



CYFARFOD BWRDD PRIFYSGOL IECHYD UNIVERSITY HEALTH BOARD MEETING

DYDDIAD Y CYFARFOD: DATE OF MEETING:	27 January 2022
TEITL YR ADRODDIAD: TITLE OF REPORT:	Use of Consultancies to Support the Health Board
CYFARWYDDWR ARWEINIOL:	Huw Thomas, Executive Director of Finance
SWYDDOG ADRODD: REPORTING OFFICER:	Various

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

This paper requests the Board's support to engage with a number of consultancies to accelerate areas of the Health Board's strategy in Quarter 4 2021/22.

Cefndir / Background

There are four examples where the potential use of consultancy has been identified, and where Board approval is required to support the engagement. These will support the acceleration of the Health Board's strategy, and in the case of digital, will enable the Health Board to progress with pilot schemes which WG are keen to explore with us to test whether there is an opportunity to expand across Wales.

Asesiad / Assessment

The four areas of support are summarised below:

Area	£	Detail
Palliative care strategy	144k	Funded by the All-Wales Palliative Care funding
Frailty identification and insights	420k	Funded by WG Digital funding
Developing a virtual hospital model	130k	Funded by WG Digital funding
Long term care home fee review	29k	HB Funding identified

Argymhelliad / Recommendation

The Board is asked to support the proposals in the paper.

Amcanion: (rhaid cwblhau) Objectives: (must be completed)	
Cyfeirnod Cofrestr Risg Datix a Sgôr Cyfredol: Datix Risk Register Reference and Score:	N/A
Safon(au) Gofal ac Iechyd: Health and Care Standard(s):	3. Effective Care 4. Dignified Care
Amcanion Strategol y BIP: UHB Strategic Objectives:	3. Growing older well. 4. Improve the productivity and quality of our services using the principles of prudent health care and the opportunities to innovate and work with partners.
Amcanion Llesiant BIP: UHB Well-being Objectives: Hyperlink to HDdUHB Well-being Objectives Annual Report	2. Develop a skilled and flexible workforce to meet the changing needs of the modern NHS 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:	Welsh Government (WG) 2017 PEOLC Delivery Plan WG (2008) Palliative Care Planning Group Wales Report to the Minister for Health & Social Services National Palliative & EOL Care Partnership (2015) Ambitions for Palliative and EOL Care; A national framework for local action 2015 – 2020 WG (2020) COVID-19 Hospital Discharge Service Requirements (Wales) HDdUHB (2016) End of Life Delivery Plan HDdUHB (2019) Together for Health Delivering End of Life Care Marie Curie (2016) An Updated Assessment on Need, Policy and Strategy – Implications for Wales WWCP (2020) PEOLC Principles
Rhestr Termau: Glossary of Terms:	BI – Business Intelligence Explanation of other terminology is included within the report
Partïon / Pwyllgorau â ymgynhorwyd ymlaen llaw y Cyfarfod Bwrdd Iechyd Prifysgol: Parties / Committees consulted prior to University Health Board:	Palliative Care Steering Group Integrated Executive Team/ Regional Partnership Board Use of Resources Group Executive Team

Effaith: (rhaid cwblhau) Impact: (must be completed)	
Ariannol / Gwerth am Arian: Financial / Service:	All accounted through funding streams outlined above.
Ansawdd / Gofal Claf: Quality / Patient Care:	Equitable outcomes for the population across all ages.
Gweithlu: Workforce:	Not Applicable
Risg: Risk:	Not Applicable
Cyfreithiol: Legal:	Not Applicable
Enw Da: Reputational:	The strategies developed from these engagements will be the first of their kind in Wales.
Gyfrinachedd: Privacy:	Not Applicable
Cydraddoldeb: Equality:	The strategies reflect the needs of the population.

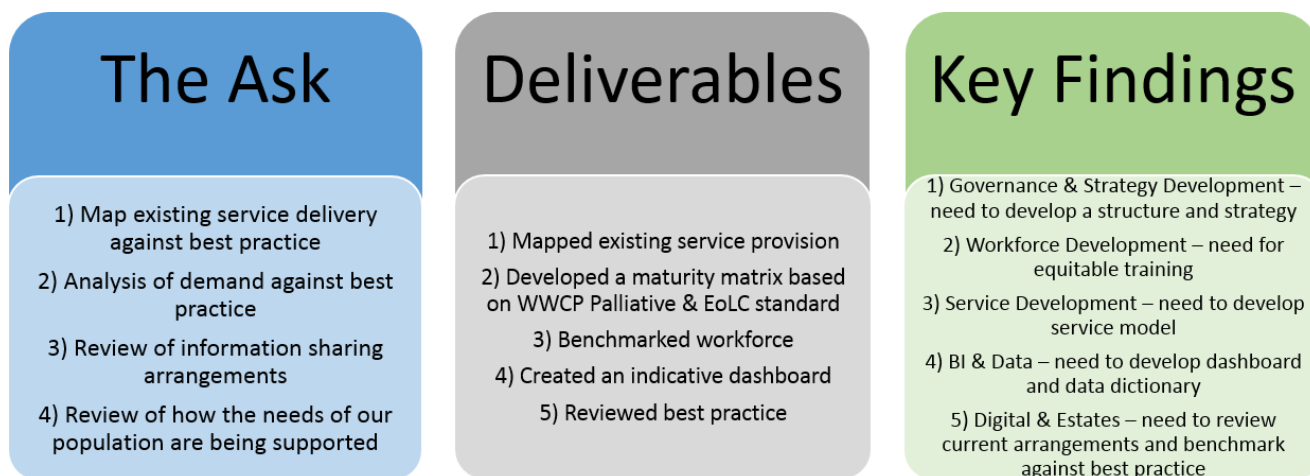
Appendix 1: Palliative Care Strategy

Proposal

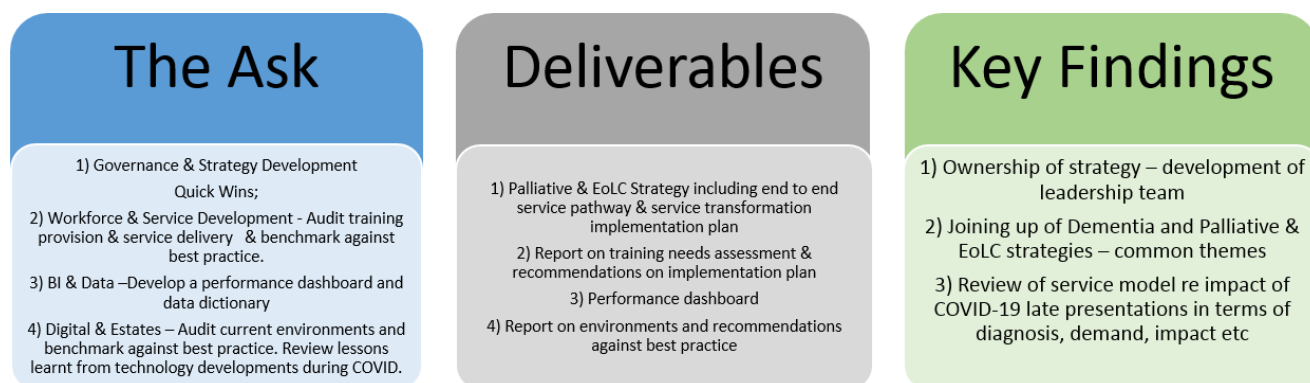
It is considered essential that HDdUHB has a robust strategy in place to ensure everyone at the end of life is able to access the specialist care and holistic support they need, and that this strategy takes into account robust estimates of palliative care need.

Utilising All Wales Palliative Care funding, HDdUHB commissioned an external review by Attain, Healthcare Consultancy, of palliative care and end of life services. This work has been developed in phases with the strategy being developed as part of phase 2.

Phase 1 January – April 2021



Phase 2 April - June 2021



An All Wales Palliative and End of Life Care (PEOLC) service review has recently been undertaken and the final report with recommendations has been circulated to health boards. A review of this document has been undertaken to ensure that the local strategy will align to the direction of travel across Wales in the absence of an All Wales strategy.

All Wales Service Review Recommendations

- 1) Undertake a population needs assessment
- 2) Develop a clinical pathway
- 3) Review & modernise funding arrangements
- 4) Develop and support leaders for the future within the current workforce
- 5) Define a strategy for Paediatric services
- 6) Review workforce requirements
- 7) Develop whole system SPC services
- 8) Develop a meaningful outcomes framework

Hywel Dda Strategy Development

- 1) Population needs assessment – Phase 1 Palliative / EoLC & Phase 3 Dementia
- 2) End to End clinical pathway - development Phase 2 & implementation phase 3
- 3/4) Strategy recommendation – structure & pooled funding arrangements
- 5) Strategy is through age & whole system
- 6) Workforce & Service Development - Phase 2
- 7) Development of SPC model – Phase 3
- 8) BI & Dashboard development – Phase 2 & 3

The HDdUHB PEOLC Steering Group has approved the strategy document and the third phase of the commissioned work is progressing, although slightly delayed due to current service/system pressures.

Phase 3 July – December 2021

The Ask

- 1) Implementation of Palliative/EoLC Strategy including;
 - a) Palliative/EoLC Service Transformation
 - b) Palliative/EoLC Workforce Development & Training

Deliverables

- 1) Development of Palliative/EoLC service model, implementing best practice from Swan/Cygnnet model;
- 2) Training, audit and plan to roll out adapted Scottish Palliative/EoLC training framework
- 3) Workforce demand and capacity modelling report

The development of the PEOLC service model has commenced with the specialist nurses and the Palliative Care Steering Group members, particularly the Consultants, having requested that this piece of work be further developed to include the whole service multi-disciplinary team and the workforce model expanded to include the different professional groups.

Conclusion

Attain have confirmed the costs for this final phase of work as £143,813. This phase of work will ensure that the service model will also be through age, as engagement will be made with children's services to develop the transition element of the service.

The outputs from this phase of work will provide tangible assets that HDdUHB can further drive forward the implementation of a regional palliative care model. One of these assets, which will be passed over to the Health Board, is a workforce modelling tool which will allow flex of both demand and capacity, coupled with demographic data to fully understand future workforce requirements and enable the relevant commissioning to be undertaken.

Appendix 2: Frailty identification and insights

Proposal

People with frailty are at risk of falls. They're also at risk of developing conditions such as anxiety and depression and are more likely to have unplanned hospital admissions. Identifying people with frailty and improving their care and support are therefore priorities for the health and care system. The Integrated Medium Term Plan (IMTP) outlines how people identified as having the greatest risks and needs will be offered targeted support for both their physical and mental health needs, including frailty. The sustainability of the NHS depends on a radical upgrade in prevention and public health. People with frailty are more likely to fall than those who are not frail; and older people presenting with one of the frailty syndromes (such as falls or immobility) may well already have established frailty.

The purpose of the paper is to seek Board support for the development of the implementation of a Frailty Identification & Insights Solution bringing together the principles of Robotic Process Automation (RPA), Artificial Intelligence (AI), Machine Learning and Cloud Computing to solve the interoperability challenges across data silos and legacy systems, which will look to unlock access to information and data to better identify frailty, and proactively assist with the prevention and promotion of patient care.

Over recent months the Health Board has been exploring the idea to using advanced technology to better manage, predict and mitigate bed consumption due to Frailty conditions across the sites. In order to progress this Hywel Dda University Health Board will be partnering with a number of companies to progress this vision.

We will be looking to invest time demonstrating the “art of the possible” with the use of AI and Robotics as a form of integration in the absence of API's across the NHS' legacy data and system siloes. The aim is to use Robotic Automation Process (RPA) to “unlock” the intelligence from these siloes to create a centralised 360 view of a patient's history within a single and secure data warehouse solution.

This would further enable Machine Prediction models, Insight dashboards, automated tooling and innovation to be developed without reliance on third party system changes or large-scale development; thus, delivering efficiency and innovation into the Health Board and peripheral services. During an on-site meeting it was evident that there we wider opportunities that would also invest in the Health Board's initiatives to drive efficiency and reduce cost of operations.

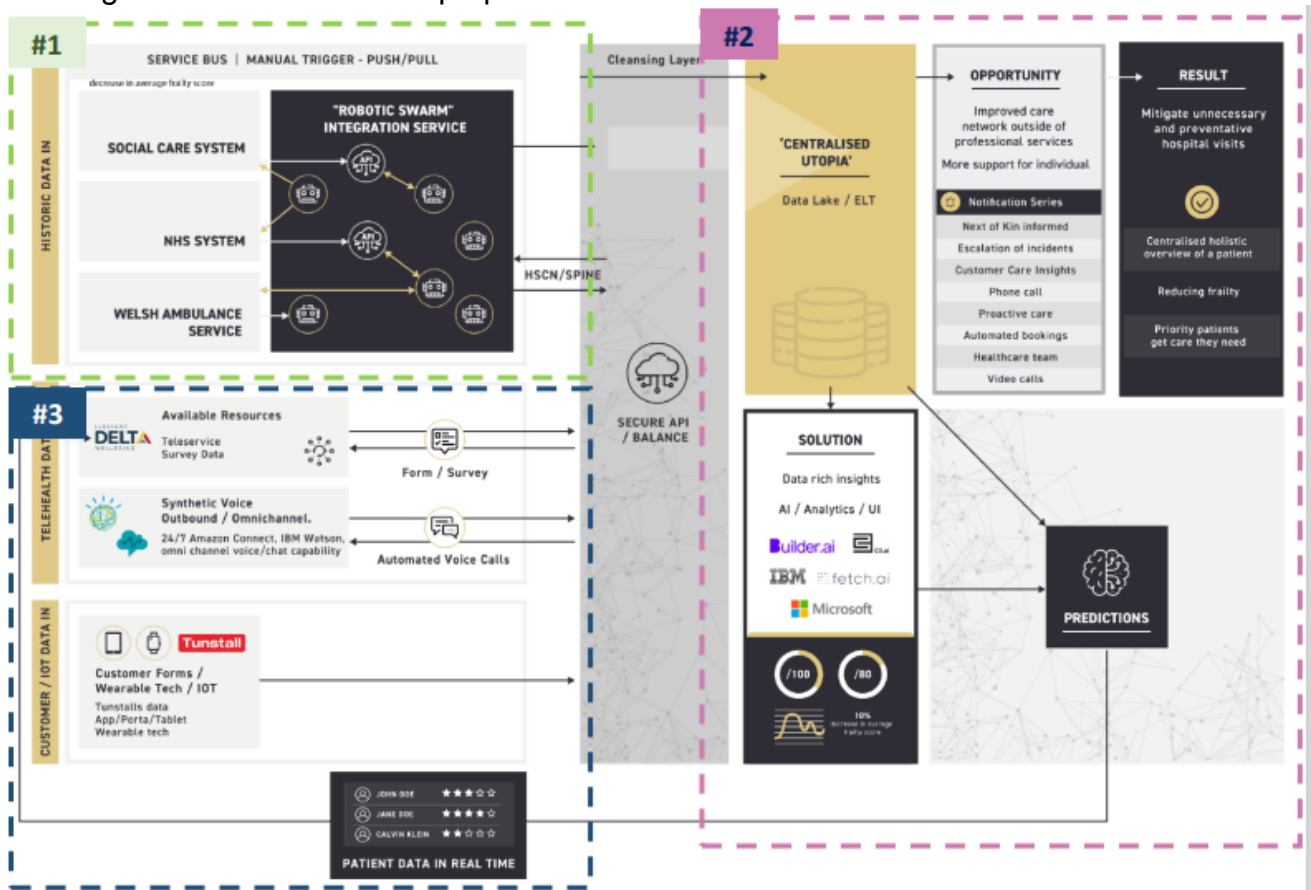
The Health Board and Codebase 8 will be developing the Frailty project working to prove the “black boxes” can enable and unlock predictive insights for Hywel Dda. The same intelligence used for the recent proof of concept (POC) around RPA, will be reused for the Frailty project but will be expanded to the wider interoperability challenges of additional data sources. The proposed solution can be broken down into very clear technical scopes of work, all of which are independent and can deliver value.

1. “Robotic Swarm” – as noted this would extend the technical POC to further connect legacy back-office systems. Development of an API and data solution to house centralised data.
2. AI and Predictions – an Research & Development and data science project which will take the centralised data, anonymise, and then apply machine learning models based on

Frailty. Data Scientists will explore each “Reason Code” around Bed consumption in relation to Frailty and apply correlating data sets for external factors objective i.e. Internet of Things (IOT) data; Weather data for dehydration. The objective would be to provide predictive models that self-calculated a Frailty score for each patient.

3. “Connected Intelligence” – deploying the 360-view dashboard to the Health Board for their trial and testing. At this point we’d bring together the AI Frailty scoring insights and predictions into the tooling.

The diagram below outlines the proposal:



The output will allow users to see an overview of the frailty concepts associated with advanced intelligence about the patient leading to the concept of the 360 view of the patient. Future opportunities will then be explored around the use of smart devices, smart homes, and passive monitoring and how this can be integrated into the product.



Conclusion

Following a recent bid to Welsh Government via the Digital Priorities Investment Fund, the Health Board has been successful in attaining the funding to progress with this scheme to the tune of £420k

The programme of work is anticipated to take 36 weeks from start of engagement.

The Board is asked to support this proposal.


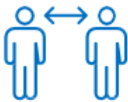


Appendix 3: Developing a virtual hospital model

Proposal

In order to support the delivery of AHMWW, we need to consider the creation of a person-centred operational model, where patients could be monitored at home, with digital front door access to clinical systems, which can be monitored by clinicians remotely in a “virtual hospital” environment, developing the concept of a “Clinical Monitoring Hub”

This will create a new layered care model, where digital technology is integral to assisting clinicians’ team with decision making. This will also introduce a self-care approach, and health coaching via health and care education campaigns, and a digital first prevention and self-care model, all underpinned with a digital inclusion programme to ensure that patients are included, using patient centre design principles.

Partnering with CGI, the Health Board will look to develop a target operating model for a truly integrated person-centred health and care service enabled by remote patient monitoring in the region, build a new digital layered care model. The aim of the work will be to move from the current situation towards the proposed outcome of a “Command Monitoring Hub”

	Current	Outcome Focus
	Citizens cannot digitally interact and engage with health and care services the way they can routinely elsewhere in their lives	Citizens take control of their health, wellbeing and data by giving them the right information and tools to self-manage
	Workers do not have the tools or capabilities to digitally interact across and often within organisational boundaries. Information is not easily accessible or available	Digital Collaboration solutions that enable staff to interact more effectively across the health and care ecosystem. Digitally enabled staff readiness
	Data sharing and interoperability of data remains a challenge organisationally and technically	Transform how information is shared, gathered and disseminated. Use data to drive service change and improvements
	Lots of pilot initiatives exist in use of remote monitoring, use of smart technology but scaling hasn’t yet been achieved	Lots of pilot initiatives exist in use of remote monitoring, use of smart technology but scaling hasn’t yet been achieved

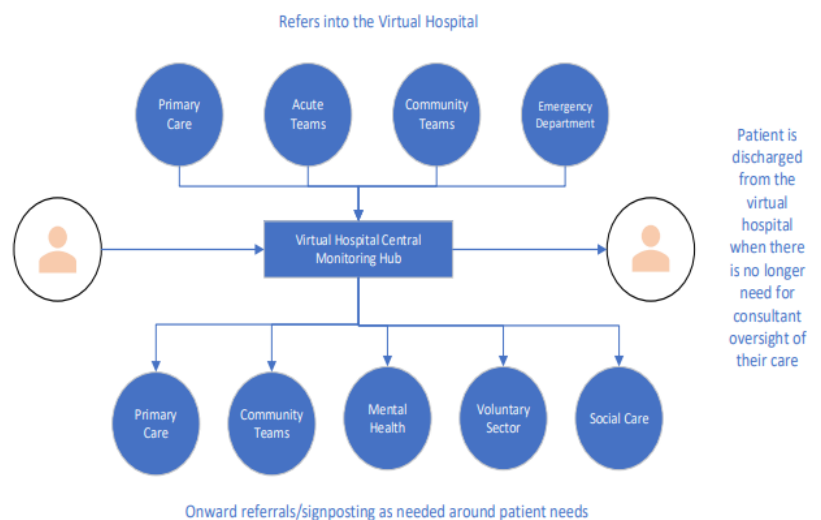
The Virtual Hospital Model allows patients to have their care managed at home with oversight from their clinical team. This in turn frees up bed capacity whilst ensuring patients are getting the right care, in the right place at the right time. The model will allow patients to be transferred from an admission in an acute or community bed or directly from primary care / community. Before patients are admitted to the Virtual Hospital, they will have a multi-disciplinary team meeting and a personalised care plan will be put in place. They will be given an information pack and equipment to monitor their status. This equipment will transfer information back continually to the central monitoring hub and the clinical team in Hywel Dda. Patients will then receive virtual consultations with their clinical team as per their management plan. If the patient is identified as needing input or advice from other teams, a referral will be sought.

Virtual hospital uses healthcare workers including consultant staff, respiratory physiologists and physiotherapists not involved directly with the front-line care to enable a specialist model allowing admission prevention or early discharge aiming to reach patients with specialist care at home. The service will be supported by a medical administrative team and volunteer medical students.

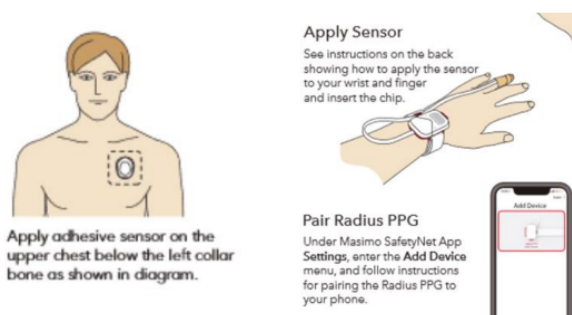
By enabling easy referral from acute medical teams, ward teams and accident and emergency department, referrals can be rapidly made. Patients with risk factors for deterioration (age, comorbidities or concerning symptoms) receive oxygen saturation probes to facilitate home monitoring.

Patients are reviewed remotely. As well as assessing the patient results from blood tests and imaging, they are reviewed to ensure that all results have been appropriately acted upon, recognising that whilst the acute pathways are under extreme pressures the earlier discharge of patients before all results have had senior review can be made safe by ensuring that a senior review occurs promptly after discharge.

Patient care is supported in their homes using remote monitoring equipment and supported by a central clinical and administrative team. Their clinical care is provided by appropriate teams depending on need and clinical responsibility is determined by care plan. The virtual hospital will support earlier discharge as well as avoiding admissions.



The diagram above demonstrates that possible approach to a virtual hospital and a central monitoring hub.



Patients will be transferred to the virtual hospital having had a demonstration and advice on how to use the equipment they need. This could consist of a wearable device that feeds information into the central monitoring hub, or other devices that are able to passively monitor patients.

By providing a kit that contains all the equipment and devices needed, it ensures all patients can be included in the virtual hospital and everyone can be digitally included.

The future model of care requires a set of technologies that will enable transformational service and support change, where the monitoring of patients and citizens inside and outside of traditional hospital settings will become the norm, introducing the philosophy of provide treatment without the constraints of walls. The benefit will be freeing up the most expensive hospital stays for those that need it. This approach will also allow Citizens or Patients

(Families) to interact with the health and care service through their channel of choice and support their desire to manage their own data and be at the centre of their care.

Conclusion

This discovery work with CGI will be capped at £130k, and any further investment will require a bid to Welsh Government via the Digital Priorities Investment Fund, in order to progress with the virtual hospital project as outlined above. Funding for this initial work has been supported by WG.

It is anticipated that the programme of work is anticipated to take 4-5 months from start of engagement, however if the project exceeds that timescale the contract is a fixed price, on a time and materials basis.

The Board is asked to support the proposal.

Appendix 4: Long term care fee review

Proposal

The main objective of this project is to establish a clear methodology for the calculation of Continuing Health Care (CHC) rates which would withstand challenge, possibly at judicial review, as has happened with other authorities.

There is no nationally approved model for determining CHC fees and the current approach is to uplift CHC base fees in line with the uplifts applied by the area's local authorities. This approach is open to challenge. Consequently, the Health Board is considering a range of options for how to calculate CHC fees going forwards and is seeking the support of professional advisors to determine which methodology should be used calculate CHC fees.

These options include:

- Continuing to use the local authority rate as a base and attempt to quantify the residual element of care need over and above residential.
- Calculating the CHC fee rate based on provider costs, regardless of the local authority rate.
- Other options that may emerge from this project.

One of the reasons for undertaking this project is that the market is becoming volatile and vocal around fee structures and the Health Board wishes to ensure that their local market remains sustainable. As has been pointed out, Hywel Dda University Health Board does not have the luxury of having many care homes in the area. The Health Board wishes to reduce the risk of local care homes leaving the market, and it also wants to make sure the market is attractive to newcomers (including those homes taking CHC patients for the first time and entirely new homes).

This review, therefore, needs to ensure that providers are remunerated for the care they provide but not encourage inefficient provision. The proposed fee structure will also need to be flexible enough to react to changes in the market. One such recent change has been a decline in the number of General Nursing packages, but an increase in S117, Mental Health and Elderly, Mentally Infirm (EMI) packages, which require different levels of care.

In undertaking this project, the Health Board hopes to be able to establish a single fee model, which can be applied in all three counties. It is currently the case that the Health Board has a different rate for each county. At the same time, the fee structure needs to be sensitive to the requirements of the local authorities so as not to destabilise them, especially as local authorities face the same risk as the Health Board that the providers might not accept their fee uplifts and subject them to legal challenge.

Conclusion

The cost to the Health Board is £29k.

The Board is requested to support the proposal.