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**Note: HEI evidence submissions and case studies will be attached separately**

# Introduction

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Cwm Taf Local Health Board (as was) achieving university health board status in December 2013 was a major achievement, recognising the hard work and collaborative effort of the workforce across the organisation. University health board status cemented the strong relationships with our initial academic partners, Cardiff University, University of South Wales, and Cardiff Metropolitan University, which manifest in numerous clinical placements, training opportunities, research activity and joint staff appointments that support the delivery of high quality research, innovation, education which ultimately leads to improved care and services.

Working in partnership with Higher Education Institutions (HEI) is vital to help maintain and improve standards and build momentum for co-creative roles and a collective drive for a better future for our communities. Health board and HEI partnership working enables the sharing of expertise and resources (financial, estates, equipment, intellectual) that can bring about positive benefits for all partners and the population of Cwm Taf Morgannwg and Wales as a whole.

In the first Triennial review of university health board status in 2016, Cwm Taf UHB successfully maintained its full university status. Now in 2021 this is the first review of university health board status undertaken as Cwm Taf Morgannwg University Health Board (CTMUHB). This report supports our verbal submission to the expert review panel and summarises our reflections on the new review process, evidences our extensive collaboration with HEI partners and presents our plans for further developing and embedding these relationships through partnership working in 2021/2022.



## CTMUHB Retrospective Review

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It is worth noting the changes that the organisation has undergone since the previous Triennial Review in 2016. CTMUHB is 50% larger than the former Cwm Taf UHB, now with an annual turnover of over £1billion and over 13,000 staff serving a population of 450,000, across the regions of Bridgend, Rhondda Cynon Taf and Merthyr Tydfil. The organisation is still adapting to these changes with a new operating model based around 3 Integrated Locality Groups and 4 overarching systems groups.

We now have six university partners with the addition of Swansea University, University of Wales Trinity St David's and the Open University to our original partners.

CTMUHB is active in each of the three key University Health Board themes, a high level summary of activity is below, with further detailed review with key achievements and plans in the appendix.

Research and Development	Training and Education	Innovation
<ul style="list-style-type: none"> <li>Development of a Clinical Research Centre (shared resource with NHS, Industry and Academia)</li> <li>Development of CTM Primary care, Mental and Population Health research infra-structure.</li> <li>£250K new investment in and recruitment to research infra-structure for Bridgend post UHB boundary change (April 2019).</li> <li>Grants Awarded with Academic / Industry Partners, eg. KESS / KESS II, Burdett Nursing Trust, RCBC, Horizon 2020, UKRI, Stroke Implementation Group, CHERISH-D,</li> <li>Number of recruits to Covid-19 1a and 1b UPH studies - 1542</li> </ul>	<ul style="list-style-type: none"> <li>6000 medical student placement weeks.</li> <li>Over 10,000 nursing student placement weeks.</li> <li>1660 AHP student placement weeks.</li> <li>Education MOU's signed with 5 HEI partners.</li> <li>Joint HEIW funded project with Swansea Uni; Learning outcomes based approach to Clinical Placements for paramedics and nursing students.</li> <li>Partnership working with HEI's for 400 nursing students and 60 medical students contracts in place through COVID to continue practice placements.</li> <li>Advanced practice and CPD qualifications accessed with HEI partners.</li> <li>Senior Nurse Clinical Education awarded Visiting Professor with USW.</li> </ul>	<p>Multiple project with HEI partners across different schemes</p> <ul style="list-style-type: none"> <li>5 Accelerate Supported projects</li> <li>2(3) Digital Strategy Fund projects</li> <li>2 Winners at Recent Health Hack</li> <li>Joint appointment with AgorIP</li> <li>Rolling out DHEW RFID project</li> <li>Partnering with WIDI to build next phase of e-whiteboard project</li> </ul>
		

As part of our retrospective review each HEI partner was been invited to provide additional material to illustrate examples of work which showcase where they felt benefit was being created. This took the form of case studies, papers and presentations (attached separately to the report).

## The Triennial Review Process 2021

With respect to the new approach to the 2021 triennial review, the review process highlighted the need to take a holistic approach to this year's submission and brought together the education, research and innovation leads for the health board as a Triennial Review working group.

CTMUHB has a strong track record of delivery in each of the three University health board themes however for this review it was recognised there is a significant synergy between the themes, mobilising a 'University' approach to undertaking our business. As a result a synergistic and multi-disciplinary approach was undertaken rather than as three separate work streams. We also used the opportunity to involve some of our graduate management trainees to provide experience of programme support to a key piece work for the UHB.

Our process, since September 2020 has involved regular action planning and progress delivery discussions with regular update reports to Executive Leads and our Academic Partnership Board (APB) reinstated after a brief hiatus resulting from the pressures of the COVID-19 pandemic.

### Our Approach

The Academic Partnership Board provides a formal mechanism for our relationships with academic partners whereby the strategic and operational benefits of partnership can be discussed, established and integrated across

CTMUHB and HEI partners. Its primary aim is to review, discuss and progress the strategic vision and shared objectives of each of the partner organisations in support of the Welsh Governments own key strategies relating to improving the health, wealth and well-being of the population of Wales.

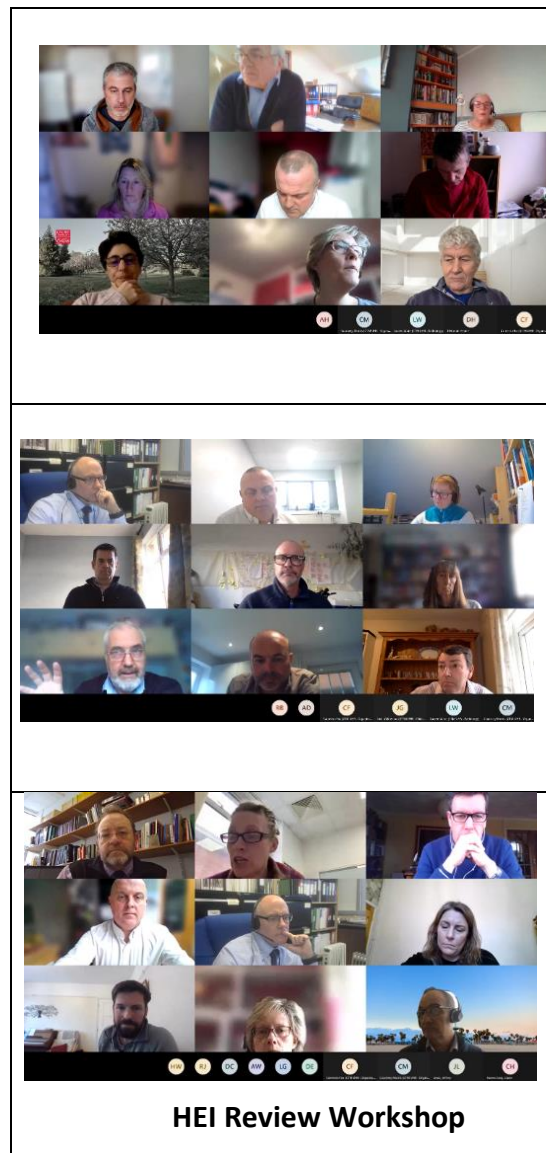
The academic partnership board is essential for progressing corporate priorities with our partners however, the formal nature of this board does not always allow for detailed discussions regarding potential collaboration opportunities and relationship building. This in-depth conversation and reflection is required to strengthen relationships and optimise all research, innovation and educational opportunities.

To facilitate the developing and deepening of our relationships and continuing with the multi-disciplinary approach, each of our six university partners were invited to attend virtual workshops over January and February 2021; University of South Wales, Cardiff University, Cardiff Metropolitan University, Swansea University, University Wales Trinity Saint David and The Open University. Unfortunately, The Open University workshop was unable to proceed within the review timeframe and will now happen after March 2021.

This series of virtual workshops (see above) provided an important environment, time and space for a greater number of colleagues to discuss our partnerships and collaborations, current and potential, identifying areas of success and for development and improvement within our relationships. The workshops were an excellent vehicle for open and honest discussion with our partners and were attended by a total of 44 representatives from different schools and colleges within

the universities, including Deans of schools and heads of departments. The conversations were engaging, full of enthusiasm, with many additional ideas of how training and education, research and development and innovation could be developed for the symbiotic development of the partnerships, notably improved service delivery and beneficial outcomes and outputs for the population of CTMUHB.

The diversity in attendance offered an excellent opportunity for networking beyond the health & care schools that we traditionally work with and enabled us to discuss opportunities for new collaborations with alternative disciplines that included, sport, business & management, art & design, computing and engineering and digital technology.



## Organisational Lessons Learned During the Review Process

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Discussions with our partners within these workshops demonstrated that, as could be expected, the maturity of the relationships with our longer-standing HEI partners is more established than with those recently developed; workshops with Cardiff Metropolitan University, Cardiff University and University of South Wales evidenced well-developed, extensive relationships with the health board built over many years of collaboration. More recent relationships with Swansea University, The Open University and University Wales Trinity Saint David are clearly still in the early stages, however there was evidence of activity that was already strengthening relationships and a great potential for productive partnerships.

As a health board, we have taken steps to strengthen the partnerships by developing individual Memorandum of Understandings (MoU's) for each partner which supersedes the single overarching MOU previously established. The individual MoU's are more reflective of the relationships with each of our partners, allowing for a more focussed approach to collaboration that is better suited to the individual university's area of expertise. For example, University Wales Trinity Saint David have excellent programmes for digital qualifications and therefore our MOU will include agreements around educating our workforce ready for ongoing digital innovation in healthcare.

## Communication and Reflection

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A simple organisational lesson reinforced during the review was the importance of regular communication and the need for dedicated time and space to have open discussions and reflection. All HEI partners are very supportive, and enthusiastic with a willingness to engage with CTMUHB and develop high quality, long lasting collaborations. However the HEI partners expressed a need for clearer routes to access and networking into CTMUHB as an organisation and a desire for the health board to share challenges to encourage challenge led learning that could provide resolutions through innovation and a robust evidence base through research and education of the NHS workforce.

A network between the leads for innovation, research and education provides a key bridging function for entry routes to any collaboration with partners and this message needs to be communicated more effectively across our HEI partners. The workshops were an initial step for successfully describing these routes into the organisation. Follow up meetings to discuss future partnership working have already occurred as a result, using the leads as conduits for this progress.

In the future we aim to hold these workshops on an annual basis to provide part of a collaboration framework giving more opportunities to a wide range of academic and health board colleagues to share their ideas and promote interaction within the health board to strengthen and expand the networks. Both our HEI partners and

the health board would like to see workshops organised with the CTMUHB clinical and non-clinical workforce to provide an opportunity for challenges to be shared with our HEIs to facilitate problem based learning and research.



## Collaboration and Sharing

The importance of maximising the benefits of utilising shared resources, which in turn would support a value based approach and would help secure future sustainability for all partners, was a key theme from the workshops. The willingness to engage with one another, and be receptive to each suggestion and potential plan put forward, truly reflected the positivity of this engagement strategy. Plans to develop and launch a CTM hosted Learning Academy has been a catalyst in inviting partners to utilise space and ensure the support for multi-disciplinary, multi-professional and multi-agency collaborative working in a diverse range of academic fields, alongside health and social care.

In light of this shared key theme, the strategy of exploring 'sustainability' together, university health board status for CTMUHB allows, and promotes, engaging conversations to explore ways of working that are holistically beneficial, but also identifies ways of optimising resource utilisation to its full potential.

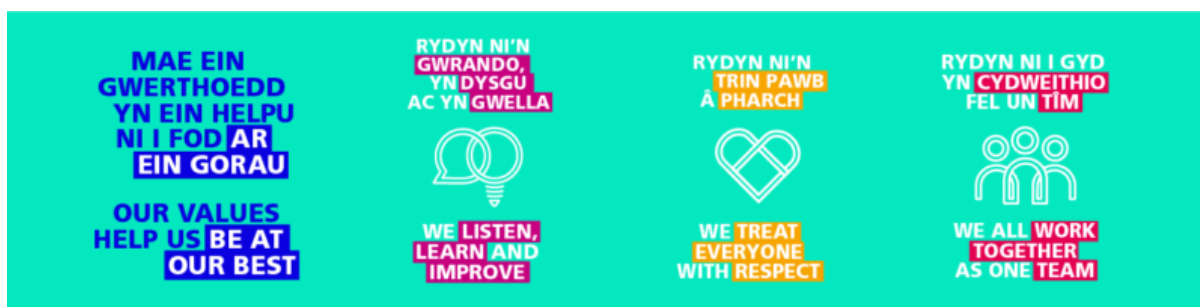
Our partners expressed positive feedback from previous partnership work. They stated that our approach to cooperation is agile and responsive with a 'can-do' attitude that has made their collaboration to date with CTMUHB an easy, supportive and enjoyable experience. This positive feedback suggests that our culture and attitude to collaboration is an area that we excel in and our organisational learning from this would be to continue with our

excellent engagement and constructive work ethic, to ensure long term relationships with HEI partners are maintained.

### Idea of authenticity

Since Cwm Taf Morgannwg University Health Board’s expansion and switch to a new operational model change, there has been an increasing focus on the concept of authenticity, set out in the new approach to Values & Behaviours (see below) and having open and honest conversation with HEI partners. Focused upon the pivotal themes of training and education, innovation and research and development, each workshop has approached these facets of the organisation in a transparent and honest way.

Every partner has had a safe space and platform to voice their feedback on partnership working with CTMUHB as an organisation with university health board status, with further exploration as to how this status helps optimise and strengthen our relationships and positive impacts on students, patients and the population of Wales.



## Future View

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The challenges facing health services in Wales and the direction for future service provision have been clearly articulated in recent Welsh Government publications. The rising demand for services, increasing health and wellbeing inequalities, higher public expectations, as well as the possibility that new and emerging diagnostic, medical and digital technologies offer, are set against a backdrop of changing demography, recruitment and resource challenges.

In 2019 the Topol Review (3) reported its recommendations in ‘Preparing the healthcare workforce to deliver the digital future’. It stated that “NHS organisations will need to develop an expansive learning environment and flexible ways of working that encourage a culture of innovation and learning” including a strong workplace learning infrastructure and cultivating a reputation for training and support. It goes on to describe the need for an effective culture of learning at every level that enables the workforce to re-frame their knowledge.

There are well recognised barriers to change that can be overcome by a motivated and enthused workforce which the utilisation of UHB status will help CTMUHB to achieve. The establishment of Digital Health Care Wales will

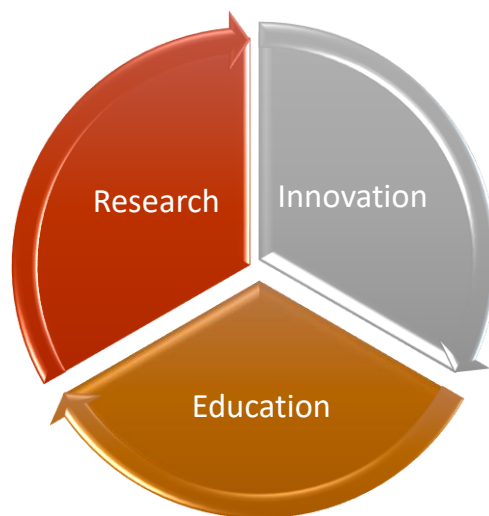
provide an opportunity for CTMUHB and its academic partners to work with this new government agency to deliver what is needed to develop and implement an effective digital strategy, to include better use of NHS data.

In our Integrated Medium Term Plan 20-23, CTMUHB acknowledges that the scale of the challenge the health board faces in achieving sustainable change and improvement remains considerable and the capacity of the organisation to develop, learn and grow at pace will be tested. Incorporation of UHB status into the annual IMTP planning is welcomed as it will help confirm the importance of research, innovation and education into the daily activities and service delivery agenda of the health board

In response the organisation rightly identifies a key strategic well-being objective of co-creating with staff and partners a *learning and growing culture* with a key principle of the future operating model to *Learn and Innovate for Continual Quality Improvement*. This is manifested as supporting research and innovation in all areas to identify, promote and embed continual service improvement, enhancing team and individual performance through skills development, learning and teaching opportunities, attracting and retaining world class staff.

### What Does University Health Board Status mean?

A robust evidence base through research, in addition to a focus on supporting innovation, quality and providing access to evolving and appropriate health and social care services, are identified as the overarching principles by which the health board will develop clinical pathways and drive forward service change and improvement, helping to deliver the key objectives documented in *A Healthier Wales*. Securing continuous improvement in the health and wellbeing of the local CTMUHB population therefore is a primary driver for change, and University status can be leveraged to both help achieve this, and for CTMUHB to be recognised as a leader with a strong reputation within Wales, the UK and beyond.

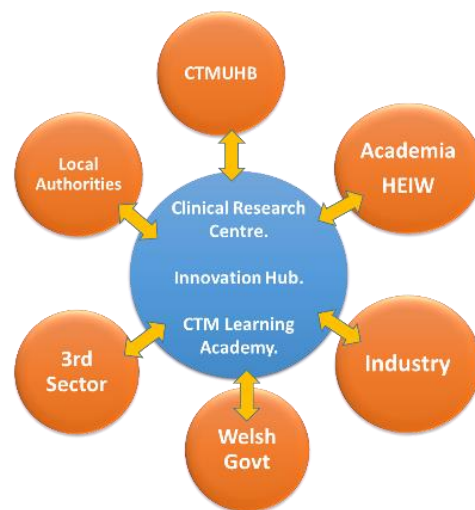


The potential of University health board status, requires a symbiotic and synergistic relationship between the three key activities of research, education and innovation. Working together these activities provide all necessary skills required to progress change from the conception of an idea through to implementation and population and organisational impact.

What does a University Health Board look like?

**Importance of Recognising ALL key Partners**

- Shared Values, Aims and Objectives
- Challenge Based Learning
- Delivering Corporate and Population Responsibilities
- Evidence and Value Based approach to improved Clinical & Social Care Services and Population Health with Impact
- Maximise Collaboration through Shared resources and Expertise of all Partners and Population
- Improved Communication and Networks within and between Partners
- Optimise Commercial opportunities,
- Re-investment and Sustainability of all partners
- Workforce development and Career opportunities for all partners
- Multi-Professional, Multi-Disciplinary, Multi-Agency and Fully inclusive engagement



A future Vision: CTM Learning Academy and Innovation Hubs

2020 saw the successful creation of the CTMUHB Clinical Research Centre (CRC) at the Royal Glamorgan Hospital. A key strategic aim of CTMUHB, in demonstrating its University status. The CRC includes 3 clinic rooms, reception area and office space to provide a hub for the R&D team, as well as hot desk space for our academic and industry partners.

Academic partners have stated that they welcome the development of the CRC to facilitate their own patient facing research activity in partnership with the UHB and its researchers. A Covid-19 Urgent Public Health study looking at longitudinal Covid-19 antibody status amongst NHS staff (SIREN) is due to open at the centre imminently and discussions are ongoing with Health and Care Research Wales (HCRW) with a view to opening a Covid-19 vaccine

trial. The R&D team will optimise the use of the Clinical Research Centre to provide CTMUHB's patient population with greater opportunity to take part in commercial and non-commercial research, in an appropriate environment and designated space. The CRC also provides the space for increased engagement with our Academic, Industry and Social care research partners to further enhance collaborative working.

It will be important to continue to develop and explore all options to increase research capacity and research related income, to facilitate future growth and

maximise future opportunities. This will require a multi-faceted approach, being cognisant of the importance of undertaking research, as a core function of all health care professionals, that has impact and which helps with tangible improvement and development of high quality clinical services, but also helps with promoting and supporting workforce development and the benefits of improving recruitment and retention.

In addition to the CRC , the further development of CTM Learning Academy and Innovation Hub will provide a robust university health board tripartite infrastructure where colleagues and potential future colleagues can network and feel inspired to think, create and aspire, build relationships and collaborate together to improve practice and health, a living manifestation of University Health Board Status, networked with multiple HEI partners, creating a virtuous cycle of research, learning, innovation and service improvement.

Key activities include:

- Innovation ideas supported e.g. Bevan fellowship/ exemplars, Environmental Impact.
- Challenge exchange
- Systems Design Thinking
- Academic Fellowships in Innovation, Research, Education and Digital Leadership.
- Collaborative work with Product Designers 3D personalised healthcare innovation

With these exciting developments in progress we look forward to this next phase of our University Health Board work in collaboration with our six university partners.



**Clinical Research Centre at Royal Glamorgan Hospital**

# Appendix

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## Research and Development supporting evidence

The R&D team continue to encourage and facilitate collaborative working with our academic partners and the Assistant Director for R&D (Professor John Geen) / R&D Manager (Mrs Rhian Beynon) continue to meet with academic partners to develop research partnerships and collaborations. Examples include:

Assistant Director of R&D and R&D Manager met with Professor Steve Conlan, Head of Enterprise and Innovation, Medical School, Professor of Molecular and Cell Biology, Swansea University in May 2019.

Assistant Director of R&D and R&D Manager met with the College Registrar and Dean of Research and Innovation at the College of Biomedical and Life Sciences, Cardiff University on 29<sup>th</sup> May, 2019.

Assistant Director for R&D delivered a presentation on CTMUHB's R&D Strategic objectives and how we can work together in the development and set up of collaborative research at the Cardiff Metropolitan University R&I Symposium on 11<sup>th</sup>, November 2019

Assistant Director for R&D delivered a presentation on CTMUHB's R&D Strategic objectives and how we can work together in the development and set up of collaborative research at the RICE group of the University of South Wales meeting on 20<sup>th</sup> February 2020.

The R&D Manager/R&D Deputy Manager (Mrs Amy Jordan) have provided "governance advice" at the RCBC Wales First into Research Workshops, University of South Wales.

One key priority of the CTM R&D service in addition to increasing research activity, is to continue to increase the research capacity, but also development of research leadership roles, for all health care professionals, to include medical, nursing, scientific, allied health professionals and non-clinical colleagues. It is very important that developing a culture that embeds research as a routine function of all health care professionals is recognised by all stakeholders and that ensuring that "research matters" is the responsibility of all.

Through their leadership, the Assistant Director for R&D and the Executive lead (Professor Kelechi Nnoaham) for R&D, will continue to work with Workforce and Organisational Development, Human Resources, the Executive team and Welsh Government to progress this key objective. In addition, working with the UHB's planning team will ensure that R&D is a key part of the IMTP, where the objectives of the R&D strategy and ambitions are aligned to the UHB's central plan of continued service improvement and the importance of R&D for workforce and career development. It is also recognised by the UHB and Academic partners that it is important to develop joint clinical academic posts with a significant research component to their role.

Capacity can also be increased through successful research grant applications and commercial research. In the case of the latter, a key priority of the CTM R&D team, utilising the all Wales R&D finance policy can be used to

incentivise health care professionals to undertake more commercial research and subsequent re-investment in research capacity from the income generated. The development of the CRC, with a significant financial contribution from the UHB and donation of the estate, demonstrates the UHB's ambition to undertake and deliver high quality research, by developing its capability and capacity to deliver to time and target, a key metric of all research sponsors and researchers.

Increasing research capacity and re-investment in research helps provide additional resilience and sustainability for the research eco-system, by using multiple funding sources and using shared resources for the benefit of all partners.

It is important to note that CTMUHB has the added complexity of providing R&D services across 3 key and very important acute sites and clinical services (e.g. x3 Intensive Care Units), in addition to several community hospitals, increased Primary care provision and Population health. It is essential that there is equity of access and support for all researchers and the population using the clinical services. This has been demonstrated more recently, following the change in the UHB's boundary in April 2019. There was no transfer of any research staff from Abertawe Bro Morgannwg UHB and therefore CTM R&D have invested (£250K) in the R&D infra-structure to provide the equity required and re-activate the research activity in the Bridgend region.

The CTM R&D service is in the process of finalising their spending plan as part of the budgetary negotiations with Welsh Government. The spending plan details the requirement for additional funding to help the UHB meet its own and the Governments own research objectives.

Maximising all available options to build research capacity requires considerable support from the R&D team. The R&D team infra-structure has been developed to provide the full package of support for all such activities in Secondary care, Primary care and Population Health research. The R&D team also support research in the integrated care sector, to help bridge the gap between health and social care. The development of the CRC now provides "space" for networking like-minded researchers from all sectors and in all fields.

The R&D Department facilitates and supports the development of links with academic partners to identify potential grant funding opportunities such as RfPPB, Innovate UK, UKRI, Horizon 2020. The UHB continues to support Knowledge Economic Skills Scholarships II (KESS II) and RCBC Wales First into Research, working collaboratively with academic partners to include Cardiff Metropolitan University and Cardiff University, the University of South Wales and Swansea University.

To formalise the partnerships between the UHB and academic partners, a nominated representative from the University of South Wales, Cardiff Metropolitan University and Cardiff University are members of the UHB's R&D Committee. Swansea University, the University of Wales Trinity St David and the Open University in Wales have also now been approached to nominate a representative to also join the committee and help inform the strategic

aims and objectives of all organisations through collaborative working. The CTM population are also included in the membership of the CTM R&D Committee, to ensure that the strategic aims and priorities are also informed by the needs of the population. The recent triennial review workshops, R&D membership of the UHB's Academic Partnership Board and Academic Partnership Steering Group, ensures additional regular discussions with academic partners.

As a consequence of the COVID-19 pandemic, the majority of active non-commercial and commercial research studies were suspended in March 2020 and urgent public health (UPH) research was prioritized across the UK to gather the necessary clinical and epidemiological evidence to inform national policy and enable new diagnostic tests, treatments and vaccines to be developed and tested in the response to COVID-19. CTM UHB has performed well as part of the Covid-19 research response, with a broad range of multi-disciplinary Covid-19 studies to include clinical therapeutic trials (RECOVERY, REMAP-CAP, PRINCIPLE), Covid-19 outcome data collection studies (ISARIC, CA-Covid), point of care antigen testing (FALCoN – CTMUHB was the highest recruiter in the UK) and studies with a focus on mental health and wellbeing of patients and staff. Supporting the Covid-19 UPH research response and post Covid “restart” of non-Covid studies will be a continuing priority for the R&D team aligned to the guidance by the National Institute for Health Research (NIHR). Discussions are in progress with regard to opening a vaccine trial in spring 2021 at CTMUHB. The focus post Covid-19 will be on recovery, resilience and growth (RRG), to ensure the CTM R&D team meet the recently revised performance metrics issued by Welsh Government as part of the research delivery framework.

It is also anticipated that there will be further research requiring support looking at the long term effects of Covid-19. The R&D infrastructure is being reviewed to help with this endeavour. Included in the recently submitted spending plan for 2021-2022 to Welsh Government, is the inclusion to appoint a Research Physiotherapist to support the post Covid rehabilitation research. The R&D Department will also ensure that it is aligned to and will collaborate with, the recently established Wales Covid-19 Evidence Centre at Cardiff University, which is due to open in the next few weeks.

It is important that research findings are translated into clinical care; closing the research loop, from the inception of a challenged based research idea through to funding, research delivery, knowledge mobilisation and implementing the findings into clinical practice. This will ensure that the impact of research is maximised, informing and improving patient care, patient outcomes and the patient's experience, in turn, meeting the strategic and shared objectives of Welsh Government and Academic partners. This will be facilitated through the existing and evolving partnership between the R&D infra-structure, Innovation, training and education, service improvement and communication teams across the UHB.

The R&D Department continues to encourage abstract application from all of the university partners for the annual R&D Conference, to share findings. Academic partners are also invited to present the keynote speech at the annual

R&D Conference to demonstrate the collaboration and partnership working between these organisations, but also the impact and success of these research partnerships.

Following the recent workshop undertaken with five of the UHB's six academic partners as part of the triennial review, discussions are already underway with Cardiff University to develop collaborative research with the CTM UHB Public Health and Primary care team in conjunction with University of South Wales, to progress a study in social prescribing. This builds on the strong collaborative and successful partnership of CTM and the University of South Wales in this field. Since CTMUHB were the highest recruiter to mental health research in the year prior to Covid-19 response, this still remains a key priority for the CTM R&D. There are also plans to further develop the relationship with University of Wales Trinity St David in the field of digital technology and health care.

CTM hosts the National Imaging Academy Wales and the National Collaborative Commissioning Unit (NCCU), both of which provide excellent opportunities for research. The R&D team have already been central to discussions to develop the research portfolio of these bodies, to include the C3 Faculty, NCCU funded post-doctoral staff, as part of a joint venture with Swansea University. The CTM R&D team are also building on the current relationship with Cardiff Metropolitan University and the Stroke hub, to develop research studies in the cardio-vascular field, a priority of the UHB in light of the population health profile. In addition the R&D team at CTM are in discussions with the Wales Cancer Research Network (WCRN) to progress cancer studies, both commercial and non-commercial, another priority field for the UHB.

## Education & Training

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In the new Cwm Taf Morgannwg operating model the Clinical Education function is now in the portfolio of the Executive Director of Nursing, Midwifery and Patient Care. We also work closely with Workforce and OD colleagues on strategic workforce planning, workforce modernisation and Education Commissioning agendas.

Clinical Education has a multi-disciplinary remit and is involved in and supports education and training for all clinical health care professionals at undergraduate and postgraduate levels and clinical health care support workers. The function includes Libraries & Knowledge Management Services.

CTMUHB makes a significant contribution to health care to undergraduate professional education and training and delivers over:

- 6000 medical student placement weeks
- 10,000 student nurse placement weeks
- 1660 Allied Health Professionals student weeks

In addition other health profession related placements and training delivered include:

- Paramedics, Chiropractors
- Biomedical Scientists, Health care scientists
- Pharmacists and pharmacy technicians.
- Physicians Associates.

We have two education visiting professorships with the USW;

- Greg Dix – the Executive Director for Nursing, Midwifery and patient care and
- Greg McKenzie - Senior Nurse Clinical Education.

Well-developed successful working partnerships are established with university partners. In 2016 this was with Cardiff University, Cardiff Metropolitan University and University of South Wales for most health care professions. In the last few years this expanded to include the Open University and since the Bridgend boundary change Swansea University. HEIW Local Learning Agreements are in place between ourselves and all these universities for student placements. The strength of these relationships was evidenced through the recent pandemic where over 400 nursing student and 60 medical student contracts were facilitated at pace between the CTMUHB and the universities, enabling essential practice placements to continue whilst also providing critical support for healthcare services.

Feedback on undergraduate and medical foundation training placements is regularly reviewed and areas for improvement identified and actioned as part of our annual education and training delivery cycle.

Clinical Education manages funding streams for advanced practice, non-medical prescribing and nurse continuing professional development, and works to ensure optimal access and utilisation of all opportunities for further professional development, underpinned by level 7 education, and alignment with Welsh Government priorities, HEIW strategic direction and CTMUHB service delivery priorities.

### Recent developments 2020-21

- Working relationships are being established with University of Wales Trinity St David, particularly around the digital healthcare agenda and emerging digital informatics qualifications. Clinical Education is working with both UWSTD and informatics colleagues within CTMUHB to establish robust organisational networks, to identify the underpinning educational need and inform educational access processes, to enable healthcare professionals to engage with and deliver digitally enabled healthcare in alignment with the organisational informatics strategy.
- As a result of learning from experience through Covid we have identified areas where adaptation was required to update training infrastructure and have significantly invested in the following areas:
  - Simulation kit for teaching practical clinical skills, including virtual reality kit and investment in Resuscitation Training kit.
  - Updating AV equipment able to robustly and reliably stream across multiple sites and able to access non-NHS sites e.g. university systems,
  - IT hardware e.g. laptops, iPad's, headsets etc. to support access to virtual teaching.
- We are also working in partnership with university colleagues to learn from their experience in the creation and development of virtual teaching offerings.
- Recent collaboration with colleagues at USW is informing a re-design for our learning spaces/ environment.
- A joint project with Swansea University Paramedic course is currently underway, funded by HEIW: Working in Partnership to Develop a Learning Outcomes Approach to Clinical Placements for

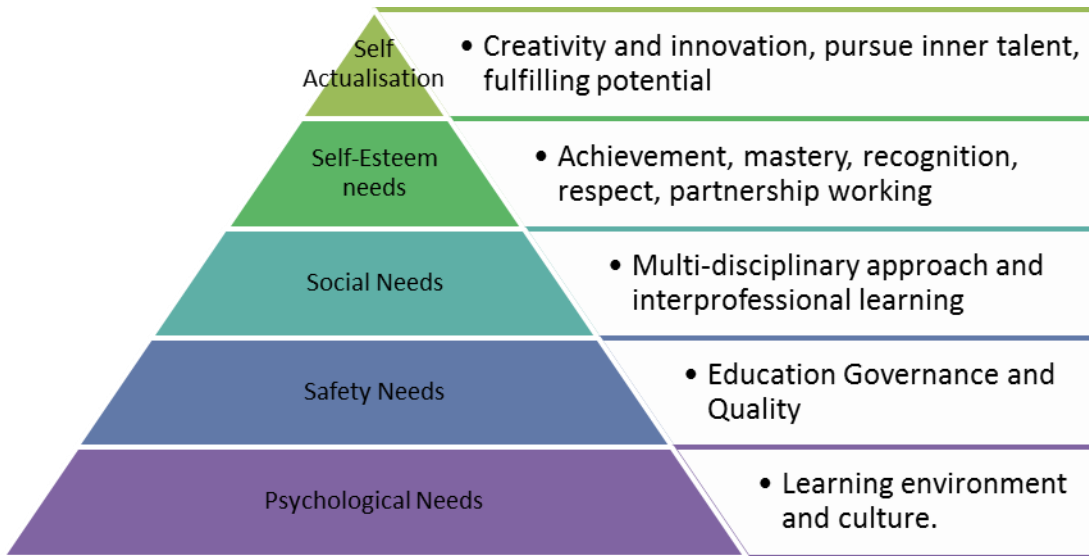


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Paramedics and Nurses.

- CTMUHB Clinical Education staff are working with HEIW to support the re-commissioning of health care professional education and training process that is currently ongoing.

The refreshed Clinical Education Strategy for CTMUHB has utilised Maslow's Hierarchy of Needs as a framework on which to develop and build its Learning Culture.



## Innovation

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- 1.1 Even before the impact of Covid-19 was felt in Wales, it has been well recognised that delivering *Prosperity for All*, would involve implementing different ways of working for both the public sector, private industry and our local population. There can be no doubting the importance of innovation, people, businesses, academic institutions, hospitals, schools, the public sector and the Welsh Government itself, all need to be more innovative to thrive.
- 1.2 Innovation is one of the means that can be used to develop new ways of doing things, ideas, products and services. Public service-led innovation allows the public sector to deliver more effective and efficient services and gives greater scope for business to generate innovative solutions for the public sector. Collaboration is key driver and is often highlighted as means harness its full potential but this needs an innovation infrastructure, both staff and space where it can take place.
- 1.3 A *Prudent Health* approach to well-being affirms the importance of co-production, a step further on from collaboration, where all those involved are given and take responsibility through their involvement. This redistribution of power towards service users and staff helps challenge the idea that innovation be led by experts and instead makes clear that everyone should be an active participants supported to explore innovative change.
- 1.4 Whereas improvement improves, innovation transforms and such transformational change will help towards achieving many of the *Wellbeing of Future Generations* goals. As a legislative commitment to innovation, along with reviews of University Health Board status CTMUHB is mandated to actively show its participation in innovative activities.
- 1.5 Innovation isn't just the successful exploitation of new ideas but the willingness to test and try out something new, that isn't guaranteed to work, but has the potential to make real sustainable change a reality.

### **Innovation Team Impact 2019-20 highlights**

- 1.6 Identification and adoption of innovative ways of working are key to develop the culture, environment and systems that continually stimulate and scan for new ideas in the internal and wider environment and takes them through to adoption and scale-up, where appropriate. The following set out recent activity by the Innovation Team

### ***3D Design and Printing***

- 1.7 Advanced Physical & Digital Engineering (ADPE) Hub: Building on work started by colleagues in the Maxillofacial Dental Laboratory at Prince Charles Hospital we have successfully secured resource and funding of over £200k to expansion of digital design and 3D printing capabilities on site. The potential impact ranges across surgery, primary care, facilities amongst others. We have

set up an ideas submission portal (<http://ctuhb-intranet/dir/ADPE/SitePages/Home.aspx>) that is being piloted before role out.

### ***E-Whiteboards***

- 1.8 Ward based e-Whiteboards: Developed internally by CTMUHB ICT dept. the e-whiteboards replicate the traditional pen and board approach used in secondary care wards to represent inpatients. The e-whiteboards have saved time, prevented errors, and kept lines of communication clear and efficient.
- 1.9 We secured over £60k funding was secured to help develop and refine the concept including the commissioning of an external design agency. Worked with the Assistive Technologies Centre at UWTSU and the Health Technology Centre at Swansea University to develop with CTMUHB staff new electronic icons, style guides and future proposal for appearance. The potential commercialization of this approach is being explored and mechanism to share with other health boards.

### ***Covid19 LAMP testing***

- 1.10 Loop-mediated Isothermal Amplification (LAMP) is a newer technique compared to RT-PCR, but is technically simple and easy for trained scientist to perform, making it a potentially useful technique for detection of COVID-19. Partnered with Dr Emma Hayhurst and Dr Jeroen Nieuwland at USW working in collaboration to validate LAMP for diagnostic use. Jointly secured over £200k funding from WG. Picked up by BBC Wales, ITV Wales, S4C and Sky News.
- 1.11 As part of this novel approach we also 3D printed bespoke LAMP nasal swabs in the ADPE hub to support testing.

### ***NHS Innovation Leads***

- 1.12 We've been a key part of the creation of the All NHS Wales Innovation Leads group. It meets regularly with a remit to discuss areas of mutual interest, share knowledge and support the adoption and scale of innovation nationally. The Group has agreed to focus on the following three areas initially:
  - Intellectual Property policy and approaches
  - Social enterprises/revenue creation vehicles
  - Development of a shared NHS Wales Innovation competency framework and skillset.
- 1.20 As such we have successfully secured funding from Wales Co-op Centre to explore commercialisation potential (See below) and as the Innovation Leads partnered with Cardiff and Swansea Universities to successfully apply to WG for funding for an Innovation Intensive Learning Academy to train the next generation on NHS innovators.

### ***Commercialisation of Innovation***

- 1.13 Exploration of the commercialisation of innovation is set out in the most recent CTMUHB IMTP as key innovation activity. We have been working with AgorIP and the Wales Co-op to deliver workshop and discussion papers that set out the legal, financial and governance misses relating to commercialisation.
- 1.14 CTMUHB Innovations that may have potential for commercialisation realisation include (but are not limited to) training courses for healthcare staff, patients and the general public; consultancy services; devices; software tools; and services.
- 1.15 Our intention in pursuing the commercialisation of at least some innovations is not, primarily, to generate income (though this may be a welcome by-product), but, rather, because we perceive that this route encourages in at least some cases a certain rigour, and provides opportunities to achieve spread and scale, which will ultimately result in greater patient benefit and greater impact in support of the strategic priorities of the Health Board, NHS Wales and Welsh Government.

#### ***Improvement CTM***

- 1.16 The Innovation team have worked closely with and supported QI colleagues primarily around Ward - Based QI work such as the IV Fluids project. We helped produce the Improvement CTM proposal which successful secured over £600k of WG funding. In addition we successfully recruited 2 QI posts funded by improvement Cymru that will soon join the new CTM Improvement structure.

#### ***RPB Research, Innovation and Improvement Hub***

- 1.17 Outlined in 'A Healthier Wales' each Regional Partnership Board was expected to create a Research Innovation and Improvement coordination (RIIC) hub to identify, align and coordinate RII activity. We successfully secured ~£300k over 2 years to recruits a team of 6. With the extension of Transformation and ICF by WG an additional £250k has been provide to extend RIIC funding until March 2022.
- 1.18 Once established the RIIC team pivoted towards Covid-19 coordinating the antibody testing approx... 5000 Local Authority Teaching Staff in 8 weeks and continues to actively support the Test, Trace and Protect programme.
- 1.19 In addition the RIIC team have worked with Arts and Wellbeing Colleagues in Ysbty'r Seren in Bridgend, securing art work, recycled benches and VR tools. Other projects include: Supporting Learning Disability Colleagues; Health and Social Care Careers Awareness in Schools; Circular Economy Housing projects with Swansea University and IBM.