

South East

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Clinical  
**senate**

**Review of the Case for Change  
for Vascular Services in Kent and  
Medway**

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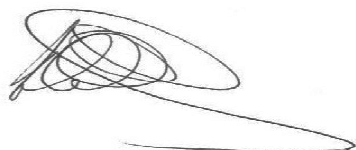
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# Foreword

Regional clinical senates exist to provide strategic, independent, clinical advice to commissioners, and to health systems, to help them make the best decisions about health care for the populations they are responsible for.

In line with that remit, the South East Clinical Senate (SECS) was formally requested to review the draft case for change and the first stage decision making criteria for vascular services in Kent and Medway that had been produced by the programme board set up by Kent and Medway's NHS commissioners.

The SECS convened an expert clinical review group to undertake this work on its behalf. I am very grateful to the members of this group, who gave of their time freely and at short notice, and contributed their experience, expertise and independent perspective to produce this report. The SECS Council has reviewed then approved this report, and on behalf of the Council, I hope it provides the balanced clinical overview that was requested, and proves useful in progressing the project through its subsequent stages towards providing the highest possible quality of vascular services for the population of Kent and Medway.



Lawrence Goldberg

South East Clinical Senate Chair, and Chair of the Clinical Senate's Expert Clinical Review Group

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# 1. Summary of Key Recommendations

## 1. Set the ambition

There should be a clear statement of the shared ambitions there are for providing world class vascular services in Kent and Medway, delivering excellent patient outcomes and experience, sub-specialisation, outstanding multi-professional training, and clinical research. The Case for Change should not be seen or written as purely fulfilling the published national service specifications and requirements.

*See recommendations: 4.1.2-4; 4.3.1; 4.3.5;*

## 2. Demonstrate a patient-centred and clinical focus throughout the Case for Change

The public and patient perspective should be maintained through the planning stages, to ensure that pathways and services deliver better patient-determined outcomes and experience of care, and that the Case for Change is developed in a way that makes clear sense to the general public. In addition, its tone and language would benefit from a clearer clinician input.

*See recommendations: 4.1.3; 4.3.10-11; 4.4.12-13;*

## 3. Decide on the catchment population, and resolve the London question

Commissioners, clinicians and public representatives critically need to decide if it is a firm intention, and clinically appropriate, to repatriate at least some of the activity that is currently being undertaken in south London vascular units. If not, there is insufficient catchment population to sustain two adequately sized arterial centres in Kent and Medway.

*See recommendations: 4.1.4; 4.4.7-11; 4.5.7*

## **4. Consider the whole vascular patient pathway, and the network structure required to deliver it**

To plan for a highly functional vascular network, the structural, operational and workforce requirements of the end-to-end vascular pathways (for both emergency and elective patients) need to be considered, and issues addressed.

*See recommendations: 4.1.1; 4.3.4; 4.4.1-4; 4.4.19-25; 4.5.5.*

## **5. Be more explicit and detailed about the benefits of larger vascular centres**

The many benefits of having large, centralised units, using an 800,000 catchment population as a minimum, should be clearly laid out. These include safe and sustainable on call rotas and seven day services; enhanced sub-specialisation; enhanced recruitment and retention; the delivery of high quality multi-professional training; and development of clinical research.

*See recommendations: 4.1.2-3; 4.1.6; 4.3.2-3; 4.5.1; 4.5.17; 4.5.22; 4.6.1*

## **6. Provide more detailed presentation of the travel times, ambulance and transport issues**

The issue of distance from home and time taken to travel, to centralised specialist units, both for delivering timely urgent care, and for visiting by family and friends, is a key consideration for the public. There should also be a clear summary of travel times to and between the various hospitals across Kent and Medway. Account should be taken of population density variations. This information will explicitly set the context in which the networked arrangements between arterial centres (ACs) and non-arterial centres (NACs) and rehabilitation, would work in delivering care closer to home as soon as clinically appropriate. In addition, effective and timely pre-hospital and paramedical care is all the more key in centralised networks, to ensure patients are stabilised and transferred safely to the specialist centre. This aspect of the pathway should receive focused attention.

*See recommendations: 4.4.3-4; 4.4.8-10; 4.4.12-18.*

## **7. Model future demand for vascular services, ensure ongoing focus on prevention, and address existing health inequalities**

Planning for the vascular network in Kent and Medway needs to anticipate and meet the population's needs over at least the coming ten to fifteen years. There is value in modelling changes in activity over this time frame, taking account of factors that might increase or decrease the prevalence of vascular disease. Modelling and planning should take account of areas of deprivation and their causes, and look to address these issues. Primary and secondary prevention of cardiovascular disease in general needs to remain a key focus for health systems taking into account variations in socioeconomic status such as deprivation in the region and address their underlying causes and the importance of prevention should be referred to in the Case for Change.

*See recommendations: 4.2.1-7*

## **8. Ensure safe siting of the planned arterial centre(s)**

There should be reassurance that the siting of the future arterial centre(s) is in hospital(s) that is/are able to provide safe and effective general urgent and emergency care services, which high quality care for vascular patients is dependent upon.

*See recommendation 4.1.5*

## **9. Address the issues of the multi-professional vascular workforce working across the whole pathway**

There should be a full understanding of the workforce requirements to deliver high quality holistic care across the planned vascular network, not just in arterial and non-arterial centres, but also in rehabilitation, in the community and in primary care. National and regional shortages in key skills, and professions, should be more clearly described, as should plans for how these will be addressed.

In addition, the education and training requirements of the workforce need to be fully considered in any new model, as the consequences of different service configurations may materially impact on how these requirements are sustained. Commissioners should work closely with Health Education England (HEE) on the required workforce plans and

anticipated education and training needs, and include a review of potential new or extended roles of different staff groups.

*See recommendations: 4.5.1-24.*

## **10. Detail the clinical co-dependencies of arterial and non-arterial centres**

Vascular patients are often critically ill, can have multiple other medical conditions, and need timely access to specialised care from a wide range of other clinical services. It is vital to understand the implications of all these clinical co-dependencies in the safe planning of inpatient care in arterial and non-arterial, centres, and in deciding the necessary co-location of services. It is strongly recommended that reference is made to the SECS's report on clinical co-dependencies of acute hospital services (1)

*See recommendations 4.4.26-31, and Appendix C.*

## **11. Plan for effective and sustainable interventional radiology services**

Interventional Radiology (IR) is a critical service for delivering diagnoses and treatments to vascular patients, working in partnership with the vascular surgical service. There are significant issues relating to the centralising of IR and delivering 24/7 IR rotas, including manpower, and the sustainability of non-vascular IR services in non-arterial centres, which need to be recognised and addressed. The non-medical specialist IR workforce requirements (particularly radiographers and nurses) must also be taken in to account.

*See recommendations: 4.3.9; 4.4.24; 4.4.26-28; 4.4.30; 4.4.32-36; 4.5.10-15; 4.5.23.*

## 2. Context of the Clinical Senate Review

The National Confidential Enquiry into Patient Outcome and Death (NCEPOD) 2005 called for a reorganisation of vascular services for emergency and elective care to optimise outcomes for patients in their 2005 report (2). In 2008, the European Society for Vascular Surgery's Second Vascular Surgery Database Report (3) showed that the UK had the highest mortality rates in Western Europe following elective abdominal aortic aneurysm surgery (UK 7.9%, best in Europe 2%) with a poor uptake of new endovascular technology.

Since then, there has been a major national drive to reconfigure vascular services across the country in order to achieve sustainable services and improved outcomes. The Vascular Society of Great Britain & Ireland (VSGBI) in 2012 published recommendations for the configuration of major vascular centres (4), and these were adopted as part of NHS England's 'National Service Specification' (NSS) for specialised vascular services (5). They set out the requirement for a centralisation of vascular surgery in specialist centres, with appropriately configured staffing levels, rotas and facilities, and with a minimum catchment area of 800,000. This population requirement is considered to be an evidence based minimum volume necessary, to enable high quality outcomes.

The specialist vascular hubs, termed 'arterial centres' (ACs) cannot and should not provide all elements of vascular care for their network, and need to work in partnership with spoke units in associated hospitals in their network, termed 'non-arterial centres' (NACs). The detailed functions and requirements of these NACs was subsequently provided in further VSGBI guidance published in 2014 (6).

At present there are three providers of these services for Kent and Medway patients:

- East Kent Hospitals University Foundation Trust (EKHUFT), with the AC based at the Kent and Canterbury Hospital. Its current catchment population is 682,000.
- Medway Foundation Trust (MFT), whose current catchment population is 505,000.
- Guys and St Thomas' Foundation Trust (GSTT), whose AC currently serves Tunbridge Wells/Pembury hospitals, and Darent Valley Hospital, between which the population served is 456,000.



Consequently both EKHUFT and MFT ACs are considered currently to be of insufficient size and undertaking insufficient or borderline levels of activity for sustainable future high performing ACs. In addition they both do not comply with a range of requirements as set out in the NSS (5). Consequently NHS England specialist commissioning has both units in 'derogation' (see Glossary for definition, and refer to the Commissioning Policy for Clinical Service Derogation of Commissioned Specialised Services (7)). This requires a detailed action plan in place to achieve compliance within agreed timescales. Consequently, Kent and Medway commissioners have set up a programme board to develop:

- a) A 'case for change', which will recommend how vascular services in Kent and Medway can provide safe and sustainable services and meet nationally agreed requirements in the future.
- b) A decision making process and criteria to be used, for deciding on the preferred option(s) to progress.

A draft Case for Change, together with outline decision making criteria, have been developed by the programme board, but to provide an independent clinical review of these, the South East Clinical Senate was approached. This document describes the methodology used for this independent review, and provides detailed recommendations for how the Case for Change could be enhanced, and from those, some of the decision making criteria that could be employed.

## 3. Methodology

### 3.1 Defining the task given to the South East Clinical Senate

The South East Clinical Senate (SECS) received a formal request for a clinical review from NHS England South, through the Kent and Medway Vascular Programme Board in order to inform their strategic planning for future vascular services in Kent and Medway. The request was for two phases of review:

**Phase 1.** To provide an independent clinical review of the clinical case for change, the decision management process and decision tree

**Phase 2.** To clinically review the subsequent options paper describing the preferred model(s), to help ensure safe, high quality and sustainable vascular surgery services in Kent and Medway in the coming years.

In line with this request, the SECS remit for this phase 1 of the request was agreed as needing to address the following and ensure that:

- There are robust pathways in place that are safe and of high quality.
- There should be clearly understood and transparent clinical vascular networks in place.
- Vascular care is delivered in accordance with best clinical practice across all Kent and Medway providers.
- Vascular services in Kent and Medway are sustainable and fit for the future.
- The implications for other clinical and support services of any reconfiguration are identified (through the inter-relationships and co-dependencies between services) and make recommendations as to how those could be addressed.
- Network options and relevant hub and spoke issues are reviewed; including onward care of patients to more local care after specialist care is completed.
- Due consideration is given to the whole vascular pathway, from community in to specialist care and out.
- There is consideration of any broader workforce, education and training issues.
- Clinical research issues are considered.
- An independent patient and public (PPE) perspective is included.

## 3.2 Expert Clinical Review Group

Senior professionals from a wide range of professions involved with vascular services, together with a strong PPE voice, were invited to join an expert clinical review group (ECRG) set up specifically for the purposes of this review.

Group members were invited to join on the basis of a combination of experience, expertise, professional role and vitally their preparedness and availability to devote their time to participate in this work in the short time scales required. A full list of the ECRG membership is found in Appendix B.

Invitations to membership of the ECRG avoided anyone employed by a Kent or Medway organisation, and all members were required to fulfil the conflict of interest and loyalties requirements as described in SECS's Standards of Business Conduct and Conflict of Interest Policy (available on request). A conflict of interest can be defined as any situation in which a member's responsibilities or interests, professional or personal, may, or may appear, to affect the impartiality of the Clinical Senate's advice. Members of the ECRG were also required to act independently, i.e. they do not represent their employing organisation or professional body. A full summary of ECRG members' declarations of interests is found in Appendix B.

# 4. Review of the Case for Change, and Recommendations

The draft Case for Change, as provided by the Programme Board, has been reviewed by the ECRG, and the following detailed points have been made. It should be recognised that for many of the recommendations, the Case for Change does allude to the issues this section highlights, but not to the extent or in the way that was felt fulfilled its purpose.

## 4.1 General recommendations

### The Case for Change should:

- 4.1.1 More clearly describe the nature of modern vascular networks, including definitions of and relations between arterial centres (ACs) and non-arterial centres (NACs), and provide a general overview of the whole vascular pathway (not just the hospital based elements) from both a clinical and patient perspective.
- 4.1.2 Clearly articulate how any rationalising of Kent and Medway's vascular units would lead to quality improvements (e.g. through the most efficient and effective use of limited specialist staff, skills and financial resources; becoming a major training and research hub; sub-specialisation; etc.).
- 4.1.3 Include details of how patient and public views have and will be drawn upon, to ensure their voice is heard throughout the planning stages. In line with NHS England participation guidance for CCGs, the Case for Change should describe how it has and will involve people potentially affected, by providing information, consulting or in other ways.
- 4.1.4 Provide more of a sense of clinical involvement and authorship of this review. There should be more evidence of the extent of involvement of multi-disciplinary clinicians (and clinical commissioners) in the development process of the Case for Change.
- 4.1.5 Clarity is required of any plans currently in place by all the stakeholder providers to fund any hybrid endovascular theatre build on their respective sites. The impact of a vascular review on the future configuration of vascular services in Kent and Medway may affect the utility of these major capital projects.

## 4.2 Demographics, health inequalities, public health and prevention

- 4.2.1 There is currently a lack of links within the Case for Change to relevant findings and priorities within Kent and Medway's Joint Strategic Needs Assessments (JSNA) and their Joint Health and Wellbeing Strategies (JHWS), and it is important to make these links to demonstrate system alignment. This would include understanding demographic trends, inequalities in cardiovascular health, and sustainability, and how these might impact of future planning of vascular services.
- 4.2.2 Future demand and activity over the coming 10-15 year time frame should be modelled, based on demographic trends and the impact of primary and secondary prevention, to help anticipate the service requirements in the future. There are drivers to both increase and decrease vascular disease incidence over this period.
- An increase in disease prevalence can be expected from the aging population, the expected increase in diabetes in the population, and the increased survival of patients with underlying vascular disease (including patients who have had stroke and coronary artery disease).
  - Factors that would decrease disease prevalence are the impact of implementing better public health and primary and secondary preventative measures. These include reduction in rates of smokers, improvements in diabetes detection and care, better identification and management of high blood pressure, the impact of NHS health checks, and the potential impacts of primary prevention initiatives to address obesity and increase physical activity.
  - The net effect of these opposing tendencies is unknown, but should be referred to in the Case for Change.

An important reference in this regard is the Cardio & Vascular Coalition's report: Modelling the UK burden of Cardiovascular Disease to 2020 (8).

- 4.2.3 There should be more emphasis on, and analysis of, a number of key population statistics: e.g. that circulatory diseases are a major contributor to the life expectancy gap in Medway and that the highest Coronary Heart Disease (CHD) mortality in Kent is in the Thanet district (21). Vascular disease increases in areas of social deprivation for a variety of reasons, including less access to and uptake of primary

and secondary health care as well as life styles. Since preventive action is a key to avoiding future vascular disease, a review of the variation in for example Quality Outcomes Framework (QOF) measures for blood pressure control, use of statins and management of diabetes and smoking cessation, would help to understand vascular disease factors in Kent and Medway, and future incidence.

- 4.2.4 Any new model for vascular services in Kent and Medway should recognise and aim to address identified health inequalities and improve outcomes.
- 4.2.5 Planning should consider how a reconfigured vascular service will adapt to changes in patient demographics and technological developments.
- 4.2.6 The Case for Change should specify how the impact of service reconfiguration will be measured and monitored over time for the population of Kent and Medway.
- 4.2.7 It should consider environmental sustainability in addition to financial and workforce sustainability when assessing the patient and staff transport requirements and energy requirements of any new models of service provision.

### **4.3 Quality, safety and standards**

There is a wide range of national standards, metrics and audit data, relating to many aspects of vascular services. Some of these are listed in National Service Specification (NSS) (5) and the Vascular Society of Great Britain and Ireland (VSGBI) 2012 and 2014 reports (4,6). In addition, we are aware of a number of other audits and standards that are important to access in describing and monitoring performance and outcomes in the vascular surgery network. These, together with the NSS (5) summary, are provided in Appendix A of this document.

Medium and longer term outcome data is still not required reporting by vascular units in the UK, but the new NHS Key Service Outcomes for Vascular Surgery does now require reporting of all-cause mortality at one year for Abdominal Aortic Aneurysm (AAA) surgery, and amputation-free survival one year following intervention for peripheral arterial disease. However, the round 1 data for these metrics is yet to be published.

- 4.3.1 The ambition to commission excellence rather than contracting to simply meet minimum acceptable outcomes and standards should be articulated. There should be an articulated aim to achieve the lowest target mortality, not simply the national

average or minimum standards required. In that regard, overall vascular team outcomes should be considered, not just that of individual surgeons (given the sub-specialisation and case mix within centres).

- 4.3.2 There should be explicit reference to the risks or poorer outcomes associated with borderline or low annual cases per consultant, and the need for reconfiguration proposals to deliver sufficient activity per consultant to maintain standards.
- 4.3.3 As a minimum, the panel considered that the Case for Change should state that there should be no justification for any reconfiguration not to deliver the care standards and key service outcomes specified in NSS and VSGBI 2012 and 2014 (4–6).
- 4.3.4 If the aim is to improve clinical and patient outcomes, then consideration must be given to performance of the whole pathway (including primary and secondary prevention, and rehabilitation) and not purely focussing on standards within ACs and NACs. This should include a review of the variation in outcomes and performance across Kent and Medway, e.g. amputation rates in patients with diabetes.
- 4.3.5 There should be high standards of care required for elective and emergency vascular surgery (of all types) and for patient care across the whole of Kent and Medway. There is a lack of reference in the Case for Change to data on the outcomes and standards for the full range of vascular procedures (including outcomes of elective AAA repair such as 30 day mortality and 30 day stroke and death rates following carotid endarterectomy), collected in the National Vascular Registry (NVR), which should be addressed.
- 4.3.6 To enhance the Case for Change, we recommend a summary is provided of each unit's current quality and performance metrics, to determine the potential for improvement. It should then be a stated aim to assess the impact of any service reconfiguration on these metrics.

## **Carotid artery surgery**

- 4.3.7 The UK Carotid Endarterectomy Audit (Round 5) (9) provides data regarding timely surgery which is important as the patient with symptomatic carotid disease is at highest risk of recurrence in the first fourteen days of an initial event. The NSS (5) specifies a target of seven days for carotid surgery from initial symptom to treatment. This is the only published data available from most national vascular units in the UK, and is used for benchmarking purposes. This data should be considered in the current Case for Change.

## **Diabetic foot care standards**

- 4.3.8 There are best practice guidelines for diabetic foot care pathways, both national and international that should be used in vascular networks e.g. data on improved outcomes from specialist diabetic centres (10); and the complexity of factors related to outcome of neuropathic and neuroischaemic foot ulcers (11).

## **Interventional radiology standards and performance**

- 4.3.9 Interventional radiologists should provide data of performance against relevant index procedures included in the British Society of Interventional Radiology (BSIR) national registries e.g. the British Iliac Angioplasty Stent Registry (12).

## **Patient-reported outcomes and information**

- 4.3.10 There should be reference to any patient experience surveys performed regarding the services provided by all three current vascular units serving Kent. To our knowledge, there have been no published PROM (patient reported outcomes measures) data for benchmarking purposes by NHS England or the VSGBI to date for vascular services in the UK to guide an understanding of the patient experience of current providers.
- 4.3.11 There should be a stated aim for good quality, accessible information to be made available for patients and families, including how to interpret the data, and to provide some explanation of case mix issues (and the higher risks associated with more complex cases).

## **4.4 Vascular service pathway, networks and co-dependencies.**

### **The vascular pathway**

- 4.4.1 Articulate clearly the current end-to-end clinical pathways to demonstrate consideration has been given to the full range of requirements for delivering a new model of care. This includes highly effective pre-hospital care (delivered by critical care paramedics) through to high quality rehabilitation in the community.
- 4.4.2 Describe how vascular networks can help hospitals support each other, along with



community providers, in delivering the full pathway of care for patients by better coordination, pooling of resources, and integration by a variety of models.

- 4.4.3 Make a clearer distinction between urgent and non-urgent pathways and interventions, as their requirements, particularly relating to travel times, paramedic and ambulance services, and out of hours emergency care, are significantly different.
- 4.4.4 Clarify the desired patient pathway for Kent and Medway regarding vascular injuries from trauma.
- 4.4.5 Take more account of new developments in endovascular treatment. The proposals should identify capacity and resource implications that will have an impact on the introduction of these new developments.
- 4.4.6 Ensure clarity and consistency regarding the use of the phrase 'repatriation', as it is used in two ways in the draft Case for Change. We recommend the term is used to refer to the bringing back to Kent and Medway providers of activity currently going to London providers. For individual patients who are being transferred back to a more local hospital (e.g. from an AC to a NAC), a different term or phrase should be used (such as 'transfer for more local care').
- 4.4.7 The risks of destabilising the work volumes of the London providers if elective and emergency vascular work is repatriated back into Kent need to be understood by commissioners, as does the consequences of consultants working for London units discontinuing their work in the Kent units. Any change should be fully planned and carefully risk managed.

## **South London, Surrey and Sussex Vascular Networks**

- 4.4.8 Provide a brief overview/map of the vascular networks in Surrey, Sussex and South London, to make clear the current boundaries of networks and existing relationships, and describe the current status of any known plans for change in these networks. This would make clearer the realistic options and the impact of any changes within this range of networks on activity within each network and their centres, patient flow, and patient choice.
- 4.4.9 Clearly articulate the impact of repatriation (whether full or partial of Kent and Medway activity currently served by London on the options for Kent and Medway ACs and NACs).

- 4.4.10 Provide greater clarity on the nature of current referral practices and patient pathways in North and West Kent, particularly for patients diagnosed there with AAA by the East Kent Hospitals University Foundation Trust (EKHUFT) AAA screening programme.
- 4.4.11 State the potential for savings relating to the relative 'market forces factors' (MFF) for the respective trusts (i.e. EKHUFT 1.05, MFT 1.10, GSTT 1.28). Refer to annex 6A of the Consultation Outcomes; National Tariff Payment System 2015/16 (13).

## **Travel times, pre-hospital care and ambulance issues**

- 4.4.12 Clearly present travel times between all the acute hospitals in Kent and Medway, to inform thinking and planning on single vs two site arterial centres modelling. This should take account of travel at peak and trough traffic times, and the expected volume of patients from different parts of the region (based on demographic modelling). In that way, an understanding of the impact of longer travel times for some patients can be more explicitly balanced against the benefits of centralisation.
- 4.4.13 Similarly, provide indicative travel times (by ambulance, public or personal transport) between different parts of Kent and Medway where patients live, and current and potential ACs, to enhance the understanding of the travel time consequences of service centralisation.
- 4.4.14 Describe the emergency and patient transport pathways and protocols. Full consideration needs to be given to how the ambulance service will respond to the changing pattern of provision.
- 4.4.15 Pre-hospital care is a vital component of the urgent vascular pathway (particularly for ruptured AAA), and there should be more detail about the skills and capacity required from ambulance service staff, particularly critical care paramedics (CCPs).
- 4.4.16 The consequences for ambulance and paramedic services of re-shaping specialist networks such as vascular are very significant, and there should be more reference to this, and more information and analysis of this impact in considering the Case for Change.
- 4.4.17 There should be greater clarity of South East Coast Ambulance Trust (SECAmb) coverage and pre-hospital care pathways for suspected ruptured AAA, acute limb ischaemia and vascular trauma in Kent and Medway.

4.4.18 Explicitly define the ambulance and paramedic pathways for vascular patients, both now and for potential future reconfigurations, taking account of volumes of traffic between sites, and including standards of care, volumes and modelling for peak times.

## **Arterial Centres and Non-Arterial Centres**

4.4.19 The generic definitions of and key inter-relations between ACs and NACs in a vascular network should be provided. The focus of the current Case for Change is almost exclusively on ACs, yet they cannot function without appropriately configured NACs supporting them, and one cannot review ACs in isolation. Clear reference to the VSGBI's service specification for non-arterial centres 2014 (6) should be made, and the key requirements of these centres made explicit.

4.4.20 The need for clear and binding transfers of care policies, back from AC(s) to NACs, should be stated, as this is key to maintaining capacity at the AC(s) for new elective and emergency vascular patients.

4.4.21 It is important to require equity of access to and consistency of vascular services for patients and for their local hospitals across Kent and Medway, whether an AC, NAC or neither.

4.4.22 Both Kent and Canterbury Hospital and MFT require input from the vascular team to hold vascular clinics, review in-patient referrals, organise day case treatment such as low risk angioplasty / stenting for lower limb peripheral arterial disease, and to treat emergency iatrogenic vascular injuries. The impact of transferring any vascular services to another site due to reconfiguration should ensure that any non-arterial site is still covered adequately for both elective and emergency vascular services.

4.4.23 More consideration should be given to the potential of innovative technology on remote management and monitoring, away from the AC, e.g. telemedicine (consultations, tele-ward rounds).

## **Post-hospital rehabilitation and ongoing care**

4.4.24 Describe the post-intervention and rehabilitation pathways following discharge from ACs/NACs, taking account of the requirement for inpatient rehabilitation, and the provision of appropriate support services, e.g. physiotherapy and podiatry. Greater

clarity is required in particular for the post-intervention pathway of patients treated in London vascular centres.

- 4.4.25 Describe the need for integration between health and social care, particularly for patients discharged across boundaries from ACs/NACs, to minimise the impact on delayed transfers of care.

## Key co-dependencies

- 4.4.26 There is a wide range of core structural components of arterial centres that needs to be provided on site, which should all be addressed in planning reconfiguration of vascular services, and stated clearly in the Case for Change. These are listed in detail in VSGBI 2012 and NSS (4,5). In particular they include: 24/7 vascular IR and a vascular IR suite; a vascular operating theatre with appropriately specialised and trained staffing; a 24 hour NCEPOD emergency theatre accessible at all times to undertake emergency vascular procedures, specialist vascular anaesthetics; an Intensive Treatment Unit (ITU) and High dependency Unit (HDU) with sufficient bed capacity for the anticipated elective and emergency work; and a vascular laboratory service for the diagnosis and assessment of vascular patients. It is recommended that there is an analysis of the current availability of such services, what will be required by the new proposed model (over the coming ten to fifteen years) and a plan for how these requirements will be met.

- 4.4.27 NSS and VSGBI 2012 and 2014 (4–6) list certain key clinical relationships and on site requirements. These are more clearly specified for ACs than for NACs, but the requirements for both should be followed.

- 4.4.28 The SECS published a detailed report on the clinical co-dependencies of a wide range of acute hospital services, which included ‘vascular hubs’ (ACs) and ‘vascular spokes’ (NACs) (1). The report describes the range of non-vascular specialties and services that vascular patients in these centres require to be provided on site. It also describes the range of services that should have on site access to vascular surgical care. A summary of the conclusions in relation to vascular centres can be found in Appendix C and the full co-dependencies grids can be found on the SECS’s website (<http://www.secsenate.nhs.uk/news/clinical-co-dependencies-acute-hospital-services-clinical-senate-review/>).

- 4.4.29 The VSGBI (6), and the SECS review of co-dependencies (1), both considered it appropriate to co-locate an AC at a hospital that has an A&E (Emergency

Department) and an acute surgical take. This would significantly reduce the number of patients that would need to be transferred for on-going care, and would ensure that time-critical ischaemic problems could be more efficiently managed on a streamlined pathway. However in the event that a vascular centre is *not* co-located with an A&E, VSGBI 2012 (4) highlights the need for clear protocols and pathways for managing acute vascular patients. It is essential that the Case for Change states the requirement for such clinically agreed and safe pathways of care for patients, particularly those presenting with abdominal pain and collapse, and that appropriate and timely triage, transfer and care for this high risk group of patients by the ambulance service and the vascular units is delivered. This arrangement of co-locating an AC at a hospital that has an A&E will also protect the education and training needs of vascular trainees who will still require emergency general surgery experience up to ST4 level as part of their SAC curriculum requirements.

- 4.4.30 There are particular specialist services that need a particularly close clinical relationship which should be highlighted in the Case for Change. These include the provision and maintenance of vascular access for kidney dialysis patients; urgent carotid artery assessment and intervention for selected stroke patients; and interventional cardiology and cardiac surgery services.
- 4.4.31 There would be a need for general surgery or orthopaedics input for patients at the NAC both to aid in triage before referral to the AC, and to perform, for example, simple foot debridement surgery under the guidance of the vascular surgery team (potentially avoiding the need for transfer of the patient to the AC).

## **Interventional Radiology**

- 4.4.32 An understanding of the provision of diagnostic angiographic imaging service availability in both ACs and NACs should be available in the Case for Change, and the expectations of NACs as well as ACs in this regard.
- 4.4.33 There is insufficient reference to interventional radiologists' commitments to services outside of vascular surgery (not all interventional radiology is vascular). The impact of any proposed reconfiguration on these commitments and contingencies to maintain services should be described. For example the provision of an acute embolisation service (for active bleeding) in non-arterial centres providing acute non-vascular care needs to be considered.

- 4.4.34 There is a need to ensure the seamless transfer of images between centres and within centres; i.e. compatible PACS systems.
- 4.4.35 There is insufficient information regarding whether or not the local interventional radiologists perform elective low risk arterial interventions at the non-arterial centre hospitals. It would be helpful to identify which non-arterial sites in Kent and Medway still provide vascular interventional radiology services for elective work and how patients are selected for intervention locally, and how they are, and would be covered safely by the vascular network.
- 4.4.36 The availability to perform non-urgent angiography and angioplasty and vascular investigations should exist at the NAC, reducing the need for transfer of patients for investigations to the AC, and ensuring care is delivered closer to home.

## Diabetic foot care

- 4.4.37 The Case for Change will need to ensure that reconfigured vascular services engage fully with diabetic foot care services to provide high quality timely, equitable and local access for this high risk group of patients. The results for Diabetic Foot Care Profiles for NHS England published in 2014 (13 ) demonstrated that annual amputation rates in Kent and Medway vary widely, with five of the eight CCGs with rates above the national average, some of which are significantly so. To our knowledge, there are no diabetic foot care MDT teams in secondary care based in Kent.
- 4.4.38 More reference and detail should be included about diabetic foot related pathways (an essential component of vascular care and the prevention of complications). There is particular opportunity for more multi-disciplinary team working, enhancing care closer to home and in the community.

## 4.5 Workforce

### General points

- 4.5.1 High quality units, that are large enough to provide sub-specialisation and high throughput, are more likely to recruit high calibre staff and improve retention. Given the range of specialist staff required in ACs, and the relative shortage in many of

these professional areas, the future model of vascular networks needs to have a realistic and deliverable overall workforce plan. This is likely to be a driver to having a single large AC in Kent and Medway. There should be a clearly stated ambition in the Case for Change to address and highlight the workforce challenges and opportunities.

- 4.5.2 The manpower requirements of the whole network should be modelled, including both AC(s) and NACs. For example vascular consultants surgeons working in NACs would need to do sessions (and most likely participate in the on call rotas) in the AC(s). This modelling would help determine the minimum required size of an AC in Kent and Medway, particularly taking account of the minimum number of cases per consultant per annum that is expected, in order to maintain high quality outcomes.
- 4.5.3 The current workforce (in all the relevant clinical professions across all sites), along with current vacancies, should be compared to best practice and recommended safe and appropriate staffing levels, to understand the gap that needs addressing in any future high quality networked model.
- 4.5.4 There is a need to model the impact of planned seven day services on manpower requirements (and not just for medical staff) at both ACs and NACs, with clear pathways described for access to out of hours specialists, and the delivery of dedicated on call rotas.
- 4.5.5 The Case for Change should require local service plans to address the workforce requirements *across the whole pathway* (from the delivery of primary prevention measures, through to rehabilitation).
- 4.5.6 The implications for the workforce resulting from the centralisation or other reconfiguration of vascular services should be explicitly acknowledged.

## Vascular Surgery Consultants

- 4.5.7 VSGBI (6) currently recommends a minimum ratio of 1 WTE consultant to 150,000 population. However its 2014 workforce document (15) envisages that a 1:100,000 consultant to population ratio will be required within ten years, as a result of the need for 24/7 services, increasing workload, reducing currently onerous job plans, increasing 2-consultant operating, and the need to address the gender imbalance at consultant level.

Additionally the consultant workforce required in Kent and Medway will be significantly determined by whether the activity currently undertaken by south London units is repatriated. Consultant requirements of the vascular network in Kent and Medway needs to take full account of these two factors in appraising options for the coming period. It is noted that the current consultant:patient ratio at EKUHFT with four consultants is at least 1: 170,000, and the ratio in MFT with its current six consultants is uncertain without knowing whether they are full time vascular surgeons.

- 4.5.8 The Case for Change should fully describe the overall network requirements for vascular surgeons, taking account of the needs of NACs. VSGBI (6) recommends at least two vascular consultants should be allocated to cover each non-arterial hospital with a minimum presence of three days on site, with around 40% of a consultant's job plan be devoted to the non-arterial site.
- 4.5.9 The current provision of consultant outpatient services across Kent and Medway, including that provided by King's and Guy's and St Thomas' hospitals, should be made clearer, to understand the current gap in provision by both current Kent and Medway providers.

## **Interventional Radiologists**

- 4.5.10 Detailed IR workforce planning is required. At present there is insufficient focus on the demands on IR services and their likely impact. IR is a wide based clinical specialty and the areas of specialist interest of interventional radiologists needs to be considered. How will the range of IR services (not just vascular IR) in Kent and Medway hospitals be provided, even daytime Monday-Friday, following any centralisation of vascular services?
- 4.5.11 The Case for Change should also take account of the fact that a cohesive and efficient radiology department includes the full range of sub-specialties. A significant change in the dynamics of the radiology department secondary to service reconfiguration could affect the morale and performance of staff.
- 4.5.12 The number of IR consultants across Kent and Medway is unclear and will need to be clearer in order to determine how to provide 24/7 cover in the AC(s), as well as providing day time IR vascular work in both the AC(s) and NACs. There is a national



shortage of interventional radiologists (in 2012, 56% of advertised IR posts were unfilled (16).

- 4.5.13 The impact of change on medical training schemes needs assessment. In many cases interventional radiologists also provide an elective diagnostic radiology service at their base trusts (22).
- 4.5.14 The fact that demands on IR services is likely to increase, thus creating greater pressure to recruit and retain a sustainable workforce, should be taken in to account.
- 4.5.15 Staffing for an IR service should conform to the guidelines indicated in the Royal College of Radiologist Guidelines (17).

## **Other Consultant Specialties**

- 4.5.16 The requirements for vascular anaesthetists and their workforce issues should be taken in to account. In addition, the implications for the general surgery and orthopaedic surgery consultant workforce in NACs resulting from any change to the current two vascular hubs should be considered, as these two specialties will need to work in a coordinated way with vascular surgeons in managing vascular patients with complications.

## **Vascular Trainees**

- 4.5.17 There should be a clear acknowledgement of the current limited numbers of vascular surgical trainees, and the potential benefits of one large centre attracting trainees and training numbers, by providing higher volumes of activity, developing sub-specialties, providing a high quality training experience and more opportunities for research.
- 4.5.18 The Case for Change needs to assess the junior doctor teams currently working within the Kent and Medway vascular units, clarify how many trainees are in each unit and determine whether they also work within emergency surgical on call rotas for general surgery. It should also determine whether their respective vascular trainees have access to IR suites for training in interventional vascular radiology techniques and whether this training is supported by the vascular consultant interventional radiologists. The lack of an A&E departments co-located with the AC (such as is currently the case at Kent and Canterbury Hospital) will have an impact on the ability

of junior doctors sent by HEKSS for their training in vascular surgery to satisfy the SAC curriculum at their ARCP meetings. Currently ST3 and ST4 trainees in vascular surgery require on call experience in emergency general surgery and this training experience may not be met without A&E input.

## **Vascular Nurse Specialists (VNS)**

4.5.19 VNSs are increasingly important in the delivery of vascular services, especially in NACs. VSGBI 2014 (6) specifies that each NAC should have at least one VNS dedicated to covering the work at each site, in addition to those required at ACs. The role will need to be reviewed and developed to support consultant colleagues in the vascular network, and the VNSs will be the principle point of liaison between the network sites. The Case for Change should describe these requirements.

4.5.20 The current VNS workforce and activity is not referred to in the Case for Change. It is our understanding that EKHUFT has five vascular nurse specialists providing claudication, AAA and leg ulcer clinics on three sites, doing joint clinics with consultants, and community clinics. We are aware of two VNSs in Kent and Medway, but not what services they currently offer. There is a likely need to recruit more VNSs to properly cover the NACs, and especially if seven day working is planned.

4.5.21 The provision of VNS training schemes nationally is a serious concern at present, and a workforce training and recruitment plan needs to be in place for Kent and Medway. The St Georges course will probably not run again, the Edge Hill course is not being run after 2016, and the Imperial College course didn't run this year.

## **Vascular Laboratory Scientists**

4.5.22 Include workforce plans with respect to the provision of vascular laboratories, working at NACs as well as ACs, which includes vascular scientists and dedicated ultrasound staff. There is currently no evidence of where or how these services are currently provided. The current shortages in these professional groups are a further potential driver to more centralisation.

## **Interventional Radiology Nurses and Radiographers**

4.5.23 Interventional radiology services require full support from specialist radiology nurses, and vascular radiographers. No data on this workforce is provided and there is a

shortage of suitably qualified staff, that should be highlighted as needing consideration in planning (18).

## **Other Allied Health Professionals**

4.5.24 There should be planning for all the multi-disciplinary workforce involved in vascular care, and for their training, in ACs, NACs and in the community, including:

- Vascular technologists and scientists
- Diabetic and non-diabetic podiatrists and diabetic foot care MDTs (19,20).
- Radiographers
- Physiotherapists
- Occupational Therapists
- Critical Care Paramedics
- Pharmacists

## **4.6. Teaching and research**

4.6.1 There should be greater reference to the expected and potential clinical research activity in the AC(s).

4.6.2 ACs and vascular networks should be planning how their workforce models integrate teaching, training and research initiatives, including the development of new skills, technology and innovation.

## 5. Suggested criteria for the decision management tree

From our recommendations, we have developed a list of potential criteria to use for either stage 1 or 2 decision making processes, to supplement those provided to us in the draft Case for Change. The details provided of the two stages of the decision making process (from long list to short list, then from short list to deciding on the preferred option pre-public consultation) were not considered sufficient for the SECS to align potential criteria to a specific stage.

1. Describe in detail how the arterial centres and associated non-arterial centres within the proposed network would inter-relate, and the relevant range of clinical pathways between them. Throughout, there should be evidence of equity of access to the AC, wherever the patient lives or whichever referring hospital they come from.
2. Provide an overview of the whole pathway of care, from pre-hospital emergency care, through to rehabilitation in the community, and how the services and providers would join up and coordinate in delivering high quality outcomes
3. Define the proposed catchment population for the AC, and then model the future activity, based on demographic trends and the impact of preventative measures over the coming 10-15 years. This activity modelling should separately consider elective and urgent work, the impact of endovascular treatment developments, and non-aortic vascular surgery.
4. Demonstrate the feasibility of delivering the capacity required by the AC ((inpatient beds and operating theatre capacity in particular) in the host hospital.
5. Demonstrate how the host hospital will be able to deliver safe and effective general urgent and emergency care services, which high quality care for vascular patients is dependent upon.
6. Proposals assuming repatriation of any patient pathways currently served by south London vascular units should be supported by credible assumptions about the deliverability of such re-direction of work.

- 7.** Detail the full range of clinical co-dependencies (in particular the critical co-located services) required by ACs (and NACs), and how they will be provided by the host hospital (with reference to the national service specification and VSGBI guidance 2012 and 2014, together with the SECS co-dependencies report 2014 (1,4,6)).
- 8.** Explicitly describe the workforce, the skills required and the challenges across the whole pathway, and describe the workforce recruitment, training and education programme plans across the multidisciplinary team to address these challenges. Particular detail on the vascular consultant workforce and the vascular nurse specialist workforce should be provided, taking account of the requirement for care delivery at NACs as well as the ACs.
- 9.** Demonstrate an effective and sustainable interventional radiology service for the AC and its supporting NACs. There needs to be clear plans not only for how a 24/7 IR service is provided at the AC, but also how at least a five day IR service is provided in NACs, how broader non-vascular IR services are provided for all acute hospitals within the network, and how the required radiology rotas in those hospitals are maintained.
- 10.** Describe specifically the aspirations for a high quality service, for the vascular network in general and the AC in particular, and the metrics that would be used to demonstrate achievement of the quality service.
- 11.** Describe how the full range or requirements of the national service specification, and the VSGBI 2012 and 2014 (4,6) recommendations, would be met, and if not, provide a justification, or a timescale by when they would be met.
- 12.** Describe how urgent and elective carotid surgery would be provided for patients with TIAs and strokes for the network.
- 13.** Describe how the renal units serving Kent and Medway would be supported in delivering a high quality vascular access service for dialysis patients. This should include the elective and emergency aspects of renal vascular access care, and involve close partnership with the IR service.
- 14.** Present clear travel times within the proposed network that the AC would be centred within. This should be both from home locations across the catchment area, and from the networked NACs. Demonstrate how these travel times would be within safe limits for emergency transfer to the AC to receive the necessary care.

15. Describe the ambition for delivering teaching, specialist training and clinical research at the AC, and the commitment to support staff in providing these activities (through job planning and other enablers), and in partnership where appropriate with universities, medical schools, the CLRN and KSS's AHSN.

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## 7. Glossary

<b>Acronym/intervention</b>	<b>Definition</b>
<b>AAA</b>	<b>Abdominal Aortic Aneurysm</b>
<b>AC</b>	<b>Arterial Centre</b>
<b>Angioplasty</b>	The technique of mechanically widening narrowed or obstructed arteries usually by endovascular balloon inflation.
<b>Arterial surgery</b>	A range of procedures to prevent death from aortic aneurysm, prevent stroke from carotid artery disease, and prevent lower limb amputation from peripheral arterial disease and diabetes.
<b>BSIR</b>	<b>British Society of Interventional Radiology</b>
<b>CCPs</b>	<b>Critical Care Paramedics</b>
<b>CE</b>	<b>Carotid Endarterectomy:</b> A surgical procedure to unblock a carotid artery (blood vessels that supply the head and neck).
<b>CEA</b>	<b>Carotid Endarterectomy Audit</b>
<b>CHD</b>	<b>Coronary Heart Disease</b>
<b>CRGs</b>	<b>Clinical Reference Groups:</b> The specialised commissioning function of NHS England is supported by a devolved clinical leadership model. Seventy-five Clinical Reference Groups (CRGs) covering all prescribed specialised services draw membership from each of the 12 geographical areas in England. CRGs bring together clinicians, commissioners, and Public Health experts with the patients and carers who use specialised services. Members are volunteers who have a particular interest, knowledge or experience of a specific area of specialised healthcare and wish to contribute to its development. They are responsible for preparing national specialised service level strategy and developing specialised service contract products such as service specifications and commissioning policies.
<b>Derogation</b>	A time limited agreement reached between commissioners and providers that one or more key national standards or requirements, as defined by commissioners, will not be met during the contractual period. Clinical service derogation would only be agreed where assurance has been provided that acceptable alternative service arrangements are in place, ensuring patient safety and acceptable quality standards of care, and where there is a detailed action plan in place to achieve compliance within agreed timescales.
<b>EKHUFT</b>	<b>East Kent Hospitals University Foundation Trust</b>
<b>EVAR</b>	<b>Endovascular Aneurysm Repair</b> (a graft placed under x-ray guidance, usually via the groin arteries)
<b>GSTT</b>	<b>Guy's and St Thomas' Foundation Trust</b>
<b>HDU</b>	<b>High Dependency Unit</b>

<b>IR / Interventional radiology</b>	A medical sub-specialty of radiology utilising minimally-invasive image-guided procedures to diagnose and treat vascular disease.
<b>ITU</b>	<b>Intensive Treatment Unit</b>
<b>JHWS</b>	<b>Joint Health and Wellbeing Strategies</b>
<b>JHWB</b>	<b>Joint Health and Wellbeing Board</b>
<b>JSNA</b>	<b>Joint Strategic Needs Assessment</b>
<b>K&amp;M</b>	<b>Kent and Medway</b>
<b>MDT</b>	<b>Multi-Disciplinary Team</b>
<b>MFF</b>	<b>Market Forces Factor</b>
<b>MFT</b>	<b>Medway Foundation Trust</b>
<b>NAAASP</b>	<b>National Abdominal Aortic Aneurysm Screening Programme</b>
<b>NAC</b>	<b>Non Arterial Centre</b>
<b>NCEPOD</b>	<b>National Confidential Enquiry into Patient Outcome and Death</b>
<b>NSS</b>	<b>National Service Specification</b>
<b>NVR</b>	<b>National Vascular Register</b>
<b>PAD</b>	<b>Peripheral Arterial Disease</b>
<b>PACS</b>	<b>Picture Archiving and Communication System</b>
<b>POVS</b>	<b>Provision of Vascular Services</b>
<b>PPE</b>	<b>Patient and Public Engagement</b>
<b>PROM</b>	<b>Patient Reported Outcome Measures</b>
<b>QOF</b>	<b>Quality Outcomes Framework</b>
<b>SECAmb</b>	<b>South East Coast Ambulance Trust</b>
<b>SECS</b>	<b>South East Clinical Senate</b>
<b>SECS ECRG</b>	<b>South East Clinical Senate Expert Clinical Review Group</b>
<b>TIA</b>	<b>Transient ischaemic attack</b> or 'mini stroke', caused by a temporary disruption in the blood supply to part of the brain.
<b>VNS</b>	<b>Vascular Nurse Specialist</b>
<b>VSGBI</b>	<b>Vascular Society of Great Britain and Ireland</b>

# Appendix A. Quality measures and definitions

## Key Standards and Metrics of a Quality Vascular Network:

### Extracts from:

- 2013/14 NHS Standard Contract for Specialised Vascular Services (Adults)
- Vascular Society 2012: Provision of services for patients with vascular disease
- Vascular Society 2014: Provision of services for patients with vascular disease (non-arterial centres).

- All arterial surgery should be delivered in an arterial centre, with the specified infrastructure.
- Adequate population volumes; A minimum population of 800,000 would be appropriate but for a world class service a larger catchment area will be required.
- A minimum population of 800,000 is considered necessary for an AAA screening programme.
- The arterial centre in the network will perform a high volume of vascular procedures per year. There is debate about the minimum/ideal volume of procedures. However, 6 surgeons, each with around 10 AAA procedures per surgeon per year would indicate at least 60 AAA procedures per centre.
- There would be a commensurate number of lower limb procedures in the arterial centre.
- The arterial centre will also perform a high volume of carotid endarterectomy procedures. A minimum number of 50 is indicated.
- Endovascular aneurysm repair (EVAR) will only be performed in specialist centres by clinical teams experienced in the management of AAAs.
- Vascular centres providing post screening AAA repair must meet all the standards set out by the NAAASP.
- In-patient arterial surgery and vascular interventional radiology will be available 24/7 within the arterial centre.
- 24/7 Interventional radiology available.
- Care of patients will be managed through regular multi-disciplinary team meetings which will occur at least once a week.
- Provider networks will work towards the aim of all leg amputations being undertaken in arterial centres by 2015.

### Workforce metrics:

- Provision of Vascular surgery by specialist vascular surgeons.
- Provision of Vascular Interventional Radiology by specialist IR consultants.
- Provision of Vascular service by a specialist Multi-disciplinary team.
- Acceptable on call rota requirements, i.e. no less than 1:6.
- A minimum of 6 Arterial surgeons and Interventional radiologists.

### Infrastructure and facilities:

- Refer to 2013/14 NHS Standard Contract for Specialised Vascular Services (Adults) (pages 9-10).

### Applicable Service Standards: Applicable national standards e.g. NICE, Royal College

- Refer to 2013/14 NHS Standard Contract for Specialised Vascular Services (Adults) (pages 13-14).

### Key Outcomes

- Refer to 2013/14 NHS Standard Contract for Specialised Vascular Services (Adults) (pages 15-16).

#### 4. Key Service Outcomes

##### Abdominal Aortic Aneurysm

Metric	Agency	Definition	Target	Acceptable
Mortality	NVD/NVR	Unit overall elective AAA in hospital mortality (by end 2013)	≤3.5%	<6%
Length of Stay	NVD/NVR	LOS for elective AAA repair	<7d	<10d
Number of AAA repairs per arterial centre	NVD/NVR	Number of AAA repairs (total – elective and emergency)	>60	>50
Mortality: elective repair	NVD/NVR	All cause mortality at 1 year (collect from ONS)	≤15%	≤20%
Time to treatment	NAAASP	% of subjects with AAA ≥5.5cm deemed fit for intervention operated on by vascular specialist within eight weeks	≥80%	≥60%

##### Carotid Intervention

Metric	Agency	Definition	Target	Acceptable
Stroke rate	NVD/NVR*	Stroke rate 30 days after surgery	<2%	<3%
Mortality	NVD/NVR	Death rate 30 days after surgery	<1%	<2%
Referral	National Stroke Strategy	Delay from symptom to treatment for suitable patients (by 2013)	<7 days	<14 days

\*National Vascular Database/National Vascular Registry

##### Peripheral Arterial Disease – Lower Limb Bypass (PAD)

Metric	Agency	Definition	Target	Acceptable
Mortality	NVD/NVR	Death 30 days after surgery	<5%	<10%
Amputation free survival	NVD/NVR	Amputation free survival 1 year post surgery	Needs benchmarking in NVR	

# Appendix B Expert Clinical Review

## Group membership and declarations of interest.

### Expert Clinical Reference Group Membership

NAME	JOB TITLE
<b>Lawrence Goldberg</b>	SECS Chair, and Chair of ECRG Consultant Nephrologist, Brighton and Sussex University Hospitals NHS Trust
<b>Mike Brooks</b>	Consultant Vascular Surgeon and Clinical Lead for the Sussex Vascular Network Brighton and Sussex University Hospitals NHS Trust
<b>Maxine Bullen</b>	Independent Patient and Public Engagement Facilitator South East Coast Clinical Networks and Clinical Senate
<b>Patrick Chong</b>	Consultant Vascular & Endovascular Surgeon, Frimley Health NHS Foundation Trust
<b>David Davis</b>	Clinical Lead AHPs, SECS Council, NHS Pathways Clinical Lead and Deputy Lead Governor, SECamb, NHS111 Workforce Programme National Clinical Lead NHS England NHS England, SECamb
<b>Prof Gordon Ferns</b>	Professor of Medical Education at Brighton and Sussex Medical School, Honorary Consultant in Metabolic Medicine and Clinical Director of CRN:KSS BSMS and CLRN
<b>Nick Gray</b>	Critical Care Paramedic Coordinator, SECamb
<b>Allan Odurny</b>	Former Consultant Vascular Radiologist, University Hospital Southampton NHS Foundation Trust
<b>Ed Palfrey</b>	Clinical Integration Director & Consultant Urologist, Frimley Health NHS Foundation Trust
<b>Mohit Sharma</b>	SECS Council member and Centre Consultant PHE. Public Health England
<b>Sue Stone</b>	GP and Clinical Lead for Planned Care. Coastal West Sussex Clinical Commissioning Group
<b>Martin Turns</b>	Lead Podiatrist in Diabetes (Brighton and Hove) Sussex Community NHS Trust
<b>Sue Ward</b>	Vascular Nurse Specialist, The Vascular Assessment Unit, Brighton and Sussex University Hospitals NHS Trust
<b>Eleanor Langridge</b>	Programme Manager, SECS
<b>Ali Parsons</b>	Joint Associate Director, SCNs and Clinical Senate NHS England South (South East), and SECS Manager

## ECRG Declarations of Interest<sup>1</sup>

<b>NAME</b>	<b>Personal pecuniary interest</b>	<b>Personal family interest</b>	<b>Non-personal pecuniary interest</b>	<b>Personal non-pecuniary interest</b>
<b>Lawrence Goldberg (Chair)</b>	None	None	None	None
<b>Mike Brooks</b>	None	None	None	None
<b>Maxine Bullen</b>	None	None	None	None
<b>Priscilla Chandro</b>	None	None	None	None
<b>Patrick Chong</b>	None	None	None	None
<b>David Davis</b>	None	None	None	None
<b>Prof Gordon Ferns</b>	None	None	None	None
<b>Nick Gray</b>	None	None	None	None
<b>Allan Odurny</b>	None	None	None	None
<b>Ed Palfrey</b>	None	None	None	None
<b>Mohit Sharma</b>	None	None	None	None
<b>Su Stone</b>	None	None	None	None
<b>Martin Turns</b>	None	None	None	None
<b>Sue Ward</b>	None	None	None	None
<b>Eleanor Langridge</b>	None	None	None	None
<b>Ali Parsons</b>	None	None	None	None

1. A conflict of interest can be defined as any situation in which a member's responsibilities or interests, professional or personal, may, or may appear, to affect the impartiality of the clinical senate's advice. Members of the ECRG were also required to act independently, i.e. they do not represent their employing organisation or professional body.

SECS's Standards of Business Conduct and Conflict of Interest Policy are available on request.

# Appendix C. The clinical co-dependencies of arterial and non-arterial centres

The SECS published their report titled 'The Clinical Co-Dependencies of Acute Hospital Services' in 2014 (1). Vascular hubs (ACs), and spokes (NACs) were two of the large acute services reviewed, both for their dependencies on other clinical services, and the dependencies of the other large acute services on vascular. The full report, grid and analysis can be found on the SECS website at <http://www.secsenate.nhs.uk/news/clinical-co-dependencies-acute-hospital-services-clinical-senate-review/>. An extract from the grid, which summarises the dependencies of ACs and NACs, is shown below in table 5.

Using the colour coding used in the SECS report:

- A **P**urple-coded dependency indicates that the supporting specialty should be *based* on site.
- A **R**ed-coded dependency indicates that that the service should be able to come to the patient, but if not based in the same hospital, should be provided by visiting, or in reach from another site (either in person, or via telemedicine links if appropriate).

**The recommendations for ACs and NACs for on-site provision from other clinical services.**

<b>Clinical specialties and functions supporting Vascular Surgery AC and NACs</b>	<b>Arterial Centres (Hub)</b>	<b>Non Arterial Centres (Spoke)</b>
A&E /Emergency Medicine	P	R
Critical Care (adult)	P	P
General Anaesthetics	P	P
Interventional Radiology	P	P (Mon-Fri day time)
General Surgery (Upper GI and Lower GI)	P	P
Urgent GI Endoscopy	R	(not required on site)
Orthopaedics	R	R
Trauma	R	(not required on site)
Urology	R	(not required on site)
Acute and General Medicine	P	R
Acute Cardiology	P	(not required on site)
Elderly Medicine	R	(not required on site)
Hyper-acute Stroke Unit	P	(not required on site)
Respiratory Medicine (including bronchoscopy)	R	(not required on site)
Medical Gastroenterology	R	(not required on site)
Diabetes and Endocrinology	R	R
Nephrology (not including dialysis)	R	(not required on site)
X-ray and Diagnostic Ultrasound	P	P
CT Scan	P	P
MRI Scan	P	P
Acute Mental Health Services	R	R
Palliative Care	R	(not required on site)
Physiotherapy	P	P
Occupational Therapy	P	P
Speech and Language	R	R
Dietetics	R	R
Clinical Microbiology/Infection Service	R	(not required on site)



## Appendix D. Clinical Senates and the clinical review process

The South East Clinical Senate (SECS), along with the other 11 clinical senates in England, is a non-statutory body set up to provide independent strategic clinical advice to health care commissioners and systems, including the CCGs, NHS England and Health and Wellbeing Boards of Kent, Surrey and Sussex.

SECS aims to provide advice that is evidence based and impartial, informed through engagement with a broad range of health and care professionals, together with patients and public, in its formulation.

Clinical senates are available to provide a clinical component to the assurance process of service change and reconfiguration proposals, to give confidence to patients, staff and the public that proposals are well thought through, have taken on board their views and will deliver real clinical benefits to patients.

NHS England's 'Planning and delivering service changes for patients' (December 2013) (22) describes the high level framework and oversight of service change, supported by the document 'Effective Service Change: A Support and Guidance Toolkit (23) , which details the assurance process which NHS England applies to service change proposals.

The guidance describes the clinical assurance role in this process for clinical senates as:

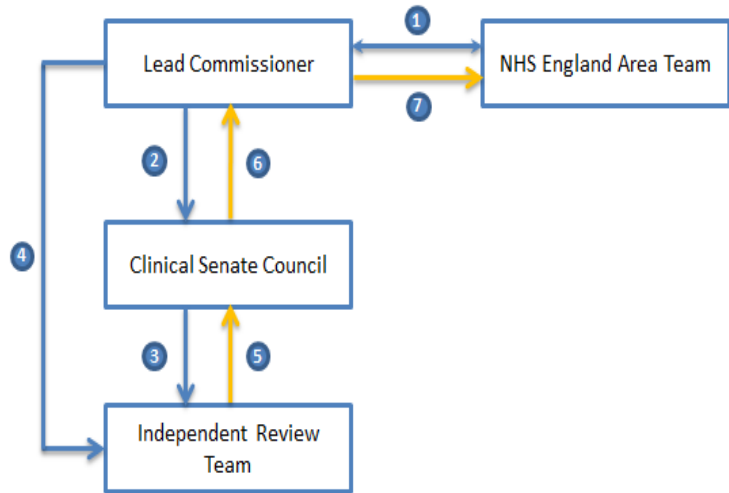
*The aim of clinical assurance is to establish whether the proposed changes are supported by a clear clinical evidence base and will improve the quality of the service provided. The decision to request an external clinical assurance review should follow discussions between the relevant commissioner(s), area teams at the strategic sense check – with input where required from the local clinical senate, who can bring multi-disciplinary strategic advice to the development of proposals.*

The advice provided by Clinical Senates is part of the broader assurance process and is considered alongside assurance of the other aspects of a service change proposal.

This review process is described in figure 1. below, and this current Clinical Senate review has followed this process.

The Independent Clinical Review Process:  
a worked example

- 1 NHS England agrees level of assurance required with lead commissioner (at stage 1 of NHS England assurance process)
- 2 Lead commissioner requests clinical senate advice as part of assurance process. Clinical senate and lead commissioner agree terms of reference for independent clinical review
- 3 Clinical senate establishes independent review team and appoints chair of review
- 4 Lead commissioner provides key documents to independent review team and supports other review requirements
- 5 Review undertaken and draft report sent to Clinical Senate Council
- 6 Clinical Senate Council agrees final report and returns to lead commissioner
- 7 Report submitted by lead commissioner as part of NHS England's assurance process.



# Appendix E. South East Clinical Senate Council

## Members

NAME	ROLES
<b>Lawrence Goldberg</b>	Clinical Senate Chair Consultant Nephrologist, Brighton and Sussex University Hospitals NHS Trust
<b>Amanda Allen</b>	Therapy Manager, Maidstone and Tunbridge Wells NHS Trust
<b>Christopher Allen</b> (Deputy to Amit Rai)	Consultant in Dental Public Health Public Health England Kent Surrey Sussex Centre
<b>Sally Allum</b>	Director of Nursing & Quality, NHS England South (South East)
<b>Katie Armstrong</b>	Clinical Chief Officer, NHS Coastal West Sussex Clinical Commissioning Group. General Practitioner
<b>Mandy Assin</b>	Consultant Psychiatrist, Sussex Partnership NHS Foundation Trust
<b>Michael Bosch</b>	General Practitioner, Horley, Surrey
<b>Maxine Bullen</b>	Independent Patient and Public Engagement Facilitator
<b>David Davis</b>	Paramedic, Clinical Informatics Advisor, Medical Directorate, NHS England, NHS Pathways Clinical Lead, SECamb
<b>Claire Fuller</b>	Clinical Chair, Surrey Downs CCG. General Practitioner
<b>Peter Green</b>	Chief Clinical Officer, General Practitioner, NHS Medway CCG. General Practitioner
<b>Des Holden</b>	Medical Director, Surrey and Sussex Healthcare NHS Trust
<b>Linda Honey</b>	Head of Prescribing and Medicines Commissioning, NHS North West Surrey CCG
<b>Caroline Jessel</b> (Deputy to James Thallon)	Clinical Strategy Lead, Kent and Medway Area Team Sustainability Lead, NHS England South, South East
<b>Tony Kelly</b>	Consultant Obstetrician & Gynaecologist, Honorary Clinical Senior Lecturer & Associate Medical Director for Quality & Innovation Brighton & Sussex University Hospitals
<b>Rachael Liebmann</b>	Registrar and Consulting Lead, Royal College of Pathologists. Clinical Director of Pathology Services, Queen Victoria Hospital, East Grinstead. Consultant Pathologist
<b>Carolyn Morris</b>	Patient and Public Engagement Representative
<b>Edward Palfrey</b>	Consultant Urologist / Clinical Integration Director, Frimley Health NHS Foundation Trust
<b>Amanda Parker</b>	Director of Nursing & Quality, Western Sussex Hospitals Foundation Trust
<b>Jo Pritchard</b>	Managing Director, CSH Surrey
<b>Amit Rai</b>	Chair, Dental Local Professional Network, Medical Directorate, NHS England South (South East)

<b>Mohit Sharma</b>	Centre Consultant, Public Health England – South East
<b>Philippa Spicer</b>	Managing Director, Health Education England, Kent, Surrey & Sussex
<b>James Thallon</b>	Medical Director Kent and Medway Area Team, NHS England South (South East). General Practitioner