Bwrdd Iechyd Prifysgol
Cwm Taf Morgannwg
University Health Board

AGENDA ITEM
3.1.8

CTM BOARD

SOUTH EAST WALES VASCULAR NETWORK BUSINESS CASE

Date of meeting	30/09/2021
FOI Status	Open/Public
If closed please indicate reason	Not Applicable - Public Report
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Approving Executive Sponsor	Executive Director of Strategy and Transformation
Report purpose	FOR APPROVAL

Engagement (internal/external) undertaken to date (including receipt/consideration at Committee/group)		
Committee/Group/Individuals	**Date**	**Outcome**
Management Board / Executive Team	23/10/2019 28/10/2019 08/06/2020 19/08/2020 11/01/2021 27/01/2021 19/05/2021	ENDORSED FOR APPROVAL
CTM Board	27/05/2021	APPROVAL

ACRONYMS	
ABUHB	Aneurin Bevan University Health Board
PTHB	Powys Teaching Health Board
CTM	Cwm Taf Morgannwg University Health Board
CAVUHB	Cardiff & Vale University Health Board
RGH	Royal Glamorgan Hospital
UHW	University Hospital of Wales
YCC	Ysbyty Cwm Cynon
YCR	Ysbyty Cwm Rhondda
VSGBI	Vascular Society of Great Britain and Ireland
WAAASP	Wales Abdominal Aortic Aneurysm Screening Programme
GIRFT	Getting it Right First Time

1. SITUATION/BACKGROUND

1.1 This report and the programme business case (appendix 1) seeks approval to redistribute and invest in vascular services across adult pathways of care within the South East Wales region covering four Health Board populations: Aneurin Bevan University Health Board (ABUHB), Cwm Taf Morgannwg University Health Board (CTM), Powys Teaching Health Board (PTHB) and Cardiff and Vale UHB (CAVUHB). The aim is to ensure a unified service which will underpin the creation of a safe, sustainable, equitable service for the population that is in line with the rest of the UK.

1.2 The reconfiguration of vascular services across South East Wales, has been discussed for a number of years due to the increasing fragility of services across the region and the growing body of evidence and standards proposing a model of care to support sustainability of services and improved patient outcomes.

1.3 Following a clinical options appraisal supporting a 'hub and spoke' model of care with centralisation of complex vascular surgery at a Major Arterial Centre (hub) at University Hospital of Wales (UHW) in line with recommendations from the Vascular Society of Great Britain and Ireland (VSGBI) and subsequently GIRFT (2018) the programme committed to undertake a comprehensive engagement process with the public and all key stakeholders. During March and April 2021, the four Health Boards: ABUHB, CTMUHB, PTHB and CAVUHB, ran a public engagement event, describing the rationale and benefits of the proposal

1.4 Following support from both Community Health Councils and Boards a full business case has been developed collaboratively for endorsement by Health Board Boards.

1.5 There has been a multi-professional and multi-disciplinary approach used to formulate the business case. All stakeholders have been engaged and there has been a clear steer to ensure that this process has been clinically led with facilitation from managerial teams. Where necessary external bodies have been asked to inform the business case.

1.6 This picture is reflected across the UK and in order to meet these challenges the Vascular Society of Great Britain and Ireland (VSGBI) and NCEPOD set out recommendations for the way in which services should be organised and delivered, to deliver safe and sustainable care for patients and staff.

1.7 The fundamental rationale for the changes set out within the business case are to ensure we create a service that is safe, sustainable and in line with national recommendations and the rest of the UK.

1.8 The region is already seeing the impact of fragile services and the consequence of managing these challenges in extremis. Indeed, the

risk to patients requiring emergency surgery and interventional radiology was deemed too great to be delivered out of hours by the three individual units in the region and therefore a centralised out of hours emergency service was put in place in 2001 at the University Hospital of Wales.

1.9 In September 2020 CTMUHB lost its interventional radiology service. As a result, an urgent temporary change was put into place and patients requiring interventional radiology and vascular surgery transferred to University Hospital of Wales. This led to a change in care model without robust appropriate process, public engagement and financial governance.

1.10 The business case sets out a proposal to deliver a model of care in line with national recommendations and the rest of the UK through the implementation of a high volume vascular surgical service at the Major Arterial Centre (the hub) located at the University Hospital of Wales (UHW), whilst delivering appropriate local care for assessment and rehabilitation through local non-arterial centres (the spokes).

1.11 For CTM the spoke site is RGH with rehabilitation undertaken in YCC and YCR. It is important to note Bridgend is served through the South West Wales Vascular Network which is already established and was in place prior to the Bridgend Boundary Change.

2. SPECIFIC MATTERS FOR CONSIDERATION BY THIS MEETING (ASSESSMENT)

2.1 The proposed reconfiguration of Vascular services across South East Wales will centralise the provision of all elective and emergency surgical procedures from a network 'hub' at UHW – currently provided at the Grange University Hospital (GUH) and previously also at the Royal Glamorgan Hospital (RGH) - alongside the out of hours emergency vascular surgery service which is already centralised. The Cwm Taf Morgannwg (CTM) surgeons have already transferred their surgical service from RGH to UHW as an urgent, interim step due to sustainability challenges within CTM. This interim service change has been welcomed by the clinical teams and has enabled the service to be stabilised for patients from the CTM catchment.

2.2 A critical component of the provision of an effective network model is the provision of the local 'spoke' services to ensure that:

- Patients can be effectively and appropriately directed for surgery at the hub from their local health board.
- Patients can be appropriately repatriated for rehabilitation and/or ongoing medical care and/or post-surgical outpatient follow up in their local health board's spoke.

2.3 This proposed model of care provides an enhanced level of local medical and rehabilitation support with the aim of improving outcomes for patients, ensuring patients receive care as close to home as possible and maintaining capacity at the hub for acute surgical patients.

2.4 This proposed model has been welcomed by the CHCs and warmly received through the extensive public engagement exercise undertaken earlier this year.

2.5 The aim of this reconfiguration is to ensure that:

- workforce and service standards can be maintained by providing the vascular surgical service with appropriate critical support services 24/7
- enabling a viable rota to be maintained across consultant and training grades in vascular surgery and interventional radiology now and in the future
- to ensure that co-location with critical services is maintained
- to improve outcomes for patients through the provision of local, medically-led rehabilitation services as part of the vascular surgery network pathway

2.6 The implementation of the proposed network model will be taken forward pending:

- Approval by all partner UHBs' Boards on September (Aneurin Bevan in October)
- Completion of a formal operational readiness assessment – to be undertaken in October.

2.7 The performance and delivery of the network model will be undertaken quarterly in the first year to:

- Ensure that any operational issues are effectively addressed
- Monitor the improvement in outcomes for patients and other benefits
- identify any opportunities to improve efficiency and Value for Money

2.8 The performance and delivery of benefits will be routinely measured and reported thereafter.

2.9 The combined theatre demand for a typical year for the region is 1082 cases. With a total of 826 cases modelled for the hub. This is a transfer of 595 cases per annum to UHW. For CTM there is expected to be 231 cases delivered in the hub and 65 in the spoke.

2.10 The following financial analysis is based on service and workforce plans confirmed to date for the 'Hub' element of the service, there remain certain elements to finalise, but they are not expected to be material in value. Not all the 'Spoke' service and workforce plans are finalised by each health board – but indicative values are identified where available, these costs will be the responsibility of the relevant

health board, to ensure the system operates effectively for patient care and patient flow.

2.11 Costs relate to three distinct areas:

- Activity transfer to the Hub
- Costs relating to set up of the network (both network and unavoidable costs)
- Cost related to aligning the SEW Vascular Network with national standards and other UK services

2.12 The network finance group have also worked to set out where costs relating to activity transfer could be mitigated.

Vascular Centralisation Forecast Cost	**AB £m**	**C&V £m**	**CTM £m**	**Total £m**
Patient Delivery	2.5	0.5	1.9	4.9
Centralisation	0.1	0.1	0.1	0.4
Set up Non recurrent costs	0.1	0.1	0.1	0.4
Total Gross Cost	**2.7**	**0.7**	**2.1**	**5.6**
Potential Mitigation:				
Vascular Surgeons recharge	0.3		0.2	0.5
Theatres & Wards releasable costs	1.1		0.5	1.6
Total Potential Mitigation	**1.4**	**0.0**	**0.7**	**2.1**
Total Net HUB business case cost	**1.3**	**0.7**	**1.4**	**3.5**
Additional Spoke Costs	0.2	0.3	0.3	0.8
System Business Case Costs	**1.5**	**1.0**	**1.7**	**4.3**

2.13 The hosting of Operational Delivery Network is still to be decided both ABUHB and CTM have submitted an application. Hosting arrangements within CTM for the network would need to be agreed if we were successful.

2.14 The workforce plan has identified a need to increase the establishment across several professional groups in CAVUHB as the Major Arterial Centre to support the transfer of activity as per demand and capacity modelling. It has also identified the need for several posts that support the creation of the Operational Delivery Network, the development of the network to meet standards/to bring the service in line with other UK vascular services. There are also several posts that will improve the service.

2.15 Staff involved in the provision of activity that is transferring to the hub are not subject to formal TUPE transfer arrangements and are free to remain within local Health Board staffing establishments or to express a wish to apply for posts in the hub if desired. Any staff who do take up these posts will be identified and progressed.

2.16 Each Health Board has committed to collaborate as part of a network to ensure that staff are developed, educated, and supported to maximise opportunities within the network. As part of the programme there is a network workforce group supporting development of recruitment, training to develop the key skills

needed. Where there are existing arrangements to work across sites, staff will be invited to carry on with that arrangement.

2.17 The business case has been developed with involvement of all Health Boards and core specialities involved in the care of vascular patients. In preparation for the business case, clinical models have been developed and agreed, demand and capacity modelling undertaken and Hub and Spoke planning templates developed.

3. KEY RISKS/MATTERS FOR ESCALATION TO BOARD/COMMITTEE

Safety and sustainability

3.1 Vascular disease accounts for 40 per cent of deaths in the UK and is as common as both cancer and heart disease. Vascular services aim to prevent death from aortic aneurysm, prevent stroke from carotid artery disease and prevent lower limb amputation from peripheral arterial disease and diabetes. The total number of patients likely to need a vascular procedure across South East Wales is approximately 1250 each year and there are a number of factors associated directly with the prevalence of vascular disease which indicate that this will increase. These include age, obesity and diabetes.

3.2 It is recognised that services within the South East Wales region are fragile. This is driven by population need, but also significant workforce constraints. Both the vascular and interventional radiology workforce is at risk with a number of staff nearing retirement. In addition to this the workforce is becoming more specialised and there is a shortage nationally. It is highly likely that a system without a centralised model will not attract high quality candidates to the area.

3.3 The region is already seeing the impact of fragile services and the consequence of managing these challenges in extremis. Indeed, the risk to patients requiring emergency surgery and interventional radiology was deemed too great to be delivered out of hours by the three individual units in the region and therefore a centralised out of hours emergency service was put in place in 2001 at the University Hospital of Wales.

3.4 In September 2020 CTMUHB was unable to sustain its interventional radiology service. As a result, an urgent temporary change was put into place and patients requiring interventional radiology and vascular surgery transferred to University Hospital of Wales.

3.5 This picture is reflected across the UK and in order to meet these challenges the Vascular Society of Great Britain and Ireland (VSGBI) and NCEPOD set out recommendations for the way in which services should be organised and delivered, to deliver safe and sustainable care for patients and staff. The proposal and business case aligns itself to these recommendations.

3.6 Whilst the two remaining units do not perform poorly, services in their current configuration are not sustainable and do not meet the minimum population recommendations for improved outcomes. Therefore, if this business case is not approved it is highly likely that vascular services will fail to deliver the safe quality of care that is in line with the rest of the UK or that our population has come to expect.

3.7 The fundamental rationale for the changes set out within this business case are to ensure we create a service that is safe, sustainable and in line with national recommendations and the rest of the UK.

Financial

3.8 The delivery of a Networked, Hub and Spoke model of care including the centralisation of vascular surgery for South East Wales is predicated on a service, workforce and financial plan that assumes no additional patient activity (inpatient procedures) is delivered, but for a marginal cost increase a better quality, more sustainable service and better patient outcomes are achieved.

3.9 The financial plan has been based upon the agreed demand and capacity requirements approved by the Programme Board, this is an increase from the 2019/20 financial baseline but is based on 4 years' worth of data with strong involvement from clinicians and managers from the 3 provider health boards.

3.10 There are both revenue and capital implications for the 3 health boards, including a stepped future revenue cost associated with the opening of the new hybrid theatre.

3.11 There are a number of Financial risks for CTM as summarised below;

- The business case is reliant upon a significant investment in additional staff with many of the additional posts falling in services that have historically struggled to recruit and retain staff. There is a real risk that the staffing requirement will not be achieved, or could deplete other core services.
- The cost reduction for CTM relates to Bed & Theatre utilisation reductions. Given that the bed numbers are so small, it is not realistic that we will be able to remove the number of beds or theatres from the establishment, it is therefore unlikely that we will be able to achieve the level of saving identified.
- CTM Financial plan has allowed for a net investment of £0.65m, the business case as it stands would require £1.4m with further investment required when the Hybrid Theatre capital case is approved. This would increase our underlying deficit by £750k, with a risk of failure to identify sufficient savings of £0.5m.

3.12 It's important to note that mitigations have been put in place within the financial model which is based on payment for actual costs incurred on a cost per case basis. A number of reviews will be undertaken within the first 18 months to test assumptions that have been made, this will include activity, finances and staffing. There will

be a further meeting including Directors of Finance to scrutinise the financial case further before submission to CTM Board.

Implementation risks

3.13 The benefits and risks associated with the delivery of the new model of care are articulated within the business case. There are also a number of risks associated with the implementation of the proposed model of care being monitored closely by the programme. These are detailed in section 19 of the case and include:

3.14 Workforce: Given that there are a limited number of staff transferring, this puts pressure on CAVUHB. Even with additional recruitment there is a risk to the local population given should staff need to transfer from other specialties to support the hub. This may also lead to additional costs such as agency, and international recruitment.

3.15 Engagement and culture: Bringing together of three existing units as a part of a network has already led to strained relationships. It is critical to work together proactively to be open, transparent, and honest when tackling these issues

3.16 Impact: Impact of transferring patients to a centralised centre for their surgery means they will potentially be further from home for a small but important period of their care. This is balanced by the need for the best care possible leading to the best option.

3.17 Financial: Cost implications of delivering an Operational Delivery Network in line with other services in the UK. Challenges for Health Boards in releasing costs to support the transfer of activity to another provider.

3.18 Estate: CAVUHB is under significant pressure presently due to unscheduled demand and COVID-19 demand. This has led to an issue with finding suitable ward space for the centralisation. This is not insurmountable but again does put pressure on the surgical footprint within UHW.

3.19 If the programme business case is supported the Programme will transition from a planning to an implementation phase during which a number of readiness assessments will be undertaken to provide assurance to Health Boards that the service is ready to be launched safely.

4. IMPACT ASSESSMENT

Quality/Safety/Patient Experience implications	Yes (Please see detail below)
	There is strong evidence that case volume influences patient outcomes with the highest volume hospitals (which undertake 57% of

	all elective Abdominal Aortic Aneurysm Repairs) have mortality rates under half those seen in hospitals with lowest Abdominal Aortic Aneurysm procedures. A minimum population of 800,000 is considered necessary for an AAA screening programme and is often considered the minimum population required for a centralised vascular service. This is based on the number of patients needed to provide a comprehensive emergency service, maintain competence among vascular specialists and nursing staff and the improvement in patient outcome that is associated with increasing caseload.
Related Health and Care standard(s)	Safe Care Timely Care Effective Care
Equality Impact Assessment (EIA) completed	Yes Submitted as part of CTM Board Papers in May 2021.
Legal implications / impact	There are no specific legal implications related to the activity outlined in this report.
Resource (Capital/Revenue £/Workforce) implications / Impact	Yes (Include further detail below) Financial impact outlined in Business Case and above in summary report.
Link to Strategic Well-being Objectives	Provide high quality, evidence based, and accessible care

5. RECOMMENDATION

The Board are asked to;

5.1 **APPROVE** the South East Wales Vascular Network Business Case (appendix 1) which includes establishing UHW as the hub, establishing the CTM spoke at RGH and supporting the establishment of the Network, the host of which is yet to be determined.

5.2 **NOTE** the readiness assessments due to be completed in October, and subject to the outcome of this, and Board approval of the business case, support implementation from 31st October (as long as operation pressures support this).