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Bwrdd Iechyd Prifysgol
Hywel Dda
University Health Board

OUR RESEARCH AND INNOVATION STRATEGY

2021 – 2024



SUPPORTING THE DELIVERY OF
A HEALTHIER MID AND WEST WALES

Whilst the COVID-19 pandemic has had devastating effects, it has served to demonstrate the vital link between research, innovation, and decision making at every level of the health care system.



Foreword



Dr Philip Kloer

Executive Medical Director and Deputy CEO

Hywel Dda University Health Board's (HDUHB) health and care strategy, 'A Healthier Mid and West Wales: Our future generations living well,' set out our plan to deliver excellent clinical services for our population. It also reaffirmed our ambition to maximise the contribution we make to the health and care system, by tackling the causes of ill-health through promotion of health and well-being, prevention and early intervention.

In November 2020, set against this strategy and learning from the pandemic, the Board agreed several high level objectives - describing the horizon we are driving towards over the long term – as well as a set of specific, measurable planning objectives, which move us towards that horizon over the next 3 years.

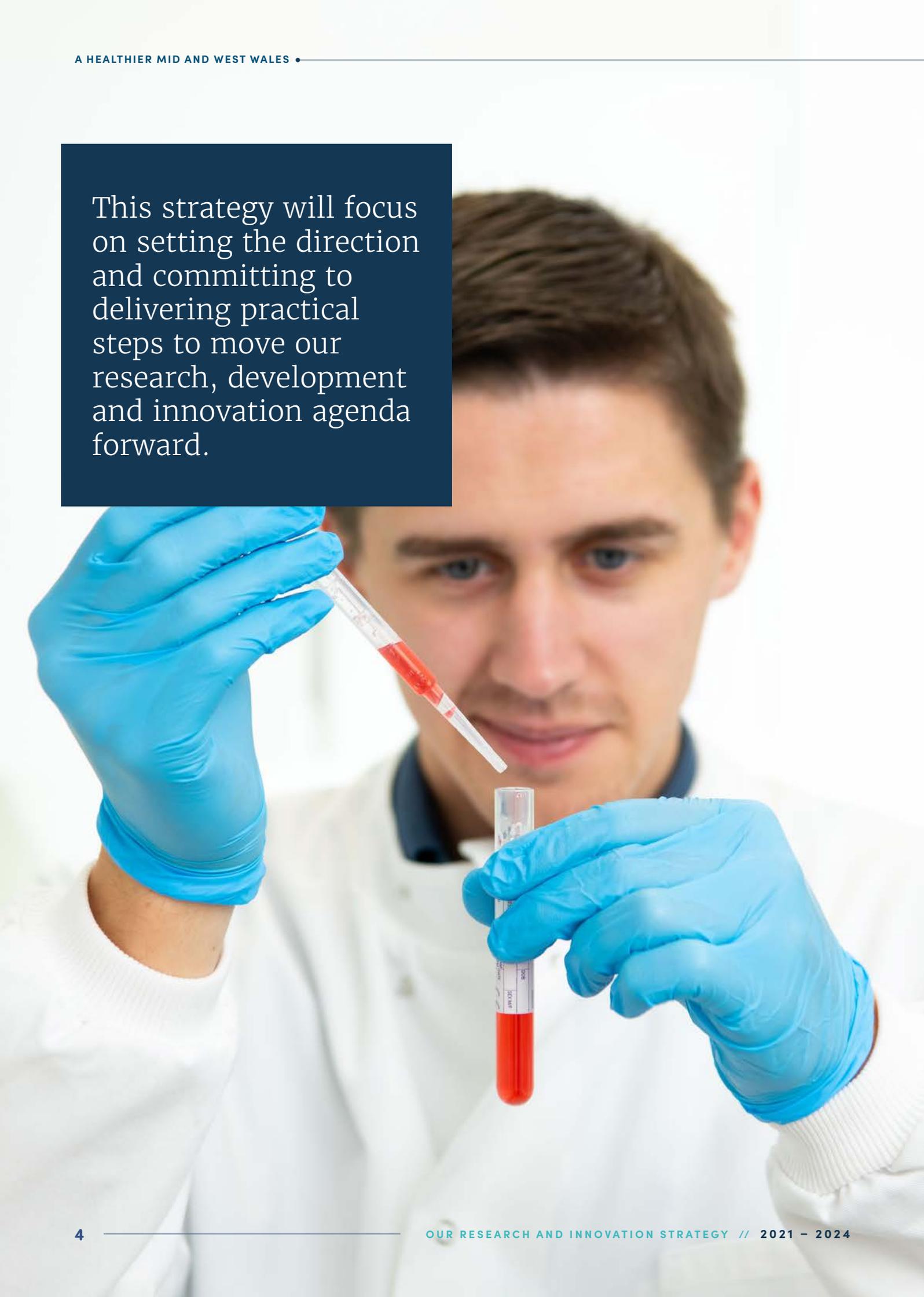
One of the Strategic Objectives is to “Strive to deliver and develop excellent services”, and within this a planning objective was set to develop a strategy for research and innovation for HDUHB. These objectives serve to place research and innovation at the heart of what we do. The past twelve months have demonstrated just how critical research and innovation is to tackling the worst infectious disease public health crisis of our time.

The ultimate mitigation of COVID-19 and the resolution of the pandemic continues to rely on the outcomes of high-quality research and innovation. Whilst the importance of research in developing new vaccines and identifying new treatments for COVID-19 has been very visible recently, HDUHB has had a research department for much longer than this. The research & innovation department enables residents in the HDUHB area to participate in research studies in cancer, respiratory disease, cardiovascular disease, gastrointestinal disorders and many more. HDUHB also have a BioBank and a new clinical engineering research facility; we have strong links with Bevan fellows and with all three Universities in our geographical area; there are also opportunities for us through participation in ARCH (A Regional Collaboration for Health), and the Swansea Bay City Deal which includes the proposed Pentre Awel development in Llanelli. Despite all these activities there is still much to do.

This strategy sets out the HDUHB strategic goals aimed at improving our research and innovation capabilities. We will do this by focussing on areas of strength as well as new opportunities, investing in our people and facilities, improving the quality and impact of our research and innovation, and developing further strong and effective partnerships. Through pursuing these goals and the aligned actions, executed through an annually refreshed implementation plan, we will ensure that we are optimising the role of research and innovation in transforming our local health and care services. This will enable us to provide better outcomes for patients and staff now and in the future.

It is a great pleasure to share this strategy with you and I look forward to working with renewed purpose to realise our vision and deliver these strategic goals over the next four years.

This strategy will focus on setting the direction and committing to delivering practical steps to move our research, development and innovation agenda forward.



Vision

We will produce and collaborate in high quality health and care research and innovation, to improve services and health outcomes for our public, patients and staff.

We will realise our vision by delivering the following **Strategic Goals**:



Background

Excellent research and innovation contributes to improved health outcomes by embedding a culture of the highest standards of health and care delivery underpinned by evidence and by attracting high quality employees. This strategy seeks to improve the profile, quality and quantity of research and innovation activity within Hywel Dda University Health Board (HDUHB), so it is recognised as essential and valuable by all members of the organisation and our wider community.

Whilst the COVID-19 pandemic has had devastating effects, it has served to demonstrate the vital link between research, innovation, and decision making at every level of the health care system. The immediate importance of translating research and innovation into health benefits has never been clearer and is something we wish to sustain through the implementation of this strategy.

The solid progress in developing research and innovation within Hywel Dda University Health Board over several years, shepherded by the 2016–2020 Research and Development Strategy and strong leadership, has led to a substantial growth in research activities and associated income and reinforced our University status. The expiry of the 2016 strategy and a changing context, punctuated in 2018 by the development of a new health and care strategy – ‘A Healthier Mid and West Wales’ – means that now is the ideal time to set the direction with a research and innovation strategy for the next four years.



The unequivocal focus of the health and care strategy on the social model for health provides an excellent pivot point and opportunity to consider our future endeavours.

As our approach to research and development has evolved, we have increasingly recognised the fine line between research and the role that it can play in developing new methods, ideas, solutions and products. For many of our staff, the mobilisation of knowledge into ‘innovations’ that improve



health outcomes has been their key driver for getting involved in research. We have also noted the increasing importance that Welsh Government and the Welsh NHS are rightly attaching to innovation and its relationship with research and development.

Some examples of this include the sponsorship of regional Research, Innovation, and Improvement Co-ordination Hubs and increased prominence of innovation enablers, including those offered by the

Life Sciences Hub Wales. This strategy seeks to identify and exploit the opportunities in the space between research, development and innovation. Innovation, and those who are interested in it, represents a broad church and not every aspect of innovation can be covered by this strategy. The focus of this strategy will be on identifying and maximising the impact of a limited number of actions to encourage those innovations that bring greatest benefit to our citizens.

This strategy will therefore focus on setting the direction and committing to delivering practical steps to move our research, development, and innovation agenda forward.

This is a bold strategy and its delivery will require considerable effort and commitment throughout our organisation. Our University Health Board has some unique challenges that can make it more difficult to advance research and innovations, but it also has a determination to underpin clinical strategy with strong research, development and innovation activity.

This strategy will focus on setting the direction and commit to delivering practical steps to move our research, development, and innovation agenda forward. It is the culmination of substantial staff involvement, review of the practices of other organisations across the UK, and consultation within our governance structures and with other local and national partners.

Like all University Health Boards, Hywel Dda operates its research, development and innovation activities within national strategic and performance frameworks, so there has been considerable engagement throughout the development process with the Research and Innovation Departments of the Welsh Government, and Health and Care Research Wales (HCRW). This strategy is also cognisant of UK wide development, including the forthcoming vision for UK clinical research.

Strategic Goal 1

IMPROVE THE QUALITY AND IMPACT OF OUR ACTIVITIES



1.1 Why this is important

In order to achieve the greatest impact it is important that research and innovation activities are of the highest quality. This goal recognises that supporting researchers and innovators to conduct their work with established policies, procedures and good governance will improve the confidence that others have in their discoveries.

Improving confidence alone, however, will be insufficient to secure impact, which is why this goal also recognises the significance of developing an effective approach to translating the knowledge gained through research into practice. This includes demonstrating to our staff and public how their involvement in research and innovation is leading to better health and care.

The significance of developing an effective approach to translating the knowledge gained through research into practice.

1.2 How we will deliver

1.2.1 Our Approach to Quality

We will facilitate portfolio studies and other high quality research and innovation, in accordance with national and health board directives, standards, and policies. This will include action to:

- Develop an enabling approach to quality assurance, working with researchers to ensure quality is designed into the study at set up and during the ongoing management of the research;
- Adopt, develop and embed HCRW standard operating procedures covering the full span of health board research activities;
- Ensure the effective sponsorship of studies in line with HCRW sponsorship policy, through our review panel and related arrangements;
- Operate efficient and effective routine and triggered audits, with a clear focus on constructive feedback and continuous improvement; and
- Continue our effective, timely and enabling research and innovation project set up function, with strengthened contracting capability and relationships to all Wales and UK costing and contracting developments.

1.2.2 Our Impact

We will develop an approach that translates the knowledge acquired through research and innovation into every day practical impact. This will include action to:

- Develop a research impact assessment to support the selection of studies. Supported studies will meet areas of greatest need and potential impact, focusing on anticipated benefits for our services and patients. Greatest need will be defined by a combination of local priorities, All Wales delivery priorities and UK prioritisation.
- Further develop research and innovation as part of the Medium Term Planning cycle, with stronger links between findings and Board decision making;
- Align research and innovation to corporate planning priorities, including the Healthier Mid and West Wales Strategy, our formative Improving Together approach, and the Value Based Health Care agenda;
- Improve the volume and quality of publications in peer reviewed journals;
- Work with stakeholders to develop an innovation ‘supply and demand’ plan, and deliver demonstrable benefits for our citizens and communities; and
- Develop an annual research and innovation award, in partnership with local companies and the press.

1.2.3 Our Performance

We will deliver against current and emergent Welsh Government Health and Care Research Wales (HCRW) strategic priorities and targets. This will include:

- Delivering against strategic priorities, associated actions and HCRW key indicators; and
- Working with UK Research & Development (UKRD) and HCRW to undertake a peer review of our research, development and innovation approach, to optimise the delivery of this strategy, and develop an approach that can be used by other health boards in Wales.



Strategic Goal 2

INVEST IN STAFF AND FACILITIES TO ENCOURAGE THE DEVELOPMENT OF A VIRTUOUS FUNDING CYCLE



2.1 Why this is important

The conduct of high quality research and innovation requires staff with the right skills and experience, working in appropriately equipped facilities, with the necessary time and resources to carry out their roles effectively. Yet we know that despite many of the HDUHB staff being committed to research and innovation, our organisation could do more to make it easier for them to get involved. This goal aims to remove several of the impediments (e.g. staffing constraints and facility limitations) to the conduct of high quality research and innovation. It seeks to address staff shortages in key research areas, afford more time for research, and offer training and development to enable all staff to get involved in new and growth areas of research and innovation.

The goal also recognises the need to address the variable provision of facilities required to ensure safe and effective research conduct across our sites. Research facility constraints unfairly limit the types of studies we can involve our patients in without an unreasonable travel expectation to another site. To invest in our people and facilities, we will use our unique position within the Health Board to generate income, growing and diversifying our research portfolio and creating a virtuous funding cycle.

2.2. How we will deliver

2.2.1 Our People

We will develop a team with the right skills and experience to improve the quality and impact of research and innovation. This will include action to:

- Improve the capability of HDUHB staff to conduct high quality research and innovation, utilising appraisal processes, and aligning a support team to guide them through the process of research;
- Take a systematic approach to identify research interested staff and support their research capability development through their Performance Appraisal and Development Review (PADR) and job planning processes;
- Support our research and innovation staff to develop personally and professionally by planning and providing learning that is relevant to their roles;
- Establish a team capable of supporting innovators through the process of developing new health and care technologies;
- Develop a team to manage and grow our biobank (i.e. a biorepository that stores biological samples for use in research and innovation);
- Address shortages in research leadership across all staff groups, through targeted development processes and schemes (Chief Investigators and Principal Investigators);

- Address shortages in key research support services including laboratory scientists, radiology, and statistics; and
- Train and support a cohort of patients (e.g. patient champions, patient groups) to inform and shape research endeavours.

2.2.2 Our Facilities

We will invest in our infrastructure to support the safe and effective conduct of research and innovation, congruent with wider health board facility plans. This will include:

- Developing 'fit for purpose' facilities serving all of our localities, with access to high quality patient consulting environments, laboratory space, and suitable office accommodation;
- Working with the team planning the new urgent and planned care hospital to develop a research and innovation facility;
- Developing a new clinical engineering, innovation and research facility in Llanelli, with support for those developing new health and care technologies. This will initially be located in Bynea but with the potential to relocate to Pentre Awel, when the site is operational in 2023/24;
- Strengthening the collaborations we have with our University partners, to improve access to our and their specialist facilities; and
- Developing safe and secure human biological sample storage at each hospital site, managed through a bespoke electronic database system.

2.2.3 Our Financial Sustainability

We will increase and diversify the financial resources available to advance research and innovation. Our actions will include:

- Stabilising our funding allocation from the Welsh Government, through the delivery of mutually agreed plans;
- Increasing the number of commercial studies undertaken;
- Making robust applications for additional funding from HCRW to support the development of new research areas / new Chief Investigators;
- Increasing the number and scale of studies supported by external grant funders, delivering against expectations (recruiting to time and target) to ensure expected income is realised;
- Increasing the number of new technology and device studies supported through a dedicated clinical engineering, innovation and research function;
- Developing a stronger contracting function, including the negotiation and securitisation of Intellectual Property Rights (IPR);
- Developing service evaluations and commissioned research as a source of revenue; and
- Increasing the number of collaborations and partnerships with life science companies, where there are clear benefits and the opportunity to increase research activity.

Strategic Goal 3

GROW RESEARCH AND INNOVATION ACTIVITY IN AREAS OF STRENGTH AND OPPORTUNITY



3.1 Why this is important

A Healthier Mid and West Wales sets out a future for our healthcare system which places greater emphasis on preventing illness, supporting people to manage their own health and wellbeing, and on enabling people to live independently for as long as they can, supported by new technologies and integrated healthcare services close to home. It is essential that our research and innovation endeavours are in step with this vision, with a corresponding increase in the activities supported outside hospital in other health and care settings, including primary care.

This goal will deliver the required rebalancing but also recognises the need for individual growth plans, playing to the research and innovation strengths and opportunities exhibited by the health and care system in the different parts of our health board, as well as the different health care needs of the population in those areas. These plans will also take into consideration the relationships and opportunities with wider public, charitable and private partners, as well as strengthening existing patient partnerships. There are also opportunities for research and innovation growth across all parts of our health board, which aim to lever particular organisational strengths (e.g. our emergent biobank capabilities and strong relationship between clinical engineering, research and development). These will afford us the opportunity to diversify the research, innovation, and technology developments we are able to support.

3.2. How we will deliver

3.2.1 Our Research Communities

We will develop targeted plans that lever clinical, scientific, academic, and community strengths and opportunities across the different geographical areas of our health board.

This will include plans for the:

- Ceredigion & Bronglais General Hospital area to take advantage of their close proximity to Aberystwyth University, the Mid Wales Joint Committee, Rural Health and Care Wales, and the formative Mid Wales Growth Deal;
- Carmarthenshire West & Glangwili General Hospital area to take advantage of the size of the hospital and the variety of clinical services offered, and proximity to the University of Wales Trinity St David and Swansea University and regional developments such as the City Growth Deals;
- Carmarthenshire East & Prince Philip General Hospital area to consolidate and build upon a well-established research portfolio and facilities, their proximity to the Swansea Campuses of Swansea University and the University of Wales Trinity St David, and regional developments such as the City Growth Deals and proposals for Pentre Awel; and
- Pembrokeshire & Withybush General Hospital area to take advantage of a well-established research portfolio, notably in oncology trials, but increasingly expanding into other areas, and growing connections with the City Growth Deals and major industry employers within the region, including those clustering around the Port of Milford Haven.

3.2.2 Our Reach

We will develop a plan to increase research and innovation activities with primary care and social care organisations within the region.

Our actions will include:

- Working with the GP clusters and the HCRW primary care team to develop plans to increase the research innovation activities carried out in primary care;
- Developing a social determinants research programme to identify how, working with our partners, we can maximise the wider societal impact of our activities; and
- Working with the Wales School for Social Care Research, and the Regional Research, Innovation and Improvement Co-ordination (RIIC) Hub, to develop a plan for improving research and innovation activity in social care and sectors that make a vital contribution to the social model of health.



3.2.3 Our Portfolio

While continuing to consolidate our research and innovation around key areas of strength, we will also diversify our activities to include new technology development. This will include actions to:

- Appraise our Human Tissue Authority (HTA) licensed Biobank and, if feasible, further develop it so that it is capable of supporting a greater number of studies;
- Develop a new clinical engineering, innovation and research consulting facility, offering advice and support to developers of new health and care technologies;
- Increase the number and quality of Value Based Health Care research, evaluation, and innovation projects;
- Develop targeted research and innovation growth plans in areas of clinical and academic strength, driven by population need, HCRW strategy/priorities and UK prioritised need; and
- Develop targeted research in areas aligned with our wider corporate plans, which are refreshed on an annual basis (e.g. promoting green healthcare and the social model of health).



Strategic Goal 4

DEVELOP STRONG AND EFFECTIVE PARTNERSHIPS WITH ACADEMIC, HEALTHCARE, INDUSTRY AND RESEARCH ORGANISATIONS



1.1 Why this is important

Most impactful research, development, and innovation depends on strong relationships between the NHS, higher education institutions and industry. Whether this involves participating in an international trial, optimising access to scientific expertise, or securing collaborative financial investments, strong and effective partnerships are essential.

As a relatively small organisation, we recognise we will achieve much more through collaborating with universities, industry and other public bodies. We are also aware of the significant role we can play in helping our partners deliver, whether that relates to becoming a flourishing life science business employing talented individuals, or by supporting universities demonstrating research, enterprise and innovation impact.

4.2 How we will deliver

4.2.1 Our University Partnerships

We will develop a collaborative plan with each of our university partners, delivering mutual benefit in defined areas, agreed and monitored through our biannual meetings with them. The plans will include actions to:

- Increase the number and diversity of honorary posts, aligned to mutually beneficial research and innovation projects;
- Increase the number of joint research and innovation endeavours with HEIs and industry, seeking to optimise the University Health Board's involvement in nationally supported schemes, including Accelerate and the new funding schemes to emerge following the UK's exit from the European Union;
- Increase the number and diversity of joint university and HDUDB funded posts in areas of academic and clinical strength;
- Strengthen our alignment to the expertise and facilities offered by universities. E.g. The Joint Clinical Research Facility (JCRF) at Swansea University; the Institute of Biological, Environmental and Rural Sciences (IBERS) at Aberystwyth University; and the Assistive Technologies Innovation Centre (ATiC) at the University of Wales Trinity Saint David. This will include joint projects involving our biobank and enhanced clinical engineering, research and innovation capabilities, as well as social and green models of healthcare;
- Increase the number of fellowships and studentships, aligned to the HDUHB's challenges and opportunities;
- Develop a strong partnership and joint projects with the three new intensive learning academies (ILA) in Wales (i.e. the Value-Based Health and Care Academy, the Spread and Scale Academy, and the All-Wales Academy for Innovation in Health and Social Care Management); an

- Celebrate success and the results from our collaborative plans, including an annual University Partnership Summit, and regular research updates through routine staff communications.

4.2.2 Our Industry Partnerships

We will work with organisations that share our values to develop innovative solutions to local health and care challenges. This will include action to:

- Improve the number and quality of partnership opportunities with The Life Sciences Hub Wales, national research hubs and nationally sponsored innovation centres;
- If found to be feasible, further develop and deliver joint projects that look to lever the benefits associated with our Human Tissue Authority (HTA) approved Biobank and new access committee and associated arrangements;
- Develop and deliver joint projects that look to lever the benefits associated with our new clinical engineering, research and innovation arrangements; and
- Streamline our arrangements for working with industry, including the delivery of commercial research, ensuring adherence to national and local HDUHB standards but also ensuring an efficient approach to identifying, contracting, and protecting our intellectual property, drawing on our local expertise and initiatives including AgorIP, Swansea University.

4.2.3 Our Public Partnerships

We will collaborate with other publicly funded organisations to undertake research and innovation where it is mutually beneficial.

We will:

- Agree collaborative research and innovation plans with Powys Teaching Health Board, Swansea Bay and Betsi Cadwaladr University Health Boards;
- Work with the West Wales Research, Innovation, and Improvement Co-ordination Hub to better co-ordinate and align the activities of our public partners – including other NHS organisations, local authorities, charitable and voluntary sector organisations – towards where they can secure greatest impact. A targeted plan will be developed utilising a recent mapping of regional assets and capabilities;
- Continue to deepen our already strong relationship with the Bevan Commission, to consolidate and where possible increase the number and quality of Bevan Exemplars. Work with the regional Research, Innovation and Improvement Co-ordination Hub to mainstream the most successful projects;
- Harness the opportunities associated with A Regional Collaboration for Health (ARCH) and the Swansea Bay City Deal, including the Pentre Awel development in Llanelli, and proposals for a life science park at Morriston Hospital, Swansea with regional outreach; and
- Continue to align our research and innovation activities to support the strategic plan of the Mid Wales Joint Committee for Health and Social Care, working closely with Rural Health and Care Wales.

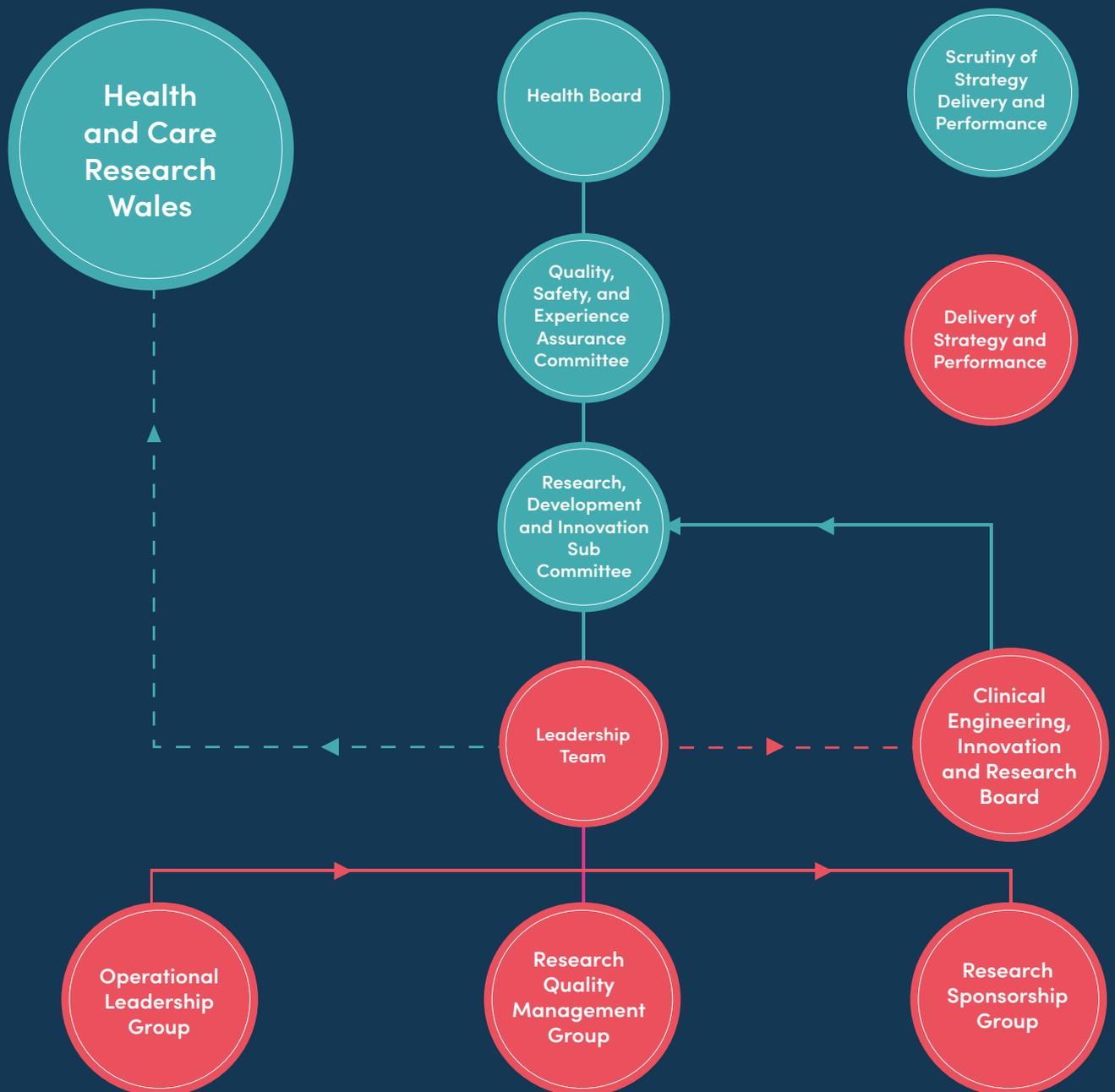
Delivering the Strategy

A plan will be set against this strategy on an annual basis, to coincide with the University Health Board’s annual planning cycle. This plan will contain specific, measurable, and time bound activities for the year ahead. We will also produce a communications plan, ensuring that progress and more importantly, the impact of research and innovation is shared across and beyond our organisation. To ensure there is strong oversight of the strategy, and that the actions are reviewed in light of progress and a rapidly evolving context, considerable thought has been given to establishing a good governance approach that will ensure strong Board oversight and a practical enablement approach.

Figure 1 sets out how the implementation of the strategy will be enabled and scrutinised, together with the wider mechanisms that oversee the management of research and innovation at a project level. The Leadership Team and Operational Leadership Group will oversee implementation on a monthly basis and report progress to the Research, Development, and Innovation Sub Committee, which meets bi-monthly. The Research Sponsorship Group will review and consider research and innovation projects requiring Health Board Sponsorship, and oversee the study set-up, confirmation of Capacity and Capability (C&C) and Quality Assurance green light processes. The Research Quality Management Group will assure the board of the quality and safety of research activities undertaken both in and with the Health Board.



Figure 1 – Research, Development and Innovation Governance





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