Bwrdd Iechyd Prifysgol Hywel Dda University Health Board

PWYLLGOR CRONFA ELUSENNOL
CHARITABLE FUNDS COMMITTEE

DYDDIAD Y CYFARFOD: DATE OF MEETING:	30 November 2021
TEITL YR ADRODDIAD: TITLE OF REPORT:	Funding Application for Haemodynamic Monitoring Equipment (GGH) to Improve Access to Diagnostic Coronary Angiography Health Board-wide.
CYFARWYDDWR ARWEINIOL: LEAD DIRECTOR:	Andrew Carruthers – Director of Operations
SWYDDOG ADRODD: REPORTING OFFICER:	Paul Smith - Service Delivery Manager, GGH Unscheduled Care, Cardiology & Renal Medicine

Pwrpas yr Adroddiad (dewiswch fel yn addas) **Purpose of the Report** (select as appropriate)
Ar Gyfer Penderfyniad/For Decision

ADRODDIAD SCAA
SBAR REPORT

Sefyllfa / Situation

All four acute hospital sites across Hywel Dda University Health Board (HDdUHB) are encountering significant delays in transferring patients to Morriston Cardiac Centre on Acute Coronary Syndrome (ACS) and Chest Pain pathways for coronary angiography, mainly due to acute bed pressures and compromised cardiology day case capacity at Morriston Hospital. This is further exacerbated by the cessation of the ACS Treat & Repatriate facility/service at Prince Philip Hospital (PPH) due to COVID-19 pressures, which has resulted in impeded flow of patients on the pathway to and from Morriston Cardiac Centre. This is resulting in prolonged lengths of stay for patients awaiting transfer in acute hospital beds across HDdUHB.

The Health Board’s Cardiology Pathway Transformation Project, which is currently scoping the whole of the ACS and Chest Pain pathways, has identified the development of increased capacity and improved access to local diagnostic coronary angiography within HDdUHB as a key component in addressing elements of these pathway constraints. The Cardiology Service is proposing a plan to complement its current established standard out-patient diagnostic angiography service/capacity at PPH by enabling Glangwili General Hospital’s (GGH) Radiology Room 3 to undertake this important cardiology diagnostic. The PPH service provides for out-patient demand and consistently runs to capacity and continues to address the COVID-19 backlog for this diagnostic. The proposed GGH service would provide additional capability and capacity to undertake in-patient diagnostic angiography for suitable ‘low risk’ ACS/Chest Pain patients who could receive this diagnostic locally to support clarification of diagnosis, management plan and discharge and avoid prolonged waits for transfer to Morriston Cardiac Centre. Development of this service, which would benefit all four acute hospital sites, would reduce reliance on Morriston Cardiac Centre for this element of the ACS/Chest Pain pathway and significantly reduce patient length of stay and care experience.

This Charitable Funds Committee is requested to support the procurement of the diagnostic coronary angiography haemodynamic monitoring equipment to enable GGH's Radiology Room 3 to provide this service.

Cefndir / Background

Patients admitted to hospital with chest pain undergo a rapid initial assessment to determine whether the chest pain may be cardiac. The term 'acute coronary syndromes' (ACS) encompasses a range of conditions including unstable angina, non-ST segment-elevation myocardial infarction collectively termed non-ST elevation acute coronary syndrome (NSTEACS) and ST-segment-elevation myocardial infarction (STEMI). All are due to a sudden reduction of blood flow to the heart muscle, usually caused by the rupture of an atherosclerotic plaque within the wall of a coronary artery and may cause the formation of a blood clot, which can partially or totally occlude the vessel.

The most common symptom of ACS is severe pain in the chest and/or in other areas (for example, the arms, back or jaw), which can last for several hours. Other symptoms include sweating, nausea and vomiting, breathlessness and feeling faint. These symptoms are independent of gender and ethnic group. People with acute coronary syndromes may have a poor prognosis without prompt and accurate diagnosis. Treatments are available to help ease the pain, improve the blood flow, and to prevent any future complications.

A 12-lead electrocardiogram (ECG) and a blood sample for high sensitivity Troponin I or T are taken on arrival in hospital, as soon as the diagnosis of unstable angina or NSTEACS is made, and aspirin and antithrombin therapy is offered. A formal assessment of the individual's risk of future adverse cardiovascular events is undertaken using an established risk scoring system that predicts 6-month mortality (for example, the Global Registry of Acute Coronary Events (GRACE) international ACS database). Hospitals must ensure that local pathways are in place for adults with NSTEACS or unstable angina who have an intermediate or higher risk of future adverse cardiovascular events to be seen by cardiac specialists and offered coronary angiography (with follow-on percutaneous coronary intervention PCI if indicated) within 72 hours of first admission to hospital as per NICE guidance.

Data for 2016/17 in the table below showed that the average length of stay for NSTEAC patients in HDdUHB was 7.7 days, with the average cost of a patient's stay in hospital being £4,507 and a total cost of £3,799,401.

Resident Local Health Board	Number of 'Person' Spells (Inc. Cross-Provider)	Average Length of Stay	Average Cost per Patient Spell	Total Cost per LHB (£)
Aneurin Bevan	995	6.6	£3,576	£3,558,120
Abertawe Bro Morgannwg	781	7.7	£4,523	£3,532,463
Betsi Cadwaladr	1,349	4.3	£2,800	£3,777,200
Cwm Taf	542	7.2	£3,716	£2,014,072
Cardiff and Vale	514	7.4	£4,381	£2,251,834
Hywel Dda	843	7.7	£4,507	£3,799,401
Powys	326	6.5	£4,306	£1,403,756
Grand Total	**5,350**	**-**	**£27,809**	**£20,336,846**
Total Average	**764**	**6.8**	**£3,973**	**£2,905,263**

Table 1: NSTEAC admissions - Welsh Residence Patients Welsh Resident Analysis 2016/17.

A data analysis exercise was undertaken from SharePoint to elucidate the average length of stay for NSTEAC patients for January-December 2020 and January-September 2021. The table below shows that in 2020 the length of stay increased to an average of 9 days, with a further increase of length of stay to 11 days in 2021 (Table 2).

AVERAGE LOS 2020 (JAN-DEC)		Number of patients in this period
Health Board	9 days	521
BGH	8 days	86
PPH	7 days	119
GGH	7 days	138
WGH	12 days	178
AVERAGE LOS 2021(JAN-SEPT)		
Health Board	11 days	360
BGH	10 days	54
PPH	7 days	86
GGH	6 days	113
WGH	13 days	107

Table 2: Average length of stay for NSTEAC patients in Hywel Dda since January 2020

Asesiad / Assessment

The Health Board's Cardiology Pathway Transformation Project has undertaken a thorough process mapping and scoping exercise of the current ACS pathway and has benchmarked the current pathway against NICE guidance and 'Getting it Right First Time' (GIRFT).

This scoping work has resulted in a gap-analysis, which has informed the identification of 6 recommendations for ACS pathway improvement and compliance with the NICE guidance:

1. Reduce the median presentation to referral time to <24 hours
2. Reinstate the Treat and Repatriation service
3. Morriston Cardiac Centre to adopt a 7-day working model for ACS patients
4. Additional Cardiology ANP resourcing for WGH, PPH and GGH
5. Commissioning of alternative transport provision
6. **Development of HDdUHB coronary angiography capacity**

Development of HDdUHB coronary angiography capacity

The flow of urgent ACS/Chest Pain patients to Morriston Cardiac Centre is limited by the availability of ambulance transport, acute bed and day case capacity at Morriston (limiting the ability to transfer patients in a timely fashion) and catheter lab capacity (meaning that patients once transferred often have their procedure delayed). All of this leads at best to wasted bed days and frustrated patients and at worst patients having adverse cardiac events, worsening cardiac conditions or hospital acquired infection.

Increasing capacity in HDdUHB for elective and in-patient diagnostic coronary angiography and increasing the number of sites that can offer this will help expedite investigation, treatment and discharge. This will reduce HDdUHB ACS patient bed occupancy and prioritise the ACS/Chest Pain pathway into Morriston Cardiac Centre for 'highest-risk' patients.

Radiology Room 3 at GGH has recently undergone a comprehensive re-furnishment and is the clinical facility in which the GGH Cardiology service currently undertake Permanent Pacemaker Implantation for patients across Carmarthenshire and Pembrokeshire; Bronglais General Hospital (BGH) has its own Pacemaker service for Ceredigion residents. The Cardiology and

Radiology services are proposing the installation of diagnostic coronary angiography haemodynamic monitoring equipment within this facility to provide this service. Feasibility studies have confirmed that it is practical to pursue this plan with a relatively small investment in equipment:

Equipment costs:
- Haemodynamic monitoring unit (Mac-Lab AltiX): **£76,800.00** (Inc. VAT)
- Catheter Storage Cupboard: approx.: **£10,000**
  TOTAL COST: £86,800.00

Workforce/Revenue Costs:
There is currently no investment requirement for workforce as in-patients from across Health Board sites will be listed and transferred where required, on an urgent ad-hoc 'hot-list' basis utilising current workforce capacity, vacant Pacing sessions or the re-prioritisation of elective pacing activity to prioritise the ACS pathway. Upscaling of this service is seen as a future priority that would require additional investment and is identified in the IMTP/3 year plan. Revenue costs associated with the maintenance of this equipment will be funded from within the core Cardiology budget.

This proposal has garnered the support of the Consultant Cardiologist body and GGH Unscheduled Care Triumvirate Team. The request should be seen as an effective use of cardiology charitable funds given that it will have a broad and positive impact on patient care, professionals, and the organisation. Additionally, a return on investment will be apparent for years beyond this fixed /one-time investment.

The following charitable fund would be used to procure this equipment:

- T059 – CAR – Cardiac (balance £180, 630.50) - £86,800.00 contribution.

This funding application complies with the Charitable Funds eligibility criteria:
- Fixed / one-time investment in equipment; No recurring or revenue cost;
- Capital Funding request made but no confirmation of funding allocation to date;

Benefits:
- Benefits to patients – improved access to local coronary angiography for in-patients. This will result in reduced length of stay for patients who otherwise have prolonged waits for transfer to Morriston Cardiac Centre. This will result in an improved care experience for patients and reduction of anxieties and risks associated with prolonged hospitalisation.
- Benefits to professionals – improved local access to this diagnostic will support improved and timely clinical decision-making for clinical teams. It will also address many of the professional anxieties and frustrations experienced by clinicians who recognise the personal impact on patients while they await transfer, and the risks associated with prolonged hospitalisation.
- Benefits to organisation – for a relatively small investment in equipment there is potential to realise substantial cost efficiencies and savings to the Health Board through reduced length of stay.

Deliverability and sustainability:
- Feasibility studies have confirmed that it would be possible to achieve installation of this equipment by the end of March 2022.
- The service would become immediately operational following initial familiarisation with the equipment.

• Eight out of twelve Consultant Cardiologists across HDdUHB have the clinical competence to undertake coronary angiography using this equipment within this facility.
Argymhelliad / Recommendation The Charitable Funds Committee is requested to consider the application for funding to support procurement of the diagnostic coronary angiography haemodynamic monitoring equipment to enable GGH's Radiology Room 3 to provide this service.

Amcanion: (rhaid cwblhau) **Objectives: (must be completed)**	
Committee ToR Reference: Cyfeirnod Cylch Gorchwyl y Pwyllgor:	4.20 The following thresholds are approved in the Charitable Funds Procedure: *"Expenditure less than £10,000 shall only need approval by the nominated fund manager. All expenditure in excess of £10,000 and up to £50,000 will require the approval of the Charitable Funds Sub-Committee. Expenditure in excess of £50,000 will require the approval of the Charitable Funds Committee. Expenditure over £100,000 will require the approval of the Corporate Trustee".*
Cyfeirnod Cofrestr Risg Datix a Sgôr Cyfredol: Datix Risk Register Reference and Score:	Corporate Risk 117 – delays in transfer to tertiary cardiology services for investigation and treatment – current risk score: 20.
Safon(au) Gofal ac Iechyd: Health and Care Standard(s):	3.1 Safe and Clinically Effective Care 3.3 Quality Improvement, Research and Innovation 5.1 Timely Access 5. Timely Care
Amcanion Strategol y BIP: UHB Strategic Objectives:	All Strategic Objectives are applicable
Amcanion Llesiant BIP: UHB Well-being Objectives: Hyperlink to HDdUHB Well-being Objectives Annual Report 2018-2019	4. Improve Population Health through prevention and early intervention, supporting people to live happy and healthy lives

Gwybodaeth Ychwanegol: **Further Information:**	
Ar sail tystiolaeth: Evidence Base:	Cardiovascular Atlas of Variation NICE guidance National Cardiac Audit Programme (NCAP) National Report 2020
Rhestr Termau: Glossary of Terms:	Included within the report

Partïon / Pwyllgorau â ymgynhorwyd ymlaen llaw y Pwyllgor Cronfa Elusennol: Parties / Committees consulted prior to Charitable Funds Committee:	Cardiology Pathway Transformation Steering Group; Hywel Dda Cardiology Clinical Lead and Cardiologists; Cardiology Management Team; ARCH Cardiology Programme

Effaith: (rhaid cwblhau) Impact: (must be completed)	
Ariannol / Gwerth am Arian: Financial / Service:	This request is for Charitable Funds to support a fixed cost/one-time investment in equipment. No recurring or revenue cost.
Ansawdd / Gofal Claf: Quality / Patient Care:	Improved patient outcomes and experience on account of improved access to local coronary angiography. Improvements to the ACS pathway.
Gweithlu: Workforce:	Not Applicable
Risg: Risk:	Failure to identify opportunities for pathway improvement and service development. Failure to make improvements to ACS pathways. Failure to improve Health Board compliance with NICE Guidelines for ACS.
Cyfreithiol: Legal:	Not Applicable
Enw Da: Reputational:	Not Applicable
Gyfrinachedd: Privacy:	Not Applicable
Cydraddoldeb: Equality:	An Equality Impact Assessment is currently in development.