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Purpose of Paper:	To update the JHOSC on the Vascular review process.

Kent and Medway Vascular Services Review

Introduction

This paper updates on progress of the current Vascular service review

1. Review context

The Kent and Medway review of specialist Vascular services commenced in December 2014 in response to non compliance by the two local providers against the national specification. This resulted in a commissioner led derogation; services allowed to continue with delivery whilst solutions are identified to ensure compliance.

2. The Case for Change

This has previously been shared with the JHOSC members and is publicly available on the NHS England website
https://www.england.nhs.uk/south/2016/02/19/vascular-service-review-2/

The Case for Change demonstrates the key components of the national specification and the national clinical recommended practice from the Vascular Society. These have both been clinically led following the Aortic Abdominal Aneurysm Quality Improvement Programme and make a clear evidence based case for improving outcomes for patients. The delivery of the specification criteria and the guidance has seen a considerable improvement in patient outcomes and in particular in improving the mortality rates for abdominal aneurysm repair.

Following the delivery of the specification in 2013 these have improved dramatically from 8% to 1.5%, with a requirement for units to move to below 3%.

The clinical evidence shows that where there are high volumes of the vascular procedures being undertaken the better the outcomes for patients. This also shows that this care must be available 24/7 and delivered by skilled specialists. Other key features include improving the assessment to surgery time which improves when working in a network model with adequate staffing levels.

2.1 Current K&M position/performance

Kent and Medway residents receive their Vascular care from three main providers; East Kent Hospitals University Foundation Trust (EKHUFT), Medway Foundation Trust (MFT) and Guys and St. Thomas' Hospitals Trust (GSTTH)
Neither EKHUFT nor MFT meet the national specification.
The key areas of non-compliance are:

1. Inadequate population volumes to generate adequate levels of activity
2. Inadequate or borderline numbers of the main procedures being undertaken
3. Inadequate numbers of specialist staff in particular consultant surgeons and Interventional radiologists.
4. There are concerns relating to the specialist facilities available.

There are also concerns across the services re sustainability due in particular to the low workforce numbers.

Whilst the outcome measures at EKHUFT and MFT are within the agreed acceptable levels there is a considerable range across the providers ie from 1.1 to 4.6 for mortality rates for Abdominal Aneurysm repairs.
GSTTH meets the national specification.

Risk adjusted Mortality rates; AAA/CE (NVR data September 15)	MFT 4.6%/ 4.0%	EKHUFT 1.1%/ 1.0%	GSTTH 0.6%/ 3.5%	All within national tolerance

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The K&M Vascular Review case for change made the following recommendations

- To recognise that there is a Case for Change if services in Kent and Medway are to comply with the national specification and clinical best

practice guidance, ensuring both quality and service sustainability of vascular services.

- To undertake an option appraisal process to address the case for change.

- To develop and agreed preferred solution that addresses the case for change.

3. Options Appraisal

The criteria used in the options appraisal are set within the National specification and the Vascular Society Provision of Vascular Services. This includes;

- Minimum population volumes
- Minimum procedures numbers undertaken
- Minimum staffing numbers for consultant surgeons and Interventional radiologists.
- Specialist facilities including dedicated hybrid theatres and wards.
- Targets for key outcomes measures.
- To work within a network, using a Hub (in patent unit) and Spoke (outpatient and diagnostic units) delivery model.

The options appraisal process identified a register of options that were then assessed against the national criteria.

The Clinical Reference Group (CRG), which is constituted by local clinicians and external experts developed a clinical vision that supported their appraisal. This was supported by the review programme board

'Vascular services are a specialised area of healthcare, which evidence has shown, will benefit from organisation into larger centres. These centres should cover a population big enough to facilitate significant volumes of activity in all areas of service. There must be a robustly staffed workforce able to deliver services 24 /7, 365 days of the year. There is an opportunity to ensure that excellence in patient care and outcome can be provided and the resource is always available for the vascular service to continue to improve on the type and standards of care provided. In Kent and Medway the opportunity exists to develop this. Establishing a vascular service of excellence will offer the opportunity for a much improved and comprehensive service to patients. In particular the right model of care could deliver the opportunity to provide more local care to Kent and Medway residents and the type of care could include more complex procedures. Such a centre(s) will be better able to embrace new technology and innovation in practice. A regional centre(s) of excellence is most likely to facilitate repatriation of patient flows. Such centres are most likely to be able to attract the highest calibre workforce and offer sustainability. The training boards will look to centres of excellence to be involved in training the future generation of vascular clinicians. This not only benefits the service but invests in the future provision of excellence in patient care. Suitably sized

centres with the appropriate population could offer opportunity for quality audit and research.'

- **The vision of the clinical teams in Kent and Medway is to develop and deliver a model of care for vascular services that could offer all of these benefits.**

The CRG identified through the initial appraisal two possible options that were then worked through in detail.

The two options are for;

1. A network model with two inpatient centers and a number of spokes.
2. A network model with one inpatient centre and a number of spokes.

The appraisal considered the ability to meet the aforementioned criteria and the quality and safety issues of each option.
This included consideration of;

- delivering a safe sustainable staffing rota and availability
- travel times
- essential co-dependencies
- current activity and possible impact of future population growth.

3.1 Travel and activity analysis.

There is no recommended criteria for travel times for vascular patients and the review has followed the guidance from the Vascular Society.

Travel times and distances are always an understandable concern for patients with some perceptions that travelling further for surgery will put patients at greater risk. Other patients note the need to get to specialist care quickly and recognise this may require travelling further.

The Vascular Society (VS) guidance notes that protocols must be developed, particularly by the accident and emergency department and ambulance service, to allow transfer of vascular emergencies to the adjacent vascular unit without delay. There is recognition that whilst most hospitals are within an hour from their neighbor, the key priority is to transfer the patient to a vascular unit, even if the travel time is beyond the hour, as evidence shows that this dramatically improves patient outcomes.

" Patient survival after a ruptured aortic aneurysm is between 5-15 percent if they stay in a hospital with no vascular surgeon, compared to 35-65 percent if transferred to an adjacent vascular service. This advantage persists even with up to four hours of hypotension, although patients who suffer a cardiac arrest are unlikely to survive transfer."

The VS guidance recommends that vascular services should be arranged to minimise transfer times.

A mapping of emergency travel times shows that all Kent and Medway residents are able to access the two current providers within 60 minutes. London hospitals are able to receive patients within an hour if they live in the north and north west of the county.

Travel time mapping was undertaken by the Geographic Information System unit at SW CSU. Travel times were calculated both for ambulance and for private transport.. The work also considered the emergency admission rates across Kent and Medway for circulatory disease.

Emergency admission rates were calculated on hospital episode statistics for the period April 2013 to March 2014. Rates of emergency admissions were mapped at the Middle Super-Output Area level (MSOA). MSOAs are geographic areas created by groupings of postcodes to create areas of similar population.

The key findings of the mapping show that:

- Medway Maritime and Kent & Canterbury hospitals are equally accessible within 45 minutes
- London hospitals are accessible within 60 minutes by ambulance only to areas in the north and western quarter of Kent.
- A service centred on Medway Maritime hospital would be over 60 minutes by ambulance from the east coast around Thanet which has a high number of admissions of circulatory disease (n = 1699). A service centred on Kent & Canterbury would over 60 minutes by ambulance from Tunbridge Wells, but this area has lower number of admissions than around Thanet (n = 796).

Medway Maritime hospital is accessible to 39% of the population within 30 minutes by ambulance, 72% within 45 minutes and 92% within 60 minutes. This falls to 28%, 53% and 80%, respectively, for private transport. The areas not well served are in the east and south coasts of Kent.

In comparison, Kent & Canterbury covers 28% of the population within 30 minutes by ambulance, 71% within 45 minutes and 95% within 60 minutes. This falls to 18%, 49% and 80%, respectively, for private transport. The areas not well served are in the West and South of Kent.

Therefore, Medway Maritime covers a greater proportion of the population within 30 minutes, but as travel time increases to 45 minutes there is little difference in terms of the proportion of the population covered, just the geographic area covered.

From Medway Maritime the most inaccessible area is the east coast around Thanet, and for Kent & Canterbury it is south-west Kent around Tunbridge Wells.

In terms of absolute numbers of emergency admissions for circulatory conditions there are more in the west of Kent compared to the east, reflecting the larger overall population.
However when considering admission rates of admission analysis shows that rates are generally higher in the south and east of Kent, and this probably reflects difference in epidemiological risk-factors, with a higher proportion of older people living in the east of Kent.

Table one; shows emergency travel times for cardiovascular disease across Kent and Medway

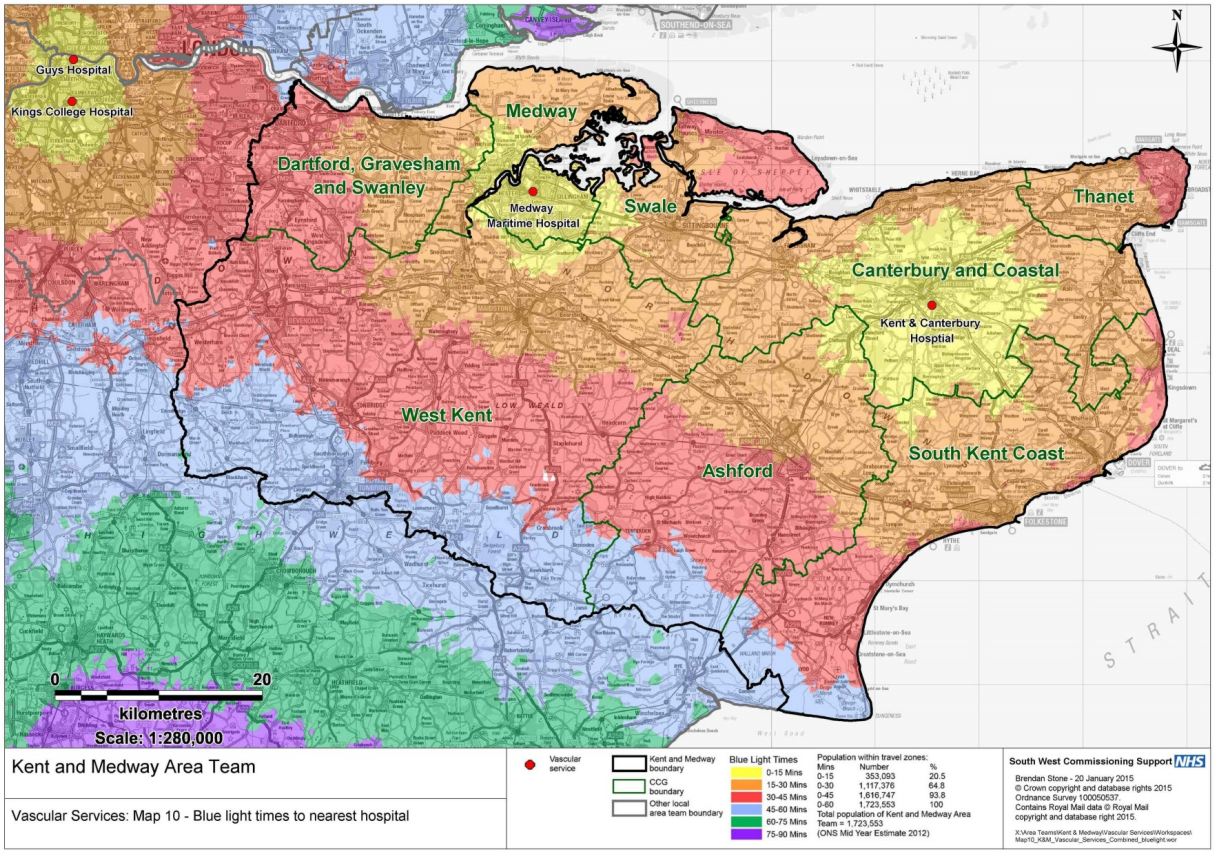
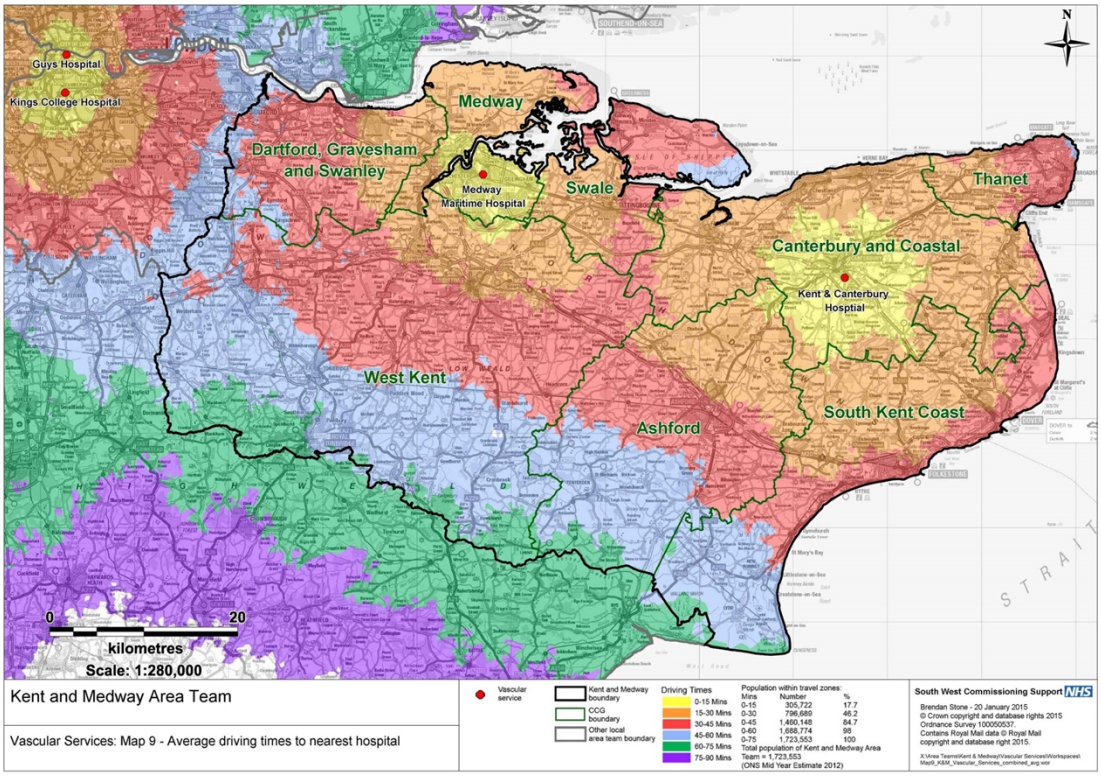


Table two; shows private travel times across Kent and Medway.



SECAmb also undertook a review of transfer times for vascular patients which shows that the majority of emergency transfers (ave 75%) are across East Kent to Kent and Canterbury Hospital.

The key variable for travel times relates to the patient's condition rather than the time of day or distance to be travelled.

Secamb achieve an emergency travel time within 60 minutes to both KCH and MMH and for a single in patient centre in the future the main areas affected would be the far West Tonbridge area and the far south east parts of Thanet, dependent on the site.

The options appraisal process has reviewed the core activity for 2013/14 and most recently 2014/15, this has specifically focused on the inpatient flows and usage in EKHUFT and MFT. The review has analysed data from the hospital episodic statistics (HES), the Trusts data and from the National Vascular registry (NVR) to ensure the most accurate activity numbers and patient flows are considered.

Patients will still be able to use the pathway from Tunbridge Wells and Darent Valley hospitals into St.Thomas' hospital in London.

Patients will continue to be able to have local care through their nearest general hospital for all out patient care including monitoring, interventions and management, pre and post surgical care, diagnostics, and day surgery

(where appropriate).
The number of patients affected by this change will be around 600 and of that figure it is likely to be circa 300 who will have further to travel for their inpatient care.

MFT serves the Maidstone, Medway and Swale populations and undertakes around 260 vascular in patient procedures. EK serves the total EK population and also treats patients who have been identified through the Abdominal Aneurysm screening programme. (These patients travel from across Kent and Medway for their elective repair of their aneurysm as in patients.) EK performs around 330 vascular in patient procedures.

CCG locality profiles show a high level of cardio vascular need in both Medway and Thanet

The findings demonstrate that there are inadequate population levels to generate the required minimum activity levels to meet the minimum standards set when delivered over two inpatient sites The ability to recruit to two units is currently difficult and would remain so. Running a shared rota may leave patients unsupported in one of the units at certain periods creating an unacceptable clinical risk.

The CRG recommended to the Progarmme Board that option two was the only clinically acceptable option.

4 Option development and clinical delivery model

Option two is a network model that works across a number of spoke sites with a single inpatient centre. This reflects the national recommendation for best practice.

This network model will mean that clear pathways will be place across the vascular network to ensure patients receive a seamless and timely service. The network will be responsible for co-ordinating vascular care across the region, ensuring good communications and maximising the delivery of care in the spoke sites.

The network will also ensure that there are improved and clear pathways with other clinical specialties, in particular Diabetes care especially foot care/clinics. The amputation rates for Kent and Medway residents are high and the development of a clear pathway between Vascular and Diabetes services will enhance the pathway and facilitate earlier intervention in peripheral vascular disease.

All vascular in patient care will take place in the single hub/centre, this will include recovery from surgery as the specialist vascular skills are required until the patient is fit to either return home or to be transferred to rehabilitation care. This is mainly the case for patients needing amputations.

The spoke sites will deliver all out of hospital care and will be delivered through the existing Kent and Medway hospital's building on the current provision at these sites.
This will include the hub site, which will be a spoke for its local population.
The spoke sites will deliver a range of services that seek to keep care as close to home as possible for patients.
This will include:

- Out patients clinics; ie multi-disciplinary clinics, condition specific clinics, one stop shops clinics, nurse led and consultant clinics.
- Pre and postoperative care
- Monitoring and management of vascular conditions ie Peripheral vascular disease,
- Diagnostics and tests
- Day surgery where appropriate.

The specialist vascular team including the consultants and nurses will staff the spoke sites.

As previously reported to the JHOSC, the review programme board has agreed to assess and develop the network model with a single inpatient hub supported by local spokes as the recommended option

4.1 Financial modeling

The review has and is completing identification of the financial envelope relating to the affected activity. This has included the triangulation of Trust and National Vascular register data alongside commissioning data (HES) to ensure that both the capacity and financial planning is robust.
Currently both Trusts report a negative position in relation to the cost of delivering the vascular service due to the low volume numbers and high staff costs.

EKHUFT and MFT are reviewing the impact of any reduction or increase in either activity or finances on their organisation.

4.2 Quality and Equality Impact Assessment

The health impact assessment shows that delivering the key criteria will improve outcomes for K&M Vascular patients.
A detailed quality and equality impact assessment is underway but the equality screening does not show a negative impact on any of the protected characteristic groups.

The key inequality concerns relate to the impact of visiting relatives in particular elderly people who may have difficulty with travel arrangements and low income families who may struggle with additional travel costs.
The travel mapping is currently scoping the range and impact of the in patient travel times between the two current hospital sites. The isochrones show that

both sites are within a one hour travel time in private transport, the detail on the public travel times for relatives is not yet completed.

The review recognises the importance of relatives to be able to visit whilst their relatives are in hospital and the benefits for the patient themselves. The key issue for vascular patients is to have a specialist safe 24/7 day vascular service that optimises their outcome. Considerations on minimising the impact on relatives of a longer travel time will need to be given through the procurement process.

4.3 Co-dependencies

The review has considered the South East Clinical senate report on the Clinical Co-dependencies. These are met through the recommended option. Further consideration of these will be embedded into the procurement due diligence.
Work is currently underway by the CRG to identify the potential impact on other clinical areas, this is mainly relates to access to the vascular service by other clinical teams. Referral pathways already exist for supporting areas such as general medicine, trauma and obstetrics and the future position will build on these.
Interventional Radiology is a key component of the Vascular Service and the clinical delivery model describes how this will operate and considers the impact and mitigation for non-vascular IR work.

The Vascular review has reported into the Kent and Medway Urgent and Emergency care Board and is part of the Strategic Transformation Plan development.

The vascular network model will align to the emerging urgent and emergency care plan and there are no anticipated changes to these sites that would prevent this being delivered at either Trust

5. Patient Priorities

The national clinical reference group that developed the service specification that guides the proposed developments was comprised of patient and carer representatives as well as clinical and commissioning experts from across England and representative of the Vascular Society of Great Britain throughout its development. Following this a national programme of public and patient engagement informed the production of the final service specification that specialised commissioning teams have now been asked to implement across England. NHS England's response to the public consultation can be located at:

http://www.england.nhs.uk/wp-content/uploads/2013/07/consult-ssscp-13-14-sum.pdf

The Kent and Medway review has built on the national engagement and consultation work to reflect and consider local needs and priorities. This commenced with a number of Listening Events where key priorities were identified. These included the ability to make choices, to have good information and communication available. To have the right staff available 24/7, with speedy access in an emergency and smooth access to elective care. Early recognition of vascular disease was important and a network that could improve this was seen as positive**.**

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.

A subsequent qualitative deliberative event in February brought together patients, relatives, clinicians and some public representatives. The event considered the recommended option from a patient perspective and considered in detail the patient journey.

The event was attended by the Progarme Board, and a vascular society representative who was able to describe the findings form other review and describe his own organisations experience.

The event also considered the priorities for the patients to be considered in the procurement process.

Detailed discussions were had and people were able to express their views openly and to challenge both the clinicians and the review leads.

The event identified a number of people expressing an interest in being part of the procurement process as expert patients.

The clinical delivery model and the procurement process have/will be adapted to reflect the feedback.

The attendees supported the findings of the review and the recommended option.

Key messages were;

- A specialist 24/7 service is vitally important and must remain in K&M
- The ability to keep out patient care close to home is important and needs to ensure that the out of hospital support is timely especially after surgery.
- A recognition that some patients would have to travel further for inpatient care but this was acceptable in order to get safe and high quality care and the best outcomes.
- Additional travel times for relatives were a concern and the attendees suggested a number of initiatives that could reduce the impact of this. This included SKYPE and support with travel.
- Providing adequate support to relatives and carers is key particularly pre and post surgery.

The clinical delivery model has been updated to reflect this feedback and the programme board is considering the draft model on the 28 April 2016.

6. Public Consultation

A draft Consultation plan has been developed and this will be considered at the April Programme Board. This describes the formal public consultation process which is planned for June 2016, dependent on sign off by NHS England assurance process and timelines required by Purdah.

This includes a number of engagement activities including;

- a survey for both existing patients and members of the public
- direct discussions with patients and carers in local clinics
- events/focus groups with protected characteristics groups
- a minimum of 2 public events.

The outcome of the consultation will inform the procurement process which will commence formally shortly afterwards. The key priorities noted in the previous events will also inform the procurement process.

7. Learning from elsewhere

The Vascular Society believes that the better outcomes for patients stem from a number of initiatives that aim to improve the quality of surgery. This includes the reorganisation of vascular units into larger specialised regional centres that are better placed to offer the full range of surgical services, 7-days a week.

Increasing numbers of patients with AAA are also undergoing minimally invasive endovascular repair in the UK instead of more complex open surgery. New models of care need to support endovascular developments going forward.

There are a number of reviews across the country that are centralising vascular services in accordance with this best practice guidance. Implementation of this has seen an improvement of in patient mortality following repair of abdominal aortic aneurysms from around 8 to 1.5 % average.
Other key improvements are a reduction in length of stay and improved waiting times form assessment to surgery.

The Kent and Medway review has a member of the Vascular society on the programme board who provides feedback from reviews elsewhere. The review has also discussed the learning and challenges from the review in Bristol in particular the patient feedback, the recent Sussex review and the Wessex review currently underway.

The key lessons learned have included the importance of**:**

- Considering phasing in any changes, such as prioritising high risk clinical areas, developing new practice and innovations over time.
- Investing in network leadership and co-ordination to support the process and embed the changes
- Developing locally agreed clinical delivery and agreement on the model/option. This requires time and support to design across local clinicians the clinical delivery model, to share concerns and experiences.
- Ensuring the engagement of the Interventional radiologists in the review.
- Building adequate time into the mobilisation process.
- To recognize that some staff may chose to leave the service.
- Recognising that there may be a small number of patients and relatives who have to travel further but this is considerably outweighed by the improved outcomes. Being open and clear about the communities/ areas affected is important.
- commissioners to ensure that vascular providers provide information about available community support, particularly transport and in patient information packs are provided as standard,
- Create a shared and equal network where there is a real focus on ensuring spoke services are maximized.

8. Next Steps

The Programme board to agree and approve the clinical delivery model, the formal consultation process and recommended procurement process.

This will include continued discussions with local and external clinical leads to describe the clinical delivery that aligns to the national specification and ensures a sustainable K&M service.

To ensure that the key impacts identified, (through quality, equality and inequality impact assessment) are mitigated through the procurement process and due diligence testing.

To ensure that there is a robust consultation process that informs the procurement process.

This will include key activities such as:

- Completion of detailed work on public transport times and journeys to inform impact assessment and identify mitigating actions
- Completion of the quality and equality Impact assessment
- Completion and agreement of financial modeling to inform the procurement process
- Completion of the draft procurement plan.
- Sign off by the NHS England Assurance process

The April Programme Board will consider the following recommendations to go to NHS England Specialised commissioning.

1. Approval of a Kent and Medway Network model with a single in patient unit alongside local spokes, building on the existing spoke sites.
2. Approval of the consultation plan
3. Agreement of the procurement process including agreement that this will determine the in patient site that can deliver the key specification requirements.

9. The JHOSC is asked to consider the following recommendations:

1. To consider and comment on the options development and clinical delivery model
2. To decide if any further information is required.
3. To refer any relevant comments to the Review Programme Board and request that they be taken into account, particularly in relation to the recommended model of one inpatient centre and a number of spokes;
4. To invite the Review Programme Board to present an update to the Committee on their preferred option for procurement for vascular services before NHS England Specialised Commissioning take a final decision on procurement.