with the proposed change in service delivery. It will entail changes for individual staff, some of whom may need to move their place of employment. It may also be difficult for Kent and Canterbury to ensure adequate staffing in the short-term.

Regarding the medium-term benefits for clinical staff, establishing an arterial hub and a vascular network will create a centre of excellence leading to increased opportunities for innovation, research, and training. The network will be an appealing place to work as the latest endovascular technology will be available and case numbers high enough to build expertise. Important experience can also be gained when surgeons work alongside a more experienced colleague on more complex procedures. This not only helps build surgeons' knowledge and experience but also accelerates procedures, reducing time under anaesthetic and thus reducing risk to the patient. Units that have adopted this approach have suggested that 'doubling up' doesn't reduce capacity or throughput but, conversely, increases it.

Consultants will also be able to build new pathways and models of care as the network develops, working with partner hospitals in the network. The specialist nursing team will also have better cross-cover for their roles as well opportunities to work across a broader network of hospitals, making these roles more attractive. This networked model will be embedded by the time the long-term decision on the location of the arterial hub is determined by the East Kent Transformation programme. This means the arterial hub could readily shift to another location, maintaining links already created across Kent and Medway.

Sustainable on-call rotas can be achieved, and effective multi-professional training can be delivered. At present shortages of specialty doctors in the region make on-call rotas overtaxing for those employed, and lack of exposure to sufficient number of training opportunities is the biggest problem facing current trainees. Concentrating services will avoid the continuing low case volumes in aneurysm and carotid surgery, as recommended by the National Vascular Registry. As more consultants are employed, their out of hours on-call commitments will be reduced, moving from current rotas of 1:4 or 1:5 to an expected 1:7 or 1:8. This will make the jobs more appealing and offering a more appropriate balance of out of hours and in hours work.

Some staff members at Medway hospital have been identified as TUPE workforce i.e. their jobs will transfer to the arterial hub (see table 13 below). Those vascular service staff remaining at Medway are being supported. For instance, Interventional Radiology consultants remaining at Medway hospital are being offered additional vascular clinical sessions to maintain their skills. Other broader workforce groups at Medway who may interact with the vascular service, such as ward nurses, and scientific and technical staff, will continue to support the day case, diagnostic and repatriation pathways for vascular patients, but will do more to support other general surgical pathways.

A staff engagement plan is proposed to support the transition and integration of staff in both organisations. An HR task and finish group has been established and this is coordinating the planning for any staffing changes. NHS England is also supporting the Kent and Medway Vascular Network with a dedicated Organisational Development package to support the move to network working and establishing a single team across separate Trusts. The Trusts have also engaged directly with potentially affected individuals (outlined in Table 13 below).

Two additional vascular consultants have been employed by EKHUFT since the temporary service moves in 2020 and 2021 (see Section 3.8). EKUHFT staff have also been supporting MFT's inpatient vascular surgical services over recent months as MFT has been unable to provide sustainable on-call rotas within the service.

This additional capacity will also mitigate the risk of any short-term service gap if consultants from Medway Hospital chose not to transfer their employment.

Current Employing Organisation	Staff Group	Band	WTE's	Service	Base
MFT	Medical and Dental	Consultant	4.12	Vascular	MMH
MFT	Nursing and Midwifery (Registered)	AfC 8a	1.0	Vascular	MMH
MFT	Nursing and Midwifery (Registered)	AfC 7	1.0	Vascular	MMH
MFT	Administrative and Clerical	AfC 4	2.0	Vascular	MMH
MFT	Administrative and Clerical	AfC 3	1.0	Vascular	MMH

Table 13: TUPE workforce for go-live

5.2. Service impacts: increased capacity required at Kent and Canterbury

Consolidating inpatient vascular surgical activity at the Kent and Canterbury site will require increases in bed, staffing and theatre capacity, for instance, 11 additional beds will be required there. This section describes how the increased capacity will be provided.

5.3. Current activity

5.3.1. Procedures

Table 14 shows the current scale of vascular inpatient procedures undertaken at EKHUFT and MFT in 2019/20. The sum of inpatient activity at the two sites taken from local validated data is being used as the baseline for patient activity that needs to be delivered on the single site in the preferred option. It is recognised that the local procedure numbers differ slightly especially for EVAR Aortic Aneurysm from the National Vascular Registry activity and this is due to the way the activity has been captured. The Kent & Medway Vascular Network will be tasked to improve the data quality and alignment across datasets, working with the National Vascular Registry to achieve this.

Procedure Type	EKHUFT 2019/20 (Full Year)	MFT 2019/20 (Full Year)	National minimum numbers for index procedures per main arterial centre
Open Aortic Aneurysm	44	6	**60**
EVAR Aortic Aneurysm	71	19	
Subclavian Artery	3	2	n/a
Lower Limb - Reconstruction Surgery	58	39	n/a
Lower Limb - Amputation (Major)	80	61	n/a
Lower Limb - Amputation (Minor)	76	72	n/a
Emergency Femoral Artery	0	1	n/a
Elective Iliac Artery Ops	0	0	n/a
Carotid Endarterectomy	61	13	**50**
IR - Angioplasty	299	106	n/a
Renal Access	144	55	n/a
Total inpatient activity	**827**	**374**	

Table 14: EKHUFT and MFT activity by type of procedure

The total inpatient activity figure does not match number of patients requiring inpatient care during this period because a number of patients have more than one procedure during their

inpatient stay. To illustrate, the 374 procedures at Medway were performed on 265 individual patients.

5.3.2. Future Demand

Capacity has been planned assuming that the demand for vascular inpatient procedures will remain relatively flat. This is because there has been a slow but clear decrease in the number of inpatient vascular procedures performed in the region over the past five years. Some of this decrease is due to an increase in day case procedures and some stems from reduced demand for some procedures, such carotid endarterectomies.

5.3.3. Increased bed requirements

At Kent and Canterbury Hospital, the number of occupied bed days for vascular inpatients rose to a high of nearly 6,000 in 2018/19. This means that on an average day, vascular surgical inpatient activity occupied around 20 beds (at 85% occupancy).

The demand and capacity modelling shows that 385 inpatient vascular procedures per year from MFT to the arterial hub to be located at Kent and Canterbury would require 11 extra beds at that site in addition to the currently funded 20 beds. Assuming 85% bed occupancy, the proposed arterial hub will require a total of 31 inpatient beds.

The length of stay (LOS) at MFT is higher than at EKHUFT, and so a small reduction in average length of stay is expected as the service is consolidated at the arterial hub. This will account for three of the total beds required at the hub. Kent and Canterbury has already created an additional eight beds to incorporate the additional procedures moved there temporarily in 2020. They have done this by moving day-case beds out of the vascular ward to create a 28 bedded ward dedicated to vascular inpatients, with plans in place to open an additional 3 beds once the move is confirmed.

5.3.4. Increased theatre requirements

Table 15 shows the theatre capacity currently required for all vascular activity at Kent and Canterbury hospital. At present, theatre capacity is equivalent to 7 sessions a week. In future the service will require theatre capacity for 11 sessions a week.

Theatre Capacity for Theatre (EVT) and Interventional Radiology at Kent & Cantebury Hospital		
	Current Capacity	Future Capacity*
Annual Sessions	364	568
Weekly Sessions	7	11
*Future capacity is based on modelling of 2019 activity across both sites with anticipated annual growth of 203 and rounded to the nearest full session.		

Table 15: Theatre Current Capacity & Requirements -Theatre (EVT) and Interventional Radiology 2019

According its theatre utilisation dashboard[12], Kent and Canterbury's endovascular theatre (theatre six) was used on average for 2 sessions a week for vascular activity in calendar 2019. Interventional Radiology activity used 7 sessions a week, of which 3 sessions were for vascular-related IR activity. Rounding up, theatre six was therefore utilised for a total of 9 sessions a week. (The unused sessions are used for MDT work as required).

The analysis shows that 10.61 sessions a week will be needed at the Kent and Canterbury hub to accommodate all activity from EKHUFT and MFT.

Since this analysis was completed, EKHUFT has invested in a dedicated new Interventional Radiology suite, which is due to open in 2022. This will provide significant additional capacity for the vascular network and comfortably cover the additional theatre demand. It will also provide backup for the existing endovascular theatre in case of breakdowns or downtime.

[12] Weekly data between week commencing 31/12/18 and 30/12/2019 (53 weeks)

5.3.5. Increased Adult Critical Care bed requirements

Two additional High Dependency Unit (HDU) beds are estimated to be required to meet all the need for critical care arising from Kent and Medway vascular activity. EKHUFT received additional capital funding for adult critical care (ACC) beds in 2020, which will include HDU beds. Funding for the additional staff required for these beds is being pursued separately to the Vascular Reconfiguration Programme. Additional ACC staff are already being used at Kent and Canterbury to meet demand arising from the temporary move of inpatient activity there in 2020.

5.4. Patient impacts: travel times

Public engagement revealed patients' concern that changes to vascular services could increase their travel times to access care. There is a risk that some patients will not access care if their travel times increase disproportionately.

The reviews of vascular services described in Section 3 included extensive travel time analysis between 2015 – 2018, which was further refreshed for the 2021 options refresh. This demonstrated that creating a single arterial hub would not significantly change patient travel times (see appendix 23 and 24). There have been no major new roads built or demographic changes since these analyses were carried out that would materially affect their conclusions.

More centralised surgical services mean better outcomes but will inevitably mean longer journey times for some patients. Concerns are often expressed that longer journey times are inherently risky. However, the evidence, while limited, does not show that longer journeys result in higher mortality from ruptured AAA (the most urgent vascular emergency)[13]. Conversely, the clinical evidence underpinning the model of care undoubtedly shows that outcomes are better at larger centres. Ruptured aneurysms are becoming less common due to the screening programme and better management of risk factors.

Experience of consolidating vascular services across the UK has not shown a rise in mortality in patients undergoing repairs for ruptured AAA. For example, services in Northern Ireland have been centralised in Belfast in recent years, and in-hospital mortality for ruptured AAA is close to the UK average.

Another common concern is that more distant elective services will not be acceptable to patients. However, under the network model for vascular services, outpatient clinics, day case surgery and many investigations continue to be offered at local hospitals. Patients only need to travel further for specialist investigations and for their inpatient care. In addition, a study of patients with screen detected aneurysm showed that they were willing to travel for at least one hour beyond their nearest hospital to access a service with better outcomes, higher surgical volumes and endovascular services[14].

The patients that currently receive inpatient care at Medway Hospital will in future need to travel further to receive their inpatient care at Kent and Canterbury. Table 16 shows the

[13] Mell M et al, Interfacility transfer and mortality for patients with ruptured abdominal aortic aneurysm. J Vasc Surg. 2014, 60: 553-7

[14] Holt P et al J, Screened individuals' preferences in the delivery of abdominal aortic aneurysm repair. Br J Surg. 2010, 97:504-10

difference in travel times for this group of patients. The analysis shows the average time it currently takes for vascular inpatients to access Medway hospital alongside the average travel time required for the same patients to access Kent and Canterbury Hospital. Note that travel times will be shorter for ambulances travelling on blue lights, which would be the method of transport used for critically unwell patients.

		Range	
Travel Time Analysis	**Average Time (minutes)**	**Min Time (minutes)**	**Max Time (minutes)**
MFT Driving AM Peak Time	21.95	3.49	90.55
K&C Driving AM Peak Time	43.87	16.11	88.49
Distance Analysis	**Average Distance**	**Max Distance**	**Min Distance**
MFT Driving Distance	14.7km	69.1km	5.8km
K&CH Driving Distance	48.3km	91.7km	8.9km

Table 16: Travel times based on patient postcodes (2019/20)

Patients who are currently accessing inpatient vascular care at Medway Hospital now spend between 3 minutes and 91 minutes travelling to the Hospital in peak time. That group of patients will see their average travel time to hospital increase from 22 minutes to 44 minutes when the central hub goes live. Travel time to Kent and Canterbury for the same set of patients will then range from 16 minutes to 88 minutes.

Currently, patients from the Maidstone area of west Kent that require vascular surgical care receive their care at MFT. The average travel time for those patients to access MFT is around 32 minutes. Under the preferred option, these patients will have an average travel time of around 53 minutes. This subset of patients is included in the overall impact analysis above.

The map below (figure 5) shows that not all of MFT patients originate from the Medway area. There are 7 patients whose postcodes are closer to Canterbury than Medway, so their future travel time to hospital will be shorter. In the future, 60% of the patients' currently receiving inpatient care at MFT will be able to access Kent and Canterbury in under the 43 minutes average travel time.

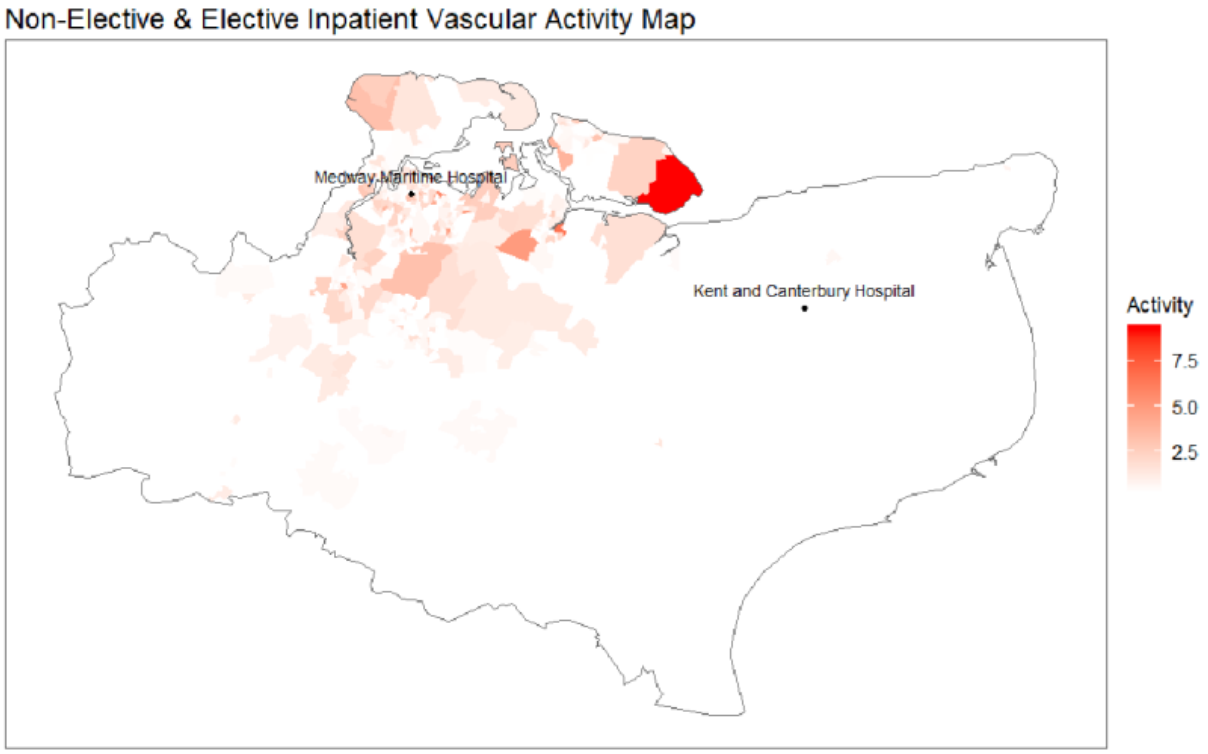


Figure 5 Originating postcode of patients accessing MFT for their inpatient vascular treatment (2019/20)

5.5. Integrated Impact Assessment

The Integrated Impact Assessment (Appendix 21) carried out in 2018 highlighted that the creation of a single vascular arterial hub in Kent and Medway would contribute to a reduction in health inequalities. The clinical benefits are likely to be experienced disproportionately by disadvantaged groups due to their higher propensity to require vascular services. However, there could be some disadvantages for these same groups associated with the requirement to travel to a new location and be in an unfamiliar setting, as well as increased costs for those who will have to travel longer distances under the new proposal.These impacts will be closely monitored after implementation by the Programme Oversight Group (see Sections 8&9). As part of the transition, patient communications explaining the changes to patients will be developed and delivered by trusted clinical staff.

5.6. Impacts on other providers

5.6.1. South East Coast Ambulance Service

South East Coast Ambulance (SECAMB) is expected to convey less than one additional patient per day on average as a result of the medium-term proposal, making it difficult to map the precise impact of the change on SECAMB resources. Their current activity related to vascular inpatients is primarily inter-hospital transfers with very few direct conveyances from home to hospital by ambulance crews. The low number of patients affected by the move makes it difficult to calculate the exact increase in travel time and impact on operational performance until West Kent patients are required to attend Kent and Canterbury Hospital and actual SECAMB conveyances into Canterbury for these patients can be monitored.

SECAMB has provided an indicative price for the cost of expected additional transport for inpatients, and through discussions with SECAMB a potential additional cost of these journeys of £125k per annum has been identified. This is the minimum cost that of ensuring an additional ambulance and crew are available each day to accommodate additional vascular transfers to the Kent & Canterbury site. This cost has been factored into the costs and affordability case for the preferred option. The exact value would need to be agreed by formal contract discussion between the lead CCG commissioner and SECAMB.

SECAMB, already has protocols in place to identify the most appropriate site for patients and would be able to transfer patients to either site. This could be supported further through use of telemedicine to support emergency response crews to access specialist opinion during the initial assessment of the patient, ensuring that the patients most likely to need emergency arterial vascular intervention are identified and taken to the most appropriate centre first, without the need to go via a nearer A&E for specialist assessment prior to onward transfer to the arterial hub. This approach has already been trialled in stroke patients within the South East region and will be considered further by the Kent & Medway Vascular Network and South East commissioners to support services across the region.

5.6.2. G4S: Patient transport services

The clinical pathway outlines how patients from the Medway area who have undergone major amputation as an inpatient at Kent and Canterbury will be offered the opportunity to be moved to Medway Hospital once they are clinically fit to be transferred from the acute inpatient vascular hub. These patients will require ongoing treatment and extensive rehabilitation and physiotherapy, which they could receive as an inpatient at Medway Hospital, closer to their homeplace of residence. The number of patients that are likely to fall into this category is very small. There have been discussions with G4S (the providers of non-emergency patient transport) who would arrange transport for these patients from Kent and Canterbury to Medway Hospital. G4S have confirmed that they will be able to accommodate these transfers within their current resources and contract.

5.6.3. Guy's and St Thomas': Referral pathways

Currently a significant proportion of vascular surgery activity from north and west Kent goes to Guy's and St Thomas' NHS Foundation Trust: 75 Carotid endarterectomies / AAA interventions compared with 90 at MFT and 168 at EKHUFT (based on 2015/16 data).

Patient flows to London may have initially been driven by historic consultant relationships; however, there is now a formal pathway in place through a service line agreement between Guy's and St Thomas' NHS Foundation Trust, Darent Valley hospital and Maidstone and Tunbridge Wells hospital.

The London providers also undertake fenestrated grafts for complex aneurysms for all Kent and Medway residents and provide clinical advice and support to the Kent and Medway units as required.

In time, through creating on of a single arterial hub within Kent and Medway, it may be possible to divert some of the London referrals back into Kent. However, this PCBC does not assume this will be the case. Any eventual diversion of activity must not interfere with patients' right to choose a recognised, compliant provider.

6. Financial impacts: costs and affordability

6.1. Introduction

An affordability and value for money assessment was undertaken as part of the options appraisal process narrated in Section 3 of the PCBC. This section details the financial case and identifies the affordability of the preferred option for the medium-term site for vascular services in Kent and Medway. The purpose of this section is to set out the financial implications for activity, funding, and workforce of the preferred medium-term option compared to the 2019/20 baseline position and 'do nothing' option.

This financial case sets out:

- Financial modelling, including underlying assumptions
- Capital cost implications
- Financial risk assessments; including activity, stranded costs, and workforce
- Financial impact of the preferred option

6.2. Financial modelling

6.2.1. Modelling assumptions

Table 17 illustrates the assumptions and bases that have been used to calculate the financial impacts within the financial case. The activity and price levels represent the baseline data at 2019/20. This is considered the most comprehensive and reliable data given the impact the pandemic has had on services in recent years.

Table 17: Modelling assumptions

Assumption Type	Do Nothing	Preferred Option: Single arterial hub at Kent and Canterbury Hospital
Activity	Vascular activity levels are taken from 2019/20 data	Vascular activity levels are taken from 2019/20 data
	There would be no vascular activity movement between providers	Actual activity would be carried out across the whole network, i.e. across sites in Kent and Medway (K&M), except for all inpatient vascular surgery activity, which will be carried out at the proposed single arterial hub only
	There would be no change in ownership and reporting of this activity	All applicable activity will be owned and reported by EKHUFT under the proposed option
		The preferred option would see a change in total vascular activity reporting for outpatients, day cases and inpatients from MFT to EKHUFT (illustrated in Table 25)
		However, only 265 patients will see a change in their pathway due to the move of inpatient services from MFT to EKHUFT.
		Activity continuing at MFT will be transacted between the trusts through a formalised provider to provider contract for the provision of facilities and support services
		The single arterial hub excludes K&M west of the county activity currently referred to London
Financial	Price levels are taken from 2019/20 data	Price levels are taken from 2019/20 data
	Prices include market forces factor (MFF)	Prices include market forces factor (MFF)
	The activity will continue to be funded by commissioners in line with 2019/20 contractual agreements	The activity will be funded by commissioners as outlined in this business case
	This option does not assume any level of cash releasing efficiency savings due to the initial investment required.	This option does not assume any level of cash releasing efficiency savings due to the initial investment required.
	The system is expected to reassess financial improvements in its long term plan aided by contractual discussions between commissioners and providers.	The system is expected to reassess financial improvements in its long term plan aided by contractual discussions between commissioners and providers.
	MFT forecast vascular service WTE attrition rate is 14%	The total provider income movement associated with vascular activity is £3,025k from MFT to EKHUFT (illustrated in Table 25)
	MFT cost of backfilling vacancies with agency, bank staff and locums attract a 20% premium	

6.2.2. Commissioning arrangements

A broad range of vascular activity is currently commissioned by both NHS England Specialised Commissioning and Kent and Medway Clinical Commissioning Group (CCG). In respect of inpatient vascular surgery, NHS England Specialised Commissioning are the lead commissioner supported formally by Kent and Medway CCG. Both agree to work closely together to support the delivery of safe vascular services in Kent and Medway.

Whilst most of the vascular activity in Kent and Medway is commissioned by Kent and Medway CCG and NHS England Specialised Commissioning, there is a small element of contracted and non-contracted activity commissioned by other organisations on behalf of patients accessing the services in the region. When reviewing the vascular service in Kent and Medway, a patient activity review has been conducted and includes patient flows from and to the following organisations:

Commissioners	Providers
Kent and Medway CCG *	Medway NHS Foundation Trust *
NHS England Specialised Commissioning *	East Kent Hospitals University NHS Foundation Trust *
NHSE&I Health and Justice	South East Coast Ambulance NHS Foundation Trust *
Bromley CCG	
Non-Kent non-contracted activity	

Table 18: Kent and Medway system stakeholders

NHSE&I Health and Justice and Bromley CCG are not material contracts therefore are not a formal stakeholder in the development of this business case, however, they are aware and have been involved in the development of the proposal.

Non-Kent non-contracted activity is where patients receive care in Kent and Medway but live outside of the region. These combined commissioning activities of; NHSE&I Health & Justice, Bromley CCG and Non-Kent non-contracted activity, represent under 2% of the total patient activity in 2019/20 and are therefore not material to the outcome of the preferred option. Key system stakeholders are identified in Table 18 with an asterix. These are referred to in the finance section of the PCBC as 'system stakeholders'.

6.2.3. Financial comparisons

The preferred option is assessed against the baseline and 'do nothing' on a recurrent basis. Table 19 and 20 below provide the recurrent incremental change from the baseline for the two options. The tables have been split for presentational purposes.

6.2.4 Efficiency savings

Whilst the preferred option does not assume any level of cash releasing efficiency savings due to the initial investment required, the system is committed to reassess financial

improvements in its long term plan aided by contractual discussions between commissioners and providers.

Following the initial 12 month period from 'go-live';

- A Value For Money evaluation will be conducted between commissioners and EKHUFT to reinforce the benefits realisation metrics in Section 9.5 of the PCBC
- The evaluation outcome will support the future decision of the system investment funding of £342k and
- Form part of contractual discussions when joint agreement is reached between commissioners and EKHUFT

It is expected that service benefits would drive efficiency savings from;

- Minimising duplication and waste
- Reducing agency /bank /locum staff costs
- Reducing litigation rates (GIRFT)
- Improving complication rates following vascular admission
- Providing early intervention and treatment
- Optimising care in diabetic and podiatry services
- Reduced length of stay for patients

These will be quantified, reviewed and monitored as part of the post consultation process.

							Incremental Change		
Recurrent System impact Income and Expenditure	Baseline			Do nothing			Do Nothing		
	Comm* £'000	Providers £'000	Total £'000	Comm* £'000	Providers £'000	Total £'000	Comm* £'000	Providers £'000	Net chg £'000
Income	0	3,025	3,025	0	3,025	3,025	0	0	0
Expenditure	(3,025)	(2,901)	(5,926)	(3,025)	(3,295)	(6,320)	0	(394)	(394)
Contribution to Overheads	(3,025)	124	(2,901)	(3,025)	(270)	(3,295)	0	(394)	(394)
Adjustment for Blended price									

Table 19: Summary of the recurrent forecast financial implications for 'do nothing'

** Comm refers to 'Commissioners'*

The 'do-nothing' option incurs no additional cost to the commissioners however there is a recurrent additional cost of £394k for the providers which is for the premium cost associated with agency/ bank/ locum staff. This additional cost is required to backfill the current vacancies within MFT. This would lead to the vascular service reporting a loss of £270k as opposed to the baseline £124k contribution to overheads.

							Incremental Change		
Recurrent System impact Income and Expenditure	Baseline			Preferred Option			Preferred Option		
	Comm* £'000	Providers £'000	Total £'000	Comm* £'000	Providers £'000	Total £'000	Comm* £'000	Providers £'000	Net chg £'000
Income	0	3,025	3,025	0	3,517	3,517	0	492	492
Expenditure	(3,025)	(2,901)	(5,926)	(3,517)	(3,256)	(6,773)	(125)	(355)	(847)
Contribution to Overheads	(3,025)	124	(2,901)	(3,517)	261	(3,256)	(125)	137	(355)
Adjustment for Blended price				(367)	367	0			

Table 20: Summary of the recurrent forecast financial implications for the preferred option

The preferred option has a system cost neutral impact shift of resource between provider and commissioner due to the 'blended price' contract arrangement between MFT and K&M CCG. The movement of activity from MFT to EKHUFT presents an income from activity change of £367k when priced at national tariffs.

The MFT contract has been agreed with a 2 year 'blended' price for 2019/20 and 2020/21. A blended price will include an agreed combination of fixed payments and outcomes-based payments paid to providers from commissioners. A blended price will enable risk share of excess costs being paid by both the commissioner and the provider and is used to incentivise innovation and cost reduction in services. The income currently paid to MFT for vascular activity is £367k less than the equivalent tariff price that would be paid to EKHUFT. The tariff price is solely outcomes-based.

The same blended price will not be agreed between the commissioner and EKHUFT. Blended price discussions will contribute to contractual efficiency saving target conversations between the commissioners and EKHUFT in their longer-term planning of the service.

A review of the overall contract between the CCG and MFT noted that the total contracting arrangements across services provided by the Trust were in balance when costed at tariff, therefore the impact of the blended price is not considered to crystalise as a cost to the commissioner. There is a commitment from both the CCG and MFT to address any difference in vascular service price through customary contract negotiations. Commissioners and providers will reflect contractual changes as part of joint system financial planning for 2022/23.

The preferred option will incur additional emergency transfer costs as narrated in Section 5.5.1 of the PCBC. Patients requiring inpatient services from the Medway and Maidstone areas would need to be transported to the proposed medium-term site in Canterbury for their inpatient admittance under this option. South East Coast Ambulance (SECAMB) has provided an indicative price of £125k for the cost of additional transport and this is included in the assumptions. The exact value will be agreed by formal contract discussion between the lead CCG commissioner and SECAMB.

The provider contribution to overheads will increase from £124k to £261k which is an improvement of £137k because of the move to tariff prices. The net effect is therefore a recurrent system benefit of £12k.

Tables 21 and 22 below include the non-recurrent incremental change from the baseline for the two options. The tables have been split for presentational purposes[15].

[15] Note Comm' refers to Commissioners and includes NHS England Specialised Commissioning and Kent & Medway CCG commissioning.

							Incremental Change		
Recurrent and Non-recurrent	Baseline			Do nothing			Do Nothing		
System impact Income and Expenditure	Comm* £'000	Providers £'000	Total £'000	Comm* £'000	Providers £'000	Total £'000	Comm* £'000	Providers £'000	Net chg £'000
Income	0	3,025	3,025	0	3,025	3,025	0	0	0
Expenditure	(3,025)	(2,901)	(5,926)	(3,025)	(3,295)	(6,320)	0	(394)	(394)
Contribution to Overheads	(3,025)	124	(2,901)	(3,025)	(270)	(3,295)	0	(394)	(394)
Adjustment for Blended price									

Table 21: Summary including the non-recurrent forecast financial implications for 'do nothing'

The 'do nothing' option incurs no non-recurrent cost to the commissioners.

							Incremental Change		
Recurrent and Non-recurrent	Baseline			Preferred Option			Preferred Option		
System impact Income and Expenditure	Comm* £'000	Providers £'000	Total £'000	Comm* £'000	Providers £'000	Total £'000	Comm* £'000	Providers £'000	Net chg £'000
Income	0	3,025	3,025	0	3,859	3,859	0	(834)	(834)
Expenditure	(3,025)	(2,901)	(5,926)	(3,859)	(3,859)	(7,718)	467	958	1,425
Contribution to Overheads	(3,025)	124	(2,901)	(3,859)	0	(3,859)	467	124	591
Adjustment for Blended price				(367)	367				

Table 22: Summary including the non-recurrent forecast financial implications for the preferred option

The overall impact of the preferred option costs the commissioners an additional £467k per annum (£342k non-recurrent and £125k recurrent) and the providers a reduction in contribution to overheads of £124k (non-recurrent).

The non-recurrent element of £342k is to deliver comprehensive vascular services under the preferred option. EKHUFT have identified an investment requirement of £603k.

Table 23 illustrates the investment for service enhancement pay required.

Investment - Service Enhancement Pay		
Role	**WTE**	**£'000**
Vascular Specialist Nursing	2.0	76
Vascular Medical Staff	2.0	260
Admin	1.0	55
Vascular Specialist Nursing - Sonographer	1.0	64
Admissions Area	4.8	148
Total Pay Costs	10.8	603
Net loss/(surplus)		(261)
System investment required		342

Table 23: Investment requirement for service enhancement pay

This is considered the minimum investment required to ensure the service provides equitable and fair services to any patients requiring vascular treatment across Kent and Medway and meet national specification requirements.

EKHUFT have forecast an achievable service contribution of £261k under the preferred option. The trust has agreed to utilise the net surplus of £261k associated with the move of vascular services in the preferred option, to support the service enhancement pay costs. However, the trust is still left with an annual shortfall of £342k. This £342k has been jointly approved by the Kent and Medway CCG and NHS England Specialised Commissioning finance and performance committees on a non-recurrent basis for 12 months from implementation of the option, in support of the proposed medium-term solution to service changes.

Following the initial 12-month period from go-live, a value for money evaluation will be conducted between commissioners and EKHUFT to reinforce the benefits realisation metrics identified in Section 9.5 Monitoring of benefits realisation. The evaluation outcome will support the future decision of the system investment funding and form part of contractual discussions when joint agreement is reached between commissioners and EKHUFT.

This financial benefits realisation will form part of a review which NHS England Specialised Commissioning will be undertaking on how this service will be commissioned and paid for in the future. Service coding will be reviewed to ensure consistency in reporting across organisations. It is a requirement that any resulting transfer of activity and finance will be prepared and transacted post public consultation and agreed between commissioners.

Both sets of commissioners have committed to reviewing the cost of the service within the 12-month funding period from go-live. Commissioners have committed to supporting the long-term sustainability of the new vascular service and will build this into financial planning for 2022/23 and beyond.

The investment will ensure the delivery of the following benefits identified as part of the preferred option:

- Vascular Specialist Nursing (2wte) investment will ensure the delivery of a specialist nurse led service on 5 hospital sites, 52 weeks of the year,
- Vascular Medical Staff (2wte) additional middle grade investment ensures a safe and sustainable rota for registrars, trainees and associate specialists that covers the whole of Kent and Medway, and reduces agency costs,
- Admin (1wte) an operations manager will implement equity across the networked sites and ensure good management and support across multiple sites. This post will also help with the consolidation of operating procedures across network sites and can make links with similar posts in other vascular networks,
- Vascular Specialist Nursing – Sonographer (1wte) an additional sonographer will reduce agency costs and ensure an equitable service for the whole of Kent and Medway,
- Admissions Area (4.8wte) staffing a dedicated admissions area allows for the release of additional inpatient beds to the vascular ward as patients can attend the admissions area before surgery. It will reduce elective cancellations with the increase in the number of patients and also improve patient experience by creating a calm and pleasant environment prior to surgery.

There are additional staffing costs under both the preferred option and the 'do nothing' option, but the recruitment of substantive staff under the preferred option creates a safer and more sustainable workforce when compared to the increased use of agency and locum staff to fill vacancies under the 'do nothing' option.

The joint system stakeholder conclusion of the financial option appraisal is that the preferred option is affordable for both providers and commissioners.

6.3. Capital costs

There are no capital expenditure costs associated with implementing either the 'do-nothing' or the preferred option. The enabling capital costs associated with the preferred option, regarding the creation of the second Interventional Radiology Suite at the Kent & Canterbury Hospital, has already been agreed by the Board of Directors at EKHUFT, as it is required to provide business resilience for the current Vascular and Interventional Radiology services. This will be funded from within the Trust's existing capital programme, and thus is outside the scope of this pre-consultation business case.

6.4. Financial risk assessment

6.4.1. Temporary staff cost risk

The many operational risks associated with maintaining the status quo translate into some financial risks. The service would continue to be unsustainable, and this would threaten the viability of the existing vascular services. These sustainability issues relate to the fragility of specialist workforce (Consultant surgeons, IR Consultants and specialist nurses and the wider multi-disciplinary team). Having 24/7 on site vascular surgery and interventional radiology on-call rotas staffed by the right number of staff continues to be extremely challenging.

MFT is currently losing substantive staff within vascular services and they need to be replaced to maintain a safe service. Due to recruitment timelines and issues recruiting into some of these specialist roles, this means having to use agency, bank and/or locums in the medium term. This comes with a premium cost to the trust.

The 'do nothing' option would increase pay costs supporting vascular services in Kent and Medway, with no corresponding improvement in patient care.

Table 24 illustrates the forecast attrition rate of 14% in MFT Vascular services with associated backfill costs to maintain 2019/20 activity levels.

Pay	Forecast Attrition WTE	Temporary staff costs £'000
Admin	0.10	3
Consultant	0.81	176
Junior Doctors	1.13	62

Nursing	2.57	127
Non-Clinical	0.00	0
HCA's	0.79	25
Scientific, Therapeutic & Technical	0.00	0
Total Pay	5.40	394

Table 24: MFT forecast staff attrition with associated backfill costs

The premium used in this illustration is 20% across all professions. The 'do-nothing' option creates a forecast recurrent additional cost of £394k for MFT associated with agency/ bank/ locum staff. The 20% premium has been based on current financial assumptions.

6.4.2. Activity impact

Table 25 illustrates vascular activity by commissioner. Activity and price levels are taken from 2019/20 data.

Activity and associated income	NHSE		CCG's		Grand Total	
	Activity	£'000	Activity	£'000	Activity	£'000
Adult Critical Care	64	63	462	442	526	505
Day case	1	1	107	116	108	117
Elective Inpatient	16	96	114	489	130	585
Emergency Inpatients	12	74	267	1,271	279	1,345
Excess Bed days	1	0	66	6	67	6
OP FA	153	31	1,181	250	1,334	281
OP FU	186	16	1,344	125	1,530	141
OP Procedure	6	1	87	13	93	14
Unbundled Radiology	54	3	500	28	554	31
Total	493	285	4,128	2,740	4,621	3,025

Table 25: Vascular activity by commissioner

The preferred option would see all vascular activity managed and reported by EKHUFT. This will result in a total provider income movement of £3,025k from MFT to EKHUFT.

6.4.3. Activity growth assumptions and demand management

A demand and capacity review was conducted and concluded that based on historical data, the demand for vascular surgery will remain relatively flat. Therefore, the forecast financial implications are unaffected by activity growth and demand management assumptions in this business case. Further detail can be found in Section 5.3.2 of this PCBC.

6.4.4. Stranded costs risk

The movement of activity from MFT to EKHUFT under the preferred option generates a stranded cost risk for MFT. The preferred option creates a stranded cost risk of £1,288k to MFT. This is summarised in Table 26 below.

Area of potential stranded cost	Potential Risk £'000	Likelihood	Mitigations
Critical care beds	376	Unlikely to occur due to increased demand for critical care beds from other services and across the country.	Use of critical care capacity by other elective or emergency patients.
Junior doctor capacity	271	Moderate likelihood to occur, as junior doctors currently cover both vascular and general surgery at MFT.	General surgery rota to be maintained at MFT. Service Level Agreement between EKHUFT and MFT to agree how MFT general surgery doctors will be used to support outpatient vascular activity.
Interventional services	60	Likely to occur as 24/7 Interventional Radiology (IR) services will be required at Medway to support other services.	Service Level Agreements between EKHUFT and MFT to agree if some vascular IR sessions can be included at EKUHFT, reducing costs.
Theatres and Wards	457	Moderate likelihood to occur as capacity will be freed up but current requirement for increased elective capacity means these could be utilised easily.	System business case confirms commissioner agreement to use retained capacity at MFT for other services. This could be to support elective recovery in other surgical services, to reduce waiting lists or to repatriate activity from other centres. Commissioners have committed to ensuring these costs are covered.
Contribution to be included	124	Moderate likelihood to occur as capacity will be freed up but could be utilised easily by other specialties.	The trust will work to backfill this newly created capacity from other specialties and repatriate activity from the independent sector and other providers.
Total	1,288		

Table 26: Total potential financial risk to MFT under the preferred option

The financial risk is classified as moderate for MFT. There is a commitment from commissioners and providers to ensure that the mitigations are actioned following the outcome of the public consultation to reduce this financial risk to low under a conventional RAG rating system.

6.4.5. Implementation Workforce Risk

There is a financial risk associated with the preferred option, that EKHUFT is unable to secure the appropriate number of staff through TUPE from MFT and direct recruitment. If the Trust is unable to recruit into the posts in a timely fashion, this would lead to the Trust having to employ costly locum and agency staff. This short-term risk is addressed in the expected impacts section under 5.1.

6.4.6. Workforce impact

For EKHUFT to manage and report all vascular activity in Kent and Medway, some staff members at Medway hospital have been identified as TUPE workforce. Their jobs will transfer to the arterial hub under the preferred option. Section 5.1 Service impacts: Workforce, provides more detail on how this has been factored into the preferred option.

The financial information relating to the TUPE workforce for go-live is illustrated in Table 27 below.

Staff Group	WTE's	£'000
Medical and Dental	4.1	797.0
Nursing and Midwifery (Registered)	2.0	107.0
Administrative and Clerical	3.0	73.0
Total	9.1	977.0

Table 27: Financial details of TUPE workforce for go-live from MFT to EKHUFT

The remaining staff who currently support vascular services at MFT will not be under TUPE arrangements. MFT have highlighted that some of these remaining staff are integral to the provision of a wider service and staffing rotas at the Trust and are highlighted in the stranded cost risk (see Junior doctor capacity under 6.4.4 Stranded cost risk).

The risks of staff choosing not to TUPE their employment is reduced as most staff will continue to provide much of the vascular care at MFT under their new employer. The programme is committed to avoiding any redundancies through this process and roles will remain at MFT to support general surgery services for those who remain employed by MFT. The programme is committed to a prompt and fully engaged TUPE consultation process to reduce the anxiety to staff and risk of staff leaving.

6.5. Impact of preferred option

6.5.1. Impact on providers

Table 28 below illustrates the phased impact of the preferred option on the provider Trusts.

Provider Impact	Preferred Option							
	Year 1				Year 2 onwards			
Income and Expenditure	MFT	EKHUFT	SECAMB	Total	MFT	EKHUFT	SECAMB	Total
	£'000	£'000	£'000	£'000	£'000	£'000	£'000	£'000
Income	3,025	(3,734)	(125)	(834)	3,025	(3,392)	(125)	(492)
Expenditure	(2,901)	3,734	125	958	(2,901)	3,131	125	355
Contribution to Overheads	124	0	0	124	124	(261)	0	(137)
Adjustment for Blended price	367			367	367	0	0	367
Total Impact	491	0	0	491	491	(261)	0	230

Table 28: Provider impact of the preferred option

The total impact reflects the impact of the income reduction on MFT for the blended price issue. This is cost neutral and affordable for MFT as it will be offset against other service contracts provided by the trust and form part of continuous commissioner and provider contractual discussions.

6.5.2. Impact on commissioners

The requirement of additional funding from Kent and Medway CCG and NHS England Specialised Commissioning to support the move to a safe and sustainable service and to mitigate financial risk across the system have been agreed between organisational stakeholders as part of the system business case approval process.

Table 29 below illustrates the funding agreement by commissioner recurrently and non-recurrently.

Cost Description	Commissioners		
	CCG	Spec Comm	Total
	£'000	£'000	£'000
Patient Travel - SECAMB	125	0	125
Total Recurrent Funding	125	0	125
Service investment	171	171	342
Total Non-Recurrent Funding	171	171	342
Total	296	171	467

Table 29: Commissioner agreed funding in support of the preferred option

The funding identified in Table 29 has been approved by the Kent and Medway CCG and NHS England Specialised Commissioning Finance and Performance Committees.

Letters of support have been authorised by organisational stakeholders to illustrate the joint ownership, commitment and responsibility outlined in the system business case and this PCBC. These can be found on Appendices A-D.

It is likely the service transfer will not take place until 2022, subject to NHS England and Improvement approval and public consultation. If this proposal is agreed together with an implementation timeline prior to the financial year 2022/23, a part year effect will need to be calculated.

The financial case has concluded that the preferred option:

- has assessed and mitigated financial risks where reasonably possible
- recurrent costs are affordable and supported by commissioners and providers within Kent and Medway
- non-recurrent investment funds are considered reasonable and supported by commissioners and providers within Kent and Medway
- non-recurrent investment funds will be evaluated and form part of contractual discussions in the medium to longer term between commissioners and EKHUFT

All income and expenditure identified as part of the preferred option will form part of formal contracting discussions between commissioners and providers following the outcome of the public consultation.

7. Plans for consultation

7.1. Introduction

This section summarises how NHS England Specialised Commissioning South East and Kent and Medway CCG plan to inform and involve stakeholders, patients and local people in proposed medium-term changes to vascular services in East Kent, Medway and the Maidstone hospital catchment of West Kent. The full communications and engagement strategy, with more detail, is included as Appendix 22.

As described in Section 3.10 above, the medium-term changes proposed are that all inpatient surgery moves to the Kent and Canterbury Hospital to create a medium-term inpatient vascular hub for East Kent, Medway and Maidstone. Services in West Kent and the rest of West Kent will remain unchanged. The final permanent location for the vascular hub will be decided following consultation on wider plans to transform health and care services in East Kent.

The change will mean vascular hospital staff will work across multiple sites as one team in a network supporting both the proposed inpatient vascular hub, which will provide all 24/7 inpatient care, and the other hospitals where outpatient treatment, diagnostic testing and some day-case surgery will still take place.

An emergency temporary move of Aortic Aneurysm Repair (AAA) procedures from Medway Maritime Hospital to the Kent and Canterbury Hospital took place with effect from 6 January 2020 to ensure the service could remain safe and sustainable. This emergency arrangement remains in place and therefore no AAA surgery is currently undertaken at Medway (see Section 3.8).

We are proposing to consult with the public and service users about making this emergency move a medium-term solution in accordance with our duties under section 13Q (see Appendix 21).

7.2. Approach

7.2.1. Legal and policy context

Under section 13Q of the National Health Service Act 2006 (as amended by the Health and Social Care Act 2012), NHS England has a statutory duty to 'make arrangements' to involve the public in commissioning services for NHS patients. This is the legal context for the proposed consultation.

The section 13Q duty aims to ensure that NHS England acts fairly in making plans, proposals and decisions in relation to the health services it commissions, where there may be an impact on services.

Public involvement in commissioning means offering people ways to voice their needs and wishes, and to influence plans, proposals and decisions about their NHS services. Patients and the public can often identify innovative, effective and efficient ways of designing and delivering services if given the opportunity to provide meaningful and constructive input.

There are five tests that must be met before there can be any major changes to NHS Services[16]:

1. Evidence of strong patient and public involvement
2. Consistency with current and prospective patient choice
3. Strong clinical evidence base
4. Support from clinical commissioners
5. Bed closures (not relevant in this case)

(See Section 8.3 for detail on the NHS reconfiguration five tests.)

In addition, NHS England's service change guidance states:

> *Effective proposals should have on-going involvement with staff, patients and the public. Proposing organisations should avoid presenting a fully worked up set of service change options to the public unless there has been on-going dialogue.*

NHS England has set out its expectations around patient and public participation for all commissioners in a general Patient and Public Participation Policy. Building on this policy, a bespoke commissioning participation framework to guide public involvement in commissioning specialised services[17]. Table 31 sets out the level of change and corresponding level of consultation required.

Specialised services are generally provided in relatively few hospitals and accessed by small numbers of patients. They are usually for patients who have rare conditions or who need a specialised team working together in one place, hence their need for a bespoke commissioning participation framework. The framework says that formal consultation and

[16] planning-assuring-delivering-service-change-v6-1.pdf (england.nhs.uk)

[17] NHS England, Framework for patient and public participation in specialised commissioning, https://www.england.nhs.uk/wp-content/uploads/2017/01/specialised-participation-frmwrk.pdf

other means of public involvement must be fair and proportionate. The table below is used within specialised services commissioning to help consider, describe and decide on an appropriate level of public involvement in light of various relevant factors, including the extent and anticipated impact of the changes.

Level	Description
1 Minor changes	– no formal consultation required. However, there may be some benefits to carrying out some engagement activity, if appropriate.
2 Intermediate changes that are broadly supported by stakeholders through prior engagement	– reduced length consultation, limited engagement activity during the live consultation period.
3 Significant changes that are broadly supported by stakeholders through prior engagement	– reduced length consultation, to include some proactive engagement activities during the live consultation period.
4 Significant changes with some contentious aspects	- 12-week consultation to include some proactive engagement activities during the live consultation period.
5 Highly contentious/high volume impact on numbers of stakeholders/ high levels of dissent/ high financial implications/ high media or political profile	- 12-week consultation period plus an extensive range of engagement activity, before during and after consultation.

Table 30: Level of change and consultation requirements linked to these.

In 2015, the Joint Health Overview and Scrutiny Committee for Kent & Medway agreed the changes proposed then to vascular services Kent and Medway amounted to significant variation. However, over the time since then that these services have been under review, there has been broad support from stakeholders and from the public. For this reason, the 13Q assessment (Appendix 21) proposed that consultation on the service changes recommended in this PCBC is designated Level three, i.e. a reduced length consultation. This designation has been discuss with the JHOSC in 2021.

7.2.2. Working in partnership

The work will be co-ordinated through the Communications and Engagement workstream which reports to the Kent & Medway Vascular Programme Oversight Group and comprises CCG, NHS England and Improvement and Trust communications teams. Healthwatch are also embedded in the workstream (see 7.4.1).

7.2.3. Pre-consultation

Reviews of vascular services have been ongoing since 2014 and patients have been involved throughout. See Section 4 for full details, including details of the most recent pre-consultation engagement activity in September 2019.

7.2.4. How has pre-consultation engagement informed the proposals?

Suggestions for improvement from the 2019 engagement, as from all previous engagement events, have been fed back to the Trusts and Commissioners via the clinicians and other staff who attended them. There was agreement for the need to consolidate specialist resources. The clinical leads discussed the need to ensure that future vascular services are up to the required standards, as specified in national guidelines and attendees welcomed this and understood that.

7.3. Phase two Live Consultation on proposed move

The proposed consultation will comprise a proactive campaign and direct engagement with patients, public and key stakeholders with the overall aims of:

- ensuring understanding of the reasons for the change
- ensuring understanding that the proposed change is a staged approach for safety reasons, pending consultation and engagement around wider Kent and Medway reconfiguration.
- enabling commissioners and the service providers to understand issues that concern patients, public and key stakeholders, to ensure the medium-term service model takes these concerns into account

To those ends, the campaign and engagement will:

- communicate openly and widely about how the public views in phase one have helped influence the proposed model.
- communicate openly and widely that no change is not an option.
- provide a clear explanation of how the preferred option has been developed.

The objectives for each element of the campaign and engagement are:

- to provide clear and consistent messages and information to all stakeholders
- to explain the option and the benefits and risks to patients
- to allow patients and the public to voice any concerns/raise issues/ask questions about the chosen preferred option
- to gain views on associated services (for patients undergoing amputation for example)
- to address any negative perception and concerns
- to increase public confidence in NHS England as a listening and responsive commissioning organisation.

The draft consultation document is provided at Appendix 20.

7.4. Format

The COVID-19 pandemic has made it necessary to refashion engagement activities so they adhere to social distancing requirements and help keep people safe, particularly as existing AAA patients may be vulnerable and could be shielding. Although lockdown measures have been eased, it is not yet understood whether the public will be reluctant to attend meetings in person. Therefore, a mix of online and face-to-face events is proposed.

7.4.1. Channels

There will be a mix of channels used to support the public consultation:

Events

- Four events are proposed on different dates and times of the day to allow the maximum number of people to participate. There will be a combination of online events on MS Teams supported by the Commissioning Support Unit and face to face events.
- These events will give people an opportunity to hear an update on the proposals and how their views have helped shape them, and to talk with those involved in the Kent & Medway Vascular Reconfiguration programme – particularly, but not exclusively, clinical leaders.

Working closely with the community and voluntary sector

- The community and voluntary sector have wide ranging communications networks. We are working with Healthwatch and the Community Voluntary Sector through events they host directly with their clients to get their views – this often works well with hard to hear groups. We aim to set up a series of focus groups to listen to views of people with protected characteristics to ensure that we have appropriately considered how these proposals can help to address health inequalities.
- We will also supply consultation information through their distribution channels. Many groups have continued to meet virtually but if any are meeting face-to-face then we will work with them to ask for the change to be discussed during these meetings.

Collaboration with CCG/ICS, Trusts and Healthwatch to make use of existing engagement channels

- We will use existing partner communication channels and have already reached out to the third sector via existing links within the organisations involved in the reconfiguration programme.
- Kent & Medway CCG engagement arm will use existing networks to support engagement with the community and voluntary sector

Online opportunities to respond to the consultation

- The consultation suite of documents and survey questions will be made available through SWCSU's "Join the Conversation" platform[18]. It provides a mechanism for consultation documents to be uploaded and for people to provide their feedback. Participants will have the flexibility to share an audio/video recording of their feedback. "Join the Conversation" also supports translation into multiple languages at the touch of a button and meets or, wherever possible, exceeds WCAG 2.1, the current global web accessibility standard.
- To ensure that any survey is accessible for a wide range of people we will also offer one-on-one phone conversations and a hard copy option to complete a survey. An Easy Read version of the document will also be available.

[18] This is a new platform from the one previously used in 2019.

Engage with staff

- NHS staff will be engaged, with briefings organised at their place of work from speakers including senior trust staff. NHS staff are key influencers of patient views. They are also members of the public and use local health services themselves, so briefings for them will focus on the case for change as a whole, not just their role as employees. The aim will be to ensure staff have had the opportunity to understand the impact of the changes to the way they work and what the change means for patients. This will inform but not be part of any formal HR consultation.

Robust media approach

- There will be a responsive, agile and robust media handling plan including proactive briefing about the proposals and promotion of the webinars and survey to encourage participation. A media sharing protocol has been agreed by the Programme and is shown in Appendix 28.

Multi-channel communications

- People get their information from a variety of different sources. Social media and websites together with other existing communications mechanisms such as newsletters will be used.

- A paid for Facebook advert has been developed together with social media adverts to raise awareness of the consultation.

- As the key clinical leaders are not always likely to be available we propose to use a video communicating the engagement's key messages. This will be made available on the NHS England website with a link available for partners to promote through their own channels. A similar video has been used for a similar review in Hampshire. We will review this existing video with the aim of using it for Kent and Medway with some additional key messages added at the start.

Materials in appropriate formats

- NHS England and Improvement has an Accessible Information Standard which sets out expectations for communications for those with disabilities.

- Our Equality Impact Assessment also indicates a potential need for translations into languages other than English with French, Polish, Punjabi, Tamil, Slovak, Bengali, Russian, Latvian, and Romanian as the main languages required. The consultation document has a line in each of these languages which asks people to contact us if they need the full document in that language. We can arrange for translation or interpretation services as needed on a case-by-case basis.

- Translations on the consultation materials are also available on the Join the Conversation site.

- An Easy Read version of the consultation materials are available and Large Print will also be available.

7.4.2. Key audiences

Successful engagement depends on identifying key audiences and assessing them according to the level of interest they have in the issue and their influence on developments. This will enable us to tailor messages to each specific audience and judge the amount of effort to devote to each one. We have identified the key audiences for engagement as:

- **Patient and public representative groups** - this audience includes:
  - Active or recent vascular patients and their carers/relatives
  - Healthwatch
  - Patient panels or health networks run by CCGs/trusts
  - Hospital – patient experience groups
  - VCS organisations interested in diabetes, cardiovascular disease, stroke, amputees,
  - CCG patient reference groups
  - Patient support groups
  - Health and wellbeing boards
  - Patient Participation Groups, linked to statutory organisations and the Primary Care Networks
  - Seldom heard groups such as LD partnerships, MH service users, prisoner, BAME communities, veterans
  - Faith groups

- **Public in areas affected by the consultation, namely:**
  - East Kent
  - Medway
  - Maidstone hospital catchment

- **GPs and GP commissioners** - this audience includes:
  - Kent and Medway CCG
  - Any GPs with a particular interest in vascular issues via the CCG

- **Council representatives** – this audience includes:
  - Council Scrutiny Committees
  - Directors of Public Health
  - Leaders
  - Health cabinet members
  - Chief executives

- **MPs** – this audience comprises all members of parliament in the affected areas

- **Campaign groups** – this audience comprises groups running existing campaigns relating to health services in the affected areas

- **Media** - this audience includes:
    - Local and regional broadcast media
    - Local print and online media
    - Any national or trade media that expresses an interest

7.4.3. Key messages

We will develop a core narrative and a set of key messages about the proposals themselves, using terms that will be applied consistently across all materials.

We plan to develop services which are:

- High quality with excellent outcomes for patients;
- Developed in line with the best available evidence to improve outcomes for patients;
- Can be sustained, despite future challenges; and
- Offer a good patient experience.

We are committed to:

- Engaging and involving stakeholders, partners and the public to find out what matters most to people;
- Making sure all the feedback received is considered as part of the decision making process;
- Being open and transparent throughout the consultation process.

Supporting messages

- Clincians at all of the hospitals have worked together to develop these options
- We want to end uncertainty for patients and for staff
- We want to provide safe, high quality services in line with the recommendations of the experts (Vascular Society of Great Britain and Ireland)
- The need for vascular surgery is reducing due to improving health of the population
- The impact of a reducing number of smokers and better care for people with diabetes means the demand for vascular surgery will continue to reduce.
- The way vascular services are provided has also changed from more major surgical procedures to less invasive techniques which require specialist training
- To ensure services remain safe and high quality it is important that surgeons remain practised in these specialist techniques which means they should undertake a minimum number of procedures to maintain their expertise
- The number of surgeons available to provide these services is limited and the hospitals in the region have had difficulty in recruiting enough to provide sufficient cover for existing rotas
- No change is not an option

7.5. Indicative Consultation Timeline

Indicative consultation timetable subject to stage 2 assurance sign off.

Pre-consultation	Live Consultation	Analysis and reporting	Decision	Implementation
Sept/Oct/ Nov	Nov/Dec/Jan	Jan/Feb	Feb/Mar	Mar/April '23
Development of communications and engagement strategy	Consultation launch - will pause over Christmas and New Year and resume in January	Responses analysed	Decision taken	Implementation – communication and engagement to be done by the providers subject to agreement by JHOSC
Stakeholder analysis	Letter to patients who have used vascular services with printed consultation document inviting them to attend events	Report written	Stakeholders updated on outcome	
Liaison with Health Overview and Scrutiny	Email to staff and stakeholders with digital consultation document		Communicate decision to patients / public	
Plan and schedule four consultation events	Media briefing			
Develop consultation material including online survey and consultation document	Social media campaign including Facebook advertising			
Work with voluntary sector on reach and breadth	Public consultation events x 4 (online and face-to-face)			
Stakeholder briefings	Focus groups with people with protected characteristics			
	Staff survey			
	Activities logged for audit trail			
	All feedback stored in line with Data Protection			

7.6. Analysis and reporting

During this phase all feedback will be analysed. A report will also be written following agreed approvals process and signed off. The report will be shared with stakeholders and made publicly available.

7.7. Decision-making

The report will be available for the public and for overview and scrutiny and will also be presented at the relevant CCG and ICS and provider board meetings.

A media and communications plan will be required for the announcement of the final decision.

7.8. Implementation

Communications for this phase is to be led by providers.

7.9. Communications Risks

All proposals to change hospital services inevitably face some challenges that are not specific to the proposals in question or the area in which they are taking place. These include:

- Emphasis among local people and opinion-formers on the importance of local hospital services, sometimes to the exclusion of other services
- Fear of loss of local services
- Fear that the local hospital will become unsustainable
- Concern about travel to get to appointments or visit loved ones
- Fear of longer distances or poor roads leading to safety risks
- Local people and politicians equating services in the local hospital with the status of the area (a particular concern following the move of stroke services in the region and the planned East Kent reconfiguration)

NHS England and Improvement's responsibility is to put forward a service proposal which will give the best possible outcomes to patients across the whole geography. Any engagement will inevitably generate noise and interest, and this is to be expected. It is important to adopt an approach applied to engagement/consultation which is as robust as possible, anticipating and mitigating risks (see table 32 below) and following due process within COVID-19 guidelines.

The level of public scrutiny applied to any public engagement or consultation should not be underestimated. Legal challenges could be made which relate to communications and engagement activities.

Challenge often comes from a programme's lack of involvement opportunities for the public at the earliest possible stage. It is important to demonstrate with clear evidence how this has been achieved.

Further details of how we plan to engage with specific groups and stakeholders are provided in the Communications and Engagement Strategy provided at Appendix 22.

Table 31: Identified Communications Risks and Mitigations

Communications Risk	Mitigation
We are unable to secure effective clinical engagement, leading to lack of support for proposals	Local lead clinicians are fully involved in the review and are programme board members. External clinical expertise has been used to support the local clinicians using nationally agreed clinical guidance as the benchmark for the review. The clinical model has been developed by the local lead clinicians. Clinical case will be convincingly described and promoted. Clinical leaders to provide visible, public support.
Inaccurate information causes undue concern among patients/public/stakeholders	All communication to be open and transparent and shared at the earliest opportunity allowing for clarity and consistency of the message. All co-dependencies to be identified and any possible impacts to be discussed and shared with stakeholders. All communications from stakeholders to be coordinated to ensure consistent clear messages. Access to information in a range of formats and languages to ensure consistent messaging reaches a broad spectrum of people.
Inadequate information causes undue concern among patients/public/stakeholders	Work with Healthwatch and existing patient groups in place through system partners to ensure materials are clear, consistent and comprehensive. Ensure the issues most likely to excite local opinion – money, transport and emergency care are adequately covered within the case for change and the consultation document Ensure the consultation document addresses how sustainability and capacity are being addressed.
The review causes anxiety which impacts on current services and/or ability to engage effectively	The process to be open and transparent. All concerns to be raised to the Programme Board at the earliest opportunity. Clear communications to be agreed and shared across key stakeholders. Risk and issues logs to be maintained and regularly reviewed through the process. Key stakeholders to be identified and communicated with as early as possible. Process is conducted across the whole of the area where the services are provided including those already operating in a network. Equality impact assessment will identify groups with characteristics which are impacted by the service/service change. A mix of approaches will be used to ensure a wide range of voices are heard.
The public and/or local authorities contest service change either through judicial review or through referral to the Secretary of State by health overview and scrutiny committees.	Learning from the Independent Reconfiguration Panel to be adopted as best practice within the communications and engagement process: • community and stakeholder engagement in the planning process • equalities impact assessment and careful analysis of particularly affected groups to ensure the right methods are used to engage • adequate attention given to the responses during and after the engagement including maintaining a thorough evidence log of all communications and engagement activities

8. Programme assurance

8.1. Governance structure

The Kent & Medway Vascular Reconfiguration programme governance arrangements are shown in Figure 6 below. The Terms of Reference for the Programme Oversight Group, Steering Group and associated working groups are available on request.

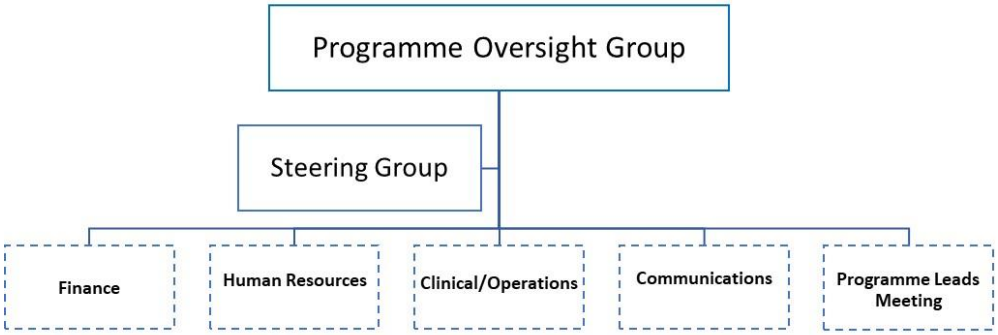


Figure 6 Programme Governance diagram

8.2. Programme assurance

NHS England Specialised Commissioning have been working collaboratively to develop the vascular programme with the Kent and Medway Clinical Commissioning Group, East Kent Hospitals University NHS Foundation Trust, Medway NHS Foundation Trust, Maidstone and Tunbridge Wells NHS Trust.

The Programme Assurance Board was established in 2014 to oversee the Kent & Medway Vascular Review Programme, and was chaired by Dr Vaughan Lewis, Regional Medical Director (NHS South East) and Dr James Thallon, Regional Medical Director (NHS South East). The Board's membership included Prof Mike Horrocks, President of the Vascular Society of Great Britain and Ireland, President of ASGBI and Clinical Ambassador for GIRFT, and Dr Jonathan Earnshaw, Director of the National Screening Programme for Abdominal Aortic Aneurysm and Honorary Secretary of the Vascular Society of Great Britain and Ireland. These well-respected and prominent professionals provided robust, independent assurance to the Programme.

When the Kent & Medway Vascular Reconfiguration programme was relaunched after the COVID-19 pandemic the Programme Assurance Board became the Programme Oversight Group, and is now chaired by Christopher Tibbs, Medical Director for Commissioning (South East). The group's membership includes executive directors from the provider Trusts, specialised commissioning and Kent and Medway CCG (representing Kent and Medway Integrated Care System).

Additional assurance has been provided by members of the regional strategy and transformation team, national specialised commissioning team and via the NHS England Oversight and Scrutiny process for service reconfiguration.

8.3. NHS reconfiguration five tests

There are five "reconfiguration tests" for the NHS that must be applied to all significant service change proposals, as specified in national policy and guidance. NHS England guidance on service change is intended to support commissioners and partner organisations in navigating a clear path from inception to implementation. It aims to assist organisations in taking forward their proposals, enabling them to reach robust decisions on change in the best interests of patients. National guidance is set out in *'Planning, assuring, and delivering service change for patients' (NHS England, 2018*[19]).

These tests are designed to demonstrate that there has been a consistent approach to managing change, and therefore build confidence within the service, and with patients and the public. This section demonstrates that these five tests have been met in the process of designing the service change proposed in this PCBC.

8.3.1. Test one: evidence of strong patient and public involvement

This test evaluates how patients and the public have been involved in the development of the solutions.

This case has described the stakeholder engagement that has taken place since 2015 (see Section 4) and gives details of how patients and the public have been engaged and involved in the review, including contributing to the development of the case for change, the clinical model and the development and evaluation of the proposed options for change. It sets out the changes that have been made as a result of feedback from patients, carers, the public, communities, and health and care professionals during pre-consultation engagement.

This case has also summarised our consultation plan. We are committed to undertaking a proportionate and meaningful formal public consultation as the next step in the process, to hear people's views, and understand their concerns and what we can do to reduce them. An independent analysis of the responses to consultation will be a substantive part of the evidence considered in the decision-making process.

8.3.2. Test two: consistency with current and prospective need for patient choice

The only change affecting patient choice entailed by the preferred option is the consolidation of specialist inpatient vascular activity onto the Kent and Canterbury site. This will affect a small number of patients who may have chosen to have their operation performed on the Medway site (noting that a large percentage of inpatient vascular activity is emergency care where patient choice is not a factor). However, the clear benefits of inpatient consolidation have been outlined in the case for change and multiple stakeholder events have been carried out to discuss the proposals. Outpatient, diagnostic and day case vascular activities will

[19] https://www.england.nhs.uk/wp-content/uploads/2018/03/planning-assuring-delivering-service-change-v6-1.pdf

continue to be carried out on all sites that currently provide these services, so there is no reduction in patient choice for the majority of vascular care.

8.3.3. Test three: strong clinical evidence base

The case for change for vascular services for Kent and Medway is firmly based on clinical evidence outlining the benefits of consolidation of services onto one medium term arterial hub and of broader network working. The case for change is outlined in Section 2 and Appendix 13.

8.3.4. Test four: support for proposals from clinical commissioners

The proposals outlined in this document have the full support of the Governing Body of NHS Kent and Medway CCG, NHS England Specialised Commissioning, and the Kent and Medway Vascular Surgery Programme Oversight Group.

Commissioners, providers and other stakeholders have worked in partnership from an early stage of the development of the proposals. This represents an unprecedented level of partnership working within Kent and Medway.

8.3.5. Test five: bed closures

The pre-consultation business case does not propose a decrease in inpatient bed numbers therefore this test does not apply. The beds utilised within MFT are general beds rather than dedicated vascular beds so these beds will be released back to support acute demand.

8.4. Integrated impact assessment

A detailed integrated impact assessment for the full Kent and Canterbury vascular programme was completed by Mott MacDonald in January 2018 by the Kent and Medway STP (now ICS), and is available at Appendix 21. This provided the foundation of the considerations in relation to the medium-term solution.

8.5. Equality analysis

An external integrated impact assessment was commissioned in 2017 as part of the review programme, which included an Equalities Impact Assessment to identify which (if any) of the protected characteristic groups are more likely to be affected by the proposals. The full impact analysis can be seen in appendix 23.

This work identified a number of groups who have protected characteristics who are considered to have a disproportionate need for vascular services and are therefore more likely to be impacted by the proposed service changes. The groups and the potential impacts of this change along with consultation considerations to ensure these groups can input their views on the proposals are outlined in Table 33 below.

Most vascular patients do not require major vascular interventions and will therefore continue to have choice in receiving this care locally at the non-arterial network hospitals as there will be no change to these through this programme. This care includes local assessment, diagnosis and less complex interventions alongside outpatient provision.

The Kent & Medway Vascular Network is being formally stood up with a clinical lead appointed in October 2021. The network will have a role in ensuring that the local services continue to meet the national standards and requirements for non-arterial vascular centres as set out by the Vascular Society which will include details of emergency cover, consultant presence, laboratory and diagnostic support and clear written arrangements for the transfer of emergencies out of hours.

It is also recognised that whilst patients within these groups may be disproportionately impacted by this service change because of their disproportional need for these services, they will also disproportionately benefit from the changes in relation to improved outcomes compared to the general public.

Protected Characteristic	Disproportionate Need for Vascular Services	Consultation Consideration
Age	Over time the vascular system can deteriorate which can lead to the furring of arteries and wakening of the aortic wall. This means that older people have a disproportionate need for vascular services.	Although there is an increasing prevalence of older people using online services it will be important for the communications and engagement process to consider the needs of older people by producing some documentation in print/large print to allow for age-related changes in vision.
Disability	Disabled people with mobility problems are likely to have reduced levels of physical activity, which is a key factor that leads to the increased need of vascular services. People living with long term conditions such as diabetes are also more likely to have complications from their condition that required vascular service input.	Because a proportion of patients accessing vascular services have diabetes it is likely that some will have visual impairment beyond the usual age-related changes in vision. This means that the consultation will need to be available in alternative formats. These patients will be unable to drive and may have difficulties accessing public transport, so consideration needs to be given to whether they will be able to attend meetings. Arterial disease in some patients requires lower limb amputation which will also affect accessibility to attend meetings Patients with chronic mental health problems and learning disability (particularly Down's syndrome) are at increased risk of diabetes and arterial disease. There will be a requirement for easy read versions of documentation.
Gender Reassignment	Individuals who are transitioning are at a greater risk of developing vascular diseases if they are taking hormone treatments with oestrogen. Patients who have legally reassigned their gender are also at higher risk of being missed from screening programmes linked to gender, e.g. AAA screening.	Links are being made with transgender groups in Kent and Medway to join their meetings
Pregnancy & Maternity	Pregnancy can lead to the blood clotting more easily, which increases the risk of	Consultation documents will be shared with Local Maternity Voice Partnerships

	developing thrombosis and therefore a disproportionate need for vascular services.	
Race and Ethnicity	Certain cultural and hereditary factors, such as high blood pressure and diabetes, are associated with an increased risk of developing vascular disease. People from black and minority ethnic communities are six times more likely to develop diabetes, suffer from a 50% increased risk of heart disease and have much higher levels of kidney disorders - all of which can require vascular interventions. The care of people with diabetes can also be complex with 25% of people suffering from three or more other long-term conditions.	Diabetes is more common in people of South Asian origin with earlier onset of significant arterial complications. People of Afro-Caribbean origin are more prone to high blood pressure which may be more difficult to control than in other groups, hence increased incidence of renal disease and stroke. Narrative content of the communications does not need to be adjusted but appropriate images this group can identify with have been used in the design. Translations will be available for people whose first language is not English and the consultation document has a line translated in the most common languages in Kent and Medway indicating how these translations can be accessed.
Gender	Vascular disease is more likely to affect men than women.	Narrative content of the communications does not need to be adjusted but appropriate images this group can identify have been used in the design.
Marriage and Civil Partnership	No specific impacts identified	Communications materials and events will be designed to be inclusive of all groups within the local population.
Religion & Belief	No specific impacts identified	Communications materials and events will be designed to be inclusive of all groups within the local population.
Sexual Orientation	No specific impacts identified	Communications materials and events will be designed to be inclusive of all groups within the local population.

Table 33Summary of Equality Impact Assessment and Consultation Considerations.

Other identified groups.

People with diabetes are at a higher risk of vascular disease. Prevalence of diabetes is caused by a number of factors such as an ageing population, obesity and low levels of activity.

The communications and engagement group is working with Diabetes UK South East and the Kent and Medway Diabetes Prevention Programme to ensure wide reach to this patient group.

Parts of Medway and Thanet have areas of socio-economic deprivation. Smoking, obesity and low levels of activity are more common in areas that have socio-economic deprivation. As these lifestyle risk factors are also linked to prevalence of diabetes (and therefore risk of vascular disease) the communications and engagement must consider the communications needs of this group. A review by Ofcom indicates that socio economic deprivation influences access to ICT which can itself be a form of social exclusion.

However, more recent research by Public Health England for the One You campaign shows people aged 40-60 in lower socio-economic groups are heavy users of mobile communications including text messaging and digital social media such as Facebook. The media mix to promote the consultation has taken these preferences into account. There will also be a mix of online and face-to-face events to accommodate accessibility and preferences. In addition there will be outreach to socio-economically deprived communities taking the consultation to their meetings rather than asking them to come to a specific meeting

Deprivation is not a protected characteristic, but it is recognised that people from more deprived areas often experience health inequalities and are at a higher risk of vascular disease linked to lifestyle factors such as smoking and physical inactivity.

As vascular patients tend to be older and may already have disabilities (or develop a disability as a result of vascular surgery/amputation) they may already have a carer or may need the support of a carer.

The consultation will seek to engage with carers to understand the impact of the proposals and possible solutions such as community transport for visitors.

Travel time impacts

Travel time analysis (section 5.4) has shown that there will be some impact on patients with a requirement to travel further for specialist vascular inpatient treatment through consolidating the specialist inpatient service onto one site. This will impact on people from deprived areas and those who are older, however this is mitigated by improved clinical outcomes for all which was recognised by stakeholders in the pre-engagement work.

The two areas in Kent & Medway with the highest deprivation are Thanet (37% deprivation against the national average of 20%) and Swale (23% deprivation). Kent & Canterbury Hospital is the closest inpatient vascular centre to Thanet, whilst Medway Hospital is the closest inpatient vascular centre to Swale. Consolidating the service to the Kent & Canterbury Hospital site meets the needs of the area with the highest proportion of deprivation.

Most people who need vascular services do not need specialist inpatient support, and of those that do at least 50% will access this pathway as an emergency and likely to have been transported to the specialist inpatient vascular service via ambulance. The Kent & Medway Vascular Network will ensure that there are clear pathways in place to repatriate patients to their nearest centre when appropriate.

9. Implementing the proposals

The Kent and Medway Vascular Reconfiguration Programme has most recently been led and Programme Managed by NHS England Specialised Commissioning South East working closely with EKHUFT, MFT and the Kent and Medway CCG.

As the accountable commissioner for specialised vascular surgery, NHS England Specialised Commissioning (SE region) are leading on the Kent & Medway Vascular Reconfiguration Programme, however are working closely with Kent and Medway CCG given that a large proportion of vascular services are CCG commissioned and vascular services are likely to be delegated to Integrated Care Systems for commissioning in the future.

Any service changes within the NHS must abide by NHS England's Assurance Processes as set out in "Planning, assuring and delivering service change for patients" (March 2018)[20]. This assurance process requires commissioners and their local partners to develop clear, evidence-based proposals for service change and to undertake assurance to ensure they can progress with due consideration for the five tests of services change detailed in Section 8.3. The service change process has several phases as shown in the figure 7 below.

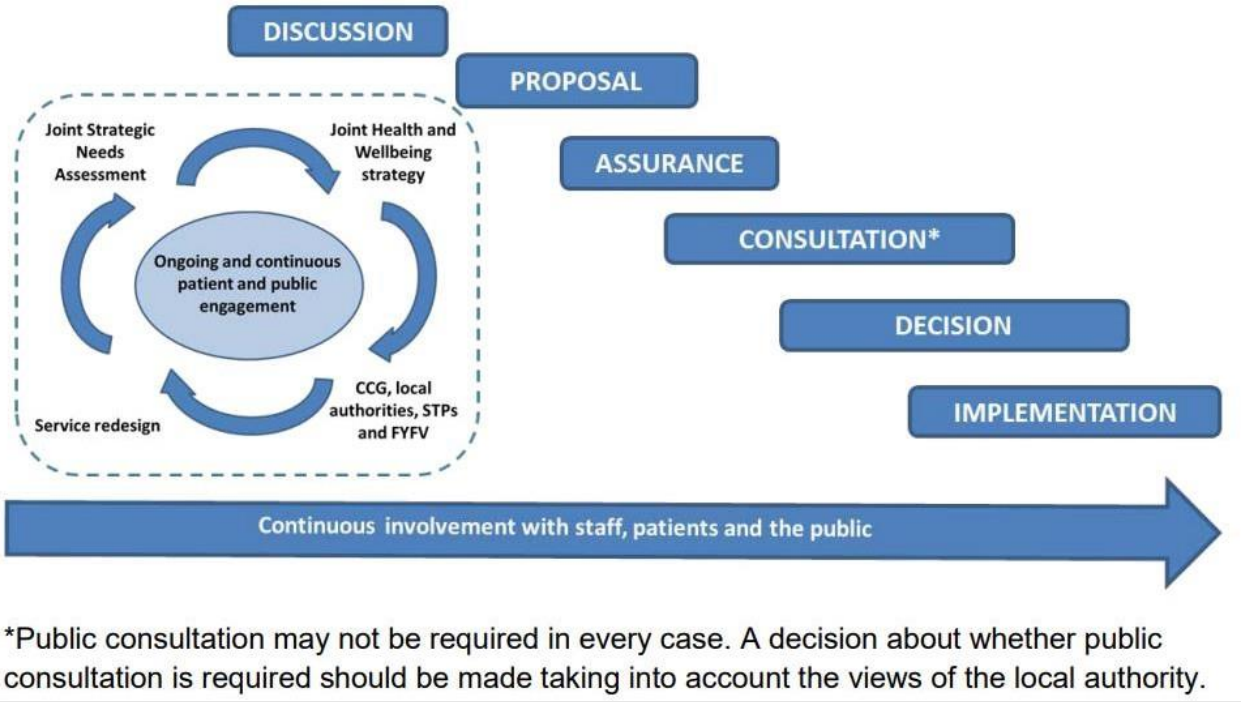


Figure 7: Service Change Process

[20] planning-assuring-delivering-service-change-v6-1.pdf (england.nhs.uk)

9.1. Pre-implementation plan

The key activities that make up the pre-implementation phase are the approval process for the pre-consultation business case, consultation, and the next stages of the business case process. An overview of the timeline for pre-implementation activities is highlighted in Figure 8.

9.1.1. Pre-consultation business case assurance process

This pre-consultation business case (PCBC) has been prepared by NHS England Specialised Commissioning working collaboratively with Kent and Medway Clinical Commissioning Group. Once NHS England and Improvement have agreed the proposals in this PCBC, the document will be formally presented to the Kent & Medway JHOSC to agree the details of the public consultation. Following public consultation, a finalised business case will be presented to the stakeholders for agreement prior to implementation.

East Kent Hospitals University NHS Foundation Trust, Medway Hospitals NHS Foundation Trust, Maidstone and Tunbridge Wells NHS Trust, NHS England Specialised Commissioning and Kent and Medway CCG have all agreed the business case for the reconfiguration of vascular surgical services in Kent and Medway. All organisations have agreed on the preferred option. The additional revenue costs associated with implementing the preferred option have also been agreed by NHS England Specialised Commissioning and the Kent and Medway CCG on both recurrent and non-recurrent basis (SECAMB £125k recurrent (from CCG) and £342k investment non-recurrent (50/50 CCG / Spec Comm).

There are no capital costs attached to this PCBC. The additional capital costs associated with creating a second Interventional Radiology suite at the Kent and Canterbury Hospital form a separate business case that has been agreed by the Board of Directors at EKHUFT. The Trust has agreed to fund these capital costs from its own internal capital resource allocation and the building work to create this new suite is well underway and due to complete by the end of 2021.

Once NHS England and Improvement Assurance Panels agree with the proposals set out in this pre consultation business case, this will enable public consultation to commence. Analysis of the consultation feedback and responses will then be undertaken to allow the NHS organisations to make an informed decision on their proposal for the proposed medium-term solution for vascular services across Kent and Medway.

The current programme of supporting works at EKHUFT and currently identified activity at MFT shows that the earliest the proposed medium-term solution could go live is the early 22/23. This is subject to necessary stakeholder approvals and public consultation being completed.

The stakeholder approvals required are:

- Programme Oversight Group
- EKHUFT board
- MFT board
- NHS England Specialised Commissioning
- Kent and Medway CCG
- NHS England and Improvement Assurance process (currently at stage 2)

- Kent and Medway Joint Health Overview and Scrutiny Committee

The pre-consultation business case will be reviewed and assured through the NHS England and Improvement assurance processes: key planning assumptions on the timescale for this are highlighted below.

Public consultation will begin once all assurance processes have been completed and all necessary steps taken. We have developed a detailed consultation plan for reaching different audiences using a range of methods, to enable people to give their views and raise any concerns. The plan is summarised in this case, and the full draft version of the consultation document can be found at Appendix 20.

When the consultation closes, the feedback will be analysed and a report will be produced covering:

- a summary of the responses and major themes raised during the consultation
- an overview of the consultation process and activities
- suggestions on how to address any concerns that people raise.

Due consideration will be given to the consultation in any decision that is taken. The decision will be shared with the JHOSC and both the decision and the report will be published on the Kent and Medway CCG's and NHS England Specialised Commissioning websites.

A proposed timeline for implementation is shown in figure 8.

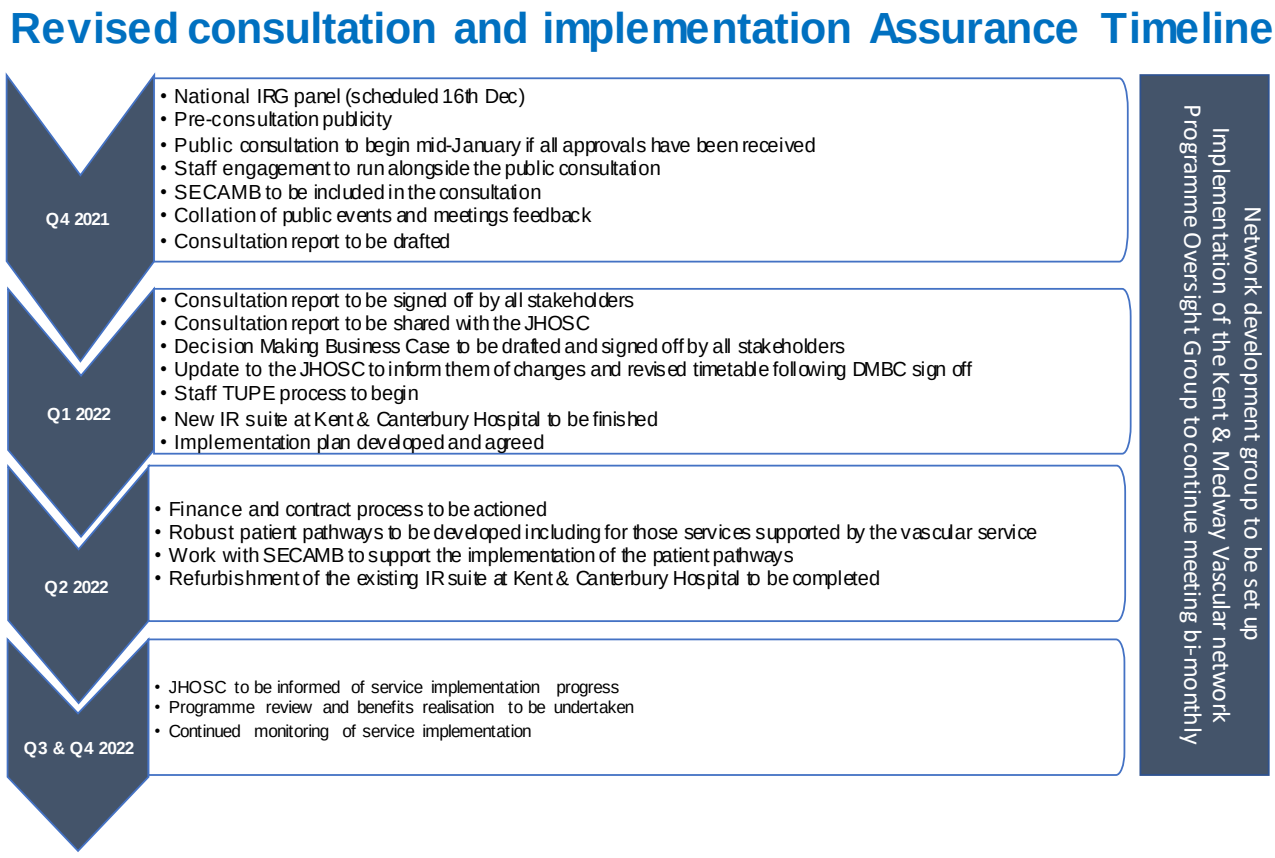


Figure 8: Timeline for pre-implementation activities

9.2. Key enablers for implementation

9.2.1. Programme management office (PMO) and governance

NHS England Specialised Commissioning is responsible for the pre-planning and implementation of the Kent and Medway Vascular Reconfiguration programme. There is a well-established multi-organisational project team in place that has representation from EKHUFT, MFT, MTW and Kent and Medway CCG.

Key activities that the multi-organisational project team will co-ordinate and oversee include:

- finalising implementation plans and governance
- establishing a performance and monitoring function
- implementing the benefits framework and ongoing benefits realisation review.

During the implementation phase the following will be key features of the governance process:

- a senior responsible officer (SRO) will be appointed to take overall accountability for implementation
- the SRO's key responsibilities will be to plan, manage progress, resolve issues, and manage risks and interdependencies
- governance arrangements will ensure that all aspects of implementation are fully aligned
- performance metrics will track and manage progress against key milestones or enablers of change (for example, reductions to acute average length of stay, monitoring clinical performance, repatriation of Medway patients from the arterial centre to the enhanced non-arterial centre for rehabilitation,)

9.3. Key implementation risks and mitigations

9.3.1. Risk management

Effective risk management is imperative not only to provide a safe environment and improved quality of care for patients and staff but also to manage and plan publicly accountable health services. The reconfiguration of a clinical service across organisations brings risks which will need to be carefully managed throughout implementation and beyond.

Risks are identified at all levels within the Programme and noted on a central risk register . The programme risk register is held by the Programme Steering Group and monitored by the Programme Oversight Group. Risks are rated based on their probability and impact, as shown in Table 34 below. During implementation, the Programme Steering Group will take responsibility for managing risks, supported by other groups which will regularly review any risks to delivery.

Table 34: Impact and likelihood risk matrix

			Likelihood				
		Probability	Rare	Unlikely	Possible	Likely	Certain
Impact	Probability	Score					
	Negligible	1	1	2	3	4	5
	Minimal	2	2	4	6	8	10

	Moderate	3	3	6	9	12	15
	Major	4	4	8	12	16	20
	Catastrophic	5	5	10	16	20	25

A summary of the current programme risk register, as of October 2021, is shown in Table 34 below.

Risk	Risk Value	Mitigation
Delays to implementing the medium-term solution cause uncertainty for staff and possible recruitment issues.	9	HR Task and Finish group to develop communications to staff about the progress. EKUHFT providing consultant support to Medway to address staffing gaps and units working more closely together to support workforce.
Waiting times may be longer for elective patients due to the impact of the pandemic and risk this is further exacerbated when services are consolidated.	12	Ongoing work to monitor the waiting lists and ensure that there is access for elective vascular patients. Additional clinic capacity opened to prevent outpatient waiting list growth. Ongoing monitoring and further demand & capacity modelling will be undertaken prior to implementation to ensure that consolidation does not increase waiting times and there are no backlogs needing to be accommodated from the pandemic. Patients continue to prioritised and see in order of urgency.
Concern and anxiety with external stakeholders including patients and their families on the delays in implementing the medium-term solution and understanding what this means for them.	9	Regular communications with the JHOSC and will be doing a stakeholder update post the stage 2 assurance with revised timescales for the consultation, including what this means for patients currently on the pathway.
Lack of clinical leadership for the network, who would provide additional support to ensure the correct pathways are in place and that all vascular services meet national standards and the needs of their local population.	4	Clinical Lead appointed at the start of October and already building relationships with all vascular services in Kent & Medway to build the network, which will ensure a strong network in place to support implementation.

Table 34: Key risks associated with the vascular reconfiguration programme

9.4. Realising the benefits of implementing the preferred option

Many of the changes being proposed are already implemented as temporary measures across Kent and Medway. The benefits of centralising the highest risk surgical procedures on one site are already being seen. The complete benefits of the proposed programme, including the ability for the vascular network to focus on positive changes in patient care, research and innovation, are likely to take over a year from going live to come to fruition as the new service beds in.

It is sometimes difficult to relate benefits to specific changes but measuring benefits alongside implementation plans will help. Some improvements may be attributable to several factors, and not seeing particular improvements expected from a particular measure may not necessarily mean that the measure has been unsuccessful. Other factors may have arisen which prevented the expected improvements. The benefits framework described in the following section will allow investigation and rectification, if required.

9.5. Monitoring of benefits realisation

Implementation will include clear monitoring of realised benefits. It will entail:

- clinically-led, clear and comprehensive implementation plans
- a pragmatic benefits realisation framework, with associated governance arrangements and processes to:
    - formally track progress of benefits realisation
    - identify actions in response to any benefits not being realised
    - define reporting requirements visible to all organisations involved, patients and the public.

Further work on the approach to monitoring benefits realisation will be required after consultation. This will include agreeing metrics to be used to measure realisation of benefits specified in the final set of proposals being developed by the programme. These metrics will be fully aligned with the Vascular Society's quality metrics and as such will be reported regularly to the Vascular Society. Benefits realisation will be overseen by the Vascular Programme Oversight Group.

The table 35 below sets out the expected benefits to be delivered from the proposed changes that will be monitored as part of the benefits realisation process.

SERVICE DELIVERY BENEFITS

The expected benefits that have been identified will be achieved through the delivery of the medium term solution for vascular surgery across Kent and Medway and include:

- Development of skills and expertise so that patients are better able to manage their condition and recovery;
- Improved access to outpatient clinics at non-arterial spokes;
- Improved sustainability of the existing vascular services;
- A sustainable specialist workforce (Consultant surgeons, IR Consultants and specialist nurses and the wider multi-disciplinary team);
- A more productive and efficient service (minimisation of duplication and waste);
- Improved opportunities for training, research and innovation;
- Ensure that highly experienced staff are treating sufficient numbers of patients to maintain competency.
- Have 24/7 on site vascular surgery and interventional radiology on-call rotas that are staffed by a minimum of 6 vascular surgeons and 6 interventional radiologists (individually undertaking a minimum number of interventions).
- Provide access to cutting edge technology including a hybrid operating theatre for endovascular (minimally invasive) aortic procedures.
- Provide a dedicated vascular ward and nursing staff.
- Have a specialist team to manage patients with vascular disease that includes vascular surgeons, interventional radiologists, specialist nurses, vascular scientists, diabetes specialists, stroke physicians, cardiac surgeons, orthopaedic surgeons, and emergency medicine amongst other specialties to provide a comprehensive multi-disciplinary service.
- Care of patients will be managed through regular multi-disciplinary team meetings, which will occur at least once a week.
- Improving the patient experience, providing equality of access to the full range of vascular diagnostics and interventions and ensuring that patients are receiving a high quality of service, with access to the most modern techniques;
- Improving mortality and morbidity rates for people with vascular disease and improving survival rates following hospitalisation;
- Improving complication rates following a vascular admission (short and long term).
- Reducing mortality rates by preventing death from ruptured abdominal aortic aneurysm, stroke, lower limb ischaemia and vascular trauma;
- Providing early intervention and treatment to achieve regional reductions in the incidence of stroke due to carotid artery disease and leg amputation due to peripheral arterial disease;
- Supporting other services to control vascular bleeding and manage vascular complications; and
- Working jointly with the diabetic and podiatry service to optimise care, minimise tissue loss and prevent amputation.

QUALITY INDICATORS

- Continued improvement of the clinical outcomes, in particular lower limb amputation, working towards achieving the best rather than average performance;
- Standardised methods and promotion of best practice across the clinical teams
- Clear lines of accountability and clinical governance across the network that puts clinicians and patients at the heart of performance monitoring and service development;

• The creation of a transparent and effective vascular network that benefits from shared clinical expertise and clear effective pathways of care
STRATEGIC BENEFITS
• Reduced length of stay for patients and more effective pathway links with community providers to support timely repatriation of patients (from the arterial hub to the non-arterial spoke) following surgery. • Serve a minimum population of at least 800,000 people to ensure an appropriate volume of procedures.

Table 35: Expected Benefits from the Proposed Changes.

10. List of Appendices

Appendix number	Details or title
1	Papers from the Medway HASC 11 August 2015
2	Papers from the Kent HOSC – October 2015
3	Papers from the Kent and Medway JHOSC January 2016
4	Papers from the JHOSC April 2016
5	Papers from the JHOSC August 2016
6	Papers from the JHOSC November 2016
7	K&M Vascular Engagement Review 2016
8	Papers from the JHOSC December 2017
9	Vascular Engagement Report – February 2017
10	Vascular Engagement Report – September 2017
11	Papers from the JHOSC October 2018
12	Papers from the JHOSC September 2019
13	Kent and Medway Vascular Case for Change – March 2015
14	Specialised Vascular Services – NHS England Service Specification
15	The Provision of Services for Patients with Vascular Disease 2012
16	The Clinical Co-Dependencies of Acute Hospital Services. SEC Clinical Senate
17	Letter of Intent jointly signed by MFT and EKHUFT
18	Kent and Medway Vascular Network Model and Pathways – Jan 2020
19	Operating model for the Kent and Medway Vascular Network
20	Draft Consultation document
21	13Q assessment completed by NHS England specialised commissioning
22	Kent and Medway Vascular Consultation strategy
23	IIA Pre Consultation Report January 2017
24	Vascular mapping travel analysis
25	GIRFT Vascular Surgery Report March 2018
26 a&b	2021 Options Appraisal Refresh pack
27	Service Development Business Case
28	Media protocol
A	Letter of support from Kent and Medway CCG
B	Letter of support from MFT
C	Letter of support from EKHUFT
D	Letter of support from NHS England Specialised Commissioning